

12-23-10

Dear Lain Fisher & Greg Thomssen:

Re. the Tule Wind Project -

I'm writing to you since you're on the big picture teams. The CPUC & BLM has the total (global view) in its sight when deciding on local projects such as this.

I urge you to support this renewable, non-fossil fuel based power generation project because we must reduce CO<sub>2</sub> concentration by 80% if we're to have any chance of survival past 2100.

Please keep the big picture in mind & support all technologies with that goal uppermost.

A carbon fee & dividend energy policy would provide the essential market-based solution to get us all rowing together without undue taxpayer burden. Thanks

Gratefully, Dadla Ponizil

F1-1

F1-2

F1-3

**From:** gthomsen@blm.gov  
**Sent:** Wednesday, January 12, 2011 11:37 AM  
**To:** ECOAdminRecord  
**Subject:** Fw: Tule Wind

Greg Thomsen  
 Special Projects Manager  
 U.S. Bureau of Land Management  
 22835 Calle San Juan De Los Lagos  
 Moreno Valley, CA 92553  
 951-697-5237  
 951-208-5444 (cell)  
 951-697-5299 (fax)

----- Forwarded by Gregory Thomsen/CASO/CA/BLM/DOI on 01/12/2011 11:36 AM  
 -----

"Greg Erdmann"  
 <greg.erdmann@oca  
 s-as.no> To  
 <[catulewind@blm.gov](mailto:catulewind@blm.gov)>  
 01/04/2011 11:06 cc  
 AM  
 Subject  
 Tule Wind

Greg,

In regard to the Tule wind Project please include me on the emailing list.

Also curious if our on-demand wind farm light system is being considered in the BLM's approval plans for Tule? This is the system that permits all flashing strobe lights remain OFF at all times unless an aircraft is detected.

We have been working with both the Nevada (Dan Nechter, Mark Chandler) and Wyoming (Tom Lahti) BLM district offices among others where this system has either been required on some wind projects or is being considered to be required in order to mitigate the negative visual impact of constantly flashing lights. Are you aware of the technology and should I be in contact with someone in your El Centro office for further information? I noticed today DOI requesting golden eagle mitigation strategy of lowering the number of turbines.

F2-1

F2-2

F2-3



Thanks and look forward to hearing from you.  
Greg

Gregory S. Erdmann

OCAS, Inc.  
1934 Old Gallows Rd.  
Vienna, VA 22182 USA  
Office: (703) 752-6212  
Direct: (802) 878-8356  
Mobile: (802) 922-6482  
Email: [greg.erdmann@ocasinc.com](mailto:greg.erdmann@ocasinc.com) <<mailto:greg.erdmann@ocasinc.com>>  
Web: [www.ocasinc.com](http://www.ocasinc.com) <<http://www.ocasinc.com>>  
Skype: greg.erdmann

The Obstacle Collision Avoidance System (OCAS) reduces the visual impact of wind farms by keeping constantly flashing turbine lights off.  
Community acceptance of wind power is greatly increased by reducing the visual impact of wind turbines.

F2-4

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**From:** jeanne bennett <avipals@yahoo.com>  
**Sent:** Thursday, January 20, 2011 1:17 PM  
**To:** ECOSUB  
**Subject:** Solar Power

Why put solar-power facilities in the desert? Why not on rooftops of large buildings in the city and over parking lots in the city where the energy is needed? Disturbing the desert and erecting ugly power lines that loose some of the energy they transport is not a sensible way to obtain "green energy" for San Diego.

F3-1

Jeanne Bennett  
Solana Beach

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**From:** Marylubran@aol.com  
**Sent:** Thursday, January 20, 2011 6:52 AM  
**To:** ECOSUB  
**Subject:** Wind Farm near Boulevard, CA

I am a resident within a mile of a proposed wind farm west and south of Boulevard, CA...I will fight this all the way to the Supreme Court if necessary...we are in a so called "buffer zone".. A buffer zone protects what is on either side. So a buffer zone should be between the wind mills and the people...but we are in the middle of it on Jewel Valley Way and less than a mile from the project...this is NOT a buffer zone.

F4-1

The reports from around the world about the problems of living so close to such a facility are very well documented. We bought this place on Jewel Valley Way as a refuge from the hectic city pace and now we will get noise, sickness and a loss of money? I am a musician with very developed hearing and refrigerator noise is even disturbing. This is really upsetting. We will fight this by every legal means available.

F4-2

This is to say nothing of the FACT that this area is already a high risk for fire. With the wind farm there it will be even a higher risk and the wind will be coming our way and we could loose everything if there is a fire. As it is now it is hard to get home insurance and it is very costly. With the companies pay for our increased insurance costs? Our home if it is burned? The lose in value if we want to sell? This is only fair if they are making money on this that we should not loose money.

F4-3

This is not logical to put wind farms in high fire areas or areas where people are close... put them in greener areas and away from people.

God help us!  
 Mary Lu Brandwein  
 39745 Jewel Valley Way  
 Boulevard, CA 91905

[www.shakuhachi.org](http://www.shakuhachi.org)  
 858-945-8739

\*\*\*\*\*  
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Ned Israelsen, Manager  
**Thunder Valley, LLC**  
 PO Box 262; 34130 Morris Ranch Rd.  
 Mt. Laguna, CA 91948  
 January 20, 2011

JAN 25 2011

Iain Fisher, California Public Utilities Commission  
 Greg Thomsen, Bureau of Land Management  
 c/o Dudek  
 605 Third Street  
 Encinitas, CA 92024

Re: Proposed Thule Wind Energy Project

Dear BLM and California PUC:

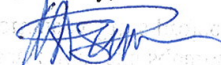
This is a letter of support for the Thule Wind Project. In particular, I am urging certification of the EIR/EIS for the project as originally proposed, without reduction in size.

I am a neighbor of the Ewiiapaayp Band of Kumeyaay Indians, owning the 325-acre Thunder Valley Ranch which adjoins the reservation on 2 sides of my property. The proposed project, including the portion on the Ewiiapaayp reservation, sits squarely within some of the best wind resources in California. I recognize the importance of this project to the members of the tribe, as well as our community and our nation.

Wind energy represents a major "green" resource and is currently a priority for reducing carbon emissions and dependence on fossil fuels. As it seems is true with everything, there is a balance here between the positive impact of wind energy on jobs, the local and national economy, and the global environment from displacement of fossil fuel, and the possible adverse impact on the local environment where the project is situated.

In my belief, the balance of interests tips strongly in favor of building the entire project, as proposed. I understand that whenever interests must be balanced, there is a temptation to "split the baby." Thus, there is a temptation to reduce the size of any proposed wind project. I believe such a knee-jerk response is inappropriate here. The local environmental impact is minor; mitigation can reduce impacts even further; and the public interest in favor of the project is very strong. Moreover, there are so few good wind sites, which will occupy such a small fraction of the U.S., that splitting the baby in each instance will dramatically reduce the amount of wind that can be developed in this country, to the detriment of all of us. Instead, there should be a strong bias in favor of developing all of our commercially-feasible wind resources, recognizing the relatively minor environmental impact of wind turbines and the tiny fraction of one percent of California that they could ever occupy.

Sincerely,



Ned Israelsen; 760-803-1279

F5-1

F5-2

JAN 25 2011



Real Estate Development  
Property Management  
General Contracting

LIC # 373142

1000 PIONEER WAY, EL CAJON, CA 92020  
PHONE: 619-440-7424 FAX: 619-440-8914

January 21, 2011

Ian Fisher, California Public Utilities Commission  
Greg Thomsen, Bureau of Land Management  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

Re: Proposed Tule Wind Energy Project

Dear BLM and California PUC:

This is a letter of support for the Tule Wind Project. In particular, I am urging certification of the EIR/EIS for the project as originally proposed, without reduction in size.

We own property that is south of and adjacent to the Tule project. The proposed project, includes 12 turbines that will be located on the northerly portions of our property and is located within some of the best wind resources in California as well as our community and our nation. Wind energy represents a major "green" resource and is currently a priority for reducing carbon emissions and dependence on fossil fuels. As it seems is true with everything, there is a balance here between the positive impact of wind energy on jobs, the local and national economy, and the global environment from displacement of fossil fuel, and the least adverse impact on the local environment where the project is proposed.

In my belief, the balance of interests tips strongly in favor of building the entire project, as proposed. I understand that whenever interests must be balanced, there is a temptation to reduce the scope of the Tule project.

The local environmental impact is minor; mitigation can reduce impacts even further; and the public interest in favor of the project is very strong. Moreover, there are so few good wind sites, which will occupy such a small fraction of the U.S., restricting development further, will end up pushing green energy south of the border, where we will pay the higher prices, but receive none of the benefits or jobs and tax base here.

We believe there should be a strong bias in favor of developing all of our commercially-feasible wind resources, recognizing the relatively minor environmental impact of wind turbines and the tiny fraction of less than one percent of California that they could ever occupy.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff Hamann", is written over a horizontal line. The signature is stylized with a large loop at the end.

Jeff Hamann

F6-1

F6-2

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**From:** Dale Stokes <dstokes@ucsd.edu>  
**Sent:** Tuesday, January 25, 2011 2:35 PM  
**To:** ECOSUB; catulewind@blm.gov  
**Subject:** TULE WIND PROJECT

JAN 23, 2011

Iain Fisher, California Public Utilities Commission  
Greg Thomsen, Bureau of Land Management  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

**Re: Proposed Tule Wind Power Project**

Dear Bureau of Land Management and California Public Utilities Commission:

I have lived in San Diego County for 21 years and urge you to certify the EIR/EIS for the Tule Wind project.

**The wind resource in McCain Valley is rare and valuable, and I feel confident that the mitigation measures proposed in the EIR will address the issues of concern. I ask you to keep the Tule Wind Power Project at its currently proposed size.**

If we are going to commit to renewable energy, the time to do so is now. We can't afford to delay bringing jobs, revenue and responsible renewable energy sources to our communities.

We unfortunately live in an era of 'concerned citizens' that promote the use of environmentally conscious practices on one hand, but, refuse to do so whenever they feel that impacts them directly, or appears "in their own backyard." It is time to think beyond self-interests and support a project that will benefit all San Diegans.

F7-1

F7-2

F7-3

As a resident of San Diego County, these issues are important to me. I urge you to certify the EIR/EIS and allow the Tule Wind Power Project to proceed as proposed. The impacts to our community will be far greater if this does not move forward.

↑  
F7-3  
Cont.

Sincerely,

Dr. M Dale Stokes  
9454 Poole St  
San Diego, 92037

\*\*\*\*\*  
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**From:** roderick warner <h0tr0dat60@gmail.com>  
**Sent:** Sunday, January 23, 2011 3:52 PM  
**To:** ECOSUB  
**Subject:** Proposed Tule Wind Power Project

Ian Fisher, Calif. Public Utilities Commission  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

**Re: Proposed Tule Wind Power Project**

Mr. James Fisher,

I have lived in San Diego County since 1990 and am very please to see this project  
and others like it being proposed.

The development of wind resources of McCain Valley is the best use of this water short land, and will be one  
more step in replacing fossil fuel.

We must commit to renewable energy. Fossil fuel will not be available forever and will become more  
expensive to extract and transport.

I am very happy to support this project. And I believe that the majority of San Diego County Residents  
approve. However, you may get more letters from opponents to the project.

Sincerely,  
Richard C. Warner

F8-1

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**From:** Marylubran@aol.com  
**Sent:** Monday, January 24, 2011 8:32 AM  
**To:** catulewind@blm.gov  
**Subject:** Fwd: Wind Farm near Boulevard, CA

The Wind Farm Proposed for Boulevard, CA has many residences located in less than a mile from the machines. This would make for a lot of noise and our properties uninhabitable. We bought our property to escape the noise of the city and this would make our property useless and impossible to sell. Why should some profit at the expense of others? Move the wind farms away from people if they must be.

F9-1

Also SDG&E doesn't need all the wind farms proposed to fulfill its quote of increased energy output and so I can only think this is greed on its part and some deal with the owners of the properties involved. This would only be acceptable to us if SDG&E would buy our property at full normal value.

We are in a so called "buffer zone".. A buffer zone protects what is on either side, So a buffer zone should be between the wind mills and the people...but we are in the middle of it on Jewel Valley Way and less than a mile from the project...this is NOT a buffer zone.

The reports from around the world about the problems of living so close to such a facility are very well documented. We bought this place on Jewel Valley Way as a refuge from the hectic city pace and now we will get noise, sickness and a loss of money? I am a musician with very developed hearing and refrigerator noise is even disturbing. This is really upsetting. We will fight this by every legal means available.

F9-2

This is to say nothing of the FACT that this area is already a high risk for fire. With the wind farm there it will be even a higher risk and the wind will be coming our way and we could loose everything if there is a fire. As it is now it is hard to get home insurance and it is very costly. With the companies pay for our increased insurance costs? Our home if it is burned? The lose in value if we want to sell? This is only fair if they are making money on this that we should not loose money.

This is not logical to put wind farms in high fire areas or areas where people are close... put them in greener areas and away from people.

People laugh because we want to escape to a beautiful setting after working hard all week in the city. It is necessary to recuperate. Also with the stock market the way it is land seemed the only sure investment and now SDG&E will make that worthless too? Where is there an answer? We will NOT accept the wind farm 1,250 feet from our home!!!!!!

F9-3

God help us!  
 Mary Lu Brandwein  
 39745 Jewel Valley Way  
 Boulevard, CA 91905

[www.shakuhachi.org](http://www.shakuhachi.org)  
 858-945-8739

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**From:** Gerry Hodge <nonaonlomond@cox.net>  
**Sent:** Monday, January 24, 2011 3:59 PM  
**To:** ECOSUB  
**Subject:** Proposed Wind Projects

To concerned people attending HEARINGS on Tule Wind and related projects:  
Use future wind turbines as part of the fencing project on the borders of Mexico and USA.

⌈ F10-1

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Dec 21 2011

To: Cain Fisher / Greg Thomsen, et.

I am a resident of Boulevard Ca 91905. I live at 39519 Avenida de Robles Verdes, Boulevard Ca. I bought in 2002. I was then diagnosed with ovarian cancer. I am having problems with my ears. The doctors say it is not related to ovarian cancer.

I want to spend my remaining years... here in Boulevard.

The doctors say they are not sure what is wrong with my ears, so they gave me some medicine.

I am against the wind turbines in the Boulevard area. there is a lot of land, other than Boulevard that these could be placed.

In Boulevard we have a Volcenter Fire Dept. These are a well known health and fire hazard.

A lot of people up here are older and to have a fire up here would require that they be uprooted and may lose their homes to fire.

Please stop the wind turbine from coming to our neighbor hoods and making our lives exposed. these

F11-1

F11-2

F11-3



health problems and noise levels  
will effect everyone up here.

the low hum of the wind turbines  
by the Acorn Casino, is constant!  
when the wind blow them apart  
fiber glass was blown all over  
surrounding properties.

Renewable energy is the thing of  
the future for our country.

But there mountains that are further  
away than McCain Valley, Jacumba  
Mesa Valley, Bank Head Springs and  
else where, which would suit this  
energy program better! why make

us sick from the magnetic energy  
field which is generated from these  
turbines.

Please listen to the people of our  
community, that don't want this here!  
What about the area out by the  
look out, past Intopa? those mountains  
are secluded and it is very windy there.  
As a property owner, a 2 1/2 cancer  
survivor and tax payer, find a  
location less populated to put this  
energy project.

Thank you for reading my letter

Angel Toranzo

39519 Avenida de Pueblos Verdes  
Boulevard Co 91905

You may contact me @ 619 454-4383

F11-3  
Cont.

F11-4

F11-5

F11-6

F11-7

1-25-2011

JAN 27 2011

Iain Fisher, California Public Utilities Commission  
Greg Thomsen, Bureau of Land Management  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

**Re: Proposed Tule Wind Power Project**

Dear Bureau of Land Management and California Public Utilities Commission:

I have lived in San Diego County for \_\_\_ years and urge you to certify the EIR/EIS for the Tule Wind project.

**The wind resource in McCain Valley is rare and valuable, and I feel confident that the mitigation measures proposed in the EIR will address the issues of concern. I ask you to keep the Tule Wind Power Project at its currently proposed size.**

If we are going to commit to renewable energy, the time to do so is now. We can't afford to delay bringing jobs, revenue and responsible renewable energy sources to our communities.

- ☒ The wind resource in McCain Valley is rare and valuable, and I feel confident that the mitigation measures proposed in the EIR will address the issues of concern. I ask you to keep the Tule Wind Power Project at its currently proposed size.
- ☒ More than five years of environmental studies at the Tule Wind Power Project area have shown low use by sensitive or endangered species. I understand that Iberdrola Renewables has a long history of working hard to site wind farms responsibly, and participates actively in studies to look at ways to reduce wind power's impact on wildlife.
- ☒ The Tule Wind Power Project will reduce CO2 emissions by approximately 250,000 tons per year, making our air cleaner, reducing our impact on climate change and lowering our dependence on foreign oil.
- ☒ The Tule Wind Power Project will provide renewable energy to power more than 60,000 San Diego area homes and go a long way toward helping the region meet California's renewable energy goals.
- ☒ This area in East San Diego County is one of the few remaining quality wind resource areas in the U.S. Let's use the power of this natural wind to our benefit and that of our children in the future.
- ☒ In this economy, we need jobs, and this project will create approximately 325 jobs at the peak of construction and 12 permanent jobs for local residents. It will also bring \$5 million per year to the County of San Diego in tax revenue.
- ☒ The project is proposed in a remote, rugged and sparsely populated area, and the wind turbines would be unseen by nearly everyone.

F12-1

- ☒ Less than two percent of the land in the wind project area will be used for actual wind power production, leaving the land free for existing recreational uses.
- ☒ Through their work on many other projects across the country, Iberdrola Renewables has shown a strong track record of developing wind energy projects that minimize impacts to the surrounding community.
- ☒ Decisions to invest in clean energy are overdue. We need our elected officials to make tough choices today for a cleaner tomorrow. Let's continue San Diego County's role as a leader in clean technology with the Tule Wind Project.

As a resident of San Diego County, these issues are important to me. I urge you to certify the EIR/EIS and allow the Tule Wind Power Project to proceed as proposed. The impacts to our community will be far greater if this does not move forward.

Sincerely,

William Carson Joyce  
(805) 705-3564  
1404 Tyler Avenue  
San Diego, CA 92103

F12-1  
Cont.

January 25, 2011

Iain Fisher, California Public Utilities Commission  
 Greg Thomsen, Bureau of Land Management  
 c/o Dudek  
 605 Third Street  
 Encinitas, CA 92024

**Re: Proposed Tule Wind Power Project**

Dear Bureau of Land Management and California Utilities Commission:

My husband and I have lived in San Diego County for all of our lives, and have lived in the backcountry for more than 30 of those years. He is 73 and I am 69. We are very interested in alternative energy and would have personal solar and windmills if we could afford it. Even with all of the available refunds offered by the Government we have not been in a financial position to take advantage of these technologies. I suspect that most people are in similar situations.

F13-1

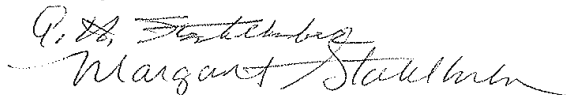
Committing to alternative green energy will need to be done on a large commercial basis such as the Tule Wind Power Project in order for most of us to be able to participate.

We need to find and utilize all available renewable resources now. We cannot wait until the last minute to develop these technologies. We urge you to certify the EIR/EIS for this project. We have been out to McCain Valley. It seems a very good location, and fairly remote. Do not make the mistake that San Diego has made for the last 40 or 50 years regarding the relocation of Lindberg Field by losing the opportunity of an excellent location due to growth.

F13-2

Windmills need wind and McCain Valley has that, a resource not found everywhere. We encourage you to approve this project at its currently proposed size. Every step we can take to reduce our dependency on foreign oil must be taken, especially in this modern age where we are finding more and more ways to utilize that energy.

Sincerely,



Alvin and Margaret Stahlheber  
 1075 Meanwhile Ranch Road  
 Campo, CA 91906  
 (619) 478-5011



**From:** Marylubran@aol.com  
**Sent:** Wednesday, January 26, 2011 7:43 AM  
**To:** catulewind@blm.gov  
**Subject:** Wind Farm south of Boulevard, CA

Please read. Please listen. Or is it just about money?  
 Wind energy is not clean...it takes its toll on the environment and on people.

F14-1

The Wind Farm Proposed for Boulevard, CA has many residences located in less than a mile from the machines. This would make for a lot of noise and our properties uninhabitable. We bought our property to escape the noise of the city and this would make our property useless and impossible to sell. Why should some profit at the expense of others? Move the wind farms away from people if they must be.

F14-2

Also SDG&E doesn't need all the wind farms proposed to fulfill its quote of increased energy output and so I can only think this is greed on its part and some deal with the owners of the properties involved. This would only be acceptable to us if SDG&E would buy our property at full normal value.

We are in a so called "buffer zone".. A buffer zone protects what is on either side, So a buffer zone should be between the wind mills and the people...but we are in the middle of it on Jewel Valley Way and less than a mile from the project...this is NOT a buffer zone.

The reports from around the world about the problems of living so close to such a facility are very well documented. We bought this place on Jewel Valley Way as a refuge from the hectic city pace and now we will get noise, sickness and a loss of money? I am a musician with very developed hearing and refrigerator noise is even disturbing. This is really upsetting. We will fight this by every legal means available.

F14-3

This is to say nothing of the FACT that this area is already a high risk for fire. With the wind farm there it will be even a higher risk and the wind will be coming our way and we could lose everything if there is a fire. As it is now it is hard to get home insurance and it is very costly. With the companies pay for our increased insurance costs? Our home if it is burned? The loss in value if we want to sell? This is only fair if they are making money on this that we should not lose money.

This is not logical to put wind farms in high fire areas or areas where people are close... put them in greener areas and away from people.

People laugh because we want to escape to a beautiful setting after working hard all week in the city. It is necessary to recuperate. Also with the stock market the way it is land seemed the only sure investment and now SDG&E will make that worthless too? Where is there an answer? We will NOT accept the wind farm 1,250 feet from our home!!!!!!

F14-4

God help us!  
 Mary Lu Brandwein  
 39745 Jewel Valley Way  
 Boulevard, CA 91905

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 858-945-8739

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 858-945-8739

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**From:** Jeanne Davies <envirojeanne@yahoo.com>  
**Sent:** Wednesday, January 26, 2011 11:27 AM  
**To:** ECOSUB  
**Subject:** wind farms

We have enough flat open space in sd for althe energy devices necessary for our needs. Jeanne Davies

| F15-1

sd for

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**CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC)/  
BUREAU OF LAND MANAGEMENT (BLM)**



**Draft Environmental Impact Report/  
Environmental Impact Statement (EIR/EIS)  
for East County Substation, Tule Wind, and  
Energia Sierra Juarez Gen-Tie Projects**

**Written Comment Form  
(please print)**

Name\*: Edwin Fleming

Affiliation (if any):\*

Address\*: 2353 Ticora Hts Rd

City, State, Zip Code\*: Boulevard Ca 91905

Telephone Number\*: 858-337-0330

Email\*: efleming@smi-mfg.com

I support the Tule Wind Power Project for a few reasons. The main reason I support the Tule Wind Power Project is that it will boost the local economy that has been dead for years. This project will boost the economy not only here but around the country. From making turbine parts and towers for the windmills to the local businesses that drill for well water. Our community needs this project to move forward to help our local families obtain jobs to care for their families and get off the crutch of the government. In my opinion only good can come from pushing this project forward. Thank you for taking the time to read my comment and thank you in advance for giving birth to the Tule Wind Power Project.

F16-1

\* Please print. Your name, address, and comments become public information and may be released to interested parties if requested.

Please either deposit this sheet at the sign-in table before you leave today, or fold, stamp, and mail. Insert additional sheets if needed. Comments can also be emailed or faxed.

(See reverse for additional information)



**CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC)/  
BUREAU OF LAND MANAGEMENT (BLM)**



**Draft Environmental Impact Report/  
Environmental Impact Statement (EIR/EIS)  
for East County Substation, Tule Wind, and  
Energia Sierra Juarez Gen-Tie Projects**

**Written Comment Form  
(please print)**

Name\*: Desiderio Vela  
Affiliation (if any)\*: Emiliaapaay Band of Kumeyaay  
Address\*: P.O. Box 1648  
City, State, Zip Code\*: Boulevard Ca 91905  
Telephone Number\*: 619 445 6315  
Email\*: dVela@leaningrock.net

I am writing this statement as a  
show of support for the Tule wind project.  
~~If~~ reduction in numbers of Turbines and realignment  
and redesign of ~~the~~ high voltage line be place underground,  
will reduce environmental impacts then lets chose and  
alternative of which can accomate all concerns  
and also hire and have staff ~~archeological~~ archeological  
monitors during all ground Disturbance and have  
a survey plan in place in case something is  
~~discovered~~ discovered.

F17-1

This project will provide employment  
for the local community and also provide green  
energy for all on the grid.

F17-2

\* Please print. Your name, address, and comments become public information and may be released to interested parties if requested.

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(See reverse for additional information)

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**From:** Nash Williams <anashwilliams@yahoo.com>  
**Sent:** Wednesday, January 26, 2011 11:55 PM  
**To:** catulewind@blm.gov  
**Cc:** Richard Caputo  
**Subject:** Fw: The Tule wind power project

Forwarded Message ----

From: Nash Williams <anashwilliams@yahoo.com>  
To: ecosub@dudek.com  
Cc: Editor North County Times <Editor@nctimes.com>  
Sent: Wed, January 26, 2011  
Subject: The Tule wind power project

Support for renewable power is a must,  
clearly a no-brainer. Tule has my vote!  
A. Nash Williams, JPL retiree  
with solar panels delivering me 12 monthly checks from SDGE each year.  
A. N. Williams, P.E.

F18-1

\*\*\*\*\*

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Iain Fisher, California Public Utilities Commission  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

Re: Proposed Tule Wind Power Project

Dear California Public Utilities Commission:

I have lived in San Diego County for 15 years and urge you to certify the EIR/EIS for the Tule Wind project.

The wind resources at McCain Valley are valuable.

I feel confident that the mitigation measures proposed in the EIR will answer any issues of concern. I ask you to keep the Tule Wind Power Project at its current proposed size.

F19-1

Decisions to invest in clean energy are very important. We need our elected officials to make important choices today for a cleaner tomorrow. Also this project will bring in \$5 million per year to the County of San Diego in tax revenue.

F19-2

As a resident of San Diego County, these issues are important to me. I urge you to certify the EIR/EIS and allow the Tule Wind Power Project to proceed as proposed.

Sincerely,

Clio Gatt

2065 Buckman Springs Rd. phone: 619-478-2639  
Campo, CA 91906

Greg Thomsen, Bureau of Land Management  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

Re: Proposed Tule Wind Power Project

Dear Bureau of Land Management:

I have lived in San Diego County for 15 years and urge you to certify the EIR/EIS for the Tule Wind project.

The wind resources at McCain Valley are valuable. I feel confident that the mitigation measures proposed in the EIR will answer any issues of concern. I ask you to keep the Tule Wind Power Project at its current proposed size.

Decisions to invest in clean energy are very important. We need our elected officials to make important choices today for a cleaner tomorrow. Also this project will bring in \$5 million dollars per year to the County of San Diego in tax revenue.

As a resident of San Diego County, these issues are important to me. I urge you to certify the EIR/EIS and allow the Tule Wind Power Project to proceed as proposed.

Sincerely,

Clio Gatt

2065 Buckman Springs Rd.  
Campo, CA 91906

phone: 619-478-2139

F19-3

**From:** Brendan Hughes <jesusthedude@hotmail.com>  
**Sent:** Saturday, January 29, 2011 8:31 PM  
**To:** catulewind@blm.gov  
**Subject:** Comments on the Proposed Tule Wind Project

To whom it may concern:

My name is Brendan Hughes and I would like to comment on the DEIS for the proposed Tule Wind, ECO Substation, and ESJ Gen-Tie project. I urge BLM to choose the No Project Alternative 1. This project has many flaws that warrant rejection. First, it will severely impact biological, cultural, and visual resources. Also, the placement of the project is amongst many sensitive areas. For these reasons BLM should not allow this project to move forward.

F20-1

The Tule Wind project will have negative impacts on biological resources. The federally-endangered Quino checkerspot butterfly occurs on the project site, and the endangered peninsular bighorn sheep is likely to use the area for foraging or to migrate to seek a mate. Among some of the other sensitive species that inhabit or forage on the project site are golden eagles, rosy boas, and spadefoot toads, in addition to many others. Placing 400-foot tall wind turbines and their associated access roads in this sensitive area will lead to habitat degradation, fragmentation, and direct mortality due to construction and maintenance activity. Also, the turbine blades themselves and power poles will kill a variety of birds and bats. This project would also cut off wildlife corridors between Anza-Borrego State Park, BLM Wilderness Areas, and the Cleveland National Forest. In light of Climate Change, wildlife linkages are all the more important for northern and upward habitat shifts. Additionally, cultural resources will be disturbed beyond repair and will lose their significance. Finally, the visual impact of these roads and turbines will ruin the scenic quality of this part of eastern San Diego county. The siting of this project in such a rich and diverse habitat is unconscionable.

F20-2

F20-3

F20-4

F20-5

The placement of this project is also terrible due to its proximity to several sensitive, protected areas. Adjacent to this project are Anza-Borrego State Park and Wilderness, Sawtooth Mountains Wilderness, Carrizo Gorge Wilderness, In-Ko-Pah Mountains ACEC, and the Cleveland National Forest. This project will also be visible from the Jacumba Mountains Wilderness and the Pacific Crest National Scenic Trail. This project will render the McCain Valley National Cooperative Land and Wildlife Management Area meaningless because the wind turbines and roads will fill up the remaining portion of it. With much of the surrounding area in private hands, BLM should retain the land this project would consume in its current, natural state. The placement of this project could scarcely be worse. BLM should recognize this and reject this ill-conceived proposal.

F20-6

Thank you for your consideration.

Brendan Hughes  
 61093 Prescott Trail  
 Joshua Tree, CA 92252

NOTE: Please send me updates regarding this matter via email. I do not want to receive printed items. Thanks.

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**CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC)/  
BUREAU OF LAND MANAGEMENT (BLM)**



**Draft Environmental Impact Report/  
Environmental Impact Statement (EIR/EIS)  
for East County Substation, Tule Wind, and  
Energia Sierra Juarez Gen-Tie Projects**

**Written Comment Form  
(please print)**

Name\*: ROBERT MAUPIN

Affiliation (if any):\*

Address\*: 904 TIERRA DEL SOL ROAD

City, State, Zip Code\*: BOULEVARD CALIF. 91905

Telephone Number\*: 619-766-4463

Email\*: ROM 904@HUGHES.NET

SEE ATTACHED

\* Please print. Your name, address, and comments become public information and may be released to interested parties if requested.

Please either deposit this sheet at the sign-in table before you leave today, or fold, stamp, and mail. Insert additional sheets if needed. Comments can also be emailed or faxed.

(See reverse for additional information)

January,29 2011

I have had the chance to review the Draft EIR/EIS document, in particular section D 10.8, that discusses health risks associated with EMF etc. To my surprise, it is mentioned that there COULD be a greater risk of childhood leukemia and there COULD be a risk that this is a carcinogen to people. Of course, the findings are conflicting, and don't show this to be a verified problem. I do not find this surprising in a document compiled for a utility project.

F21-1

Within two years of the start up of the SWPL, which runs through our property, my wife started to have dizzy spells, nausea, vomiting, and passing out. After going to many and various medical specialists we ended up at a hematologist. He said that she had polycythemia rubra vera, which was brought on by something in our environment that altered her bone marrow. The alteration led to the production of platelets by the millions, a marked increase in red and white blood cells, and small blood clots causing TIAs which are mini strokes. They happened each time a clot reached her brain. The treatment for this medical problem, which is incurable, is oral chemotherapy and phlebotomies. The drug suppresses the bone marrow to slow down its production of platelets and the phlebotomies control the red and white cells. The alternative to this is more frequent and larger strokes until death.

F21-2

The only change in our environment was the addition of the aforementioned SWPL which is about 600 feet from our house. Polycythemia rubra vera is closely related to leukemia. During the same time, we lost a dog to what the veterinarian said was leukemia. Since then, the vet said that there have been many dogs that have died from leukemia---all lived somewhere near the SWPL.

I believe that there needs to be an in-depth study of health problems in those that are living under and around high voltage lines. Not lab type as are used in the document, but on the ground medical analyses of people and animals having problems after the installation of the lines. One of the people that I spoke to at the January 26, 2011, meeting in Jacumba told me that his father had been in the electric field all his life, and there are no adverse affects associated with EMF, etc. I related to him that my father smoked for more than seventy years and never had any breathing or lung problems. So I assume I should think that there are no ill effects associated with smoking? The tobacco companies took this stance so as not to affect their bottom line financially. I believe that is the same thing happening with the power companies.

F21-3

Although this document does not address the line going through Alpine, directly in front of a grade school and the soon to be built junior-senior high school, I do not see how, in good conscience, Sempra/ San Diego Gas and Electric can do this without a much more in-depth study of the effect on those who travel on, and live in, the vicinity of that road all the time.

F21-4



R. O. Maupin

**From:** THEMIGHTYQ <THEMIGHTYQ@cox.net>  
**Sent:** Sunday, January 30, 2011 11:29 AM  
**To:** catulewind@blm.gov  
**Subject:** Public Comment on Windmill Industrialization

Register this as a NO to the proposed acres of 500 foot windmill farms in East San Diego County and miles of ugly worthless power lines completely destroying the environment in the back country. This will absolutely ruin the picturesque view on the way into and out of San Diego along Highway 8. It will also impose a monstrosity upon the locals there and eliminate any enjoyment that anyone in town would have by spending a day "in the country."

F22-1

I don't think that most people in San Diego are aware of the windmill industrialization, otherwise there would be a lot more outcry against.  
 You haven't done nearly enough to alert the public.

F22-2

The supporters of the Windmills are mostly from Northern Cal and the likes of Robert Kennedy Jr. and other out of town do gooders and profiteers, including foreign corporations.

You know that they are making us pay for this inefficient and pathetically ugly system by jacking up rates for real electric production.

F22-3

These windmills are becoming a problem all across the USA, except were the supporters reside, as they don't want it in their backyard.

The windmills if used at all should be placed completely away from population centers, for example, in the hottest part of the desert or off the coast of Camp Pendleton. Instead they are planned in mountain areas and present a high risk of fires blowing through the county, visual and noise pollution, destruction of land use and property values.

F22-4

This is incredible given that they don't work efficiently and are only produced due to government subsidies.

Please do not allow these projects or government subsidy and vote against archaic, destructive windmill industries located in populated fire prone areas.

F22-5

Barrance Q Zakar  
 Alpine, Ca.

\*\*\*\*\*  
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January 31, 2011

Iain Fisher, California Public Utilities Commission  
Greg Thomsen, Bureau of Land Management  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

Re: Proposed Tule Wind Power Project

Dear Bureau of Land Management and California Public Utilities Commission:

I am a resident of San Diego County who has lived here since 1982 and I urge you to certify the EIR/EIS for the Tule Wind project.

The wind resource in McCain Valley is rare and valuable, and I feel confident that the mitigation measures proposed in the EIR will address the issues of concern. I ask you to keep the Tule Wind Power Project at its currently proposed size.

I believe that renewable energy is critical to meeting San Diego's growing power demands and long-term energy concerns. Wind energy is a free and unlimited resource. It helps California reach its renewable energy goals, lowers our dependence on imports of natural gas, oil and other fuels, and reduces smog and greenhouse gas pollution.

The Tule Wind Power Project will reduce CO2 emissions by approximately 250,000 tons per year, making our air cleaner and reducing our impact on climate change. As with any wind farm, less than two percent of the land in the wind project area will be used for actual wind power production, leaving the land free for existing recreational uses.

The Tule Wind Power Project will provide renewable energy to power more than 60,000 San Diego area homes, bring \$5 million annually to county revenues, and create approximately 325 much-needed jobs at the peak of construction and 12 permanent jobs for local residents.

If we are going to commit to renewable energy, the time to do so is now. We can't afford to delay bringing jobs, revenue and responsible renewable energy sources to our communities.

As a resident of San Diego County, these issues are important to me. I urge you to certify the EIR/EIS and allow the Tule Wind Power Project to proceed as proposed. The impacts to our community will be far greater if this does not move forward.

Sincerely,



HELENE DEBRA IDELS  
739 Dellcrest Way  
Escondido, CA 92027  
760-294-2842

F23-1

-----Original Message-----

From: jimburnsfree [mailto:jimburnsfree@me.com]

Sent: Wednesday, February 02, 2011 9:03 PM

To: ECOSUB; catulewind@blm.gov

Subject: This version of my comments includes our address as requested in your handout. Thank you.

Dear Mr. Fisher, Mr. Thomsen,

My name is James Freeburn. I met Iain Fisher tonight at the Boulevard informational meeting and discussed the routing of power lines around the private airstrip off Jewel Valley Rd and subsequently through my properties.

F24-1

I write on behalf of over 100 people who form our greater church community to support the proposed alternative routes designated ECO 3C/3E as opposed the currently proposed route ECO 3B.

Our community purchased three parcels of land in 1994/1995 and began operating a yoga/meditation retreat in Boulevard, CA. We operate out of two tax exempt 501(c)(3) non-profits one of which is recognized as a church by the IRS. Our church is called New Being Project and our land holding non-profit is called Rasayana. One of our major parcels and a smaller one are held in trust by long standing community member Luke Gordon of Denver Colorado. All together our adjacent parcels span 165 acres. We have been holding retreats since 1995. We have served many hundreds of people, many for free. Our church is non-denominational and is guided by the wisdom of many saints and masters of yoga and the world's religions. People come to get away from the hustle and bustle of their personal lives and hectic city life. We offer space to meditate, learn, heal, and rejuvenate. We host many groups and programs. We have given free food and free healing experiences to many locals and people who have travelled from afar to be with us. Our community is 37 years old and has done a lot of good work for the local community and beyond.

F24-2

Proposed route ECO 3B jogs around an improperly zoned, unpermitted airstrip and effectively cuts our property in half by running along the border of the two major adjacent parcels both of which we own and out of which we operate our yoga/church retreat facility. It then runs along side our 40 acre parcel and cuts back across at the northern end. It comes within a few hundred feet of some of our buildings. The power lines will greatly detract from the strikingly natural setting which is home to our retreat center. EMF is also controversial and not a good image for our healing and detox purposes.

F24-3

No doubt our neighbors will also be negatively impacted by the power lines running through all the residential properties along side ours. It appears that alternative routes ECO 3C/3E are a shorter, more direct route and impact residential property to a much lesser degree.

F24-4

We implore the planners of this project to adopt the ECO 3C/3E alternatives. Please represent our concerns appropriately in your planning process. Thank you very much.

James Freeburn  
Vice-President  
New Being Project/Rasayana  
1585/1521 Jewel Valley Rd  
Boulevard CA, 91905

619-758-5360

\*\*\*\*\*  
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**From:** Mannixarch@aol.com [mailto:Mannixarch@aol.com]  
**Sent:** Wednesday, February 02, 2011 10:44 AM  
**To:** ECOSUB  
**Cc:** catulewind@blm.gov  
**Subject:** Application 09-08-003 Electrical Facilities

Hello Lain Fisher,  
Greg Thomsen,

We are writing about the Electrical Facilities in the East County area of San Diego County. We own property in Jacumba CA.

We are concerned with the health risk with the 200KV lines. Does this cause any health issues? This topic needs to be addressed.

We are also concerned with adding towers and a sea of wires since the area is of a natural landscape. This issue needs to be addressed.

Thanks,

Dan & Tami Mannix

439 El Cajon Blvd  
El Cajon, Ca 92020

Office: 619-588-7730  
Fax: 619-588-2932  
Cell: 619-302-7730

F25-1

\*\*\*\*\*

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**CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC)/  
BUREAU OF LAND MANAGEMENT (BLM)**



**Draft Environmental Impact Report/  
Environmental Impact Statement (EIR/EIS)  
for East County Substation, Tule Wind, and  
Energia Sierra Juarez Gen-Tie Projects**

**Written Comment Form  
(please print)**

Name\*: Alan Ridley  
Affiliation (if any)\*: Cajamaca College  
Address\*: 900 Rancho SD Parkway  
City, State, Zip Code\*: El Cajon CA 92019  
Telephone Number\*: (619) 660-4425  
Email\*: alan.ridley@ccc.edu

I am broadly in favor of wind power development in East San Diego County. It makes sense to develop wind resources where the wind is. It is like making lemonade out of lemons.

F26-1

I look forward to learning more details of the Tule Wind project so I can comment more specifically.

Local sources of power create energy security for our region & nation.

F26-2

I encourage fact based dialog & further discussion. I would also like to encourage renewable energy seminars\* & public discussion so benefits & pitfalls can be further examined.

F26-3

Don't curse the darkness; light a candle.

Don't curse the wind; harvest the power!

\* and Learning Center or Renewable Energy Museum

\* Please print. Your name, address, and comments become public information and may be released to interested parties if requested.

Please either deposit this sheet at the sign-in table before you leave today, or fold, stamp, and mail. Insert additional sheets if needed. Comments can also be emailed or faxed.

(See reverse for additional information)



Letter of Support

February 2,2011

This is being written in support of the Tule Wind Project. Understandably following CEQA and NEPA guidelines that an alternative will be chosen other than the original desire design and that alignments and mitigations measures will be in place. I have faith in the Department of Interior and the California Public utilities commission will act in good faith to approve the project and will insure that all surveys will continue during the active life of the project and than a stipulation be in place that qualified archeologist and native American monitors be in place during all ground disturbance and an action plan be in place if new artifacts are discovered. This project is good for the environment and good for the surrounding communities for retail and support service to contract with the developer and will generates income for all associated with the project.

F27-1

F27-2

F27-3

Desiderio Vela

PO Box 1648

Boulevard, Ca 91905



**CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC)/  
BUREAU OF LAND MANAGEMENT (BLM)**



**Draft Environmental Impact Report/  
Environmental Impact Statement (EIR/EIS)  
for East County Substation, Tule Wind, and  
Energia Sierra Juarez Gen-Tie Projects**

**Written Comment Form  
(please print)**

Name\*: PHILIP VILLANUEVA  
 Affiliation (if any)\*: \_\_\_\_\_  
 Address\*: 10032 PINWOOD VIEW  
 City, State, Zip Code\*: SANTEE CA 92071  
 Telephone Number\*: 619-449-2355  
 Email\*: \_\_\_\_\_

I support this project 100%.  
 Now is the time to act. Lots  
 of wind is being wasted.  
 Use it.

*Philip Villanueva*

F28-1

\* Please print. Your name, address, and comments become public information and may be released to interested parties if requested.

Please either deposit this sheet at the sign-in table before you leave today, or fold, stamp, and mail. Insert additional sheets if needed. Comments can also be emailed or faxed.

(See reverse for additional information)

**From:** Jim wiegand [mailto:jim@jimwiegand.com]

**Sent:** Wednesday, February 02, 2011 10:56 PM

**To:** ECOSUB

**Cc:** catulewind@blm.gov

**Subject:** Comments on Tule Wind/Energia Sierra Juarez Gen-Tie Projects Draft EIR

## Comments on Tule Wind/Energia Sierra Juarez Gen-Tie Projects Draft EIR

Iberdrola or Iberdrola Renewables, which is 80% owned by IBERDROLA, S.A., has produced its Draft Environmental Impact report to San Diego county for the proposed Tule Wind/Energia Sierra Juarez Gen-Tie Projects in the McCain Valley area of East County. I am submitting comments because I have found that this company has a history of submitting impacts reports that severely down play the most critical impacts of their wind projects.

F29-1

I am an expert on birds of prey and most of my comments will be related to them. I did however note that the impact report does not discuss potential impacts to two other federally endangered species, the Arroyo toad and the Least Bell's vireo both of which are known to live in the nearby Cleveland National Forest.

F29-2

Since the project a wind farm the impact report should have discussed the true dangers of a wind farm. What is not in the EIR is that every bird species that is forced to share their habitats with the propeller style wind turbine will eventually be killed by spinning wind turbine blades. The extensive species mortality lists that have been compiled at Altamont and in Europe show this. These mortality lists include peregrine falcons, swallows, and swifts, the fastest and most maneuverable birds on earth. The reason for the mortality is the extreme blade tip speeds that are generated by these turbines. It was not discussed but I calculated the turbines used in the project will have approximately 234 mph tip speeds at 20 RPMs. These blade tip speeds far exceed all the early model turbines installed at Altamont Pass.

F29-3

I can not stress this enough, all data, surveys and opinions given on behalf of Iberdrola should be viewed with suspicion. I say this because I have encountered major flaws in every report and survey that I have looked at. For example the EIR used in Iberdrola's PCV (Manzana) Project when commenting on the California Condor stated the following "In addition, no suitable foraging or nesting habitat were identified at the project as a result of more than 5,000 hours of biological

F29-4

surveys conducted at the site". Another condor statement in the final Pdv Mananza EIR stated, "Scientific literature also suggests that diurnal vultures, such as the California condor, are not at substantial risk for collisions with wind turbines". In addition, data on comparable species, such as turkey vultures, indicate that they skillfully avoid turbines". the report claimed: "As turbines are in an area with high visibility, condors could be expected to be able to avoid collisions with wind turbines at the project site."

F29-4  
Cont.

In contrast, the reality is that vultures are killed in great numbers each year throughout the world. The PDV document failed to disclose critical information about existing condor habitat in the project site. It was not disclosed that larger mammals (wild pig, elk, deer, cattle) and turkey populations reside in the upper portions of this wind farm site that are food sources for the condor. In actuality condor habitat did exist on the project site.

I recently looked over another survey conducted on behalf of Iberdrola concerning peregrine falcon use in the region of the proposed Groton Wind project in New Hampshire. The official Falcon Survey for the project site shows that researchers did not even observe the falcons when they would be the most active, during courtship in the Spring and during their daily dawn and dusk hunts. Yet the stated objective of the survey was to investigate whether peregrine falcons use the Project area. These observations are critical because it is during these behaviors the falcons are the most likely to be using the project site. It is also during these behaviors that a collision with a turbine is the most likely.

Even the observers themselves noted this flaw in the survey with the following statement; "Therefore, the results of the 2009 surveys can not describe peregrine activity during all daylight hours during the period of interest, or describe activity across the entire Project area."

F29-5

Yet Iberdrola, in their Executive Summary for the project, boldly makes the following statement based upon this survey; " Rare, threatened, or endangered bird species that were documented in the Project area during these surveys include peregrine falcon (state- listed threatened), bald eagle (state-listed threatened), and common loon (state- listed threatened). None of these species reside within the project area. No federally-listed threatened or endangered birds were observed during any of the field surveys."

This statement is false. I am an expert on Peregrine Falcon behavior and know with complete certainty these falcons do utilize the air space above the proposed Groton Wind Project site. They will use the project site and will be highly susceptible to turbine blade strikes.

F29-5  
Cont.

## California Condor Discussion in Draft EIR

Having stated the previous examples of flawed information given in Iberdrola impact documents, I will now point out misrepresentations concerning the California Condor. In the Tule Wind/Energia Sierra Juarez Gen-Tie Projects EIR is this carefully worded assessment: "The California condor is a federally and state-listed endangered species and is also Fully Protected. This species has been reintroduced to a number of locations within North America as described in Section D.2.1. Although the closest area used by the Baja-released condors is approximately 50 miles south of the Tule Wind Project, a female condor did fly from Baja over the Cuyamaca Rancho State Park area. The bird did not remain in the United States for more than a couple of days. However, this indicates that these birds could fly the distance to the project area. Although the habitat in the project area is suitable for a condor to forage within, there are no roosting or nesting opportunities, and nesting locations within the Sierra San Pedro de Martir National Park are approximately 100 miles south of the project area."

F29-6

There are many things wrong with this statement. (1) Condors can very easily fly, glide, and soar on wind currents more than 100 miles in a day. (2) Other condors could have flown to the Cuyamaca Rancho State Park area, but only one has been reported. (3) The area has suitable foraging habitat so the truth is, condors will always be drawn to the area. (4) It is claimed there are no roosting locations for the condor in the project area. Condors can and will use many of the same perches and rim rocks used by the 10 pairs of Golden Eagles reported living in the area. (5) It is also not disclosed that once the project is built there will be hundreds of new perches and roosting sites for condors and all birds of prey. These will be provided by the 60-200 foot towers and poles used for the project.

Here is another carefully worded and misleading statement from the EIR: "Within the Proposed PROJECT area, suitable foraging habitat includes agriculture, disturbed habitat, field/pasture, and non-native grassland, but this species is not likely to occur within San Diego County since the closest potential breeding population is located in Baja California, Mexico, as noted previously. The species

F29-7

could occasionally wander north from Baja, but breeding of the species in San Diego County has not been recorded since the 1880s (Unitt 2004)."

The fact that the condor will be moving north from Baja must be considered. I firmly believe the Condor will attempt to again nest in San Diego County and at the very least migrate through on a regular basis once the Baja Condor population gets established. San Diego County must understand that the Tule Wind/Energia Sierra Juarez Gen-Tie Projects will have a very serious impact upon critically endangered condor.

F29-7  
Cont.

The lethal propeller style wind turbines used in the project will prove to be a major road block in the condor recovery plans of the USFWS, the CDFG, and all involved in the recovery effort. The recovery plan for the condor calls for the free flying condors to the north of San Diego county, to eventually intermingle and breed with the southern BAJA population. This project will stop the free movement of the highly susceptible condors and keep them from getting established in eastern San Diego County. As a result the condor populations will forever be limited to the immediate areas around their feeding stations. In addition if the isolated Baja population expands or if individuals wants to extend their forage range, Condors can only move to the north towards San Diego County because of limited suitable habitat available in Baja. I have spent a considerable amount of time in the Baja habitat looking doing research in the 1970 's and saw first hand how ill suited most of the habitat is for the condor.

F29-8

It is my opinion that most of the habitat in Baja will not support any Condors. In a 1980 article written by Sanford R. Wilbur and Lloyd F. Kiff, they came to the same conclusion. It is titled " **The California Condor in Baja California, Mexico**". Here is what they had to say about the harsh Baja habitat and condors:

F29-9

1. "There is very little suitable habitat.--Although there are thousands of square miles of relatively uninhabited terrain in northern Baja California, much of it is desert. The region has never fully recovered from the drought of the 1930s. Native mammals are scarce, and livestock grazing is localized. Condors, particularly nesting birds not free to forage great distances, would have great difficulty finding food regularly. There is no other area in Baja California comparable to the Sierra San Pedro Martir, the location of most historical condor sightings. The Sierra



Juarez, for example, lacks the high mountain meadows with seasonally large numbers of cattle. The coastal mountains have potential nesting sites, but little food.

F29-9  
Cont.

2. There is little likelihood of vagrant birds coming from California.--Very few California Condors have been reported south of Los Angeles since 1910 (Koford 1953). There are no confirmed records since before 1966 (Wilbur 1978) While a condor has the capability of soaring great distances, and they do sometimes appear in unexpected places, in general they are traditional and predictable in their movements. For a California bird to appear in Baja California would require a minimum flight of more than 300 miles, in a non-traditional direction, and over considerable terrain that we think would have little or no attraction for a condor.

F29-10

### **Wind Farm Transparency**

It is well known that wind turbines cause bird and bat mortality however the total magnitude of this impact cannot ever be fully understood until there is complete transparency. This information is made even more difficult to obtain when the access the wind properties is limited by the industry itself. Keep in mind wind farms have been known to conceal blade strike victims as in Spain where the bodies of 19 unreported griffon vultures were found buried on wind farm property. I have also been told that contracts and leases have gag clauses written into them so information can be limited.

F29-11

To insure transparency all wind farms should be required to operate with specific conditions. Every wind farm should be subject to inspection at any time by non-industry biologists and the unreported disposal or hiding of bodies treated as a felony with corresponding fines. The use of 24 hour video camera/web cams with feeds to an accessible internet site should be required of any and all turbines in high priority habitats. Each wind farm should also be set up with mandatory mortality thresholds and shut down if these thresholds are met.

I hope San Diego County understands that their decisions about this project will greatly impact the future of the condor. It is my recommendation that based upon the impacts to the condor and this company's history of using deceptive wording and omissions describing their Biological Impact Reports, that San Diego County should deny the project.

F29-12

Jim Wiegand Redding Ca

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Barb A <[cedar816@live.com](mailto:cedar816@live.com)>

To <[ecosub@dudek.com](mailto:ecosub@dudek.com)>, <[catulewind@blm.gov](mailto:catulewind@blm.gov)>

cc Donna Tisdale <[tisdale.donna@gmail.com](mailto:tisdale.donna@gmail.com)>

02/03/2011 09:50 AM

Subject Public Comment

Declaration of Barbara Ashbee, provided as public Comment on the Joint California Public Utilities Commission and Bureau of Land Management Draft Environmental Impact Report /Draft Environmental Impact Statement (DEIR/DEIS) for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects: State Clearinghouse No. 2009121079 DOI-BLM-CA-D070-2010-0027-EIS (ECO Sub); DOI-BLM-CA-D070-2008-0040-EIS (Tule Wind)

Wind energy installations are causing health problems around the world. Sadly for the victims, there appears to be a concentrated effort to ignore and/or trivialize the impacts that these industrial installations are having on people. Well aware of the health issues and the fact that people are being forced to abandon their homes, many governments are ignoring the issues by continuing the push ahead with yet more wind energy projects. Sadly it is clear that they support the wind lobby groups and developers over the safety of their own constituents. It is an appalling situation and it must stop.

The only true way to determine what would be a safe setback for industrial wind turbines and their substations is to complete proper independent health studies. There have been no human health studies completed by any government and yet globally families continue suffering severe adverse effects since the turbines and substations started up too close to their homes.

The size of the wind installation or whether it is a community owned or corporate owned program is irrelevant. There is no benefit to polling people about waived or non-waivable participation. All residents, participating or non-participating must be protected, as should the technicians working with them. Whether one reaps any financial reward has nothing to do with whether they are experiencing adverse health effects. There are leaseholders making an income who regret their decision and are now suffering.

It is fact that excessive noise (audible) and low frequency noise (much of it inaudible but which penetrates walls and creates vibration) is being emitted from industrial wind turbines and they are causing health problems for those living in their midst. There is enough evidence from first-hand accounts to support this.

It is unconscionable to continue down the path of industrial wind turbine installations until independent 3rd party health studies are completed. No government mandate or policy should be allowed to affect the citizens in such a harmful way as these wind turbine installations have. To continue would be a reckless breach of public safety.

F30-1

In Ontario there are 2 legal challenges underway pertaining to the disregard for health issues by the provincial government who has been well informed of the distress families are experiencing. The 'precautionary principle' has certainly been ignored.

There were no front end health studies conducted to research this new technology and sadly after 4 years authorities still publicly deny the harm being perpetrated on families.

There are 115 people in Ontario reporting adverse health effects in response to a voluntary health survey that was created in 2009. This is very alarming considering there are only 690 turbines in operation. In addition, the number of adversely affected residents is seriously underreported due to many situational pressures. Among them are the fear of loss of privacy at filling out the survey (although identities are held strictly confidential), fear of reduced property values if one speaks publicly, fear of exposing children and other family members to the social stigma and backlash of speaking out against something "green" due to years of intense environmental social marketing and fear of causing upset to neighbours and others in their community. These are all valid concerns.

F30-1  
Cont.

Please consider that there are families who currently are suffering daily in their homes. These families were fine before the wind development started up and then they got sick. When they leave their homes they get better, when they go back they get sick. Many have to sleep elsewhere. Some drive away from their homes and sleep in their vehicles, some are renting safe houses (a heavy added financial burden) and some families are split up, living with friends and relatives. These people need help. They do not want to see more families hurt with additional wind turbines. These families, like yours, deserve to live in a healthy and safe environment in their own home.

All municipalities must first and foremost protect the residents.

Please put a halt to any more wind development until the proper health studies have been completed to determine safe regulations.

F30-2

Literature reviews sponsored by government or wind lobby panels cannot determine health effects of wind energy. For instance, Dr. Arlene King, the Ontario Chief Medical Officer of Health, who is well aware of the victims, released a literature review in which she concluded there was no link to adverse health effects caused by wind turbines. It is a very important to note that she did not contact even one of the many victims when working on her report. She certainly knew about them and one must question this omission of the obvious by Ontario's top doctor when conducting her 'research'.

F30-3

Please visit [www.windvigilance.com](http://www.windvigilance.com) and select the Society News tab to locate an in-depth analysis on both Dr. King's and the AWEA/CanWEA sponsored health reports. This site also has information on a control study of residents at a wind installation at Mars Hill, Maine by Dr. Nissenbaum. [http://www.windvigilance.com/society\\_news.aspx](http://www.windvigilance.com/society_news.aspx)

You can also access the WindVOiCe health survey results, found under its own tab.

[http://www.windvigilance.com/windvoice\\_home.aspx](http://www.windvigilance.com/windvoice_home.aspx)

My husband and I had to leave our home permanently and I personally know many others who have had to abandon their homes under incredible hardship while waiting for our government to step up and do the right thing. Sleep deprivation and sleep disturbance are at the top of the list of complaints. Tinnitus, chest pressure, heart palpitations, cognitive problems, headaches, stomach aches and dizziness are just some of the symptoms that both my husband and I experienced. We were healthy before the start-up of the wind turbines. After the start-up we got progressively sick living in our own home and ultimately had to leave. Our symptoms went away after we moved. The added anger, stress, and feelings of defeat by the injustice of a dismissive government weigh heavily on every family and add to the overall despair. Victims everywhere have lost trust and faith in their government, a government that is supposed to be protecting them, a government that is using the residents own tax money to fight against them by using splashy colourful advertisements on television, print and websites pushing the renewable wind energy mandate. This same government has signed secret deals with foreign corporations to press ahead while families are sick. How can one reconcile this?

Please do not let this happen to your citizens. Please research very carefully the consequences of poorly laid out plans by aggressive policies and developers alike.

Thank you for taking the time to read my submission. Everyone must agree that preserving the health and well-being of our families, of our pets, our livestock and wildlife is of paramount concern and is necessary for a healthy community.

Barbara Ashbee  
RR1 Orangeville,  
Ontario Canada  
L9W 2Y8  
519-941-9507

F30-3  
Cont.

**From:** fanshen@clearwater-hydrology.com [mailto:fanshen@clearwater-hydrology.com]  
**Sent:** Thursday, February 03, 2011 9:48 AM  
**To:** jimburnsfree  
**Cc:** Luke Gordon; Aba One; Mursshud Van Merlin; Jack Rudra; Sonya Aragon; ECOSUB; catulewind@blm.gov  
**Subject:** RE: Comment on EIR/EIS for East County Substation, Tule Winde, and Energia Sierra Jaurez Gen-Tie Project

Well done, Jim. You could also have referenced the earlier response I made on Rasayana's behalf to the draft EIR. Your reply emphasized all the critical points- in particular, the planner's ill-advised preference for avoiding the unpermitted, improperly zoned airstrip (Mattar's property?) to the detriment of our property.

F31-1

Thank You.  
Fanshen

William Vandivere, P.E. (Fanshen)  
Clearwater Hydrology  
2974 Adeline St.  
Berkeley, CA 94703  
(510)841-1836  
(510)841-1610 (fax)

----- Original Message -----

Subject: Comment on EIR/EIS for East County Substation, Tule Winde, and Energia Sierra Jaurez Gen-Tie Project  
From: jimburnsfree <[jimburnsfree@me.com](mailto:jimburnsfree@me.com)>  
Date: Wed, February 02, 2011 8:53 pm  
To: [ecosub@dudek.com](mailto:ecosub@dudek.com), [catulewind@blm.gov](mailto:catulewind@blm.gov)  
Cc: Luke Gordon <[skydanzer@comcast.net](mailto:skydanzer@comcast.net)>, Fanshen X <[fanshen@clearwater-hydrology.com](mailto:fanshen@clearwater-hydrology.com)>, Aba One <[murshida@mac.com](mailto:murshida@mac.com)>, Mursshud Van Merlin <[xaz@mac.com](mailto:xaz@mac.com)>, Jack Rudra <[jackrudra@mac.com](mailto:jackrudra@mac.com)>, Sonya Aragon <[sonyaaragon@me.com](mailto:sonyaaragon@me.com)>

Dear Mr. Fisher, Mr. Thomsen,

My name is James Freeburn. I met Iain Fisher tonight at the Boulevard informational meeting and discussed the routing of power lines around the private airstrip off Jewel Valley Rd and subsequently through my properties.

I write on behalf of over 100 people who form our greater church community to support the proposed alternative routes designated ECO 3C/3E as opposed the currently proposed route ECO 3B.

Our community purchased three parcels of land in 1994/1995 and began operating a yoga/meditation retreat in Boulevard, CA. We operate out of two tax exempt 501(c)(3) non-

profits one of which is recognized as a church by the IRS. Our church is called New Being Project and our land holding non-profit is called Rasayana. One of our major parcels and a smaller one are held in trust by long standing community member Luke Gordon of Denver Colorado. All together our adjacent parcels span 165 acres. We have been holding retreats since 1995. We have served many hundreds of people, many for free. Our church is non-denominational and is guided by the wisdom of many saints and masters of yoga and the world's religions. People come to get away from the hustle and bustle of their personal lives and hectic city life. We offer space to meditate, learn, heal, and rejuvenate. We host many groups and programs. We have given free food and free healing experiences to many locals and people who have travelled from afar to be with us. Our community is 37 years old and has done a lot of good work for the local community and beyond.

Proposed route ECO 3B jogs around an improperly zoned, unpermitted airstrip and effectively cuts our property in half by running along the border of the two major adjacent parcels both of which we own and out of which we operate our yoga/church retreat facility. It then runs along side our 40 acre parcel and cuts back across at the northern end. It comes within a few hundred feet of some of our buildings. The power lines will greatly detract from the strikingly natural setting which is home to our retreat center. EMF is also controversial and not a good image for our healing and detox purposes.

No doubt our neighbors will also be negatively impacted by the power lines running through all the residential properties along side ours. It appears that alternative routes ECO 3C/3E are a shorter, more direct route and impact residential property to a much lesser degree.

We implore the planners of this project to adopt the ECO 3C/3E alternatives. Please represent our concerns appropriately in your planning process. Thank you very much.

James Freeburn  
Vice-President  
New Being Project  
619-758-5360

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Feb 04 11 05:00p

Environmental Development

6194660234

p.1

February 4, 2011

In regards to: The Tule Wind Power Project

Mr. Iain Fisher, CPUC and Mr. Greg Thomsen, BLM  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

Fax: (800) 371-8854 (press "2")

Dear Mr. Fisher, and Mr. Thomsen:

SUBJECT: LETTER OF INQUIRY & SUPPORT.

I am writing for two reasons:

1. to inquire as to the CPUC' and BLM's objections to **certifying the EIR/EIS on the Tule Wind Power Project as it is currently proposed, and**
2. to comply with a request to provide a letter of support for **Iberdrola Renewables, Tule Wind Power Project.**

According to Iberdrola Renewables, the Tule Wind Power Project will provide the following:

- The Tule Wind Project will create approximately 325 jobs at the peak of construction.
- It will be located in a remote and sparsely populated area unseen by nearly everyone.
- The project will provide renewable energy to power 60,000+ San Diego area homes.
- The Tule Wind Power Project will reduce CO2 emissions by approximately 230,000-250,000 tons and save 149 million gallons of water per year over gas-fired generation, making our air cleaner and reducing our impact on climate change.
- Studies show this land has low use by sensitive or endangered species.
- Wind energy is a free and unlimited resource. It helps California reach its renewable energy goals, lowers our dependence on imports of natural gas, oil and other fuels, and reduces smog and greenhouse gas pollution.
- The local Ewiiapaay Band of Kumeyaay Indians tribe supports the Tule Wind Power Project and wants their land to be used to harness this valuable natural wind resource. If the project size is reduced, the tribal land will no longer be incorporated into the project.
- The wind resource in McCain Valley is rare and valuable.

As a resident of San Diego County, I would like to know if any of the above assertions are false or misleading. *If all the above claims are true, then I would be in full support of certifying Iberdrola Renewables, Tule Wind Power Project's EIR/EIS report as submitted.* In your reply, please provide any appropriate documentation supporting your denial or approval of this project. Thank you.

Sincerely,



Dana R. Chappell  
Environmental Development & Assoc.

NR

F32-1

F32-2

F32-3

F32-4

**From:** Lamar Parks [mailto:lamar323@cox.net]  
**Sent:** Friday, February 04, 2011 3:41 PM  
**To:** ECOSUB  
**Subject:** tule wind farm

February 2, 2011

Mr. Iain Fisher, California Public Utilities Commission  
Mr. Greg Thomsen, Bureau of Land Management  
c/o Dudek Engineering  
605 Third Street  
Encinitas, CA 92024

Re: Proposed Tule Wind Power Project

Dear Bureau of Land Management and California Public Utilities Commission:

I believe that the government agencies should approve the EIR for the Tule Wind Power Project because the project will provide the San Diego region with many benefits.

- The Tule Wind Project will create approximately 325 jobs at the peak of construction.
- It will be located in a remote and sparsely populated area unseen by nearly everyone.
- The project will provide renewable energy to power 60,000+ San Diego area homes.
- The Tule Wind Power Project will reduce CO2 emissions by approximately 230,000-250,000 tons and save 149 million gallons of water per year over gas-fired generation, making our air cleaner and reducing our impact on climate change.
- Studies show this land has low use by sensitive or endangered species.
- Wind energy is a free and unlimited resource. It helps California reach its renewable energy goals, lowers our dependence on imports of natural gas, oil and other fuels, and reduces smog and greenhouse gas pollution.
- The local Ewiiapaayp Band of Kumeyaay Indians tribe supports the Tule Wind Power Project and wants their land to be used to harness this valuable natural wind resource. If the project size is reduced, the tribal land will no longer be incorporated into the project.
- The wind resource in McCain Valley is rare and valuable.

F33-1

The Project is located in a remote area and will produce clean energy for local residents. Jobs will be created and tax revenues will help the city. I strongly feel that we need to commit to renewable energy now.

I am also the organizer of Escondido Green Drinks and have met many other members and environmentalist who support renewable energy, specifically wind power. Tule Wind Power Project is the ideal opportunity to reduce environmental impacts. The draft EIR should be approved so that the project can move forward.

F33-2

Sincerely,



William L Parks  
Owner  
Phoenix Energy and Construction  
1046 Buena Vista Dr.  
Vista,CA, 92081  
[Lamar@phxenergy.info](mailto:Lamar@phxenergy.info)

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**From:** billjacum@aol.com [mailto:billjacum@aol.com]  
**Sent:** Sunday, February 06, 2011 2:55 PM  
**To:** ECOSUB  
**Subject:** DEIR/EIS for East County Substation, Tule Wind, and ESJ Gen-Tie Projects

These projects are vital and must proceed without delay! Clean Energy, Jobs, More dependable electricity distribution, and Income to the Ewiiapaayp People. Please do NOT reduce this Project.

F34-1

William Pape  
Jacumba Resident

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February 7, 2011

Iain Fisher, CPUC / Greg Thomsen, BLM  
605 Third Street  
Encinitas, CA 92024

Dear Sirs:

After reviewing the Environmental Impact Statement report for the East county Substation, Tule Wind, and Energia Sierra Juarez Gen-Tie Projects, I have come to the conclusion that the "No Build" option is the correct decision. This decision is based largely on issues that were not covered in the report, and they cause me grave concerns.

F35-1

First: Here in the Boulevard area, as well as the rest of San Diego, we are in a deep recession and have already seen large declines in our property values. These proposed projects (and others that are sure to follow) would expose home owners to another 30% or larger decline in their property values. Add to this the likely-hood that few, if anyone, would be willing to drive 40 plus miles to live among wind farms. The result of this would mean total destruction of our homes and communities.

F35-2

Second: As the report makes clear, there is a substantial unmitigated fire hazard associated with these projects. Combining this with the fact that this is already an extreme fire hazard area, this proposal will have the potential to create the "Perfect Storm", one that could rival the Cedar Fire. This is the greatest fear for all East County residents. Knowing a windmill fire cannot be put out until it has fallen, and aerial support cannot be used within the project zones, our best tools for fighting a wild fire are all but useless during the initial stages of attacking the blaze.

F35-3

Third: After the Cedar Fire here in San Diego, my home owner

F35-4

insurance carrier dropped my policy. The only way I could insure my home was either a state written minimalist policy, or Lloyds of London. My rate jumped from \$650.00 per year to \$2,000.00 a year.

Almost a year ago I was finally able to get a major U.S. underwriter to insure my home again. My current rate is about \$2,000.00 a year. Once again, however, I have learned that if these projects are approved, that my policy could be cancelled again due to the added fire risks. Although I could probably return to Lloyds for insurance, I'm sure my rates would again jump. I should state, my home is a 1978 split level track-style home approx. 2,000 sq. ft. I have never filed a home owner's claim, and my property is always cleared of brush.

In conclusion, it is a fact that most people support alternative energy sources, and see a need for responsible projects. Responsible meaning having these projects located in appropriate areas so as to minimize risks and protect communities from financial ruin.

Due to the property value losses, fire, habitat, and health risks, these projects should not be located in or around existing communities ESPECIALLY in high fire hazard areas.

I believe these projects would NEVER be considered for this part of the county if officials would remember that their responsibility is to serve, protect and help enhance ALL the communities in San Diego and not allow the destruction of any town or community for the sake of tax revenues or special interest groups regardless of State or Corporate pressures.

These projects are the wave of the future. But they can be located to enhance ALL California citizens and not at the expense of US who live and pay taxes here in Boulevard and Jacumba.

We love our community and our rural life-style as much as I'm sure you love yours.

F35-4  
Cont.

F35-5

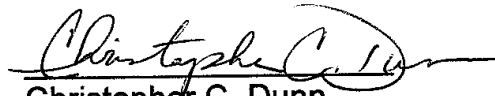
F35-6

F35-7

Please: Don't build those ugly and dangerous projects in this area of our beautiful county of San Diego.

↑  
F35-7  
Cont.

Thank you for the opportunity to comment.



Christopher C. Dunn  
39440 Jewel Valley Way  
Boulevard, CA 91905  
619 766-4322



Kathryn Beeler  
39440 Jewel Valley Way  
Boulevard, Ca. 91905



**CALIFORNIA PUBLIC UTILITIES COMMISSION (CPUC)/  
BUREAU OF LAND MANAGEMENT (BLM)**



**Draft Environmental Impact Report/  
Environmental Impact Statement (EIR/EIS)  
for East County Substation, Tule Wind, and  
Energla Sierra Juarez Gen-Tie Projects**

**Written Comment Form  
(please print)**

Name\*: Nancy Anne Oppenheimer  
Affiliation (if any)\*: Pine Valley Riders  
Address\*: 39544 Clements St.  
City, State, Zip Code\*: Bohlevard CA 91905  
Telephone Number\*: 619-746-4125  
Email\*: \_\_\_\_\_

High impact of Traffic on Ribbon Wood Rd. & Damage  
Ribon Camping, Horseback riding, hiking  
Impacts on property value  
Increase fire danger  
Impact on wildlife

F36-1

\* Please print. Your name, address, and comments become public information and may be released to interested parties if requested.

Please either deposit this sheet at the sign-in table before you leave today, or fold, stamp, and mail. Insert additional sheets if needed. Comments can also be emailed or faxed.

(See reverse for additional information)

-----Original Message-----

From: Diane Smelser [mailto:swantine@gmail.com]  
Sent: Monday, February 07, 2011 8:07 PM  
To: John Porteous  
Cc: Rica Nitka  
Subject: Tule Wind Power Project - support letter

Dear Mr. Porteous,

I was told that I could send my letter of support for the Tule Wind Power Project to you, even though I have addressed it to Iain Fisher of the CPUC and Greg Thomsen of BLM. I am not certain of the correct protocol and I hope this will be acceptable. I understand that Dudek Environmental Consultants will be handling all of the correspondence and will forward our letters to all appropriate people. Is that correct? Please let me know if I should proceed in a different way.

F37-1

Please see the attachment for my letter to Mr. Fisher and Mr. Thomsen in which I express my support for the Tule Wind Power Project. I feel that the opposing "vocal minority" has raised such a fuss that the quiet majority must finally speak up!

Thank you for your kind consideration.

Very truly yours,  
Diane Smelser  
(858) 279-4370  
swantine@gmail.com

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***Diane Smelser***

10655 Porto Court  
San Diego, CA 92124

February 7, 2011

Iain Fisher, CPUC  
Greg Thomsen, BLM  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

**REGARDING: Tule Wind Power Project**

**Gentlemen:**

For many years I have been following media reports about renewable energy projects in San Diego County. During the scandalous Enron years, through the hardship of being evacuated from our home when wildfires spread to our community and through countless other controversies, I continued to hope for a day when we would have accessible, clean, safe energy for our county. I understand that you are currently in the process of evaluating the Tule Wind Power Project in San Diego County and I wish to express my complete support of this wonderful project!

Although there are many successful wind power projects around the world, the technology and implementation is still being refined. It takes true pioneer spirit to step into areas of our country that are just starting up wind and other renewables. Often it is stepping into the unknown, even as certain as the developers are that the product and service will be top-notch.

Besides the obvious future benefits of clean energy, the Tule Wind Power Project will boost the local economy, creating jobs, help in the funding of other county projects and services and will help California meet its renewable energy goals.

Even though I have pondered the opposing arguments, I do not completely understand people who protest this change. I believe that the majority of people in the community are in support of clean energy and this new technology as evidenced by polls and the voters during elections. They are a quiet majority and they rarely go to public meetings. The far more vocal opposing parties are the ones you often hear at the public meetings. They are the vocal minority. I think much of their angst is based in fear. For some of them, it may simply add excitement to their boring lives. I would ask opponents this question: How can our situation be any worse? We must do something soon. We are using up and running out of fossil fuel, which was never a clean source to begin with. It pollutes the air and

F37-2

F37-3

**the water table and it certainly costs too much. The wildfires that frequently occur in our 'chaparral' and tumble-weed filled backcountry, often bring controversy over the causes of the fires (and the vocal minority comes out for this, too) and whether the old, existing power lines contribute to the devastation. With the new technology and equipment that comes with wind power, those controversies would fade away and the vocal minority will have to find new issues to oppose.**

F37-3  
Cont.

**A reasonable person must realize that we will have energy no matter what. Do we want to stay with the old ways of generating and sending energy out to the community, even though we know it is becoming scarce, can be dangerous and pollutes our environment, or do we want to seize this opportunity to advance to a new level of technology while we have the opportunity with such a responsible, stalwart developer as Iberdrola? I say this is an opportunity we should not let pass. I encourage you to do what is right. Please approve the Tule Wind Power Project.**

F37-4

**Thank you for considering my comments as we all look forward to a cleaner and greener California.**

**Very truly yours,**

**Diane Smelser**

**From:** John Gibson [mailto:John@hamannco.com]  
**Sent:** Tuesday, February 08, 2011 9:45 PM  
**To:** ECOSUB  
**Subject:** Tule Wind Project

We are all entirely supportive of this project. We own nearly 2,000 acres in the Boulevard area. We see this as a good use, in a good place that will put unemployed San Diegans back to work. This all comes at a time of high unemployment and at a time when we need to not be importing oil from countries that don't like us. This will assist in that effort, and help balance the trade imbalance.

F38-1

The County of San Diego General Plan Update is doing everything to keep population down in this region. With that in mind, there is little else that can economically be done with the land other than to leave it fallow. So we see this as a win win for the environmentalist fervor that want little or no population development in this region. This satisfies that need, provides some use/value of the property owners and minimally impacts the region.

John Gibson  
Hamann Companies  
1000 Pioneer Way  
El Cajon, CA 92020  
619-440-7424  
619-990-3006 cell  
[john@hamannco.com](mailto:john@hamannco.com)

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**From:** Julie Gibson [mailto:julieoth@hotmail.com]  
**Sent:** Tuesday, February 08, 2011 9:58 PM  
**To:** ECOSUB  
**Subject:**

We are all entirely supportive of this project.  
We see this as a good use, in a good place that will put unemployed San Diegans back to work.  
This all comes at a time of high unemployment and at a time when we need to not be importing oil from countries that don't like us. This will assist in that effort, and help balance the trade imbalance.

The County of San Diego General Plan Update is doing everything to keep population down in this region. With that in mind, there is little else that can economically be done with the land other than to leave it fallow. So we see this as a win win for the environmentalist fervor that want little or no population development in this region. This satisfies that need, provides some use/value of the property owners and minimally impacts the region.

How long does it take to create a stimulus job? We've been hearing about green energy for years, and government trying to get infrastructure built and people back to work. Instead, we see the unemployment lines get longer and hear excuses.  
If you can't site a wind project here, where on earth are you going to?

Julie Gibson  
14907 Montana Serena  
El Cajon, CA  
92021

[julieoth@hotmail.com](mailto:julieoth@hotmail.com)

F39-1

F39-2

**From:** Jim [mailto:jimboy615@hotmail.com]  
**Sent:** Wednesday, February 09, 2011 5:05 PM  
**To:** ECOSUB  
**Cc:** catulewind@blm.gov  
**Subject:** Tule Wind Project / McCain Valley

To Whom it may concern,

I am writing you today with great concern. I was recently made aware of a pending proposal to give away BLM land located in McCain Valley California to the Tule Wind project. This is a terrible mistake. For many years myself, family and friends have enjoyed using this OHV area. With San Diego's population being what it is, we off roaders have limited areas to play in the dirt. McCain Valley OHV area provides children of all ages a place to enjoy being outside and enjoying the sport of off roading. It would be a tragedy for us and generations of San Diegan if this area was lost to big business. I urge you to reevaluate the Tule Wind project and vote NO on its approval. Furthermore, I urge you extend the public comment period an additional 90 days so that those not aware of the pending project will have an equal chance to weigh in. Additional, I would hope BLM will hold public meetings with regards to this project on weekends so that all parties involved have an equal chance to attend. We as off roaders appreciate the hard work the BLM does in keeping our off road areas open and safe, I hope you will make the right decision and vote NO on this proposed project.

F40-1

F40-2

F40-3

Thank you for your time, please feel free to contact me anytime regarding these matters.

Sincerely,

Jim Collins  
Concerned Citizen

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This footnote confirms that this email message has been scanned by  
PineApp Mail-SeCure for the presence of malicious code, vandals & computer viruses.

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February 10, 2011

Iain Fisher, CPUC / Greg Thomsen, BLM  
605 Third Street  
Encinitas, California 92024

Subject: Joint Draft Environmental Impact Report  
Draft Environmental Impact Statement (DEIR/DEIS)  
East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects

Dear Sirs,

After attending the public informational meeting on January 26, 2011 covering the above referenced Joint DEIR/DEIS presented by Dudek, our comments are as follows:

The Tule Wind Project is our biggest concern. Our property is located several miles from Mc Cain Valley and we are not in the line of sight of the turbines and are beyond sound the impulse area. However we are not out of the fire danger area. It has been acknowledged and documented that the turbines do present a fire risk. Fire fighting agencies have reported that there is not equipment available to fight or control a turbine fire until it falls to the ground. Mc Cain Valley is located ENE from our property. Santa Ana winds typically come from the ENE. A substantial wild fire started in this area, that has not had a major burn in over 50 years, could in reality destroy not only our property but the town of Boulevard.

F41-1

The human and animal health issues to the local residents, caused by the wind turbines, have not been fully researched on a broad enough scale. To state that there are no adverse health affects caused by the turbines shows just how little research has been done. It takes little effort from a layman with internet access to prove that there is substantial adverse health risks well beyond the local county allowable set backs.

F41-2

It is our understanding that by mentioning the Campo, Manzanita, and Jordan wind energy projects that this Joint Project may be also used as a guideline in these upcoming projects.

Although there is little the local residents can do about the Campo and Manzanita projects on reservation land, the Jordan project is on private land currently under review for re-zoning by the county.

F41-3

By allowing the Tule Wind Project to proceed it sets a precedence and allows for a spring board for more turbines in the Boulevard area, such as the Jordan project.

Our home and property in Boulevard lies on the north border of the Lansing ranch. The wind turbines in the Jordan project are planned for the Lansing ranch. This puts us in the line of sight of the wind turbines which will decrease our property value by 30% or greater as proven by real estate experts throughout the nation. This decrease is in addition to the reduction in property values that we have currently experienced due to the economy.

F41-4

The Jordan project also puts us within the danger zone for health risks that have been documented throughout the nation and Canada.

F41-5


A final comment regarding the timing on the release of the DIER/DEIS. Although the Joint DEIR/DEIS was released for public review on December 24, 2010, We were not aware of the release, as were many of the local residents in attendance, until we were informed of the existence of the report the night of the meeting. We were also advised the public review period ends on February 16, 2011. This leaves the concerned residents less than three weeks to review over 2000 pages of the DEIR/DEIS, an impossible task in such a short period of time. In an area of limited to no internet access, that limits the availability of the DEIR/DEIS to our local libraries. To me it was just another reason to select this area not only for the Joint Project, but the timing of the release and the public information meeting as to limit input from the local residents.


F41-6

We hope this input will give you our side of the argument and we thank you for taking the time to read and hopefully represent our views.

F41-7

In summary it appears the DIER/DEIS is an all or none project, Our main concern is the wind turbines. But as things stand we strongly oppose the Joint Project and support the alternative to the Project: NO PROJECT/NO ACTION ALTERNATIVE.

  
Earl Goodnight  
1902 Jewel Valley Lane  
P.O. Box 1238  
Boulevard, CA 91905

  
Beverly Goodnight  
1902 Jewel Valley Lane  
P.O. Box 1238  
Boulevard, CA 91905



FEB 15 2011

**John & Iris Mauris  
2945 Ribbonwood Road  
Boulevard, CA 91905**

February 12, 2011

Mr. Iain Fisher, CPUC  
Mr. Greg Thomsen, BLM,  
c/o Dudek  
605 Third Street,  
Encinitas, CA 92024

**Draft EIR-EIS : Tule Wind, ECO Substation, Energia Sierra Juarez**

Dear Mr. Fisher and Mr. Thomsen,

This letter is being provided to ensure that our concerns and strong opposition are documented in the record for these large wind turbine, substation, and power line projects that your agencies are reviewing. We may need to join in filing a future lawsuit for damages related to loss of property value, quality of life, the use and enjoyment of our property, and other potential adverse effects.

F42-1

We are both up in years and live full time on property we own located at 2945 Ribbonwood Road, in Boulevard. Until recently, this was a beautiful and quiet place to live and to invite family and friends join us, except for the Kumeyaay turbines that we have to look at and can hear thumping away even though they are over 3 miles to the west. We are now very concerned for our own future and that of our neighbors, pets, livestock and the local wildlife. We do have several horses.

F42-2

A moratorium on industrial wind turbine projects should be initiated by local state, and federal agencies, unless and until science-based peer reviewed health and safety tests are conducted to determine a safe setback distance. To date, those studies have not been done and industrial wind energy supporters cannot claim otherwise.

F42-3

You are now reviewing three energy projects, along with the additional proposed wind turbine projects on the Manzanita and Campo Reservations and Greg Lansing's ranch lands on Ribbonwood Road and Jewel Valley Road. San Diego Gas & Electric's large 500 kV Sunrise Powerlink towers and lines will also be installed all along the eastern edge of McCain Valley Road and will swing around to the north and northwest of our property.

F42-4

The Tule Wind turbines, that will stand almost 500 feet tall, are planned to be installed approximately 4,500 feet or some from our home along the top of the ridge just east of our property.

One route for the new Tule Wind 138 kV transmission line is also planned to run near our property. A new 5 acre substation and 5 acre operation and maintenance building, for the Tule Wind project, are also planned for the Rough Acres Ranch property southeast of us.

The Enel Jewel Valley Project and turbines ( previously called Jordan Wind) are proposed for land immediately west of us at the north end of Ribbonwood Road. Proposed new Manzanita and Campo turbines will only add to the visual blight and adverse effects already generated by the 25 Kumeyaay Wind turbines that we hear and see from over 3 miles away!

**There are several main concerns that we want your agencies to address and respond to:**

1) Increased risk of fire; increased fire insurance rates or total loss of coverage due to new high risk development near our home; reduced fire fighting access due to increased potential for electrocution to fire fighters. Power lines, turbines, substation transformers can all start fires. This can translate into a life or death situation for us, with only one access road and limited local fire fighting staff availability, equipment, and funding.

2) Noise and low frequency pollution from industrial wind turbines, some below the level of human hearing, can and does make people and animals ill when turbines are placed too close to homes, livestock, and sensitive wildlife areas. It has been reported that families have even abandoned their homes to escape the unbearable living conditions that are inflicted by these power generating turbine. Increased medical expenses and long-distance round trips for medical attention can really add up. Impacts to pets and livestock can also be severe and expensive. Wind turbines, as we know, can be heard for miles and infrasound can travel great distances in our type of open terrain.

3) 4,500 feet is way too close for turbines. 3 miles is too close! We don't want them anywhere near our home or the homes of other families. They should be placed miles and miles away from any occupied buildings, livestock, public recreation areas, campgrounds, and protected wildlife areas.

4) Electrical pollution, stray voltage, has been documented in and around other wind turbine and substation projects and homes within 1,800 feet and much more. There are indications that wind turbines and the substations

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that serve them are more prone to generate electrical pollution due to the intermittent nature of the energy they produce.

4) Shadow flicker from turbines can extend several thousand feet during certain times of day and can create a harmful pulsing light effect that can result in vertigo, seizures, or other adverse effects. That strobe effect also has adverse effects on pets, livestock and wildlife. Our home and property will likely be impacted during the late afternoon and evening hours.

5) Property value losses are being recorded at other wind turbine projects. We join others in requesting that Tule Wind be required to enter into binding Property Value Protection Agreements to ensure that we do not suffer lost value or the inability to sell our property, if rendered necessary, due to the adverse impacts generated by the proximity of their massive wind turbines, power lines, and substations that will surround us.

6) We are requesting that any project approvals include binding contractual agreements for adequate and ongoing funding for third party unbiased pre-construction testing for ambient noise, low frequencies and infrasound, and dirty electricity levels to be taken both inside and outside our home and at all our property lines. We are also requesting ongoing monitoring and enforceable compliance guarantees that include shutdown of non-compliant turbines--in the event these projects are approved over our objections.

7) The County noise ordinance and turbine setbacks are currently inadequate to protect public health and safety and cannot be relied upon for these projects. Compliance with those standards, as stated in the Draft EIR/EIS will NOT insure against the generation of a nuisance. Your agencies must address this issue. Our rural ambient noise levels are much lower than stated in the Draft EIR/EIS. Complaints have been generated at other wind energy projects with only minimal increases in noise levels. All ranges of noise levels, audible and inaudible need to be documented at pre-construction levels--and protected.

8) We also have concerns over adverse impacts to both the quality and quantity of our well water. Tule Wind will be clearing, grading, and blasting for turbine footings and new access roads. They will also be drawing large amounts of well water from several wells on Rough Acres Ranch for cement batch plants and other operational uses. The Enel project represents additional impacts. All these turbines, substation, transformers, and maintenance buildings will contain hazardous fluids that can spill or leak into the water table. Our water levels should be documented by a licensed unbiased third party prior to commercial uses at nearby wells. We have no economically viable alternative source of water available to replace what we currently have.

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9) Day time strobe lights and red blinking night lighting on the turbines and some of the transmission towers will create another nuisance both day and night ,and take away from our beautiful dark night sky, one of the few left in Southern California.

F42-16

In short, we strongly object to and oppose the introduction of any commercial industrial scale wind turbines , the related infrastructure, and all the adverse impacts that go with them, into our quiet rural neighborhood.

Any approvals of such would constitute a nuisance based on bulk and scale, blinking lights, noise levels (including low frequency and infrasonic), disruption to the peaceful use and enjoyment of our home and property and the very real potential for adverse health effects. While ignored, denied, and dismissed by the wind energy industry, growing evidence documents that some home owners have been bought out by wind energy companies due to undeniable adverse effects. The problems are real and must be addressed by your agencies prior to any project decisions.

F42-17

Sincerely,

*John J. Mauris*  
*Iris A. Mauris*

John and Iris Mauris

cc: Donna Tisdale

**Robert & Kathryn Mc Callister  
3032 McCain Valley Road  
Boulevard, CA 91905**

**FEB 15 2011**

February 12, 2011

Mr. Iain Fisher, CPUC  
Mr. Greg Thomsen, BLM,  
c/o Dudek  
605 Third Street,  
Encinitas, CA 92024

**Draft EIR-EIS : Tule Wind, ECO Substation, Energia Sierra Juarez**

Dear Mr. Fisher and Mr. Thomsen,

This letter is being provided to ensure that our concerns and strong opposition are documented in the record for these large wind turbine, substation, and power line projects that your agencies are reviewing. We may need to join in filing a future lawsuit for damages related to loss of property value, quality of life, the use and enjoyment of our property, and other potential adverse effects.

We are both in our 80's, are in good health, and live full time on the 80 acres we own located at 3032 McCain Valley Road, in Boulevard. Until recently, this was a beautiful and quiet place to live and to invite family and friends join us. All that has changed and we are now very concerned for our own future and that of our neighbors, pets, livestock and the local wildlife.

A moratorium on industrial wind turbine projects should be initiated by local state, and federal agencies, unless and until science-based peer reviewed health and safety tests are conducted to determine a safe setback distance.

To date, those studies have not been done and industrial wind energy supporters cannot claim otherwise.

You are now reviewing three energy projects, along with the additional proposed wind turbine projects on the Manzanita and Campo Reservations and Greg Lansing's ranch lands on Ribbonwood Road and Jewel Valley Road.

San Diego Gas & Electric's large 500 kV Sunrise Powerlink towers and lines will also be installed all along the eastern edge of McCain Valley Road and our eastern property boundary about 1,000 feet or so from our home.

The Tule Wind turbines, that will stand almost 500 feet tall, are planned to be installed approximately 2,200 feet or some from our home along the top of the ridge just west of our property.

The new Tule Wind 138 kV transmission line is also planned to run right next to the Sunrise Powerlink lines along McCain Valley Road, our only access road. More Tule Wind turbines are also planned for private land on the ridgeline to the north east of our home. A new 5 acre substation and 5 acre operation and maintenance building,

F43-1

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F43-3

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F43-5

for the Tule Wind project, are also planned for the open pasture on private property just to the north of us, or for the Rough Acres Ranch property just to the southwest of us.

**There are several main concerns that we want your agencies to address and respond to:**

1) Increased risk of fire; increased fire insurance rates or total loss of coverage due to new high risk development near our home; reduced fire fighting access due to increased potential for electrocution to fire fighters.

Power lines, turbines, substation transformers can all start fires. This can translate into a life or death situation for us, with only one access road and limited local fire fighting staff availability, equipment, and funding.

2) Noise and low frequency pollution from industrial wind turbines, some below the level of human hearing, can and does make people and animals ill when turbines are placed too close to homes, livestock, and sensitive wildlife areas. It has been reported that families have even abandoned their homes to escape the unbearable living conditions that are inflicted by these power generating turbine. Increased medical expenses and long-distance round trips for medical attention can really add up. Impacts to pets and livestock can also be severe and expensive.

3) 2,200 feet is way too close for turbines. We don't want them anywhere near our home or the homes of other families. They should be placed several miles away from any occupied buildings, livestock, public recreation areas, campgrounds, and protected wildlife areas.

4) Electrical pollution, stray voltage, has been documented in and around other wind turbine and substation projects and homes within 1,800 feet and much more. There are indications that wind turbines and the substations that serve them are more prone to generate electrical pollution due to the intermittent nature of the energy they produce.

4) Shadow flicker from turbines can extend several thousand feet during certain times of day and can create a harmful pulsing light effect that can result in vertigo, seizures, or other adverse effects. That strobe effect also has adverse effects on pets, livestock and wildlife. Our home and property will likely be impacted during the late afternoon and evening hours.

5) Property value losses are being recorded at other wind turbine projects. We join others in requesting that Tule Wind be required to enter into binding Property Value Protection Agreements to ensure that we do not suffer lost value or the inability to sell our property, if rendered necessary, due to the adverse impacts generated by the proximity of their massive wind turbines, power lines, and substations that will surround us.

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compliance guarantees that include shutdown of non-compliant turbines--in the event these projects are approved over our objections.

7) The County noise ordinance and turbine setbacks are currently inadequate to protect public health and safety and cannot be relied upon for these projects. Compliance with those standards, as stated in the Draft EIR/EIS will NOT insure against the generation of a nuisance. Your agencies must address this issue. Our rural ambient noise levels are much lower than stated in the Draft EIR/EIS. Complaints have been generated at other wind energy projects with only minimal increases in noise levels. All ranges of noise levels, audible and inaudible need to be documented at pre-construction levels--and protected.

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9) Day time strobe lights and red blinking night lighting on the turbines and some of the transmission towers will create another nuisance both day and night ,and take away from our beautiful dark night sky, one of the few left in Southern California.

In short, we strongly object to and oppose the introduction of any commercial industrial scale wind turbines , the related infrastructure, and all the adverse impacts that go with them, into our quiet rural neighborhood.

Any approvals of such would constitute a nuisance based on bulk and scale, blinking lights, noise levels (including low frequency and infrasonic), disruption to the peaceful use and enjoyment of our home and property and the very real potential for adverse health effects. While ignored, denied, and dismissed by the wind energy industry, growing evidence documents that some home owners have been bought out by wind energy companies due to undeniable adverse effects. The problems are real and must be addressed by your agencies prior to any project decisions.

Sincerely,

*Bob McCallister*  
*Kathryn McCallister*

Robert and Kathryn Mc Callister

cc: Donna Tisdale

F43-12  
Cont.

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**From:** Paul Thompson [mailto:pauldthompson@sympatico.ca]  
**Sent:** Saturday, February 12, 2011 2:55 AM  
**To:** catulewind@blm.gov; ECOSUB  
**Subject:** Public comment East county substation Tule wind project

**From:** Paul Douglas Thompson, 214242 10 th line Amaranth R.R. #1 Grand Valley  
 Ontario Canada L0N1G0

**Phone #** (519) 928-5753

**To:** Iain Fisher, CPUC, and Greg Thomsen, BLM c/o Dudek

**Sent via:** e-mail: [ecosub@dudek.com](mailto:ecosub@dudek.com) [catulewind@blm.gov](mailto:catulewind@blm.gov)

**Declaration of Paul Douglas Thompson provided as public Comment on the Joint California Public Utilities Commission and Bureau of Land Management Draft Environmental Impact Report /Draft Environmental Impact Statement (DEIR/DEIS) for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects: State Clearinghouse No. 2009121079 DOI-BLM-CA-D070-2010-0027-EIS (ECO Sub); DOI-BLM-CA-D070-2008-0040-EIS (Tule Wind)**

I, Paul Douglas Thompson declare and say:

I reside in the township of Amaranth in the County of Dufferin in the province of Ontario Canada and I have lived for 5 years (on February 16 2011) with a “Commercial Electrical Substation” (T/S) energized 360 meters (1,181 feet) from my home which provides the provincial grid connection for a 199.5 Mega Watt (MW) industrial wind turbine facility. Said facility was originally built and owned by Canadian Hydro Developers (CHD) but was subsequently absorbed in a "Hostile" take over of CHD by Trans Alta Corporation. The project consists of two 100 MW transformers, numerous other smaller transformers located at the T/S, as well as one step up transformer at each turbine base, 133 General Electric SLE 1500 turbines along with numerous above ground (70 foot tall concrete poles approximately 75 feet apart, looks like a picket fence or wall of poles from the right angle, which happens to be from the end of my driveway) and below ground collecting lines. I was born on this “97 acre more or less” rural property 47 years ago and severed off a 1 acre parcel in 1989 and built my current home from the ground up.

F44-1

I have been to my family doctor and have exhausted the headache, tinnitus testing regimen of my physician including a MRI, CT scan, neurologist and a pain management clinic, etc. The conclusion reached by the medical profession after all of these tests seems to be that the problem is not with me. The “pain management clinician” told me “this is my shortest diagnosis ever. You already know what the problem is, what are you going to do move”? Therefore the only conclusion I can reach is that it must be the environment I live in. The only change in the environment I live in since my home was built is the installation of the T/S across the road from my property.

F44-2



An example of an “accidental spill etc.” which could have been much worse

There have been I believe from the “scuttlebutt” I’ve heard, two "capacitor" explosions one of which damaged a shed on the T/S site, I personally heard the explosions, it rattled the windows in my house. The first one gave me a little over a days respite from the noise, (I assume CHD had to order parts) the second time they were only shut down for a couple of hours. (CHD must have had “spares” on hand). The 100 MW transformers each contain 35,000 kgs (78,610 lbs) of possibly PCB? Contaminated cooling liquid and are located uphill from my property with to my knowledge no means of containment should a spill or explosion occur.

F44-3

CHD had a spill when a "tap" was knocked off one of the transformers in their storage yard in Melancthon during snow removal. They had to employ several "vacuum trucks" to clean up the resulting mess and according to the Ontario Ministry of the Environment (MOE) there was no environmental damage, same for a hydraulic oil leak from a boom truck employed by CHD at the T/S site.

I have included excerpts from my daily diary in an attempt to help demonstrate to you the adverse effects imposed on my body by this installation. I have been renting other accommodations to sleep in at night since May 1<sup>st</sup> 2009 and driving to and from daily thereby increasing substantially the financial encumbrance and wear and tear on my vehicle and on my person.

F44-4

An example from my diary of my “worst “day yet to occur on my property:

XX/XX/20XX

Arrived home at 6 am OK, (I discovered last October what I have been calling OK in my diary for years is just what has become a “normal” amount of adverse affects to me, this I determined after spending two days in a secluded cabin in the woods with electricity.) (It is possible in a “clean “location to enjoy No ringing in ears at all and not even a slight headache) wicked ringing in ears on entering house. By 6:30 am could easily vomit, wickedly dizzy, nauseous, Medium Headache, and diarrhea. By 6:45am felt really rotten (vomited twice) after having one bite of a waffle for breakfast, which I threw up almost instantly along with a sip of my morning coffee before I left the house for outside (being outside usually helps to alleviate symptoms) at 7 am. By 7:30 am condition has worsened it is unsafe (extremely dizzy) to drive to leave here, so I lay down in my pickup in the front yard (where I parked it on coming home), (unfortunately between my house and T/S) (I had to move very slowly to avoid falling and vomiting) until 12:20pm. Vomited 5 more times by 9 am. Entered house for lunch (unsuccessful) still same symptoms as above except now I have progressed to a wicked headache. In house I could hear an “Electric Motor running” type noise coming from the T/S (this happens on occasion, may be the low frequency noise aspect affecting my brain?) In house until 1 pm struggled outside to truck parked in front yard till 3 pm by then felt capable (vision cleared to the point of being able to see and feel well enough to drive around house and shed hopefully without hitting it) of moving the pickup to back yard out of view of passersby (two visitors came by while parked in front yard, its hard to talk when this sick without vomiting) and behind shed hoping that with the house and my shed behind house blocking “line of sight to T/S I might feel

F44-5

better. Stayed there until 7 pm. By then symptoms had backed off to slight headache and medium ringing in ears, (almost “normal”) other symptoms have backed off as well. Entered house, by 7:20 pm back to medium headache and slight ringing in ears, almost diarrhea, had something to eat (1<sup>st</sup> time today it stayed down) by 9:30pm when felt semi safe to drive to leave here I could easily vomit again.

By the next morning on awakening at 6am all is well again.

An example of a “good” day:

29/08/2010

Awoke at 6:15 am arrived home at 6:45 am felt OK. Instant medium ringing in ears on entering house, by 7 am medium Headache started, in house until 7:45 am. Away on service call until 11:40 am, felt OK by 10:30 am, on entering house at 11:40am OK until 11:50 am then slight ringing in ears and slight to medium headache started. Left house at 12:30 pm on service call away until 7:45 pm. I felt OK by 2 pm. On entering house at 7:45 pm instant medium ringing in ears started and slight to medium headache. By 8:40 pm it had progressed to medium ringing in ears and medium headache I left house at 9:30 pm.

Note: in my opinion the reason this is an example of a “good” day is the fact I spent less than 4 hours on my property in three batches of time separated with a “detoxification” period in between.

An example of an average day:

An average day usually starts out with no issues (OK) while sleeping elsewhere. On entering my home (on many occasions when unlocking the door) I have up to a maximum of 17 minutes in the house if I’m lucky before Ringing in ears at various intensities and headache at various intensities starts interspersed on some days with alternating bouts of nausea, vomiting, diarrhea, dizziness, occasional chest tightness, (stiff seized limbs, if I spend too much time in the house or sleep here,) “short term (new) memory loss”, ( i.e. just yesterday (Feb 3 2011) in a restaurant I had decided what to order and asked the lady with me to order first, by the time she was done ordering chicken fingers and a drink I had totally forgotten what I wanted to order, how embarrassing.) This problem seems to linger (based on conversations with people who are no longer exposed and haven’t been for years) and in my case is seems to be getting worse.etc.

In short I know something bad will happen every day I reside on my property the only variables are which symptoms besides the headache and ringing in ears, how bad, and how long will they last. I have learned to spend as little time as possible on my property as it is the only sure way to prevent or alleviate my symptoms. I have found no “pain killers” that work and my doctor tried me on many different ones before I discovered the “cure” for my headache was to essentially abandon my property as much as possible.

I have had several persons (some of which had never been on my premises before) visit my home 99% of which left in 5 to 30 minutes with either a feeling of tightness in their chest a headache or both, some have also experienced the ringing in their ears. All of these symptoms dissipate for them within an hour or so of leaving my home, depending on how long they have been visiting.

F44-5  
Cont.

I also have had on some occasions a severe problem with an audible hum emanating from the T/S (distinctly audible while inside the house with doors and windows closed wearing 27 db noise reduction rated ear protection). In my opinion the reason the hum is such a problem is the fact that the (MOE) decided that a noise level of 40 db(a) on the (a) scale was an appropriate level for a rural area at night when in fact during short term testing at my property by a qualified acoustic consultant (hired by CHD) at approximately 2 am the noise level was 16 db(a). An increase in noise level of 20db(a) is accepted as a minimum of a 4 times increase of the noise level to the human ear, an increase in "power level" of well over 100 times. This is due to the logarithmic scale used to measure noise levels.

Another way of putting this is to quote the wind developers mantra used here:" 40db (a) is no louder than a library or a refrigerator". The World Health Organization (WHO) has determined that the difference in the noise level between inside and outside a home (even with windows open) will be approximately 10 to 15 db(a). According to a "noise level comparison chart" on the internet 0 db(a) is regarded as the threshold of hearing, 10 db(a) is a sound proof room, 20 db(a) is a recording studio. If we factor in my 16 db(a) outside minus WHO's 15 db(a) reduction, I have essentially been forced from a room at almost the threshold of hearing (1 db(a)), (9 db(a) quieter than a "soundproof" room) to essentially a room in a library with a constantly running refrigerator in it when the T/S was first energized. This in my opinion demonstrates the "flaw" in the audible portion of the MOE noise guideline. I have tried 3 times to have the guideline revised all were refused. The guideline also makes no attempt to address Low Frequency Noise or Infrasound, which I fear may be even larger problems created by these rural installations.

I trust no one reading this submission would willingly accept an increase in the noise level of 4 times as loud to the ear where they attempt to sleep at night. Bear in mind this could very well be non stop 24/7 for potentially the rest of your life or until you can't stand it any longer and move away or as I have been forced to do rent other accommodations in which to enjoy a nights sleep with all the attendant expenses thus incurred.

I have attached the decision rendered ( September 12 2008) ( please note it is 7 pages in length) in my case by the property tax Assessment Review Board (ARB) as an example of the impact of wind development on the municipal tax base and the ratepayer (me). ( I believe my property thanks to the detriment across the road is not salable, (a clause in the real estate law in this province states you must reveal to a potential buyer any detriments to your property or face legal repercussions etc.)) . This decision represents a 50% loss to the municipality, possibly a complete loss of value to the ratepayer. Since the rendering of this decision the T/S has been expanded to double its size. I will be appealing once again to the ARB in 2012.

When CHD decided to let the public know that they were expanding the project for Phase two, (CHD sent the public notices for both phases of the project to Rural Route # 2 Grand Valley approximately 3 km from the part of the project area located in Rural Route # 1 Grand Valley where I live) at the Ontario Municipal Board

(OMB) hearing into the expansion of the T/S and the addition of 88 turbines (twenty two in Amaranth)) the company representative was adamant that there were two transformers shown on the site plan for the T/S from day one). At the initial public meeting (April 20th 2005) before any construction began the president of CHD stated as recorded in the minutes of the council meeting that "there is only one transformer proposed and noise level will be minimal" Apparently

F44-6

F44-7

F44-8

minimal is 43 db(a) at my residence as determined by CHD's hired acoustic consultants, (the maximum limit for a stationary noise source is 40 db(a) minus in this case 5 db(a) for "tonal" noise or transformer hum). The reason for the original mistake resulting in CHD being "out of compliance with the noise guideline" I learned from the acoustic consultant was that CHD had inadvertently forgot to give the acoustic consultant the results from the plot by the land surveyor of the closest residences to the T/S so that the consultant could determine the noise levels and determine compliance. The acoustic consultant was also operating under the assumption that the T/S was located within the project boundary with the turbines. The MOE reasoning for missing this potential problem was: "The substation was not described as a new structure and there was no indication that it included transformers. The applicable fee did not include any other equipment except for the 45 generators. It was concluded that the application for approval did not include the transformer substation." The solution after the noise level was determined to be "out of compliance" was to construct a noise abatement wall around three sides of the transformer North, West and South ( I live on the south west side).

The original General Electric "Prolec" transformer with 45 turbines connected to it operated at 67 db(a) at 16 meters but was tested by the manufacturer at a corrected sound pressure level of 76.9 db(a) maximum for a certain location on the transformer for a manufacturer's guarantee of 83 db(a). The "new" "quieter" "Siemens" transformer substituted for the old 83 db(a) one was tested by the manufacturer at a corrected sound pressure level of 75.8 db(a) ( this may explain why the acoustic consultant at the OMB hearing while under oath refused to guarantee the noise level of 71 db(a) he was trying to sell me on neither would CHD guarantee the 71 db(a) touted at the OMB as a manufacturer's test specification) at a certain area of the transformer for a manufacturers guarantee of 80 db(a). The second transformer added to the site was tested by the manufacturer with a result of 74.9 db(a) maximum for a certain location on the transformer also with a manufacturer's guarantee of 80 db(a). If we take the entire site with two transformers as a whole the noise level has increased using the manufacturers guarantee back to 83 db(a) as two side by side noise sources increase the noise level by 3 db(a). If we use the test results it is increased by a minimum of 1 db (a). This was the resolution to my noise problem fully approved by the Ministry of the Environment, The Ontario Municipal Board, and my municipal council. I believe it may be the first resolution ever approved by three government bodies to make an ongoing problem worse!

I would also like to mention the relatively "new" problem of "Electrical Pollution (EP)" also known as "dirty electricity". I am not an electrical engineer however I will attempt to define EP as it was explained to me. As you may know the electrical "grid" system in North America is based on a frequency of 60 cycles per second or 60 hertz (check any of your household electrical appliances). EP is all of the other frequencies higher than 60 hertz "riding" on the 60 hertz sine wave. These additional unwanted frequencies cause what is known as Harmonic Distortion of the sine wave, and the harmonics are labeled the first, second, third etc... These individual harmonic numbers are then combined to generate a Total Voltage Distortion (THD) percentage. I have been told that wind turbines are notorious generators of EP as the wind is not a steady source of energy to drive the generator (inside the turbine) (the wind speed fluctuates, sometimes very rapidly) unlike a steam (nuclear) Water, (hydro) or gas turbine or an internal combustion engine. Some wind turbines may contain "inverters" (to convert the DC current of the generator to AC current to match the "grid") another source of EP.

F44-8  
Cont.

F44-9

Due to voltage distortion limits placed upon generators supplying the grid a Generator (turbine) is only allowed to place electricity with a certain maximum amount of Total Harmonic Distortion (THD) into the grid (in my case of a 230,000 volt grid connection 1.5 % THD is Maximum) which means the generator has to “filter out” if you will all the excess THD before the electricity is placed on to the grid. I’ve been told that the least expensive place to do this “filtering” is at the Transformer substation as the generator can filter their entire output all at one time. The generator only needs one set of capacitors etc. not one set of capacitors etc. times the number of turbines) Makes economical sense, for the developer’s pocket. The problem as far as I am concerned (because I live adjacent to a substation with dirty electricity going in and clean electricity going out to the grid) is now that the generator has filtered the unwanted THD (essentially garbage) out now what do they do with the garbage? Where does it go?

An acquaintance of mine during a conversation with a representative of the Electrical Safety Authority (ESA) was told that the generator essentially “dumps” the THD into the ground around the T/S to disperse it and the ESA gets a report of how much they have dumped and when. To my mind this explains the “ground” wire coming out of the T/S interconnected to a ground wire running down every pole until it reaches the intersection north of my home then the ground wire is spliced into the neutral wire for the entire neighbourhood, and then disappears completely. This may also explain why the T/S and all the turbines sit on a “grounding grid” placed underneath them.

Funny thing! The next time in conversation the same representative had changed his mind completely and said the generator didn’t do that. I have to wonder where the truth, lies in his statement.

The person I hired to check my home for EP stated to me after he completed testing that essentially you are living inside a microwave oven and I recommend that you find somewhere else to live. He also stated that he knew I was in trouble as soon as he turned in the driveway as he has the ability to “feel” it. (I have to admit I was highly skeptical to say the least when he started to explain what was going on at my property). That was nearly two years ago, unfortunately I have begun to join his “club” as well as I can now pickup these issues elsewhere. He warned me that that would happen and I have to admit he is correct. Unfortunately like most rural residents I can not afford to “walk away” especially when my “business” is located here and I can not afford to own two properties as I doubt I would have much luck unloading this place now at a reasonable price, once I disclose all the faults in my opinion caused by the T/S.

As a side note the Institute of Electrical and Electronics Engineers Inc. in the revision of IEEE Std 519-1981 , IEEE Std 519 tm-1992 states in clause 6.3 page 29 Transformers “ With the exception that harmonics applied to transformers may result in increased audible noise, the effects on these components usually are those arising from parasitic heating”. Parasitic heating results in some loss of iron from “voltage harmonics” and copper loss from “current harmonics”. I believe this might be another avenue which should be investigated as I would doubt that the manufacturer’s of transformers “feed” their transformers harmonics on purpose during noise emission level testing because as mentioned above harmonics can cause a transformer to degrade its iron and /or copper content and essentially “eat” itself over time. What does that do for the audible noise etc.? Food for thought!

F44-9  
Cont.

F44-10

To use the original transformer here as an example the noise level was projected to be 31 db(a) at my home after the installation of the acoustic noise barrier wall and yet it exceeded the limit of 35 db(a) during an acoustic noise level test. Perhaps this was at least partly as a result of harmonics entering the transformer and thereby increasing the audible noise?

F44-10  
Cont.

After reading the above letter I appeal to the persons who may be about to force someone else to endure this nightmare, to ask yourself, how much would you be willing to pay for my property? And how would you feel if you were in my shoes?

The most important question: How many of your fellow residents are you willing to force to endure this situation or one similar, possibly worse, in the name of "green"? energy?

F44-11

**I declare, under penalty of perjury, that the foregoing is true and correct based on my personal knowledge, and that the original of this declaration was signed February 8 2011 at 214242 10<sup>th</sup> line Amaranth R.R. # 1 Grand Valley Ontario Canada.**

**Paul Douglas Thompson**

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Assessment Review Board  
Commission de révision de l'évaluation foncière

File No: WR 70364

**Region Number:** 22  
**Municipality:** Township of Amaranth  
**Roll Number:** 2208-000-002-27050-0000  
**Hearing Number:** 144063  
**Complaint Number:** 1975050

In the matter of Section 40 of the Assessment Act, R.S.O. 1990, c. A. 31, as amended,  
and in the matter of a complaint with respect to taxation year 2008 on premises known  
municipally as 21424 10<sup>th</sup> Line Amaranth.

**BETWEEN:** Paul Douglas Thompson

Assessed Person/  
Complainant

-and-

The Municipal Property Assessment Corporation,  
Region No. 22 and Township of Amaranth

Respondents

**APPEARING:** P. D. Thompson - for the Assessed Person/Complainant  
D. Carney - for the Municipal Property Assessment Corporation  
No one appeared - for the Municipality

**DECISION OF THE ASSESSMENT REVIEW BOARD delivered by:**

**C. Marques**

This complaint came before the Assessment Review Board on July 21, 2008 in the  
Town of Orangeville.

F44-12



### ISSUE

The subject property is located directly in front of a Canadian Hydro Developers transformer station which emits a noise level of 40 decibels. Mr. Thompson, the complainant, argues that, except for the negative impact of the noise on the value of his home, the assessment of \$255,000 as returned would be correct.

The Municipal Property Assessment Corporation (MPAC), does not dispute that the current value of the subject property is negatively impacted by the noise emitted by the transformer station. MPAC has, however, made no adjustment to the assessment to reflect the noise nuisance and offers no evidence with respect to what the adjustment might be.

The issue before the Board for determination is what correction to the current value assessment (CVA) of the subject property is required to allow for the noise contamination?

### DECISION

The Board reduces the CVA of the subject property from \$255,000 to \$127,000 for the 2008 taxation year.

### REASONS FOR DECISIONS

#### Property Description:

The property is a one-storey, single family dwelling, built in 1989, with a total building area of 1,320 square feet. The property is assessed at \$255,000 for the 2008 taxation year.

F44-12  
Cont.



**Complainant's Evidence:**

Mr. Thompson, the owner, appeared before the Board. He presented Exhibit #1, a copy of his presentation to the Board, a CD with photographs of the Hydro One transformer station, an audio recording of the sound emitted by the transformer station, and a binder of evidence which was presented at a hearing of the Ontario Municipal Board.

Mr. Thompson testified that the residence on the subject property was built in 1989. In April 2005, the Municipality of Amaranth rezoned the 15 acre parcel of land directly across the road from the subject property for the purpose of the construction of the transformer station. The transformer station is located 360 meters away from the subject property. The constant hum associated with these activities is 40 decibels, audible not only outside in the yard, but also within the house with the windows closed. Mr. Thompson described the noise as a constant nuisance that not only affects his day-to-day activity, but also impacts the sales value and marketability of his property. He believes that there will be more transformers built on this location, further increasing the noise level that he describes as a nightmare, further devaluing his property. Mr. Thompson agrees that the subject property's CVA of \$255,000 assigned by MPAC would be correct if it were not affected by the negative influence of the transformer station. He suggests that he should be exempt from paying property taxes due to this problem, and is looking to the Board to reduce the CVA accordingly.

**Municipal Property Assessment Corporation Evidence:**

MPAC has placed a CVA on the subject property in the amount of \$255,000 using a sales comparison approach. Mr. Carney did not submit any evidence as to the effect of the noise level on the CVA because there are no sales in the vicinity that would test the

F44-12  
Cont.

theory that the noise emitted by the transformer station impacts sales values negatively or otherwise. He confirmed that noise is audible even over the telephone, and that it has a negative influence on the value of the subject property. Mr. Carney did not present any evidence to assist the Board in quantifying the nuisance, because he has no idea how to do so.

**The Legislation:**

In making a decision in this matter, the Board is governed by section 1 and subsections 19(1), 19.1(1) and 44(2) of the *Assessment Act (Act)*.

Section 1 defines current value as:

***“current value”** means, in relation to land, the amount of money the fee simple, if unencumbered, would realize if sold at arm’s length by a willing seller to a willing buyer.*

Subsection 19(1) states that:

***19(1) Assessment based on current value.** - The assessment of land shall be based on its current value or average current value, as determined under section 19.1.*

Subsection 19.1(1) states:

***19.1(1) Assessment, single years and averages.** – Subject to subsections (2) and (3), land shall be assessed for a taxation year at the current value of the land for the taxation year.*

***19.2(1) Valuation days.** – Subject to subsection (5), the day as of which land is valued for a taxation year is determined*

F44-12  
Cont.

as follows:

1. *For the 2006, 2007 and 2008 taxation years, land is valued as of January 1, 2005.*

Subsection 44(2) states that:

***44(2) Reference to similar lands in the vicinity.*** – *In determining the value at which any land shall be assessed, reference shall be had to the value at which similar lands in the vicinity are assessed.*

Subsection 40(11) of the *Act* directs the Board to “...determine the amount of the assessment as necessary to reflect corrections to the current value.” The result of this process should be current value.

The Board’s interpretation of the Legislature is that subsections 19(1) and 19.1(1) are primary. The direction contained in subsection 44(2) requiring reference to the value at which similar lands in the vicinity are assessed is secondary. In other words, the Board must first look to sales evidence to determine if a correction to current value is required.

**Board’s Deliberations:**

The only issue before the Board is to determine the effect on the current value of the negative influence created by the noise emitted by the transformer station located directly across the road from the subject property.

Both parties recognize that this very unique situation makes it difficult to determine a correct current value in accordance with the directions set out in the *Act*, and have asked the Board to determine a value reduction for this negative influence on the subject property. Mr. Thompson and Mr. Carney are turning to the Board for assistance in resolving this challenge.

F44-12  
Cont.

There is evidence that noise contamination exists without any apparent cure. Indeed, if Mr. Thompson's fears come true, the constant noise will become louder. The Board finds that the subject property is unique and it has no doubt that it is negatively impacted by the noise contamination. There is no sales data or similar evidence to assist the Board in quantifying the impact on current value.

Mr. Carney does not dispute the noise contamination. He presented no evidence on behalf of MPAC, as to the contamination's impact on the subject property, but testified that the noise was loud enough to cause significant interference with a telephone conversation he had with Mr. Thompson.

The Board is unable to address the complainant's suggestion that he should be exempt from property taxes, since that is not within the Board's jurisdiction. The Board's jurisdiction is limited to if a correction is required to the current value.

The Board finds that the constant hum alleged by Mr. Thompson does exist and significantly reduces the current value of the subject property. The best evidence is the audio portion of the CD (Exhibit #1) and the testimony of both parties. Having heard this nuisance, apparently sanctioned by the Municipality, the Board accepts Mr. Thompson's testimony that the stigma of noise contamination has a negative impact on the value and marketability of the property, and that after learning of the hum, prospective purchasers will quickly lose interest in purchasing the property. The Board is satisfied that a very substantial reduction is warranted.

Having satisfied the Board that a correction to current value is required, the Board is left without evidence to quantify the effect. While the onus is on the complainant to prove that the assessed value of the subject property is incorrect, the Board is of the view that

F44-12  
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in the circumstances of this case where the evidence is clear that a correction is required, MPAC should have some responsibility for returning a correct assessment for the property. The evidence is clear that while aware of the nuisance and agreeing that it affects current value, no effort has been made by MPAC to quantify it. The Board is of the view that if MPAC agrees that the current value is incorrect and makes no effort to quantify the correction so required, the complainant should not be left with an incorrect assessment or bare the expense of a professional appraisal.

Under the circumstances, the Board reduces the assessment of the subject property for the 2008 taxation year by 50% from \$255,000 to \$127,500, rounded down to \$127,000.

"C. Marques"

C. Marques  
Member

/II

**DECISION RELEASED ON: September 12, 2008**

F44-12  
Cont.

FEB. 12, 2011

Iain Fisher ; CALIF PUC  
C/o Dudek  
605 Third St.  
Encinitas Ca 92024

Philip Villanueva  
16032 PINELAND DRIVE  
Santee Ca 92071  
619-449-2355

SUBJECT: TULE WIND PROJECT

Dear ALL interested in this vital Project,

I feel strongly that we are at a crossroads  
of 2 most important issues and you need to make  
decisions that will have impact beyond imagination.

I ask YOU to please support this Project to the  
utmost. Please do not decrease the means and  
support. Go all out and do this Project the  
right way... and with gusto and CLASS!

Sincerely,

Philip Villanueva

F45-1

**From:** Howard Cook [mailto:howwcook@yahoo.com]

**Sent:** Monday, February 14, 2011 12:19 PM

**To:** catulewind@blm.gov; ECOSUB

**Cc:** Donna Tisdale; clasictraclayer@att.net

**Subject:** Analysis and Comments re: East County Substation and Tule Wind Projects

Attached is my analysis and comments for the East County Substation and Tule Wind projects. I am resending my analysis and comments, because my previous submission had an inaccurate date. This new submission is dated 02/12/2011.

Howard W Cook  
1243 Jacumba St  
Jacumba, CA 91934  
619-766-4640

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**COMMENTS/ FACTS/ANALYSIS OF DRAFT ENVIROMENTAL IMPACT  
REPORT FOR EAST COUNTY SUBSTATION AND TULE WIND PROJECTS**

**BY HOWARD W COOK, 02/12/2011**  
**1243 JACUMBA ST. JACUMBA, CA 91934**  
**619-766-4640**

**BACKGROUND**

This document analyses and comments on the draft EIR for the Tule Wind Project and the Jacumba-Boulevard Substation Project as well as the multiple high voltage transmission connector and feeder lines involved with both.

F46-1

The Tule Wind Project in the McCain Valley specifies 124 wind turbines, each one over 400 feet tall. This project also specifies its own 5 acre substation, a 5 acre operations and maintenance yard, a 5 acre concrete factory, new enlarged and enhanced roads, as well as connecting high voltage transmission lines and a connecting high voltage line to the Boulevard substation.

The Substation project specifies two major substations. First, a 58-acre Jacumba facility adjacent to the Mexican border, which will connect with various planned Mexican and US wind and solar projects. Second, an expanded, greatly enhanced Boulevard substation. They both specify multiple interconnections to each other and other high voltage transmission lines to the Tule substation and from the planned wind projects in Campo, the Jordan project, and several Indian land wind projects.

F46-2

**OVERALL COMMENTS**

I attended both of the local project "informational meetings" at Jacumba on January 26, 2011 and in Boulevard February 2, 2011. They were both very strange meetings, because they did not have a specific agenda item in which the people in attendance could ask questions and comment on the key points of the plans and the "Environmental Impact Report". Instead, the Dudek Chair broke up both meetings and then asked each of those attending to ask individual questions of project personnel stationed around the room. The meeting design reflected a desire to get the meetings over quickly without direct questions and input from the floor. Both meetings were conducted top down, not like most serious high impact meetings held elsewhere in America where give and take is expected. **These were not valid meetings for this reason. The projects should be placed on hold until multiple true "open meetings" can be held locally.** After all, the next open meeting will be held 70 miles away in San Diego. Many people in this rural locale lack the resources to travel and park in down town San Diego on the multiple days likely to be required.

F46-3

The reports were prepared at the direction of companies which are majority foreign owned. Recent experience, such as in the Gulf Of Mexico with British Petroleum, allow us to conclude that foreign companies do not have the same commitment to environmental protection as do local companies

F46-4



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**619-766-4640**

who must answer long term for environmental errors or omissions. My analyses of both reports conclude that there are many glaring critical omissions.

The two projects at issue are interconnected. I am addressing The Tule Wind project first because it helps define the size and scope of the substations. In the same vein, I also suggest that the substation location and size along with the many environmentally destructive high voltage feeder lines envisioned, should wait completion of the approval process for all of the various wind and solar projects scoped. Too much is being rushed through all at once. This rush to energy industrialization threatens the quality of life in the East County area.

**TULE WIND PROJECT**

These comments and analysis of the Tule Wind development provide research data and analysis that causes us to recommend against this industrialization of the McCain Valley area.

The recreational and wilderness areas immediately adjacent to McCain Valley as detailed below are shockingly touched on only briefly in the report or not mentioned at all.

The Tule Wind project is centered around McCain Valley Road. The left hand, Western side of the road serves light ranching, OHV recreational, and a camp for troubled teens. The right hand, Eastern side of the road contains magnificent designated environmental areas and recreational assets. The Tule Wind report mentions McCain Road areas as a designated RMZ (Resource Management Zone) while largely ignoring the designated wilderness areas and recreational assets immediately adjacent on the right hand Eastern side and also at the north end of the road. McCain Valley Road provides the sole primary vehicular access to the immediately adjacent Carrizo Gorge dedicated Wilderness and the Sawtooth dedicated Wilderness areas. The road serves this same purpose for the higher elevation Western side of Anza Borrego State Park (the largest state park in the USA). In the case of the Sawtooth Wilderness Area, McCain Valley Road offers the only access of any kind (see the included BLM website and map information). These wilderness and recreational access and entry points and related recreational sites are well documented by a large quantity of recreational guides and books and the BLM's own literature and maps. Some of these publications will be detailed and quoted later herein.

F46-4  
Cont.

F46-5

F46-6

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F46-8

**COMMENTS/ FACTS/ANALYSIS OF DRAFT ENVIROMENTAL IMPACT  
REPORT FOR EAST COUNTY SUBSTATION AND TULE WIND PROJECTS**

**BY HOWARD W COOK, 02/12/2011**  
**1243 JACUMBA ST. JACUMBA, CA 91934**  
**619-766-4640**

The Wind contractor also fails to describe the overall impact of "Wind Power Industrialization" on the wildlife, scenic overlooks, campgrounds, trails, trail heads and other similar environmental and recreational assets in the adjacent Wildernesses.

F46-9

The right Eastern side of McCain Road has short paths and short side roads leading to magnificent scenic overlooks of the desert below (Anza Borrego State Park, Carrizo Gorge, Jacumba Mountain and Sawtooth Wilderness areas). These reflect an escarpment 15 miles long that is similar to other scenic gorge areas such as the Grand Canyon, Royal Gorge, Kings Canyon etc. The escarpment is very precipitous, going almost straight down. Mc Cain Road is mostly unpaved, but passable by car. Tour buses, however, do not frequent it so it is not so well known. This awesome escarpment is not mentioned in the report as a key asset. The Tule Wind report once again fails to mention that the road is the only way to access the escarpment and Wilderness areas as quoted in the included BLM and other documents.

F46-10

The Tule Wind Report specifies at least 35 wind turbine sites on the Eastern right hand side of the road and another 25 in close proximity (hundreds of feet) on the immediate left side. The Cottonwood campground is close to the end of road. The campground overlooks and is adjacent to the Sawtooth Wilderness and the Carrizo Gorge Wilderness. Hikers, campers, horseback riders and day visitors utilize Cottonwood campground. The specified immediately adjacent noisy whirring turbines are projected to surround the campground and would make it no longer practical for camping and day use. Keep in mind that the campground and McCain Road are the only means of visiting, hiking and horseback riding into The Sawtooth and Carrizo Gorge Wilderness areas. Lets not lose access to these large areas set aside for us to visit and enjoy as well as for plant and wildlife visitation and study.

F46-11

The 35 Wind turbines, as well as the close in 25 previously discussed, each one over 400 feet high, will be clearly visible in Anza Borrego State Park and in the two Wilderness areas discussed. The blinking red lights atop the turbines at night will also clearly distract those in Anza Borrego State Park who go to the park to observe the stars, to enjoy the solitude and camp in the the many canyons off County Highway 2 in Anza Borrego State Park as I have myself.

F46-12

This industrialization of McCain Road is also absolutely not compatible with the wildlife found in the valley and the adjacent wilderness areas. These are are described in BLM's own documents shown later. Wildlife found include bats, protected Golden Eagles and endangered Bighorn sheep.

F46-13

**COMMENTS/ FACTS/ANALYSIS OF DRAFT ENVIROMENTAL IMPACT  
REPORT FOR EAST COUNTY SUBSTATION AND TULE WIND PROJECTS**

**BY HOWARD W COOK, 02/12/2011**

**1243 JACUMBA ST. JACUMBA, CA 91934**

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So that readers unfamiliar with wind installations will understand the impact they would have on the McCain Road environment I am including the following descriptions found in nationally recognized documents (multiple equipment descriptions are provided since the Tule Wind report does not specify models or brands planned):

F46-14

***How big are the towers?***

"Industrial wind turbines are not the benign little structures you might see in a schoolyard or behind someone's house.

The widespread GE 1.5-megawatt model, for example, consists of 116-ft blades atop a 212-ft tower for a total height of 328 feet. The blades sweep an area just under an acre. The 1.8-megawatt Vestas V90 from Denmark is also common. Its 148-ft blades (sweeping more than 1.5 acres) are on a 262-ft tower, totaling 410 feet. Also gaining use in the U.S. is the 2-megawatt Gamesa G87 from Spain, which sports 143-ft blades (just under 1.5 acres) on a 256-ft tower, totaling 399 feet.

Many existing models and new ones now coming out reach well over 400 feet high, with higher towers and extra-long blades designed to turn the generator in less-than-ideal sites.

F46-15

The base of the steel tower is anchored in a platform of more than a thousand tons of concrete and steel rebar, 30 to 50 feet across and anywhere from 6 to 30 feet deep. Pylons may be driven down farther to help anchor the platform.

The gearbox—which transforms the slow turning of the blades to a faster rotor speed—and the generator are massive pieces of machinery housed in a bus-sized container, called the nacelle, at the top of the tower. The blades are attached to the rotor hub at one end of the nacelle. Some nacelles include a helicopter landing pad.

On the GE 1.5-megawatt model, the nacelle alone weighs more than 56 tons, the blade assembly weighs more than 36 tons, and the tower itself weighs about 71 tons, for a total weight of 164 tons. The corresponding weights for the Vestas V90 are 75, 40, and 152, total 267 tons, and for the Gamesa G87 72, 42, and 220, total 334 tons.

Besides the noise and vibrations such huge moving machines unavoidably generate, they must be topped with flashing lights day and night to increase their visibility.

F46-16

***So the footprint is less than 50 feet?***

Hardly. First of all, new roads have to be built, or existing ones need to be extensively "upgraded." It requires more than an old dirt logging track to get a 150-ft blade, a

F46-17

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**1243 JACUMBA ST. JACUMBA, CA 91934**

**619-766-4640**

70-ton nacelle, or the huge crane needed to put it all together up a mountain. The road needs to be wide, straight, and very strong.

Several acres around each turbine have to be cleared as well. For best performance, the GE 1.5-megawatt turbine needs 82 unobstructed acres around it and the Vestas V90 needs 111. On a ridgeline, the sloping away of the land and the hope that the wind is always perpendicular to the line of the ridge mean that about 5 acres are actually cleared around each turbine. Access to the area around the turbines must be strictly limited because of physical danger. A facility may also require a new substation or two, as well as new transmission lines.

The combination of all this—road building, extensive clearing, and the installed facility itself not only significantly degrades and fragments wildlife habitat but also has a serious effect on erosion and water flow, not to mention the aesthetics of a mountainside or open land and of course the visual intrusion affects the landscape for miles around". (end of general description)

The Tule Wind Report in it's "visual impact assessment section" says that the construction period will be "short term", yet the report in another place says that it will last for 12 to 18 months. The report in the "traffic section" estimates the construction period truck volume at 200 trips a day (Concrete mix trucks, construction haulers and the largest industrial cranes) They say that the construction periods, when complete, will end any interference with recreational use, wilderness access or enjoyment, yet we know by local experience with the wind farm on tribal land adjacent to Highway 8 that every turbine has been replaced since installation several years ago. Visual review of this site shows large discarded or replacement structures remaining strewn around the base of the turbines. Go underneath these turbines with the noise, vibration and fearsome proximity to lethal whirling blades while operating and you will understand that visitors will not want to visit and utilize the recreational and visitor assets (campgrounds, trails, trailheads, overlooks) currently in use. The wildlife will react similarly.

The Tule Wind project report in the "operation and maintenance impacts" section itself admits the following: "Given the height of the wind turbines, their placement on ridgelines, and the rural nature of the project site, the turbines may be highly visible from certain viewpoints" The modifier "may be" is a large copout. Industrial high visibility is a certainty. The "rural nature" comment is an admission that the entire character, not just the visualization of the area will be forever changed to

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F46-21

**COMMENTS/ FACTS/ANALYSIS OF DRAFT ENVIROMENTAL IMPACT  
REPORT FOR EAST COUNTY SUBSTATION AND TULE WIND PROJECTS**

**BY HOWARD W COOK, 02/12/2011**

**1243 JACUMBA ST. JACUMBA, CA 91934**

**619-766-4640**

industrialization. Once again the entire right and Eastern side of McCain Valley is tourist, environmentally and recreationally oriented, not rural. Visual views, the feeling of solitude and quite enjoyment are vital to the tourist and recreational visitor and user. The Tule Wind Power industrialization would ruin these current major attributes. The Tule Wind Power project is extremely deleterious to our backcountry area and should not be allowed.

The following BLM publications describe the wilderness areas, their sole access via McCain Valley Road and their significant environmental assets:

**SAWTOOTH MOUNTAINS WILDERNESS QUOTED FROM THE CURRENT BLM WEBSITE AND 1997 BLM DESERT DISTRICT MAP**

**"Area Description:** Ridges and valleys alternate here, arising from 1,400 feet to 5,600 feet. The ridges extend from the Laguna Mountains into the desert, creating the alluvial valleys of Vallecito, Inner Pasture and Canebrake Canyon. Wildlife residents include the San Diego horned lizard, spotted bat and willow flycatcher. Historically, Peninsular bighorn sheep made their home and today transient sheep use the area. Prairie falcon, golden eagle and Coopers hawk span their wings above the desert floor. More than 200 species of plants are believed to grow within this wilderness, where vegetation transforms from a dense chaparral at the higher elevations along the Laguna Mountains to low desert creosote bush. Many of the plant species are under review for listing as threatened or endangered.

**Getting there:** Although State Route 2 winds along the northern side of the wilderness, there is no legal access due to private lands along the boundary. The only access is from the Pepperwood Height Trail at the end of the McCane Valley. To reach this trailhead exit interstate 8 at the Manzanita Boulevard exit, follow State Route 94 east to McCain Valley and follow this road 13 miles to Cottonwood Campground".

**CARRIZO GORGE WILDERNESS QUOTED FROM THE CURRENT BLM WEBSITE AND BLM 1997 DESERT DISTRICT MAP**

**"Location:** San Diego County; 60 miles east of San Diego, California (Note Boundary setbacks from roads or trails are 30 to 300 feet)

**Area Description:** The Carrizo Gorge Wilderness offers some of the most expansive vistas in the California Desert. Views

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**COMMENTS/ FACTS/ANALYSIS OF DRAFT ENVIROMENTAL IMPACT  
REPORT FOR EAST COUNTY SUBSTATION AND TULE WIND PROJECTS**

**BY HOWARD W COOK, 02/12/2011**

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**619-766-4640**

stretching 100 miles or more are common. The panorama includes the Salton Sea, Chocolate Mountains, Anza Borrego State Park and Mount Signal on the Mexican Border. This wilderness is the only ecological transition zone between the Colorado Desert and the peninsular mountain ranges represented in the National Wilderness Preserve System. Three peninsular bighorn sheep herds call the area home., and the San Diego Horned Toad, Swainson's hawk, golden eagle and other birds of prey have all been spotted here. California fan palms line the edges of dry washes and narrow canyons, creating desert oasis.

**Getting There:** Access this wilderness by taking the Boulevard/Manzanita exit from Interstate 8. Follow State Route 94 east to the McCain Valley Road. Driving north, the wilderness is located along the east side of McCain Valley Road".

The unique and beautiful assets of McCain Valley and its adjacent wilderness areas are also described in the following guide and recreational publications:

**Afoot and Afield in San Diego County by Jerry Shad says:**

"The area between County Highway S2 and the BLM'S McCain Valley Cooperative Management Area constitutes some of the most wild, beautiful and serene territory in San Diego County". Also: "Cottonwood Campground is a good place for car camping, and serves as a jumping off point for hikes into the wild areas lying North and East. Several interesting hikes may be taken between McCain Valley and the desert floor" etc.

**Back Country Adventures, Southern California by Peter Massey and Jeanne Wilson says:**

"Sacatone Overlook offers views into the Carrizo Gorge" Also: "The paved road turns to graded dirt as it enters the McCain Conservation Area. Along the way it passes two viewpoints over the Carrizo Gorge area and travels through a magnificent undulating landscape strewn with giant granite boulders" also "a second overlook into the Carrizo Gorge region encompasses the badlands as well as the valley area".

**The Sierra Club's Wild Heritage Campaign publication on The Carrizo Gorge Wilderness says:**

"Contains critical habitat for the endangered Peninsular bighorn sheep" also "The area provides outstanding habitat for bighorn sheep including potential lambing areas. Bighorn scat, tracks and beds have all been observed here. While the

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**COMMENTS/ FACTS/ANALYSIS OF DRAFT ENVIROMENTAL IMPACT  
REPORT FOR EAST COUNTY SUBSTATION AND TULE WIND PROJECTS**

**BY HOWARD W COOK, 02/12/2011**

**1243 JACUMBA ST. JACUMBA, CA 91934**

**619-766-4640**

habitat is good, the Carrizo Gorge band is one of the most precariously balanced of all Peninsular bighorn groups with just 19 ewes counted in 1998; everything possible must be done to protect these vanishing symbols of the desert."

**A Sierra Club publication "Still Wild, Always Wild" by Suzan Zwinger on pages 16 and 17 says:**

"It is early February and Carrizo Gorge Overlook is an ideal place for my exploration to begin. Below me, dropping three thousand feet down, the Ink-ko-pah, Carrizo, and Bow Willow Gorges look like arid crevices of rock boulders. ---- This overlook straddles the transition between the peninsular zone's moist mountain climate and the dramatic Sonoran Desert. I stand at the serrated-knife-edge of two ecosystems and their exceptionally rich variety of species. Last night I slept half a mile back from this escarpment (McCain Valley's Cottonwood Campground) under lush old madronas, huge manzanitas with thick trunks, and deep green oak trees. ---- To the east-northeast, the whiter than white Salton Sea shimmers below sea level. Far to the southeast, Picacho Peak Wilderness drops down to the Colorado River --- - . To the southeast, the Mexican border's steep mountain terrain, the Jacumba Wilderness, sinks from high coastal mountains on the west to sea level in a matter of miles".  
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The Tule Wind Report presents wildlife risk as a necessary afterthought. They are willing to risk wildlife harm as secondary to the claimed economic and social benefits. The wildlife at risk is enumerated in the just quoted six publications. The extent of the risk is considerable because of the size of the project and its proximity to the wildlife itself. The experience at other Wind sites is revealing in this regard. BLM has recommended cutting the number of turbines at Tule in half because of the threat to golden eagles. Iberdrola has expressed its opposition to this reduction in spite of a dismal record at the Californian Altamont Pass Wind site that reports 1000 raptor kills a year. 100 of these fatalities are golden eagles. Lets not put the golden eagle, other raptor and the bat population of Eastern San Diego County in jeopardy with the proposed Tule Wind project (see included BLM wildlife reports in the 2 wilderness areas).

The prior BLM reports and the Sierra Club reports indicate an active but threatened Bighorn sheep population along the McCain escarpment. Why risk this vital population of Bighorns? On the other side of Anza Borrego State Park (about 20 miles away) at Coyote Creek, BLM and De Anza State Park wildlife people shut down travel on the Coyote Creek

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**COMMENTS/ FACTS/ANALYSIS OF DRAFT ENVIROMENTAL IMPACT  
REPORT FOR EAST COUNTY SUBSTATION AND TULE WIND PROJECTS**

**BY HOWARD W COOK, 02/12/2011**

**1243 JACUMBA ST. JACUMBA, CA 91934**

**619-766-4640**

road for 5 months each year during the Bighorn lambing season. The proposed heavy truck travel on McCain Road and the ongoing noise, wind disruption and vibration will cause disruption to the precarious Bighorn population especially during the vital lambing season and during periods of drought when Bighorns are forced to move over wider areas to find water.

The heavy industrialization of the McCain Valley area can only worsen the overall wildlife population.

Finally, the economic future of far Eastern San Diego County is heavily dependent on tourism and retiree residences. Both would be severely impacted by reduced real estate values and tourist visits caused by the actuality of wind energy, including Tule, and electrical line industrialization. Currently, landowners adjacent to present tribal turbines off Interstate 8 are experiencing a drastic inability to sell their real estate. The economy in East County is already suffering due to the recession. Wind energy industrialization will make it worse. The deleterious economic effects of the recession abound, for example, the only Jacumba clinic has just left Jacumba because of poor economic conditions.

**EAST COUNTY SUBSTATION PROJECT ANALYSIS**

Initially, in this analysis I wrote herein: "the substation location and size along with the many environmental harming feeder lines envisioned, should wait completion of the approval process for all of the various wind projects scoped. Too much is being rushed through all at once. The quality of life in the East County area is threatened by this rush to energy industrialization".

The substations should not be planned and sized until the various wind and solar projects are planned and approved. The EIR Report analyzed here, specifies three unapproved wind projects, the Tule, the Campo, the Jordan projects. These unapproved projects are tentatively intended to feed into the two substations. They are also scoped to be interconnected to each other. Then finally, lines from each of the various not yet sized and approved substations will be connected to the still in construction above ground Sunrise high power transmission line. The scope, the number of lines, the routes, the wattage and other key design elements are still in limbo, although many alternate routes have been mentioned in the document. Potentially, as many as seven new high voltage lines could be coming through the Jacumba-Boulevard area. This can result in the almost total

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**COMMENTS/ FACTS/ANALYSIS OF DRAFT ENVIROMENTAL IMPACT  
REPORT FOR EAST COUNTY SUBSTATION AND TULE WIND PROJECTS**

**BY HOWARD W COOK, 02/12/2011**  
**1243 JACUMBA ST. JACUMBA, CA 91934**  
**619-766-4640**

industrialization of this now beautiful area currently sprinkled with small ranches and residences.

What is the hurry? Each line and substation, if necessary to build at all, should be carefully planned, designed to minimize environmental impact, and then reviewed with the public. Not rushed through this hastened, sketchy and not yet completely defined process. Chaos and helter skelter electrical line and substation development is about to be dumped on the Jacumba-Boulevard area. The residents and visitors have had some details presented to them and what they have heard and seen is already deleterious to their property values and to the enjoyment of their homes.

If this energy industrialization is finally defined, all approved, then lets put all of the interconnecting and feeder lines to the substations underground. The imposition of the recently approved and under construction above ground high voltage Sunrise transmission line is already too much for the same environment. The various public agencies, the utility company and the developers are treating scenic Eastern San Diego County as a can be sacrificed "Throw away" environment.

Many pages of the substation report address the fire, safety and security of the Jacumba Substation. They fail to consider the fire, safety and security risks of a substation adjacent to the Mexican Border. The site chosen for this fifty-acre development is within shooting distance of the border. There is the well-publicized current and past instability of the Mexican government. There is the real threat of the Mexican drug cartels with which the Border Patrol is coping on a daily basis. The substation would present an attractive target for those border elements with interests inimical to the United States.

There is, therefore, a real danger to the facility, the environment around it and our energy supply. Much of the energy supply is intended for our military in San Diego and to the many hospitals and other health facilities along the way. Everyday there are televised reports of border incursions by organized and unorganized groups. Cross border gunshots, tunnels, fire and catapulted objects have been recently observed and reported. Recently this year, just outside of Boulevard, a Tunisian Muslim agitator and advocate of Sharia law, who had been expelled from both France and Canada for crimes and terrorist advocacy was found in a car trunk by the Border Patrol while being smuggled from Mexico.

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**COMMENTS/ FACTS/ANALYSIS OF DRAFT ENVIROMENTAL IMPACT  
REPORT FOR EAST COUNTY SUBSTATION AND TULE WIND PROJECTS**

**BY HOWARD W COOK, 02/12/2011**

**1243 JACUMBA ST. JACUMBA, CA 91934**

**619-766-4640**

The report fails to address this overall extreme risk at all. These vulnerable and energy vital substations, if necessary should not be located within twenty miles of the Mexican border.

Sincerely,

Howard W Cook  
1243 Jacumba Street  
Jacumba CA 91934



F46-33  
Cont.

**From:** Michael Hanna [mailto:mhanna@arizonanatural.com]  
**Sent:** Monday, February 14, 2011 2:48 PM  
**To:** ECOSUB  
**Cc:** catulewind@blm.gov  
**Subject:** East County Substation/Tule wind/Energia Sierra Juarez Gen-tie Projects

To Whom it May Concern:

I own commercial property in the Boulevard area and it is evident from your public documents that parts of these proposed projects will adversely effect the actual value and the future income producing value of my property. One of the proposed wind turbine sites will be visible and probably audible from my property and the proposed route of the high voltage transmission/distribution lines will directly cross my property. In effect, the combination will ruin any value in the property, cause considerable noise pollution and stand as a visual physical scar on the landscape.

F47-1

Additionally, the increased electric emissions coming from high voltage transmission lines may be hazardous to the public health. There is no doubt that miles of wind turbines and gigantic electrical towers and high voltage wires will destroy the potential value of property in the community and economically devastate an already blighted part of San Diego County. This is also a very ecologically delicate area. My property has over 40 ancient live oaks, many over 200 years old, that provide homes for several varieties of animals not found in such concentration anywhere else in the high deserts of East San Diego County. If you stood on the property for 10 minutes you would understand what a violation it would be to defile it with power lines and disturb it with the sound of whipping turbine blades and electrical buzzing.

F47-2

F47-3

Sincerely,  
Michael Hanna

\*\*\*\*\*  
\*\*\*\*\*

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**From:** Mannixarch@aol.com [mailto:Mannixarch@aol.com]  
**Sent:** Monday, February 14, 2011 10:22 AM  
**To:** ECOSUB  
**Cc:** catulewind@blm.gov  
**Subject:** Fwd: Application 09-08-003 Electrical Facilities

Hello Iain,  
Hello Greg,

An additional concern with the project is the location of the Wind turbines. The drive from highway 8 to Jacumba should be kept with natural vistas. Also coming in from highway 80 from Boulevard, the area should be kept as is. The location of the Wind turbines should be stepped back so that they are out of view.

F48-1

Dan & Tami Mannix

439 El Cajon Blvd  
El Cajon, Ca 92020

Office: 619-588-7730  
Fax: 619-588-2932  
Cell: 619-302-7730

\*\*\*\*\*

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**From:** mark.l.meech@cummins.com  
**Sent:** Monday, February 14, 2011 1:55 PM  
**To:** ECOSUB  
**Subject:** Wind turbines

I would like to voice my concerns in regards to the project wind turbine projects in the east county of San Diego.

F49-1

I have read some of the report but can not read all of before our deadline.

We need to find other alternatives to the current locations proposed. The visual, cultural, ecological impact is to great. Your report minimizes most of these concerns. We live in the back country for many reasons and do not feel that the use of these lands is beneficial for those that currently use it. If we would like to decrease our need for fossil fuels we need to explore other forms besides wind. It is a very poor use of the land. These projects take up far to much of the land for what they can generate in wind power. It is a negative for environmental justice. Your are going to industrialize this area and that is not what the land was meant for. You could fit all federal county and city facility's with the funding the federal government is giving to these projects The federal government needs to be a better neighbor to the folks that live near or next to federal land. When you look at how many acres are required for such projects, you will find per acres of land for each wind generator it is very wasteful use of the land. I am all for green power this is not the place and not the technology for it. Solar is much more cost effective and puts the power closer to the user. Not what SDG&E wants to hear. We are going to hold our elected representatives accountable as well as many other government employees as well. Do not bet your reputations and careers on such a disaster.

F49-2

Thanks You.

Mark Meech

\*\*\*\*\*

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**From:** Donna Tisdale <tisdale.donna@gmail.com>  
**Sent:** Monday, February 14, 2011 5:20 PM  
**To:** aei@cpuc.ca.gov; ECOSUB  
**Subject:** 2 ECO Tule ESJ comment letters  
**Attachments:** McCallister Tule ECO ESJ 2-12-11.pdf; Mauris Tule ECO ESJ 2-12-11.pdf

Hello PUC/ Dudek

Hard copies of the attached similar letters from 2 senior couples were mailed to Dudek today.

The McCallister's home and 80 acre property will be sandwiched between the Tule turbines (G line), the Sunrise Powerlink, one of the proposed routes for the 138 kV line for Tule, and one of Tule Wind Substation proposed for APN 61103001 owned by Harmony Grove.

The Mauris's home and property is to the west of the Tule turbines (G line).

Regards,

Donna Tisdale  
619-766-4170

F50-1

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\*\*\*\*\*

**Robert & Kathryn Mc Callister  
3032 McCain Valley Road  
Boulevard, CA 91905**

February 12, 2011

Mr. Iain Fisher, CPUC  
Mr. Greg Thomsen, BLM,  
c/o Dudek  
605 Third Street,  
Encinitas, CA 92024

**Draft EIR-EIS : Tule Wind, ECO Substation, Energia Sierra Juarez**

Dear Mr. Fisher and Mr. Thomsen,

This letter is being provided to ensure that our concerns and strong opposition are documented in the record for these large wind turbine, substation, and power line projects that your agencies are reviewing. We may need to join in filing a future lawsuit for damages related to loss of property value, quality of life, the use and enjoyment of our property, and other potential adverse effects.

We are both in our 80's, are in good health, and live full time on the 80 acres we own located at 3032 McCain Valley Road, in Boulevard. Until recently, this was a beautiful and quiet place to live and to invite family and friends join us. All that has changed and we are now very concerned for our own future and that of our neighbors, pets, livestock and the local wildlife.

A moratorium on industrial wind turbine projects should be initiated by local state, and federal agencies, unless and until science-based peer reviewed health and safety tests are conducted to determine a safe setback distance. To date, those studies have not been done and industrial wind energy supporters cannot claim otherwise.

You are now reviewing three energy projects, along with the additional proposed wind turbine projects on the Manzanita and Campo Reservations and Greg Lansing's ranch lands on Ribbonwood Road and Jewel Valley Road. San Diego Gas & Electric's large 500 kV Sunrise Powerlink towers and lines will also be installed all along the eastern edge of McCain Valley Road and our eastern property boundary about 1,000 feet or so from our home.

The Tule Wind turbines, that will stand almost 500 feet tall, are planned to be installed approximately 2,200 feet or some from our home along the top of the ridge just west of our property.

The new Tule Wind 138 kV transmission line is also planned to run right next to the Sunrise Powerlink lines along McCain Valley Road, our only access road. More Tule Wind turbines are also planned for private land on the ridgeline to the north east of our home. A new 5 acre substation and 5 acre operation and maintenance building,

F50-2



for the Tule Wind project, are also planned for the open pasture on private property just to the north of us, or for the Rough Acres Ranch property just to the southwest of us.

**There are several main concerns that we want your agencies to address and respond to:**

1) Increased risk of fire; increased fire insurance rates or total loss of coverage due to new high risk development near our home; reduced fire fighting access due to increased potential for electrocution to fire fighters.

Power lines, turbines, substation transformers can all start fires. This can translate into a life or death situation for us, with only one access road and limited local fire fighting staff availability, equipment, and funding.

2) Noise and low frequency pollution from industrial wind turbines, some below the level of human hearing, can and does make people and animals ill when turbines are placed too close to homes, livestock, and sensitive wildlife areas. It has been reported that families have even abandoned their homes to escape the unbearable living conditions that are inflicted by these power generating turbine. Increased medical expenses and long-distance round trips for medical attention can really add up. Impacts to pets and livestock can also be severe and expensive.

3) 2,200 feet is way too close for turbines. We don't want them anywhere near our home or the homes of other families. They should be placed several miles away from any occupied buildings, livestock, public recreation areas, campgrounds, and protected wildlife areas.

4) Electrical pollution, stray voltage, has been documented in and around other wind turbine and substation projects and homes within 1,800 feet and much more. There are indications that wind turbines and the substations that serve them are more prone to generate electrical pollution due to the intermittent nature of the energy they produce.

4) Shadow flicker from turbines can extend several thousand feet during certain times of day and can create a harmful pulsing light effect that can result in vertigo, seizures, or other adverse effects. That strobe effect also has adverse effects on pets, livestock and wildlife. Our home and property will likely be impacted during the late afternoon and evening hours.

5) Property value losses are being recorded at other wind turbine projects. We join others in requesting that Tule Wind be required to enter into binding Property Value Protection Agreements to ensure that we do not suffer lost value or the inability to sell our property, if rendered necessary, due to the adverse impacts generated by the proximity of their massive wind turbines, power lines, and substations that will surround us.

6) We are requesting that any project approvals include binding contractual agreements for adequate and ongoing funding for third party unbiased pre-construction testing for ambient noise, low frequencies and infrasound, and dirty electricity levels to be taken both inside and outside our home and at all our property lines. We are also requesting ongoing monitoring and enforceable

F50-2  
Cont.



compliance guarantees that include shutdown of non-compliant turbines--in the event these projects are approved over our objections.

7) The County noise ordinance and turbine setbacks are currently inadequate to protect public health and safety and cannot be relied upon for these projects. Compliance with those standards, as stated in the Draft EIR/EIS will NOT insure against the generation of a nuisance. Your agencies must address this issue. Our rural ambient noise levels are much lower than stated in the Draft EIR/EIS. Complaints have been generated at other wind energy projects with only minimal increases in noise levels. All ranges of noise levels, audible and inaudible need to be documented at pre-construction levels--and protected.

8) We also have concerns over adverse impacts to both the quality and quantity of our well water. Tule Wind will be clearing, grading, and blasting for turbine footings and new access roads. They will also be drawing large amounts of well water from several wells on Rough Acres Ranch for cement batch plants and other operational uses. Their turbines, substation, transformers, and maintenance buildings will contain hazardous fluids that can spill or leak into the water table. Our water levels should be documented by a licensed unbiased third party prior to commercial uses at nearby wells. We have no economically viable alternative source of water available to replace what we currently have.

9) Day time strobe lights and red blinking night lighting on the turbines and some of the transmission towers will create another nuisance both day and night ,and take away from our beautiful dark night sky, one of the few left in Southern California.

In short, we strongly object to and oppose the introduction of any commercial industrial scale wind turbines , the related infrastructure, and all the adverse impacts that go with them, into our quiet rural neighborhood.

Any approvals of such would constitute a nuisance based on bulk and scale, blinking lights, noise levels (including low frequency and infrasonic), disruption to the peaceful use and enjoyment of our home and property and the very real potential for adverse health effects. While ignored, denied, and dismissed by the wind energy industry, growing evidence documents that some home owners have been bought out by wind energy companies due to undeniable adverse effects. The problems are real and must be addressed by your agencies prior to any project decisions.

Sincerely,

*Bob McCallister*  
*Kathryn M. Callister*

Robert and Kathryn Mc Callister

cc: Donna Tisdale

F50-2  
Cont.

**John & Iris Mauris  
2945 Ribbonwood Road  
Boulevard, CA 91905**

February 12, 2011

Mr. Iain Fisher, CPUC  
Mr. Greg Thomsen, BLM,  
c/o Dudek  
605 Third Street,  
Encinitas, CA 92024

**Draft EIR-EIS : Tule Wind, ECO Substation, Energia Sierra Juarez**

Dear Mr. Fisher and Mr. Thomsen,

This letter is being provided to ensure that our concerns and strong opposition are documented in the record for these large wind turbine, substation, and power line projects that your agencies are reviewing. We may need to join in filing a future lawsuit for damages related to loss of property value, quality of life, the use and enjoyment of our property, and other potential adverse effects.

We are both up in years and live full time on property we own located at 2945 Ribbonwood Road, in Boulevard. Until recently, this was a beautiful and quiet place to live and to invite family and friends join us, except for the Kumeyaay turbines that we have to look at and can hear thumping away even though they are over 3 miles to the west. We are now very concerned for our own future and that of our neighbors, pets, livestock and the local wildlife. We do have several horses.

A moratorium on industrial wind turbine projects should be initiated by local stater and federal agencies, unless and until science-based peer reviewed health and safety tests are conducted to determine a safe setback distance. To date, those studies have not been done and industrial wind energy supporters cannot claim otherwise.

You are now reviewing three energy projects, along with the additional proposed wind turbine projects on the Manzanita and Campo Reservations and Greg Lansing's ranch lands on Ribbonwood Road and Jewel Valley Road. San Diego Gas & Electric's large 500 kV Sunrise Powerlink towers and lines will also be installed all along the eastern edge of McCain Valley Road and will swing around to the north and northwest of our property.

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The Tule Wind turbines, that will stand almost 500 feet tall, are planned to be installed approximately 4,500 feet or some from our home along the top of the ridge just east of our property.

One route for the new Tule Wind 138 kV transmission line is also planned to run near our property. A new 5 acre substation and 5 acre operation and maintenance building, for the Tule Wind project, are also planned for the Rough Acres Ranch property southeast of us.

The Enel Jewel Valley Project and turbines ( previously called Jordan Wind) are proposed for land immediately west of us at the north end of Ribbonwood Road. Proposed new Manzanita and Campo turbines will only add to the visual blight and adverse effects already generated by the 25 Kumeyaay Wind turbines that we hear and see from over 3 miles away!

**There are several main concerns that we want your agencies to address and respond to:**

1) Increased risk of fire; increased fire insurance rates or total loss of coverage due to new high risk development near our home; reduced fire fighting access due to increased potential for electrocution to fire fighters. Power lines, turbines, substation transformers can all start fires. This can translate into a life or death situation for us, with only one access road and limited local fire fighting staff availability, equipment, and funding.

2) Noise and low frequency pollution from industrial wind turbines, some below the level of human hearing, can and does make people and animals ill when turbines are placed too close to homes, livestock, and sensitive wildlife areas. It has been reported that families have even abandoned their homes to escape the unbearable living conditions that are inflicted by these power generating turbine. Increased medical expenses and long-distance round trips for medical attention can really add up. Impacts to pets and livestock can also be severe and expensive. Wind turbines, as we know, can be heard for miles and infrasound can travel great distances in our type of open terrain.

3) 4,500 feet is way too close for turbines. 3 miles is too close! We don't want them anywhere near our home or the homes of other families. They should be placed miles and miles away from any occupied buildings, livestock, public recreation areas, campgrounds, and protected wildlife areas.

4) Electrical pollution, stray voltage, has been documented in and around other wind turbine and substation projects and homes within 1,800 feet and much more. There are indications that wind turbines and the substations

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Cont.

that serve them are more prone to generate electrical pollution due to the intermittent nature of the energy they produce.

4) Shadow flicker from turbines can extend several thousand feet during certain times of day and can create a harmful pulsing light effect that can result in vertigo, seizures, or other adverse effects. That strobe effect also has adverse effects on pets, livestock and wildlife. Our home and property will likely be impacted during the late afternoon and evening hours.

5) Property value losses are being recorded at other wind turbine projects. We join others in requesting that Tule Wind be required to enter into binding Property Value Protection Agreements to ensure that we do not suffer lost value or the inability to sell our property, if rendered necessary, due to the adverse impacts generated by the proximity of their massive wind turbines, power lines, and substations that will surround us.

6) We are requesting that any project approvals include binding contractual agreements for adequate and ongoing funding for third party unbiased pre-construction testing for ambient noise, low frequencies and infrasound, and dirty electricity levels to be taken both inside and outside our home and at all our property lines. We are also requesting ongoing monitoring and enforceable compliance guarantees that include shutdown of non-compliant turbines--in the event these projects are approved over our objections.

7) The County noise ordinance and turbine setbacks are currently inadequate to protect public health and safety and cannot be relied upon for these projects. Compliance with those standards, as stated in the Draft EIRjEIS will NOT insure against the generation of a nuisance. Your agencies must address this issue. Our rural ambient noise levels are much lower than stated in the Draft EIRjEIS. Complaints have been generated at other wind energy projects with only minimal increases in noise levels. All ranges of noise levels, audible and inaudible need to be documented at pre-construction levels--and protected.

8) We also have concerns over adverse impacts to both the quality and quantity of our well water. Tule Wind will be clearing, grading, and blasting for turbine footings and new access roads. They will also be drawing large amounts of well water from several wells on Rough Acres Ranch for cement batch plants and other operational uses. The Enel project represents additional impacts. All these turbines, substation, transformers, and maintenance buildings will contain hazardous fluids that can spill or leak into the water table. Our water levels should be documented by a licensed unbiased third party prior to commercial uses at nearby wells. We have no economically viable alternative source of water available to replace what we currently have.

F50-2  
Cont.

9) Day time strobe lights and red blinking night lighting on the turbines and some of the transmission towers will create another nuisance both day and night ,and take away from our beautiful dark night sky, one of the few left in Southern California.

In short, we strongly object to and oppose the introduction of any commercial industrial scale wind turbines, the related infrastructure, and all the adverse impacts that go with them, into our quiet rural neighborhood.

Any approvals of such would constitute a nuisance based on bulk and scale, blinking lights, noise levels (including low frequency and infrasonic), disruption to the peaceful use and enjoyment of our home and property and the very real potential for adverse health effects. While ignored, denied, and dismissed by the wind energy industry, growing evidence documents that some home owners have been bought out by wind energy companies due to undeniable adverse effects. The problems are real and must be addressed by your agencies prior to any project decisions.

Sincerely,   
  
John and Iris Mauris

cc: Donna Tisdale

F50-2  
Cont.

Dear Iain Fisher and Greg Thomsen,

February 15, 2011

I am writing this letter in response to the east county Tule Wind project. My wife and I are property owners at 39328 Old Hwy 80 in Boulevard, Ca. We strongly oppose the wind project in this area for the following reasons.

1. The destruction of the beauty and natural landscape of our beloved backcountry and the unknown impact on the wildlife native to our area.
2. The interrupted night time viewing of our mountains, night skies and vistas by lights on the large wind mills which area required by the FFA.
3. The potential for fire hazards and accidental wind damage to the large blades and motors resulting in injuries to properties and wildlife.
4. The devaluation of private properties in the surrounding areas.
5. The instillation of high voltage transmission lines for the same reasons listed above.
6. It is our strong position that SDGE and Sempra Energy have not been honest with the public regarding the real reasons for the construction of the windmills and transmission lines.
7. The people and property owners were never given the opportunity to give input in choosing the type of alternative energy source that SDGE is required to develop to meet state and federal mandates. This is unfair because we are the ones adversely affected by their decision to build wind farms.
8. THE PUBLIC REVIEW PERIOD IS TOO SHORT FOR MOST WORKING PEOPLE TO PREPARE A RESPONSE

Thank you for allowing us to the opportunity to voice our concerns.

Sincerely,

Harry Backer

Tracy Backer

619-977-8078  
619-276-3507

F51-1

F51-2

F51-3

F51-4

F51-5

F51-6

F51-7

F51-8



Tom Bartley  
 Tom Bartley Ideas  
 Energy and Transportation  
 2708 Poinsettia Drive  
 San Diego, CA 92106  
[tombartley@att.net](mailto:tombartley@att.net)  
 619-379-6755

February 16, 2011

Iain Fisher, California Public Utilities Commission  
 Greg Thomsen, Bureau of Land Management  
 c/o Dudek  
 605 Third Street  
 Encinitas, CA 92024

**Re: Proposed Tule Wind Power Project**

Dear Bureau of Land Management and California Public Utilities Commission:

I have lived in San Diego County for over 43 years and have been involved in energy and transportation efficiency for 10 years. I urge you to certify the EIR/EIS for the Tule Wind Project. **This project will help improve air quality, reduce imported oil, and reduce the generation of green houses gases in the energy usage in the San Diego region.**

F52-1

**Electric cars and trucks are coming.** From [www.sdenergydata.com](http://www.sdenergydata.com) San Diego annually uses 35,000 GWh of petroleum fuels energy for on road transportation (54% of 64,000 GWh). 10 to 15 years from now 10 to 15% of the on road vehicles in San Diego could be electric. That means we will need an additional 3,500 GWh per year to charge those vehicles and 30% of that, or 1,050 GWh per year, is mandated to come from renewable energy such as wind.

F52-2

Nissan is now in the process of delivering at least 1000 electric Leaf cars to drivers in San Diego County. Nissan is building a production plant in Tennessee capable of producing an estimated 100,000 electric cars per year. Other car manufacturers are also planning to offer electric cars. Additionally, as many as 12 different truck models are now in development to offer plug-in hybrid or plug-in electric trucks. **The initial growth of the plug-in electric vehicle (PEV) market is expected to be exponential. Using this project as an example, it takes at least six years for approvals and 12 to 18 months for construction to bring a renewable wind energy project on line. Any reduction in the wind project size now could result in shortfalls later that will be hard to meet to catch the PEV exponentially increasing demand.**

F52-3

All these PEVs are switching energy consumption from petroleum to the electricity grid. This will happen faster than new wind energy farms can be brought on line. If we are going to commit to renewable energy, the time to do so is now. Solar is a partial answer along with other renewables. However, to keep this in prospective, **one wind turbine is the power equivalent of over 6000 solar panels.** One side benefit is that the timing of

F52-4

the wind power production could fit nicely with the evening PEV charging, thus, making the grid easier to control and reducing the need for energy storage.

Wind is a unique local resource that can fulfill future clean energy requirements and keep energy dollars from paying for imported oil. We can't afford to delay bringing jobs, revenue, and responsible renewable energy sources to our communities.

**The wind resource in McCain Valley is rare and valuable, and I feel confident that the mitigation measures proposed in the EIR will address the issues of concern. I ask you to keep the Tule Wind Project at its currently proposed size.**

Through their work on many other projects across the country, Iberdrola Renewables has shown a strong track record of developing wind energy projects that minimize impacts to the surrounding community. More than five years of environmental studies at the Tule Wind Power Project area have shown low use by sensitive or endangered species. I understand that Iberdrola has a long history of working hard to site wind farms responsibly, and participates actively in studies to look at ways to reduce wind power's impact on wild life.

As a long time resident of San Diego County with grandchildren in San Diego County, these issues are important to me. I urge you to certify the EIR/EIS and allow the Tule Wind Project to proceed as proposed. The impacts to our community will be far greater if this does not move forward.

Sincerely,



Tom Bartlev  
2708 Poinsettia Drive  
San Diego, CA 92106-1124  
619-379-6755

F52-4  
Cont.

F52-5

F52-6

F52-7



16 February 2011

To: Department of the Interior (DOI)  
Bureau of Land Management (BLM)  
C/O Greg Thomsen  
22835 Calle San Juan des Los Lagos  
Moreno Valley, Ca. 92553

From: Michael W. Cuff  
PO Box 36  
Ocotillo, Ca. 92259

Mr. Thomsen,

Public meetings should be held on weekends (so that folks that live in the areas of concern will be able to attend) in the areas of concern. Providing maps and ways to identify the areas and pads for the Wind Turbine Generators would assist us in being able to properly assessing the project and its affects of the area.

F53-1

First of all, I would like to remind you of the “Intent of the California Desert Conservation Area (CDCA) Plan” “Is to ensure that as nearly as humanly possible that the recognition brought by Congress and the people into Law- that the California Desert is not a wasteland but a precious public resource – is effectively guaranteed in its management, that the uses of today do not preclude the users of tomorrow, and that we preserve and develop these assets wisely with full regard for their social and environmental as well as economic values”. Quoted from the BLM’s CDCA, passed by Congress in 1976.

F53-2

Additionally, “the year 2010 marked the 10th Anniversary of the National Landscape Conservation System. The treasured landscapes of the Conservation System are specially designated and managed to conserve, protect, and restore their exceptional scientific, natural, cultural, ecological, historical, and recreational values” quoted from the front page of the Department of the Interior, Bureau of Land Management California website.

F53-3

How much revenue (In dollars) will the Department of the Interior, Bureau of Land Management receive in granting this project during the course of its operation?

How much revenue (In dollars) will the State of California receive in the granting of this project during the course of its operation?

F53-4

How much revenue (In dollars) will the County of San Diego receive in the granting of this project during the course of its operation?

The black water, gray water, hazardous materials and hazardous waste become an issue. Who will be monitoring this site to ensure that Tule Wind is in compliance with federal, state and local regulations during the duration of the project? How would spills or contamination be remediated?

F53-5

Currently, the El Centro Field Office does not have its own Environmental, Health and Safety professional. Who from BLM will be monitoring Tule Wind's project and how often? Who will be the Environmental, Health and Safety professional for Tule Wind? What is the person's qualification? Who will be BLM's Contracting Officers technical representative (COTR)? Will California EPA be informed of Tule Wind project and will they be observing the project site during the duration of the project?

F53-6

Currently, the local fire department is able to respond to most emergency calls. Unfortunately, they do not have the capability of responding with the proper equipment to combat a fire in the Nacelle surrounding the transmission of a WTG. When a WTG catches on fire, the embers from the WTG could travel quite a distance. Are you willing to be liable for the land and resources being destroyed by a fire caused by one of the WTG? Additionally, if one of the blades catches fire then we have a toxicity issue that I'm not sure the fire department has the proper personal protective equipment (ppe) to wear in order to combat this type of fire.

F53-7

Has BLM approached the local Native Americans to inform them of the project? According to BLM's required permit process as stipulated in Federal Land Policy and Management Act of 1976, BLM Planning Regulations (43 CFR Part 1600), BLM Land Use Handbook (H-1601-1) "Indian tribes must be consulted to identify sacred sites and other places of traditional religious and cultural importance".

F53-8

How many full time employees does Tule Wind plan to hire. How many will be from San Diego County?

F53-9

Has Tule Wind conducted preliminary analysis to describe soil and geological suitability and what were there results? Where can the public observe these results and the approved special permits for Tule Wind to conduct these tests? Who has the final approval for the foundation design and construction quality control of this project? Are seismic studies for the planned project area in favor of WTG sites with no potential for collapse or failure? What is the material composition of the Nacelle and the turbine blades? What agency provides guidance and approval of the construction materials used for this project, specifically fasteners used on high torque equipment and machinery? Which agency will monitor Tule Wind to ensure that they will use the proper materials for the construction of the WTG to avert what happened on the WTG site across from Golden Acorn Casino by Live Oak Springs in San Diego County, resulting in turbine blade fasteners failing?

F53-10

Understanding that the FAA requires lighting for the WTG, I have a concern for pilot and aircrew safety during daylight and night time operations. There is daily air traffic from Customs and Border Protection, as well as US Navy and US Marine aircraft in this area. Additionally, there is occasional illegal aircraft, suspected to be from south of the US Border that could be affected the construction of these WTG.

F53-11

Best management practices, developed by the Bureau during the planning process outlined in the Clean Water Act, Section 208 and subsequently, will be used to avoid degradation and to comply with Executive Order 12088”. Who will monitor BLM to ensure that they are in compliance with their own guidelines, given the fact that they found themselves to be not in compliance with their own directives regarding the approval and observance of Special Recreation Permits?

F53-12

Have there been any studies conducted on the affects of the WTG lubricating oil on the flora, fauna, birds, fish, mammals, reptiles and plants in the project area? What were the results of these studies? If studies have not been conducted, when will they be conducted and when will the public be able to view the results?

F53-13

Who will be onsite daily to monitor Paleontological Resources at the Pattern project during the course of the project?

F53-14

BLM has a responsibility to the public regarding Visual Resource Management Designations its Scenic quality and Viewer Sensitivity. There are multiple viewing areas associated with this project. Given the proximity to Interstate 8, what is the VRM classification of this project? Who made the final determination that the project areas were rated in this manner? Who monitored their decision to ensure that the decision was made properly using the established guidelines?

F53-15

How will BLM ensure Tule Wind will comply with Air Pollution Control District Air Quality and PM-2.5 and PM-10 requirements? Who on the BLM staff from the El Centro Field Office is qualified to monitor this requirement during the duration of this project?

F53-16

How will BLM and the County of San Diego be notified when they commence transport of the equipment and materials required for this project? Has the local school district been contacted by Tule Wind, in regards to traffic flow and proximity to bus routes and bus stops? Will there be independent oversight?

F53-17

Who will conduct Resource Conservation Measure training and ensure the compliance and accountability of Tule Wind in the areas concerning this project? Who will certify that their archaeological monitors are qualified to support the discovery plan? When will El Centro Field Office be completed with their Wind Energy Protocol? Who ensures that their protocol is in compliance with Federal Regulations, taking in to account state and local regulations concerning Wind Energy and the Wildlife and Monitoring?

F53-18

In closing and after considerable thought, I ask you and your staff to give more attention to this project that Tule Wind is requesting. To quote “BLM Management Principles contained in the Federal Land Policy and Management Act (FLPMA) of 1976 recognizes that multiple use, sustained yield, and the maintenance of environmental quality are not simple guides. This act recognized the value of our Nation’s public lands and provided a framework in which they could be managed in perpetuity for the benefit of present and future generations. It defined BLM’s mission as one of multiple use -- a new concept for the times, but which today stands as your agency’s greatest strength.

F53-19

BLM's mission is unique among federal land-managing agencies and you provide us with the best opportunity to meet the many and varied demands of the changing West. In 1976, few anticipated the West's rapid growth and its associated demographic and economic changes, all of which have placed increased demands on the public lands. But because of the insight and vision of the people who crafted it, FLPMA provides us with the tools we need to cooperatively and creatively manage the public lands, and in the process, dispel the notion that a variety of uses and resources cannot co-exist"

Understanding and responding to priority needs of resource use and development, both today and in the future, including such paramount priorities as energy development and transmission without compromising the basic desert resources of soils, air, water, and vegetation, or public values such as wildlife, cultural resources or magnificent desert scenery. I ask you and your staff what this means, in the face of the unknowns, erring on the side of conservation, in order not to risk today what we cannot replace tomorrow".

F53-19  
Cont.

Feb. 16, 2011

Iain Fisher, CPUC  
Greg Thomsen, BLM  
c/o Dudek  
605 Third St.  
Encinitas, CA 92024

Dear Mr. Fisher and Mr. Thomsen,

I've been a healthcare professional and land owner in San Diego's East County for the last 33 years. The ECO Substation Project is very, very important to our community for a number of reasons, not the least of which is reliability.

The communities of Boulevard and Jacumba need access to reliable energy. San Diego Gas & Electric has acknowledged that it needs to replace the old substations with new, more reliable technology. Yes, it will cost money, but this project will provide access to clean, renewable energy and allow us to eventually stop using fossil-fuel-sourced energy. Our national defense is being jeopardized by using up our oil, natural gas, and coal reserves.

The source of this renewable energy will be wind turbines and other green projects. The sun and the wind are free, but that energy can't reach us if the infrastructure isn't there.

As former chief executive officer for Grossmont District Hospital, I can also tell you that there's a broader need for reliable energy beyond just our community. Building more infrastructure is not necessarily something we like to do, but it is something we have to do. And it has to be infrastructure that promotes renewable energy sources.

For reasons stated above, we can't continue to rely on outdated fossil-fueled power plants. And nuclear power is not the answer, either, because nuclear waste is a problem. The solution is wind.

We need to begin to look at something that will achieve the state's RPS objectives. Currently, renewable power makes up 6 to 7 percent of our overall energy portfolio. We need to be at 33 percent by 2020. Can we make it? I don't know, but projects like ECO are critical to us achieving that threshold.

The last point I want to make is that this issue transcends NIMBYism. We should be IMBYs. This is a regionwide issue that will require the cooperation of everybody, not just those who happen to live far from this project. If enough people think of it in that way, we can solve any problem at all.

Yours Truly,



Ron Dahlgren

F54-1

**From:** brock prather <berock44@yahoo.com>  
**Sent:** Thursday, February 17, 2011 6:12 PM  
**To:** ECOSUB  
**Subject:** Email to Support the Tule Wind project

Good evening Iain Fisher- Bureau of Land Management and California Public Utilities Commission:,  
I am emailing you to show my support of the Tule Wind Project. Wind power is a great source of renewable energy, funds from taxes and jobs. It is a way to power us with the environment instead of punishing it. I have lived in San Diego County for 6 years and I sincerely care about this county and I am proud of the strides we have made to be a kinder place for the environment and the progressive approach we take as a county. I urge you to certify the EIR/EIS and allow the Tule Wind Power Project to proceed as proposed.

F55-1

Thank you for your time.

Brock Prather  
6833 Central Ave.  
Lemon Grove, CA 91945  
619-563-5210

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**From:** sean kilcoyne <callhimup50@yahoo.com>  
**Sent:** Saturday, February 19, 2011 9:47 AM  
**To:** ECOSUB  
**Subject:** Stop encroaching on McCain OHV area whith the Tule Wind Project

Stop the Tule Wind Project. This riding area (Lark Canyon / McCain Valley) east of San Diego that has been targeted, happens to be one of my favorite places on the planet. I have spent countless weekends riding, camping and exploring this area, and it will always be important to me. Myself and thousands of others pay hard earned money for this right! Double in fact of what we have paid only a few short years ago. This area is mine, and not for anyone to come in and destroy it, for greed. Offering of a few picnic tables or whatever is an insult. The riding area is already too small! Making it smaller would be dangerous, and cause injury or deaths. There are miles and miles and miles of land in this area that should be used for this project instead of this ever-shrinking riding area. The off-road community is always the one suffering in these situations, even though we leave the least impact. You are not supposed to even ride off of the designated trails in this area, especially if your off highway vehicle is 40" or wider. Why then is it OK to put in all of these new roads, buildings, windmills, (please) power lines, traffic, signs, fences, drainage, manned facilities, and more? If we are asked to leave only tire tracks, why should anyone be able to destroy the landscape forever? For what? Whatever it is, it's not worth it. It's also not fair. This is all that I can do to help stop a huge machine of government and bureaucracy that my hard earned dollars also fund. Do something for me for once.  
 Sean Kilcoyne 760-440-0949

F56-1

F56-2

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**From:** BOB CLARK <clarkca9138@wildblue.net>  
**Sent:** Sunday, February 20, 2011 10:51 AM  
**To:** ECOSUB  
**Subject:** CPUC project email

To whom it may concern,

We are writing to express our horror at the possibility of being surrounded by windmills in our small community. We can't believe our government would allow this to happen in an area that is basically residential. Why can't projects like this be put out in the middle of nowhere where they wouldn't affect people?

F57-1

We moved here for the peace and quiet and views. We can't imagine having to star at windmills with their blinking lights all day and night. What about the added fire danger? We just saw a segment on KUSI news about people living near windmills developing health problems.

F57-2

F57-3

From what we can see, a number of people and corporations will make a lot of money from this, while the residents here will lose money from dropping property values. Please help us!

F57-4

Sincerely,

Robert & Cyndi Clark & family

39550 Jewel Valley Ct.  
 Boulevard, CA. 91905  
 mailing address: PO Box 1393  
 Boulevard, CA. 91905

\*\*\*\*\*

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**From:** EdWaldheim@aol.com  
**Sent:** Monday, February 21, 2011 10:35 AM  
**To:** catulewind@blm.gov; ECOSUB  
**Cc:** editor@sandiegooffroad.com; EdWaldheim@aol.com  
**Subject:** McCain Valley

Greg Thomsen, Iain Fisher.

I am writing this e-mail in regards to the above project impacting our OHV opportunities in McCain Valley. As past OHMVR commissioner, this project has been going on since before 1979. In fact we provided \$82,000 to the BLM to provide a campground, improve McCain Valley Road, develop motorcycle trails in Lark Canyon, and do Stream Canalization. Then again in 1987 we provide money for O & M, to keep this area open to off roading both roads, restrooms, trails etc etc. Then again in 1988 we did the same thing, provide O & M. and this is as far as my records go but I am sure that BLM has applied for grants up to this current grant cycle .

F58-1

It is with this information that I have a very hard time understanding why the BLM can just ignore the fact that OHV has been a part of this entire area for so long and impact our OHV opportunities. it is also an insult that you think putting some sunshade are going to replace the loss of OHV riding opportunities. Last time I looked, riding my off road vehicles has absolutely nothing to do with shade. That is a personal thing if someone wants to sit in the shade rather than ride, they can do that at any park .

We are talking about loss of OHV trail riding opportunity. This project must replace mile for mile of lost opportunity period. We the OHV community have paid millions of dollars to maintain our access to public land and for anyone to think they can just push us aside, I don't care if it is BLM or Renewable Resources folks or Public Utilities company's, we have been part of the BLM's recreational programs for a very long time and have management plans that allow this recreational opportunity.

F58-2

It is incumbent on those that want to use our access to public lands, that they figure out a way to mitigate our loss by providing like opportunity in the area that we the California Residents, especially those from San Diego area have access to.

I know I am a few days late in the time frame, but request that you include my concerns and demands for no loss of OHV opportunities to the citizens of California especially those in San Diego and Imperial Counties.

F58-3

Sincerely yours

Edward H. Waldheim  
 3550 Foothill Blvd  
 Glendale, CA 91214  
 818 247 8778 Ext 215  
[edwaldheim@aol.com](mailto:edwaldheim@aol.com)

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To Whom It May Concern,

As you know there is always two sides to every story - As far as I can tell you who are so "Hung Ho" to ruin our beautiful area are not listening to the side affects it will have on we the "people" and "Wild Life".

F59-1

Also what will happen to our wells with using 17.65 millions gallons of water? On just one project? I suppose you Big Time Operators will do a Rain Dance to replace our water - (Ho-Ho) -

F59-2

This morn I read my "Tea Leafs" and the story told they told was this Fiasco (wind machines, powerlink) was cut and dried from day one - Sure we can have have our say but when our words fall on deaf ears what good will it do?

F59-3

I do wish I had mucho bucks and I would sue the pants off of you all, and then I would call the police to arrest you all for indecent exposure - Then we would all have a good laugh!

The first wind machines in our area in the 80's we lived a mile and a half from them - Every evening we would sit out in our back yard in the summer time and guess what?

F59-4

We could hear the noise from those machines  
It was a screeching sound - They were not  
as large or as many as is planned to be put  
in this time - So we have already been there  
and done that -

F59-4  
Cont.

I just love the words "Eminent Domain" when  
Translated it really means "Get your A-- Out"  
no matter if you are 104 yrs Old, "Move It" - I also  
just given a pittance for your home not enough  
money to buy a "lean to"!!

F59-5

Why are you not putting the Wind Machines  
around the Capitol in Washington DC? Those  
politrickers would spurt forth so much  
hot wind you could not take care of all  
of it - Then you could leave us "Mountain"  
Bumpkins" alone!

F59-6

Oh no! Not when the Almighty Dollar is  
talking it still talks louder than words.  
There will be so many wires crossing the sky you will  
not be able to see the sun or moon -

I am an Old Great Granny I still have some Smarts,  
Back Bone I have never used yet - I came to  
Jacumba in the very early 40's so I have been around  
for a long time - now I live in Boulevard have a  
Beautiful Home plus acreage but when there are  
Wind monsters in every direction including one on  
your front porch - The home values will be gone -

F59-7

Heres Suds In your Eyes  
Sincerely,  
Mary L. Stewart

**RICHARD F. VOLKER**  
325 W. Washington Street  
Suite 2, #337  
San Diego, CA 92103  
(619) 299-6091 (tel)

Feb. 22, 2011

Iain Fisher, CPUC  
Greg Thomsen, BLM  
c/o Dudek  
605 Third St.  
Encinitas, CA 92024

Re: ECO Letter to CPUC

Dear Mr. Fisher and Mr. Thomsen,

I am an owner of property in the Campo area and I believe that San Diego Gas & Electric's ECO Substation Project is the kind of project needed in East San Diego County to create jobs while at the same time preserving the environment and bolstering the economy for our children and grandchildren.

F60-1

In East County, we are blessed with plenty of wind. It's a natural resource. In fact, experts have identified portions of eastern San Diego County, Imperial County and the northern Baja California region as being rich in potential renewable energy resources such as the sun, wind and steam heat from the earth (geothermal power).

F60-2

However, this valuable renewable energy resource is not being currently utilized. We need to put the wind to work for us. That can't happen until infrastructure is in place that will deliver that new source of energy to market. My property is near the ECO substation site and several proposed wind farms. I believe the need for infrastructure trumps any NIMBY concerns people have.

I'm a participant in a non-profit called S.O.R.E. (Save Our Rural Economy). S.O.R.E. is a grassroots group of rural property owners and citizens concerned about the socioeconomic impacts of proposed County land-use planning practices. S.O.R.E. is comprised of ranchers, farmers, healthcare providers, professionals, tribal members and rural residents. We are seeking a fair and balanced approach to land-use planning that does not destroy property values and the rural economy while at the same time providing opportunities for new economic development in East San Diego County. We are focused on preserving and protecting population growth and housing, community character, our rural way of life, farming and industry, and, of course, the environment.

F60-3

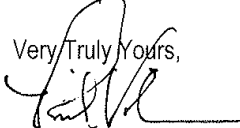
Farming was a rich industry in East County throughout much of the 20<sup>th</sup> century, but has since dwindled in recent years. East County is now positioned for a new industry to take us into the future, and that's renewable energy. We've seen new green energy initiatives from Sacramento and Washington, and it's time for those initiatives to bear fruit.

One of the keys to East County reaching its full potential is tapping into the abundance of wind power. We need policies and projects that will foster private investment, because without it, there could be significant economic harm to our communities, leaving them with little or no viable economic future and placing significant strain on County taxpayers to support a continuing need for fire, school, emergency and other services in these communities.

Therefore, I believe there is urgent need for projects such as the ECO Substation, which will help improve electric reliability in East San Diego County by reducing outages. We need to generate jobs and put our friends, neighbors and family members to work. And finally, we need to cut the cord when it comes to our dependence on conventional power plants that burn fossil fuels.

I respectfully urge you to support and approve the ECO Substation Project and help make sure our region will be a place that will make our children and our children's children proud of us all.

Very Truly Yours,



Rich Volker

F60-4

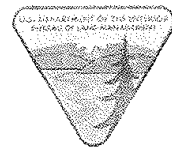
F60-5



Notice of Extension of the Draft Environmental Impact Report/  
Draft Environmental Impact Statement (DEIR/DEIS) Public Review Period for:  
**East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects**

State Clearinghouse No. 2009121079

DOI-BLM-CA-D070-2010-0027-EIS (ECO Sub)  
DOI-BLM-CA-D070-2008-0040-EIS (Tule Wind)



FEB 23 2011

Lead Agencies: California Public Utilities Commission  
United States Department of the Interior, Bureau of Land Management

**PUBLIC COMMENT PERIOD EXTENSION**

By this notice, California Public Utilities Commission (CPUC) and Bureau of Land Management (BLM) are announcing the extension of the public comment period from February 16, 2011, to March 4, 2011, for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects DEIR/DEIS. The Joint DEIR/DEIS was released for public review on December 24, 2010.

To ensure that comments will be considered, the CPUC/BLM must receive written comments on the DEIR/DEIS by the close of the extended public review period (March 4, 2011). Written comments on the DEIR/DEIS must be postmarked or received no later than March 4, 2011. Written comments on the Joint DEIR/DEIS can be submitted via:

**Mail:** Iain Fisher, CPUC/Greg Thomsen, BLM, c/o Dudek, 605 Third Street, Encinitas, California 92024

**Email:** [ecosub@dudek.com](mailto:ecosub@dudek.com) (CPUC project email) OR [catulewind@blm.gov](mailto:catulewind@blm.gov) (BLM project email)

**Fax:** (800) 371-8854 (to send a fax, please press "2")

*Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including personal identifying information, may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.*

F61-1

**PROJECT ABSTRACT**

The California Public Utilities Commission (CPUC) and Bureau of Land Management (BLM) have prepared a Joint Draft Environmental Impact Report/Draft Environmental Impact Statement (DEIR/DEIS) under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) for consideration of San Diego Gas & Electric Company's (SDG&E's) application to build and operate the East County (ECO) Substation Project. In addition, the Joint DEIR/DEIS addresses Pacific Wind Development's application to build and operate the Tule Wind Project and Energia Sierra Juarez U.S. Transmission, LLC's application to build and operate the Energia Sierra Juarez Generator Tie-Line (ESJ Gen-Tie) Project as "connected actions" under NEPA and "whole of the action" under CEQA. Therefore, the ECO Substation Project, Tule Wind Project, and ESJ Gen-Tie Project are collectively referred to as the Proposed PROJECT in the Joint DEIR/DEIS. In addition, the DEIR/DEIS also considers at a qualitative/program level the proposed Campo, Manzanita, and Jordan wind energy projects, which would connect into the proposed Boulevard Substation Rebuild component of the ECO Substation Project. The CPUC and BLM have determined that these three wind energy projects are sufficiently developed to analyze impacts where feasible. Therefore, for purposes of this EIR/EIS, the Campo, Manzanita, and Jordan projects are qualitatively evaluated at a programmatic level because sufficient project-level information has yet to be developed. The proposed Campo, Manzanita, and Jordan wind energy projects will still require project-specific environmental review and evaluation under all applicable environmental regulations once sufficient project-level information is developed. By including these nascent wind projects as components of the proposed wider PROJECT, it allows the lead agencies to further consider broad impacts, mitigation and consequences of the ECO substation project specifically, and the wider PROJECT as a whole.

*I support these projects. own*

F61-2

The Proposed PROJECT would be located near the unincorporated communities of Jacumba and Boulevard, approximately 70 miles east of downtown San Diego, in the southeastern portion of San Diego County. If approved, the Proposed PROJECT would construct and operate 1) the ECO Substation Project including a new 500/230/138-kilovolt (kV) ECO Substation, a new 13.3-mile 138 kV transmission line (connecting the ECO Substation with the Boulevard Substation Rebuild), and would rebuild the existing Boulevard Substation to operate at 138/69/12 kV; 2) the Tule Wind Project, including up to 134 wind turbines and associated facilities, including an aboveground and underground cable collection system, collector substation, and an operations and maintenance facility, and an approximate 9.7-mile 138 kV transmission line to interconnect with the proposed Boulevard Substation Rebuild; 3) and the ESJ Gen-Tie Project including an approximate 1-mile 500 kV (or 230 kV) gen-tie from the U.S.-Mexico border approximately 4 miles southeast of the community of Jacumba to interconnect with the proposed ECO Substation. Approval of the Campo, Manzanita, and Jordan wind energy projects will require project level environmental review.

The Joint DEIR/DEIS describes the Proposed PROJECT, evaluates and describes the potential environmental impacts associated with the construction and operation of the Proposed PROJECT, identifies those impacts that could be significant, and presents mitigation measures, which, if adopted, could avoid or minimize these impacts. The Joint DEIR/DEIS also evaluates alternatives to the Proposed PROJECT, including the No Project/No Action Alternative, as required by CEQA and NEPA.

#### AVAILABILITY OF JOINT DEIR/DEIS

Copies of the Joint DEIR/DEIS are available for review at the following local libraries: Jacumba Public Library, located at 44605 Old Highway 80, Jacumba, California 91934; Campo-Morena Village Branch Library, located at 31356 Highway 94, Campo, California 91906; Potrero Branch Library, located at 24883 Potrero Valley Road, Potrero, California 91963. The DEIR/DEIS is also available on the CPUC and BLM websites at:

<http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/ECOSUB.htm>

<http://www.blm.gov/ca/st/cn/fo/elcentro/nepa/tule.html>

F61-1  
Cont.

*Mr. Fisher  
3076 Copia Verde Ln. Pk Support these  
Jama, Ca. 91935 projects.  
I live in Jama and have a  
518 acre tax lot (6 parcels) which  
views the new Sunrise Line.  
I support these critical projects  
and recognize our state target of  
33% by 2020 of green power. *Michelle Delgado*  
2 of 2*

F61-3



Ianin Fisher, California Public Commission

February 23, 2011

Greg Thomsen, Bureau of Land Management

C/O Dudek,

605 Third Street

Encinitas, Ca 92024

Re: Proposed Tule Wind Power Project

Dear BLM and CPUC:

I have lived in San Diego County for 48 years and urge you to certify the EIR/EIS for the Tule Wind Project.

The wind resources in McCain Valley and on the Ewiiapaayp Indian reservation is rare and valuable, I feel confident that the mitigation measure proposed in the EIR will address the issues of concern. I ask you to keep the Tule Wind Project at its currently proposed size.

If we are going to commit to renewable energy, the time to do so is now. We can't afford to delay bringing jobs, revenue and responsible renewable energy sources to our communities.

The neighboring community has had ample time and due process to present opposition and concerns to our elected officials of which support the Tule Wind Projects. Just the amount of air pollutants of which will be offset with the development of green wind energy versus a new coal fire generating plant is incentive to approve the EIR/EIS for the Tule Wind Project. This is just one in the many steps to break our dependency on foreign oils supplies.

As a resident of San Diego County, these issues are important to me and my family. I urge you to certify the EIR/EIS and allow the Tule Wind Power Project to proceed as proposed. The impacts to our community will be far greater if this does not move forward.

Sincerely,

Desi Vela

PO BOX 1648

Blvd. Ca 91905

619 445 6315

F62-1



**From:** Carmen Krogh <krogh@email.toast.net>  
**Sent:** Thursday, February 24, 2011 7:26 PM  
**To:** ECOSUB; catulewind@blm.gov  
**Cc:** tisdale.donna@gmail.com  
**Subject:** Tule Wind/Energia Sierra Juarez Gen-Tie Projects  
**Attachments:** Submission Tule Wind\_Energia Sierra Juarex Gen-Tie Project March 2011.pdf

To whom it may concern,

Attached is my submission in response to public comment for the Tule Wind/Energia Sierra Juarez Gen-Tie Projects.

Thank you for the opportunity to offer my comments.

I have been working on the risk to health regarding industrial wind turbines for over 2 years and am in touch with many of those experiencing symptoms both in Ontario and in other jurisdictions. Based on the research to date, there is ample evidence adverse health effects are occurring. A major research gap is that there have been no peer reviewed human health studies conducted to determine authoritative guidelines for setbacks and noise levels that will protect families.

I appreciate this opportunity and hope that the attached information will assist with your deliberations.

Respectively submitted,

Carmen Krogh, BScPharm  
 1183 Cormac Road, RR4  
 Killaloe, Ontario, Canada, K0J 2A0

The information transmitted is intended only for the person or entity to which it is addressed and may contain confidential and/or privileged material. Any review, retransmission, dissemination or other use of, or taking of any action in reliance upon this information by persons or entities other than the intended recipient is prohibited. If you received this in error, please contact the sender and delete the material from any computer.

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F63-1

**Adverse Health Effects**  
**and**  
**Industrial Wind Turbines**  
**March 1, 2011-02-24**

**Submitted to:**

California Public Utilities Commission  
United States Department of the Interior, Bureau of Land Management

**Public Comment:**

East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects DEIR/DEIS.

**Email:**

[ecosub@dudek.com](mailto:ecosub@dudek.com) (CPUC project email)  
[catulewind@blm.gov](mailto:catulewind@blm.gov) (BLM project email)

**Extracted from work authored by**  
Brett Horner BA CMA

Summary of References  
Adverse Health Effects and Industrial Wind Turbines  
Prepared March 1, 2011

Submitted to:  
California Public Utilities Commission  
United States Department of the Interior, Bureau of Land Management:  
East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects DEIR/DEIS.

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## NOTICE TO READER

Authoritative references are cited to support the assertions contained within this summary. This summary also contains statements and citations from other individuals and or organizations including that associated with the wind energy industry.

Every reasonable attempt was made to ensure the accuracy of this summary. Any errors or omissions contained within this summary are unintentional.

No financial compensation has been requested nor received for the compilation of this summary.

F63-2

Summary of References  
Adverse Health Effects and Industrial Wind Turbines  
Prepared March 1, 2011

Submitted to:  
California Public Utilities Commission  
United States Department of the Interior, Bureau of Land Management:  
East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects DEIR/DEIS.

## FORWARD

Dear sirs / madame,

I had the opportunity to make a presentation regarding the risk for adverse health effects if industrial wind turbines are placed in close proximity to family homes.

This presentation took place January 19, 2011, at Boulevard, California.

As background, I am a retired pharmacist with over 40 years experience in health. I am a former Director of Publications and Editor-in-chief of the Compendium of Pharmaceutical and Specialties (CPS), the book used in Canada for prescribing information on medication. Doctors, pharmacists, nurses, and other health care professionals use the book. The CPS is similar to the US Physicians Desk Reference (PDR). I have held senior executive positions at a major teaching hospital, a professional association and Health Canada (PMRA).

I work with a colleague to conduct the WindVOiCe © (Wind Vigilance for Ontario Communities) health survey and am in touch with many victims in Ontario and other areas. I have been researching this issue for over 2 years.

This summary may be used and submitted by other individuals as required.

Due to time and resource constraints this summary does not detail all the references available.

There is, however, ample evidence indicating a risk to health with industrial wind turbines.

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Peer reviewed and other authoritative references indicate that wind turbines may have an adverse health effect on humans. <sup>1</sup> These references indicate that adverse health effects occur at sound pressure levels in the ranges expected at participating and non-participating noise receptors. <sup>2</sup>

For example, there are over one hundred Ontario residents who are reporting adverse health from exposure to industrial wind turbines. <sup>3</sup> Some of these victims are currently being or have been billeted by wind energy developers at the developer's expense. <sup>4</sup> Others have had their homes bought out by the wind energy developer and are now silenced by non disclosure clauses. Other victims live in self funded safe houses or have abandoned their homes to protect their health. The balance continues to suffer in their existing homes. This situation is disturbing.

Human health research is urgently required to determine authoritative regulations for safe setbacks and noise levels. <sup>5</sup>, <sup>6</sup> Until this research is conducted, no further industrial wind turbine development should occur.

Based on the best available science, decision makers should give serious consideration about the risk to health and not approve any industrial wind turbine facilities in close proximity to family homes until authoritative human health research has been conducted to determine authoritative guidelines for safe setbacks and noise levels.

Respectively submitted,

Carmen Krogh, BScPharm  
1183 Cormac Road, RR4  
Killaloe, Ontario, Canada, K0J 2A0

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## CONCLUSIONS

Relevant authoritative references are included in this summary in order to assist decision makers in their assessment of the health impacts of noise, including low frequency noise, annoyance, stress and sleep disturbance.

F63-7

Based on general observations, it is noted that often a number of points may not be considered by proponents and decision makers. These may include:

- There are peer reviewed human health studies that industrial wind turbines may cause adverse health effects.
- There are no peer reviewed human health studies to determine authoritative setbacks and noise levels.
- Peer reviewed research has shown industrial wind turbine noise levels of 40 dB and lower may cause adverse health effects.
- There typically is no provision to consider low frequency noise and infrasound.
- Peer reviewed research has shown that low frequency noise and infrasound may cause adverse health effects.
- The negative impact of shadow flicker is understated.
- There typically is no complaint protocol for mitigating and / or resolving adverse health effects or other negative impacts.
- There is no vigilance monitoring of those residing near industrial wind facilities.
- There is no long term surveillance of those residing near industrial wind facilities.

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- Noise studies are based on predictive computer modelling without a correlation with human responses to noise including dose response.

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## WIND TURBINES AND ADVERSE HEALTH EFFECTS

Wind turbines emit noise pollution and wind turbine "...noise pollution may be a problem if turbines are situated close to centres of population." <sup>7</sup>

F63-15

In addition to noise pollution wind turbines have additional burdens of "visual intrusion".<sup>8</sup> (See discussion in Shadow Flicker section of this summary)

F63-16

Wind turbine induced adverse health effects currently acknowledged include annoyance, stress and sleep disturbance.

F63-17

The American Wind Energy Association and Canadian Wind Energy Association sponsored report entitled "Wind Turbine Sound and Health Effects" (Colby et al, 2009) acknowledges wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms. <sup>9</sup>

F63-18

The Chief Medical Officer of Health of Ontario and Agency for Health Protection and Promotion concur in that they acknowledge wind turbines may cause annoyance, stress and sleep disturbance. <sup>10, 11</sup>

"Perhaps the main finding is that wind turbine sound is relatively annoying, more so than equally loud sound from aircraft or road traffic. A swishing character is perceived by most respondents, indicating that this is an important characteristic of wind turbine sound. Sound should therefore receive more attention in the planning of wind farms, and (more) sound mitigation measures must be considered." <sup>12</sup>

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“The study confirms that wind turbine noise is easily perceived and compared to sounds from other community sources relatively annoying.” <sup>13</sup>

“The need for guidelines for maximum exposure to wind turbine noise is urgent:” <sup>14</sup> in order to avoid possible adverse health effects.

Currently there is no health based generalized dose-response relationship developed to avoid possible adverse health effects from wind turbine noise exposure. <sup>15</sup>

“Annoyance with wind turbine noise was associated with psychological distress, stress, difficulties to fall asleep and sleep interruption.” <sup>16</sup>

World Health Organization recognizes annoyance and sleep disturbance as adverse health effects. <sup>17</sup>

Peer reviewed studies have documented wind turbine annoyance, stress and sleep disturbance may occur at sound pressure levels in the ranges participating and non-participating noise receptors proposed by many proponents will be exposed to. <sup>18, 19, 20, 21</sup>

Geoff Leventhall, a co-author of “Colby et al, 2009” acknowledges the reported symptoms of “Wind Turbine Syndrome” are particular to “low frequency noise” exposure. <sup>22</sup>

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The Minnesota Department of Health concludes that: “Most available evidence suggests that reported health effects are related to audible low frequency noise.”

23

Health Canada states:

“...that there are peer reviewed scientific articles indicating that wind turbines may have an adverse impact on human health.”<sup>24</sup>

***Conclusion: Wind Turbines and Adverse Health Effects***

Based on the best available science the following conclusions can be made.

- At common residential setbacks wind turbine noise, including low frequency noise, can cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.

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## WIND TURBINES AND ANNOYANCE

An August 2009 peer reviewed article states “Wind turbines are a new source of community noise to which relatively few people have been exposed.... No generalized dose-response curves have yet been modeled for wind turbines primarily due the lack of results of published field studies...The need for guidelines for maximum exposure to wind turbine noise is urgent...”<sup>25</sup>

F63-21

Given it is acknowledged that “Wind turbines are a new source of community noise to which relatively few people have been exposed...”<sup>26</sup> it is incumbent on authorities to assess the impacts of wind turbine noise on human health using established and emerging authoritative references on noise.

Peer reviewed findings of studies of industrial wind turbines conclude “Noise from wind turbines was found to be more annoying than noise from several other sources at comparable Lden sound levels.”<sup>27</sup>

F63-22

This reference determined wind turbine noise is more annoying than equally loud railway, road traffic, and industrial and aircraft noise.<sup>28</sup> These findings are consistent with previous studies of human response to industrial wind turbine noise.<sup>29, 30, 31</sup>

Annoyance is predominately attributed to the unique sound characteristics of wind turbine noise.

F63-23

“The sound level associated with wind turbines at common residential setbacks ...may lead to annoyance and sleep disturbance.”<sup>32</sup> and evidence demonstrates

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“Annoyance and sleep disruption are common when sound levels are 30 to 45 dBA.” <sup>33</sup>

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The American Wind Energy Association and Canadian Wind Energy Association sponsored literature review entitled “Wind Turbine Sound and Health Effects” acknowledges wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms. <sup>34</sup>

F63-24

CanWEA President, Robert Hornung, stated regarding The American Wind Energy Association and Canadian Wind Energy Association sponsored report “The study does acknowledge that wind turbines can be annoying, the sound of wind turbines can be annoying for some individuals and that may cause them to feel some stress etcetera,...” <sup>35</sup>

More specifically the wind industry sponsored literature review acknowledges reported symptoms can be caused by wind turbine noise and states “...“wind turbine syndrome” symptoms are not new and have been published previously in the context of “annoyance” to environmental sounds .... The following symptoms are based on the experience of noise sufferers extending over a number of years: distraction, dizziness, eye strain, fatigue, feeling vibration, headache, insomnia, muscle spasm, nausea, nose bleeds, palpitations, pressure in the ears or head, skin burns, stress, and tension...” <sup>36</sup>

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The symptoms listed in the wind industry literature review are consistent with international research and media reports documenting subjects exposed to wind turbines who are reporting adverse health effects. <sup>37, 38, 39, 40, 41</sup>

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The health impacts of noise induced annoyance must not be underestimated.

A coauthor of the wind industry sponsored “Wind Turbine Sound and Health Effects”, W. David Colby, M.D., reinforced this position regarding wind turbine induced annoyance by stating

“We’re not denying that there are people annoyed and that maybe some of them are getting stressed out enough about being annoyed that they’re getting sick.” <sup>42</sup>

Geoff Leventhall, another coauthor of the wind industry sponsored “Wind Turbine Sound and Health Effects”, reportedly elaborated:

“... there was no doubt people living near the turbines suffered a range of symptoms, including abnormal heart beats, sleep disturbance, headaches, tinnitus, nausea, visual blurring, panic attacks and general irritability....it’s ruining their lives – and it’s genuine...” <sup>43</sup>

The word annoyance may mean different things to different people; however in clinical terms annoyance is acknowledged to be a risk to human health.

The World Health Organization acknowledges noise induced annoyance to be an adverse health effect. <sup>44, 45</sup>

Regarding noise induced annoyance the US Environmental Protection Agency states “...“annoyance” can have major consequences, primarily to one’s overall health.” <sup>46</sup>

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A World Health Organization study "...confirmed, on an epidemiological level, an increased health risk from chronic noise annoyance." <sup>47</sup>

Noise induced annoyance contributes to stress, <sup>48</sup> sleep disturbance <sup>49</sup> and an increased risk of regulation diseases. <sup>50</sup>

Annoyance may adversely affect physiological health. Research indicates that for "chronically strong annoyance a causal chain exists between the three steps health – strong annoyance – increased morbidity." <sup>51</sup>

The subjective experience of noise stress can, through central nervous processes, lead to an inadequate neuro-endocrine reaction and finally to regulation diseases. <sup>52</sup>

"Adults who indicated chronically severe annoyance by neighbourhood noise were found to have an increased health risk for the cardiovascular system and the movement apparatus, as well as an increased risk of depression and migraine...With children the effects of noise-induced annoyance from traffic, as well as neighbourhood noise, are evident in the respiratory system." <sup>53</sup> Peer reviewed studies have consistently concluded that wind turbine noise is more annoying than equally loud traffic. <sup>54, 55, 56, 57</sup>

To protect against adverse health effects noise level limits "...should be based on annoyance responses to noise." <sup>58</sup>

"Dose-response relations for different types of traffic noise (air, road and railway) clearly demonstrate that these noises can cause different annoyance effects at equal LAeq,24h values." <sup>59</sup> Currently there is no health based generalized dose-

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response relationship developed to avoid possible adverse health effects from wind turbine noise exposure.<sup>60</sup>

“The need for guidelines for maximum exposure to wind turbine noise is urgent...”<sup>61</sup>

Wind turbine visual effects such as shadow flicker may also cause visually induced adverse health effects such as annoyance and/or stress.<sup>62, 63, 64, 65, 66, 67, 68, 69</sup>

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### ***Conclusions: Wind Turbines and Annoyance***

Based on the best available science the following conclusions can be made.

- The main conclusion of peer reviewed scientific studies state noise from wind turbines is more annoying than noise from most other sources at comparable sound levels. This annoyance is predominately attributed to the unique sound characteristics of wind turbine noise.
- Peer reviewed scientific research confirms noise induced annoyance is an adverse health effect which can result in stress, sleep disturbance and an increased risk of regulation diseases.
- Possible symptoms of wind turbine noise induced annoyance include distraction, dizziness, eye strain, fatigue, feeling vibration, headache, insomnia, muscle spasm, nausea, nose bleeds, palpitations, pressure in the ears or head, skin burns, stress, and tension. These symptoms are consistent with international research and media reports documenting

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subjects exposed to wind turbines who are reporting adverse health effects.

- Peer reviewed scientific research confirms the audible sound from wind turbines, at the levels experienced at typical receptor distances is expected to result in an unacceptable percentage of persons being highly annoyed.
- Peer reviewed scientific research confirms dose-response relations for different types of noise (air, road and railway) clearly demonstrate that these noises can cause different annoyance effects at equal sound pressure levels.
- Peer reviewed scientific research confirms no generalized dose-response curves have yet been modeled for wind turbines, primarily due to the lack of results of published field studies.
- Peer reviewed scientific research confirms the need for guidelines for maximum exposure to wind turbine noise is urgent.
- Exposure to wind turbines may also visually induce adverse health effects. It is acknowledged wind turbine shadow flicker may cause annoyance and/or stress.
- Wind turbines must be sited to protect humans from the adverse health effect of visually induced annoyance as well as noise induced annoyance.

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## WIND TURBINES AND STRESS

Noise is an environmental stressor <sup>70</sup> which can cause stress related adverse health effects. <sup>71</sup>

A coauthor of the wind industry sponsored “Wind Turbine Sound and Health Effects”, <sup>72</sup> W. David Colby, M.D., reinforced this position regarding wind turbine induced annoyance by stating

“We’re not denying that there are people annoyed and that maybe some of them are getting stressed out enough about being annoyed that they’re getting sick.” <sup>73</sup>

CanWEA President, Robert Hornung, stated regarding The American Wind Energy Association and Canadian Wind Energy Association sponsored report “The study does acknowledge that wind turbines can be annoying, the sound of wind turbines can be annoying for some individuals and that may cause them to feel some stress etcetera,…” <sup>74</sup>

“The subjective experience of noise stress can, through central nervous processes, lead to an inadequate neuro-endocrine reaction and finally lead to regulatory diseases.” <sup>75</sup>

Peer reviewed scientific research reveals “With children the effects of noise-induced annoyance from traffic, as well as neighbourhood noise, are evident in the respiratory system. The increased risk of illness in the respiratory system in children does not seem to be caused primarily by air pollutants, but rather, as the results for neighbourhood noise demonstrate, by emotional stress.” <sup>76</sup>

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It is acknowledged that wind turbine noise may cause annoyance, stress and sleep disturbance.<sup>77, 78, 79, 80, 81</sup>

“Also, recent epidemiological studies have shown a connection between disturbed sleep and later occurrence of stress-related disorders such as cardiovascular diseases...and diabetes type II...”<sup>82</sup>

Regarding stress Health Canada states<sup>83</sup>

“...stress is considered to be a risk factor in a great many diseases, including: heart disease, some types of bowel disease, herpes, mental illness.

...Stress also makes it hard for people with diabetes to control their blood sugar.

...Stress is also a risk factor in alcohol and substance abuse, as well as weight loss and gain. Stress has even been identified as a possible risk factor in Alzheimer’s Disease.

...Severe stress can cause biochemical changes in the body, affecting the immune system, leaving your body vulnerable to disease.”

Other health effects associated with stress include becoming increasingly distressed, and irritable, unable to relax or concentrate, have difficulty thinking logically, and making decisions, depression, anxiety, sleep disorders, disorders of the digestive system, increases in blood pressure, headaches and musculo-skeletal disorders.<sup>84, 85</sup>

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## ***Conclusions: Wind Turbines and Stress***

Based on the best available science the following conclusions can be made.

- Noise is an environmental stressor which can cause stress related adverse health effects.
- It is acknowledged that wind turbine noise can cause annoyance, stress and sleep disturbance at common residential setbacks.
- Research has shown that annoyance associated with sound and shadow flicker from wind can be expected to contribute to stress related health impacts.
- Some of adverse health effects associated with stress include becoming increasingly distressed, and irritable, unable to relax or concentrate, have difficulty thinking logically, and making decisions, depression, anxiety, sleep disorders, disorders of the digestive system, increases in blood pressure, headaches and musculo-skeletal disorders.

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## WIND TURBINES AND SLEEP DISTURBANCE

It is acknowledged that wind turbine noise may cause annoyance, stress and sleep disturbance.<sup>86, 87, 88, 89, 90</sup>

“Some people with wind turbines located close to their homes have reported a variety of clinical symptoms that in rare cases are severe enough to force them to move away. These symptoms include sleep disturbance...”<sup>91</sup>

Wind turbines noise will cause annoyance and sleep disturbance with noise limits of 40dBA.<sup>92</sup>

The American Wind Energy Association and Canadian Wind Energy Association sponsored literature review entitled “Wind Turbine Sound and Health Effects” acknowledges wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms.<sup>93</sup>

Wind turbine induced sleep disturbance is consistently reported by those experiencing adverse health effects from exposure to wind turbines.<sup>94, 95, 96, 97</sup>

“Wind turbine noise was more annoying than transportation noise or industrial noise at comparable levels, possibly due to specific sound properties such as a “swishing” quality, temporal variability, and lack of nighttime abatement.”<sup>98</sup>

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A 2008 study of wind turbines in the Netherlands concludes:

“Perhaps the main finding is that wind turbine sound is relatively annoying, more so than equally loud sound from aircraft or road traffic....With respect to other health effects associated with wind turbines:

- The risk for sleep interruption by noise was higher at levels of wind turbine sound above 45 dBA than at levels below 30 dBA.
- Annoyance with wind turbine noise was associated with psychological distress, stress, difficulties to fall asleep and sleep interruption.”<sup>99</sup>

Sleep specialist Dr Christopher Hanning reviewed the findings of this reference and other peer reviewed studies of European wind turbine facilities and concluded:

“The recent analyses of the WINDFARM Perception and earlier Swedish studies by Pedersen and her colleagues gives, for the first time, robust evidence that wind turbines cause sleep disturbance and impair health and that this occurs at set-back distances previously regarded as adequate...Unfortunately all government and industry sponsored research in this area has used reported awakenings from sleep as an index of the effects of turbine noise and dismisses the subjective symptoms. Because most of the sleep disturbance is not recalled, this approach seriously underestimates the effects of wind turbine noise on sleep.”<sup>100</sup>

Difficulty falling asleep constitutes sleep disturbance which can have serious consequences.<sup>101</sup>

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A UK report documented sleep disturbance caused by wind turbine amplitude modulation and recommended a penalty adjustment to noise guidelines to protect the local population.<sup>102</sup> Other researchers believe a penalty should be considered for wind turbine noise.<sup>103, 104</sup>

“Harry (2007) ... subsequently investigated 42 people in various locations in the U.K. living between 300 meters and 2 kilometers (1000 feet to 1.2 miles) from the nearest wind turbine. The most frequent complaint (39 of 42 people) was that their quality of life was affected. Headaches were reported by 27 people and sleep disturbance by 28 people. Some people complained of palpitations, migraines, tinnitus, anxiety and depression....Pierpont does report that her study subjects maintain that their problems are caused by noise and vibration, and the most common symptoms reported are sleep disturbances and headache.”<sup>105</sup>

“In Ontario “WindVOiCe recently published the updated results of a self-reporting survey of communities affected by wind turbine noise. As of March 2010, 141 responses had been received of which 115 reported one or more health effects. 83 of the 115 (72%) reported sleep disturbance.”<sup>106</sup> The next update of WindVOiCe will be available mid-March, 2011. The results have increased in numbers.

Describing the preliminary results of his pilot study Dr Michael Nissenbaum states:

“In my investigation of Mars Hill, Maine, 22 out of about 30 adults (‘exposed’) who live within 3500 feet of a ridgeline arrangement of 28 1.5 MW wind turbines were evaluated to date, and compared with 27 people of otherwise similar age and occupation living about 3 miles away (Not Exposed).

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Here is what was found:

82% (18/22) of exposed subjects reported new or worsened chronic sleep deprivation, versus 4% (1 person) in the non-exposed group. 41% of exposed people reported new chronic headaches vs 4% in the control group.

59% (13/22) of the exposed reported 'stress' versus none in the control group, and 77% (17/22) persistent anger versus none in the people living 3 miles away. More than a third of the study subjects had new or worsened depression, with none in the control group. 95% (21/22) of the exposed subjects perceived reduced quality of life, versus 0% in the control group.

Underlining these findings, there were 26 new prescription medications offered to the exposed subjects, of which 15 were accepted, compared to 4 new or increased prescriptions in the control group. The prescriptions ranged from anti-hypertensives and antidepressants to anti migraine medications among the exposed. The new medications for the non exposed group were anti-hypertensives and anti-arthritis.

The Mars Hill study will soon be completed and is being prepared for publication.” <sup>107</sup>

“The sound level associated with wind turbines at common residential setbacks ...may lead to annoyance and sleep disturbance.” <sup>108</sup> and evidence demonstrates

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“Annoyance and sleep disruption are common when sound levels are 30 to 45 dBA.” <sup>109</sup>

Sleep disturbance is acknowledged to be an adverse health effect. <sup>110, 111</sup>

The consequences of sleep disturbance can be serious.

In 2009 World Health Organization released a 184 page peer reviewed summary of research regarding the risks to human health from noise induced sleep disturbance. Some of the adverse health effect documented in the report include poor performance at work, fatigue, memory difficulties, concentration problems, motor vehicle accidents, mood disorders (depression, anxiety), alcohol and other substance abuse, cardiovascular, respiratory, renal, gastrointestinal, musculoskeletal disorders, obesity, impaired immune system function and a reported increased risk of mortality. <sup>112</sup>

A 2009 court decision mandated that a wind turbine facility in France shut down operations at night in order to prevent the sleep disturbance that the local population had been enduring. <sup>113</sup>

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### ***Conclusions: Wind Turbines and Sleep Disturbance***

Based on the best available science the following conclusions can be made

- Wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance.

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- Wind turbine induced sleep disturbance occurs at common residential setbacks and when sound levels are higher than 30 dBA.
- The consequences of sleep disturbance can be serious. Acknowledged symptoms include poor performance at work, fatigue, memory difficulties, concentration problems, motor vehicle accidents, mood disorders (depression, anxiety), alcohol and other substance abuse, cardiovascular, respiratory, renal, gastrointestinal, musculoskeletal disorders, obesity, impaired immune system function and a reported increased risk of mortality.

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## WIND TURBINE LOW FREQUENCY NOISE AND INFRASOUND

Wind turbines generate a broad spectrum of noise including low frequency noise and infrasound which may be audible or inaudible. <sup>114, 115, 116</sup>

Audible wind turbine LFN is routinely perceptible to people.

Health Canada states:

“...turbine noise is likely to be audible to the nearest receptors in the form of continuous low-level or intermittent swooshing, as well as low frequencies at approximately 50 Hertz. As such, Health Canada advises the following...

- Please ensure that nearby residents are informed that turbine noises may be audible in terms of a low-level continuous or intermittent swooshing, as well as at low frequencies around 50 Hertz.” <sup>117</sup>

It is important decision makers consider that turbine noises may be audible in terms of a low-level continuous or intermittent swooshing, as well as at low frequencies around 50 Hertz.

It is widely affirmed that exposure to audible low frequency noise can cause adverse health effects in humans. <sup>118, 119, 120, 121</sup>

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Low frequency noise can cause "...immense suffering to those who are unfortunate to be sensitive to low frequency noise and who plead for recognition of their circumstances." <sup>122</sup>

"Wind turbines are generally located in areas devoid of trees and other large vegetation. Instead, ground cover usually consists of grass, sagebrush, plants, and low shrubs, which are minor impediments to noise propagation except at very high frequencies. At frequencies below about 1000 Hz, the ground attenuation is essentially zero." <sup>123</sup>

The farther away from the wind turbine the greater is the low frequency content due to a relatively larger atmospheric absorption of high frequencies. Considering the A-weighted sound level outdoors in relevant distances to neighbours, the lower frequencies constitute a substantial part of the noise. <sup>124</sup>

"Under 'adverse' wind conditions the sound of wind turbines are clearly audible at distances to approximately 5000 metres turbines-to-receiver to the extent that the sound can be recorded inside and outside a residence at these distances" <sup>125</sup>

There is no doubt that as wind turbines get larger and more densely sited the lower frequency part of the noise spectrum is of importance to the neighbours' perception of noise from large wind turbines. Noise from wind turbines is under certain atmospheric conditions more annoying and - especially the low frequency part - spread much farther than generally accepted. Wind turbines may cause low frequency noise induced annoyance both inside and outside a building. <sup>126</sup>

Annoyance is an acknowledged adverse health effect. <sup>127, 128</sup>

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“Regulatory authorities must accept that annoyance by low frequency noise presents a real problem which is not addressed by the commonly used assessment methods.” <sup>129</sup>

Literature reviews and peer reviewed scientific articles confirm the symptoms associated with low frequency noise exposure include annoyance, stress, sleep disturbance, headaches, difficulty concentrating, irritability, fatigue, dizziness or vertigo, tinnitus, heart ailments anxiety, stitch and beating palpitation. <sup>130</sup>, <sup>131</sup>, <sup>132</sup>

International research and media reports document people exposed over time, to too-close wind turbines, are experiencing adverse health effects. “These symptoms include sleep disturbance, headaches, difficulty concentrating, irritability and fatigue, but also include a number of otologic symptoms including dizziness or vertigo, tinnitus and the sensation of aural pain or pressure.” <sup>133</sup>

The American Wind Energy Association and Canadian Wind Energy Association sponsored literature review entitled “Wind Turbine Sound and Health Effects” (Colby et al., 2009) acknowledges wind turbine noise may cause annoyance, stress and sleep disturbance and as a result people may experience adverse physiological and psychological symptoms. The literature review specifically acknowledges that wind turbines may cause low frequency noise induced annoyance. <sup>134</sup>

Colby et al., 2009 does not deny that the symptoms documented in Dr. Pierpont’s case studies may be caused by wind turbine noise. This wind industry sponsored report disputes the mechanism of action proposed by Dr. Pierpont and concludes

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““wind turbine syndrome” symptoms are not new and have been published previously in the context of “annoyance” to environmental sounds .... The following symptoms are based on the experience of noise sufferers extending over a number of years: distraction, dizziness, eye strain, fatigue, feeling vibration, headache, insomnia, muscle spasm, nausea, nose bleeds, palpitations, pressure in the ears or head, skin burns, stress, and tension....” <sup>135</sup>

Colby et al., 2009 states the symptoms documented by Dr. Pierpont are “The collective symptoms in some people exposed to wind turbines are more likely associated with annoyance to low sound levels.” <sup>136</sup>

Colby et al., 2009’s use of the phrase “**low sound levels**” is misleading. The references cited by Colby et al., 2009 are specifically related to human response to “**low frequency noise and infrasound**” (Nagai et al., 1989 <sup>137</sup>; Møller and Lydolf, 2002 <sup>138</sup>; Mirowska and Mroz, 2000 <sup>139</sup>; Leventhall, 2002 <sup>140</sup>).

In August 2009 Geoff Leventhall, a coauthor of Colby et al., 2009, critiqued Dr. Pierpont’s research and confirmed that people may suffer from the symptoms described as Wind Turbine Syndrome. In a critique Geoff Leventhall states

“The symptoms of...Wind Turbine Syndrome...sleep disturbance, headache, tinnitus, ear pressure, dizziness, vertigo, nausea, visual blurring, tachycardia, irritability, problems with concentration and memory, and panic attack episodes associated with sensations of internal pulsation or quivering when awake or asleep...I am happy to accept these symptoms, as they have been known to me for many years as the symptoms of extreme psychological stress from environmental noise, particularly low frequency noise.” <sup>141</sup>

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Geoff Leventhall's acknowledgement that the symptoms described as "Wind Turbine Syndrome" are particular to "low frequency noise" exposure confirms that wind turbine low frequency noise may cause serious adverse health effects.

Another document attributed to Geoff Leventhall lists symptoms associated with wind turbine syndrome (WTSyndrome): <sup>142</sup>

"...sleep disturbance, headache, tinnitus, ear pressure, dizziness, vertigo, nausea, visual blurring, tachycardia, irritability, problems with concentration and memory, and panic episodes associated with sensations of internal pulsation or quivering which arise while awake or asleep" <sup>143</sup>

The same document also lists symptoms associated with noise annoyance:

"...insomnia; headache; pressure in the ears or head; Dizziness; nausea; eye strain; fatigue; distraction; nose bleeds; feeling vibration; muscle spasms; palpitations; skin burning; stress; tension etc" <sup>144</sup>

The same document states "Wind Turbine Syndrome Symptoms...same as those of noise annoyance. Psychological, not physiological" <sup>145</sup>

While there is a consensus on the symptoms caused by low frequency noise exposure the mechanism of action is not fully understood.

"Today we know that most illnesses, mental and physical, are influenced by a combination of biological, psychological and social factors." <sup>146</sup>

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“In an integrated and evidence-based model of health, mental health (including emotions and thought patterns) emerges as a key determinant of overall health. Anxious and depressed moods, for example, initiate a cascade of adverse changes in endocrine and immune functioning, and create increased susceptibility to a range of physical illnesses.” <sup>147</sup>

“Mental health is as important as physical health. In fact, the two are intertwined. Our mental health directly affects our physical health and vice versa...mental health factors can increase the risk of developing physical problems such as, diabetes, heart disease, weight gain or loss, gastrointestinal problems, reductions in immune system, efficiency, and blood biochemical imbalances.” <sup>148</sup>

World Health Organization advises that “Health effects due to low-frequency components in noise are estimated to be more severe than for community noises in general...The evidence on low-frequency noise is sufficiently strong to warrant immediate concern.” and consequently “Noise with low-frequency components require lower guideline values.” <sup>149</sup>

The effects of low frequency noise induced annoyance and stress are acknowledged to be serious as evidenced by “The claim that their “lives have been ruined” by the noise is not an exaggeration...” <sup>150</sup>

“...LFN (*low frequency noise*) does not need to be considered “loud” for it to cause such forms of annoyance and irritation.” <sup>151</sup>

“The effects of infrasound or low frequency noise are of particular concern because of its pervasiveness due to numerous sources, efficient propagation,

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and reduced efficiency of many structures (dwellings, walls, and hearing protection) in attenuating low frequency noise compared with other noise.” <sup>152</sup>

“Unlike higher frequency noise issues, LFN is very difficult to suppress. Closing doors and windows in an attempt to diminish the effects sometimes makes it worse because of the propagation characteristics and the low-pass filtering effect of structures. Individuals often become irrational and anxious as attempts to control LFN fail, serving only to increase the individual’s awareness of the noise, accelerating the above symptoms” <sup>153</sup>

“Those exposed may adopt protective strategies, such as sleeping in their garage if the noise is less disturbing there. Or they may sleep elsewhere, returning to their own homes only during the day.” <sup>154</sup>

Ontario victims have resorted to sleeping in a tent <sup>155</sup>, been billeted by the wind energy proponent, <sup>156</sup>, <sup>157</sup> or have abandoned their homes <sup>158</sup>, <sup>159</sup> to escape the wind turbine noise that has invaded their home.

Wind turbines may produce infrasound which may be inaudible or audible.

A spectral analysis of sounds emitted at a Michigan site revealed that unweighted peak levels at frequencies under 5 Hz exceeded 90 dB SPL (Wade Bray, pers. comm., 2009). <sup>160</sup>

“There is no doubt that some humans exposed to infrasound experience abnormal ear, CNS, and resonance induced symptoms that are real and stressful.” <sup>161</sup>

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There is no scientific consensus that infrasonic noise below the threshold of hearing will have no effect on health. There is scientific uncertainty regarding the understanding of human response to infrasound.

“There is no consensus whether sensitivity below 20 Hz is by a similar or different mechanism than sensitivity and hearing above 20 Hz...”<sup>162</sup>

The National Research Council states “Low-frequency vibration and its effects on humans are not well understood. Sensitivity to such vibration resulting from wind-turbine noise is highly variable among humans.... studies on human sensitivity to very low frequencies are recommended.”<sup>163</sup>

The conclusions of a 2010 peer reviewed scientific article states

“1) Hearing perception, mediated by the inner hair cells of the cochlea, is remarkably insensitive to infrasound.

2) Other sensory cells or structures in the inner ear, such as the outer hair cells, are more sensitive to infrasound than the inner hair cells and can be stimulated by low frequency sounds at levels below those that are heard. The concept that an infrasonic sound that cannot be heard can have no influence on inner ear physiology is incorrect.

3) Under some clinical conditions, such as Meniere’s disease, superior canal dehiscence, or even asymptomatic cases of endolymphatic hydrops, individuals may be hypersensitive to infrasound.

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4) A-weighting wind turbine sounds underestimates the likely influence of the sound on the ear. A greater effort should be made to document the infrasound component of wind turbine sounds under different conditions.

5) Based on our understanding of how low frequency sound is processed in the ear, and on reports indicating that wind turbine noise causes greater annoyance than other sounds of similar level and affects the quality of life in sensitive individuals, there is an urgent need for more research directly addressing the physiologic consequences of long-term, low level infrasound exposures on humans.” <sup>164</sup>

Recent research on the issue of infrasound below the hearing threshold states:

“For years, people have been told that infrasound you cannot hear cannot affect you. This is completely WRONG.

As the inner ear DOES respond to infrasound at levels that are not heard, people living near wind turbines are being put at risk by infrasound effects on the body that no-one presently understands.

Until a scientific understanding of this issue is established we should not be dismissing these effects, but need to be erring on the side of caution.” <sup>165</sup>

It is incorrect to assume that inaudible low frequency noise cannot cause adverse health effects as “...non-aural physiological and psychological effects may be caused by levels of low frequency noise below the individual hearing threshold.”

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“Low-frequency noise may also produce vibrations and rattles as secondary effects.” <sup>167</sup>

“Although infrasound levels from large turbines at frequencies below 20 Hz are too low to be audible, they may cause structural elements of buildings to vibrate.”

<sup>168</sup>

“Jung and colleagues (2008), in a Korean study, concluded that low-frequency noise in the frequency range above 30 Hz can lead to psychological complaints and that infrasound in the frequency range of 5–8 Hz can cause complaints due to rattling doors and windows in homes.” <sup>169</sup>

Field studies and “...research has shown that the acoustic energy from wind turbines is capable of resonating houses, effectively turning them into three-dimensional loud speakers in which the affected residents are now expected to live. The phenomenon of natural resonance combines to produce a cocktail of annoying sounds which not only disturb the peace and tranquility once-enjoyed by the residents, but also stimulate a number of disturbing physiological effects which manifest in the physical symptoms...” <sup>170</sup>

A NASA technical paper on wind turbine noise states

“People who are exposed to wind turbine noise inside buildings experience a much different acoustic environment than do those outside....They may actually be more disturbed by the noise inside their homes than they would be outside....One of the common ways that a person might sense the noise-induced excitation of a house is through structural vibrations. This mode of observation is

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particularly significant at low frequencies, below the threshold of normal hearing.”

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Living conditions are acknowledged to be a key determinate of health. <sup>172</sup>

A World Health Organization epidemiology study confirms disturbed living conditions caused by noise increases the risk of ill health. <sup>173</sup>

Peer reviewed scientific research confirms “Pollution and degradation of the indoor environment cause illness, increased mortality, loss of productivity, and have major economic and social implications....The health effects of indoor noise include an increase in the rates of diseases and disturbances... these illnesses, and the related reduction in human productivity, can result in substantial economic losses.” <sup>174</sup>

Wind turbine low frequency noise and infrasound is unique.

Modern upwind industrial wind turbines produce a characteristic audible modulation of aerodynamic noise. <sup>175</sup> This is commonly referred to as amplitude modulation and is acknowledged to contribute to higher levels of wind turbine induced annoyance and/or sleep disturbance in the exposed population. <sup>176, 177, 178</sup>

Wind turbine low frequency noise and infrasound is also modulated.

“Low frequency sound and infrasound are normal characteristics of a wind farm as they are the normal characteristics of wind, as such. The difference is that

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“normal” wind is laminar or smooth in effect whereas wind farm sound is non-laminar and presents a pulsing nature.” <sup>179</sup>

“A limitation of much work on assessment of low frequency noise has been that long term averaged measurements were used and, consequently, information on fluctuations was lost. Many complaints of low frequency noise refer to its throbbing or pulsing nature.” <sup>180</sup>

Research related to low frequency noise “...confirms the importance of fluctuations as a contributor to annoyance and the limitation of those assessment methods, which do not include fluctuations in the assessment.” <sup>181</sup>

Adverse health effects associated with low frequency noise and infrasound can be avoided with authoritative regulations that ensure protection is engineered into the design of wind turbine projects.

Low Frequency Noise is an issue that must be resolved quickly and accurately to improve the sound environment and quality of life for the residents. For this reason, it remains the duty of industry and authorities to implement regulations that will account for low frequency noise. <sup>182</sup>

It is widely affirmed that A-weighting underestimates the sound pressure level of noise with low-frequency components. <sup>183, 184, 185, 186, 187</sup> “A-weighted level is very inadequate...” <sup>188</sup> when assessing low frequency noise and infrasound.

C-weighting and Z-weighting are more appropriate to assess noise with low frequency components.

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The proposed noise level proposed by proponents are usually based on the A-weighted level metric.

The adoption of low frequency noise and infrasound regulations is hampered by wind energy industry resistance. The Canadian Wind Energy Association (a registered lobby group for the wind industry) lobbies against having to address the impacts of wind turbine low frequency noise and infrasound "...CanWEA submits that the proposed requirement for infrasound or low frequency noise monitoring as a condition of the REA be removed." <sup>189</sup>

It is acknowledged that wind turbine noise, including low frequency noise, may cause annoyance, stress and sleep disturbance. <sup>190, 191, 192, 193, 194</sup> These adverse health effects occur at sound pressure levels in the ranges expected at participating and non-participating noise receptors. <sup>195</sup>

### ***Conclusions: Wind Turbine Low Frequency Noise and Infrasound***

Based on the best available science the following conclusions can be made.

- Wind turbine noise is likely to be audible to receptors in the form of continuous low-level or intermittent swooshing, as well as low frequencies at approximately 50 Hertz.
- Exposure to audible low frequency noise can cause adverse health effects in humans.

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- The symptoms associated with low frequency noise exposure include annoyance, stress, sleep disturbance, headaches, difficulty concentrating, irritability, fatigue, dizziness or vertigo, tinnitus, heart ailments anxiety, stitch and beating palpitation.
- Humans must be protected from the adverse health effects caused by low frequency noise exposure.
- Wind turbine low frequency noise may induce annoyance, stress and sleep disturbance which may have other health consequences.
- International research and media reports document people exposed to wind turbines reporting adverse health effects. Reported symptoms include annoyance, stress, sleep disturbance, headaches, difficulty concentrating, irritability, fatigue, dizziness or vertigo, tinnitus and the sensation of aural pain or pressure.
- Wind turbines emit infrasound which may be audible or inaudible. There is scientific uncertainty regarding infrasound; however, it is plausible wind turbine infrasound could adversely affect human health.
- It is acknowledged infrasound can induce annoyance, stress and sleep disturbance by disturbing people inside their homes through structural vibrations.
- Based on current understanding of how low frequency sound is processed in the ear, and on reports indicating that wind turbine noise causes greater annoyance than other sounds of similar level and

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affects the quality of life in sensitive individuals, there is an urgent need for more research directly addressing the physiologic consequences of long-term, low level infrasound exposures on humans.

- Adverse health effects associated with low frequency noise and infrasound can be avoided with authoritative regulations that ensure protection is engineered into the design of wind turbine projects.
- Members of the wind energy industry oppose addressing wind turbine low frequency noise and infrasound. For example the Canadian Wind Energy Association has lobbied against the introduction of protective guidance designed to address wind turbine low frequency noise and infrasound.

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## WIND TURBINES AND SHADOW FLICKER

World Health Organization acknowledges that in addition to noise pollution wind turbines also have visual burdens.<sup>196</sup>

The health impact of visual burdens cannot be underestimated. An epidemiology study conducted by World Health Organization determined a “bad view out of window” increased the risk for depression by 40%. The same study also demonstrated disturbance by noise and sleep disturbance by noise increased the risk of depression 40%, and 100% respectively.<sup>197</sup> In addition to visual burdens wind turbines create noise pollution<sup>198</sup> which is acknowledged to cause annoyance, stress and sleep disturbance.<sup>199, 200, 201, 202, 203</sup> In light of these statistics it is expected that people may suffer adverse health effects from visual and noise impacts of wind turbines.

The National Research Council states “...wind-energy projects create negative impacts on human health and well-being, the impacts are experienced mainly by people living near wind turbines who are affected by noise and shadow flicker.”<sup>204</sup>

Rotating wind turbine blades interrupt the sunlight producing unavoidable flicker bright enough to pass through closed eyelids, and moving shadows cast by the blades on windows can affect illumination inside buildings.<sup>205</sup> This effect is commonly known as shadow flicker.

Wind turbine shadow flicker has the potential to induce photosensitive epilepsy seizures however the risk is low with large modern models and if proper planning

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is adhered to.<sup>206, 207</sup> Planning should ensure the flash frequency does not exceed three per second, and the shadows cast by one turbine on another should not have a cumulative flash rate exceeding three per second.<sup>208</sup>

Wind turbine shadow flicker induced adverse human health effects include annoyance and/or stress.<sup>209, 210, 211, 212, 213</sup>

Wind turbine noise including low frequency noise may also contribute to the overall annoyance.

“Wind turbine noise is easily perceived and annoying even at low A-weighted SPLs....Wind turbines are furthermore prominent objects whose rotational movement attracts the eye. Multimodal sensory effects or negative aesthetic response could enhance the risk of annoyance. Adverse reactions could possibly lead to stress-related symptoms due to prolonged physiological arousal and hindrance to psychophysiological restoration.”<sup>214</sup>

No generalized dose-response curves have yet been modeled for wind turbine shadow flicker primarily due to the lack of results of published field studies.

Further investigation into the effects of wind turbine stressors including shadow flicker is required to assist in the development authoritative guidelines designed mitigate potential adverse health effects.<sup>215</sup>

Shadow flicker is also a safety concern. For example it can cause vehicle driver distraction.<sup>216</sup>

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Most jurisdictions do not have explicit regulations to protect people from the adverse health effects of shadow flicker.<sup>217</sup>

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To mitigate risk to human health wind turbines should be sited to ensure people will not be adversely affected. For example in the northern hemisphere people located East-NE or WNW from the turbine must be protected from shadow flicker.<sup>218</sup>

Recommended shadow flicker setbacks for current wind turbine designs are 10 rotational diameters which would typically translate to approximately 1000 m.<sup>219</sup>

Greater setback distances may be required when wind turbines are sited on elevated ridges as the shadows can be cast over distances of several kilometres.

It is acknowledged that "...shadow flicker can be an issue both indoors and outdoors when the sun is low in the sky. Therefore, shadow flicker may be an issue in locations other than the home."<sup>220</sup> Shadow flicker modelling must consider human exposure to shadow flicker outside a building.

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Protection from wind turbine shadow flicker exposure must be engineered into the design of the wind turbine facility during the planning stage.<sup>221, 222</sup>

Furthermore the assumption that 30 hours a year of shadow flicker is protective of human health is not based on science. No generalized dose-response curves have been modeled for wind turbine shadow flicker primarily due to the lack of results of published field studies.



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To ensure protection from adverse human health effects a revised shadow flicker study must be conducted during the planning stage of a wind turbine facility. The shadow flicker study must:

- Calculate shadow flicker based on the actual location of the wind turbines.
- Calculate shadow flicker exposure on the entire neighbouring properties and not just the “receptor (house)”.
- Calculate shadow flicker for both sun and moon induced flicker using conservative assumptions to ensure maximum protection against adverse human health effects and safety risks.
- Protect against photosensitive epilepsy by ensuring the flash frequency does not exceed three per second, and the shadows cast by one turbine on another do not have a cumulative flash rate exceeding three per second.

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### ***Conclusions: Wind Turbines and Shadow Flicker***

Based on the best available science the following conclusions can be made.

- Wind turbines produce noise and visual burdens.
- Scientific research confirms visual impacts can adversely affect human health.

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- Wind turbine shadow flicker has the potential to induce photosensitive epilepsy seizures; however the risk is low with large modern models and if proper planning is adhered to.
- Wind turbine shadow flicker induced adverse human health effects include annoyance and/or stress.
- No generalized dose-response curves have yet been modeled for wind turbine shadow flicker primarily due to the lack of results of published field studies.
- Protection from wind turbine shadow flicker exposure must be engineered into the design of the wind turbine facility during the planning stage.

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## WIND TURBINE NOISE CHARACTERISTICS

“Noise is multidimensional. A one dimensional view of noise is the A - weighting, which considers only levels and neglects frequencies. Another one-dimensional view is to consider only frequencies and neglect levels. Developing the dimensions further, two dimensions include both frequency and level (the spectrum), three dimensions adds in the time variations of the noise, whilst higher dimensions include subjective response.” <sup>223</sup>

Peer reviewed scientific research confirms “The capacity of a noise to induce annoyance depends upon many of its physical characteristics, including its sound pressure level and spectral characteristics, as well as the variations of these properties over time.” <sup>224</sup>

“Noise measures based solely on LAeq values do not adequately characterize most noise environments and do not adequately assess the health impacts of noise on human well-being. It is also important to measure the maximum noise level and the number of noise events when deriving guideline values. If the noise includes a large proportion of low-frequency components, values even lower than the guideline values will be needed, because low-frequency components in noise may increase the adverse effects considerably. When prominent low-frequency components are present, measures based on A-weighting are inappropriate. However, the difference between dBC (or dBlin) and dBA will give crude information about the presence of low-frequency components in noise. If the difference is more than 10 dB, it is recommended that a frequency analysis of the noise be performed.” <sup>225</sup>

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The sound energy produced by wind turbine noise is complex. Wind turbine noise is comprised of a number of characteristics including broad band noise, low frequency noise, infrasound, amplitude modulation, tonal noise, impulse noise.<sup>226</sup>,<sup>227</sup>,<sup>228</sup>,<sup>229</sup> It is widely affirmed that modulated broad band noise, low frequency noise, infrasound, tonal noise, and impulse noise have a particularly pronounced effect on people exposed to them.<sup>230</sup>,<sup>231</sup>,<sup>232</sup>,<sup>233</sup> Another problematic special characteristic of wind turbine noise is that unlike other forms of noise it does not abate at night.<sup>234</sup>

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A-weighted guidelines have proven ineffective at protecting individuals from the adverse health effects associated with wind turbine noise.<sup>235</sup>

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“The probability of being annoyed by wind turbine sound increased with increasing levels of wind turbine sound.”<sup>236</sup>

Peer reviewed scientific research confirms “...that wind turbine noise is easily perceived...”<sup>237</sup> and difficult to mask.<sup>238</sup>

Regarding representations pertaining to industrial wind turbine noise masking Health Canada advises...” omit statements about noise masking as they can be misleading;”<sup>239</sup>

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“The sound of the turbines is not masked by wind or by wind through vegetation or leaf rustle in trees”<sup>240</sup>

Peer reviewed scientific research confirms noise masking may only be successful if the “...noises have the same frequency composition and if they actually occur at the same time.”<sup>241</sup>

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“Turbines produce a range of disturbing frequencies out of place in the natural soundscape extending from the audible range down into infra-sound. Residents frequently report that developers have claimed that the gentle sounds of the turbines will be absorbed or masked by the natural sounds of the environment... Residents report this as entirely untrue and an insult to their intelligence. Research undertaken by the author and many others has proved these claims of natural sound masking to be without foundation.” <sup>242</sup>

“Wind turbine noise is NOT comparable to the rustling of leaves.” <sup>243</sup>

Modern upwind industrial wind turbines produce a characteristic audible modulation of aerodynamic noise. <sup>244</sup> This is commonly referred to as amplitude modulation and is acknowledged to contribute to higher levels of wind turbine induced annoyance and/or sleep disturbance in the exposed population. <sup>245, 246, 247</sup>

“Wind farm noise can be intrusive in the home and is identified as low amplitude modulated sound (modulated in amplitude and frequency)” <sup>248</sup>

A UK report documented sleep disturbance caused by wind turbine amplitude modulation and recommended a penalty adjustment to noise guidelines to protect the local population. <sup>249</sup> The report also recommended addition research into amplitude modulation. <sup>250</sup>

Other researchers believe a penalty should be considered for wind turbine amplitude modulation. <sup>251, 252</sup>

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Peer reviewed scientific research confirms noise limits should be based on annoyance scientific dose responses to individual noise sources.<sup>253</sup>

According to a peer reviewed article there is no health based generalized dose-response relationship developed to avoid possible adverse health effects from wind turbine noise exposure.<sup>254</sup>

Peer reviewed research confirms wind turbine noise is more annoying than equally loud noise sources such as traffic noise, airport, rail and industrial noise.

<sup>255</sup>, <sup>256</sup>, <sup>257</sup>, <sup>258</sup>

“The need for guidelines for maximum exposure to wind turbine noise is urgent.”<sup>259</sup>

Researchers have concluded that more sound mitigation measures must be considered for wind turbine noise.<sup>260</sup>

Wind turbine noise induced annoyance, stress and sleep disturbance have been documented at sound power levels less than 40 dBA.<sup>261</sup>, <sup>262</sup>, <sup>263</sup>, <sup>264</sup>

Wind turbines produce low frequency noise and infrasound which may be audible or inaudible.

To protect people from the adverse health effect of noise annoyance World Health Organization states “Noise with low-frequency components require lower guideline values.”<sup>265</sup>

Peer reviewed research confirms is inadequate as A-weighting underestimates the sound pressure level of noise with low-frequency components.<sup>266</sup>, <sup>267</sup>, <sup>268</sup>

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“A-weighted levels for assessment of environmental noise are normally taken outside a residential property. The complexities of low frequency noise, including uncertainties in the transmission loss of the structure and resonances within rooms, require low frequency noise to be assessed by internal measurements.”

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Wind turbine noise is modulated. Research related to low frequency noise “...confirms the importance of fluctuations as a contributor to annoyance and the limitation of those assessment methods, which do not include fluctuations in the assessment.” <sup>270</sup>

CanWEA lobbies against having to address the impacts of wind turbine low frequency noise and infrasound “...CanWEA submits that the proposed requirement for infrasound or low frequency noise monitoring as a condition of the REA be removed.” <sup>271</sup>

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Peer reviewed scientific references confirm noise regulations must be enforceable. <sup>272, 273</sup>

“Health Canada advises that noise monitoring be undertaken under varying climatic conditions in order to ensure that noise levels do not exceed the acceptable level, and if exceedences are identified, that appropriate mitigation be implemented to reduce the noise level to an acceptable level.” <sup>274</sup> The MOE Noise Guidelines for Wind Farms do not meet this standard.

Proposed industrial facilities including wind turbine facilities must be designed with appropriate noise control considerations so that the likelihood of compliance

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is strong. Wind turbine developers should model noise assessments based on worst case conditions and should maximize setback distances. <sup>275</sup>

“The genuine difficulty that developers face is that noise levels are difficult to predict fully in advance...” <sup>276</sup> The NASA Technical paper “Wind Turbine Acoustics” illustrates that noise propagation of a wind turbine is complex and locations closer to a wind turbine such as under the base may be quieter than locations further away due to the wind induced refraction on acoustic rays radiating from an elevated point source. <sup>277</sup>

There is no scientific study to conclusively support that any of the wind turbine noise regulations and/or guidelines are protective of human health and safety. There are reports of individuals reporting noise problems <sup>278</sup> and adverse health effects in other jurisdictions with experience with wind turbines. <sup>279</sup>, <sup>280</sup>

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### ***Conclusions: Wind Turbine Noise Characteristics***

Based on the best available science the following conclusions can be made.

- A-weighted guidelines have proven ineffective at protecting individuals from the adverse health effects associated with wind turbine noise.
- A significant percentage of the exposed population will experience annoyance, stress and sleep disturbance and other related health problems from noise emissions.

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- It is widely affirmed that A-weighting underestimates the sound pressure level of noise with low frequency components is not appropriate when managing human exposure to low frequency noise. C-weighting and Z-weighting are more appropriate to assess noise with low frequency components.
- Reliance on wind turbine manufacturers' statements showing the degree of tonality present is unwise as experience indicates that these statements are not reliable. Given this scientific uncertainty tonal penalties must be applied to all wind turbine projects during the engineering and approval stage.

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## WIND TURBINES AND PUBLIC SAFETY

Ice throw may not apply in warmer climates. However, wind turbine ice throw and structural failure are potentially severe public hazards. Ice throw and structure failure are physical dangers to people or passing vehicles. <sup>281</sup>, <sup>282</sup>

"The majority of the available literature reporting on potential risk of ice from wind turbines is qualitative (opinion articles) with little scientific support...there has been only one scientific study conducted to assess the risk of ice throw." <sup>283</sup>

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"Small blade parts and tips can fly very far. The maximum distance reported is 500 m. The maximum throw distance of an entire blade found during this analysis is about 150 m. Distances of 400 and 600 meters for entire blades were also reported in publications. Nevertheless, attempts to confirm these numbers through contacting the owner or the publisher were unsuccessful. When a rotor or nacelle falls down, the risk zone is approximately equal to half a rotor

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diameter. When an entire tower fails, the risk zone is equal to the height of the tower plus half a rotor diameter.”<sup>284</sup>

Studies have identified setback distances of 200–350 m for ice throw and 150 – 500 m for blade failure.<sup>285</sup>

A July 2009 Ontario commissioned report highlighted uncertainty regarding wind turbine ice throw and structural failure setbacks and stated among other things “Determination of the recommended separation distance based on these results may be premature and may not be appropriate.”<sup>286</sup>

More research is required into the risk of ice throw in regions where glaze ice is common as most research has focused on rime ice.<sup>287</sup>

Wind turbine “structural failure is potentially fatal” and is a “physical danger to people or passing vehicles”<sup>288</sup>

“Although most turbines are designed to withstand temperatures as low as –20 to –40°C, structural materials can be compromised by extreme cold. Cold stress can cause steel and/or composite components to crack or deform, interfere with electrical equipment, or damage moving parts in the gearbox increasing the risk of turbine failure.”<sup>289</sup>

### ***Conclusions: Wind Turbines and Public Safety***

Based on the best available science the following conclusions can be made.

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- Wind turbine ice throw and structural failure are potentially severe public hazards. Ice throw and structure failure are physical dangers to people or passing vehicles.
- Based the research to date, determination of the recommended separation distance for ice throw and/or structural failure is premature and not appropriate.

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**From:** Carmen Krogh <krogh@email.toast.net>  
**Sent:** Thursday, February 24, 2011 7:30 PM  
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**Cc:** tisdale.donna@gmail.com  
**Subject:** Submission II Tule Wind/Energia Sierra Juarez Gen-Tie Projects  
**Attachments:** healt\_survey\_rev14 final.pdf

To whom it may concern,

Attached is a second submission in response to public comment for the Tule Wind/Energia Sierra Juarez Gen-Tie Projects.

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Thank you for the opportunity to offer my comments.

Attached is a copy of the WindVOiCe health survey results. An updated will be available in a few weeks. This is the largest case series reporting on adverse health effects and industrial wind turbines.

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WindVOiCe follows the principles of Health Canada's *Canada Vigilance Programs* for self reporting adverse events for prescription and consumer medication, vaccines and other.

I appreciate this opportunity and hope that the attached information will assist with your deliberations.

Respectively submitted,

Carmen Krogh, BScPharm  
1183 Cormac Road, RR4  
Killaloe, Ontario, Canada, K0J 2A0

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**WindVOiCe©**

**Wind Vigilance for Ontario Communities**

**A self-reporting survey: adverse health effects with  
industrial wind turbines and the need for vigilance**

**July, 2010**

**Abstract**

**By**

**Carmen Krogh, BScPharm**

**Lorrie Gillis, Process Administrator**

**Nicholas Kouwen, PhD., PEng, FASCE (Scrutineer)**

WindVOiCe© fills a void due to the lack of government vigilance and long term surveillance programs regarding the impact of industrial wind turbines on human health. It follows the principles of Health Canada' *Canada Vigilance Programs* for self reporting suspected adverse health effects of consumer and prescription products, vaccines and other products.

This is the sixth update of WindVOiCe© health survey results. Reports (9) from jurisdictions other than Ontario are included.

The number of people in Ontario reporting adverse health affects due to industrial wind turbines continues to rise. The first community-based self reporting survey conducted Ontario was made public on April 22, 2009 by Dr. Robert McMurtry at the Standing Committee for the Green Energy Act (Ontario). The new total is now 109 in Ontario which is a disturbing 106% increase from the 53 originally reported.

Researchers and victims report altered living conditions and adverse health effects.

Victims report disturbed living conditions and loss of quality of life and enjoyment of their homes and property, and financial loss due to the negative impact to the health of their families.

Sleep disturbance is the most common health complaint. Some describe the annoyance, stress and sleep disturbance being experienced. Symptoms include inner ear problems, cardiac

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concerns such as arrhythmias and palpitations, headaches and cognitive and mood disturbances. Several suffered acute hypertensive episodes which are most concerning.

Some have had to leave their homes in order to protect their health. These reports are consistent internationally.

In an American Wind Energy Association and Canadian Wind Energy Association sponsored report it is acknowledged that wind turbine noise may cause annoyance, stress and sleep disturbance which have negative implications regarding health. The Ontario Chief Medical Officer of Health in a memorandum concurred that "...sound produced by wind turbines is sometimes found to be annoying to some people which may result in stress and sleep disturbance."

Current research demonstrates that annoyance must not be trivialized. Annoyance is acknowledged to be an adverse health effect which contributes to stress, sleep disturbance and an increased risk of regulation diseases. Wind turbine noise is associated with psychological distress, stress, difficulties to fall asleep and sleep interruption. For more information visit [www.windvigilance.com](http://www.windvigilance.com)

Comments from the victims are included in this report. They are both revealing and disturbing. No authority or compassionate member of our society can ignore the moving descriptions of the victims' experiences.

There are unanswered questions about infants, children, and the unborn whose mothers are exposed, family members and workers such as farmers and technicians who live and work in close proximity to the wind turbines.

The newest survey results are a startling cause for concern. More victims continue to come forward. Some victims may be suffering in silence due to non-disclosure agreements in the leasing contracts with wind developers or because of legal actions. Alarm now exists around the world with regard to wind energy technology. Governments should not proceed with further wind development until authoritative regulations based on the best available science are in place. The health and well-being of more people are potentially at risk.

Until 3<sup>rd</sup> party human research is conducted to determine authoritative guidelines, it is incumbent on governments to invoke the precautionary principle and declare a moratorium regarding the building of more turbines. It is also imperative that where victims are reporting adverse health effects, wind facilities be decommissioned.

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WindVOICE (Wind Vigilance for Ontario Communities)

A self-reporting survey: adverse health effects with industrial wind turbine complexes and the need for vigilance  
March/June/September 2009 January/March/July 2010

#	Age	Gender	Occupation	Distance from turbine	Time at property	Health altered	Headaches	Palpitations	Excessive tiredness	Stress	Anxiety	Tinnitus	Hearing problems	Sleep disturbance	Migraines	Depression	Other	Approached doctor	Altered quality of life
1	54	f	farmer	800	30.5	No	No	No	No	No	No	No	No	No	No	No	n/a	Yes	
2	56		farmer	800	31	No	No	No	No	No	No	No	No	No	No	No	n/a	Yes	
3	56	m	farmer	800	35	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	
4	53	f	homemaker	800	34	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
5	45		cmi	1200	45	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	No	Yes	
7	50	m	self empl	800	49	Yes	Yes	Yes	Yes	Yes		Yes		Yes	No	No	No	Yes	
8	53	m	farmer	950	52	Yes		Yes			Yes				No	No	No	Yes	
9	n/a		farmer	1000	8	Yes	No				Yes	Yes			No	No	Yes		
12	63	m	retired	717	32	Yes	Yes	No	Yes	Yes	Yes	Yes	No	No	Yes	Yes	Yes	Yes	
13	60	f	retired	717	32	Yes		Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	
16	47	f	ed Asst.	1600	20			Yes				Yes					Yes	No	
17	47	m	truck driver	1600	20	unsure	Yes	Yes									Yes	No	
18	28	f	teacher	717	18	Yes	Yes	No	Yes	Yes	No	No	Yes	No	Yes	Yes	No	Yes	
19	29		soc. Worker	717	vis	Yes	Yes	No	No	Yes	No	Yes	No	No	No	No	No	Yes	
21	50	f	sales	457	4	Yes	No	No	Yes	No	No	Yes	No	No	No	Yes	Yes	Yes	
22	52	m	seld empl	457	4	Yes	Yes	Yes	Yes	Yes		Yes						Yes	
23	26	f	graphic	800	26	No												Yes	
24	59		retired	700	13	Yes	Yes	No	Yes	Yes			Yes	Yes	No		Yes	Yes	
27	31	m	farm	3500	2	No													
33	53	m	truck driver	1200	30		No	Yes	No	No	Yes	Yes	Yes	No	No	No	No	Yes	
34	53	f	farmer	1200	30	Yes	Yes	?	Yes	Yes	Yes	No	Yes	No	Yes	Yes	Yes	Yes	
38	50	m	farmer	350	10	Yes	No	No	No	Yes	No	No	No	No	No	No	No	Yes	
39	71	f	retired	983	3	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	No	No	Yes	
40	67	m	retired	548	30	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	?	Yes	Yes	
41	67	f	retired	548	30	Yes	Yes	Yes	Yes	Yes		Yes						Yes	
44	65	f	retired	n/a	n/a	Yes	Yes	Yes								Yes	Yes	Yes	
45	24	m	police officer	800	11	Yes	No	No	Yes	No	No	No	No	No	No		No	Yes	
46	22	m	engineer	808	11	Yes	Yes	No	No	Yes	No	Yes	No	No	No	No	No	Yes	
47	19		student	808	19	Yes	No	Yes	Yes	No	Yes	No	Yes	No	No	Yes	Yes	Yes	
48	21	f	student	808	0.25	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	No	No	Yes	
49	53	f	teacher	808	11	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	No	Yes	Yes	Yes	
50	51	m	carpenter	808	11	Yes	Yes	No	Yes	Yes	No	n/a	No	Yes	No	Yes	No	Yes	
51	45-60	m	technician	1000	26	Yes									Yes		No	Yes	
52	45-60	f	homemaker	close	21	Yes	Yes		Yes	Yes		Yes		Yes			No	Yes	
54	53	m	ems	1000	0.67	No												Yes	
58	68	m	ret'd farmer	650	39	Yes	Yes			Yes		Yes					No	Yes	
59	42	m	bus/farmer	1000	19	Yes	No	No	Yes	Yes	Yes	Yes	No	No			Yes	Yes	
60	60	f	retired	750	10	No	No	No	No	No	No	No	No	No	No			Yes	
61	45-60		manager	500	20	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes		Yes	Yes	
62	30-45	f	food_prep	500	20	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes			No	Yes	
65	>60	m	farmer	450	45	Yes	No	No	No	Yes	No	No	No	No			Yes	Yes	
66	>60	m	farmer	650	62	No												Yes	
67	56	f	homemaker	uncle	30	Not					Yes						Yes	No	
68	45-60	f	retired	1300	32	Yes	Yes	No	Yes	Yes	No	No	Yes	No	Yes		No	Yes	
69	36	m	firefighter	550	5	Yes	No	No	Yes	Yes	Yes	No	No	Yes				Yes	
70	39	f	sales	550	5	Yes	Yes	No	Yes	No	Yes	Nos	Yes	Nos	No			Yes	
71	30-45	f	access control	704	5	Yes	Yes										No	Yes	
72	30-45	m	millwright	700	2	Yes	Yes		Yes	Yes	Yes		Yes		Yes		No	Yes	
73	70	f	homemaker	800	37	Yes	Yes	Yes	Yes	Yes	No	No	Yes	No	Yes		Yes	Yes	
74	44	f	unemployed	400	10	Maybe		Yes				Yes				Yes		Yes	
75	43	m	electrician	400	43	Maybe		Yes			Yes	Yes				Yes		Yes	
76	44	f	farrier's	n/a	n/a	Yes	Yes	Yes									No		
77	>60	m	retired	<100 0	30pr/ 12ft	Yes										Yes	No	Yes	
78	65	m	retired	800	6	Yes	Yes		Yes	Yes	Yes	Yes					Yes	Yes	
79	63	f	teacher	800	6	Yes		Yes	Yes	Yes	Yes	Yes					No	Yes	
80	79	f	retired	600	5	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	
81	58	f	farmer	1100	33	Yes	Yes		Yes	Yes	Yes	Yes				Yes	No	Yes	
82	68	m	farmer	1100	33	Yes		Yes	Yes	Yes	Yes	Yes				Yes	Yes	Yes	
83	45-60	f	healthcare	600	22	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	Yes	No	Yes	
84	>60	m	electrician	600	22	Yes	No	No	Yes	No	No	No	Yes	No	No	Yes	No	Yes	
85	45-60	m	retired	573	25	Yes			Yes	Yes	Yes					Yes	No	Yes	
86	59	m	farmer	800	22	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
87	46	m	mechanic	360	46	Yes	Yes		Yes		Yes	Yes	Yes				Yes	Yes	
88	45-60	f	bookkeeper	<500	23	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes			Yes	Yes	
89	45-60	?	45-60	<500	14	Yes	Yes	No	Yes	Yes		Yes	Yes				No	Yes	

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Cont.



# WindVOICE (Wind Vigilance for Ontario Communities)

A self-reporting survey: adverse health effects with industrial wind turbine complexes and the need for vigilance  
March/June/September 2009 January/March/July 2010

#	Age	Gender	Occupation	Distance from turbine	Time at property	Health altered	Headaches	Palpitations	Excessive tiredness	Stress	Anxiety	Tinnitus	Hearing problems	Sleep disturbance	Migraines	Depression	Other	Approached doctor	Altered quality of life
90	69	m	retired	450	20	Yes	No	No	Yes	Yes	Yes	No	No	No	No	No	No	Yes	Yes
91	66	m	retired	1000	31	Yes			Yes	Yes							No	No	Yes
92	32		student	500	1	Yes	Yes	No	Yes	No	No	Yes	No	Yes	No	Yes	Yes	Yes	Yes
93	46	f	homemaker	600	visitor	Yes										Yes	No	n/a	
94	68		retired	500	16	Yes	No	No	Yes	No	No	Yes	No	No	No		No	Yes	Yes
95	71	m	retired	500	16	Yes			Yes			Yes						Yes	Yes
96	51	f	housewife	700	17	Yes	"	"	"	"	"	"	"	"	"	"	No	Yes	Yes
97	46	m	retail	700	17	Yes			Yes								No	Yes	Yes
98			retired	2000	27	No						Yes					No	Yes	Yes
99	44	m	exec director	5000	11	Yes	No	Yes	No	Yes	Yes	No	Yes	No	No		Yes	Yes	Yes
100	39		admin assistant	5000	11	maybe	Yes					Yes					No	maybe	
101	62	m	trucker	900	10	Yes	No	Yes	Yes	Yes	No	No	No	No	No	No	Yes	Yes	Yes
102	62	m	carpenter	500	years		Yes				Yes	Yes							
103	68	m	retired	750	11	Yes	No	No	No	No	No	No	No	No	No	Yes	No	Yes	Yes
106	45-60	f	hairstresser	400	20	Yes			Yes	Yes	Yes		Yes				No	Yes	Yes
107	52	f	Med. Secretary	600	13	Yes	Yes		Yes		Yes	Yes	Yes	Yes			No	Yes	Yes
108	44	m	Carpenter	482	5	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
109	36	f	Administration	482	1(visitor)	Yes	Yes	No	Yes	Yes	No	Yes	No	No	No	Yes	No	Yes	Yes
110A	61	f	teacher	565	2	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Updated	No	Yes	Yes
111	62	m	builder	800	1	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes		Yes	Yes	Yes
112	83	f	Retired	800	1	Yes									Yes	Yes	Yes	Yes	Yes
113	5	m	child	600	5	Yes	No	No	Yes	Yes	Yes	Yes	Yes	No	No		Yes	Yes	Yes
114	3	m	child	600	3	Yes	No	No	Yes	Yes	Yes	Yes	No	Yes	No		Yes	Yes	Yes
115	74	f	retired	700	Visitor		Yes					Yes				Yes			
116	79	f	retired	2400	48	Yes	Yes	Yes	Yes	Yes	n	No	Yes	No	Yes		Yes	Yes	Yes
117	54	f	grower horticulture	400	20	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No	Yes	Yes
118	59	m	prevention services	490	22	Yes	Yes	Yes	Yes	Yes	Yes		Yes		Yes	Yes		Yes	Yes
119	57	f	farmer	490	22	Yes	Yes	Yes	Yes	Yes			Yes		Yes		No	Yes	Yes
120	59	m	farmer/	673	59	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
121	51	f	bookkeeper/	673	17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
122	29	f	Security	673	17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
123	26	f	health care/	673	17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
124	24	f	Security	673	17	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes
125	67	f	Retired	1000	5.5	Yes	Yes	Yes	Yes	Yes	Yes					Yes	No		
126	19	f	Student	390	7	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
127	50	m	Service	390	7	Yes	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes		No	Yes	Yes
128	48	f	Assistant	390	7	Yes	Yes	Yes	Yes	Yes	Yes		Yes	No	Yes		Yes	Yes	Yes
129	39	f	Homemaker	400	13	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes
130	45	m	Driver	400	13	Yes			Yes	Yes	Yes	No	Yes	No	Yes	Yes	No	Yes	Yes
131	54	m	Service	1000	9	Yes			Yes	Yes	Yes	Yes	Yes		Yes		No	Yes	Yes
132	70	f	Gardener	1300 +/-	35	Yes	No	Yes	Yes	Yes	No	Yes	Yes		Yes	Yes	Yes	Yes	Yes
133	52	f	R.N.	450	31	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
134	50	m	Boat Builder	450	15	Yes			Yes	Yes		Yes					No	Yes	Yes
135	>60	m	Retired	450	20	Yes	Yes		Yes		Yes	Yes					No	Yes	Yes

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Cont.

# WindVOICE (Wind Vigilance for Ontario Communities)

A self-reporting survey: adverse health effects with industrial wind turbine complexes and the need for vigilance  
March/June/September 2009 January/March/July 2010

## Other (Out of Province)

#	Age	Gender	Occupation	Distance from turbine	Time at property	Health altered	Headaches	Palpitations	Excessive tiredness	Stress	Anxiety	Tinnitus	Hearing problems	Sleep disturbance	Migraines	Depression	Other	Approached doctor	Altered quality of life
1001	59	m	Landscaping	700	9	Yes	No	Yes	Possibly	Yes	Yes	No	No	Yes	No	Possibly	See comments	No	Yes
1002	56	f	Landscaping	694	9	Yes	No	No	No	Yes	Yes	No	No	Yes	No	No		No	Yes
1003	25	m	Truck Driver	700	Visit 3 days	Yes	Yes	Yes								Just visiting			
1004	50	m	Former Fisherman	300	27	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	No	Yes				Yes
1005	20	f	Student	300	19	Yes	Yes	No	Yes	No	Yes	No	Yes	No	Yes				Yes
1006	46	f	Homework	300	27	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
1007	17		student	300	16	Yes	Yes	No	Yes	Yes	No	No	Yes	No	Yes				Yes
1008	14	m	Student	300	13	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes	No	Yes	Yes		Yes
1009	10	m	Student	300	9	Yes	Yes	No	Yes	Yes	Yes	No	No	Yes	No	Yes			

## Not affected: 26 respondents with no health effects

#	Age	Gender	Occupation	Distance from turbine	Time at property	Health altered	Headaches	Palpitations	Excessive tiredness	Stress	Anxiety	Tinnitus	Hearing problems	Sleep disturbance	Migraines	Depression	Other	Approached doctor	Altered quality of life
6	86	f	homemaker	800	30	No													
10	61	f	psw	?	17	No													No
11	63	m	farmer	?	17	No													No
14	28	m	farmer	500	6	No													Yes
15	27		accountant	500	3	No													Yes
20	51		Soc. Serv.	1000	7	No													
25	57	f	retired	1000	19	No													No
26	56	m	teacher	1000	19	No													No
28	65	m	crusher op.	500	38	No													No
29	60	f	homemaker	500	38	No													No
30	28	m	farmer	1200	28	No													No
31	64	m	farmer	800	40	No													No
32	60	f	greenhouse	800	40	No													No
35	42	f	clerk	800	9.5	No	No	No	No	No	No	No	No	No	No	No			No
36	39	m	carpenter	800	9.5	No	No	No	No	No	No	No	No	No	No	No			No
37	43	f	cook	?	13	No													
42	66	m	sales/farmer	800	26	No	No	No	No	No	No	No	No	No	No	No			No
43	?		retired	800	26	No													
53	n/a		trucker	800	45	No													No
55	n/a	f	homemaker	700	13	No	No	No	No	No	No	No	No	No	No	No			No
56	42	f	supervisor	n/a	4	No													No
57	44	m	mechanic	n/a	4	No													No
63	?		farmer	1005	34	No													No
64	?		farmer	2006	40	No													No
104	63	f	retired	close by	7	No													No
105	61	m	police officer	close	7	No													

F64-3  
Cont.

**Please note: Comments are transcribed exactly as submitted by respondents.**

**Date Tabulated: March 21, 2009:**

**#1**

8)[health affected] not sure at this time

10) [quality of life altered] The noise of the turbines is what bothers me. On a windy day, they can sound like a jet is coming right at you. They are much louder than we were led to believe they could be.

In the summer when we have the windows open we have to sleep with the fans running to drown out the constant pulse of the windmills. In the winter, when it is windy, you can still hear & sometimes feel the pulsing of the windmills right through the walls.

Thankfully, the 3 closets windmills to our home are not lined up so they are not aimed at our residence at the same time.

More research into the effects of windmills should definitely be undertaken. We don't need neighbourhoods of people who have to vacate their homes b/c we have allowed turbines and their owners to take over & their effects on birds & animals. Why not people too.

11) We have not had a dog since the wind turbines were erected. We used to have barn cats, but there have been none in the barn this year.

**#2**

8)[health affected] No

10) [quality of life altered] On windy days we hear the turbines. Bothers me when sleeping during summers with the windows open.

**#3**

9)[other] High blood pressure 217/124

Had a foot that don't heal until I moved out of the house

Yes [contact doctor] Blood pressure, urine test, Doppler test, heart machine, on blood pressure pills now (Mavik 1Mg) Trandolapril [sp?]

10) [quality of life altered]

1. Had to move out of my home, just come home now to feed the cattle.
2. Our home can't be sold due to the problem per real estate agent.
3. Family events can't take place at home
4. Financial problems due to keeping two homes
5. Always sick, depressed and bad tempered when at home but when away for a short time feel much better. (Much better in the second house which I had to buy)
6. Had family problems until we moved out.
7. Feel no cares or believes us.

Bottom line:

They took life away as we knew it before the wind farm, same house value & sick all the time, financial stress now, world turned upside down.

11) 2 house dogs always sleeping, ear problems itching all the time. Moved the dogs out of house now they are fine.

F64-3  
Cont.

**#4**

9)[other] Legs sore all the time

Blood tests, ear testing, eye testing

10) [quality of life altered]

1. Moved out of house July 2008 until present time
  2. Family problems because of family living in two places
  3. Our finances are not as good because of living in two places
  4. All family events including Christmas has not been in our family home
  5. I always felt sick and very depressed when I was in the house and went to bed to try to get away from it.
  6. The wind farm didn't seem to care.
  7. No one should have this happen to them we were fine before the wind farms came
- 11) Yes 2 dogs always sleeping, itching, ear problems. Now they are fine when they are in different home.

**#5**

8)[health affected] Yes for sure!

10) [quality of life altered] I can no longer sleep at all in the summer with my window open because the noise drives me nuts. I also hear it sometimes when the windows are closed. The scenic landscape has been ruined both in the day and at night. I have had people over and we would be sitting outside at night and they tell me that those red lights would drive them crazy.

It would be hard for me to say what is worse the noise or the lights.

11) – Dog – yes now when I let him out at night He is Hyper and runs out and barks at nothing.

**#7**

8)[health affected] Yes, I have lost sleep, my appetite and gained headaches.

9)[other] Not yet I will contact my doctor for a check up regarding my health.

10) [quality of life altered] I have lost sleep and suffered headaches. Last year in March 2008 for one week I suffered nasty headaches, I had no appetite and could not sleep. Never before have I endured such painful headaches in my life.

**#8**

8)[health affected] Yes, I have performed electrical pollution testing in the homes affected and now have similar symptoms as the affected residences

9)[other] No have not consulted a doctor

10) [quality of life altered] Depending on wind direction and wind speed can hear closest turbine in our bedroom at night.

**#9**

10) [quality of life altered] Sleep disturbance has been the biggest thing, falling asleep for a short time and then waking up with difficulty (an hour or two) to get back or else not falling asleep at all until 2 hours after going to bed.

F64-3  
Cont.

**#12**

8)[health affected] GEATLY AFFECTED.

9)[other] High Blood Pressure

Seen Doctor and have been put on Blood Pressure Medication. Chest X-ray

10) [quality of life altered]

- We have electrical pollution in our home
- Turbine noise heard in home and outside
- Causing sleepless nights, headaches, and ringing in our ears.
- It has dropped the value of our home
- Loss of enjoyment of our home
- Because of the electrical pollution our family cannot come home to visit because it is dangerous to their health.

**#13**

9)[other] DR. XX has given me a medical letter stating before late 2007 I had not been seen at his office for any of the symptoms listed below.

April 30/08 Dr. XX – complaint humming in ears, anxiety, stress, sleep disturbances. Removed wax from ear (rt) prescribed Rx meds for anxiety and stress. May 27/ Audiologist testing. July 15/08 Dr. XX – heart palpitations – halter monitor X 48 hrs. July 7/08 Audiologist – check tinnitus match – 3000Hz @ 15db Oct. 1/08 Dr. XX – same complaints / recommends - avoidance of home.

10) [quality of life altered] Everything in my life has changes since the town\_x Wind Turbine Project company\_x has been in operation. I feel my health has been compromised. I have felt generally unwell physically and mentally since March 24/08. Also Sensitivity to white noise and sounds has increased. My ears are either humming or feeling pressure on them / heart palpitations continue usually while sleeping. My anxiety and stress levels continue to be high. We have discouraged our two daughters and son-in law from visiting. They have also experienced health issues when visiting. The damage that has been done to my body – scares me what will happen in the future. At 60 – I wanted to enjoy my retirement with reasonable good health and now everything has blown up in our faces. We spent 5 weeks in Florida Jan 26 – March/09 improvement in health. Loss of enjoyment of working outside with flower beds and yard. Our property value has been greatly decreased. We are still having problems with electrical pollution. Constant reminder in every direction of our property – turbines. A very uncertain future!!

**#14**

10) [quality of life altered] Pays some bills with the extra income.

**#15**

10) [quality of life altered] A little extra income doesn't hurt!

**#16**

Received sleeping pills

**#17**

F64-3  
Cont.

8)[health affected] Unsure if it is windmill related but I do have [...checks off symptoms]

9)[other] Doctor's appt in Jan09, only change a crestor 10mg to 5mg

#### #19

8)[health affected] Yes during xmas 2008 I felt pressure in my head & ringing in my ears

9)[other] [visit doctor] not at this time

10) [quality of life altered] I am unable to come home to visit my parents as often as I would like. Due to my parents ongoing adverse health effects I feel discouraged & our family dynamic has change. My childhood home no longer feels like a place to relax & where I can be in a peaceful environment. I am sick over what the turbines have done to my family & community. My quality of life has definitely been affected.

11) My dog was unable to relax in this environment.

#### #18

8)[health affected] Yes –whenever I am there!

9)[other] [other] Pressure in my ears or ear aches tightness feeling in my head

[doctor visit] Not at this time, these symptoms only occur around the Ripley Wind Project and not at my own residence.

10) [quality of life altered] As a teacher who spends most of my summer relaxing at home& was disrupted in July/Aug 2008 when I would leave each night with my mother to drive 10 min to a hotel in Kincardine because of the above symptoms. This is something she did for months, it was disruptful for the few weeks I did it, not a peaceful relaxing environment. In December 2008 when I arrived home to my parents on the first night for Christmas the pressure in my head and ears hurt so bad that I had difficulty sleeping and considered spending the rest of the week at a relative's home away from the wind turbines. These are regular occurrences when I visit, and now sometimes think twice before going as I don't know how bad it will be this time, which makes going home no longer relaxing and peaceful like it once was. I also worry on a daily basis for the health and well being of my parents who live through this daily and the negative health impacts and stress worries me greatly. It also causes me stress that the value of my family farm has dramatically been reduced due to these wind turbines.

11) Thank you for organizing this health survey. My family greatly appreciates it.

#### #20

8)[health affected] Not really

11) Haven't noticed anything

#### #21

[palpetations] sometimes – not often

[stress] at times frustration

[tinnitus] sometimes not often

9)[other] [other] vibration/hum in house that gets into the head & body & makes sleep impossible. Torturous some nights, some not as heavy but there. Teeth seem to tingle

No treatment – waiting for closure – do not want to take any medications. Follow up visit to come after yearly physical.

F64-3  
Cont.

10) [quality of life altered] Noise levels very high. Whooshing noise is very irritating. Cannot sleep anymore. Have horrible vibration in the house and dog very upset. Spend nights on couch with TV and try to block out humming. Extremely tired and not functioning at cognitive and physical levels that I normally would. It is very distressing and invasive. My house is worth nothing now. I could never sell it. Angry, sad, disillusioned, exhausted.

11) Dogs & cats. 1 dog extremely antsy and whining & barking when vibration/noise levels are high. 2<sup>nd</sup> dog is just starting to show symptoms similar.

## #22

10) [quality of life altered] Lack of sleep – stress and home unsellable adds to stress level. Low / 60Hz Found in home keeps one up and makes left ear ring.

11) One dog barks at night for no reason – can't sleep in bedroom.

## #23

6) On windy days, there is a constant pulsing noise. It is not pleasant to listen to while trying to get to sleep.

The “flicker effect”. The turbines cast large shadows. In the last hours of the day, whole rooms at the west side of the house will “flicker” as the shadow of the windmill comes in and out of the room. The red blinking lights at night. Driving at night, there are 38 red blinking lights in an otherwise pitch black area. The lights are distracting, and an eye sore to the landscape.

11) We no longer have any barn cats.

## #24

[comment] Because I have a conflict of interest, I am not signing my name but I do not want anyone else to suffer as we did for 8 or 9 months.

8)[health affected] Yes, from shortly after the turbines were put in operation until the transmission line was partly buried, more insulators put on, extra grounding done. Now, as far as I know, I am in good health again.

9)[other] Yes, until the problem was fixed. (fall of 08)

[excessive tiredness], because of electrical humming, could not get a good sleep.

[stress anxiety] of trying to get problem fixed.

[tinnitus hearing] I had earaches that got more and more severe. Please note: My spouse also developed earaches and headaches during this time but not as soon as me.

[migraines] I had a really bad migraine before I moved out for 3 months completely - did not return home at all except once to try it again briefly.

I did approach my doctor but he said he really wasn't knowledgeable about wind farms. A substitute doctor gave me an antibiotic to make sure there was no infection in my ears. I took the antibiotic but my ears just got worse.

10) [quality of life altered] Until the problem was fixed, I could not live at home. This was very disruptive to my life.

At first we thought the windmills themselves were the problem. However, once we had electrical testing done, we concluded the problem at our farm had more to do with harmonics and induction causing backfeed on the lines into our house. Putting our residential line on the same pole as the unfiltered or insufficiently filtered transmission lines from the wind turbines created this problem.

F64-3  
Cont.

Please note: The problem at our place has been fixed since last October since transmission lines were partially buried and extra insulators installed and extra grounding done on the dead pole south of the pole where the lines go underground. Suncor and Acciona did reimburse us for any expenses which we appreciated.

11) Once the turbines started up, our cats would not come in the house or go in the shed. Shortly after the electrical problem was fixed, the cats started going back in the shed again and in the house.

**#27**

10) [quality of life altered] I do not know if any changes have or can be attributed to the windmills because of the time span that I have lived at this residence. I would have to mention that through personal experience at work, which is very close to the windmills my life would be seriously altered if I lived any closer. I am quite surprised at how loud the windmills can be when surface wind speeds are low but wind at higher altitudes are swifter. I feel that this noise would very easily affect my sleeping as I'm a very light sleeper.

**#28**

11) 2 cats - no change.

**#29**

2 cats - no change.

**#30**

11) We have 50 dairy and young, 100 beef cows and young and so far no ill effects.

**#31**

11) No changes as of yet in our animals.

**#32**

11) We have a dairy farm and no we haven't seen any changes.

**#33**

9)[other] not approached doctor

10) [quality of life altered] not sleeping.

**#34**

[palpetations] pressure in chest, dull and stabbing pain in chest

9)[other] joint pain, numb face, dizziness, feeling cold a lot.

Yes, doctor is aware and looking for a referral to an enviromental specialist - so far no luck - not sure what next step will be.

10) [quality of life altered]Along with the above symptoms - experiencing a general lack of wellness.

F64-3  
Cont.



**#37**

11) I live on a farm. My cows and dogs are fine.

12)

**#38**

8)[health affected]Morning headaches and some ringing in the ears.

9)[other] No, I've not approached my doctor. I just returned from Manitoba at Xmas.

10) [quality of life altered] I farm in Manitoba (8 months/year) and Ontario (4 months/year) and when I'm here in Ontario I develop headaches. I take 3 tylenol(500mg) every morning and then I'm good to go.

**#39**

9)[other] severe headaches, but migraines?

[doctor] No doctor

10) [quality of life altered] Headaches etc. prevent me from living my life the way I would like too. Also my home seems to be unstable the way it is, ie turbines in the vicinity.

11) Don't know

**#40**

Struck/hart palpetations

9)[other] Stress tests/ blood tests to numerous to count.

10) [quality of life altered] I now live on drugs that don't seem to help.

11) Livestock were all sold of due to problems that could not be explained. (Nervousness)

**#41**

10) [quality of life altered]Forced to sell our property, take less then what it was really worth!! This was due to health problems caused by the wind turbines.

11) Our dogs were nervous, as well as our four(4) ponies. We ended up taking our ponies too the auction barns and had them sold. Two of our dogs had to be put down!!

**#44**

9)[other] 1.vibration in body 2. chest and head pressure 3. heart rhythm sensations 4.nausea,queasy 5. dizziness

9)[other] queasiness, mild vibration in head and chest, heart sensations – felt like the beat of my heart changed by turbine.

[doctor] Yes, checkup.

10) I experienced severe health effects from exposure to a single wind turbine while on vacation and never, ever want to experience these health effects ever again. The vibration and breast sensations were very frightening and debilitating.

11) [quality of life altered] I experienced this attack when exposed to a small wind turbine group of 2 turbines. The wind was moderate and my symptoms were very uncomfortable. I left the area very quickly and felt better within an hour or two. I will avoid these turbines when ever possible because the

F64-3  
Cont.

health effects are very uncomfortable and distressing. Turbines make me feel very sick when I get near them. I am OK when I leave the area where they are installed.

11)n/a

**#45**

10) [quality of life altered] My stress level increased while at home for the 4 months. Now within my life I am stressed and I worry about the physical health of Mom, Dad and Erin as well as friends and neighbours in the wind project. I worry about my families financial health too, whether the property has any value. At the worst i was worried about Mom and Dad marriage because of disagreement which flared up more than ever before. I did not think about the above prior to the wind complex starting.

11) No.

**#46**

9)[other] No. Problems with the above go away when I leave the (wind project) home.

10) [quality of life altered]I feel wound up when at home. I just cannot settle. Because of this I do not want to stay in our home or for that matter come home. the biggest change has been the effect on my Mom, sister and Dad's health, especially Mom. To see her suffering from health problems, getting sicker and sicker just pisses me off. It really bothers me a lot.

11) No.

**#47**

[palpitations] a lot

[tinnitus] all the time

9)[other] stomach felt full, air hurt, rapid weight loss 170 to 125lb over 3 months and loose stools, more extremely exhausted, not as patient, get angry fast.

/For weight, (Dr. at school) get weigh up since it was in the danger zone for my height.

10) [quality of life altered] For myself I was more angry. Mom and I have always been able to talk. Last winter we argued about the stupidest things. I have very, very, very low energy and just want to sleep.

My family has been ripped apart with Mom not able to live at home. Not having Mom around to talk to about school or friend and personal stuff has been and is hard. Very hard.

Mom use to talk about other things, fun stuff, but windmills have become the main topic. I hate that.

11) No.

**#48**

[sleep disturbance] had to get to sleep upstairs.

10) [quality of life altered] The sleep disturbance - over all feeling of wellness was very poor.

11) No.

**#49**

[headaches] at the back of the head/neck

9)[other] A jumpy feeling as if you have had 5 cups of coffee, humming in the head behind the ears, very painful left hip, spiking pain, loose stools, cold body temp, blurred vision when winds are high,

F64-3  
Cont.

some dizziness, increasing blood pressure, nerve pain from the left ear to jaw, 2 large coldsore masses one time, shortness of breath, tight chest and knot in left chest.

[approached doctor for] ear, heart and chest.

Yes, Family Physician, May, 2008, blood tests, orders 12.5mg fluid pills, auditory assessment by ear, nose and throat specialist (order a CT scan to eliminate tumor or abnormality and hearing assessment June to August, 2008) Feb. 18/2009 Family physician Bp and cold sores - ordered double Bp meds, sleeping pills, antiviral and antibiotics, purchase Bp cuff and blood work. Feb. 22/09 Bp, heart, chest, heart monitor, emerg bed. O2 monitor, Bp, "pink lady", Nitro spray under tongue, order - change living place, 4 days off work, rest, stress reflex test. Specialist consult. Stress test (order - Bp med, change of living place or modification; reevaluate in one month.

10) [quality of life altered] I used to be able to get a solid 6-8 hours, full of dreams and nap or snooze without any effort. I have been severely sleep deprived from Nov. 2007 to May 2008, attempted rest at billets in town paid for by wind\_co\_x. When [W.C.] turned off the field your whole body felt calm and like you have had a massage, humming or ringing subsided and could deep sleep. Again in the last week of Aug. 2008 to Feb. 2009 sleep deprived, waking up to 3 times or if the winds are high it seems like every hour and hard to drop off to sleep. Humming in the head occurring behind the ear and started wearing cotton batton, then over time orange ear plugs and head phones.(This did not stop the humming then latter ringing then buzzing and ringing\*. The ability to hear my students even while working at the board has changed to walking across the room or asking for them to repeat louder the answers or questions. I can not listen to loud T.V. or music or sounds. At the worst I struggled to go into the Sobey Store, the lights made ears ring and similar environments (i.e. C.T. store). Now I am more sensitive to vibrations and high frequency electrical pollution which means some high tech equipment is more annoying than prior to Nov. 2007. All symptoms subside with less exposure and sleep\*\*. \*Change - I would attempt sleep in the spare room or in the basement. \*\*As a family we shut off and unplugged as many appliances as possible prior to trying to sleep and when home. Difficult to form thoughts to come out of my mouth. I studded on my words. When tired, I would wear a lot of extra clothes to try and warm up, too.

Family - oh, our normal problem solving skills between family members were not attempted. We were very irritable. We had loud angry arguments. I was constantly worried and concerned about the health changes in my family. That there was no way to change. We did not invite the Grand mothers over to visit much or stay over due to the concern for their health. The same can be said for inviting family or kid's friends over.

Changes - for the second time I am not home and have to help co-ordinate food, cars, laundry, mail and financial from a distance. May - June 2008 - up [at] 6:00 home to pick up [daughter] 2-3 times/week, 8:00a.m. on other days for Rugby, teach, home for setting up meals and lunches (with ears plugged and sometimes head phones), back to town\_z with clothes, homework and bed. Now I am in town\_y and going home every 2/day and into school(maybe). We send love over the phone or on message sheets on the counter. Have spent a massive number of hours, totally days of family time, working to get the problems resolved.

Personal Change - My love, [husband] ie worries and I worry about him and [daughter]. I truly miss being happy in my home. My home was my calm space where I could unwind after a day at highschool. No other space can replace the home where you have helped raise your family and had so many positive plans for the future. I miss [husband]. I miss [daughter]. Lost total faith in government to safeguard myself, my family and other Ontario families. I do not trust the word or intentions of experts compared to before Nov. 2007.

Job Change - I love to organize, plan and teach a lesson. I have taken pride over 27 years to be able to call students by name at any point in the lesson. Change, I took 1 1/2 hours to get a lesson organized. I

F64-3  
Cont.

had trouble remembering the lesson or where I was in a lesson. I had to work so hard to remember facts which should be 2nd nature. It was hard for me to get the first word or name out of my mouth and the right students name. My co workers were extremely worried about my deteriorating health and the lack of progress with governments and companies to fix the problem. Change in 27 years I have rarely been absent for illness. Feb 22/09 I had Dr. orders to not work and I requested one week, but, my principal recommended another week to rest away from home as ordered by 2 physicians.

Financial. did not have to worry about property value. Now our home is worthless unless someone can fix this mess. I could not in any moral consciousness sell knowing how we are affected.

Outside change. I do not and have not felt like going out into the gardens which has been a calming passion my entire life since I was a child. We as a family do not sit on the deck as much due to jet sound or roaring. We close our window in the summer due to roaring jets or rattling sheet metal sound. We could not cool the house and ourselves as well, too. I will say there are probably other alterations like not being there for [daughter] as a young person needing advice and her Mom, but I am going to stop!

11) Moved Horses prior to start up of turbines.

#### #50

9)[other] [tinnitus] pop when turbines come on and off.

[sleep disturbance] Do not sleep a full night. Wake up quite often.

[other] nasal cavity felt like I had allergies, but no mucus, Irritable.

10) [quality of life altered] Personal - have found the changes in sleep patterns reduced energy levels, levels of patience and very frustrating and draining. Dec. on there were serious, angry arguments we normally do not have. I am very worried about my partner's, [wife], reduced sleep/rest, humming/ringing in her ears and continued deterioration of health. When [wife] had to live away from home it was hard. She is my partner and my love. We would always chat on family plans from food to finances. Our lives were upside down at all family levels when she was billeted by the windmill company wind\_co\_x from May 2008 to July 17th and AGAIN now. She is living at her Mom's in town\_y a 30 minute drive away (on Dr. orders). On a very personal level I am like a widower and sad and lonely.

Generally - Our financial outlook for our property has changed. At present we can not sell knowing the possible harm that someone may experience. This is a stressor we did not have prior to the turbines. I can't sleep with the bedroom window open in the summer for a cool breeze due to the roaring jet sound. (This was pleasant and cooling too.) I can't have a quiet sit on the deck without the jet or swoosh sound. And our phone has static on it which is not there when turbine were not here. CKNX am channel is static or weaker in the project area.

#### **Date Tabulated: March 24, 2009:**

#### #51

10) [quality of life altered] The visual impact of the navigation lights has had a profoundly negative effect on our night sky. In the day-time the obvious industrialization of our landscape adds to this demoralization. When weather conditions are right the turbines can be heard from outside our house again having a negative effect on the quality of our life in the country.

11) No.

#### #52

6) Too close - I'm sure the bare minimum.

10) [quality of life altered] The constant changing sound changing to a horrible noise startles me, my

F64-3  
Cont.

dog and sometimes even the birds. The constant distant buzz in my head because of the substation - it's always there. The blinking red lights at night just depresses me and ticks me off. I might as well be at an airport landing strip. The same goes when I just look around. There aren't the same birds or their numbers anymore. I never see the deer anymore and to see the skyline no matter which way I turn ruined by the number of these things does give me a headache. I can count over 70 windmills from my property.

11) The cats don't go as far out back as they used to. When they're really noisy especially right before they shut down startles the dog. If it's at night, he's reluctant to go towards the noise and wants to come back in. The flyway for the swans is all windmills now so I'll see if they come again this spring as they've done for years. The owls aren't around in the numbers they were.

**#53**

8)[health affected] None what so ever.

10) [quality of life altered] No not at all

11) I have pets no change same as they have always been.

**#54**

8)[health affected] Not that I'm aware of

10) [quality of life altered] I have 2 reasons;

1. I don't particularly like looking at them.

2. If the wind is a certain way I can hear them even though the closest is 1 km. away. Some days it sounds like a jet aircraft in the distance, and some days its more of a swishing sound. It seems to vary depending on wind speed and direction. I am definately opposed to any more going up in our neighbourhood.

**#55**

8)[health affected] Not at all there has been no change.

9)[other] There have been no problems at all.

11) None what soever.

**Date Tabulated: March 27, 2009:**

**#56**

11) no

**#57**

11) no

**#58**

10) The flicker from the turbines can be very annoying in the mornings. When I'm training horses for 3 to 4 hours the noise gets to you and you have to stop for awhile and go to the house. In the summer when windows are open you can hear them in the house. There is also some problems with some of the neighbours around me because of stray electricity. I have not had mine checked.

F64-3  
Cont.

11) When the turbines are noisy, the horses always go to the far side of the barn.

**#59**

9)[other] Yes, I went to doctor for stomach scope/colonoscopy because I was afraid I had stomach ulcer.

10) [quality of life altered] \*I don't like the looks of them.

\*I don't like the noise they make, I can hear them all the time.

\*Shadow flickering is a problem.

\*It used to be "nature" only, fields, trees peaceful but now you can only see these ugly looking windmills

\*At night I hate the "red" lights on top of the wind mills blinking.

\*When I go for a walk with our dog, the closer I get to windmill, the more my ears ring.

\*Since they erected the windmills I felt stomach pains(still today) and went to the doctor for stomach scope and colonoscopy, all was fine but I still have stomach pains. I don't know if it has anything to do with the windmills.

\*At the beginning when they put up the windmills I had anxiety problems, I hated the windmills.

\*At night my wife and me wake up to some weird ringing in our ears/it comes and goes.

11) No livestock, but I know since they put up the windmills, we have not heard any coyotes or wolves howling at night, strange.

**Date Tabulated: March 30, 2009:**

**#60**

10) [quality of life altered] The only way I feel that the turbines have impacted my life is the noise when the wind is strong. Even at night it is difficult to block out the sound of the blades. I do feel badly for those neighbours who are experiencing serious health and sleep problems. It is the responsibility of the wind turbine company and/or Hydro One to ensure that their life and health returns to pre wind turbine quality.

**#61**

9) [other] Yes, doctor did blood tests, oral scope, prescribed sleeping pills, referred me to therapist and a nutritionist, sent me to a sleep clinic, I was vomiting blood.

10) [quality of life altered] We lived in this house for twenty years with the plan that we would pay it off, borrow money to purchase our retirement home and then sell the house to pay for the retirement home. We put the house up for sale the year before the turbines were built and real estate agents told us, people were worried about where the turbines would be placed and the house did not sell. Now the turbines are up and I can count 30 of them from my property. My wife and I can hear them when we are outside and we experience flicker when we are inside. We can see them through every window in the house in the daytime and we see the sea of red flashing lights every night. We live in a school house we took from being vacant for twenty years to a beautiful open concept home in a quiet country setting. Our friends and family have loved our home for years but now just shake their heads when they [see] what has happened here. Don't know what's going to happen to me in five years when I'm ready to retire if I can't sell my house.

11) n/a

F64-3  
Cont.

**#62**

9)[other] Not as of yet.

10) [quality of life altered] I feel like I don't wish to live here since the day the turbines have been erected in our area.....

Their distracting (flicker, etc)

Their ugly(including the switchyard out back of property)

Their noisy

They look dangerous to be around them.

I here a low humming noise while trying to sleep and I can't function as I normally could before during the day.

11)n/a

**Date Tabulated: March 31, 2009:**

**#63**

11) no changes

**#64**

12) no change.

**Date Tabulated: April 5, 2009:**

**#65**

09)[other] Increased blood pressure medication.

10) [quality of life altered] To bring you up to speed, I own 200 acres of prime farmland which is completely surrounded by turbines. At last count we had 37 red flashing lights, disturbing noise. AM/FM interference and shadow flicker on sunny days.

My anxiety and stress is mainly caused by the fact that we don't know what the long-term health effects will be, if any. When I read about the health problems I worry about the value of my farm which is my retirement fund.

It's interesting to note that the lawyer for Enbridge at the OMB hearing with our WAG group, is now fighting to keep windmills away from her home at Honeywood.

I've read and kept all your letters and presentations on the subject. Keep up the good work!

11) None at the present time.

**#66**

08) not so far, the windmills just started up.

09) noise issue

night sky is full of flashing red lights

visibility of area with the density of windmills

F64-3  
Cont.

**#67**

08) [health affected] not sure

09)[other] Been twice to the Dr. with ear problems – June and Oct, 2008, no results. Dr. couldn't find anything wrong.

11)n/a

**#68**

10) It causes me ill feelings to continually have to look out each window of my home to see spinning towers. At night the continued flashing lights invade a once Peaceful Sky.

Industrial Energy Projects belong on industrial zoned land.

**#69**

10) [quality of life altered]We bought this property to be away from the noise of the city and road traffic now all I hear is the windmills. I love to be outside, walking, hunting in our bush. Now all I hear is the windmills. Peace and quite no longer exists. The rear of our house is all windows, at night all you see is the warning lights. It is driving me crazy. We had no say in the mills because we weren't getting one. The persons that got them get paid and don't live near them. I'm sure our property value has went down because of them. This summer will be the first time we can lay by our pool and I'm sure they will drive me.

**#70**

09)[other] [hearing problems] not sure

[migraines] not sure – bad headache

11) n/a, No Pets.

**#71**

10) [quality of life altered] If these symptoms are caused by the turbines, my quality of life is effected. The windmills are a distraction when your trying to keep your eyes on the road. Also the red lights on every other one flashing at night are a sure spoiler in the nice countryside.

**#72**

10) [quality of life altered] The constant noise is like an alarm clock going off all the time and at sunset the flicker can make me dizzy.

11) N/A

**#73**

9) [other] I talked to a Clinic Dr., but he wasn't concerned.

The windmills are very noisy when we have a strong wind. When the sun comes up we have a shadow that makes like the lights are going off and on in the house.

10) [quality of life altered] No.

F64-3  
Cont.



**Date Tabulated: April 15, 2009:**

**#74**

8) [health affected] maybe, but how can you pinpoint it at the windmills.

9) [Other] joints + muscle soreness.

[Doctor] Yes, but I never asked if it would have anything to do with the windmills. I have had no tests done.

8) [health affected] I'm a nature person, and I find since the windtowers have come here, there is hardly any wildlife, my bird population has pretty much diminished. I also like peace and quite which has been lost, because of the noise of the turbines. I feel tired all the time and my muscles and joints are sore and I feel achy all the time.

9) [Other] dog-having problems with his ears, vet calls it swimmers ear, but we don't take him swimming, or bath him especially in the winter.

**#75**

8) [health affected] Maybe – do not know how you can say for sure.

9)[other] [other] itchy EARS

10) [quality of life altered] I always feel tired. I do not like to hear the turbines. Peace and quit has been lost. I do not know what makes my ear itch by it is very irating.

11) Do[g] has problems with ears. Vet says it is swimmers EAR but we do not take him swimming.

**#76**

05) [wind farm near property?] None – we spend time near 'town x'.

8) [health altered] When we are in the area yes. No, as we leave the area the symptoms vanish.

**#77**

9)[other] [other] spatial infringement.

10) [quality of life altered] The wind turbines are across the road from the property and one is in direct line with my driveway. Every time I go out the lane I look right at the turbine.

My home has large front windows with a pastoral view. Now it is full of wind turbines. I now have to keep the curtains pulled to avoid looking at them. I find the continuous turning of the blades quite disconcerting. At night the once dark sky is now filled with blinking red lights so again requiring the blind to be closed, definitely affecting my life. I am away for 5 months in the winter coming back in early April so have not had the full exposure to the turbines. These wind turbines are the only ones I have seen that are built in such close proximity to homes.

It is equally disturbing to know that our politicians and so called "leaders" have such blatant disregard for individual lives. This is also applicable to so called neighbours.

Thankyou for all the work that is being done to ensure a more regulated and humane system.

**Date Tabulated: May 20, 2009:**

**#78**

9)[other] [Doctor] Discussed symptoms with doctor twice. At this point we will further monitor my symptoms and discuss possible actions (tests, etc.)

F64-3  
Cont.

10) [quality of life altered] This previously peaceful/quiet area was to be our retirement home. We are now considering changing our plans. Any further improvement to this property is on hold.

Depending on wind direction there is a loud pulsating, intrusive swooshing noise. I seem to sense a vibration in the air and at times I seem to sense the changing air pressure (like descending in an airplane.)

I spend 80% of my time in [turbine town x] and 20% in [town y]. When in [town y] I sleep better, less headaches and more relaxed.

11) N/A

#### #79

9)[other] [doctor] No – I do not yet live full time at this address. If I were permanently here, I might find the symptoms severe enough to seek medical help.

10) [quality of life altered] The peace and quiet of this potential retirement home has been compromised. The noise at times is intrusive and impossible to ignore. I am also concerned about long term exposure to low frequency vibrations; as a result, our plans to retire here are on hold and may need to change.

#### #80

9)[other] [other] Nausea, sound like tomtom, sharp knife-like pain in muscles, twitching in skeletal muscles and around eyes, hypertension (168/80)

[doctor] Yes. I will be following up with hearing tests at UWO which will be compared with such tests done at the Toronto Hearing Society facility. MRI test is scheduled for May.

10) [quality of life altered] In order to accommodate a condition diagnosed as fibromyalgia, I sold a four level house in Toronto and put all the proceeds into building a one level house which would handle wheel chair living. My new house just west of [town x] made my daily activities doable and my health started to improve.

When AIM Power gen started building industrial wind turbines I was perturbed and stressed by the presence of these behemoths and the effect they would have in this major migratory bird corridor, not thinking they would affect my life.

While I was distressed by the sight of the first phase of turbines which were more than three km from my house, it was the connection of the last six turbines erected in a semi circle around my house that brought on symptoms which I had never had before and which exacerbated the hypertension.

So now I am researching ways of regaining some of my health again although the hyperthyroid, diabetes, scleroderma, fibromyalgia conditions continue.

11) No pets or livestock but anecdotally have seen that tundra swans no longer feed in fields which have industrial wind turbines on their migration north in the spring.

[additional comment] These are the industrial wind turbines around my house. A & C are about 600m away, B is 700 m and D is 800m.[away] E is 1.9km.[away] G is 2.2km.[away] F is 1.9km. [away]

#### #81

8) [health affected] Yes – but we can't prove it.

9)[other] [other] sore joints & sore back of hands, memory loss.

10) [quality of life altered] – due to health problems.

F64-3  
Cont.

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**#82**

8)[health affected] Yes – but we can't prove it.

9)[other] Joints-painful, sores on head.

[doctor] Yes regarding sores on head – all they gave was medicated salve.

10)[quality of life altered] Yes, the above health problems.

11) [pets/livestock] We are cow/calf producers. We feel our cattle are more high strung. Our calving pattern is effected – we get calves then no calves for a couple of weeks usually when we are calving, once we start we get a calf/day.

Last fall the earth worms-hundreds of them-were on top of the gravel and on top of the cement – in the morning when we saw them they were dead.

**#83**

9)[other] nausea, muscle pain, irritability

10) [quality of life altered] To avoid morning flicker must have blinds or avoid rooms until it passes. When warm weather arrives noise from turbines will limit opening of windows especially at night for sleeping.

Will not enjoy evenings out of doors on decks due to all the Red Flashing lights and noise.

11)N/A

**#84**

9)[other] [other] irritability

10) [quality of life altered] can't be outside any length of time due to noise and in am the Flicker. Red flashing lights at night make it impossible to sit outside for long at night. Won't be able to open windows at night when warm weather comes due to noise.

11) N/A

**#85**

9)[other] enjoyment of my property

10) [quality of life altered] -> worry about house value

-> can't go outside – noise

-> every window I look out I see wind turbines

-> flicker issues at certain times of day on house walls inside & reflections on windows.

-> those things have greatly disturbed my setting and how I was use to functioning for the last 25 years at my home.

11) -> no longer see wild geese or wild turkey in the field?

**#86**

8) [health affected] I am severely limited in any physical work managing biosolids application company, but suffer constantly from muscle cramp pain.

9)[other] developed Parkinson's disease 2 years ago

[doctor] drugs for migraines, 12 Sinnamet capsules for Parkinson's, 4 tabs Comtan, cost \$4000 year, no drug plan, poor writing due to loss of fine motor skills.

F64-3  
Cont.

WindVOICe (Wind Vigilance for Ontario Communities)

A self-reporting survey: adverse health effects with industrial wind turbine complexes and the need for vigilance  
March/June/September 2009 January/March/July 2010

10) [quality of life altered] We hear wind noise from turbines every evening while sitting on our deck. The setbacks are 800m, 1100m, 2000m , 1000m, 1500m, 2000m.

At nights we hear them in our bedroom a 17 year old home with R2000 standards.

Severe trembling with Right hand and foot, people think I am drunk when in town, due to some paralysis on right side. Even harassed by OPP.....[illegible]... "drunk".

11) ) [pets/livestock] We keep about 20 nanny goats, for the past 20 months they have had abortions, not a single kid was born alive, all aborted before term, others died within 3 hours of birth.

**#87**

[disturbed by wind turbine transformer]

9)[other] [headaches] moderate to severe, daily occurrence

[tinnitus] occasionally 3 or 4 times per month

[sleep disturbance] almost nightly

[doctor] CT scan, MRI, visit to neurologist, pain management clinic, echocardiogram. All tests negative, its not me, is doctors conclusion. Pain management clinic doctor agreed that based on my chart the transformer is probably the problem since when I leave home symptoms disapate.

10) [life affected] It is very hard to work when you have a daily headache which varies from moderate to severe. It hasn't been less than slight headache in approximately 18 months. Always tired. Ringing in ears sometimes a high pitched squeal lasting for up to 10 minutes at a time. Body aches on awakening for last couple of months

Severe Headache, Pain to the point that a single shake of my head will result in vomiting. I take no medication since my doctor tries many different ones and all they would do is make me sick, did not help the headache.

List of drugs for headache that didn't work, Tramacet, Tylenol3 w. codeine, Apo Nortriptylene, Apo Propanolol, Dilavdil, Apo Hydroxyzine, Apo Naproxen, Endocet

Compared to this issue having my leg broken in two places was a picnic!

11) None.

**#88**

9)[other] Have no family doctor. Went to emerg currently awaiting a CT scan.

10) [quality of life altered] Constant noise, constant headaches. Sleep disturbance since the windtowers have started.

We have recently put a 500' addition on our home with large windows all around. Not only we get flickering from the towers we cannot open any windows due to the constant noise of the blades.

My occupation is a bookkeeper. These constant headaches are affecting my concentration, especially working with numbers. I work from my home. I simply cannot afford to be in ill health.

I can no longer sit on my back porch enjoying the beautiful sunsets. This was so relaxing to me. Now all I see is flickering blades and blinding red lights. The sunsets have disappeared into money hungry pockets of our government.

This area was once known as having the most beautiful sunsets in the world, now gone!

I now am a prisoner in my own home of 23 years.

F64-3  
Cont.

This is not the future I wanted! That is why I bought this property 23 years ago. Now I am going to sell and start all over again. Extremely depressing!

11) My horses are nervous of the noise and do not focus on what they are doing. Instead they watch the windmills making this a danger when riding or training them. My dogs and cats want to stay in the house more now. This is very unusual for them.

**#89**

9)[other] I currently have no family doctor.

10) [quality of life altered]The measurement of one's quality of life is something difficult to qualify. That being said, I know what my life was like before the towers went up and I know what it is like now. Aside from the aforementioned health concerns there are many other factors that are of concern for myself. I have spent many years living on this property and making improvement to it. These improvements were compatible with the rural area in which I am located. Now I cannot enjoy quiet evenings (turbine noise), beautiful sunsets (turbines flashing on horizons – 67 can be viewed from my place) and star filled nights (bright and flashing lights in every direction).

These things may not seem important to those who don't live here, but they are important to me and you just can't put prices on that. My various levels of gov't has deserted me and ignore my concerns. This is not the future I had planned when I invested my energy, time and money in this place. I choose to live here for what it was, not what it has become. The addition of this wind project has upset the balance of this area and will, without a doubt, drive me from this area. This will happen with great financial loss to my family and the thought of starting over else where is almost intolerable, too much of me has gone into this – my home. Add this to the health concerns and we are looking at a disaster in the waiting.

11)I have noticed that the horses are far more nervous and more easily spooked. My dogs at times will not leave the house and are acting very out of character at times.

**Date Tabulated: June 7, 2009:**

**#90**

8)[health affected] Yes, I find myself very easily irritated. Every window in our home has at least 10 or more windmills.

9) [hearing problems] Good thing I am ½ deaf.

10) [quality of life altered] People who were good neighbours are now looking away and don't want to talk any more if they have windmills or are in favor. Our beautiful view is now gone as from my back deck I can count 72 wind mills. My property values have gone down the drain by around \$100,000. Most of the owners of the landowners with turbines on the farm do not live around here. They live many miles away.

11) My dog gets very upset when anyone comes to the door.

**#91**

9) [doctor] As of this time I do not have any physical symptoms

10) [quality of life altered]The present gov't. has an agenda to promote these mills even though they are unreliable as a steady source of power & will only ever amount to a very small percentage of the power req'd on the grid. I live on the north limit of the [X wind farm] and so far I am fortunate to be as far

F64-3  
Cont.

away from the turbines as I am. However, land options have been acquired in [S. township] and I will not fair as well should they go ahead there.

I know my property value has been reduced to some degree and it is a constant worry where they will relocate to next.

With regards to noise, if the wind is blowing towards our residence they can be heard even at a km (3300') away. (Not inside the house) At night the sky is filled with blinking red lights which is something else to contend with. The above are some of my concerns which I believe contribute to increased stress & anxiety.

11) No pets or livestock

#### #92

9) [hearing problems] right ear only

[other symptoms] tones change in hearing, popping excessively

[doctor] Yes, My migranes and popping of ears and fatigue. Hearing tests. My tx-treatment higher enriched diet for ears, migranes. Migrane relieve advil.

10) 10) [quality of life altered] People who were good neighbours are now looking away and don't want to talk any more if they have windmills or are in favor. Our beautiful veiwi is now gone as from my back deck I can count 72 wind mills. My property values have gone down the drain by around \$100,000. Most of the owners of the landowners with turbines on the farm do not live around here. They live many miles away.

My life has been altered slightly. When I go outside there ugly to look at, when wind is strong my symptoms are strong as well but in the long run, the windmills haven't altered my life significantly. Windmills are the future, whether I like them or not, I am one person I live for change! Do I want more around where I choose to live, the answer will be no. Do I plan to live here long? NO I noticed behaviour changes in my animals, yes, my dogs and horses shake their ears a lot but do I have testing and evidence to back up my theory? NO!

#### #93

5) [wind farm near property] This occurred when I visited a home in the [windfarm] project

7) [how long living at property] N/A – was a visit only.

9)[other] pain below my right ear, where my jaw bone ends after visiting in this home for 4 hours. The pain disappeared after I left this home and returned to my own residence.

#### #94

9)[doctor] not yet.

10)[quality of life altered] Cannot sit outside anymore because the noise. Have to sleep in summer with the windows closed.

11) We have a cat who no longer wants to go outside since we have the turbines.

#### #95

10)[quality of life altered] The prevailing wind is from the West and we are downwind of a cluster of wind turbines which generate a lot of noise, when sleeping with the windows open. It is being heard in the bedroom.

11) Our cat stays now more inside.

F64-3  
Cont.

**#96**

8)[health affected] Stress.

9)[symptoms] I have a pre-existing medical condition. Therefore this question cannot be answered accurately.

10) Noise & radio interference devalued our property

At times: "Noise" from the turbines is very annoying. At times sounds like we are living right next to an airport. Can even hear them "at times" when all our windows are closed

"Radio interference is an issue as well. Can hear the blades turning (static) through our radio

Also, they are unsightly. May have affected our property value.

11) Yes, my "therapy dog" is really apprehensive to go outside at night (to do her business) when the turbines are so noisy.

**#97**

8) [health affected] A little stressed

10) [quality of life altered] Somewhat. Noise from the blades turning. Radio interference. Also, may affect our property value.

11)At times: Noise from the blades stresses our dog.

**#98**

10)[quality of life altered] The flickering bothers us when we sit in our sunroom or deck in the afternoon. The noise is equally distrubing – especially at night sometimes we have to close our windows.

**#99**

8) [health altered] Yes, there may be a connection

9) [doctor] Mentioned to my Doctor outside of office, have not made an appointment. I am very healthy, thin, athletic and exercise often.

10) [quality of life altered] Prior to the installation I was always a high energy, upbeat person who slept well. Late in the fall of 2008, my wife and I started experiencing heart palpitations when trying to sleep. We can both hear our pulse in our ears. We never connected this to turbines until now. I am less energetic, lacking in ambition, more moody and less optimistic. My whole state of mind has changed. It has impacted my work & home life. I cannot see or hear the turbines from my home. The symptoms were worse in the fall and winter and better in the spring. If our symptoms increase next fall and winter we will know it is linked to the turbines and wind speed/direction.

11) No pets or livestock.

**#100**

8)[health altered] possibly, but uncertain

9)[doctor]No. I have noticed that I have experienced heart palpitations or increased pulse, sometimes during the day and sometimes while resting through the night, which has caused some disturbance to my sleep. I am not sure if these are linked to the recent start-up of the nearby wind turbines, but I believe I have been experiencing these symptoms over the past 6 – 8 months.

10)[quality of quality of life altered] possibly, if what I have experienced is in fact linked to the operation of the turbines

F64-3  
Cont.

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**Date Tabulated: July 10, 2009:**

**#101**

9) My doctor does not understand the situation.

10) [approached doctor] My doctor does not have any information on the symptoms. I believe my quality of life has deteriorated as have my property values.

11) My dogs seem to be more clingy towards me and seem to overreact when I return after being away for several hours.

**#102**

10) [quality of life altered] Some days its like camping at the end of an airport.

11) Deer and turkeys moved out of area.

**#103**

9) [other] annoyed at visual sight as well as hearing the noise generated.

10) [life altered] Was expecting to enjoy peace and tranquility, not being intruded upon by the multitude of turbines.

**#104**

10) [quality of life altered] I resent the fact that WAG [wind action group] has interfered with my privacy by submitting this in my mailbox. I refuse to listen or acknowledge WAG's underhanded methods.

**#105**

10) [quality of life altered] I am disgusted with the attempts of WAG to try and brainwash residents. I am sure if you checked you will find these people (WAG) to be less than truthful and very bitter. I have dealt with these people and I am glad NOT to call them friends.

11) I have livestock, no problems.

**#106**

10) [quality of life altered] I cannot go a day without thinking about Wind Turbines. They are everywhere you look, noisy, lights flashing.

Does the Wind Farm effect our families Health. How long does it take 1year/5 years/10 years.

I do not know exactly how much value our house has lost. 40/50/60 THOUSAND MAYBE?

If you raise a family today, How long does it take to save 60 THOUSAND DOLLARS. I believe we lost that.

One thing that could make matters worse is the idea that my tax Dollars might be subsidizing a Wind Project.

Thanks for your efforts.

**#107**

11) Biggest factor is the noise.

F64-3  
Cont.



Unable to sleep with windows open at night and I'm a poor sleeper under good conditions. Find when I'm outside gardening or reading the constant noise from the blades turning very irritating and I find I have a pressure in my ears that wasn't there prior to the last few months.

**Date Tabulated: July 20, 2009:**

**#108**

6) [nearest turbine to property] There is at least one on each corner of my home (see map attached)  
Nearest is 481.8 meters

9) [other] Digestive problems/ chronic upset stomach

9), 10) and 11) Hello, my name is [home owner] and I had a Dream.

I knew in my early 20's that I wanted to move north and build my dream home. I was born and raised in the City, but undeniably a country boy at heart. I worked with my Father who was a Carpenter by trade for most of my life, and I naturally followed in his footsteps. This gave me the skill set and knowledge required to be able to one day realize my Dream.

It was the late 1990's and me in my early 30's, I was financially ready and began looking for the perfect spot. I would need to be close to the city to commute for work, but far enough to enjoy the Country Living lifestyle that I had been dreaming of for 10+ Years now. My search took me all over Northern Ontario and was a 3 year process.

Finally in 2001...I found it!! A 1 Acre Corner lot Located in the Township of [township]. The next step was to go thru the process of obtaining Building Permits, and designing my home to the Townships approval. For anyone that has gone thru this, they will tell you that it is a lengthy and sometimes frustrating process, but worth the reward in the end (or at least suppose to be). In 2002 I started construction on my outbuilding (barn), and in 2004 my home.

It was 2005 when I first caught a glimpse of phase 1. I was on my way home from work and saw these massive windmills being erected. My first thought was "what the heck is going on here?" and my thoughts after that I can not mention is this letter. I began making inquiries, and came to find out that [township] Township had become the new home of a [wind company] Wind Farm.

I had, and still have a hard time understanding how this could have happened without me knowing. After speaking with the Township and asking this very question, they informed me that the Residents of [township] were indeed notified, unfortunately for me the means of notification were not (in my opinion) appropriate.

The notification process consisted of:

1.) A notice was posted on the Township Website.

\*\*At that time and up until 1 Month ago, I did not have internet access at my home nor own a Computer.

2) Notices were posted in the Local Newspaper.

\*\* I was working full time and building a home on my own, I didn't have time to read the paper.

3) A notice was in the Township Newsletter that comes in the mail with your Property Tax Bill.

\*\* With all the advertisements, flyers, pamphlets, etc...that come in the mail these days, it is hard to keep up. I am sure that many people are like me, they open it up (whatever it may be) take out the bill and recycle the rest.

At no point in time was there ever a notice or letter sent to my home, it was assumed that I would come across one of these methods of notification. I feel that this was very presumptuous of the Township and

F64-3  
Cont.

[wind company], this information SHOULD have been shared with residents via Direct mail, not left to the possibility that one might come across it.

So here I am, not even half way thru building my home and now I have these windmills almost, but not quite, in my backyard. After much soul searching I decide to forge ahead, block out the images and I concentrate on the things that remind me of why I fell in love with this land. Difficult as it is I manage not to lose sight of "My Dream".

In early 2006, comes the news of phase 2...They are not done yet! And this time they will be right in my backyard, front yard and to both sides of my house. I am surrounded.

Now the windmills in phase one have been up and operational for approximately 1 year and residents have had an up close and personal experience. They have quickly come to realize that they are not all they were cracked up to be.

After attending the Township and planning meetings for phase two, there was definitely not a positive reaction to the news of more noise makers moving into Town. Residents managed to put up enough of a fight to halt it for a short period of time, but it is very difficult to fight a Township that wants the Revenue that comes from allowing this type of project, and a Corporation the size of [wind company]. The offer is too good, the Corporation is too strong, and eventually Politics and Money win out over Resident's wishes. A modern day David and Goliath.. The giant(s) win again.

In December 2008 phase two was turned on, since then I have not slept thru the night. I have had to go to the Doctor and have sleeping pills prescribed so that I can get to sleep, but I am inevitably awakened each night.

My quality of life is and has been affected, I no longer look forward to coming home. I get a better night sleep in the city (go figure) and will spend some nights there, but why should I be run out of my home?

Summer is now upon us, I have always looked forward to this time of year. My home was built with summer as the focus, the positioning on my property, location of windows, all designed to enjoy having my windows open all summer long, and use Mother Nature's air conditioning. For this reason I do not have A/C in my home (many people out here don't.. it is (was) not necessary). Now the wind that I look so forward to each summer has become my enemy.

I have become intimately aware of the negative effects involved with living in a wind farm. It's pretty sad that I have to put my T.V on the nature channel and close my windows and doors to hear "Nature" when I live in the middle of the Country!

The more I know, the worse the scenario is. I live in the middle of what sounds like an Airport only worse, at least if I lived next to the airport I would get a break every 30 seconds, and have 'No Fly' times so I could sleep. Between the constant whooshing that echoes thru the skies 24/7, and the humming sound that is omitted from the mechanics of the turbine 24/7, I have gone from being a very easy going, relaxed person to struggling on a daily basis with anything from stress to depression to anxiety. I attempted seeing a massage therapist and chiropractor to help relieve the tension, but this proved to only be a temporary fix, and was quite costly, so I had to stop going. Not to mention the other Health related issues that are now becoming a daily struggle. I have headaches at least every other day; and a constant ringing in my ears, I have had 2 ear infections in the course of a 3 month period, and occasionally suffer mild hearing loss. I experience digestive problems, and an upset stomach after almost every meal which will last anywhere from a few hours to days. I have gone from being a healthy person that had to visit the doctor once, maybe twice a year (one of these visits being a regular checkup) to having all these symptoms happen at once, and persist for months on end. It is all a little too coincidental, don't you think? Even guests to my home experience similar symptoms when they stay for more than a day.

I lay awake at night and trying to figure out why this has happened. I have come here to realize what has been my dream for over 20 years, and it has turned into what would be a nightmare if I could sleep.

F64-3  
Cont.

Where do I go from here? I am not only financially bound to my home, but emotionally torn. As I consider my options (none of them good) I cry.

The ironic thing about it is I am not even done yet. Just to add a little insult to injury, I have to now finish my dream so that I can walk away from it for the sake of my health.

Why was there not a proper investigation done into Potential Health Risks BEFORE putting these in people's backyards. There is/was so much research available from existing wind farms around the world, none of it was taken into consideration. Had it been, they would not be so close to residences. The required setback in phase one was 400 meters, and was increased to 450 for phase 2. This is crazy, the Provincial Government is now 'Proposing' a setback of 1500 meters from a residence, with a wind farm of this size, and a noise study is required prior to installation. I have a total of 9 turbines surrounding me, on all 4 corners of my property, [1.@481.8M](#) 2.@ 563.9 [3.@576.2](#) and [4.@619.6](#) and beside #2 is another one @ 700.5. The remaining 4 did not have distance readings available at the Township office, but are not too far from the 5 listed here. Needless to say, I am getting it from every end! I cannot go onto my property any time of the night or day ever again and experience the peaceful serenity, and sounds of nature that made me fall in love with this place, and want to build my dream home here.

My goal with this letter is to bring awareness to the issue that I and many others are dealing with. For those that don't live in the middle of a wind farm, but merely drive thru once in a while, my situation would be hard to understand. It is quite an awe to see for the occasional passer-by, but there is far more to this than meets the eye.

For the land owners that have agreed to have these turbines on their property, I would be curious to know, how much was my Dream worth? Because it is worthless to me now. And what is [wind company] and [township] Township prepared to do?

Thankyou,

[home owner]

#### #109

6) [how far are turbines] 481.8 meters - Total of 9 surround

9) [other symptoms] -Nausea, Dizzy (occasional) – Digestion  
[approached doctor] No, symptoms stop when I return home.

10) It is difficult when you want to visit your loved ones, however, you know that you are going to an environment that will cause you harm. Not a choice anyone should have to make!

Essentially, the wind energy industry is forcing people to stay away from their families and loved ones, which is unacceptable!

#### #110

8) [health affected] yes, (mostly mental health

9) [other symptoms] cannot deal with noise

10)[quality of life altered] –cannot enjoy the outdoors and sounds of nature because of noise

-hesitate to invite friends over

-feel upset that we built our amazing energy efficient ICF home in an area full of horrible noise pollution.

-feel violated

-upset that my lonely elderly mother came to live with us to have a happier life but now has vertigo (we have not mentioned to her the possible correlation to windmills.)

F64-3  
Cont.

-feel like we should have known better!  
-we trusted township and [wind company]

**#111**

9) [approached doctor] yes, for tinnitus – pending  
10)[quality of life] – do not feel desire to improve our house (finish work started)  
-do not enjoy outdoor exercise when windy and noise from windmills

**#112**

9) [other symptoms] vertigo  
[approached doctor] yes for vertigo – take medication  
-she's never had this before.  
10) [life altered] because of vertigo \* we are looking after [mother] and do not wish to give her windmill details.

**Date Tabulated: September 11, 2009:**

**#113**

Young Child-Form completed by parent

9) [headaches, palpitations] too young to describe.  
[hearing problems] We are having hearing re-checked. Family Dr. found swelling, excessive wax.  
[sleep disturbance] sleeps but does not seem rested.  
[approached doctor] Family Dr. [doc's name] suggested hearing test, documented visit, found no issues apparent – does not have knowledge of WTS but has heard some comments from local public health.  
12) [life altered] I feel both my children are “different” in their behaviour – two happy, well-behaved children have become irritable and unreasonable w/tempers and agitation – reminds me of an overtired or hungry child. This is compounded by the fact that my husband and I are affected and sleep deprived and I imagine have lower patience, tolerance and are irritable also. [Child's name] describes “bees” in his ears – I believe ringing ringing from W.T. s.[wind turbines]

**#114**

Young Child-Form completed by parent

9) [headaches, palpitations] too young to describe.  
[stress, anxiety, tinnitus] slaps his head sometimes  
[sleep disturbance] sleeps but does not seem rested. Very irritable/complete change in personality.  
[approached doctor] Family Dr.[doc's name] documented visit, found no issues apparent – does not have knowledge of WTS but has heard some comments from local public health – confused by vomiting without cough but said some children with large tonsils and mucus can cause vomiting.  
10) [life altered] I feel both my children are “different” in their behaviour – two happy, well-behaved children have become irritable and unreasonable w/ tempers and agitation – reminds me of an overtired or hungry child. This is compounded by the fact that my husband and I are affected and sleep

F64-3  
Cont.

deprived and I imagine have lower patience, tolerance and are irritable also. [child's name] vomits sometimes for no reason – seems to have motion sickness which I think is from wind turbines.

**#115**

9) [other ] Flashing lights (irritation), kept waking up.

**#116**

9) [approached doctor] Yes, 1) heart tests 2) CT scan – ruled out stroke and or tumours.

10)[life altered] No energy – due to lack of sleep

-depression and irritability

**#117**

9)[ other symptoms] rapid heartbeat, shallow breathing, overall sensation of being pressurized as if I could explode aggravated digestive problems, cannot relax.

10) [ life altered] – cannot sell property. Municipal value @\$258,000 – listed @ \$239,000 – nobody has viewed.

- the other night I woke up because of a very loud, insistent pounding in my ears, accompanied by a headache. As I'm waking, I wonder where that noise is coming from. I am ready to holler at my neighbour across the road to turn down her radio. I then realize with concern, that it's me. That noise is my pulse racing, making the same sound the wind turbines make, but much faster. If you can imagine the beat of "Paint it Black" by the Rolling Stones, that would be the speed of my heart beating. It was a pleasant very still night and I was actually having a pleasant dream. The turbines were operating.

- this has happened 4 times that I can remember, once while awake. I find if I change position, the pounding sensation goes away.

- all symptoms are more noticable when I'm laid off (an annual event-longer each year) and in and around my house 24/7.

- I have previously attributed any problems to financial stress. I now believe that stress is being compounded by low-frequency noise.

- I don't want to take any medication in order to sleep, low blood pressure, etc. If there is a physical ailment, I believe in eliminating the source rather than treat the symptoms.

- I just want to move.

- complete lack of energy I have on a daily basis. I feel as if I could sleep all day, every day, with no incentive to do anything at all. It seems like these turbines are draining the energy out of me

11) [pets affected] not apparent.

**#118**

6) [nearest turbine] [turbine] transformer station

9) [palpitations] vibrations

[sleep disturbance] on most nights

[other] broken sleep, aching muscles

10)[life altered] The transformer station has been operating for over 3 years. We have had endless nights of broken sleep. I wake up tired, seem to be anxious all the time. Everything seems to upset me.

F64-3  
Cont.

Have asked MOE [Ministry of Environment] for a letter that says there is no problem with the wind farm so we can sell our farm for a reasonable sum but they will not give us one because there is a problem. But when you say fix the problem to MOE they say the transformers are in compliance.

## What do we do!

### #119

6) [nearest turbine] [turbine] transformer station

10) [life altered] Here is our history. On April 20, 2005 we attended a public meeting at the [township] township hall to hear about the proposed installation of [wind company] transformer station. The members of the community asked the township council not to pass this installation. Our fears were for noise and health effects with such a an electrical installation so close to our home(490) metres. It was passed anyway.

[wind company] installed the first transformer and energized it on February 23, 2006. We are the adjoining property owners. For the next few days afer that date, we heard a loud, penetrating buzz/hum. We wondered what was the source of the noise. Gradually, we realized that it was the transformer. It seemed to make more noise in the evening and early morning hours. The sound was more extreme with any form of water vapour in the air, either rain, frost, or fog. The noise was heard inside our house with all the doors and windows closed. We found that we could not sleep for more than 30 or 40 minutes at a time, awakening over and over again to the sound of the transformer.

We issued many pleas to council and [wind company] for help, and attended meetings for over a year. We finally appealed to the Ministry of the Environment, and the transformer noise was found to be in excess of the legal limits. Finally they constructed a noise absorbing wall and earthen berm, topped with trees. This helped dim the noise a little, but it was still disturbing. We could not get away from the noise even in the refuge of our own home. We felt pressure on our ears, like an airplane take off. At times the intensity of the noise made my ears hurt and vibrate. We were constantly sleep deprived, exhausted and stressed. I awaken to find myself with the blankets over my head. I believe this is an unconscious action to protect myself from the effects of the noise.

The OMB hearing took place October 2007, and the original [brand] transformer was ordered to be replaced with a supposedly quieter [brand] brand. At this time a second transformer was allowed to be installed, also a [brand]model. During this time period, we co-operated with [company]Engineering to do noise recording testing inside our homes. The MOE abatement officer looked at these reports and concluded that the intrusive noise was in the low frequency range, 360 hz.

The second transfromer was energized in February 2009. The noise is still intrusive, but it is now coupled with a penetrating vibration in our home and even in our bodies. It is a terrible feeling. We have reported our distress multiple times to MOE and [wind company] via their noise reporting protocol telephone number. We have co-operated with [wind company] noise consultants[company]Engineering. They have done four season audits, first for one transformer, and now for the two of them. Our distress has not been heard, and their usual answer is "it's in compliance".

All of us here have suffered with many severe headaches, ringing ears, heart palpitations and unending fatigue. With the stress and anxiety we suffer, we can hardly think straight and are irritable and short tempered with each other. Our nerves are frayed. When will there be some relief? Will it ever end? When will we ever get a good night's sleep again?

In an effort to try and help ourselves, we had [name withheld] do an electrical assessment of our house. His graphs showed a great deal of "dirty electricity" coursing through our home. He likened it to living in

F64-3  
Cont.

a microwave. He stated: "This is a bad house, a very bad house." He felt that we were sensitized to the electricity and that was contributing to our health issues.

We contacted Hydro One and they have installed monitors in our home on two different occasions. The first round of tests were inconclusive and we have not received any feedback from the second set.

Our anguish is great. We feel betrayed. There is no help. This is our home, our refuge, but we can hardly stand to be here.

[homeowner's name]

**#120** [family collaborative effort #120-124]

9)[headaches] severe

[sleep disturbances] severe

[other] -mouth feels like clinching teeth (but not)

-TOTAL LACK OF CONCENTRATION,

- heavy painful chest, heart pounding

- Weight gain-can't seem to loose the weight

- Your eyes feel like they are being "dug" out of the eye sockets

- takes more medication to do the job, as you do not respond to the medication the way a normal person would....Eg. 2 or 3 rounds of antibiotics to get over a bout of pneumonia, (immune system compromised)

- wear outdoor boots/shoes IN THE HOUSE, to try and help prevent our feet from "burning" hurting

- severe mood swings

- sores and injuries do not heal very well

- tingling in extremities, body aching(a lot),s

[approached doctor] NOTE: the family doctor is so busy with (shortage of doctors) surgery, office, covering emergency at hospital that unless another doctore speaks to him about the facts he appears to not want to acknowledge the symptoms. – heart tests – eye tests – xrays –CAT scans – Blood testing

10) [life altered] – when you don't get a proper sleep, then you can't comprehend everything that is goig on and you can't concentrate or remember

-you get chest pains

- you are so tired that you just don't even want to get up and going...Your weight is increasing and you can't seem to get it off

-your ears are constantly ringing and it makes it hard to hear

- NOTE: when we go away from the farm the headaches ease up,

- but to have the effects of the wind turbines ease you need to leave the farm for more thant 3 weeks, at least.

11) The cattle became very aggressive at times, a lot more assisted births, abortions, prolapses, reproduction problems (symptoms too numerous to mention)

**#121** [family collaborative effort #120-124]

9) [other] –nauseated, mouth feels like clinching teeth(but not)

-go to the washroom more often

-TOTAL LACK OF CONCENTRATION, cant even spell/add right, at times

F64-3  
Cont.

- Your memory is just not what it used to be
- heavy painful chest, heart pounding
- unusual bloody noses,
- Your eyes feel like they are being “dug” out of the eye sockets
- takes more medication to control symptoms
- can’t walk straight (when turbines are powering up/down quickly) equilibrium is off, inside of ear always seems itchy
- wear outdoor boots/shoes IN THE HOUSE, to help prevent our feet from the “burning” hurting feel
- sores and injuries do not heal very well( your itchy/scratching)
- body aching
- there are times(a lot) when I would go to town just to sit to get away from the effects of the turbines (ease the pressure in chest, head and ears)

[approached doctor] Heart tests,

- NOTE: the family doctor is so busy with {shortage of doctors} surgery, office, covering emergency at hospital that unless another doctor speaks to him about the facts he appears to not want to acknowledge the symptoms.

10) [life altered] –when you don’t get a proper sleep, you can’t concentrate r

- you get chest pains
  - when I go near florescent lighting or those new light bulbs I get a severe headache and my eyes feel like they are bing pulled out
  - your ears are constantly ringing
  - NOTE: when we go away from the farm the headaches ease up, but to have the effects of the wind turbines you need to leave the farm for more than 3 weeks, at least, and the longer you are near the wind farm the longer it takes to have the symptoms “start” easing when you leave.
- 11)[pets and livestock] – The cattle became very aggressive when the wind turbines where putting out the power, and there was a noticeable amount of other problems
- We used to have cats but shortly after the turbines started up they disappeared with the odd stray only staying around for a short period of time.
  - You expect to have mice on a farm, but they have even disappeared.

**#122** [family collaborative effort #120-124]

9) [other symptoms] –heart pounding

- Lack of memory
- ears itchy and ringing
- bloody noses, ears itchy and ringing
- body joints aching

[approached doctor] General testing – Heart tests (Holter monitor)

- 10) [life altered] – when you don’t get a proper sleep, then you can’t comprehend everything that is going on and you can’t concentrate or remember,
- extreme mood swings
  - at my age, I should not be having chest pains
  - severe headache and my eyes feel like they are being pulled out

F64-3  
Cont.



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- your ears are constantly ringing and it makes it hard to hear

NOTE: when we go away from the farm the headaches ease up, but to have the effects of the wind turbines you need to leave the farm for more than 3 weeks, at least.

- the worst thing is: I felt I had to move totally away from this area to try and protect myself from the effects of the wind turbines!

13) [pets and livestock] - no cats – our collie became “clingy”, he would always be around humans

**#123** [family collaborative effort #120-124]

9) [ other symptoms] – irritated and agitated very easily

- mouth feels like clinching teeth (but not)

- TOTAL LACK OF CONCENTRATION

- Weight gain-can't seem to lose the weight

- body aching,

- takes more medicine to keep symptoms under control

[approached doctor] General testing – blood tests – xrays – specialized testing

10) [life altered] – when you don't get a proper sleep,

- you can't concentrate

- your ears are constantly ringing and it makes it hard to hear

- NOTE: when I go away from the farm the headaches ease up

- I trained in Agriculture in Ontario in order to be able to take over with my sisters, the family farm and now there is no farm to take over, as the wind company does NOT appear to be trying to FIX the problem

- the worst thing is: I have had to move totally away from this area to try to protect myself from the effects of the wind turbines.

- if it is doing so much damage to our cattle what is it doing to us as people

11) [pets and livestock] –the cattle became very aggressive at times,

- a lot more assisted births,

**#124** [family collaborative effort #120-124]

9) [other symptoms] – nauseated/ stomach upset

- heavy painful chest

- extreme mood swings

[approached doctor] General testing – Gastro-intestinal testing

10) [life altered]- when you don't get a proper sleep- you can't remember stuff, it affects your memory

- irritated and agitated very easily, (extreme mood swings)

- I get a headache and my eyes feel like they are being pulled out.

- NOTE: when we go away from the farm the headaches ease up and go away

- I trained in Agriculture in Alberta in order to be able to work with my sister to take over the family farm and now there is no farm to take over as the wind company does NOT appear to be trying to FIX the problem

F64-3  
Cont.

- the worst thing is: I have had to move totally away from this area to protect myself from the effects of the wind turbines!

- when I go near florescent lighting or those new light bulbs

11) [ pets and livestock] – used to have 20+ cats but shortly after the turines started up they disappeared with the odd stray only staying around for a couple of hours, but they NEVER came back

- big change in the cattle behaviours

- a lot of calving problems

**Date Tabulated: January 5, 2010:**

**#125**

8) [health altered] visited Wolfe Island on bus trip

9)[other symptoms] sick to my stomach, feel like belching

[approached doctor] No because I was at Wolfe Island for a short time once I got away from the area I felt better.

10) [life altered] This is a different issue. I've lived in Europe – travelled to 19 different countries, travelled on trains in Europe, planes, here military plane I have never experienced such a disturbing noise –

People have outer body experiences this is inner body disasters. My body has never experienced this before. The inner body experience is hard to explain. One feels very ill headaches sick to my stomach feel like belching no energy and confused.

**#126**

6) Generator Station - 390 meters

9) [other symptoms] Nausea/vomitting

[approached doctor] He didn't know why I was experiencing these problems. I was treated with medications but nothing effected the symptoms.

10)[life altered] It has declined rapidly. I am unable to even return to my residence because when I do, I become sick. I am no longer allowed to visit my home. I have had to move in with my Grandmother.

11)[pets/livestock] Yes, They dislike being touched on the ears. My cat started acting very strange and hyper.

**#127**

6) transformer substation – 390 meters, power line – 100 meters

9)[approached doctor] No – waste of time

10) [life altered]

-CAN NOT LIVE IN MY HOME

-CAN NOT SELL MY HOME WHERE I HAVE EVERYTHING INVESTED

-WE HAVE NO FAMILY LIFE LEFT

-ON WEEKENDS, WHEN WE MUST RETURN TO OUR ANIMALS & GET WORK DONE, OUR DAUGHTER CAN NOT RETURN – WE MUST – VISIT WITH HER ELSEWHERE

-WE COMMUTE TO & FROM OUR HOME TWICE DAILY TO ATTEND TO LIVESTOCK WE CAN NOT YET SELL

F64-3  
Cont.

11)[change in pets/livestock since erection of] substation, powerlines

Younger horses – nervous and tense

If horses in barn for length of time sometimes appear stoned.

**#128**

6)[nearest to property to] substation & powerlines

substation 390 meters, powerline approx 100 meters

grid – 100 meters

8)[health affected] substation & powerlines, yes

9) [hearing problems] more acute hearing making all environment very loud

[depression] I'm beginning to wonder if I am now in this category.

[approached doctor] – I have had my hearing tested as well as an MRI. There are no apparent problems

- I have also spent many hours with the family doctor & a naturopath regarding my daughter.

10)[life altered] [wind]farms – yes

>We have had to relocate our family numerous times. Our family life no longer exists.

>We have livestock – we have given horses away; financially we are losing our shirts & are commuting an extra 50 kms per day to care for them.

>Our residence/farm is worth nothing

> Windfarm has taken over our lives, there is little social activity or enjoyment as everything is to the point of overwhelming.

>We can no longer host friends or family at our home but must keep up a façade that all is well

>We have no time to relax and unwind as we continue to deal with issues; (windfarm, legal, family).

>the stress and anxiety is an everyday event with concerns over our children, pets and livestock

11)[ change in pets/livestock since erection of]windfarms(substation/powerlines).

I have given away our cat>cannot provide safe housing. We gave away 4 yearlings (horses) can't work with them due to their stress and our lack of time.

**Date Tabulated: February 20, 2010:**

**#129**

6)[distance from turbine] 400m, but we have 10 within 1 mile of our home.

8)[health affected] Yes absolutely!

9)[other symptoms]My hands shake often and sometimes out of no where I feel sick to my stomach.

Chest pains, off balance often.

[approached doctor] When I began having chest pains I did go to my doctor. After many tests they could not diagnose it. At that time I did not think anything of it, now I feel it is due to some sort of impact from the wind towers. They did find however that I had extremely high blood pressure for a woman my age.

(I did not at that time suggest to them that I live so close to all of these wind towers.)

10) [life altered]

-The peace and quiet of my country home has been totally changed. Once able to walk outside my door and hear nothing but birds chirping and cows mooing from the farm next door, now my door opens to

F64-3  
Cont.

not only the gigantic physical obstacles of our view (the towers) but the constant annoying “whooshing” and humming sounds that they create.

-Once able to fall asleep and stay asleep with ease due to being a very busy wife and mother of two, now I am lucky to fall asleep and get more than 3-4 hrs a nite.\*This is not enough to get through the day, however I have NO CHOICE but to continue on the following day sleep deprived.

-My 8 year old daughter now complains of headaches. She doesn’t have any problems with her eyesight which could cause this and has never before complained.

-I feel anxious and nervous nearly everyday. My hands shake like those of a “much” older person some days. (I am only 39)

-One other major thing that has happened to me is that I have fell down. Normally this doesn’t occur to me but I have felt “off balance”. One day I fell down my stairs inside my home, also while holding my 4 year olds hand. Also had a fall while outside just simply walking into my garage. My leg and knees were bruised for weeks.

-Headaches, on average 2 or 3 a week. Also I have had countless migranes, so bad that no amount of tylenol could help. I have also experienced “depression” at times which is very out of character for me, generally a very happy person.

- 11) My dog[breed] who we have had for 7 years, seems to be very nervous. She paces constantly and in the time we have had her she never has “accidents” in our home until now. One evening she went upstairs and urinated on our bed! There was absolutely no reason in our minds for this. Obviously she now does not go upstairs. I should note that on that particular night it was quite windy and the towers were extremely loud.

#### #130

6) [distance from turbines] approx 400m but there are 10 of them within 1 mile of our home.

8)[health affected] YES – WITHOUT A DOUBT!!!

9) [symptoms] [palpitations] not sure, [excessive tiredness]I have trouble sleeping,[tinnitus]sometimes, I’ve just noticed it. [other] I don’t know if it’s palpitations or anxiety, but sometimes my heart races like it’s going to jump out of my chest.

10)[life altered]

-I now have great trouble getting to sleep in fact I now use sleeping pills, I never used to, EVER!!!

-I can no longer enjoy my home outdoors, There is a constant “buzzing” that I cannot escape. The further that I walk onto my vacant land, the closer I get to the neighbors tower – these towers make me feel constantly stressed and I always am anxious or have a feeling of anxiety.

- I worry about my plummeting real estate value, and if a bank will even renew my mortgage when its time.

-I’m in a position that if I complain, I fear that my property value will fall even further. [identifying comment left out]

-myself and other members of my family are now getting unexplained headaches, even my [age] year old daughter who has never had a headache prior to these towers coming online. I have a feeling of helplessness because I want to get away from the towers but we must remain due to the fact that we can’t afford to abandon our home and move.

11) Our dog is restless constantly pacing

F64-3  
Cont.

- We have a lot of wildlife on our property, deer, turkey...- we rent our property to a bow (deer) hunter. He told me that he has never seen such few deer in all the years that he has been hunting here, - note that this is the first hunting season that the wind turbines were active.

**#131**

9)[approached doctor] No. What can he do about it. I do not like taking drugs because there are always side effects.

10)[life altered]

Very tired feeling, go to work feeling non productive. Harder to deal with your family. I am harder on my son.

Worst of all I have put my retirement money into this farm coming out of [place] to get away from Industry and do something good for the environment and grow heartnut orchard and pears all organically. I have excessively worked my summers after work to cut around trees and hand till the weeds so not to use any chemicals. I drove to and from work, [place] to [place], so this would pay off when I retire.

So far I am only one that is having these problems although my son sees me depressed and it showing on his focus on school work. Last night he had a hard time doing his homework, he was trying to finish off in the car ride to school. As it stands now I need to get out because this will not go the right way for us. I cannot function properly and will not have the ability to keep up the farm and work with this going on. I am done with it and will try to sell the farm.

11) I have cancelled my order on goats for keeping grass down around my orchard as I heard they are effected too. And my dog although less than a year urinates on our floor in the house.

F64-3  
Cont.

**#132**

9)[symptoms] Dizziness, Unsteady, Nausea!

[other] Ear problems – ongoing

10)[life altered] Noticeable/Significant change in energy

Feels like a huge energy force directed at my property when wind is in certain direction pushing across the channel between [place] and [place].

Sounds like a jet engine is headed for my house at night. Wakes me up.

Feel Different. Unbalanced. Stressed. Sleep Deprived. Depressed. Sad.

**Date Tabulated: June 23, 2010**

**#133**

9) [other symptoms] Lack of focus – Lack of Concentration – Memory loss – High Blood Pressure – Nausea – Feeling of Fullness in the Head – Fullness Feeling in the ears

[approached doctor] Weekly pain clinic and migraine treatments. Pain medication for migraine. Nausea medication. Anti – hypertensive medication. Anti – depressant medication. Several types of pain medication. Acupuncture and Chinese Medication. Acupuncture bi-weekly.

10) [life altered]

- 1) Lost my career, which I loved dearly. It was a part of my life since age 18. A huge loss.
- 2) Lack of sleep has caused an enormous amount of stress; has impacted my everyday life from everyday appointments to social events + friendships; routines of living such as shopping, house cleaning, gardening; entertaining and family gatherings.
- 3) I was an avid reader but I cannot sit and concentrate to read a book.
- 4) I'm exhausted most of the time.
- 5) I feel tense all the time.
- 6) My ill health has become a major focus of my life and I fear a major fear of having a stroke!
- 7) I don't have people in my home anymore.
- 8) All our needed home renovations are on hold.

**#134**

10) [life altered] The visual impact around our home has been very negative as well as at our cottage off the western shore of [place].

Noise is disturbing at both places, especially at 3 or 4 am when all else is quiet especially with south or southwest (prevailing) winds ->directly from 5 neighboring turbines to our bedroom window which has to be open during summer.

Stress level is high because of property value + saleability – we will need to sell in the near future.

**#110A - Update for 110**

10) [life altered] – many health problems

- vibrating in torso
- no sleep – always tired
- thumping in ears
- cannot enjoy our lives like before
- feel violated
- my mother has lived with us since Aug./08 but is moving to a 1 bedroom apartment on June 1, 2010 because since turbines were turned on she has had vertigo, her bed vibrates + this frightens her, her blood pressure is lower than usual – when she visits my sister in Kitchener she does not have these symptoms.
- we cannot enjoy nature
- fear for the safety of visiting relatives and friends when they come over
- cancelled plans for a family reunion
- we are a 13 acre property surrounded by industrial wind turbines
- I love my job but it's difficult often because of all of this.
- \* there are 34 turbines within a 3 km radius of our property.
- we are sad, frustrated, tense, ill, vibrating people
- our lives are on hold – it's horrible

**#111A- Update for 111** [comments by spouse]

9) [ other symptoms] pounding or thumping in ears (head)  
ears (tinnitus)

F64-3  
Cont.

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had many heart, lung tests (inconclusive, can't explain why he feels like this

**Date Tabulated: July 12, 2010**

**#135**

[life altered] I think our way of life has chanded

We cant Look out of a window in our home without looking at wind mills

from my back deck we can count 72 Windmills.

my property value has gone down

at the O.M.B. hearings in [place] a few years ago they [wind company] admitted that property values  
woud go down 30 percent so my home and farm was valued at \$400,000 due the math.

This stuff bothers people

it doesn't have to be noise or other things

our township is a mess not just windmills but monster Power line at my door step.

There is 110 Windmills in [place] twp.

there are 6 turbines on the home farm of the farms who have them on there land

they put them on grass farms not near there home

also ownership of most farms are by people who dont even live around here. They put the turbines on  
good farm land with roads running all over the farm

so much for protecting farm land. Sorry for my spelling

F64-3  
Cont.

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**OTHER RETURNS (Out of Province):**

**Date Tabulated: February 20, 2010:**

**#1001**

7) [time at property] 9 yrs. (off the grid) make electricity from the sun For past three years having to deal with nearby wind turbines.

8) {health affected} Absolutely

9) [Excessive tiredness] possibly [depression] possibly

[other symptoms'] Fortunately, these problems or symptoms only occur when the wind is strong (40 km/hr. minimum) and if wind is from the NW (prevailing) This puts us downwind from the noise disturbance.

[approached doctor] No. A doctor would only prescribe medication. We are doing our best to live with it and consider ourselves fortunate we were able to stop the wind company from creating a full-blown wind farm, "in our backyard".

(10) [life altered] Nine years ago, my wife and I built our lovely home (off the grid) in the middle of our 14 wooded acres where we would be safe from any infringements from others. We succeeded in achieving total privacy along with peace and tranquility, living in harmony with nature.

That is, until the wind turbines were introduced to the top of the hill. So the answer to your question is definitely , yes.

(11) No pets or livestock. I would not subject a pet to the kind of torture and I don't think any food from livestock would be fit for human consumption.

Yours sincerely [name]

**#1002**

7) [time at property] nine years (1<sup>st</sup> Turbines started Turning May 2006.

10) [quality of life] Though we live quite a distance from the two turbines, during certain conditions (wind speed & direction) they can be very loud. When they are loud I feel very stressed out and irritable and the feeling gets worse as the day goes on. I have found myself going into my house (even on hot august days) closing all the windows and doors & turning the on radio so I can't hear the sound of the turbines. I'm covering noise with noise but at least that way I can relax for a bit. The only other alternative is to get in my car and drive away for a while (or for the day) Night time is the worst when they are loud. Because our house is very quiet the turbines have woken me up in the middle of the night & it is impossible to get back to sleep. All I can do is lay there & wait for the wind to change. (I sometimes think I can feel the sound as well as hear it) Luckily for us we don't have this loud noise from the turbines all the time. If we did I would have to move away. I feel sorry for the people who have to live so much closer than us. There are times when there is nowhere on our 14 acres that you can go to get away from the noise & so we are not able to enjoy our land like we used to. (our house is very quiet because we get our power from solar panels)

11) No pets or livestock

**#1003**

7) [time at property] Visiting 3 days

8) [health affected] yes freq. Headaches

9)[approached doctor] Just visiting

F64-3  
Cont.



**#1004**

7)[time at property] 27 years minus 3 ½ years (abandoned)

10)[life altered] My life has been shattered. We lost our house and home. Our family was divided. We nearly lost our health and I am just hanging on to my sanity. We have been unable to sell our house.

**#1005**

8) [health affected] A lack of sleep.

10)[life altered] A lot of things have changed because we were forced to move out of our home.

**#1006**

7) [time at property] 27 years minus 3 ½ years (abandoned)

9) [other] vibration in my lower legs

[approached doctor] Yes, he said he did not want to get involved.

10) [life altered] Our life as we once knew is gone forever. We have lost our home, our security, our well being, our sanctuary (home). Above all, our family has been divided.

There are no words to describe the hell we have gone through.

**#1007**

Child-Form completed by parent

7) [time at property] [age] years minus 3 1/2

10) [life altered] [name] had become extremely defiant and withdrawn. Her schoolwork suffered greatly. Her entire persona changed.

**#1008**, Child-Form completed by parent

7)[time at property] [age] years minus 3 ½ years

9)[symptoms] His eardrum burst.

[approached doctor] [name] went to see 2 naturopathic doctors and they felt the windfarm would be the cause of his changed behaviour.

10) [life altered][name] had a lot of difficulty dealing with the loss of his home and he missed the many friends he had to leave behind. The pain is still strong. [name] was unable to concentrate.

**#1009**, Child, Form completed by parent

7)[time at property] [age] years minus 3 ½ years

9) [approached doctor] [name] saw 2 naturopathic doctors who agreed that the windfarm was the probable cause of his change of behaviour.

10)[life altered] After 3 ½ years [name] still cries for his home. He cannot bear to let it go. I feel the same.

F64-3  
Cont.

Jeffrey and Paula Byrd  
 name  
39376 Opalocka Rd, Boulevard CA 91905  
 address

2.28, 2011  
 date

MAR 03 2011

Mr. Iain Fisher, CPUC  
 Mr. Greg Thomsen, BLM,  
 c/o Dudek  
 605 Third Street,  
 Encinitas, CA 92024

**Draft EIR-EIS Comments/ Opposition: Tule Wind, ECO Substation, Energia Sierra Juarez**

Dear Mr. Fisher and Mr. Thomsen,

This letter is being provided to ensure that our concerns and strong opposition are documented in the record for these large wind turbine, substation, and power line projects that your agencies are reviewing as the Proposed Project, alternative projects, and cumulative projects. We may need to join in filing a future lawsuit for damages related to nuisance, loss of property value, quality of life, the use and enjoyment of our property, and other potential adverse effects.

F65-1

We reside in the neighborhood off Ribbonwood Road north of I-8 , in Boulevard. When we moved here, this was a beautiful and quiet place to live and to invite family and friends to join us. Easy access to our adjacent public lands in the McCain Valley Resource Conservation and Recreation Area has been added benefit of living here. All that has changed and we are now very concerned for our own future and that of our neighbors, pets, livestock, and the local wildlife.

We are already impacted by the existing Kumeyaay Wind turbines on the Campo Reservation 2 miles or so to the west of us. We hear and feel the thumping of the giant blades that sometimes disrupts our sleep and creates a nuisance. We also deal with the visual blight of the whirling blades skyline on the ridgeline and the day and night strobe and aviation lights--none of which seem to work properly since the catastrophic failure of all 25 turbines in December 2009. Those almost 4 months of turbine downtime were some of the best days and nights we have had since the turbines started operation around 2005.

F65-2

A moratorium on industrial wind turbine projects should be initiated by local state, and federal agencies, unless and until science-based peer reviewed health and safety tests are conducted to determine a safe setback distance. To date, those studies have not been done and industrial wind energy supporters cannot claim otherwise.

You are now reviewing three energy projects, along with the additional proposed wind turbine projects on the Manzanita and Campo Reservations and Greg Lansing's ranch lands on Ribbonwood Road and Jewel Valley Road. The Jordan / Enel Jewel Valley Wind Project on Ribbonwood Road would be within several thousand feet of our neighborhood homes. San Diego Gas & Electric's large 500 kV Sunrise Powerlink towers and lines will also be installed all along the eastern edge of McCain Valley Road east of us, and will also loop around to the north and west of our neighborhood, placing us down wind of many potential turbine, power line, and /or substation related fires / firestorms.

F65-3

The up to 134 Tule Wind turbines, that will stand almost 500 feet tall, are planned to be installed approximately 1 mile from our home along the top of the ridge just east of our property, and to north at across the top of McCain Valley.

The new Tule Wind 138 kV transmission line is also planned to run right next to the Sunrise Powerlink lines along McCain Valley Road, *or along the western edge of the BLM project site* and ridgeline to the north east of our home.

A new 5 acre substation and 5 acre operation and maintenance building, for the Tule Wind project, are also planned for private land on McCain Valley Road, or for the Rough Acres Ranch property just to the southeast of us.

Ribbonwood Road, our only access road, will be the adversely impacted by the related Project construction traffic , noise, and road damage from overweight vehicles and equipment. Our quiet neighborhood road will become an industrial highway of sorts, creating much more dangerous and invasive conditions for local residents.

**There are several main concerns that we want your agencies to address and respond to:**

1) Increased risk of fire; increased fire insurance rates or total loss of coverage due to new high risk development near our home; reduced fire fighting access due to increased potential for electrocution to fire fighters. Power lines, wind turbines, substation transformers can all start fires. This can translate into a life or death situation for us, with only one dead end access road and limited local fire fighting staff availability, equipment, and funding.

2) Noise and low frequency pollution from industrial wind turbines, some below the level of human hearing, can and does make people and animals ill when turbines are placed too close to homes, livestock, and sensitive wildlife areas. It has been reported that families have even abandoned their homes to escape the unbearable living conditions that are inflicted by these power generating turbine. Increased medical expenses and long-distance round trips for medical attention can really add up. Impacts to pets and livestock can also be severe and expensive.

3) No safe distance has been scientifically determined for industrial wind turbine set-backs. We do know that we don't want them anywhere near our home or the homes of other families. They should be placed miles and miles away from any occupied buildings, livestock, public recreation areas, campgrounds, and protected wildlife areas.

4) Electrical pollution, stray voltage, has been documented in and around other wind turbine and substation projects and homes within 1,800 feet and much more. There are indications that wind turbines and the substations that serve them are more prone to generate electrical pollution due to the intermittent nature of the energy they produce.

4) Shadow flicker from turbines can extend several thousand feet during certain times of day and can create a harmful pulsing light effect that can result in vertigo, seizures, or other adverse effects. That strobe effect also has adverse effects on pets, livestock and wildlife. Our home and property will likely be impacted during the late afternoon and evening hours.

5) Property value losses are being recorded at other wind turbine projects. We join others in requesting that Tule Wind be required to enter into binding Property Value Protection Agreements to ensure that we do not suffer lost value or the inability to sell our property, if rendered necessary, due to the adverse impacts generated by the proximity of their massive wind turbines, power lines, and substations that will surround us. Their current

F65-3  
Cont.

F65-4

F65-5

F65-6

F65-7

F65-8

F65-9

F65-10



wind testing equipment, highly visible from our homes and neighborhood, must be disclosed to potential buyers.

6) We are requesting that any project approvals include binding contractual agreements for adequate and ongoing funding for third party unbiased pre-construction testing for ambient noise, low frequencies and infrasound, and dirty electricity levels to be taken both inside and outside our home and at all our property lines. We are also requesting ongoing monitoring and enforceable compliance guarantees that include shutdown of non-compliant turbines--in the event these projects are approved over our objections.

7) The County noise ordinance and turbine setbacks are currently inadequate to protect public health and safety and cannot be relied upon for these projects. Compliance with those standards, as stated in the Draft EIR/EIS will NOT insure against the generation of a nuisance. Your agencies must address this issue. Our rural ambient noise levels are much lower than stated in the Draft EIR/EIS. Complaints have been generated at other wind energy projects with only minimal increases in noise levels. All ranges of noise levels, audible and inaudible need to be documented at pre-construction levels--and protected for public health and safety.

8) We also have concerns over adverse impacts to both the quality and quantity of our well water. Tule Wind will be clearing, grading, and blasting for turbine footings and new access roads. They will also be drawing large amounts of well water from several wells on Rough Acres Ranch for cement batch plants and other operational uses. Their turbines, substation, transformers, and maintenance buildings will contain hazardous fluids that can spill or leak into the water table. Our water levels should be documented by a licensed unbiased third party prior to commercial uses at nearby wells. We have no economically viable alternative source of water available to replace what we currently have. Cumulative impacts include the Sunrise Powerlink and other projects proposed in this area.

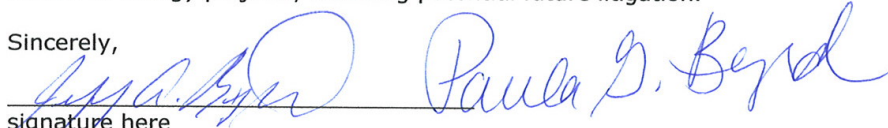
9) Day time strobe lights and red blinking night lighting on the turbines and some of the transmission towers will create another nuisance both day and night ,and take away from our beautiful dark night sky, one of the few left in Southern California.

In short, we strongly object to and oppose the introduction of any additional commercial industrial scale wind turbines, the related infrastructure and power lines, and all the adverse impacts that go with them, into our quiet rural neighborhood.

Any approvals of such would constitute a nuisance based on bulk and scale, blinking lights, noise levels (including low frequency and infrasonic), disruption to the peaceful use and enjoyment of our home and property and the very real potential for adverse health effects. While ignored, denied, and dismissed by the wind energy industry, growing evidence documents that some home owners have been bought out by wind energy companies due to undeniable adverse effects. The problems are real and must be addressed by your agencies prior to any project decisions.

We strongly support and encourage the efforts of Backcountry Against Dumps to protect and defend our rural community from the unnecessary, expensive and invasive commercial industrial energy projects, including potential future litigation.

Sincerely,

  
signature here

cc: Donna Tisdale  
Backcountry Against Dumps  
PO Box 1275, Boulevard, CA 91905

F65-10  
Cont.

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To All Concerned,

This letter comes to you with my concerns on the upcoming Proposed sites of the Sun Rise Power link, Tule Wind project, the Emergia Sierra Suarez Gen. Co. project and the East County Sub Station.

Over the past few years I have attended many of the meetings that have taken place in regards to expanding the power usage, claiming that it is much needed. Not true! I am not a rocket scientist just a proud wife of a wild land fire fighter who recently retired after devoting and risking his life for 37 years. It doesn't take a well knowledgeable person to know that we do not need more projects to produce added power. It has been proven many times over the years that when a project begins and by the time it is completed, more is needed to fulfill Man's needs. Where does it end? It doesn't, until as humans we learn to cut back and conserve what we already have. Remember we do not live on this Planet alone and it is our only home.

Living in the Kaumba area has been a challenge due to so many other projects that have disrupted not only our quiet region but has taken away and disturbed the homes and feeding grounds of so many wild life who reside in the Back Country. Our roads have been torn up with a promise to re fix them when a project is completed. Not true!

F66-1

F66-2

Patching up Old Hwy 80 is not what you call "fixing it up". Heavy equipment and daily semi vehicles use Old Hwy 80 and when were lucky the County will send a "1" man crew to patch up the holes. Now more companies, more heavy equipment will be brought in ripping up Old Highway 80 and to add, blasting mountain tops in certain areas to place towers. By doing all of these proposed projects, our comfort zone, our views and our property values will decline on top of the already existing inclination due to economy. At these meetings your people mention that we have Fire Station, Police, Medical coverage and access to plenty of water. False claims on your researchers.

Fire Stations : one full coverage - CAL-FIRES - yet has been cut back due to budget. Campo, Boulevard and Jacumba fire stations are staffed with volunteers who come from the San Diego / Riverside areas, they are not permanent residents of the Back Country. Please take note that the Jacumba Fire Station has not and is not staffed 24-7 like your source claim that it is. I know this for a fact, I live in Jacumba. McLean Valley Camp is NOT a fire station but is a Prison Camp for non-violent inmates. They are called out to projects and used on a wild land fire under supervision but not classified as professionals. The Back

F66-2  
Cont.

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Country is already in a high fire danger and the proposed projects will put us all in an even more high fire danger as property owners not to mention they will put our firefighters at an even more risk when there is a fire, ground and by air. Please re-evaluate your studies!

F66-5  
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Medical: as for medical facilities, there are 2 in operations; Campo and Campo Indian Health Clinics. Both are staffed and are run 8 AM to 5 PM, 5 days a week, closed weekends and on holidays. Closest hospital with 24-7 emergency care is 40+ miles going West and East of our area. If life flight is needed it comes from the San Diego area and has to land a distance from the incident scene, ambulance services we have "1" that covers the whole Back Country area. Response times it depends. If not in use at another incident it can be in our area in about 20 minutes - depending on weather. Again your researchers are misinformed on important issues!

F66-6

Water: residents, store owners, medical, etc. depend on wells for water and we tend to use it sparingly. It is our responsibility to maintain our wells according to health matters. Wells can be affected by earthquakes along with other disruptions to the ground. We are limited and have to drill deep in order to receive our water. Wrongful on your researchers once again. Many of us who have lived around that

F66-7



drought tolerance vegetation or in many yards natural growth. These proposed projects will have a huge impact on those who depend on the existing Chaparral for food source and means of living. Not to mention the climate change, which has already changing from past projects.

F66-7  
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F66-8

Noise : If the already existing noise from the Campo Reservoir Wind Turbines and already existing power towers are effecting humans with vision, hearing, heart and other medical effects, can you imagine what it's doing to the wild life population! There has been a decline in this area in the past 12+ years. Food supplies for those who take flight, hunt by ground has decreased. No one ever talks about Gods Creatures. Man has done more harm to all that is necessary in order to survive on Earth, just to have more energy. Our air, the water, our health, the health of nature, the mountain tops, the forest and the land has suffered due to corporation greed. We call it "the Circle of Life" and without it there is nothing. Man has killed off many species who share this Earth from greed and the high demands. At all of these meetings, scoping, etc., I hear "the high demands". There wouldn't be such a phrase spoken if every single human would learn to cut back and become an

F66-9

F66-10



power, water and building. Continuing to enlarge and more usage proves only one thing, "more will be needed". Our future generations will Never know what it was like to run in the woods, to camp or to see the wild life that roamed the land. They will be "Told" of the stories when man use to share the land with the Coyotes, bears, eagles and all birds of prey, the Rabbits, butterflies etc. They will read about the forest, for the way they are being torn down for Wind Turbines (and other means) and power lines, sub stations, etc.

F66-10  
Cont.

We moved to the Back Country in 1992 from Alpine and in the year of 2000 we bought our first home west of Sacramento. Over the years we have experienced weather changes, decrease in wild life, bright lights and excess noise. Every year there are reasons for some type of project to be placed out here claiming that we will all "benefit" from it - like creating more economy for the all ready existing motels, restaurants, stores, etc. and provide jobs for local residents. Humbug to that talk! On past projects - No jobs were given, there was no increase in our local facilities and the outcome for our future - torn roads, no jobs offered and we are still waiting to see the "benefit".

F66-11

"Green Energy". Humbug again! If all of these projects are so-o-o green, then why hasn't Washington, D.C, Sacramento and all other government buildings, state etc.

F66-12

using and placing these wind turbines in there back yard? Larger substations and taller power towers in their neighborhood. Why? Because there not truly green. Green is when our forest still stands, our waters are clean and free of any chemicals, the air is breathed without choking and the land is not disturbed and cleared of what already exists. This is how we were taught by others. "Respect what you have today for it may be gone tomorrow and don't take it for granted, life is a circle and we are a small portion of that circle."

Help me to understand something. "A few years ago I had the honor to look upon the hillsides of Jacumba with an Elder, you see plant that takes 25 years to grow to maturity and bloom had done just that. Thousands of this plant had matured and it was a sight to see. It has been 12 years since that day and where they once stood and where more should be growing has been destroyed for good by SDG&E and other means. The ground has been cleared for the proposed site of new Sub station, future power towers etc. The Century Plant wasn't just a sight to see, it was also a food source and provided water in time of drought for the desert habitat and for humans. At these meetings Speakers for these projects mention that they will re-plant what has been uprooted. How can one "re-plant" a plant

F66-12  
Cont.

F66-13

that takes 25 years to grow—remember 12+ years have already past from the last growth and now they are gone. The Century plant stays in bloom for nearly 2 weeks and slowly dies out over time, leaving behind new pods for future growth. But the big equipment not only removed these plants the pods were also removed leaving behind no food or water for the desert habitat. This could possibly be just one of the reasons our wild life has decreased in the past few years. Once again Man and greed for money and high demands has destroyed a portion of the Circle. And again big Corporations and foreign funds have destroyed what nature did provide for survival to those who depended on it. Help me to understand the rights to destroy the sites of our ancestors who walked the Earth as they travelled by foot in order to relocate during the change of seasons to live and to hunt and along the way, died, called burial grounds, also history. Help me to understand how one can come and observe the habitat of our wild life that travels over thousands of miles to hunt for food and also to reside birth their offsprings, claim a new site, mentioned to us who live here that certain wild life wasn't seen or they don't roam the areas affected. We invite each of you to come and live in the Back Country for the next couple of years

F66-13  
Cont.

F66-14

F66-15

and observe the wild life that we share this land with. They move from place to place in order to survive but they (those who are left) do come back to their natural site.

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Cont.

These projects will cause what wild life still exists today to only die out or move where there are means of food, water and shelter - the towns, cities, etc. The Golden Eagle is just one of these examples of a dying out species. They use to be seen coming during mating season, giving birth and flying overhead teaching their young how to fly. A beautiful sight to be seen. But because of past projects (for San Diego) that tore up the Back Country - fewer sights of the Golden Eagles have been seen.

F66-16

This past winter around November, I saw 2 Mountain Sheep walking along Highway 8 going West, remember we moved here in 1992, this was the first time ever that my eyes saw Mountain Sheep close to the freeway. I felt sadness for it was a sign that they are being forced from their natural habitat. With the proposed projects and the areas that you have chosen to place them you are once again destroying the wild life that do exist today.

F66-17

Unfortunately the female Mtn. Sheep died in their travels and the male was found hungry and hurt. A good Samaritan fed and watered the Mtn. Sheep

to better health so that the animal could move on. No one has seen him since but it doesn't mean he isn't out there.

Losing his mate means one less in the ~~the~~ Mtn. Sheep herd to be born. These projects will decrease the wild life already here by destroying them, their food and water source.

F66-17  
Cont.

Border Patrol: There are plans of another holding station off of Ribbonwood in the Boulevard area. There is already a temporary station and a main station by the Kitchen Creek / La Bosta area. This will bring even more high traffic, remove more chapparal <sup>where</sup> ~~that~~ wild life exist. Outcome: disturbing wild life, tearing up roads, causing Night Skies viewing to lessen and more noise. Illegal / International travelers are an ongoing issue for the Back Country. It has been proven that past fires around here have been started due to illegal camp fires to stay warm or to heat up their food (or both), to signal others, because they are lost. Not to mention the trash they leave behind.

F66-18

Sheriff's Dept: 3 small substations, Pine Valley, Campo and in Boulevard areas. Our Deputies cover thousands of acres and the response time varies. Calls after 5pm are responded according to the incident. The

F66-19



average time for an incident call is about 30 to 45 minutes depending on where the Deputy is, if already on the scene. After 5pm the Bottelard sub station is un-covered and calls are responded according to if its an emergency. CHP calls are just as long in response time or longer.

F66-19  
Cont.

Emergency Medical: The Back Country has 1 ambulance located in Campo. If not already in service response time is 20-25 minutes, weather permitting. If Life Flight is needed there is a 15-20 minute flight time from San Diego - than theres a landing issue.

When theres a fire, Pilots come from Ramona. Water is an issue for them in the Back Country, power lines that already exist are a danger for both air attack and for those who attack a fire by ground.

F66-20

Power lines, rugged terrain and now Big Corporations and foreign funding put our emergency crews at a more risk along with all of us who live in the Back Country, a non-incorporated area. High fire danger plus extreme high fire danger equals total disaster.

Fact: due to the Harris Fire our fire insurance was increased, our property value plunged in the past 2 years and will more than likely be

F66-21

decreased again with so many projects proposed. Many homes are already sitting long and show no signs of being sold tomorrow.

F66-21  
Cont.

Question: "Where are the permits (not posted) for what is already taking place with SDG&E? Why did they hire outside of the State of CA? PAR is from MI which means the drivers are from out-of-state. How does this provide jobs for CA? Why did <sup>they</sup> bring in outside Sanitation porta potties when the Back Country has 2 such companies?

Why have they (SDG&E) brought in cement makers when there are ones in the Back Country: Campo and Campo Separation? To build the power towers they bulldozed a hill side, then hauled in soil not to mention ripped up the wash for flash flooding.

F66-22

These are my questions to you. Where are the jobs for those who were told they would hire locals, keeping the Back Country economy alive yet they didn't use that which is available out here - concrete plants, sanitation, motels, diners, stores. They hired out once again.

Thank you for taking the time in reading my letter of why we feel these projects are unnecessary. By supplying roof top (no batteries used) solar and/or.

F66-23

individual wind towers connected to the grid is just one solution to going green. Going underground with power lines will prevent fires, won't destroy the wild life, Night Skies, Views that <sup>many</sup> enjoy seeing, save our National Forest, save Tourists.

Over sized Wind Turbines can and have caused property values to decline, health problems and fires. Turbines that exist today have become a grave yard due to the lack of funds for those who have them today - no money - no removal. They also cause hearing problems and other health issues.

No future projects to the Planet -  
Conserve

Lorrie Ostrander  
Lorrie Ostrander  
43577 Old Hwy 80  
Jacumba, CA. 91934

F66-23  
Cont.

F66-24

F66-25



After review of the East County Substation, Tule Wind, and Energia Sierra Juarez Gen Tie Project DEIR/DEIS, I have the following comments.

D.2 Dudek map 6168-01 shows Golden Eagles within 6 miles and peninsular Big Horn sheep within less than 1 mile. The ESJ-B IO-10 shows no impact. How does undergrounding of overhead power lines put the wind turbines at no impact for sensitive birds or bat species colliding with wind turbines.

F67-1

US Fish and wildlife states factors to consider when assessing effects. Species that are rare or cryptic; that migrate, conduct other daily movements, or use areas for short periods of time; that are small in size or nocturnal; or that have become extirpated in parts of their historical range will present particular challenges when trying to determine potential presence. One of these challenges is “**migration**,” broadly defined as the act of moving from one spatial unit to another (Baker 1978), or as a periodic movement of animals from one location to another. Migration is species-specific, and for birds and bats occurs throughout the year. Such moments should be considered for all potentially affected species, including flying insects and species that migrate on the ground.

F67-2

Wind developers need to determine not only what species may migrate through a proposed development site and when, but also whether a site may function as a staging area or stopover habitat for wildlife on their migration pathway. For some species, movements between foraging and breeding habitat, or between sheltering and feeding habitats, occur on a daily basis. Consideration of daily movements (morning and evening; coming and going) is a critical factor when considering project development.

F67-3

#### **Collision and Barotrauma**

The services concerned about effects to birds and bats from collision and barotrauma caused by moving blades and wind wake turbulence. Collision likelihood for individual birds and bats at a particular wind energy facility may be the result of complex interactions among species distribution, “**relative abundance**,” behavior, visibility, weather conditions, and site characteristics.

F67-4

Along with the observed direct fatalities from barotrauma, there may be lesser injuries, such as hearing impairment and other internal injuries that may allow the bats to fly or otherwise move away from the vicinity but would ultimately result in their death (Kozuka et al. 1997). As a result, estimates of bat fatalities from carcass searches may underestimate total fatalities.

#### **Barrier Effects**

“**Barrier effects**” can occur when a species' avoidance of wind facility results in decreased movement or an increase in energy use to circumvent the facility. (Goodale and Divoll 2009). Avoidance of the area

F67-5

may also occur as a result of noise or habitat loss due to construction of roads and other structures associated with facility development (Fox et al. 2006). The level of barrier effect depends on species, turbine layout, size of wind facility, season, and the species' ability to compensate for losses in energy due to avoidance, among other variables (Langston and Pullan 2003; Fox et al. 2006). Though populations-scale effects currently have not been documented, scientist are concerned that **"barriers"** between breeding and feeding areas may have significant effects (Fox et al 2006; Goodale and Divoll 2009; Drewitt and Langston 2006). The combined barrier effect of multiple wind facilities is also a concern as wind energy development becomes more prevalent (Drewitt and Langston 2006). The barrier effect has been documented fairly extensively in several offshore wind projects (Guarnaccia and Kerlinger 2007) where modified behaviors by various bird species have been recorded at distances of between 100 m and 3 kilometers from turbine arrays (Drewitt and Langston 2006; Exo et al. 2003; Desholm and Kahlert 2005; and Percival 2001).

F67-5  
Cont.

### **Habitat loss and degradation**

Wind project development results in direct habitat loss and habitat modifications, especially at sites previously undeveloped. Many of North America's native landscapes are greatly diminished or degraded from multiple causes unrelated to wind energy. Important reminiscence of these landscapes are identified and documented in various databases held by private conservation organizations, state wildlife agencies, and, in some cases, by the service. Species that depend on these landscapes are susceptible to further loss of habitat, which will affect their ability to reproduce and survive. While habitat loss due to footprints of turbines, roads, and other infrastructure is obvious, less obvious is the potential reduction of habitat quality.

F67-6

### **Habitat Fragmentation**

Habitat fragmentation separates blocks of habitat for some species into segments, such that the individuals in the remaining habitat segments may suffer from effects such as decreased survival, reproduction, distribution, or use of the area. Site clearing, access roads, transmission lines, and arrays of turbine towers may displace some species or fragment continuous habitat areas into smaller, isolated tracts. Habitat fragmentation is of particular concern when species require large expanses of habitat for activities such as breeding, foraging, and sheltering.

F67-7

### **Noise**

Turbine blades at normal operating speeds can generate levels of noise beyond ambient background levels. Construction and maintenance activities can also contribute to noise levels by affecting communication distance, an animal's ability to detect calls or danger, or to forage. Noise associated with developments can also cause behavioral and/or physiological effects, damage to hearing from acoustic

F67-8

over-exposure, and masking of communication signals and other biologically relevant sounds (Dooling and Popper 2007). Some birds are able to shift their vocalizations to reduce the masking effects of noise. However, when shifts don't occur or are insignificant, masking may prove detrimental to the health and survival of wildlife (Barber et al. 2010). Data suggests noise increases of 3 dB to 10 dB correspond to 30 percent to 90 percent reductions in alerting distances for wildlife, respectively (Barber et al., 2010).

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### **Indirect Effects**

Wind development can also have indirect effects to wildlife habitats. Indirect effects include reduced nesting and breeding densities and the social ramifications of those reductions; loss or modification of foraging habitat; loss of population vigor and overall population density; increased isolation between habitat patches, loss of habitat refugia; attraction to modified habitats; effects on behavior, physiological disturbance, and habitat unsuitability. Indirect effects can result from introduction of invasive plants; increased predator populations for facilitated predation; alterations in natural fire regime; or other effects, and can manifest themselves later in time than the causing action.

Source USFW website: [www.usfw.gov](http://www.usfw.gov)

F67-9

It is my opinion that ESJ-BIO-10 has unknown impacts that could be class I due to the presence of Golden Eagles, Bats, and Peninsular Big Horn sheep in the project vicinity. The wind turbines will require new roads and 100 feet to 200 feet clearance around the base of each wind turbine as stated in the Fire Protection Plan for the Tule Wind Project. This would create more loss of habitat and potentially attract raptors into cleared areas, bringing them into close proximity of the wind turbines and into the rotor swept area creating a potential for injury or death. The wind turbines should be evaluated separately from the undergrounding of the overhead lines. The project is located within or near the following conservation areas Carrizo Gorge wilderness, Jacumba Mountain Wilderness, Table Mountain ACEC, and Inko- Pah ACEC where these species live.

F67-10

BIO-10d mitigation states minimize Turbine lighting however ECO-VIS-4 & Tule-VIS-4, ECO is rated Class 2 Tule is rated Class I states" The project would create a substantial new source of light or glare that would adversely affect day or nighttime use in the area". The County has requested from the project managers, a lighting plan incorporating the use of shaded or shielded lights during construction and on all facilities. However, the Fire Protection Plan for the Tule Wind Project states PDF-15 electrical collection and transmission system and turbines will include the required FAA and CAL Fire lighting and markings. This would greatly increase the nighttime glare from these aviation lights as required by law and would make BIO-10d ineffective.

F67-11

D. 3 visual impacts.

ECO-V I S-3 & Tule-V I S-3 states” The project would substantially degrade the existing visual character or quality of the site and its surroundings” is rated class I. This would seriously downgrade many property values as they were appraised and purchased for their visual quality. This would also downgrade its visual quality for recreational use. Many people visiting the backcountry come to the area for its scenic vistas, open spaces, and unique visual appeal.

F67-12

ECO-VIS-4 & Tule-VIS-4, ECO is rated Class 2 Tule is rated Class I states” The project would create a substantial new source of light or glare that would adversely affect day or nighttime use in the area”. The County has requested from the project managers, a lighting plan incorporating the use of shaded or shielded lights during construction and on all facilities. However, the Fire Protection Plan for the Tule Wind Project states PDF-15 electrical collection and transmission system and turbines will include the required FAA and CAL Fire lighting and markings. This would greatly increase the nighttime glare from these aviation lights as required by law and would kill the Boulevard area pending application for dark skies.

F67-13

ECO-VIS-1 & Tule-VIS-1 is rated class I and states “The project would have of substantial adverse effect on scenic vistas”. The project would substantially downgrade property values and downgrade recreational use as previously stated.

F67-14

KOP 1, 2, and 5 does not show the Sun Rise Power Link and the clearance of vegetation around substation for compliance of PRC codes. KOP does not show clearance of vegetation around substation for compliance PRC codes and I am also concerned about the removal of existing trees at the site, especially oak trees. San Diego County is experiencing impacts to its existing oak trees from the gold spotted oak Borer. This is a major concern for the area as there is a significant decline of oak trees in the County. This potentially could create seed stock shortages for future oak tree propagation. Any healthy oak tree removal would be a significant impact. KOP 10, 19, 20, 21, and 22 does not show vegetation removal as stated in the Fire Protection Plan for the Tule wind project. This would create a different visual simulation than what is shown in the document.

F67-15

#### D.7 Cultural\_Paleontology.

I have serious concerns with this section as there are 102 new sites, 29 not evaluated, and 2 unknown no records. With the number of new sites, the area should be reevaluated as it could be significant if you take of view from all the sites within the area. Many of the sites had been evaluated singularly and not as a whole. Looking at the sites individually may appear to be not significant. However, as stated,

F67-16

looking at the sites as a whole in the project area could potentially change this rating. The section states that the sites could be potentially significant and sites being unique archaeological resource. The section also talks about developing and implementing a historical properties and cultural resource treatment plan. What is that plan? In my opinion this fall short of what is needed for these sites. All the cumulative impacts, from multiple projects in the area, have greatly impacted these cultural sites. Further, I believe that further studies should be conducted with collaboration from Native American Tribes and Historical Society Groups. McCain Valley has had some limited surveys and studies, but has not been studied thoroughly. Surveys of the project area at most times are limited in findings due to terrain and vegetation cover. I myself have done surveys in the area after previous surveys and have found new sites within that area. The reason for the new finds was because of change of vegetative cover. Once these cultural resources are impacted, it changes the timeline data and these resources would be gone forever. This would be too high of a price to pay for lost history and lost cultural resources, not to mention the lost educational opportunities.

F67-16  
Cont.

#### D. 8 Noise.

Noise levels would increase ambient noise from 2 to 3db or greater in some areas. A 3db increase would be doubling of the noise level. Each decibel gain increases logarithmically. The noise would be continuous and not intermittent, such as a passing truck or jet aircraft passing through an area. The noise being continuous would have cumulative impacts to local residents in the affected area. Tule-NOI-4 Permanent noise levels would increase due to corona noise from operations of the transmission lines and other project components states impacts Class II.D.3-32 states noise from wind turbine assuming all turbines installed at 1.5mw, the project would exceed maximum allowable noise limits for nighttime. If 3.0mw turbines are used, additional residents may be adversely impacted. MM-NOI-3 mitigation states a site specific noise mitigation plan will be developed. How do you evaluate impact to Class II without the plan already developed? What brand of turbine will be used? Every brand has a different noise rating as well for each model. The noise from turbine would also be continuous and would have cumulative impacts on residents. Again, noise from the turbines would be continuous and would have cumulative impacts on residents. The noise would also create impacts on recreational use as visitors come to the area for the quiet. The impact rating should be reevaluated as it can be potentially class I impact.

F67-17

#### D. 10 Public Health and Safety.

D. 10 address EMF, but do not address potential long-term exposure health effects to residents. There should be a condition placed on project that if there is a spike in health problems in the area the causal agents will be removed. Furthermore, ongoing studies should be conducted throughout the life of the project studying the health of residents within the project area. Any health conditions that arise as a

F67-18

result of the project. The companies and approvers of the project will compensate all cost incurred by individual suffering from health conditions.

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Cont.

#### D. 14 Public-Services and Utilities

D. 14-2 shows solid waste as San Diego County. There are no landfills within the project area. All solid waste is hauled off by private companies or dumped along roadways and or private property. Boulevard fire department does not provide advanced life support (ALS). Advance life support is provided by American Medical Response (AMR) contracted through San Diego County. The nearest advance life support is located in Campo and provides services to East County providing service to 8+ communities. The next closest advanced life support is in the community of Alpine. Campo response is 20+ minutes to Boulevard with Alpine being 35+ minutes if available. During periods of high demand Advance life support can be an hour plus response time, including air ambulance. Desert road season taxes emergency services and increases response times as does inclement and weather. The project area is located within the Interstate 8 corridor, a major highway running East to West and is a majority of calls for local emergency services. A typical vehicle accident can involve up to three fire stations for up to two hours or more per incident. It is not uncommon to have multiple incidents on Interstate 8 simultaneously within 2 to 3 miles of each other.

F67-19

D. 14-7 accurately states Jacumba Fire Station as a volunteer station, which was uncovered, for several years and currently the station is cover sporadically by volunteers. Coverage of the station ranges from 3 to 8 days a month. McCain Valley Camp is not a station and is an inmate prison camp. Inmate firefighters are trained at the minimum level of wildland fire. Currently, the inmate population levels fluctuate and inmate fire crews have been hard-pressed to maintain adequate staffing levels; this is a statewide problem for all state inmate camps. McCain Valley Camp is funded for five inmate crews with 17 inmates procure. The camp has had many periods of crew strength at 12 to 13 inmates per crew for 2009 and 2010. Crew strength has even dropped to 11 inmates on a crew which is a minimum before disbanding crew. The camp is not an all risk service as inmates are not trained at that level. Incident response is typically wildland fire, flood control, resource projects, and community service projects. Inmates are a manual labor force and follow directions from a fire captain and cannot work independently from the crew.

F67-20

Community Service Area # 111 is no longer valid as it falls under San Diego County fire Authority' s Community Service Area # 135.

F67-21

San Diego Sheriff Department Boulevard/Jacumba substation at 39919 Highway 84, Boulevard does not exist. The Sheriff substation is located at 39919 Highway 94, Boulevard.

F67-22

D. 14-9 solid waste states that residential solid waste disposal is typically facilitated through the use of rural bin sites. These sites have been closed for several years as stated in final sentence. This is misleading as beginning of section states that County provides a service when they do not.

F67-23

D. 14-19 MM-PSU-1a notification of utility service interruption states to notify public a power interruption. The majority of residents depend on Wells for their water supply, extended or multiple outages could create health and sanitation issues and also local residents would not be able to get local news or updates in the event of emergencies, as many areas cannot receive local radio stations. Satellite TV is how local residents pick up local info. In my opinion this mitigation falls short and does not mitigate the impact. This would also impact emergency services located within outage area.

F67-24

D. 15 Fire and Fuel.

D. 15-5 Boulevard, Manzanita, and Jacumba are communities at risk, fire history over 50 years show 29 wildfires greater than 10 acres. States fire small either from lack of fuel or quick response. The response area within the project area traditionally had minimal foot traffic to minimal vehicle traffic with portions no traffic due to limited access. These response areas now will have infrastructure that could potentially increase fire activity. Boulevard fire department is shown covered 24/7, but does not address that the department is staffed by volunteers and reserves, and was not covered Christmas holiday 2010. It also does not address resource coverage during high call volume or when multiple major incidents are taking place within San Diego County, Statewide, or National. The document treats the Boulevard fire department as her sole dedicated department and hinges on resources always available. It also does not address the illegal border crossings and the number of emergency responses due to this activity, such as fires, medical aides, and rescues. The document addresses the declining fuel beds but does not state that this makes them more conducive to large devastating fires. The document addresses fire prevention and education but does not state plans when fire happens and impacts to emergency services due to equipment failure and or human factors. The document does not address the Jacumba fire station with hit or miss coverage which when covered is staffed by volunteers or reserves. The project area is served by volunteer fire departments with the closest paid staff station belonging to CAL Fire located on Tierra Del Sol. The document addresses the construction phase and talks about measures for fire during this phase, but does not address the increased emergency responses to emergency services such as traffic accidents, medical aides, and potential increase of wildfires during the construction phase. The document does not address the multiple projects that will be taking place at the same time in the area such as the border patrol Boulevard station construction and Sun rise power link projects. It also does not address the increased response time due to increased traffic and traffic control points because of construction. The roads in the area are narrow, two-lane rural roads paved with some

F67-25

in the project area being narrow dirt roads. The document does not address areas not accessible by vehicular equipment and is only accessible by air or on foot. The document states the response of aerial resources but does not address the modify tactics that would need to be implemented due to the aerial hazards such as overhead lines and wind turbines. The document also does not address that when a fire happens the modify tactics fire service would employ such as perimeter control defined as waiting for the fire to come out of hazard area. This would only be successful in a no to low wind conditions. This would not be successful in a Santa Anna wind event. Tule/ECO/ESJ-FF-2 &3 show Class I impact and as not able to mitigate. This should be reason enough to deny project as San Diego is in a year-round fire prone environment. The County does not need more impact added to it as it has seen an increase in large devastating fires such as seen in 2003 and 2007.

F67-25  
Cont.

#### D. 16 Social and Economic Conditions.

D. 16-6 states major industrial activities in Boulevard area are restricted by limited and vulnerable groundwater resources, lack of extensive infrastructure, distance to urban areas, zoning and land-use ordinance, as well as community preferences. The last point community preference should be noted as many residents choose to live here because of no industrial zones, the scenic views, the quiet atmosphere, and limited number of people in the area. It also should be noted the limited and vulnerable groundwater resources. These projects could seriously impact groundwater, which local residents are dependent on for drinking, fire protection, and sanitation.

F67-26

ECO/Tule/ESJ-SOC-3 project construction and operation would cause decrease in property values. States Impact class not adverse. In my opinion the following should be taken into consideration when deciding impacts as not adverse.

F67-27

Chris Luxemburger study was based on a sample of 600 properties that sold in the windmill areas over a period of three years. The results, properties inside the windmill zones were more than double the days on the market than those outside, the sold price was on average, \$48,000 lower inside windmill zones than those outside, and the number of homes not sold inside windmill zones was 11% versus 3% outside the zone.

F67-28

Financial gain to developer and landowner/lessor should not be at the expense of neighboring property owner equity. Since the project developers and the ones approving the project claim property valued increase as not adverse they should be able to back it up with property value guarantees. This should be a requirement or condition. Verbal promises are meaningless and this needs to be a written

F67-29



requirement or condition to back up this claim. The housing market has and is still suffering and does not need more impacts. Any more devaluation of property values in the area would have a devastating effect on already struggling communities in the project area.

F67-29  
Cont.

Property value guarantee should be based on the following: homeowner option to sell within 3 to 5 miles of wind turbines; based on certified appraisal process; measured against far distant comps and marketing periods; current value at time of option/sale; possible sale leaseback; bonding or adequate insurance, particularly when developer or owner has inadequate assets to guarantee probable range of value loss, insurance prepaid for project life; and decommissioning of turbines bonded; construction of replacement housing and relocation for reservation residents who will be disturbed.

F67-30

I went to Iberdrola's website to look up the document used for their findings (Iberdrola Renewables, Inc. 2010a), and was unable to locate it for review. If this is based on Ben Hoen's thesis I submit to you a recorded interview from Ben Hoen." You might know about a property value guarantee. It's a dicey situation and complicated. **I think one of the things that often happens is that (wind) developers put our report forward and say, look, property values aren't affected, and that's not what we would say specifically.** On the other hand, they have little ground to stand on if they say we won't guarantee that."

F67-31

Sources: Micheal S. McCann, CRA McCann Appraisal, LLC mikemccann@comcast.net

Recorded interview by Clif Schnieder April 12, 2010 – recorded interview available online.

#### D. 17 Environmental Justice.

The document uses statistics from U.S. Census report 2000, whereas they use U.S. Census, 2010 statistics elsewhere in the other sections. In my opinion 10-year-old statistics used in the environmental justice section are out of date. I am sure that there have been many changes in the area in 10 years. U.S. Census, 2010 statistics should be used to accurately reflect this section.

F67-32

In conclusion, I urge you to use the no project alternative based on the comments and concerns that were addressed in this letter. Our country's energy goal is to reduce dependency on foreign oil. In our rush to develop renewable energy projects I have concerns that we are creating new dependencies and new ecological disasters. An example Mongolia produces 90% of the world's legal reserves rare earth metals specifically neodymium which is used to create (Nd2Fe14B) permanent magnets. An average of 44,000 pounds of Neodymium- based permanent magnet material is required for most large wind turbines. China currently controls the rare earth magnets in the world. Second concern is most of the companies are from out of country that develop and sell these renewable projects and third wind

F67-33

turbines have not proved to be as efficient as were all led to believe. The wind turbines need to run at 30% efficiency in order to break even.

F67-33  
Cont.

We have seen wind energy projects in the 1970s during the energy crisis. There are still remnants of these projects that shut down due to it not being economically viable and we were left with the turbine sites in poor condition and in disrepair or disarray.

F67-34

The ESJ project is located in Mexico. This is a serious investment out of country with no guarantees that we will receive the power generated if Mexico decides they need it more. There are many claims from the developers that this will create new jobs for local residents. We have heard these claims many times from past projects in the area. This has not held true from the past performance. Some examples Sun Rise Power Link project currently in progress in our community has contracted to PAR an out-of-state company. We watch many of the trucks go by on a daily basis, displaying Missouri plates. In public meetings we have asked SDG&E why they have not employed local residents. Their answer is we are bound by Trade Labor Agreements. The current project developers promise the same things. They are from out of country and out-of-state and because of past track records more promises that will be more than likely broken. There is no mechanism in place to hold these companies accountable to the promises they make.

F67-35

Our communities have suffered through many projects and yet more are forthcoming. The past projects have created damage to our communities and local residents leaving us to try and fix it. Example Q West fiber-optic project damaged the Jacumba pond fill pipe, the pond to date is currently dry as a result from damage caused by the project. Residents had driveways that were torn up during construction and after the construction company left many experienced sinkholes and sinking of their driveways. The driveways that were paved had trenches through their pavement then patched after construction very poorly. There are many more examples of damage from this project and other projects that took place in our communities. Generally residents wanting to make claims are told they need to fill out the proper forms and most times follow a complicated process. Most times, the process includes proof that the company caused the damage, which can be hard to do when people trust that the companies will make good and do not make photographic records prior to the construction. This creates a lot of frustration and anger within the communities. The companies generally are not held accountable as there is no mechanism in place to enforce accountability.

F67-36

We typically are ignored because we are small in numbers and have limited financial resources. These companies have lobbyist, financial means, and public relation staff. If these projects are approved this will only open the door for more projects in our area. Currently there are several other projects in the works pending the outcome of this project. We are truly a David fighting against a Goliath. We value the resources in our area. We try to protect them for future generations. The federal government has been entrusted with this same responsibility. However, it seems that someone in government with the stroke of a pen or political agenda can change areas with protected designations, endangered species, protected species, and scenic vistas to a designation for industrial use.

F67-37

We hear from these developers the citizens need for more power projects because of increasing demands for more energy. We do not hear the need to conserve. We also hear it is for the greater good and that we are so small that the impacts are not significant and therefore should go forward.

F67-38

It is my opinion that if every structure had rooftop solar and small wind generation and distributive power versus transmission we could meet our renewable energy and conservation goals. By utilizing rooftop solar on all existing structures we would not need to develop projects in undisturbed ground areas. Many of these projects are scrambling to get these projects going because of deadlines on government subsidies and/or credits. My question is would these companies still pursue these projects without the government's help. If they are profitable as they claim they should be able to do these projects on their own. This seems to me that we will pay more in the long run in the form of rate increases and higher taxes for these projects. Currently in our area the electric power company asked for a rate increase in San Diego County because we did not use enough electricity. It appears to me that currently we are allowing means for utility companies to implement rate increases when we conserve.

F67-39

In closing, I hope you take these comments and use prudence and due diligence when making your decision. We do not need another Gulf oil spill incident or environmental disaster. Thank you for allowing me to participate in this process.

Mark Ostrander

Jacumba Resident

43577 Old Hwy 80

Jacumba, Calif. 91934

clasictraclayer@att.net

28 February 2011

Ian Fisher, California Public Utilities Commission  
Greg Thomsen, Bureau of Land Management c/o Dudek  
605 Third Street

Re: Proposed Tule Wind Power Project

Dear Bureau of Land Management and California Public Utilities Commission:

I am a 47 year resident of San Diego County, and I urge you to certify the EIR/EIS for the Tule Wind project.

The McCain Valley has been studied and shown to be a rare and valuable wind resource. Despite the arguments that have been submitted against this project, I feel confident that the mitigation measures proposed in the EIR will address the issues of concern. I ask you to support the State of California and its commitment to renewable energy and I ask you to keep the Tule Wind Power Project at its currently proposed size.

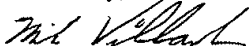
Renewable energy is critical to meeting San Diego's growing power demands and long-term energy concerns. Wind energy is a free and unlimited resource. This project will help California commit to clean energy, reach its renewable energy goals, lower our dependence on imports of natural gas, oil and other fuels, and reduce smog and greenhouse gas pollution. Less than two percent of the land in the Tule Wind Power Project area will be used for actual wind power production, leaving the land free for existing recreational uses.

The Tule Wind Power Project will reduce CO2 emissions by approximately 250,000 tons per year, making our air cleaner and reducing our impact on climate change. As with any wind farm, less than two percent of the land in the wind project area will be used for actual wind power production, leaving the land free for existing recreational uses. When completed, the Tule Wind Power Project will provide renewable energy to power more than 60,000 San Diego area homes. It is estimated this project will bring \$5 million annually to county revenues and create over 300 much-needed jobs during construction and 12 permanent jobs for local residents.

We must commit to renewable energy now to reach and sustain California's renewable energy goals. We cannot afford to delay bringing jobs, revenue and responsible renewable energy sources to our communities.

As a resident of San Diego County, these issues are important to me and my family. I urge you to certify the EIR/EIS and allow the Tule Wind Power Project to proceed as proposed. The impacts to our community will be far greater if this does not move forward.

Sincerely,



Michael Villandre  
1730 Jackson St.  
Chula Vista, CA 91913  
619-520-9744

F68-1

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**From:** Marylubran@aol.com  
**Sent:** Tuesday, March 01, 2011 8:10 PM  
**To:** ECOSUB; catulewind@blm.gov  
**Cc:** dianne.jacob@sdcounty.ca.gov; tisdale.donna@gmail.com  
**Subject:** Comments on DRAFT DEIR/DEIS FOR ECO SUBSTATION, TULE WIND & ENERGIA  
SIERRA JUARE  
**Attachments:** NoiseandHealth Final.doc

Attached please find my comments on the Noise/Sound Component of the  
DRAFT DEIR/DEIS FOR ECO SUBSTATION, TULE WIND & ENERGIA SIERRA JUAREZ GEN-TIE PROJECTS.

Mary Lu Brandwein  
Homeowner/Musician  
39745 Jewel Valley Way  
Boulevard, CA 91905  
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\*\*\*\*\*

California Public Utilities Commission  
Attn: Iain Fisher  
BLM California Desert District Office  
Attn: Greg Thomsen  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

March 4, 2011

VIA E-MAIL: [ecosub@dudek.com](mailto:ecosub@dudek.com) or [catulewind@blm.gov](mailto:catulewind@blm.gov)  
RE: DRAFT DEIR/DEIS FOR ECO SUBSTATION, TULE WIND & ENERGIA  
SIERRA JUAREZ GEN-TIE PROJECTS

Dear Mr. Fisher and Mr. Thomsen,

As a homeowner/musician in the area affected by the proposed wind farms in East County San Diego, I am very interested in the noise/sound part of this proposed project. I began to look around and learn about sound measurement and wind farms as well as sound in a more scientific way.

**Noise/Sound:**  
**Sound is audible and inaudible.**

**Here are my concerns:**

**1. Audible Sound:**

**D8: 1, page 1** The Environmental Impact Statement presented by Dudek with regard to noise uses only figures supplied by proponents of the Wind Farm Projects. Independent figures and independent studies must be gathered. Vested interest here colors the figures supplied. This goes without saying that none of the numbers that favor the installation of the wind farms at a distance of 1000 ft. that have been supplied by the proponents **are to be trusted**.

The sound of these wind turbines is of two kinds: audible sound and inaudible (low frequency sound.) This Environmental Impact Statement treats low frequency sound as a non-issue, as it is not mentioned.

From what I understand when measuring sound from machinery, using the "A" scale is inappropriate for measuring the effect of machinery on humans. The "C" scale should have been used. How do the numbers and effects change if this scale is used? What is better yet is using a sound spectrometer.... I am not an expert but the analysis of sound is grossly understudied. Just a few things I have gleaned.

**1. A. Measuring Wind Turbine Noise**

By [RenewableEnergyWorld.com](http://RenewableEnergyWorld.com) Editors | November 22, 2010 | [12 Comments](#)  
Are decibel levels the most important metric for determining impact?

F69-1

F69-2

F69-3

F69-4

F69-5

Alternative Ways to Measure Sound in a More Complete and Realistic Way:

<http://www.renewableenergyworld.com/rea/news/article/2010/11/measuring-wind-turbine-noise>

Graph referred to:

<http://www.renewableenergyworld.com/rea/news/article/2010/11/measuring-wind-turbine-noise>

Comment from Eardoc)

"A key part of this graphic that most people will not appreciate is the "A" after dB (i.e. dB (A)). This means that all the infrasound (< 20 Hz) generated by the turbine, which undoubtedly affects the ear at levels below those that are heard, is totally ignored by the measurement. This measurement is equivalent to considering only the visible portion of sunlight and concluding that sunlight cannot harm you. We all know that the invisible portion of sunlight (the ultraviolet light) is the portion that causes skin and eye problems. Similarly, it is the unheard infrasound component of wind turbine noise that causes problems to nearby residents. Until the industry starts taking note of this, the problem of wind turbine noise on nearby communities will not be solved. Long term infrasound exposure disturbs sleep and this graphic completely ignores this fact. So it may be a clever graphic, but it misrepresents the true (infrasound-dominated) nature of sound. A key part of this graphic that most people will not appreciate is the "A" after dB (i.e. dB (A)). This means that all the infrasound (< 20 Hz) generated by the turbine, which undoubtedly affects the ear at levels below those that are heard, is totally ignored by the measurement. This measurement is equivalent to considering only the visible portion of sunlight and concluding that sunlight cannot harm you. We all know that the invisible portion of sunlight (the ultraviolet light) is the portion that causes skin and eye problems. Similarly, it is the unheard infrasound component of wind turbine noise that causes problems to nearby residents. Until the industry starts taking note of this, the problem of wind turbine noise on nearby communities will not be solved. Long term infrasound exposure disturbs sleep and this graphic completely ignores this fact. So it may be a clever graphic

(<http://www.renewableenergyworld.com/rea/news/article/2010/11/measuring-wind-turbine-noise>), but it misrepresents the true (infrasound-dominated) nature of wind turbine noise."

Another comment from the same web site by ([AcousticEcologyInstitute](http://www.acousticecologyinstitute.com))

"A couple other important factors: even within audible sound ranges, the sound spectrum of wind turbines is heavily weighted toward the lower frequencies. Turbine noise is often clearly of a lower overall frequency than the ambient noise in bushes and trees; this is one reason it is not as effectively masked as often is assumed.

Perhaps the most important metric is whether the turbine noise is more than 5dB above the background ambient (in the moment; averaging sound over time can miss the fact that for parts of a day and especially night, ambient noise is lower than an averaged level). As it moves past 5dB over other sounds, it becomes distinguishable; as it reaches 10dB over other sounds, it will be readily noticeable and likely to cause some annoyance. 15dB or more is quite intrusive.

F69-5  
Cont.

Expectations are obviously crucial, as noted here. If peace and quiet is a prime reason many people in the area live there, then any audible intrusion from large industrial installations will trigger discontent. If most everyone nearby is more actively working the land and using machines in their daily life around their land/ranch/farm, then it's probably going to be less of an issue to hear turbines added to the mix at the low level they are heard." ([AcousticEcologyInstitute](#) )

F69-5  
Cont.

**Comment:** The way sound is measured in the impact statement has been grossly under studied. This is really a big disappointment. In fact looking at the decibels appears to actually give a very incomplete measurement of what people and wildlife will have to deal with. I understand it would be 10 dB above current noise and that seems to be intrusive according to the above source if I understand correctly. Additional study will have to be done and presented and proper mitigations presented or the companies involved will have to agree to buy out all people in the affected areas who do not want to or can't deal with this sound.

F69-6

### 1. B. Sound Character/Timbre

No “**characteristic**” of the audible sound has been addressed in the impact statement. The recordings on the Internet show that the sound is very objectionable. The type of audible noise produced by the wind farms is not discussed. It seems that windmills produce a sound particularly unacceptable to humans, which for long hours is particularly grating. The type of sound must be addressed. No natural noise is constant over an hour or longer... the wind mills would/could be constant or relatively so for many hours on end day and/or night. The effect of prolonged audible and inaudible sound needs to be addressed. (As for freeway noise, most of the properties in the East County affected areas do not experience that sound.)

F69-7

Ocean waves and even natural wind sound are pleasant to the ear and so more acceptable. It seems that these wind turbines produce an objectionable sound. This isn't even mentioned in the impact statement perhaps because 1,000” is supposed to take care of all sound. This may or may not be true for all individuals and what of animals?

### 2. A. Low Frequency Sound

A large component of the sound of these wind turbine machines is below the level of hearing and has great effects on humans; this is not addressed in the Environmental Impact Statement at all. Decibels are all that is discussed.... It is like unseen sunlight that burns the skin.... Here unheard sound seems to also be a problem. Nothing is addressed in the document about this. This is unacceptable. (1. See Below)

F69-8

Japan has placed a four-year moratorium on new wind farm development pending independent health studies. This indicates that there are enough serious health problems. Japan has suffered enough adverse effects to say further studies are needed and has found the situation grave enough to halt further construction.

F69-9



The health risk of these East San Diego County Projects has been grossly underestimated with the totally inadequate analysis of sound. If we consider the study in "Wind Turbine Syndrome" by Nina Pierpont, MD, Ph.D., page 193 begins the summary of the effects of living in the proximity of wind turbines. These studies have not been included in the Environmental Impact Study. Pierpont shows many case histories and summarizes many, many symptoms. Among them disturbed sleep, headaches, tinnitus, hearing loss, Visceral Vibratory Vestibular Disturbance, problems with concentration and memory, irritability and anger, fatigue, loss of enjoyment and motivation, dizziness, loss of balance, and many, many more serious possible effects. Pressure in the ear and loss of balance affects also mental processing of many things. The longer the exposure, the worse the symptoms. Pierpont says, "The simple answer is: Keep wind turbines at least 2km (1 1/4 miles) away on the flat, and 3.2 km (2 miles) in mountains. These are minimum distances. Kamperman and James's methods (\* See Below: Kamperman and James) will likely recommend larger setbacks, especially in rural areas that are very quiet at baseline." (2. See Below, Pierpont)

F69-10

Japan has found sufficient problems with wind energy to declare a four-year moratorium of further construction for health study. Holland and Nova Scotia also are declaring moratoriums.

[Nextera wind project meets opposition in West Grey :](http://www.betterfarming.com/online-news/nextera-wind-project-meets-opposition-west-grey-2705)

<http://www.betterfarming.com/online-news/nextera-wind-project-meets-opposition-west-grey-2705>

"One has only to undertake real research into the issues carried out by arms-length organizations to discover that countries who have been at it longer have indeed identified problems, not least of which is wind power does almost nothing to reduce CO2 emissions and in fact has not resulted in the shut-down of any traditional energy producing plants (in fact a study of the situation in Denmark done in 1998 contained this sentence "In 1998, Norway commissioned a study of wind power in Denmark and concluded that it has "serious environmental effects, insufficient production, and high production costs." Read more here:

F69-11

[http://www.wvmcre.org/neg\\_imapcts/inefficiency.htm](http://www.wvmcre.org/neg_imapcts/inefficiency.htm)

As well there are a growing number of studies identifying both health problems and loss of property values (see <http://www.epaw.org/victims.php?lang=en&article=t1>, and <http://www.epaw.org/victims.php?lang=en&article=t3>, and follow the links on these pages: [http://www.wvmcre.org/neg\\_imapcts/neg\\_impacts.htm](http://www.wvmcre.org/neg_imapcts/neg_impacts.htm), <http://windconcernsontario.wordpress.com/2010/01/21/us-japan-france-aust...>, <http://windconcernsontario.wordpress.com/category/health/>."

A medical officer of health in Ontario, Canada, Dr. Hazel Lynn, supported by the Grey-Bruce Board of Health and Grey County Council, wants to see proper health studies conducted. The recent international symposium on health effects of wind turbines, held in Picton Ontario, Canada brought together American, British and Canadian physicians, medical researchers, physicists, and acousticians all of whom say there are serious health effects that need much further study before we proceed. Canada especially has started hosting symposiums on the adverse effects of wind farms. Not enough is known here.

F69-12

Will the companies involved in all these East San Diego County Projects put a deconstruction and decommissioning section in the project if new research shows that new standards need to be implemented?

F69-13

Musicians know about the experience of sound. Here is one experiment that was done with low frequency and music. Of course the audience was close to the music. What this shows is that low frequency definitely has an effect on many people. How far away one must be so as to nullify that effect is the subject of other comments in this paper?

F69-14

## 2. B. Infrasonic: 17 Hz tone experiment

On May 31, 2003, a team of UK researchers held a mass experiment where they exposed some 700 people to music laced with soft 17 Hz sine waves played at a level described as "near the edge of hearing", produced by an extra-long-stroke subwoofer mounted two-thirds of the way from the end of a seven-meter-long plastic sewer pipe. The experimental concert (entitled *Infrasonic*) took place in the [Purcell Room](#) over the course of two performances, each consisting of four musical pieces. Two of the pieces in each concert had 17 Hz tones played underneath. In the second concert, the pieces that were to carry a 17 Hz undertone were swapped so that test results would not focus on any specific musical piece. The participants were not told which pieces included the low-level 17 Hz near-infrasonic tone. The presence of the tone resulted in a significant number (22%) of respondents reporting anxiety, uneasiness, extreme sorrow, nervous feelings of revulsion or fear, chills down the spine and feelings of pressure on the chest. In presenting the evidence to [British Association for the Advancement of Science](#), Professor [Richard Wiseman](#) said, "These results suggest that low frequency sound can cause people to have unusual experiences even though they cannot consciously detect infrasound. Some scientists have suggested that this level of sound may be present at some allegedly haunted sites and so cause people to have odd sensations that they attribute to a [ghost](#)—our findings support these ideas."

F69-15

["Infrasound linked to spooky effects"](#). msnbc.com. 2007-09-07.  
<http://www.msnbc.msn.com/id/3077192/>. Retrieved 27 January 2010.

## 2. C.

Sumas Energy 2 Final SEIS  
Section 3.4 – Low-Frequency Noise  
May 2002 Page 3.4-8

"This is characterized by noise levels at frequencies less than about 100 hertz (Hz). For this SEIS, low- frequency noise is described as noise levels in the 16 Hz, 32 Hz, and 64 Hz octave bands. Noise at those frequencies can be annoying to some people even at relatively low levels that might not be discernible to other people standing nearby (van den Berg 1998). Low-frequency noise can propagate through closed windows and lightweight walls typical of most homes, so in many cases the indoor and outdoor levels at homes near sources of low-frequency noise can be nearly identical. For that reason, annoyance from low-frequency noise usually occurs when the receiver is indoors where the background noise levels are low compared to the intruding low-frequency noise.

If the low-frequency noise level is sufficiently high, it can cause discernable vibration and rattling of windows or other lightweight structures. “

## **2. D. Periodic Beats**

Sumas Energy 2 Final SEIS

Section 3.4 – Low-Frequency Noise

May 2002 Page 3.4-8

“In some cases where two sources of low-frequency noise operate near each other (e.g. two adjacent turbines operating at the S2GF), sound waves propagating away from the sources can interact to cause repetitive low-frequency “beats.” These periodic beats can be readily discernible (and be potentially annoying) even when the overall noise level is low.“

**Comment:** The sound effects of two or more turbines in sync or out of sync and the audible sound waves and low frequency waves produced as a result are a whole order of magnitude above all that is mentioned in the EIS and these comments of mine. How far these waves travel is not discussed. The Environmental Impact Statement does not even mention the possibility of this, let alone the effects on people and wildlife. These kinds of self interfering or self coordinating waves seems to augment the possibility of actual noise and physical effect on residents and wildlife beyond what one source of sound waves would produce. This situation also needs to be addressed as many windmills in the same area are planned and close to residences and a school.

## **3. Effects on Children**

Some of the wind turbines in the East County Projects are planned to be close to schools and homes with children. A Tule Wind Farm Project would have a mill placed 1.25 miles from an Elementary School. It seems there could be a problem with child leukemia...

### **The NIH Document: EMF Associate with the Use of Electric Power-June 2002**

“Q. What can we conclude about EMF at this time?

A. "Electricity is a beneficial part of our daily lives, but whenever electricity is generated, transmitted, or used, electric and magnetic fields are created. Over the past 25 years, research has addressed the question of whether exposure to power frequency EMF might adversely affect human health. .... There is some evidence from epistemology studies that exposure to power-frequency EMF is associated with an increased risk for childhood leukemia. This association is difficult to interpret in the absence of reproducible laboratory evidence or a scientific explanation that links magnetic fields with childhood leukemia." June 2002"

### **WHO results:**

**Extremely Low Frequency Fields**

F69-15  
Cont.

F69-16

F69-17

F69-18

## **Environmental Health Criteria Monograph No. 238**

### **Chapter 12 WHO**

#### **Conclusions**

“Consistent epidemiological evidence suggests that chronic low intensity ELF magnetic field exposure is associated with an increased risk of childhood leukemia. However, the evidence for a causal relationship is limited, therefore exposure limits based upon epidemiological evidence are not recommended, but some precautionary measures are warranted.”

F69-18  
Cont.

**Comment:** The bone structure of children is thinner and not as solid as adults.

This information about the possibility of childhood leukemia plus the effects of “Wind Turbine Syndrome” on children make it imperative that the wind turbines be set back at least 2 miles and better 2.5 miles from schools and residences where there are children in particular, so as to avoid future complaints and lawsuits.

F69-19

#### **4. Maintenance:**

Detailed plan for maintaining the windmills and proof of maintenance.

"The plan will also demonstrate how the project will maintain the turbines so that they will be kept in good running order throughout the operational life of the project and will not create noise levels due to deterioration that would violate County standards."

F69-20

**Comments:** This absolutely needs to be shown how this will happen in detail before the project starts. What recourse will locals have if this is not done? Will locals have the possibility of turning off the windmills when they become too much to handle as in some European installations?

#### **5. Future Studies:**

What is the plan for incorporating the results of future studies that possibly change the noise and low frequency thresholds and other variables? This kind of flexibility needs to be built into the projects. This could also include the possibility of complete shut down and complete decommissioning if these new standards can not be met.

F69-21

#### **6. Conclusion:**

##### **6. 1. A More Serious and Complete Study of Sound Needed**

F69-22

These few pages of mine are only the beginning of a more serious and scientific look at the whole nature of sound and in particular the sound emanating from the wind turbines. I am a musician and not a sound expert and so my presentation here is also not complete, but I am only suggesting that much more needs to be looked at. I cited only a few works and studies and there are many, many more.

- A. Sound measurement needs to be amplified and refined both of audible and inaudible sound/noise. A sound spectrometer or at least the “C” Scale should be used and whatever else the experts say. Experts in sound need to be consulted.

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B. Periodic beats need also to be looked at and included as to effects on audible and inaudible sound waves.

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C. Adverse health effect studies need to be looked at especially of infrasound for all residents, children, elderly and wildlife.

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From the above studies and comments it seems that there are sufficient problems on the part of residents living closer than 2 miles from wind turbines to warrant much more attention and understanding and ultimately inclusion in these aspects of sound in the Environmental Impact Statement.

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I have also not touched on the impact on the hearing wildlife in the affected areas. It is known that animals hear higher and lower frequencies than humans.

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## **6.2. Distance from Wind Turbines Changed to at least 2 miles**

It seems that wind turbine distance from residences and schools needs to be set back to at least 2 miles away, given the evidence that is starting to be presented around the world with regard to health effects of being closer than 2 miles from the low frequency source. Before the Wind Farms can be constructed that could adversely affect the health of so many people and wildlife much more study is needed. Distance from the turbines seems to be of paramount importance.

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## **6.3. Inclusion of Health Marker Monitoring of Local Residents**

Since the health problems of residents as stated in the extensive study of “Wind Turbine Syndrome” of Dr. Pierpont and the other cited comments and studies seem to be a real possibility, if wind turbine distance is not altered from the proposed 1,000 feet standard, the County should have a component in the project for monitoring the “Wind Turbine Syndrome” and “Sick Building Syndrome” health markers to see if they are presenting themselves in people closer than 2 miles to the turbines. The age of residents seems important as to impact on health; the young and the old are more affected.

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Further study needs to be done included in the Environmental Impact Statement and distances altered, if this is not done and the County does not undertake the monitoring of the health markers of the residents then the communities themselves will have to take up the defense of their own health including children in schools and mount adequate scientific monitoring of the health markers set forth in these and other studies with the help of experts and with the intention of presenting them to the proper authorities if there are forthcoming adverse effects.

## **6.4. Inclusion of Buyout Option**

For me our property will possibly be located within 1,000 feet of a wind turbine and is close to an alternative high energy line route and would possibly become unlivable with

F69-30

so many frequencies all around. This raises the question of buyouts as a result of this industrial incursion on already established families.

## 6.5. Maintenance

The maintenance schedule needs to be very clear and available to all as well as public recourse if this maintenance isn't complied with.

## 6.6. Future Study Conclusions

There needs to be a way to include the results of future study as to noise/sound and EMF thresholds for humans; that is, to include some kind of inherent flexibility in the project structure.

## 6.7. Possible Abandonment of Wind Farm Projects

It seems like a better option to resurrect some of the 12,000 abandoned wind turbines that seem to be all over California. These abandoned areas already have approval. Perhaps it is best to exercise the Do Not Construct Option for all these East County Projects.

### A Personal Note:

I am a musician and my hearing is sensitive. I can hear to high frequency humming of dimmer lights and exposure can leaving feeling nauseous. Low frequency assaults the body in many ways. We do not only hear with our ears. Sound is vibration of all frequencies and it bathes, surrounds and penetrates the body; experiencing all of this is real hearing, complete hearing. As I tell my students, we don't only hear with our ears, but with our whole bodies. Our whole body is an ear. Musicians know this (music experiment quoted above) and audiences need to be educated to properly hear music, which I do at all my performances. I have trained myself in this for years, as my instrument (shakuhachi) is one that emphasizes timbre and microtonal variation.  
([www.shakuhachi.org](http://www.shakuhachi.org))

**Mary Lu Brandwein**  
**Homeowner/Musician**  
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### Notes:

1. "[Symposium Delivers Facts on Wind Energy](#) Ontario, Canada

*Author:* Garand, Henri

The First International Symposium on the Global Wind Industry and Adverse Health Effects, held this past weekend [October 29-31] in Picton, brought together American,

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British and Canadian acousticians, physicists, physicians, and medical researchers. The audience came from across Ontario and the United States and from as far as Australia. Our understanding of how wind turbines can affect human health is steadily increasing. Since the facts often contradict the Ontario government's and wind industry's claims, it may be useful to clarify the current state of knowledge.

1. *Claim: Ontario's regulations are the best in the world.*

**FACTS:** Orville Walsh, CCSAGE chair and APPEC vice president, studied government regulations in every country hosting wind turbines. The standards differ widely and most are based on noise, not setback distances. Ontario's noise level is 40 dbA, measured outside a home. Countries, like Germany, with lower levels cite either 35 dbA or +3 dbA above ambient sound. Night time ambient sound in a rural area is typically 30 dbA or less. (On the dbA scale, the ear can detect a difference of  $\pm 2$ -3 decibels and perceives 10 decibels as a doubling of sound.)

2. *Claim: The sounds heard from wind turbines are no louder than whispers or a refrigerator.*

**FACTS:** Dr. John Harrison, a physicist, explained that wind turbine sounds, especially the "swoosh," are different because of their amplitude and can exceed the 40 dbA regulatory limit because turbine settings are based on computer models, not live measurements. Moreover, turbine noise is not masked by natural sounds and can sometimes be perceived over great distances. Depending on weather conditions and cloud cover, a large installation of wind turbines, such as those planned for Lake Ontario, could emit over 40 dbA of noise as far as 9-15 km away.

3. *Claim: Wind Turbines do not produce low-frequency sound.*

**FACTS:** Acoustician Rick James exhibited spectrograms of the sound coming from land-based wind turbines in which the low-frequency component was substantial and could be measured more than 5 km away. He also compared the symptoms of people suffering from "Wind Turbine Syndrome" to the identical symptoms reported in the 1970's and 80s by those working in so-called "sick buildings." The latter problem was eventually identified as due to infra low-frequency sound (ILFN) transmitted through ducting.

4. *Claim: People cannot detect infrasound.*

**FACTS:** Dr. Alex Salt, a physiologist, described his recent research findings in which parts of the inner ear reacted visibly to infrasound. His research shows that the ear does respond to low-frequency sound even though we do not perceive it as sound. Further research will be required to understand how these impulses are transmitted to the brain, with possible disturbance and detrimental effects.

5. *Claim: Complaints about wind turbine noise indicate annoyance, which is harmless.*

**FACTS:** Dr. Arline Bronzaft, a noise researcher, explained how daytime transit noise near a New York City public school went well beyond annoyance and affected students' academic achievement. The effects of noise disturbance are not restricted to nighttime, and the effects of noise on children can be profound, impacting development.

6. *Claim: Wind turbine noise is harmless.*

**FACTS:** Dr. Christopher Hanning, a specialist in Sleep Medicine, explained how noise can disrupt the sleep patterns necessary for health and how loss of sleep affects memory and thinking, and can lead in the long term to risks of diabetes and heart disease.

Dr. Nina Pierpont, a physician and researcher and author of *Wind Turbine Syndrome*, explained how auditory systems react to sound and the negative effects of wind turbine sound on the patients she has studied.

7. *Claim: Wind turbine noise affects few people seriously.*

**FACTS:** Dr. Michael Nissenbaum reported on his studies of people living near wind projects in Mars Hill and Vinalhaven, Maine. Both studies indicate that residents within 2 km and beyond, compared to a control group outside the project areas, suffered serious sleep disturbance and stress.

8. *Claim: Wind turbines are safe because no peer-reviewed studies prove otherwise.*

**FACTS:** Dr. Carl Phillips, an epidemiologist, explained that clinical reports around the world are sufficient evidence of adverse health effects and that wind industry denials reflect misunderstanding of the stages of scientific inquiry and the value of peer review.

9. *Claim: Wind development serves the public good.*

**FACTS:** Carmen Krogh, board member of the Society for Wind Vigilance, applied the concept of social justice to public health and presented testimonies from Ontario, Germany, and Japan of people suffering from wind projects. Ontario rural residents are dismayed, to put it mildly, that every government agency has ignored their plight. ....Considering the adverse health effects and practical limitations of wind energy, how is it that wind development remains so popular? The answer lies in twenty years of social marketing, environmental fears, and the false economic hope of green jobs. The Symposium should make everyone question what the Ontario government and wind industry would like us to believe.

Henri Garand

Chair, Alliance to Protect Prince Edward County"

(\*)[Simple guidelines for siting wind turbines to prevent health risks](#)

*Author:* Kamperman, George; and James, Richard

*Also see* ["How-to guide to criteria for siting wind turbines to prevent health risks from sound"](#) by the same authors

Paper presented at Institute of Noise Control Engineering (INCE) NOISE-CON 2008, July 28-31, 2008

- George W. Kamperman, INCE Bd. Cert. Emeritus, INCE Kamperman Associates, Inc., [george@kamperman.com](mailto:george@kamperman.com)

- Richard R. James, E-Coustic Solutions, [rickjames@e-coustic.com](mailto:rickjames@e-coustic.com)

Rev. 1.0, July 27,

2. Pierpont, MD, PhD, Nina, [Wind Turbine Syndrome, A Report on a Natural Experiment](#), 2009, p. 254, King Printing, Lowell, Mass.

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[http://www.multi-science.co.uk/effects\\_low-frequency.htm](http://www.multi-science.co.uk/effects_low-frequency.htm)

The Effects of Low-Frequency Noise and Vibration on People

Edited by Colin H. Hansen, University of Adelaide

## Wind Turbine Syndrome

<http://www.windturbinesyndrome.com/http://www.windturbinesyndrome.com/>

Wind energy is a multi-billion dollar a year industry. It's billed as "clean, green, renewable."

In this engagingly written, peer-reviewed report by a Johns Hopkins University School of Medicine trained M.D. and Princeton (Population Biology) Ph.D., we discover wind energy's dirty little secret. Many people living within 2 km (1.25 miles) of these spinning giants get sick. So sick that they often abandon (as in, lock the door and leave) their homes. Nobody wants to buy their acoustically toxic homes. The "lucky ones" get quietly bought out by the wind developers—who steadfastly refuse to acknowledge that Wind Turbine Syndrome exists. (And yet the wind developers thoughtfully include a confidentiality clause in the sales agreement, forbidding their victim from discussing the matter further.)

Dr. Nina Pierpont explains in simple, layman's terms how turbine infrasound and low frequency noise (ILFN) create the seemingly incongruous constellation of symptoms she <http://www.windturbinesyndrome.com/buy.html> has christened Wind Turbine Syndrome. (Incongruous only to the non-clinician who does not understand Mother Nature's organs of *balance*, *motion*, and *position* sense.) For the high level clinician, Pierpont provides a parallel chapter written in sophisticated medical language and format, complete with voluminous, up-to-date clinical and scientific references.

The core of the book is 66 pages of ingeniously laid out tables wherein the author presents her clinical Case Histories. The hard data.

Since publishing the book in late 2009, Pierpont has heard from people around the world who are discovering that Wind Turbine Syndrome is not confined to living in the shadow of industrial wind turbines. It turns out people suffer identical symptoms from living close to [natural gas compressor stations](#), industrial sewage pumping stations, and other power plants. In each case, low frequency noise and infrasound appear to be the chief disease-causing culprit—basically, Wind Turbine Syndrome without the turbines.

**3. Summary of Recent Research on Adverse Health Effects of Wind Turbines**, 20 October 2009, Compiled by Keith Stelling, MA MNIMH, Dip Phyt, MCPP (England), with additional files from Carmen Krogh, BscPharm

**4. The Society for Wind Vigilance, "Wind Turbines Linked to 'Sick Building Syndrome.'"**

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Cont.

**5. The Waubra Foundation:** "I have now interviewed over 40 people in rural Australia who have been affected by wind turbines, with the same symptoms." Dr. Sara Laurie, Medical Director

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Cont.

**Mary Lu Brandwein**  
**Homeowner/Musician**  
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[www.shakuhachi.org](http://www.shakuhachi.org)  
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**From:** Morgans <smorgy@hughes.net>  
**Sent:** Tuesday, March 01, 2011 5:57 PM  
**To:** ECOSUB  
**Subject:** Tule Wind Project

Mr. Fisher,

As long time residents of Boulevard we would like to voice our objection to the various proposed wind turbine projects currently under consideration for the Boulevard area (Tule, Campo, Manzanita, Jordan).

Of primary concern at this time is the Tule Wind project.

Our home is located on the north end of Ribbonwood Road (north of the intersection of Opalocka Rd) and we take exception to the downplaying by Iberdrola of the negative visual, financial and possible health impacts that the placement of these turbines will have on the homes in our immediate area. Iberdrola has only sited a couple of homes on the east side of Ribbonwood Rd as being "directly impacted". There are many families on the west side of Ribbonwood Road who will be directly impacted by having their view shed ruined and be subjected to the nuisance factor and possible health risks created by the continuous noise from the turbines. The most dramatic view for these properties is looking east towards Tule Mountain. The "visual simulations" included in Iberdrola's Environmental Documents provide very distorted and carefully crafted depictions designed to minimize the visual impact of the turbines as viewed from Ribbonwood Road and no effort was made to provide such visual simulations as viewed from the many homes on the northern most end of the road.

Iberdrola has also commented that "their studies" show that there is no negative impact on home values as a result of the wind turbines. Other, **independent** studies show that this is totally false and that there are definite substantial reductions in property values in homes within 5 miles of wind turbines. The Tule Wind project will place turbines within a half mile of many homes on Ribbonwood Rd. Regardless of what the studies show, common sense would tell you that if the view from your property is a significant asset to the home's appeal and this view is permanently compromised by 500ft wind turbines it will make the property less appealing and therefore reduce it's value.

We are also very concerned about the potential health risks due to the noise emitted by the turbines. There are documented cases of people being driven from their homes because of the noise factor from nearby wind turbines. The lack of long term studies prevent a definitive statement on what the safe offset from homes would be but the close proximity of the Tule Wind project will definitely create a significant noise impact on families in our area.

**The impacts on the view shed and potential health risks for the many families on the north end of Ribbonwood Road can be significantly mitigated by a reduction in the scope of the Tule Wind project. The elimination of 10 - 12 of the southern most proposed turbine sites and related transmission lines (based on the map in the draft EIR/EIS) would preserve the easterly view and provide a larger buffer from noise and potential health risks.**

If Iberdrola (or any other company) is permitted to place wind turbines in areas that threaten property values and/or create conditions that make existing homes uninhabitable by the current residents due to health issues caused by the noise factor, there should be a legally binding insurance policy issued by these companies that protect the homeowners. If, as Iberdrola contends, there is little or no negative impact from these turbine's proximity to homes then they shouldn't have any issues with issuing a property value guarantee. So far Iberdrola has not been willing to consider such a guarantee.

We are opposed to all of the wind projects (Tule, Jordan, Campo, Manzanita) that threaten to permanently damage the quality of life for the residents in Boulevard however if the Tule Wind Project is allowed to proceed it seems that all reasonable efforts should be taken to minimize the negative impacts on the residents. The small reduction in the Tule Wind project as outlined above would be a responsible action to take in order to help protect the many families in the north Ribbonwood Road area. Iberdrola seems unwilling to compromise their planned project so we are looking towards

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our government agencies (CPUC and BLM) to protect the families who will be permanently damaged by the Tule Wind Project.

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Cont.

Thank you,  
  
Marie and Scott Morgan  
2912 Ribbonwood Rd  
Boulevard, CA.

\*\*\*\*\*  
This footnote confirms that this email message has been scanned by  
PineApp Mail-SeCure for the presence of malicious code, vandals & computer viruses.  
\*\*\*\*\*

Mrs. Ken Eppenheim  
name

39544 Clemente St Bld. Ca.  
address

3/1/11, 2011  
date

MAR 03 2011

Mr. Iain Fisher, CPUC  
Mr. Greg Thomsen, BLM,  
c/o Dudek  
605 Third Street,  
Encinitas, CA 92024

**Draft EIR-EIS Comments/ Opposition: Tule Wind, ECO Substation, Energia Sierra Juarez**

Dear Mr. Fisher and Mr. Thomsen,

This letter is being provided to ensure that our concerns and strong opposition are documented in the record for these large wind turbine, substation, and power line projects that your agencies are reviewing as the Proposed Project, alternative projects, and cumulative projects. We may need to join in filing a future lawsuit for damages related to nuisance, loss of property value, quality of life, the use and enjoyment of our property, and other potential adverse effects.

F71-1

We reside in the neighborhood off Ribbonwood Road north of I-8 , in Boulevard. When we moved here, this was a beautiful and quiet place to live and to invite family and friends to join us. Easy access to our adjacent public lands in the McCain Valley Resource Conservation and Recreation Area has been added benefit of living here. All that has changed and we are now very concerned for our own future and that of our neighbors, pets, livestock, and the local wildlife.

We are already impacted by the existing Kumeyaay Wind turbines on the Campo Reservation 2 miles or so to the west of us. We hear and feel the thumping of the giant blades that sometimes disrupts our sleep and creates a nuisance. We also deal with the visual blight of the whirling blades skyline on the ridgeline and the day and night strobe and aviation lights--none of which seem to work properly since the catastrophic failure of all 25 turbines in December 2009. Those almost 4 months of turbine downtime were some of the best days and nights we have had since the turbines started operation around 2005.

F71-2

A moratorium on industrial wind turbine projects should be initiated by local state, and federal agencies, unless and until science-based peer reviewed health and safety tests are conducted to determine a safe setback distance. To date, those studies have not been done and industrial wind energy supporters cannot claim otherwise.

You are now reviewing three energy projects, along with the additional proposed wind turbine projects on the Manzanita and Campo Reservations and Greg Lansing's ranch lands on Ribbonwood Road and Jewel Valley Road. The Jordan / Enel Jewel Valley Wind Project on Ribbonwood Road would be within several thousand feet of our neighborhood homes. San Diego Gas & Electric's large 500 kV Sunrise Powerlink towers and lines will also be installed all along the eastern edge of McCain Valley Road east of us, and will also loop around to the north and west of our neighborhood, placing us down wind of many potential turbine, power line, and /or substation related fires / firestorms.

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The up to 134 Tule Wind turbines, that will stand almost 500 feet tall, are planned to be installed approximately 1 mile from our home along the top of the ridge just east of our property, and to north at across the top of McCain Valley.

The new Tule Wind 138 kV transmission line is also planned to run right next to the Sunrise Powerlink lines along McCain Valley Road, *or along the western edge of the BLM project site* and ridgeline to the north east of our home.

A new 5 acre substation and 5 acre operation and maintenance building, for the Tule Wind project, are also planned for private land on McCain Valley Road, or for the Rough Acres Ranch property just to the southeast of us.

Ribbonwood Road, our only access road, will be the adversely impacted by the related Project construction traffic, noise, and road damage from overweight vehicles and equipment. Our quiet neighborhood road will become an industrial highway of sorts, creating much more dangerous and invasive conditions for local residents.

**There are several main concerns that we want your agencies to address and respond to:**

1) Increased risk of fire; increased fire insurance rates or total loss of coverage due to new high risk development near our home; reduced fire fighting access due to increased potential for electrocution to fire fighters. Power lines, wind turbines, substation transformers can all start fires. This can translate into a life or death situation for us, with only one dead end access road and limited local fire fighting staff availability, equipment, and funding.

2) Noise and low frequency pollution from industrial wind turbines, some below the level of human hearing, can and does make people and animals ill when turbines are placed too close to homes, livestock, and sensitive wildlife areas. It has been reported that families have even abandoned their homes to escape the unbearable living conditions that are inflicted by these power generating turbine. Increased medical expenses and long-distance round trips for medical attention can really add up. Impacts to pets and livestock can also be severe and expensive.

3) No safe distance has been scientifically determined for industrial wind turbine set-backs. We do know that we don't want them anywhere near our home or the homes of other families. They should be placed miles and miles away from any occupied buildings, livestock, public recreation areas, campgrounds, and protected wildlife areas.

4) Electrical pollution, stray voltage, has been documented in and around other wind turbine and substation projects and homes within 1,800 feet and much more. There are indications that wind turbines and the substations that serve them are more prone to generate electrical pollution due to the intermittent nature of the energy they produce.

4) Shadow flicker from turbines can extend several thousand feet during certain times of day and can create a harmful pulsing light effect that can result in vertigo, seizures, or other adverse effects. That strobe effect also has adverse effects on pets, livestock and wildlife. Our home and property will likely be impacted during the late afternoon and evening hours.

5) Property value losses are being recorded at other wind turbine projects. We join others in requesting that Tule Wind be required to enter into binding Property Value Protection Agreements to ensure that we do not suffer lost value or the inability to sell our property, if rendered necessary, due to the adverse impacts generated by the proximity of their massive wind turbines, power lines, and substations that will surround us. Their current

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wind testing equipment, highly visible from our homes and neighborhood, must be disclosed to potential buyers.

6) We are requesting that any project approvals include binding contractual agreements for adequate and ongoing funding for third party unbiased pre-construction testing for ambient noise, low frequencies and infrasound, and dirty electricity levels to be taken both inside and outside our home and at all our property lines. We are also requesting ongoing monitoring and enforceable compliance guarantees that include shutdown of non-compliant turbines--in the event these projects are approved over our objections.

7) The County noise ordinance and turbine setbacks are currently inadequate to protect public health and safety and cannot be relied upon for these projects. Compliance with those standards, as stated in the Draft EIR/EIS will NOT insure against the generation of a nuisance. Your agencies must address this issue. Our rural ambient noise levels are much lower than stated in the Draft EIR/EIS. Complaints have been generated at other wind energy projects with only minimal increases in noise levels. All ranges of noise levels, audible and inaudible need to be documented at pre-construction levels--and protected for public health and safety.

8) We also have concerns over adverse impacts to both the quality and quantity of our well water. Tule Wind will be clearing, grading, and blasting for turbine footings and new access roads. They will also be drawing large amounts of well water from several wells on Rough Acres Ranch for cement batch plants and other operational uses. Their turbines, substation, transformers, and maintenance buildings will contain hazardous fluids that can spill or leak into the water table. Our water levels should be documented by a licensed unbiased third party prior to commercial uses at nearby wells. We have no economically viable alternative source of water available to replace what we currently have. Cumulative impacts include the Sunrise Powerlink and other projects proposed in this area.

9) Day time strobe lights and red blinking night lighting on the turbines and some of the transmission towers will create another nuisance both day and night ,and take away from our beautiful dark night sky, one of the few left in Southern California.

In short, we strongly object to and oppose the introduction of any additional commercial industrial scale wind turbines, the related infrastructure and power lines, and all the adverse impacts that go with them, into our quiet rural neighborhood.

Any approvals of such would constitute a nuisance based on bulk and scale, blinking lights, noise levels (including low frequency and infrasonic), disruption to the peaceful use and enjoyment of our home and property and the very real potential for adverse health effects. While ignored, denied, and dismissed by the wind energy industry, growing evidence documents that some home owners have been bought out by wind energy companies due to undeniable adverse effects. The problems are real and must be addressed by your agencies prior to any project decisions.

We strongly support and encourage the efforts of Backcountry Against Dumps to protect and defend our rural community from the unnecessary, expensive and invasive commercial industrial energy projects, including potential future litigation.

Sincerely,

  
signature here

cc: Donna Tisdale  
Backcountry Against Dumps  
PO Box 1275, Boulevard, CA 91905

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MAR 07 2011

**Michele Strand  
2235 Tierra Heights Road  
Boulevard, CA 91905**

March 1, 2011

Mr. Iain Fisher, CPUC  
Mr. Greg Thomsen, BLM,  
c/o Dudek  
605 Third Street,  
Encinitas, CA 92024

**Subject: Draft EIR-EIS Comments / Opposition: Tule Wind, ECO Substation,  
Energia Sierra Juarez**

Dear Mr. Fisher and Mr. Thomsen,

This letter is being provided to ensure that our concerns and strong opposition are documented in the record for these large wind turbine, substation, and power line projects that your agencies are reviewing as the Proposed Project, alternative projects, and cumulative projects. We may need to join in filing a future lawsuit for damages related to nuisance, loss of property value, quality of life, the use and enjoyment of our property, and other potential adverse effects.

We reside in the neighborhood between Highway 8 and Olde Highway 80, on the Tecate Divide, in Boulevard. When we moved here, this was a beautiful and quiet place to live and invite family and friends to join us. Easy access to our public lands in the McCain Valley Resource Conservation and Recreation Area has been added benefit of living here. My fiancé proposed to me on a crisp October night at the scenic overlook in McCain Valley. Instead of dinner at a fancy restaurant, we would take weekly trips to McCain Valley to experience nature's wonder. I even wanted to plan our wedding there. All that has changed and we are now very concerned for our own future and that of our neighbors, pets, livestock, and the local wildlife.

We are already impacted by the existing Kumeyaay Wind turbines on the Campo Reservation 1 mile or so to the northwest of us. We hear and feel the thumping of the giant blades that sometimes disrupts our sleep and creates a nuisance. We also deal with the visual blight of the whirling blades skyline on the ridgeline and the day and night strobe and aviation lights--none of which seem to work properly since the catastrophic failure of all 25 turbines in December 2009. Those almost 4 months of turbine downtime were some of the best days and nights we have had since the turbines started operation around 2005.

A moratorium on industrial wind turbine projects should be initiated by local state, and federal agencies, unless and until science-based peer reviewed health and safety tests are conducted to determine a safe setback distance. To date, those studies have not been done and industrial wind energy supporters cannot claim otherwise.

You are now reviewing three energy projects, along with the additional proposed wind turbine projects on the Manzanita and Campo Reservations and Greg Lansing's ranch lands on Ribbonwood Road and Jewel Valley Road. The Jordan / Enel Jewel Valley Wind Project on Ribbonwood Road would be within several thousand feet of our neighborhood homes. San Diego Gas & Electric's large 500 kV Sunrise Powerlink towers and lines will also be installed all along the eastern edge of McCain Valley Road northeast of us, and will also loop around

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to the north and west of our neighborhood, placing us down wind of many potential turbine, power line, and /or substation related fires / firestorms.

The up to 134 Tule Wind turbines, that will stand almost 500 feet tall, are planned to be installed approximately 2 miles from our home along the top of the ridge just northeast of our property, and to the north across the top of McCain Valley.

The new Tule Wind 138 kV transmission line is also planned to run right next to the Sunrise Powerlink lines along McCain Valley Road, *or along the western edge of the BLM project site*, and ridgeline to the northeast of our home.

A new 5 acre substation and 5 acre operation and maintenance building, for the Tule Wind project, are also planned for private land on McCain Valley Road, or for the Rough Acres Ranch property just to the northeast of us.

Ribbonwood Road, the only access road for some of our friends and neighbors, will be adversely impacted by the related Project construction traffic, noise, and road damage from overweight vehicles and equipment. Our quiet neighborhood road will become an industrial highway of sorts, creating much more dangerous and invasive conditions for local residents.

**There are several main concerns that we want your agencies to address and respond to:**

1) Increased risk of fire: Increased fire insurance rates or total loss of coverage due to new high risk development near our home; reduced fire fighting access due to increased potential for electrocution to fire fighters. Power lines, wind turbines, substation transformers can all start fires. This can translate into a life or death situation for us due to limited local fire fighting staff availability, equipment, and funding.

2) Noise and low frequency pollution from industrial wind turbines, some below the level of human hearing, can and does make people and animals ill when turbines are placed too close to homes, livestock, and sensitive wildlife areas. It has been reported that families have even abandoned their homes to escape the unbearable living conditions that are inflicted by these power generating turbines. Increased medical expenses and long-distance round trips for medical attention can really add up. Impacts to pets and livestock can also be severe and expensive. My work commute is over 1 hour, leaving me little precious time to return home and evacuate my animals, in the event of a firestorm.

3) No safe distance has been scientifically determined for industrial wind turbine set-backs. We don't want them anywhere near our home or the homes of other families. They should be placed miles and miles away from any occupied buildings, livestock, public recreation areas, campgrounds, and protected wildlife areas.

4) Electrical pollution and stray voltage has been documented in and around other wind turbine and substation projects and homes within 1,800 feet and much more. There are indications that wind turbines and the substations that serve them are more prone to generate electrical pollution due to the intermittent nature of the energy they produce.

4) Shadow flicker from turbines can extend several thousand feet during certain times of day and can create a harmful pulsing light effect that can result in vertigo, seizures, or other adverse effects. That strobe effect also has adverse effects on pets, livestock and wildlife. Our home and property will likely be impacted.

5) Property value losses are being recorded at other wind turbine projects. We join others in requesting that Tule Wind be required to enter into binding Property Value Protection Agreements to ensure that we do not suffer lost value or the inability to sell our property, if rendered necessary, due to the adverse impacts generated by the proximity of their

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massive wind turbines, power lines, and substations **that will surround us**. Their current wind testing equipment, highly visible from our homes and neighborhood, must be disclosed to potential buyers.

6) We are requesting that any project approvals include binding contractual agreements for adequate and ongoing funding for third party unbiased pre-construction testing for ambient noise, low frequencies and infrasound, and dirty electricity levels to be taken both inside and outside our home and at all our property lines. We are also requesting ongoing monitoring and enforceable compliance guarantees that include shutdown of non-compliant turbines--in the event these projects are approved over our objections.

7) The County noise ordinance and turbine setbacks are currently inadequate to protect public health and safety and cannot be relied upon for these projects. Compliance with those standards, as stated in the Draft EIR/EIS will NOT insure against the generation of a nuisance. Your agencies must address this issue. Our rural ambient noise levels are much lower than stated in the Draft EIR/EIS. Complaints have been generated at other wind energy projects with only minimal increases in noise levels. All ranges of noise levels, audible and inaudible need to be documented at pre-construction levels--and protected for public health and safety.

8) We also have concerns over adverse impacts to both the quality and quantity of our well water. Tule Wind will be clearing, grading, and blasting for turbine footings and new access roads. They will also be drawing large amounts of well water from several wells on Rough Acres Ranch for cement batch plants and other operational uses. Their turbines, substation, transformers, and maintenance buildings will contain hazardous fluids that can spill or leak into the water table. **Our water levels should be documented by a licensed unbiased third party prior to commercial uses at nearby wells. We have no economically viable alternative source of water available to replace what we currently have.** Cumulative impacts include the Sunrise Powerlink and other projects proposed in this area.


9) Day time strobe lights and red blinking night lighting on the turbines and some of the transmission towers will create another nuisance both day and night, and take away from our beautiful dark night sky, one of the few left in Southern California.

In short, we strongly object to and oppose the introduction of any additional commercial industrial scale wind turbines, the related infrastructure and power lines, and all the adverse impacts that go with them, into our quiet rural neighborhood.

Any approvals of such would constitute a nuisance based on bulk and scale, blinking lights, noise levels (including low frequency and infrasonic), disruption to the peaceful use and enjoyment of our home and property and the very real potential for adverse health effects. While ignored, denied, and dismissed by the wind energy industry, growing evidence documents that some home owners have been bought out by wind energy companies due to undeniable adverse effects. The problems are real and must be addressed by your agencies prior to any project decisions.

We strongly support and encourage the efforts of Backcountry Against Dumps to protect and defend our rural community from the unnecessary, expensive and invasive commercial industrial energy projects, including potential future litigation.

Sincerely,

  
Michele Strand

cc: Donna Tisdale  
Backcountry Against Dumps  
PO Box 1275, Boulevard, CA 91905

F72-11  
Cont.

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F72-16

To Whom It May Concern:

Thank you for the opportunity to comment on the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects, along with the Campo, Manzanita, and Jordan wind energy projects and their cumulative effects in this regional area.

Briefly stated, we support the CEQA No Project/No Action Alternative for ALL of the proposed projects including the Campo, Manzanita, and Jordan wind projects that are anticipated to yield similar residual effects. We do not support the BLM Alternative 5 - Reduction in Turbines for the Tule wind turbine project. We think there should be NO wind turbine projects built anywhere in this regional area.

F73-1

#### WILDERNESS AND RECREATION

On page D.5-30, wilderness and recreation, the report states, "Impacts to wilderness and recreation would be significant if: The proposed project, including the Campo, Manzanita, and Jordan wind energy projects, or alternatives would directly or indirectly disrupt activities in established federal, state, or local recreation and/or wilderness areas."

We disagree with the report's findings. We think there would be significant indirect and unmitigable adverse impacts to recreation and/or wilderness areas, and that they would be disruptive to its users from Tule wind turbines and other proposed wind turbine projects. These projects won't preclude recreational use of the area; however, as mentioned in the ESJ U.S. Transmission Line Project DEIS, Section S.11 Cumulative Impacts - page S-34: "To the extent that distant views of the surrounding landscape are a valuable component of recreational use of the region, then ANY diminishment of this character is considered an indirect and potentially major impact to recreational resources." We know the Tule wind turbines and other proposed wind turbine projects will intrude and encroach upon the distant and close-up views of the surrounding landscape diminishing its visual character and quality that would have major indirect adverse impacts to recreationists like us.

F73-2

On page D.3-157, visual resources, Table D.3-8 lists four significant and unmitigable impacts to the visual resources from the Tule wind turbine project (TULE-VIS-1, 3, 4, 5). We agree, and think these adverse impacts would also apply to recreation/wilderness areas and its users.

TULE-VIS-1 - We think the substantial adverse effects on a scenic vista would apply to ALL areas within the McCain Valley National Cooperative Land and Wildlife Management Area, not just the Carrizo Overlook, Ribbonwood Trail and Ribbonwood Road Pathway and would affect ALL recreational activities there.

Additionally, on page D.5-16, wilderness and recreation, the report states, "Several turbine strings would, however, be located NEAR special designation areas, state park lands, and campgrounds. For example, several turbines in the proposed J-string would be located on the Ewiiapaayp Indian tribal lands that are BOUND to the north and east by the Sawtooth

F73-3

Mountains Wilderness (the closest turbine would be located WITHIN 200 FEET of the wilderness boundary). Several other turbine strings (D- and E-strings on BLM land and R-strings on County lands) would be located on lands BORDERING the In-Ko-Pah Mountains ACEC and the Carrizo Gorge Wilderness Study Area. The closest turbine in the D-string would be located approximately 1.25 MILES west of the In-Ko-Pah ACEC BORDER, while the closest turbines in the E- and R-strings would be located within 100 FEET of the ACEC BORDER. The closest turbine in the R-string would be located approximately 4,000 FEET west of the Carrizo Gorge Wilderness Study Area BORDER. Turbines in the D- and E-strings would also be located WITHIN 1,300 FEET of the Carrizo Overlook, A SCENIC OVERLOOK. Lastly, several turbines in the G-turbine string would be located APPROXIMATELY 1,300 FEET west of the Lark Canyon Campground, and the closest turbine in the A-string would be located APPROXIMATELY 1,300 FEET northeast of the Cottonwood Campground.

Additionally, as shown in Figure D.5.I, the Sombrero Peak Wilderness Study Area in the Anza-Borrego Desert State Park would be in close proximity to the A-string turbines.

Many of these special designated areas mentioned above are key destination and key observation points (KOPs) that many recreationists like us use because they are remote and offer opportunities to view landscape and wildlife. The recreational experience of being in a remote location in the McCain Valley National Cooperative Land and Wildlife Management Area would no longer exist. Instead, we would experience being in the middle of several wind farms. Wind turbines would be highly visible and intrude or encroach upon, and thus obstruct and degrade, the scenic views we observe while using ALL of these areas within the McCain Valley Area for recreational purposes. It would have a major indirect adverse impact on recreational resources and its users.

TULE-VIS-3 - We think the same reasoning would also apply to the visual character or quality that would also be substantially degraded by the Tule wind turbines in ALL areas within the McCain Valley National Cooperative Land and Wildlife Management Area. These wind turbines would cause PROFOUNDLY STRONG VISUAL CONTRASTS UP TO 5 MILES AWAY due to the more than 400-foot-tall scale and vertical form of the turbine towers, their light color, and especially the movement of blades. Where openly seen on ridgelines and/or against tan and green mountain slopes, the visibility of multiple wind turbines would create dominant, large-scale industrial elements in predominantly natural landscapes. They would be visually dominant from rural residential, highway, and PUBLIC LAND LOCATIONS within both foreground and middle-ground viewing locations. ALL areas in the McCain Valley National Cooperative Land and Wildlife Management Area would be within 5 MILES of a wind turbine, and thus there would be a major indirect adverse impact on recreational resources and its users anywhere within its boundaries and extend into the surrounding wilderness and ACEC areas.

TULE-VIS-4 & 5 - These impacts would also create a substantial new source of light or glare that would adversely affect day or nighttime views in the area and be a SOURCE OF ANNOYANCE not only for the residents, but for recreationists like us who enjoy star gazing at night from Lark and Cottonwood Campgrounds. This would have a major indirect adverse

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F73-5



impact on recreational resources and its users.

On page D.5-5, General Overview, the report states, "In general, the recreation and wilderness areas in the vicinity of the proposed project support a variety of activities including, camping, hunting, fishing and hiking while at the same time placing an EMPHASIS on habitat preservation and conservation efforts. According to the BLM, the Carrizo Gorge Wilderness is the ONLY ecological transition zone between the Colorado Desert and the Peninsular Mountain Ranges. (BLM 2009b)" We think the emphasis on this unique area is being diminished by the proposed projects.

On page D.5-15, we would like to add here that the report states the proposed transmission line would be located IN CLOSE PROXIMITY to the Table Mountain ACEC, Anza-Borrego Desert State Park, and County facilities. Several trail and pathway corridors (including the San Diego and Arizona Eastern Railway Trail, Jewel Valley Trail, Lansing Trail, and the Jewel Valley Road Pathway corridors) identified in the Boulevard Community Trails and Pathways Plan would also be CROSSED by the proposed alignment.

#### Federal Land Policy and Management Act

On page D.5-21, the report states, "FLPMA defines ACEC as "areas within the public lands where special management attention is required (when such areas are developed or used or where no development is required) to PROTECT and PREVENT IRREPARABLE damage to important historic, cultural or scenic values, fish and wildlife resources or other natural systems or processes, or to PROTECT life and safety from natural hazards." (BLM 2001)

On that same page, the report states, "FLPMA states that in the development and revision of land use plans, the Secretary of the Interior shall use and observe the principles of multiple use, GIVE PRIORITY to the DESIGNATION and PROTECTION of ACECs , AND WEIGH LONG-TERM BENEFITS TO THE PUBLIC AGAINST SHORT-TERM BENEFITS (BLM 2001).

We think it imperative that long-term adverse impacts from development in an intact, mostly pristine area should be weighed against short-term industrial uses such as wind turbines when they are located as little as 100 FEET AWAY from an ACEC. The important historic, cultural and scenic values and wildlife resources in these areas are not currently being given special management attention or protection and are being damaged by illegal motorcyclists (pictures attached) and adding any new roads nearer to an ACEC will only add to their destruction.

#### National Trails System Act

On page D.5-21, the report states, this Act was established "in order to provide for the ever-increasing outdoor recreation needs of an expanding population and in order to promote the PRESERVATION of, public access to, travel within, and ENJOYMENT and APPRECIATION of the OPEN-AIR, OUTDOOR AREAS, and historic resources of the Nation."



It refers to the Pacific Crest Trail which we use and will be impacted by the wind turbines on the Ewiiapaayp Indian tribal lands. How can recreationists like us enjoy and appreciate the open-air and outdoor areas and views when they are substantially obstructed and degraded by wind turbines? Is this preservation? The "great outdoors" won't be so great here anymore, just outdoors next to wind turbines and lines that intrude and encroach upon the views and the natural experience while hiking.

F73-8  
Cont.

On Page D.5-21, 43 CFR 6300 and 8560, the report states, "To summarize, the use of mechanical transport within wilderness areas violates the intent of the wilderness area designation as an area of relatively undeveloped land still in its natural state (65 FR 78358-78376)." We have already mentioned the damage illegal motorcyclists have done in these areas and adding any new roads near wilderness areas will add to their destruction.

F73-9

#### California Desert Protection Act

On page D5.22, the report states, The California Desert Protection Act of 1994 designated the Jacumba Mountains Wilderness and Carrizo Gorge Wilderness as federal wilderness areas.

#### BLM Eastern San Diego County Resource Management Plan

F73-10

Even though the Tule wind turbine and other proposed wind turbine projects are not located in these areas, won't the substantial adverse impacts to visual resources from them that cause PROFOUNDLY STRONG visual contrasts up to 5 MILES AWAY intrude upon the scenic vistas in these areas and indirectly adversely affect recreational resources and its users like us? The reason we use these areas is because they are WILderness areas, not industrial areas.

After reading the report, two questions came to mind regarding the BLM.

1. HOW CAN THE BLM	WHEN THE BLM ALSO:
state their INTENT is	INTENDS
to DIRECT future development	to PERMIT Tule Wind
and MANAGE land within the	to CONSTRUCT wind turbines/lines in the
Eastern San Diego County Area	Eastern San Diego County Area
in a way that DOES NOT IMPACT the NATURAL RESOURCES	with SIGNIFICANT UNMITIGABLE IMPACTS to the NATURAL RESOURCES
and MAINTAIN THE ENVIRON-QUALITY	that OBSTRUCT and DEGRADE ITS ENVIRONMENTAL QUALITY?

F73-11

2. If the RMA Zone-04 McCain Valley Recreation Management Zone:	
<p>is MANAGED as a DESTINATION</p> <p>and the Primary Market Strategy targets . . . EXPERIENCE OPPORTUNITIES</p> <p>for its NATURAL RESOURCE QUALITIES</p> <p>by participating in primary recreational activities such as: HIKING, LANDSCAPE and WILDLIFE VIEWING</p>	<p>Who would come here as a DESTINATION</p> <p>for OPPORTUNITIES TO EXPERIENCE</p> <p>HUNDREDS of UNNATURAL WIND TURBINES/LINES</p> <p>while HIKING and OBSERVING MOVING FAN BLADES that OBSTRUCT and DEGRADE the VIEW of the LANDSCAPE and KILL GOLDEN EAGLES and OTHER BIRDS?</p>

F73-12

#### BLM Limited Use OHV Management Area

On Page D.5-25, the BLM OHV-05A: Reduce or halt the unauthorized proliferation of motorized and nonmotorized recreation trails, and OHV-06: Minimize impacts to identified sensitive cultural, natural, biological, and visual resources are not currently being properly managed, as already mentioned (see attached pictures).

F73-13

#### California Wilderness Preservation System

On page D.5-27, State Regulations, California Wilderness Preservation System, defines wilderness areas, "In addition, both wilderness areas and state wilderness MUST have OUTSTANDING opportunities for SOLITUDE AND RECREATION, contain at least 5,000 acres of land, and contain ecological, geological, or other resources of scientific or SCENIC VALUE."

Some the wilderness areas adjacent to the McCain Valley National Cooperative Land and Wildlife Management Area would have wind turbines WITHIN 200 FEET. Opportunities for solitude and recreation would be intruded and encroached upon by OVER 400-FOOT-TALL wind turbines that have PROFOUNDLY STRONG visual contrasts up to 5 MILES AWAY. Turbines would be HIGHLY visible in the project area and would DOMINATE the visual landscape affecting the SCENIC VALUE when using this area for the wilderness experience.

F73-14

We especially like hiking informal trails such as the Sombrero Peak and Pepperwood trails, that originate from Cottonwood Campground and have destinations to the north and northeast where the only thing that is man-made that still exists is of cultural or historical interest. There is an expansive view of the Sawtooth Wilderness Area, Canebrake Valley, and distant mountains.

The J- and A-string turbines would be intrusive here. We also use informal trails that originate from the Carrizo Overlook and Lost Valley Road areas that have destinations to the east in the wilderness and ACECs where there are palm oasis. There would also be turbine strings here that would be visually intrusive especially when returning back from hiking in those areas and looking west. We think the KOPs looking west in these areas are exceptional because of the view of the Laguna escarpment, especially when covered in snow. There are also informal trails in the Sacatone Overlook area that would be affected in the same manner.

There are several Codes in the California Wilderness Preservation System that define a wilderness area, such as: "A wilderness area, in contrast to those areas where a man and his own works dominate the landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor who does not remain. . . .which has retained its primeval character and influence or has been substantially restored to a near natural appearance without permanent improvements." The State Parks and Recreation Commission is responsible for "preserving the wilderness character of an area" . . . "commercial enterprises, temporary or permanent roads, structures or installations, motor vehicles, motorized equipment. . . "

Considering that wind turbines, lines, roads, construction and maintenance equipment and personnel would be within 100 FEET of wilderness and ACECs without buffer zones, will the wilderness character of this area be preserved? We think the primeval character and near natural appearance without permanent improvements would no longer exist. Are we critically or casually concerned with our Areas of Critical Environmental Concern?

On page D.5-71, APM Tule-REC-1 does nothing to rectify the indirect major adverse visual impacts and their diminishment of recreational resources and its users, and we think these impacts would remain Class I impacts.

On page D.5-39, the report states, "In addition, as discussed in Section B, Project Description, all new permanent spur access roads would be gated off of the main access road. Please see our comments and pictures in regards to this issue under biological resources below.

#### VISUAL RESOURCES

The adverse impacts to the visual resources from the Tule wind turbines are due to the inherent characteristics of the wind turbines themselves and their associated auxiliary infrastructure that cannot be solved with reduction. Typical wind turbine characteristics such as the wind turbine's more than 400-foot-tall scale, their light color, the movement of blades, and lighting cannot be effectively screened or remedied by mitigation. These adverse impacts would be substantial.

BLM Eastern San Diego County Resource Management Plan

On page D.3-49, visual resources, the report states, "The majority of the Tule wind project site would be located within the McCain Valley National Cooperative Land and Wildlife Management

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F73-16



Area, which has been designated by the BLM as VRM Class IV." We know this area was recently downgraded, and we think it should be upgraded again to a Class I or Class II. We think either of these classifications is more appropriate than the Class IV because of the area's high visual resource values based on its scenic vistas, character and quality of the site and its surroundings as identified in the report (Class A - EXCEPTIONAL - in some instances). The VRM classifications determine to what extent an area is developed, and we would like to see very little, if any, development here because of its high visual resource values. The EXCEPTIONAL views would become APPALLING!

F73-16  
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On page D.3-50, there is one VRM element we are concerned about. VRM-03 states, "Evaluate proposed surface-disturbing projects from KOPs for the following factors: distance (between project and KOPs), angle of observation, length of time the proposed project will be in view, relative size or scale, season of use, light conditions, recovery time, spatial relationships, atmospheric conditions, and motion. Are the Tule wind turbines and other proposed wind turbine projects in CONFLICT with VRM-03 considering their significant and unmitigable impacts to the high visual resources here?"

F73-17

On page D.4-65, Land Use, BLM Final Programmatic EIS, the report states, "The BLM will not issue ROW authorizations for wind energy development on lands on which wind energy development is INCOMPATIBLE with specific resource values." We think the Tule wind turbines and other proposed wind turbine projects in the McCain Valley area have significant and unmitigable adverse impacts and/or are in CONFLICT with existing (recreation, for example) and planned multiple-use activities or land use plans that make them INCOMPATIBLE with the high visual resource values here.

#### Federal Land Policy and Management Act

On page D.3-50, visual resources, the report includes FLPMA (2001) and the sections that emphasize the PROTECTION of the quality of scenic resources on public lands: Section 102 (a), 103 ©, Section (a) and Section 505 (a). On the next page, the report states FLPMA objectives to protect the quality of scenic resources on public lands are met through the BLM's VRM system, previously described. The VRM system is implemented through the RMP and the management framework process. Are the high scenic resources on these public lands PROTECTED in view of the significant and unmitigable impacts in regards to the Tule wind turbine project and the other proposed wind turbine projects?

F73-18

#### BLM Recreation Areas

On page D.5-40, wilderness and recreation, the report states, "wilderness area buffer zones are not provided in the Eastern San Diego County RMP." We would like to suggest that buffer zones be provided in the McCain Valley National Cooperative Land and Wildlife Management Area for the Tule wind turbine and other proposed wind turbine projects. Buffer zones could provide the necessary distances to protect various existing area designations from significant and unmitigable adverse impacts by an adjoining proposed project. Adjoining uses like

F73-19

industrial wind turbines and/or a community, resource, wilderness or ACECs, recreation area, trails, campgrounds, viewpoints, etc. are examples of this. Buffer zones could already be established before projects are proposed, or afterwards when adverse impacts are identified. (The Tule wind turbine project, for instance, would PROFOUNDLY adversely affect views in areas up to 5 miles away and affect scenic vistas 15 miles away or more.) Buffer zones would provide a set of standards and uniformity that would be applied when different conflicting uses are adjacent to each other. Distances necessary could be measured by the foot or by miles depending on the degree of the adverse impact..

F73-19  
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## BIOLOGICAL RESOURCES

We agree with the significant and unmitigable impacts described under TULE BIO-10 for golden eagles, but disagree with the findings for the Peninsular bighorn sheep.

F73-20

### Birds

We have included two pictures of bald eagles we observed last year at Cuyamaca Rancho State Park and Cleveland National Forest. In August 2010, the bald eagle we spotted from Fletcher Island at Cuyamaca Lake was known to be in the area. The other one we observed with our son that Norm the Fire Watchman at the Los Pinos Fire Lookout spotted on Father's Day looking west towards the Hauser/Pine Creek wilderness areas last year was not known to be in that area. The Sunrise Powerlink Record of Decision amendments included the addition of the Bald and Golden Eagle Protection Act based on many sightings that became known from the public, along with ours, in many areas the Powerlink would traverse. Will this Act be added to the final Tule report as a mitigating measure because of TULE-BIO-10 in Table D.2-13 which pertains to golden eagles in the area? The report stated their populations are declining and that this area could become a continuing sink for golden eagles attempting to use nesting sites west of the project area if the proposed wind turbines are built here. We think the Tule wind turbine project and other proposed wind turbine projects would present a hazard for electrocution or collision with fan blades for golden eagles and should not be built.

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We also think more intensive surveys for golden eagles should be conducted. We observe and have pictures of many large birds of prey in the McCain Valley area soaring above ridgetops.

F73-23

There are other raptors and birds that use the area that could be significantly impacted when colliding with the wind turbine blades, such as red-tailed hawks and turkey vultures. Do we know if there would be a ripple effect on animal populations they hunt for food if their numbers decline?

F73-24

On page S-18, in the ESJ Transmission Line Project DEIS, the presence of transmission towers were considered beneficial to raptors for nesting purposes. However, the Audubon Society wrote a letter stating the opposite is true. Can this be clarified and taken into consideration for these proposed projects? Also, would the proximity of the Sunrise Powerlink towers be in conflict with the proposed wind turbines? Birds that nest on the Sunrise Powerlink towers could collide with the rotating blades of the wind turbines when hunting for food.

F73-25

F73-26

## Peninsular Bighorn Sheep

On page S-19, in the ESJ Transmission Line Project DEIS, it stated, "construction and operations of the wind facilities, coupled with elevated levels of human activity from workers and visitors to the wind farm, could alter wildlife behavior, including avoidance of the area."

We are concerned that the Peninsular bighorn sheep and other wildlife that are in close proximity to these proposed projects might also be affected by wind facilities here in the same way. On page D.2-59, biological resources, it states, "... portions of the In-Ko-Pah Mountains and are located WITHIN 800 FEET of the proposed project footprint. ... Unit 3 is currently occupied by Peninsular bighorn sheep. ... 0.79 MILE from the proposed project, near Tule Peak. The closest critical habitat for this species is just east of the Tule wind project area (see Figure D.2-9) where it is located less than half a mile from the easternmost portion." We have seen evidence of bighorn sheep when hiking in the McCain Valley area (footprints/scat/forage use). We know there are also springs and creeks with flowing water in these areas that they use. We know of one spring that used to have water, and as of two weeks ago, was dry. We know of two other springs that hold water at Mountain Springs, and were thought to be dry. Will these proposed projects affect the bighorn sheep and other wildlife when they use these water sources? Will the noise and activity level from construction and operation of the proposed wind turbines, coupled with elevated levels of human activity from workers, drive them into other areas, especially from the edges of the wilderness and ACECs because there are no buffer zones?

We have observed illegal motorcyclists and their tracks which cause damage when we hike in this area. The attached pictures show some of the damage we saw on recent hikes near the western rim of Carrizo Gorge. We encounter illegal motorcyclists frequently while hiking in remote areas that they are not supposed to be in where we have also observed either deer/ bighorn sheep prints, scat and bones. If motorcyclists are already damaging the area by riding illegally on roads/trails that already exist even when gated, posted off limits, or have riprap across them, what will happen when more roads are built? Will security be provided to ensure illegal use doesn't occur? Are the bighorn sheep and other wildlife already being effected by these motorcycles in the areas they used to frequent more extensively in the past?

## WILDLIFE AND FUELS MANAGEMENT

We agree with the findings of significant and unmitigable in the report for this issue. Here again, the inherent characteristics of the wind turbines and their associated auxiliary infrastructures cannot be remedied by reduction in regards to this issue.

The report states the presence of over 100 wind turbines and related electrical transmission lines would result in potential ignition sources within an area ranked HIGH, VERY HIGH OR EXTREME for wildfire.

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F73-28

F73-29

The Tule Wind project will have ongoing maintenance activities and the inclusion of five permanent and five part-time employees at the facility there that will also increase the possibility of ignition.

The primary areas of risk at the Tule Wind project site will be the overall premises, the towers, the rotor blades, the nacelles and potentially transformers and overhead collection lines. The nacelle is unmanned and too high for firefighter response.

The report concludes that due to the potential for ignitions related to the presence of the overhead transmission lines to occur throughout the calendar year, including during extreme fire weather, and in an area considered VERY HIGH FIRE HAZARD SEVERITY ZONE with adjacent wildland fuels, the presence of the project would adversely increase the likelihood of a wildfire.

Is it in the PUBLIC'S BEST INTEREST to introduce wind turbines and their auxiliary infrastructures into an area that is a very high fire hazard severity zone?

#### SUMMARY

We consider McCain Valley OUR FAVORITE DESTINATION to camp, hike, view landscape, wildlife and wildflowers, take pictures, star gaze and find solitude in all of San Diego County. One of our hiking resource books, Afoot and Afield San Diego County by Jerry Shad states, "The area between County Highway S-2 in the south end of Anza-Borrego State Park and the BLM's McCain Valley Resource Conservation Area constitutes some of the most wild, beautiful, and serene territory in San Diego County." That description is what has lured us to McCain Valley and the surrounding wilderness areas for decades, along with our children.

We would like to express our opinion that this regional area is SPECIAL, JUST AS IT IS! That's why we come. Industrialization would desecrate its present rural character and SOMETHING IRREPLACEABLE WILL BE LOST FOREVER! The experience of enjoying this area's natural resources would be GONE, and LOSING IT would QUENCH our desire to come out here anymore. Our family was fortunate to experience the wonders of this remote area with few modern man-made structures interfering. Will future generations be able to do the same?

We try to be good stewards when we visit this regional area for recreational purposes. Our hope is that the people in charge will also be good stewards and not forsake our valuable public resources. Our desire is that these people will grasp this opportunity for preservation so that not only ourselves, but future generations, will be able to experience and enjoy ALL the wonders of the natural world here.

There's a sign posted by the State of California on the Pepperwood Trail in McCain Valley that reads, "FEATURES PROTECTED. THIS IS YOUR HERITAGE - HELP GUARD IT." That is what we are trying to do.

F73-29  
Cont.

F73-30



Sincerely, *Charles E. Baker -  
Laurie A. Baker*

Charles and Laurie Baker  
10217 Strathmore Dr.  
Santee, CA 92071

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Cont.



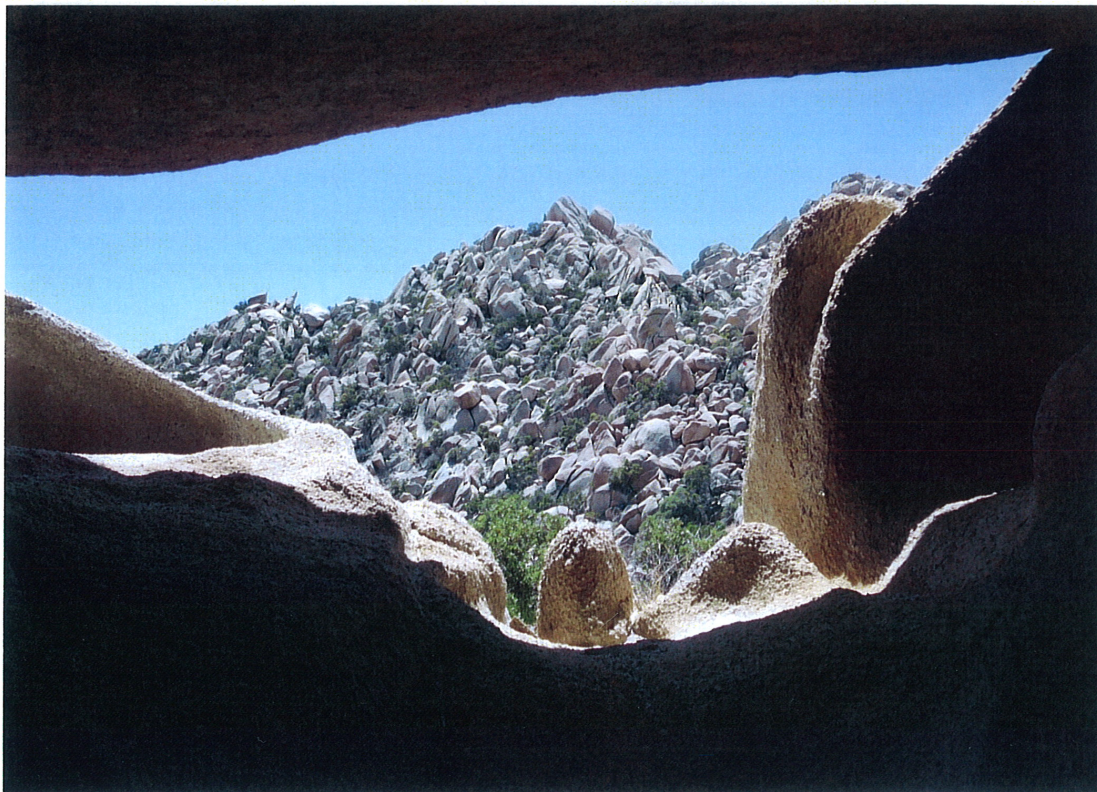
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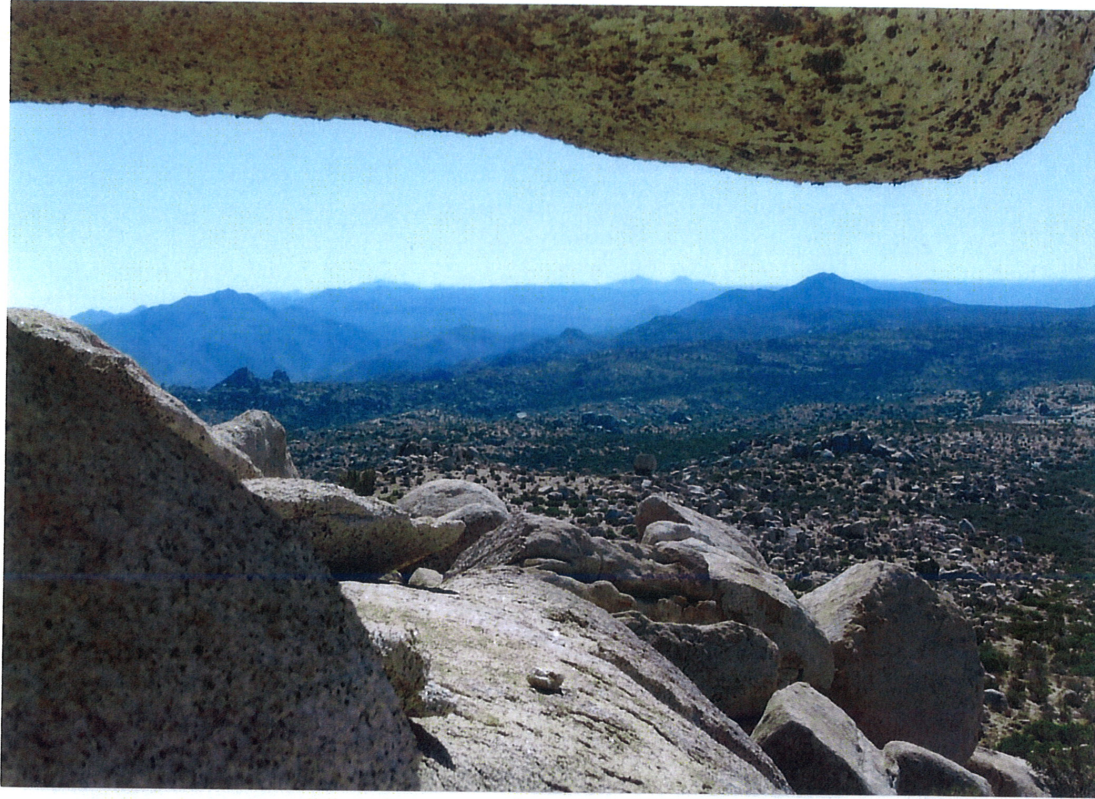
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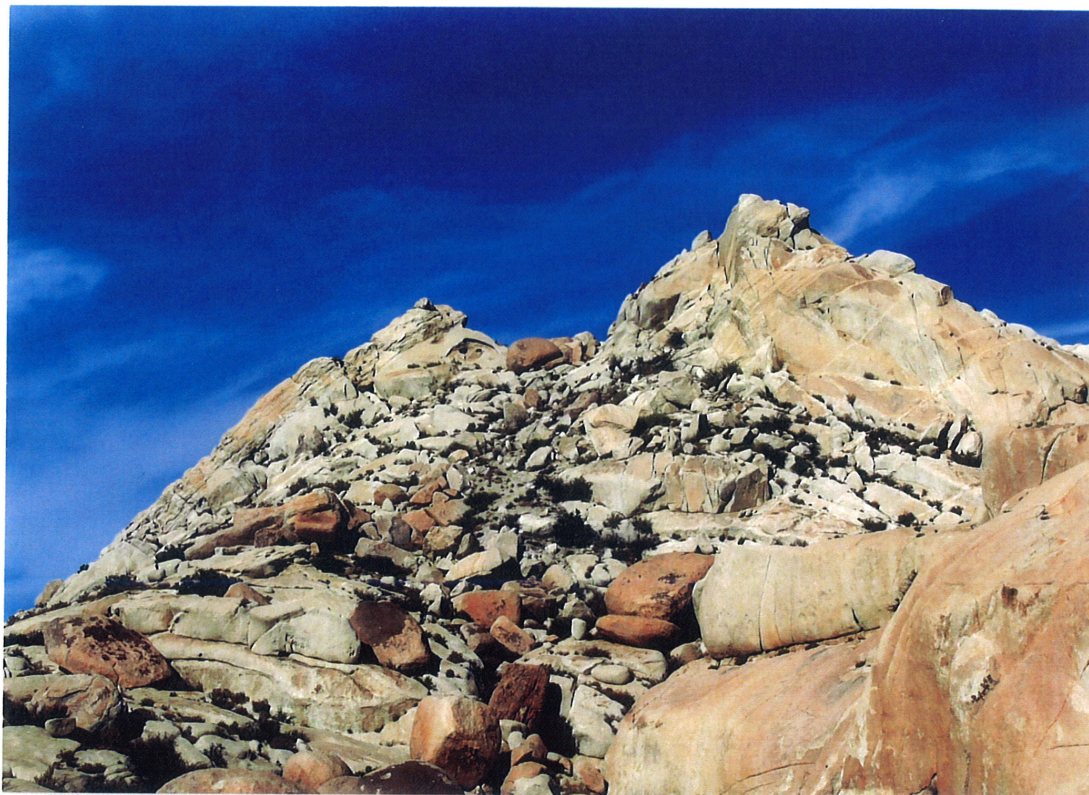
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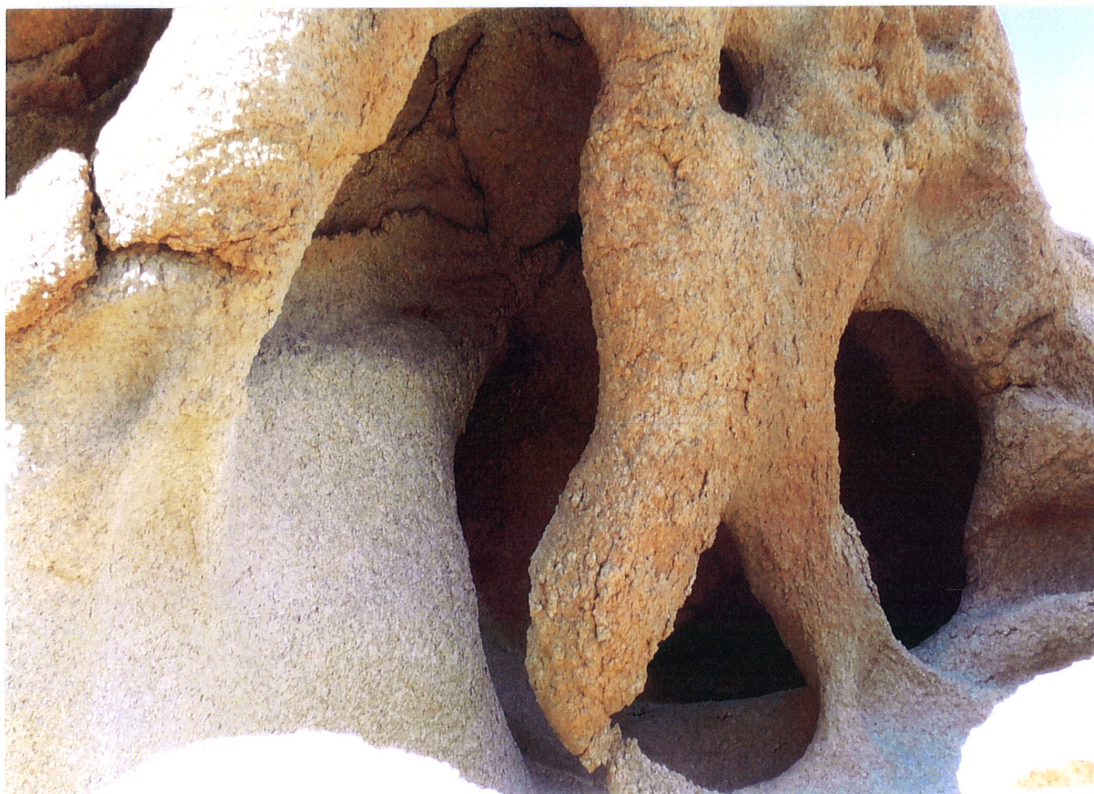
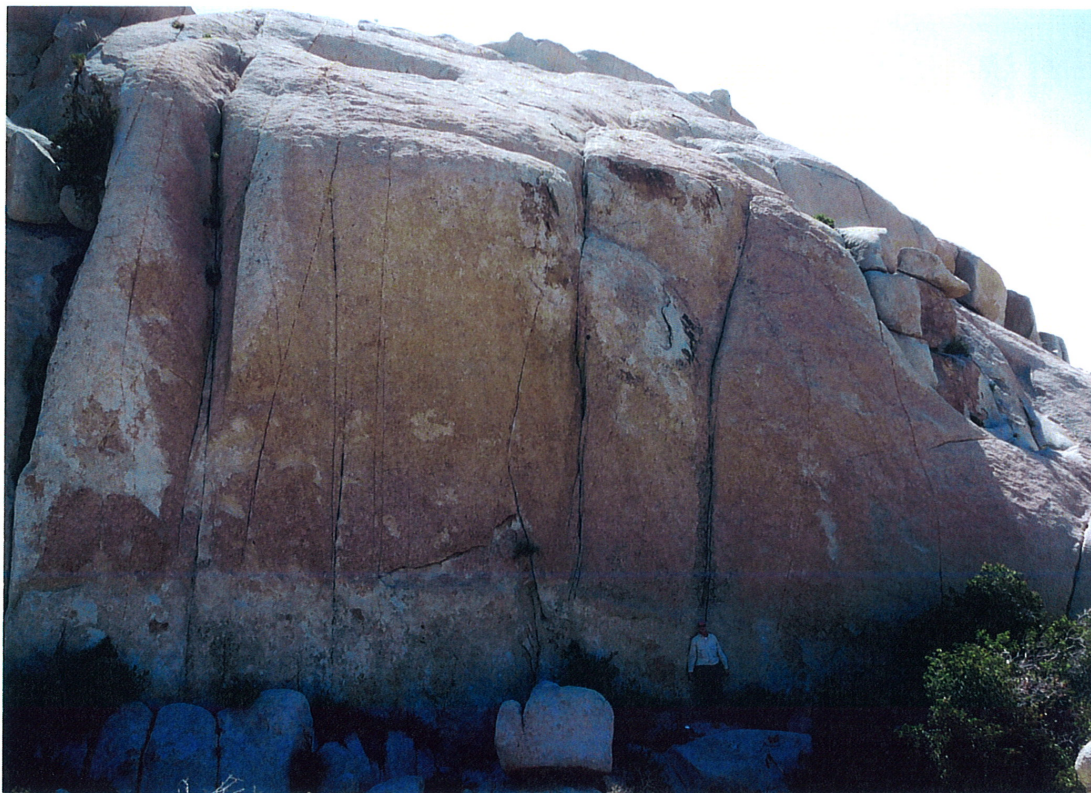
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F73-31  
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March 2, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East  
County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

Development of the Tule Wind project will hasten the decline of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. Over the past several decades the total population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide. Additionally, no Avian Protection Plan is proposed or has been developed and made public in conjunction with the proposed project; however there is no acceptable mitigation that will eliminate the risk of loss of the Golden Eagles. It is a documented fact that wind turbines kill birds, bats and other wildlife essential to our planet.

F74-1

The Kumeyaay people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. Due to the development of most of this region there are few Kumeyaay ancestral sites left undisturbed. McCain Valley and the Jacumba are the last of such critically important sites. The proposed draft EIR/EIS has no adequate provisions to avoid the Kumeyaay ancestral districts and no mitigation will be acceptable other than complete avoidance. Many of these locations contain cremation of human remains as well as ceremonial and religious tribal gathering sites that date back thousands of years. There is no way to replace these sites once they are gone. In addition, the proposed project have no plan in place to avoid the significant and sacred cultural, historic, religious, and archaeological Kumeyaay ancestral sites in the region and doesn't address the effects of the total desecration of this highly important and significant cultural landscape of the Kumeyaay People. To disturb this entire ancestral site would be devastating.

F74-2

In summary, the proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project should be rejected.

F74-3

Sincerely,



Carol Cockerham  
P.O. Box 1011  
Boulevard, CA 90915

March 2, 2011

Iain Fisher, CPUC  
 Greg Thompson, BLM  
 C/O DUDEK  
 605 Third Street  
 Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the  
 East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

Development of the Tule Wind project will hasten the decline of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. The population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of our Nation is of primary concern to me and other Kumeyaay People. No plan has been developed and made public for the protection of the Golden Eagles.

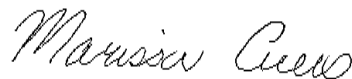
F75-1

The Kumeyaay people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. Due to the development of most of this region there are no Kumeyaay ancestral sites left undisturbed. McCain Valley and the Jacumba are the last of such critically important sites. The proposed draft EIR/EIS has no provisions to avoid the Kumeyaay ancestral districts and no mitigation will be acceptable other than complete avoidance. Many of these locations contain cremation of human remains as well as ceremonial and religious tribal gathering sites that date back thousands of years. There is no way to replace these sites once they are gone. In addition, the proposed project have no plan in place to avoid the significant and sacred cultural, historic, religious, and archaeological Kumeyaay ancestral sites in the region and doesn't address the effects of the total desecration of this important and significant cultural landscape of the Kumeyaay People.

F75-2

In summary, the proposed Tule Wind project will eliminate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district forever and create an unacceptable risk for a significant loss of the local Golden Eagle population. Please help us save what's left, there is so little.

Sincerely,



Marissa Cuero  
 80 Hubble Road  
 Boulevard, CA 91905

March 2, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/DEIS Public Comments for the East County  
Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

My name is Judy Elliott and I am a long time resident of the boulevard area and mother of two tribal members of the Manzanita Band of the Kumeyaay Nation. I am writing this letter because I am very concerned for my children and grandchildren's Native American cultural sites and Golden Eagles that the proposed Tule Wind project will ultimately destroy.

Through my years of being around the culture and reservation I have seen how important these sacred sites are to not only to the culture but to the people around it. By putting wind turbines through these last sites you will be devastating the culture, religion and history of the Kumeyaay people. These sites are some of the last pieces of their history and this project will obliterate what they have held onto for so long. These sites are thousands of years old and should remain undeveloped.

This project will also endanger the sacred Golden Eagle even more than it already is because one of the turbines comes very close to a nest that produced babies in 2010. These Golden Eagles have been in this area for thousands of years along with the Kumeyaay people and they have learned to respect each other. How can the government let this happen when the Golden Eagle is already an endangered species and with this project it will only endanger them and their survival more and may even make their species extinct. By humans entering and building projects within the territories and nesting areas of these Golden Eagles it will only further drive them away and they only have limited space left. This area is one of the last undeveloped areas for them to live in and if they are forced to leave they will have nowhere else to go. It would be completely unacceptable to develop an area that has had these Golden Eagles since before recorded time. There is no replacing an eagle or cultural site once they have been destroyed.

In conclusion I ask you to deny the Tule Wind Project due to unnecessary violations to such a rich archaeological district and to the Golden Eagles.

Sincerely,

*Judy Elliott*

Judy Elliott  
P O box 1491  
Boulevard Ca, 91905

F76-1

F76-2

March 2, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the  
East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

Development of the Tule Wind project will hasten the decline of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. Over the past several decades the total population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide. Additionally, no Avian Protection Plan is proposed or has been developed and made public in conjunction with the proposed project; however there is no acceptable mitigation that will eliminate the risk of loss of the Golden Eagles.

F77-1

The Kumeyaay people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. Due to the development of most of this region there are few Kumeyaay ancestral sites left undisturbed. McCain Valley and the Jacumba are the last of such critically important sites. The proposed draft EIR/EIS has no adequate provisions to avoid the Kumeyaay ancestral districts and no mitigation will be acceptable other than complete avoidance. Many of these locations contain cremation of human remains as well as ceremonial and religious tribal gathering sites that date back thousands of years. There is no way to replace these sites once they are gone. In addition, the proposed project have no plan in place to avoid the significant and sacred cultural, historic, religious, and archaeological Kumeyaay ancestral sites in the region and doesn't address the effects of the total desecration of this highly important and significant cultural landscape of the Kumeyaay People.

F77-2

In summary, the proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project should be rejected.

Sincerely,



Nick Elliott, Tribal Elder Manzanita Tribe  
P.O. Box 1182  
Boulevard, CA 91905

March 2, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the  
East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

My name is Toni Lee Elliott and I am a Tribal Member of the Manzanita Band of the Kumeyaay Nation. My people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. My family and ancestors have a direct connection to the McCain Valley and the Jacumba area and once lived there so these are critically important sites for my family. The proposed projects would disturb and ultimately destroy sites that contain cremations as well as ceremonial and religious sites that are scared and date back thousands of years. We cannot lose these sites to development.

F78-1

Development of the Tule Wind project will exponentially increase the decline and loss of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide.

F78-2

We need these sites protected from this kind of development. These sites include more than just what is on and under the earth, the site boundaries should include the view shed as these sites have a connection in time and space which includes the surrounding environment and their connection to the sky.

F78-3

The proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project must be rejected.

F78-4

Sincerely,



Toni Lee Elliott  
P.O. Box 1491  
Boulevard, CA 91905

March 2, 2011

Iain Fisher, CPUC  
 Greg Thompson, BLM  
 C/O DUDEK  
 605 Third Street  
 Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the  
 East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

The Kumeyaay people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. Due to the development of most of this region there are few Kumeyaay ancestral sites left. This proposal has no adequate provisions to avoid the Kumeyaay ancestral districts and no mitigation will be acceptable other than complete avoidance. Many of these locations contain cremation of human remains as well as ceremonial and religious tribal gathering sites that date back thousands of years. There is no way to replace these sites once they are gone. In addition, the proposed project have no plan in place to avoid the significant and sacred cultural, historic, religious, and archaeological Kumeyaay ancestral sites in the region and doesn't address the effects of the total desecration of this highly important and significant cultural landscape of the Kumeyaay People. To disturb this entire ancestral site would be devastating.

F79-1

The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. Over the past several decades the total population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide. There is no acceptable mitigation that will eliminate the risk of loss of the Golden Eagles.

F79-2

The proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for wiping out our local Golden Eagle population. For these reasons this project must be rejected.

Sincerely,



Yolanda Elliott  
 80 Hubble Road  
 Boulevard, CA 91905

March 2, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the  
East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

Development of the Tule Wind project will hasten the decline of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. Over the past several decades the total population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide. Additionally, no Avian Protection Plan is proposed or has been developed and made public in conjunction with the proposed project; however there is no acceptable mitigation that will eliminate the risk of loss of the Golden Eagles.

F80-1

The Kumeyaay people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. Due to the development of most of this region there are few Kumeyaay ancestral sites left undisturbed. McCain Valley and the Jacumba are the last of such critically important sites. The proposed draft EIR/EIS has no adequate provisions to avoid the Kumeyaay ancestral districts and no mitigation will be acceptable other than complete avoidance. Many of these locations contain cremation of human remains as well as ceremonial and religious tribal gathering sites that date back thousands of years. There is no way to replace these sites once they are gone. In addition, the proposed project have no plan in place to avoid the significant and sacred cultural, historic, religious, and archaeological Kumeyaay ancestral sites in the region and doesn't address the effects of the total desecration of this highly important and significant cultural landscape of the Kumeyaay People.

F80-2

In summary, the proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project should be rejected.

Sincerely,



Lio Estrada  
P.O. Box 1491  
Boulevard, CA 91905



MICHAEL & DEBBIE MORAN  
name

39545 CLEMENTS ST. BOULEVARD, CA. 91905  
address

MAR. 02, 2011  
date

MAR 03 2011

Mr. Iain Fisher, CPUC  
Mr. Greg Thomsen, BLM,  
c/o Dudek  
605 Third Street,  
Encinitas, CA 92024

**Draft EIR-EIS Comments/ Opposition: Tule Wind, ECO Substation, Energia Sierra Juarez**

Dear Mr. Fisher and Mr. Thomsen,

This letter is being provided to ensure that our concerns and strong opposition are documented in the record for these large wind turbine, substation, and power line projects that your agencies are reviewing as the Proposed Project, alternative projects, and cumulative projects. We may need to join in filing a future lawsuit for damages related to nuisance, loss of property value, quality of life, the use and enjoyment of our property, and other potential adverse effects.

We reside in the neighborhood off Ribbonwood Road north of I-8 , in Boulevard. When we moved here, this was a beautiful and quiet place to live and to invite family and friends to join us. Easy access to our adjacent public lands in the McCain Valley Resource Conservation and Recreation Area has been added benefit of living here. All that has changed and we are now very concerned for our own future and that of our neighbors, pets, livestock, and the local wildlife.

We are already impacted by the existing Kumeyaay Wind turbines on the Campo Reservation 2 miles or so to the west of us. We hear and feel the thumping of the giant blades that sometimes disrupts our sleep and creates a nuisance. We also deal with the visual blight of the whirling blades skyline on the ridgeline and the day and night strobe and aviation lights--none of which seem to work properly since the catastrophic failure of all 25 turbines in December 2009. Those almost 4 months of turbine downtime were some of the best days and nights we have had since the turbines started operation around 2005.

A moratorium on industrial wind turbine projects should be initiated by local state, and federal agencies, unless and until science-based peer reviewed health and safety tests are conducted to determine a safe setback distance. To date, those studies have not been done and industrial wind energy supporters cannot claim otherwise.

You are now reviewing three energy projects, along with the additional proposed wind turbine projects on the Manzanita and Campo Reservations and Greg Lansing's ranch lands on Ribbonwood Road and Jewel Valley Road. The Jordan / Enel Jewel Valley Wind Project on Ribbonwood Road would be within several thousand feet of our neighborhood homes. San Diego Gas & Electric's large 500 kV Sunrise Powerlink towers and lines will also be installed all along the eastern edge of McCain Valley Road east of us, and will also loop around to the north and west of our neighborhood, placing us down wind of many potential turbine, power line, and /or substation related fires / firestorms.

F81-1

F81-2

F81-3

The up to 134 Tule Wind turbines, that will stand almost 500 feet tall, are planned to be installed approximately 1 mile from our home along the top of the ridge just east of our property, and to north at across the top of McCain Valley.

The new Tule Wind 138 kV transmission line is also planned to run right next to the Sunrise Powerlink lines along McCain Valley Road, *or along the western edge of the BLM project site* and ridgeline to the north east of our home.

A new 5 acre substation and 5 acre operation and maintenance building, for the Tule Wind project, are also planned for private land on McCain Valley Road, or for the Rough Acres Ranch property just to the southeast of us.

Ribbonwood Road, our only access road, will be the adversely impacted by the related Project construction traffic , noise, and road damage from overweight vehicles and equipment. Our quiet neighborhood road will become an industrial highway of sorts, creating much more dangerous and invasive conditions for local residents.

**There are several main concerns that we want your agencies to address and respond to:**

1) Increased risk of fire; increased fire insurance rates or total loss of coverage due to new high risk development near our home; reduced fire fighting access due to increased potential for electrocution to fire fighters. Power lines, wind turbines, substation transformers can all start fires. This can translate into a life or death situation for us, with only one dead end access road and limited local fire fighting staff availability, equipment, and funding.

2) Noise and low frequency pollution from industrial wind turbines, some below the level of human hearing, can and does make people and animals ill when turbines are placed too close to homes, livestock, and sensitive wildlife areas. It has been reported that families have even abandoned their homes to escape the unbearable living conditions that are inflicted by these power generating turbine. Increased medical expenses and long-distance round trips for medical attention can really add up. Impacts to pets and livestock can also be severe and expensive.

3) No safe distance has been scientifically determined for industrial wind turbine set-backs. We do know that we don't want them anywhere near our home or the homes of other families. They should be placed miles and miles away from any occupied buildings, livestock, public recreation areas, campgrounds, and protected wildlife areas.

4) Electrical pollution, stray voltage, has been documented in and around other wind turbine and substation projects and homes within 1,800 feet and much more. There are indications that wind turbines and the substations that serve them are more prone to generate electrical pollution due to the intermittent nature of the energy they produce.

4) Shadow flicker from turbines can extend several thousand feet during certain times of day and can create a harmful pulsing light effect that can result in vertigo, seizures, or other adverse effects. That strobe effect also has adverse effects on pets, livestock and wildlife. Our home and property will likely be impacted during the late afternoon and evening hours.

5) Property value losses are being recorded at other wind turbine projects. We join others in requesting that Tule Wind be required to enter into binding Property Value Protection Agreements to ensure that we do not suffer lost value or the inability to sell our property, if rendered necessary, due to the adverse impacts generated by the proximity of their massive wind turbines, power lines, and substations that will surround us. Their current

F81-3  
Cont.

F81-4

F81-5

F81-6

F81-7

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F81-9

F81-10

wind testing equipment, highly visible from our homes and neighborhood, must be disclosed to potential buyers.

6) We are requesting that any project approvals include binding contractual agreements for adequate and ongoing funding for third party unbiased pre-construction testing for ambient noise, low frequencies and infrasound, and dirty electricity levels to be taken both inside and outside our home and at all our property lines. We are also requesting ongoing monitoring and enforceable compliance guarantees that include shutdown of non-compliant turbines--in the event these projects are approved over our objections.

7) The County noise ordinance and turbine setbacks are currently inadequate to protect public health and safety and cannot be relied upon for these projects. Compliance with those standards, as stated in the Draft EIR/EIS will NOT insure against the generation of a nuisance. Your agencies must address this issue. Our rural ambient noise levels are much lower than stated in the Draft EIR/EIS. Complaints have been generated at other wind energy projects with only minimal increases in noise levels. All ranges of noise levels, audible and inaudible need to be documented at pre-construction levels--and protected for public health and safety.

8) We also have concerns over adverse impacts to both the quality and quantity of our well water. Tule Wind will be clearing, grading, and blasting for turbine footings and new access roads. They will also be drawing large amounts of well water from several wells on Rough Acres Ranch for cement batch plants and other operational uses. Their turbines, substation, transformers, and maintenance buildings will contain hazardous fluids that can spill or leak into the water table. Our water levels should be documented by a licensed unbiased third party prior to commercial uses at nearby wells. We have no economically viable alternative source of water available to replace what we currently have. Cumulative impacts include the Sunrise Powerlink and other projects proposed in this area.

9) Day time strobe lights and red blinking night lighting on the turbines and some of the transmission towers will create another nuisance both day and night ,and take away from our beautiful dark night sky, one of the few left in Southern California.

In short, we strongly object to and oppose the introduction of any additional commercial industrial scale wind turbines, the related infrastructure and power lines, and all the adverse impacts that go with them, into our quiet rural neighborhood.

Any approvals of such would constitute a nuisance based on bulk and scale, blinking lights, noise levels (including low frequency and infrasonic), disruption to the peaceful use and enjoyment of our home and property and the very real potential for adverse health effects. While ignored, denied, and dismissed by the wind energy industry, growing evidence documents that some home owners have been bought out by wind energy companies due to undeniable adverse effects. The problems are real and must be addressed by your agencies prior to any project decisions.

We strongly support and encourage the efforts of Backcountry Against Dumps to protect and defend our rural community from the unnecessary, expensive and invasive commercial industrial energy projects, including potential future litigation.

Sincerely,

\_\_\_\_\_  
signature here

cc: Donna Tisdale  
Backcountry Against Dumps  
PO Box 1275, Boulevard, CA 91905

F81-10  
Cont.

F81-11

F81-12

F81-13

F81-14

F81-15

March 2, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/DEIS Public Comments for the East County  
Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

*My name is Veronica Santos and I am a tribal member of the Manzanita Band of the Kumeyaay Nation. I have lived on the reservation all of my life and have always been involved with my culture and traditions. I am writing this letter to encourage you to deny the Tule Wind project that will destroy the last sacred sites of my people and endanger the sacred Golden Eagle even more than it already is.*

*The sacred sites in Jacumba and McCain Valley area are the last sacred and ancestral sites of my Kumeyaay people that have made San Diego County, Imperial County and Northern Baja California our home for thousands of years. These sites are irreplaceable once they are destroyed by wind turbines. Some of the sites in McCain Valley and Jacumba are cremation, some are ceremonial, some are religious, but all of them are a big part of our culture, past, present, and future. This project would desecrate the remaining sacred lands that my people lived off of and took care of for thousands of years.*

*The Golden Eagle is a very important part of my Kumeyaay Culture and our Elders told us to protect them and always respect them. Golden Eagles have been a part of many of our ceremonies since before time was recorded. Putting a turbine so close to a Golden Eagles nest would endanger the species even more and could possibly make them become extinct because their population is already so low. This area is some of the last space left for them to go and putting turbines in this area would only limit their survival and reproduction more.*

*There really is no way to explain how important the Golden Eagles and these sacred sites are to my Kumeyaay people and tradition. There will never be a way to restore these sites or bring back a Golden Eagle once there has been disturbance therefore these sites and Golden Eagles must be protected. I have also researched health affects from wind turbines and they are not good. These turbines are not natural to the earth and can only have bad affects on the people, animals, and land surrounding this entire wind project. I understand green energy but not when its going to have more negative impacts than positive. Such negative impacts on so many different levels should not be allowed.*

Sincerely,



Veronica Santos  
P O Box 1545  
Boulevard Ca, 91905

F82-1

F82-2

March 2, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East  
County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

I would like to respond to the draft EIR/EIS for the Tule Wind project and SDG&E East  
County sub-station.

I am a resident of Alpine, in San Diego County, and a life-long friend of the indigenous  
peoples of San Diego County, especially the Kumeyaay. The people have been my family  
and friends for over fifty years.

Within the East San Diego Mountains lie the last undisturbed remnants of a people who  
lived in Southern California for thousands of years. They roamed an area from the sea  
coast, to the mountains, to the deserts. Gathering foods in season, hunting, and practicing  
their culture. They lived in tandem with the animals who were often considered equal to the  
people, especially Ishpa, eagle, who gave his life for the ceremonies.

After the coming of the Spanish, and later the Americans, the Kumeyaay suffered the near total  
collapse of their traditional ways, their land was taken, their people died from  
disease and out-right murder, (the government of California offered bounty for them),  
and those remaining were denied access to food sources. Many of the remaining people  
ended up in back country foothills and mountain areas.

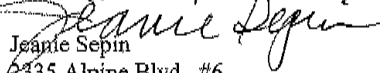
This has to be the last indignity, to a people who have suffered and survived unspeakable  
hardships. To displace Ishpa. To disturb and destroy this last habitat is appalling. To plow  
over the historical cultural and religious sites in the McCain valley and Jacumba is unbelievable.

This project, as proposed, will complete the decimation of a culture.

I support green energy projects. I know we need to develop and incorporate new technologies and  
I believe we can and will, but not this project, not this way.  
Not at the cost of the last bastion of history and culture of these unique people.

The destruction of eagle habitat is unconscionable; the abject disregard for the archeological sites  
is unforgivable. When will it be enough? When will the relentless  
destruction of the Kumeyaay end?

Sincerely,

  
Jeanie Sepin  
2335 Alpine Blvd., #6  
Alpine, CA 91901

F83-1

F83-2

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**From:** Alexa <alexaadkins@aol.com>  
**Sent:** Thursday, March 03, 2011 3:56 PM  
**To:** ECOSUB; catulewind@blm.gov  
**Subject:** RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for  
the East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects  
**Attachments:** Tule Wind EIR-EIS response draft 2.doc

\*\*\*\*\*  
This footnote confirms that this email message has been scanned by  
PineApp Mail-SeCure for the presence of malicious code, vandals & computer viruses.  
\*\*\*\*\*



March 3, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East  
County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

Development of the Tule Wind project will hasten the decline of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. Over the past several decades the total population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide. Additionally, no Avian Protection Plan is proposed or has been developed and made public in conjunction with the proposed project; however there is no acceptable mitigation that will eliminate the risk of loss of the Golden Eagles.

F84-1

The Kumeyaay people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. Due to the development of most of this region there are few Kumeyaay ancestral sites left undisturbed. McCain Valley and the Jacumba are the last of such critically important sites. The proposed draft EIR/EIS has no adequate provisions to avoid the Kumeyaay ancestral districts and no mitigation will be acceptable other than complete avoidance. Many of these locations contain cremation of human remains as well as ceremonial and religious tribal gathering sites that date back thousands of years. There is no way to replace these sites once they are gone. In addition, the proposed project have no plan in place to avoid the significant and sacred cultural, historic, religious, and archaeological Kumeyaay ancestral sites in the region and doesn't address the effects of the total desecration of this highly important and significant cultural landscape of the Kumeyaay People.

F84-2

In summary, the proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project should be rejected.

Sincerely,

Alexa Adkins, Manzanita Tribal Member  
P.O. Box 1484  
Boulevard, CA 91905  
(619)766-0056  
alexaadkins@aol.com

March 3, 2011

Ian Fisher, California Public Utilities Commission  
 Greg Thomsen, Bureau of Land Management  
 c/o Dudek  
 605 Third Street  
 Encinitas, CA 92024

**Re: Proposed Tule Wind Power Project:**

Dear Bureau of Land Management and California Public Utilities Commission:

I have lived in San Diego County for 32 years and I urge and pray to God that you cancel The Tule Wind Project.

I have lived in Boulevard city, San Diego County CA for 9 years and love this beautiful, tranquil back country and town. However, as of late, this area has been as busy as a large city with unbearable traffic and immense noise during the day. At night you cannot sleep because of the CampoWind Turbines noise, which keeps me awake through the night. Four out of seven days a week it sounds like helicopters are hovering over my house at 5000ft. The sound resembles a Thermo King refer unit on a tractor trailer a few hundred feet from my house. This is a constant "hum" that doesn't go away, day and night. I've talked with several neighbors and they are also bothered by the noise but are afraid it may be too late to stop it. It seems there is nothing we can do about it. The Wind Turbine people appear to have the BLM and CPUC in their pocket. I hope and pray this is not true. This town will be devastated if Iberdrola Renewables is allowed to build their project in McCain Valley with 60 turbines. The Compo Turbines are 3 miles from my home and I am greatly impacted.

I recently attended a Iberdrola Renewables meeting at Golden Acorn Casino and voiced my concerns with Harley McDonald and to my horror she told me the Turbines would be 2 miles from my home. She said the Turbines would only be as loud as a household refrigerator! She's obviously never spent a night close to one of these farms. I asked this beautiful, intelligent young lady, "where do you reside?" She replied "Encinitas," that's more than 80 miles from any wind farm. None of the employees of Iberdrola Renewables or any other wind company employee who makes more than \$25,000.00 a year lives near one of these wind farms (or landfills, high voltage lines, or electromagnetic fields). I was so disturbed by the lack of information by Iberdrola I went a step further and visited the Campo Wind Farm myself. I talked with an employee on site. He basically told me the Windmills are a joke. He said there is always something going wrong with them, such as bearings, gears and propellers. He said, "they are more trouble then they are worth." "The noise gets worse as the bearings wear. As I thanked the young man for his time and was

F85-1

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about to leave I noticed a golf cart approaching. The golf cart stopped about 50 yards away from me. I watched the driver pick up and throw something in the back of the cart. As I came side by side with the cart I stopped and to my disbelief and shock I noticed over a dozen large "dead" birds. One of the birds was the largest Horned Owl I have ever seen. I was so depressed by this I could not sleep for days. Now every time I drive by those Turbines I think of death and disruption. I again urge you the BIM and CPUC to cancel this project.

Sincerely,

Don R. Bonfiglio  
40123 Ribbonwood Rd.  
Boulevard, CA 91905



F85-2  
Cont.

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**From:** danielle thomas <daniellet96@yahoo.com>  
**Sent:** Thursday, March 03, 2011 4:20 PM  
**To:** ECOSUB; catulewind@blm.gov  
**Cc:** howwcook@yahoo.com; diane.jacob@sdcounty.ca.gov; donnatisdale@hughes.net; classictraclayer@att.net; cheryl.furr@yahoo.com  
**Subject:** Public Comment on DIER/DEIS  
**Attachments:** Input Into Energy Plan-R.doc

To whom it may concern: attached are my comments on the proposed East county Substation/Tule Wind/Energia Sierra Juarez Gen-Tie projects. Please feel free to call me with any comments or questions. I appreciate the opportunity to be heard.

↓  
F86-1

Regards, Danielle Cook

\*\*\*\*\*  
This footnote confirms that this email message has been scanned by  
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\*\*\*\*\*

One Citizen's Public Comments on the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects-by Danielle Cook, PO Box 486, Jacumba Ca. 91934 •619-766-4640

**O**n any given weekend in the San Diego County Gateway communities of **Boulevard , Jacumba and the McCain Valley Wilderness area**, people of all ages and walks of life can be seen enjoying these “jewels” in their backyard. San Diego Bicycle enthusiasts meandering down the historic Old Highway 80 and Highway 94; honeymooners enjoying a romantic getaway at the cozy Live Oak Springs Resort; family reunions and holiday barbeques at the Jacumba Hot Springs Spa; backpackers and campers experiencing the pristine McCain Valley; hikers climbing Jacumba Peak or exploring Carrizo Gorge, motor cyclists in formation cruising down the back roads (stopping at the Wisteria Candy Cottage for a sweet treat); San Diego Glider Club members swooping and soaring over the Jacumba Airport and the San Diego Stargazing clubs viewing skies so black and pure that the solitary stars and Milky Way look etched in 3D.

San Diegan's and other visitors travel and vacation here because the wilderness areas offer a peace and tranquility that feeds the soul. They come here because the whooshing of the wind through the pine trees, the fragrance of the aromatic desert plants, the sight of delicate desert wildflowers in bloom help recharge their batteries. One of the best parts is that these activities provide families a free or low cost option to more crowded and expensive recreational opportunities in the city.

But sadly, this is coming to an end

This document looks at the irrevocable damage and outright destruction that the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects will perpetuate on San Diego's Gateway Communities (and the current wilderness playgrounds of all San Diegans). It will also put forth the argument that, in spite of being categorized as GREEN, Wind Turbine Energy is far from it. Finally, my document will put forth some solutions

## THE IMPACTED AREAS

In the interest of disclosure, I am a property owner in Eastern San Diego County. My husband and I made many visits to this area to enjoy the wilderness and variety of recreational activities prior to selecting Jacumba as our retirement home. We have no economic interest in any business here, nor will the proposed utilities activities impact our immediate homestead (we did not buy the home for investment purposes but rather to live in during our retirement). My concerns are not knee-jerk NIMBY; instead, they are rooted in what I see as a broader catastrophic environmental change that will affect San Diegans and our communities now and for generations.

I am also a proponent of green energy, and have long supported wind energy. However, this was before I carefully researched all the periphery components that surround this energy source and the potential impact on the environment and San Diegans.

It is interesting that in the descriptions of our area as found in the project documents, we are described as rural, back country and filled with “desert scrub”. These sterile statements are meant to diminish our importance in the eyes of those making final decisions on the projects as well as to position the area as barren and thus suitable for exploitation. Here is the reality.

Boulevard and Jacumba combined have over 2,100 residents (2000 censuses). These include teachers, librarians, policeman, border patrol, entrepreneurs, artists, writers, plumbers' electricians, musicians, retired folk and families. In short a microcosm of what you would find in any city. We have small businesses that create economic opportunity and social benefit such as the *White Sage Farms*, the *Live Oaks Springs Resort*, the *Jacumba Hot Springs Hotel* and restaurant and the *Wisteria Candy Cottage*. We have other businesses such as the *Sacred Rock Resort* and the *Institute of*

F86-1  
Cont.

F86-2

F86-3

*Perception* that embrace nature as part of their mission and provide contemplative retreat opportunities and family picnic areas. We also have ranchers, organic farmers and local "characters" that enrich our gateway communities in many ways.

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Cont.

While the vegetation might be correctly characterized as "desert scrub", these words hardly depict the specialness of the plant life. Stately Oaks, Chaparral, red-branched Manzanita, aromatic shrubs such as the endangered White Chia, Cottonwood trees, flowering Yucca and Prickly Pear cactus are used as food plants by butterflies and moths or cover and sustenance for a wide variety of reptiles, birds, insects and animals. And what a variety we have! Bobcats, Coyotes, Jackrabbits, Road Runners, ground squirrels, Quail (the California State bird), Golden eagles, hawks, insect eating bats, Scotts Orioles, ducks, woodpeckers, grackles, Horney lizards -the list goes on! In addition to this amazing flora and fauna, Jacumba, Boulevard and McCain Valley are an archeological treasure trove of many ancient Native American artifacts.

F86-4

This vibrant, precious resource is soon to be lost to San Diego

**SNAPSHOT OF THE INDIVIDUAL PROJECT IMPACT**-Energy development needs to be considered in terms of cumulative effects. Sometimes, projects are approved on an individual basis with little collective evaluation of social and environmental impacts. Collective evaluation is necessary to judge the true destructive nature of what is being done to San Diego's gateway communities and wilderness playgrounds. (This is not an in-depth review. Others have done that before me. My intentions are to highlight some of the more troublesome aspects. I have done so in the following chart) Additional detail will follow. Information was taken from the draft DEIR/DEIS document

Project Name	Years for Completion	Truck Deliveries	Water Usage	Permanent Acres Impacted	Plant Removal/Other impact
<b>Eco substation</b>	2 years (12 hrs/day Mon -Sat. Sometimes by night! )	60/day for 8 months. 200 trips to deliver equipment	30 million gal	110.5	3 mature oaks, removal of 88 acres of vegetation/habitat.  Earth movers, cranes, rollers concrete mixers etc
<b>Tule (134 turbines)</b>	2 years construction  7AM-7PM M-Sat	325/day peak	17,512,000 gallons for dust suppression and concrete mixing.  2,500 gal/day during operations for employee use	562.8	All vegetation cleared 50 to 150 feet around each pole. 232 wood or steel poles. 5,000 sq ft area set aside for switching station/control house. Dig a well  A 138 kv overhead transmission line with 108 poles running over to the Boulevard substation
<b>SWPL Loop-in/ESJ Gen Tie</b>	6 months?	10-20 vehicles/day and up to 200 delivery trucks	780,000 gal for watering dust and soil compaction. May drill well	40 acres	Continuous helicopter activity, 75 ft X 35 ft working zones around all structures cleared of shrubs, blasting equipment

F86-5



## THE TROUBLE WITH WIND FARMS

They are not green . It is a dirty little secret that wind farms, far from being green, are very damaging to the environment. This is because they never exist in a vacuum. Wind energy and their associated construction, roads, power lines, power grids and other structures, destroy or fragment wildlife habitat and are directly responsible for killing thousands of birds and bats annually. Birds can collide with turbines and other structures, bats apparently do not collide as frequently but can be devastated by a syndrome called barotrauma. This occurs because when the bat chases the turbine blade, it is sucked into a low pressure area behind the blade. The low pressure area causes blood vessels in the bats lungs to expand and explode. (Baerwald EF et al 2008 Curr Biology 18 (16):R695-96). Bats keep undesirable insects (such as West Nile -carrying mosquitoes and gnats) under control.

F86-6

In Northern California, a Government Accountability Office (GAO) study found more than 1,000 raptors were killed annually by wind-power facilities there (Altamont Pass region). In West Virginia, more than 2,000 bats were killed in a seven-month period in an area with 44 wind turbines, according to the GAO report. The Tule project is scheduled for 3X that amount!

Wind turbines built in areas dependent upon water wells face special problems. As stated earlier, wind turbines don't exist in a vacuum. The years of water usage for construction (roads, structures, accompanying power lines etc) and the demands of operation could adversely affect water levels and availability for current residents, ranchers and farmers

F86-7

They Negatively impact property values. It is ludicrous to believe (as the slick *Tule Wind news* brochure suggests) that property values do not suffer. Ask any local realtor and you will discover that the news of the massive wind turbines (and their corresponding electrical lines and grids) has made it virtually impossible for local residents to sell their properties except to the project developers at far less than replacement costs. I do not know of anyone who deliberately chooses to live around wind turbines or under high voltage 120 ft towers and electrical lines, do you?

F86-8

They Will Have a Negative NET Impact on Employment. Although the Tule Wind news states that 325 "green" jobs will be created at peak of construction, experience tells us that most will be union jobs and the permanent operations and maintenance employees will transfer in from other regions. While it is true that for a couple of years a small amount of jobs may be created, and local sandwich shops and hotels might see a spike in business, what isn't discussed is the permanent economic fallout for the many businesses that depend upon tourists coming to enjoy our formerly pristine environment. Gross job creation could look positive for a narrow window of time while long term NET JOB LOSSES could be devastating.

F86-9

They are not economical and do little to help Global Warming. A report on the German experience of renewable energy by Professor Wolfgang Pfaffenberger, Director of the Bremer Energy Institute at the University of Bremen, warns of wind energy's economic downside.

F86-10

Professor Pfaffenberger emphasises that the cost of reducing emissions by the use of stochastic (randomly intermittent) generation such as wind is very high, and referring to a growing body of research in Germany (see below), Professor Pfaffenberger states that the difficulties of managing wind energy make it so costly that its net economic impact is negative.

"Basically, of course, investing in renewable energy plants creates employment in industries producing these investment goods. On the other hand the extra cost of renewables adds to the cost of energy and in this way destroys purchasing power that otherwise could have created demand and indirectly employment in other areas. Whereas the gross effect of spending money on renewables is always positive, the net effect may be negative".

Germany is one of the world's leading adopters of wind energy, with nearly 17,000 MW of wind turbines installed, but contributes only 5% of total German electricity consumption.

This energy source is not sustainable on its own .The rush to push this project through is to get government stimulus dollars. Wind energy is much more expensive per unit of power generated than fossil fuel or nuclear power. Its intermittent nature (dependent upon wind blowing) requires a backup which cancels out any reduction in carbon dioxide emissions. Our energy costs will surely go up and it is ironic that our own tax dollars are being used to destroy an area with such a unique and beautiful "sense of place".

They can be a health hazard. Nina Pierpoint, MD who has made a study of the health hazards of wind farms has this to say in her groundbreaking book *Wind Turbine Syndrome*. . ."people living within two miles from 'wind farms' all had similar complaints and health problems. . .these include: sleep disturbance, headache, tinnitus, ear pressure, dizziness, vertigo, nausea, visual blurring, tachardia, irritability, problems with sensations of internal pulsation or quivering while awake or asleep".

Dr. Pierpont goes on to say: "Two kilometers or 1.24 miles, remains the shortest setback from residences that communities should consider. In mountainous terrains, 2 miles is probably a better guideline. . . .The shorter setbacks in use in the USA and elsewhere, 1,000 -1,500 ft are a financial convenience for wind developers and leasing landowners. They have no basis on safety and health, and they make no clinical sense."

The Tule Project in particular will forever scar a priceless wilderness resource-McCain Valley Wilderness. The Tule Wind project is centered around McCain Valley Road. The left hand, Western side of the road serves light ranching, OHV recreational, and a camp for troubled teens. The right hand, Eastern side of the road contains magnificent designated environmental areas and recreational assets. The Tule Wind report mentions McCain Road areas as a designated RMZ (Resource Management Zone) while largely ignoring the designated wilderness areas and recreational assets immediately adjacent on the right hand Eastern side and also at the north end of the road. McCain Valley Road provides the sole primary vehicular access to the immediately adjacent Carrizo Gorge dedicated Wilderness and the Sawtooth dedicated Wilderness areas. The road serves this same purpose for the higher elevation Western side of Anza Borrego State Park (the largest state park in the USA). In the case of the Sawtooth Wilderness Area, McCain Valley Road offers the only access of any kind. These wilderness and recreational access and entry points and related recreational sites are well documented by a large quantity of recreational guides and books and the BLM's own literature and maps. This industrialization of McCain Road is also absolutely not compatible with the wildlife found in the valley and the adjacent wilderness areas. These are described in BLM's own documents shown later. Wildlife found include bats, protected Golden Eagles and endangered Bighorn sheep

During the years of construction, this area will endure 325 truck deliveries a day 7 AM to 7PM Monday through Saturday. 232 over 120 foot high wood or steel poles will be placed. All vegetation will be cleared 50 to 150 feet around each pole, devastating wildlife habitat. There will be a 5,000 sq ft area set aside for a switching station/control house.

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Cont.

F86-11

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F86-13

Campers and backpackers will not be able to enjoy their former idyllic sanctuary. All for an energy source proven not economic. What a shame.

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Cont.

**What is troubling is that other wind turbines have been planned for: Mazanita (25); Campo (106) and the Jordon project (40)**

### **The Boulevard Substation Rebuild**

F86-14

What a misnomer! This is not a "rebuild" but rather a gross expansion 10X its original size. Again, this language was no doubt chosen to minimize the scope of the project. The new behemoth that will be created will service a lattice work of over 150 continuously humming massive high voltage steel towers hovering ominously over the Boulevard community and scenic Old Highway 80 like something out of a science fiction movie. We might as well rename the highway "Electric Avenue".

### **Why more electrical Lines are counter indicated for this area**

F86-15

They have a negative impact on wildlife-Kathy Barton, a professor at UC riverside had this to say in a news article: "California natives, with few exceptions, are disease free and restore much needed natural habitat to dwindling populations of animals whose breeding grounds, sources of food and water, and protective cover have been polluted and destroyed by decades of unchecked, rampant development and urban sprawl. Construction of overhead power transmission lines nearly destroys plant cover and soil conditions in the immediate area. The towers also provide nesting sites for ravens, a native bird whose population is growing. Ravens prey on the threatened desert tortoise. Trenching associated with underground pipelines for gas, oil and water destabilizes soil crusts and rock surfaces, concentrating water runoff and erosion. Research has shown it takes more than 30 years for these areas to recover."

They pose unnecessary fire danger in an area proven to be extremely fire prone—Is there anyone that doesn't shudder at the devastation wrought during the October 2007 series of deadly wild-fires? The fires destroyed 1500 homes, caused 9 deaths and impacted 500,000 acres. At least one of the fires (I believe the Rice Canyon fire) was cause by downed power lines!

F86-16

I think it astonishing that SDGE, the very same organization pushing for a power shut-off to back country areas during high fire periods, is now pushing a massive transmission line grid on us. Fires do not just devastate the backcountry but they pose real danger to the entire San Diego county area as they can easily spread westward. It is a fact that downed electrical lines from high winds cause fires. SDGE has paid thousands of dollar for what the PUC (I believe it was this organization) characterized as poor maintenance of lines but they seem to be more interested in paying off insurance claims than in fixing the problem.

With all the additional lines to police and maintain, how can we be assured that we are not creating a situation that could result in an even more destructive fire season than that of 2007?

To Summarize:

- Six hundred eighty three (rounded) acres will be directly and permanently impacted –there will be thousands of other acres including homes, ranches and farms that will be indirectly impacted
- Over Fifty million gallons of precious water will be squandered and our local water wells may be diminished during the two years of construction
- The Boulevard/Jacumba/McCain Valley areas will be subjected to TWO YEARS of Monday thru Saturday constant rumble of construction and dust pollution. Incessant humming and potential toxic electromagnetic emissions will also have to be endured (The area will hardly attract the tourists that the residents desperately need for economic survival)
- Acres of fragile wildlife habitat will be destroyed or displaced
- Historic old Highway 80 will be rendered unusable by residents and tourists trying to dodge massive earth movers, back-hoes, cranes, water and cement trucks. Highway 80 was not designed to take this type of traffic and the narrowness of the road will invite accidents.
- San Dieagans will lose precious recreation resources and the peace and tranquility they seek will be shattered.

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F86-22

Recommendations

My initial recommendation would be to locate all these projects to a less sensitive area but I am a pragmatist and know that this is unlikely given the money and subsequent political muscle of the various project developers. These are my alternative recommendations:

- 1) Move wind turbines away from McCain Valley Road and all of its associated sensitive areas (including Cottonwood Campground)
- 2) If that isn’t feasible, scale back the Tule wind project from 134 turbines to 72 and reroute some of the related transmission lines as a previous environmental report recommended.
- 3) Ensure the Iberdrola wind turbine company uses the curtailment process (shutting down the wind turbines during low wind periods at night) that has proven successful in reducing bat deaths (I believe Iberdrola pioneered a study on this with the Bat Conservation Group)
- 4) Relocate the Boulevard Substation to an alternative and less sensitive area closer to San Diego and the border
- 5) Bury all the power lines scheduled to snake down Historic Highway 80 and from the Tule wind farm. This would greatly reduce fire exposure and prove less stressful on the environment and wilderness area long-term. It would also allow San Diegan’s to continue to enjoy the area
- 6) Restrict project work days to Monday through Friday. Local residents and weekenders from San Diego deserve this.

F86-23

- 7) Mandate that SDGE replace all wooden poles with more wind resistant steel AND produce and implement a plan for stepped up inspections and maintenance of their lines
- 8) Require that SDGE place coils and other devices on the power lines that have been proven to decrease bird deaths
- 9) Have all the project developers contribute to a fund for third-party, unbiased oversight on the many commitments they have made to mitigate environmental damage (habit control and replanting, relocation of raptors' nests, careful handling of cultural resources, keeping night lighting to a minimum and turned down etc)
- 10) Assist the impacted communities of Boulevard and Jacumba by funding emergency evacuation plans and equipment for evacuation centers

F86-23  
Cont.

Our rush to produce green energy in the beautiful Eastern San Diego County will do irrevocable damage to our vibrant communities and fragile wilderness. The costs of "electrifying" this archeologically and biologically rich area will be measured in terms of economic devastation, habitat degradation , possible species extinction, and the perpetuation of the myth that all non-fossil fuel energy is GREEN and thus desirable.

F86-24

We have the opportunity to make a wrong perpetuated on this area a right. Let's not squander this opportunity.

MAR/04/2011/FRI 06:33 PM

FAX No.

P. 001

March 3, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the  
East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

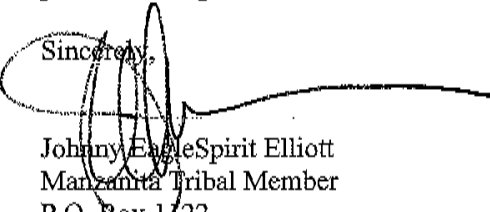
The Kumeyaay People have called San Diego County, Imperial County and Northern Baja California home for thousands of years. The Old People told us that the Creator chose this area for our home and we have been here ever since. Out of duty and respect we have been stewards of the land, the animals and plants for many years. Our Old People and Elders have passed down to us our history, sacred sites, language, culture and traditions, some of which has been recorded, including the information from my great great grandfather Jim McCarty who recorded many eagle nesting areas and sacred sites in the early 1900's.

There are no adequate words to explain the deep connection our people have with the Golden Eagles and our Cultural and Sacred Sites, they are at the heart and soul of our people. They are an important and integral part of our past, present and future.

I understand that the Tule project developer has said that they will do "what they can" to avoid and minimize effects on the archeology of the project area however that is not the whole issue at hand. These towers will act as arrows piercing the heart and soul of the land and therefore the Kumeyaay People forever destroying the spirituality of these areas. This destruction would be unacceptable!

These tribal traditional properties and the Golden Eagles must be protected. The Department of the Interior must live up to their trust responsibilities to my people and protect our eagles and traditional areas.

Sincerely,

  
Johny Eagle Spirit Elliott  
Manzanita Tribal Member  
P.O. Box 1122  
Boulevard, CA 91905

F87-1



**From:** JonIsaacs@aol.com  
**Sent:** Thursday, March 03, 2011 9:14 PM  
**To:** ECOSUB; catulewind@blm.gov  
**Cc:** dianne.jacob@sdcounty.ca.gov; tisdale.donna@gmail.com  
**Subject:** Comments: DEIR/DEIS FOR ECO SUBSTATION, TULE WIND & ENERGIA SIERRA JUARE Isaac  
**Attachments:** ISAACS~1.DOC

Hello to all:

It has been a long, hard time, reading, researching, thinking, writing, all the while pondering the fate of our corner of East County. If they are approved, the ECO SUBSTATION, TULE WIND & ENERGIA SIERRA JUAREZ GEN-TIE PROJECTS would seem to have major impacts on the communities of Boulevard, Jacumba and the surrounding regions.

The total sum of the impacts is beyond the ability of a single individual to address and so I have chosen to study those that seem most important to me as someone with a home on Jewel Valley Way, a location that would be directly affected by some aspects each of these projects as well as the Jordan project. Some of my concerns are very local, the sound produced by nearby turbines, the possible increase in light pollution and its affect on my astronomical studies. Some are more community wide, property values, the damage to the wonderful vistas. Some are procedural, making sure that the funds for dismantling these turbines are secured for the time when they are no longer operational. And some are county wide, the increased risk of wildfires and the increased difficulty in fighting wildfires.

I have tried to address these issues honestly, from the place of an individual whose life has been and will be changed by whatever decision is made concerning these projects. I have brought my total being to bear on these issues. In some cases I just want to know more, for example, "Are there really 12,000 abandoned wind turbines in the state of California?"

In other cases believe I bring something unique the table. One such case is the measurement and analysis of the sound levels. I have been a researcher in the Engineering Department at UCSD for 24 years, my focus is on making measurements, not just making accurate measurements but also making the right measurements, ones that accurately characterize the conditions. Sound consists of a broad spectrum of acoustic waves of different amplitudes, one number or measurement cannot accurately quantify the sound from operating wind turbines and how it might affect the environment. Fortunately, there is no need make use a single number to quantify the sound levels, the tools and techniques to make the right measurements are well known, the proper equipment exists.

As you read my comments, I hope that my questions are clear, my concerns are clear and my concerns are real to you. I was born in the Oceanside Hospital in 1948 and have essentially lived my entire life in San Diego county. East county has long had a special meaning to me, camping as a child, in my youth tearing around old 80 and 94 on a motorcycle, as a young man, driving a hay truck over the back roads of San Diego county and more recently as an amateur astronomer enjoying the dark skies between the light domes of Mexicali and San Diego.

My wife and I recently purchased a small place in Boulevard with the thought that it would the place we could spend our retirement years in a quiet, peaceful, rural region with dark skies and undisturbed vistas of grand proportions. We are still hopeful that this may still come to pass but clearly we are concerned and wondering what we will do, where we will go if indeed these projects and the others in the planning process are approved.

Best wishes to all from the wonderful dark skies of Boulevard.

Jon Isaacs

F88-1

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California Public Utilities Commission  
Attn: Iain Fisher

March 4, 2011

BLM California Desert District Office  
Attn: Greg Thomsen  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

VIA E-MAIL: [ecosub@dudek.com](mailto:ecosub@dudek.com), [catulewind@blm.gov](mailto:catulewind@blm.gov)

RE: DRAFT DEIR/DEIS FOR ECO SUBSTATION, TULE WIND & ENERGIA  
SIERRA JUAREZ GEN-TIE PROJECTS

Dear Mr. Fisher, Mr. Thomsen,

Issues of concern regarding the Draft Environmental Impact Statement for the ECO  
SUBSTATION, TULE WIND & ENERGIA SIERRA JUAREZ GEN-TIE PROJECTS.

### Initial Comments::

To someone familiar with this area, the impact of these projects to this panoramic region would be huge. The overall environmental impact to the region would be severe and could not be adequately mitigated. For a scenic area, this is unacceptable. Indeed, the conclusion of this Draft Environmental Impact Statement is that the environmental impact of these projects is severe, that it cannot be mitigated and that the best choice is no action. In a scenic region that is home to a small community and has many wonderful recreation areas, it seems a tragedy to damage this fragile landscape and disturb this community when the environmentally sound choice is to leave it alone.

F88-2

In the process of writing these comments, I became aware of the large number of abandoned wind turbines spread across the state. A view from above, a view of the bigger picture would suggest that these are places to renew and the places to build turbines. The damage in those locations has already been done, new modern wind farms could not only benefit the environment by replacing old machinery with new but also by replacing old environmental practices with new, modern understandings.

F88-3

### Visual:

As a 62-year resident of San Diego County, this east county region has long been special. While we are only recent property owners and part time residents, it is our intention to retire to our home in Boulevard where we can share in the wonders of the California Desert Mountains. I have long been an enthusiastic amateur astronomer and we chose the Boulevard area particularly because it has some of the darkest skies in southern California and because of its proximity to the San Diego Astronomy Associations Tierra Del Sol site and SDSU's Mt. Laguna Observatory. The Dark Sky Ordinances in place in San Diego County were also an important factor. It is important these skies be preserved. It appears that if the ordinance and regulations are followed that the impact can be mitigated.

F88-4

Unfortunately what cannot be mitigated are the many different ways these turbines, power lines and substations impact the visual environment. Because of the panoramic nature of the area and large open vistas, these 300-500 foot high towers cannot be hidden. Again, just another reason the first choice of the report, take no action, is the appropriate choice and should be followed.

F88-4  
Cont.

### **Decommissioning and Restoration:**

The life expectancy of the Wind Farm Projects is approximately 30 years. At the end of this period, it is planned that the wind farms will be decommissioned, which involves removal of the turbines and returning the environment to its original condition. In other locations in the state of California, wind farms have been abandoned by the owners and have not been cleared away. In order to avoid this scenario, it seems that the funds necessary to decommission the wind farms and restore the environment should be provided at the start of construction and held by a third party until required. This would guaranty that were the owners of the wind farms to become insolvent or otherwise unable to decommission the wind farms and return the region to its previous condition, this important environmental responsibility could still be met. This is in accord with general environmental policy. When I buy a can of soda pop, I am required to pay up front the cost of recycling the aluminum can, that way it is already paid for and it can be done without further concern. The cost of decommissioning and restoration should be managed in a similar manner; it should be taken care of prior to project approval so that it is guaranteed to be funded.

F88-5

### **Sound level, noise measurements:**

The possibility for increased background sound from the operating turbines is of great concern to me, to my wife, to my sister and it seems to the community as a whole. The report contains sound level information but very little that is more than numbers and certainly nothing that an individual who may be subject to these sounds can use to understand what they might be facing. The only resources available to get a sense of the sound of operating wind turbines seem to be recordings on the Internet and discussions with individuals such as members of the nearby Indian tribes who have long term experience with the sound of the operating turbines. Without exception, what one hears from both these sources is disturbing and alarming.

Thus, an accurate assessment of the current sound levels and as well as an accurate prediction of the increased sound levels across the full spectrum is critical. This should not only meet the letter of the law, but also be consistent with medical physics and the fundamentals of acoustics and wave propagation. Coming from my background as a researcher in the engineering sciences at UCSD, these are some observations and concerns I have about the DEIS.

- According to this statement, the proponents provided the current sound level data. I believe that such important initial data points that may be used to determine the actual environmental impact of the wind turbine noise should be made by an independent third party.

F88-6

- In the section concerning the level of increased noise caused by the proposed wind farms, it was stated that the ambient noise measurements as well as the noise added by the various aspects of the wind farm projects were measured using the Db(A) scale.

F88-6  
Cont.

The use of the dB(A) scale rather than the dB(C) scale seems inappropriate. The dB(A) was developed as a scale to assess peak sound levels, which would and could cause damage to the human ear. The ear is more susceptible to injury in the mid-ranges and less susceptible to injury at both high frequencies and low frequencies and so the dB(A) scale has severe rolloff in its measurements at low frequencies. It is down 50dB at 20Hz; essentially, it does not include these frequencies in the sound level measurements. Many seem to recommend using the dB(C) scale for measuring machinery sound levels, the dB(C) scale is flat down to 100 Hz and then rolls off to about 15 dB at 10Hz.

Looking at the physics as well as listening to the sound of a wind turbine with its long blades cutting through the air, it seems clear that there is a substantial low frequency component to the noise, the very sound that the inappropriate dB(A) scale minimizes. The dB(C) scale would be more accurate in estimating the noise levels of the wind turbines.

F88-7

From a scientific standpoint, the real difficulty here however, is that both the dB(A) scales and the dB(C) scales are attempts to characterize complex quantity with a single number. To properly understand the sound levels, particularly of the wind turbines themselves, the proper instrument is the spectrum analyzer. A spectrum analyzer measures sound levels as a function of frequency and therefore is capable of a much better representation of the actual sound of a wind turbine.

I believe for this environmental impact assessment to accurately reflect the actual level and effect of the sound on the environment, additional measurements and information is required:

1. Initial sound level measurements conducted by independent parties under the direction of independent parties that report directly to Dudek and/or the BLM. These should include both dB(A) and dB(C) levels for future use.
2. The report should include detailed data and analysis of the actual sound spectrum of an operating wind turbine under a variety of operating conditions including those associated with "high mileage" units and how this compares to background sound levels. With access to a wind farm and appropriate recording equipment, the measurements and analysis should be straightforward.
3. With the proper spectrum and spatial data, modeling of the propagation and sound should be possible including any additive effects that might result from multiple sources.

F88-8

While I am aware that in many instances the dB(A) scale is mandated by law, it is also clear that it is poorly characterizes machinery noise and that to complete this impact

statement with scientific accuracy rather than just meeting the legal requirements, further efforts are necessary.

↑ F88-8  
Cont.

### **Wind Turbine Size:**

The actual size of the turbines needs to be established. Mention is made of various units including units as large as 500 feet. Before the impact to the environment, particularly the visual environment, can be properly determined, actual sizes need to be known. For comparison, Mount Soledad is about 800 feet above sea level at the cross.

F88-9

### **Fire:**

Table D.15-9 lists Significant and Unmitigable Impacts regarding the impact of the Eco Substation, the Tube Wind and the EDJ Gen-Tie. Each project has serious, class 1 unmitigable impacts, all of them seriously increase the probability of a wild fire and each one will reduce the effectiveness of firefighting.

Each of these is serious and should be evaluated in light of the recent history of wildfires in San Diego County. One of the largest fires in California history, the Witch Creek Fire, was determined to have been caused by lax maintenance of their power lines by San Diego Gas and Electric and SDG&E was later fined \$17,000,000 for their lax maintenance for this and two other fires. Clearly the cost of fighting these new fires and the resulting damage far exceeded this amount.

F88-10

After these fires, SDG&E petitioned the PUC to allow them to cut off the power to regions of East County during periods of high winds. This was met by resistance from the community, as it would leave them vulnerable and without power during periods when water and electricity could be critical in saving homes and lives.

The significance of this proposed action is that it appears to be an admission by SDG&E that they are unable to maintain their power lines so that they do not represent a serious fire risk. It seems contradictory to allow new high voltage power facilities to be installed in a vulnerable environment when the regional supplier of electric power who has been responsible for major fires, still believes they are unable to manage the situation.

For the county taxpayers and for those who reside in the Boulevard-Jacumba region, two issues seem apparent.

- First, given this history, it should be determined whether adding more high voltage transmission lines in a high fire risk area makes sense.

- The second issue is that if it is decided that indeed this is a risk worth taking, what will be done to ensure that the owners and operators of these projects will assume the costs associated with an increased probability of wildfires. These would include increased home insurance costs for those living near the projects, the costs of increasing the level of fire protection, the costs of fighting any fires that may result from these projects as well as the damage to property and the environment.

F88-11



Since the “Take No Action” was recommended as the most environmentally sound choice, it would seem those making this choice are aware of the difficulties associated with wildfires. However, if for some reason a less environmentally sound alternative is chosen, then it is mandatory that adequate safeguards be in place prior to the beginning of actual construction so that if a fire does occur, the tax payers and property owner affected can be confident that the entities involved will be held accountable and that sufficient funds are present to take care of all costs.

F88-11  
Cont.

### **Property Values:**

For the small property owner whose lifetime of work and toil may well be represented by the land and structures that is called home, changes in the property value and salability of their home is of great importance. This may represent their entire life’s work and the inheritance they hope to pass on.

When major projects invade previously peaceful, sleepy towns like Boulevard and Jacumba, it is a very scary thing; there are many questions and few answers. Proponents of the projects may maintain that there will be no effect on property values but common sense says otherwise. The salability of our Boulevard home has already been affect by these proposed projects, the mere existence of these projects, including the Jordan Project must be disclosed to any purchaser in the discovery phase. Prospective buyers looking for the same peace and quiet we had hoped to enjoy would clearly choose another location. The word of the day seems to be mitigation; can this be mitigated? If so, how?

F88-12

In this case, if the NO ACTION recommendation is not followed, then home values in the area may decrease. Since a decrease could be directly linked to the construction of these projects and it directly affects the members of the community, then the loss of value should be born by the proponents of the project. The most obvious solution to this quandary is a “good faith” property value guaranty. If the property values do not drop, then no one is out any money. If they do decline, then those benefiting from the project can step up to the plate and take responsibility.

In this case, mitigation appears to be simple. There is no need to argue whether mitigation will be necessary, one can wait and see. What is important, is to have a plan for mitigation in place and agreed upon prior to construction. If the property values do not decline, everybody wins. If they do, those responsible can take the burden.

### **How These Three Projects Affect the Surrounding Communities:**

There are many ways these projects will affect the communities of Boulevard and Jacumba. There has been a serious attempt to quantify how these projects would affect the environment, this includes the wildlife, the land, the geology, the history, the physical health of the people, and many aspects of the environment.

F88-13

But what it has not been addressed are the most obvious effects: what will become of the once rural communities of Boulevard, Jacumba, Manzanita and the surrounding rural regions, if these three projects that are the primary focus plus the three that are waiting in

the wings are built. It doesn't require much imagination to envision what these massive projects would do to this once wholesome region.

Driving around the state of California via the World Wide Web, one can see horrific photos of abandoned wind farms. One report mentions 14,000 abandoned turbines in California. I am not in a position to verify these numbers, rather....

I am in a position to ask that this impact statement include data concerning the number of abandoned wind turbines in the state of California.



[http://www.americanthinker.com/2010/02/wind\\_energys\\_ghosts\\_1.html](http://www.americanthinker.com/2010/02/wind_energys_ghosts_1.html)

The question this raises is an obvious one.

“If there really are a significant number of abandoned wind turbines across the state of California, why subject this unique and relatively undisturbed environment to irreparable damage when there are other locations that have already suffered at the hands of the wind power industry?”

### **Summary: Some Final Thoughts and Comments.**

In order to make this report more complete and provide an Impact Statement the gives a clearer picture of how these projects would affect this area, I see the following action items as mandatory:

F88-13  
Cont.

F88-14

**-Decommissioning:** The plans for decommissioning and environmental restoration of the whole wind farm region must be in place prior to approval. Prior to construction, the funds necessary to decommission all the wind farms must be in place and under the control of a third party. Like aluminum cans, computer monitors and televisions, decommissioning costs should be paid up front. Decommissioning should require disassembly and removal of all components and structures.

F88-14  
Cont.

**Sound/Noise:** A more extensive measurement and analysis of the turbine noise is necessary. The data should be collected independently of the interested parties and should include not only the measurements of dB(A) and of dB(C) but also more importantly a spectrum analysis of the actual acoustic vibrations that the turbines produce. Given the complicated nature of the turbines, the acoustic vibrations we normally think of as sound almost certainly consist of a broad spectrum that cannot be properly characterized by a single weighted number.

F88-15

**Increased Fire Risks:** The report is clear that there would be increased fire risk from each of these projects; each would make fire more likely and each would make fighting any fire more difficult. This must be mitigated at any cost. A repeat of the fires of 2007 could devastate large areas of East County and indeed the county as a whole. The cost of increased fire protection as well increased fire insurance costs for the community are the responsibility of the proponents. The mitigation measures already proposed in the project hardly seem adequate. Not one single new fire station is proposed in spite of the construction of this enormous industrial complex.

F88-16

**Property Values:** Taken as a whole, it seems likely that these projects will result in a decrease in the local property values. This can be mitigated with a simple “good faith” agreement by the proponents of these projects to take responsibility for their projects.

F88-17

**Abandoned Wind Farms:** This impact statement needs to include accurate information about the number of abandoned wind farms across the state of California and the southwest. Not only would this data be important in determining whether impacting the Boulevard-Jacumba region is truly necessary, but it would also provide some information as to the likelihood of failure of these proposed projects.

F88-18

#### **One last request:**

When it is complete, this Environmental Impact Statement should accurately reflect the many ways in which this remote region of San Diego County would be affected by these major projects. Those who prepared this document worked long and hard and spent many hours in the field getting to know the region. The recommendation of those who prepared this document is that the best choice environmentally is the NO ACTION choice.

F88-19

For those who will be deciding the fate of this region, I hope that you do more than read this document.

I hope that you too take some time to visit these areas, to stand next to a wind turbine flailing away in the wind, to travel to the remote regions of McCain Valley, to get to know these communities, to join me on a wonderfully dark and quiet night gazing at the

dark sky flooded with stars, to understand the vistas that will be forever changed, to imagine for yourself the increased fire risks, and to imagine for yourself just how this region would be changed forever.

To anyone who does take this time to be get a “gut feeling” about the impact to this region, I think it would be clear that indeed “NO ACTION” is the right action.



F88-19  
Cont.

**Jon Isaacs**  
**Senior Development Engineer/Researcher**  
**Center of Excellence for Advanced Materials**  
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**858-945-4782**

**From:** derik martin <milpas@prodigy.net>  
**Sent:** Thursday, March 03, 2011 3:59 PM  
**To:** ECOSUB  
**Cc:** catulewind@blm.gov  
**Subject:** Public Comment East County Substation/Tule Wind/Energia  
**Attachments:** Public Comment March 3.doc

Please see attached public comment and feel free to call me or e-mail me with any questions.

Thanks

Derik Martin

619-444-6034

F89-1

\*\*\*\*\*  
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## Comments For East County Substation/Tule Wind/Energia Sierra Juarez Gen Ti

I am a local homeowner who owns a home and 175 acres just North of one of the impacted areas where the Eco Sub Station will be. My Address is 1425 Carrizo Creek, Jacumba CA.

After review of the Environmental Impact Statement (EIS) I see many errors and opinions that are not substantiated with facts. Every section I read has reports that are out dated and don't accurately reflect what exactly is present in this pristine backcountry that some of us call home. Rather than list specific sections that are misleading and frankly not true I will touch on a few key points that were erroneously reported.

The EIS states this area has a Moderate Value for Wildlife.

This is simply not the case, I have hundreds and hundreds of photos of Bobcats, Fox, Big Horns Sheep and protected birds all taken from around my home. This web site lists species in Jacumba that are unique and only found in this area in San Diego County and California. <http://www.sdnhm.org/research/birds/sdmamm.html>

Bighorn sheep have been observed closer than two miles to the impacted areas.

I have many photos that were taken at Boulder Park less than 1.5 miles from the impacted area. I have also attached a photo with much more than a "small group" of sheep.

California Fish and Game Biologist for this area has done extensive research in this area and believes as do many others that the Peninsular Bighorn Sheep use the mountains just South of the border as a corridor to the north. The "cumulative" affect of the Power lines, Sub Station and some 1200 wind machines will decimate these animals.

It appears as if the Bighorn sheep were studied for a total of less than 4 weeks in the EIS. Many conditions during the time of the study are not what normally occur such as drought, and seasonal movement. California DFG biologist Mr. Botta is a wealth of information on the sheep and other animals in the area yet he was never contacted for this study. All information was compiled by a few out of town people who were working for SDG&E and Semptra.

Water sources show now where they were not present during the EIS study because it was done during a drought!! Big Horn sheep are now reported across from Mountain Springs on the S. Side of the Freeway, which makes them have easy access through the

F89-1  
Cont.



mountains into Mexico right above the impacted area. A BLM Biologist I spoke to as well as the local Border Patrol have reported this.

↑ F89-1  
Cont.

The EIS lists No Known Wildlife Corridors, which is a ridiculous statement. The area affected is very close to Borrego State Park and is known as a Corridor from there into Mexico. I have several spots where I see numerous tracks going through washes that go From Borrego, to BLM Land and then into Mexico. Private property was recently bought by the Nature Conservancy west of Jacumba for a bighorn sheep corridor. That property is now under construction for the Sunrise Powerlink.

F89-2

The EIS mentions that no Bald Eagle nests are located within 10 miles of the impacted area, this simply isn't true, You have Table Mountain and the vast area around the Eastern Edge of Carrizo Gorge and Western McCain Valley, it would take many years of research to make such a statement, if there are no nests within 10 miles then why do I have Bald and Golden Eagles in my back yard near Table Mountain?

Since the recent construction of the Sunrise Power Line I have noticed an increase in wildlife North of the I-8 simply because these animals are being pushed into areas they weren't at before. This project will do the same, but because of the limited food the animals will not survive. You can't continue to take away habitat and expect the wildlife to survive. We have a very limited area in East San Diego County that remains open and hospitable to wildlife and your ruining one of those such areas. Now another 15,000 acres of wind turbines is planned at the base of our mountains in and around Ocotillo, in another major bighorn habitat and wildlife corridor.

F89-3

The EIS mentions that because of the freeway and the developed checkpoints on I-8 & Hwy 80 makes the area Industrial and Utilitarian.

This is simply an opinion. I have attached a photo from the top of Table Mountain just North of the impacted area. Nothing in this photo is "Industrial & Utilitarian" Look for your self at the photo and it's real stretch to call one border fence and a temporary border patrol station in a vast open area and rural setting Industrial and Utilitarian. None of the Key Observation Points photos in the EIS were taken from these elevated locations that are similar to the view from my home and property.

The Border stations are Mobil and are not permanent. They are the only structures other than two houses in the area. There is no industry here.

I have attached a photo of what the pristine area looks like now and what the long range plan of SDG&E and Sempra which is to decimate the land with thousands of wind machines, 58 acres of sub stations/ transformers and 10 acres of tie in lines going into Mexico. With major expansions being built in for up to five 500kV lines! Where are these details and analysis on those expansion plans?

This will change this rural setting to one of Industrial Blight.

F89-4





F89-4  
Cont.

This is the area the EIS calls “Industrial & utilitarian? The Structure in the distance (mid photo left side) is where my home is, an area that SDG&E wanted 60,000 dollars to run power to but now wants to take my front yard/ View and turn it into an industrial Armageddon.

What do I get in return for the destruction and devaluation of my home and property?

The link below is what Sempra wants the area to look like.

[http://www.cpuc.ca.gov/Environment/info/aspen/sunrise/rdeir/figs/fig\\_2-3-7b\\_kvp84\\_table\\_mountain\\_simulation.pdf](http://www.cpuc.ca.gov/Environment/info/aspen/sunrise/rdeir/figs/fig_2-3-7b_kvp84_table_mountain_simulation.pdf)

The EIS lists traffic in the area as Average Annual Daily Traffic of 15,000 vehicles.

This is very misleading. The majority of the traffic in this section of the I-8 freeway is that of recreational vehicles on weekends and holidays. Some 250,000 people visit Glamis Dunes on Thanksgiving alone. The majority of those people use the I-8 freeway in this area to get to Glamis. If you discount this Holiday you end up with very little daily traffic. My home is located some 1,500 feet from I- 8 and the traffic on this highway comes to a complete stop after 10:00 pm on the weekdays.

F89-5

The EIS Report is written in a fashion where it paints a photo of this area unlike what it actually is. They are misrepresenting the facts.

↑ F89-5  
Cont.

The EIS shows with its map that the impact area is located adjacent to a zone listed as being a Very High Hazard for Fires. This project in conjunction with the others has a cumulative affect on fires and simply makes no sense given the lack of resources in the area and Mexico. Fires and wild animals have no boundaries.

There is not a full time Fire Department within 40 miles of the impacted zone. When I pulled permits for my house I had to turn my plans into the closet fire district and it was located in Jamul, Ca some 55 miles away. CDF or Cal Fire stations/ personnel are seasonal and not full time occupied stations. All other stations are volunteer. Relying on the Campo Indians for major brush fires in the area is just not prudent or realistic.

F89-6

The EIS also mentions water resources in the area. The information is based on Hydrology reports from 1980????????

Ground Water data is over 25 years old! Much has changed in this area since then, Bort Farms drawing down the water table, and a 10-year drought were not even considered but are a huge impact on the ground water in this area. My neighbors well just north of the impacted area is over 1,000 feet deep and he gets less than 5 gallons per minute. Well in Jacumba are drying up and the water table is dropping at alarming rates. Your use of 780,000 gallons from a “brackish” source could be just enough to cause the town and possibly the region to run dry of water.

F89-7

SDG&E/Semptra is using this green push to increase its market share. There is no demand for green energy other than the unscientific political agendas of the CPUC and far distant legislators . Decimating land and killing wildlife is not green! The CPUC is pro SDG&E and Semptra because of it’s off the field association with Semptra and the other power companies. Much of what is being done in the project is a result of major conflicts of interest. Nothing is being done for the consumer and rates have gone up 40% in the past 3 years.

In Summary this project is all wrong for this sensitive area. The EIS study is based On little fact and a lot of assumptions. Time spent in the field was limited and some of The data collected or reported is 20 years old, other data is simple not true or reported in A Way that is very misleading such as the fire data, traffic and the presence of wild life.

F89-8

Please review attached photos; the PDF’s couldn’t be attached to this word document.

Thank You

Derik Martin



MAR 07 2011

①

3.3.11

To:

ADMINISTRATIVE LAW JUDGE HALLIE YACKNIN  
IAIN FISHER CPUC  
GREG THOMSEN BLM

REGARDING: DRAFT EIR/EIS FOR  
ECO SUBSTATION, TULE WIND, AND  
ESJ GEN-TIE PROJECTS

WE FULLY SUPPORT THE CEQA ENVIRON-  
MENTALLY SUPERIOR ALTERNATIVE, THE NO PROJECT  
ALTERNATIVE 1, FOR THE FOLLOWING REASONS;

MY WIFE AND I BOUGHT OUR HOME,  
SIGHT UNSEEN, BECAUSE OF THE SPECTACULAR  
VIEWS, AND ITS REMOTE LOCATION, FAR FROM  
DEVELOPMENT AND INDUSTRIALIZATION.

WE ARE TRULY BLESSED TO BE ABLE  
TO SAY THAT WE LIVE HERE.

OUR VIEW FROM OUR LIVING ROOM  
STRETCHES FROM THE SOUTH END OF BUCKMAN  
SPRINGS RD TO THE WEST, TO CORTE ~~LAGUNA~~ <sup>MADERA</sup> AND  
GLEN CLIFF TO THE NORTH, THEN FOLLOWS THE  
~~LAGUNA~~ LAGUNA MOUNTAINS TO THE EAST WHERE  
THEY DESCEND INTO MCCAIN VALLEY.

OUR VIEW TO THE WEST NOW HAS  
FOUR (4) MET TOWERS THAT ARE VISIBLE

F90-1

F90-2



2

ON THE CAMPO RESERVATION.

OUR NORTHERN VIEW IS BLIGHTED BY THE LAPOSTA CASINO, THE GOLDEN ACORN CASINO, AND THE EXISTING CAMPO WIND FARM, WHICH IS APPROXIMATELY 4 MILES AWAY.

THE ROTATING BLADES, THE SHADOW FLICKER AS THE BLADES PASS THE TOWERS, ALONG WITH THE FLASHING WHITE STROBE LIGHTS, MAKES US UNABLE TO ENJOY THE VIEWS FROM OUR FRONT DECK AT CERTAIN TIMES OF THE MORNING AND EVENING.

OUR VIEW TO THE WEST, FROM NORTH TO SOUTH WILL BE DESTROYED IF THESE PROJECTS ARE APPROVED. 106 TURBINES WITH AN <sup>50</sup> ~~ADDITIONAL~~ OR MORE BEING ANALYZED, MANY WOULD BE AS CLOSE AS 1 MILE TO OUR HOME.

IF THESE PROJECTS ARE APPROVED, THEY WILL ULTIMATELY DESTROY THE COMMUNITY OF BOULEVARD, TURNING IT FROM A BEAUTIFUL RURAL WILDERNESS, WITH BREATHTAKING SCENIC VISTAS AND PRICELESS SOLITUDE, TO AN INDUSTRIAL WASTELAND OF 400 WIND TURBINES, 500 FEET TALL, WITH ROTATING BLADES, SHADOW FLICKER, FLASHING WHITE STROBE AND RED LIGHTS, INFRASONIC VIBRATIONS, NOISE FROM ROTATING BLADES, MILES OF GRADED LAND AND ACCESS ROADS, SWITCHYARDS, 69 KV, 138 KV, 230 KV, 500 KV TRANSMISSION LINES STRETCHING FOR

F90-2  
Cont.



(3)

MILES IN EVERY DIRECTION, GALLONS OF OIL LEACHING INTO THE GROUND FROM SUBSTATIONS AND THE TURBINES THEMSELVES.

BOULEVARD SHOULD NOT BE CONSIDERED EXPENDABLE. IT IS OUR HOME!

MCCAIN VALLEY, INKOPAH MOUNTAINS, SAWTOOTH, AND CARRIZO GORGE WILDERNESS AREAS ARE PRICELESS AND SHOULD BE LEFT ALONE. THEY ARE HOME TO PENINSULA BIG HORN SHEEP, GOLDEN EAGLES, QUINO CHECKERSPOT BUTTERFLIES AS WELL AS MANY OTHER SPECIES.

THE NOISE FROM CONSTRUCTION, TRUCKS, THE CEMENT BATCH PLANT, BLASTING, GRADING, ~~AND~~ CRANES, HELICOPTERS, FOR 2 YEARS AS WELL AS THE PRESENCE OF THE WORKERS WILL DRIVE WILDLIFE AWAY. YOU CANNOT HAVE THAT KIND OF A PRESENCE 6 DAYS A WEEK FOR 2 YEARS AND NOT EXPECT A SIGNIFICANT IMPACT FOR POSSIBLY YEARS TO FOLLOW.

THE NOISE AND MOTION FROM TURBINE BLADES WILL BE SIGNIFICANT AND SEVERE TO MAINTAINING WILDLIFE IN THE AREA.

AIR QUALITY WILL BE GREATLY AFFECTED DUE TO OVER 1600 TRUCK TRIPS P/DAY, 250 WORKERS VEHICLES, CRANES, EARTHMOVERS, GENERATORS AND HELICOPTERS. THE POLLUTION ALONG WITH THE SMELL WILL CARRY FOR MILES. THIS IS VERY

F90-2  
Cont.

F90-3

F90-4



(4)

SIGNIFICANT. THE AIR IS CLEAN AND FRESH, AND 2 YEARS OF CONSTRUCTION EXHAUST WILL GREATLY IMPACT AIR QUALITY.

F90-4  
Cont.

BECAUSE OF THE SEVERE LOSS OF SCENIC VISTAS THAT CHARACTERIZE THE AREA, HOME VALUES ARE SURE TO DECREASE. SOME ESTIMATES IN AREAS WHERE WIND FARMS HAVE BEEN BUILT, HAVE RANGED FROM 25% TO 40% REDUCTION IN VALUE. NO PROPERTY VALUE GUARANTEES ARE IN PLACE.

F90-5

AT A RECENT PLANNING GROUP MEETING IN BOULEVARD, ENEL ENERGY EMPLOYEES WHO WERE PRESENT (JORDAN WIND) WHEN ASKED, WOULD NOT SAY THEY WOULD EVER BUY A HOME NEAR A WIND FARM.

WATER CONTAMINATION IS A GREAT CONCERN. OIL, DIESEL FUEL AND HYDRAULIC FLUIDS LEAK FROM EQUIPMENT AND CAN FIND THEIR WAY INTO WASHES AND CREEKS.

THERE ARE NO WELL TESTS THAT CAN TRULY MEASURE WHAT EFFECT PUMPING OVER 48 MILLION GALLONS OF WATER FROM THE GROUND WILL HAVE AND HOW FAR IT WILL REACH.

F90-6

THERE ARE MANY PRIVATE WELLS SURROUNDING LIVE-OAK SPRINGS WATER CO., THAT WILL BE AFFECTED IF LIVE-OAK IS USED TO SUPPLY WATER.



(5)

SOUND TRAVELS VERY FAR IN BOULEVARD. NOISE TRAVELS EVEN FARTHER. DURING THE CONSTRUCTION THERE WILL BE CONSIDERABLE NOISE FROM OVER 1600 TRUCK TRIPS P/DAY, CRANES, HELICOPTERS, EARTH MOVING EQUIPMENT, GENERATORS AND CONCRETE TRUCKS AS WELL AS FROM THE BATCH PLANT. THE ~~NOISE~~ NOISE WILL CARRY FOR MILES 10 HOURS A DAY, 6 DAYS A WEEK, <sup>AND</sup> NIGHTTIME, FOR 2 YEARS. THIS IS A SIGNIFICANT IMPACT FOR ALL OF US WHO ENJOY THE QUIET.

DURING OPERATIONS, NOISE WILL BE EMITTED FROM BLADES AS WELL AS THE GENERATORS INSIDE THE NACELLES.

~~CONSIDERABLE NOISE~~ THERE WILL ALSO BE CONSIDERABLE NOISE FROM LARGE JACKHAMMERS AS WELL AS BLASTING ROCK.

CORONA NOISE WILL BE EVERYWHERE BECAUSE BOULEVARD WILL BE ENGULFED WITH ~~TRANSMISSION~~ TRANSMISSION LINES. THE NEGATIVE EFFECTS OF THIS DUE TO MILES OF LINES HAS NOT BEEN STUDIED AND WE BELIEVE THE EFFECTS ON HUMANS IS SIGNIFICANT.

VISUAL RESOURCES WILL BE DESTROYED. THE VISUAL SIMULATION OF TOWERS AND TURBINES DISAPPEARING INTO THE HILLSIDES

F90-7

F90-8



(6)

ARE NOT ACCURATE AT ALL. ONE VISUAL AT ONE SECOND IN ONE DAY DOES NOT REFLECT SUN ANGLES, SHADING THAT CHANGES DURING THE DAY AND LANDSCAPE <sup>APPEARANCE</sup> ~~APPEARANCE~~ CHANGES FROM SUNRISE TO SUNSET. YOU CANNOT ACCURATELY SIMULATE WITHOUT PUTTING HUNDREDS OF BLADES IN MOTION ALONG WITH BLINKING RED, AND ~~THE~~ WHITE STROBE LIGHTS.

TRANSMISSION TOWERS, LINES AND POLES ARE VERY VISIBLE WHEN LIGHTING CHANGES.

TURBINES AND TRANSMISSION LINES POSE A REAL THREAT FOR WILDFIRES.

BOULEVARD WILL BECOME VIRTUALLY INDEFENSIBLE AGAINST WILDFIRES. THIS WOULD BE DUE TO THE INABILITY OF AIRCRAFT OR FIRE CREWS BEING ABLE GET CLOSER THAN 500 FEET ON EITHER SIDE OF TRANSMISSION LINES AND EVEN GREATER DISTANCES FROM TURBINES.

IF A TURBINE CATCHES FIRE IN THE NACELLE AND IS NOT ABLE TO BE ~~EXTINGUISHED~~ EXTINGUISHED BY THE SUPPRESSION SYSTEM IT WILL BE EXTREMELY DIFFICULT TO PUT OUT BEING ALMOST 400 FEET TALL.

THERE ARE NO SUPPRESSION SYSTEMS FOR THE TRANSFORMERS AT THE BASE OF THE TOWERS WHICH CAN EXPLODE IN ALL DIRECTIONS. POWER LINES CAUSE FIRES, THE

F90-8  
Cont.

F90-9



⑦

MAJORITY OF TRANSMISSION LINE IGNITIONS WERE ASSOCIATED WITH 69 KV AND 138 KV LINES. THERE WILL BE MILES UPON MILES OF THESE LINES FOR THE PROJECT ALONG WITH JORDAN, CAMPO AND MANZANITA.

~~RISK~~ TRANSFORMERS FAILING RESULT IN FIRES 1 OUT OF 5 TIMES AND THERE ARE 35 TURBINE GENERATOR<sup>RELATED</sup> FIRES IN CALIFORNIA EVERY YEAR

THE RISK OF WILDFIRE FROM THESE PROJECTS IS SEVERE, ADVERSE AND SIGNIFICANT. THE ODDS ARE OVERWHELMING THAT THERE WILL BE A FIRE CAUSED BY THESE PROJECTS!

THERE ALSO IS THE RISK ASSOCIATED WITH ASPECTS OF CONSTRUCTION. THESE ARE VERY SEVERE BUT ~~UNNECESSARY~~ UNNECESSARY RISKS.

WHATS MISSING IS THE SUNRISE POWERLINK AS A CONNECTED ACTION. THE TOTAL MEGAWATTS FROM ALL OF THESE PROJECTS ~~IS~~ IS TOO MUCH FOR THE SWPL TO ABSORB, YET THERE IS NO MENTION OF SUNRISE.

THE EDO SUBSTATION ULTIMATE EXPANSION ARRANGEMENT TO ACCOMMODATE 5 500KV, 9 230 KV AND 9 138 KV LINES PAINTS A VERY BLEAK PICTURE FOR ~~THE~~

F90-9  
Cont.

F90-10

F90-11

F90-12

(8)

BOULEVARD IN THE FUTURE. THIS SOUNDS LIKE  
THE BEGINNING OF TRUE DEVISTATION AND  
DESTRUCTION OF A WHOLE COMMUNITY, A  
LIFESTYLE AND A BEAUTIFUL PLACE TO  
LIVE.

WE FIND IT HARD TO BELIEVE HOW  
WE DON'T MATTER, AFTER ALL, ITS ALL  
ABOUT THE MONEY, ISNT IT!

THANK YOU,  
Sincerely

JEFF MCK — Laura McKernan

JEFFREY AND LAURA MCKERNAN  
37131 HWY 94  
PO BOX 1209  
BOULEVARD, CA. 91905

619. 766.9185

F90-12  
Cont.



CROSBY H. MILNE

name

39323 - CLEMENTS ST.

address

MAR 04 2011

3/3, 2011  
date

Mr. Iain Fisher, CPUC  
Mr. Greg Thomsen, BLM,  
c/o Dudek  
605 Third Street,  
Encinitas, CA 92024

**Draft EIR-EIS Comments/ Opposition: Tule Wind, ECO Substation, Energia Sierra Juarez**

Dear Mr. Fisher and Mr. Thomsen,

This letter is being provided to ensure that our concerns and strong opposition are documented in the record for these large wind turbine, substation, and power line projects that your agencies are reviewing as the Proposed Project, alternative projects, and cumulative projects. We may need to join in filing a future lawsuit for damages related to nuisance, loss of property value, quality of life, the use and enjoyment of our property, and other potential adverse effects.

F91-1

We reside in the neighborhood off Ribbonwood Road north of I-8 , in Boulevard. When we moved here, this was a beautiful and quiet place to live and to invite family and friends to join us. Easy access to our adjacent public lands in the McCain Valley Resource Conservation and Recreation Area has been added benefit of living here. All that has changed and we are now very concerned for our own future and that of our neighbors, pets, livestock, and the local wildlife.

We are already impacted by the existing Kumeyaay Wind turbines on the Campo Reservation 2 miles or so to the west of us. We hear and feel the thumping of the giant blades that sometimes disrupts our sleep and creates a nuisance. We also deal with the visual blight of the whirling blades skyline on the ridgeline and the day and night strobe and aviation lights--none of which seem to work properly since the catastrophic failure of all 25 turbines in December 2009. Those almost 4 months of turbine downtime were some of the best days and nights we have had since the turbines started operation around 2005.

F91-2

A moratorium on industrial wind turbine projects should be initiated by local state, and federal agencies, unless and until science-based peer reviewed health and safety tests are conducted to determine a safe setback distance. To date, those studies have not been done and industrial wind energy supporters cannot claim otherwise.

You are now reviewing three energy projects, along with the additional proposed wind turbine projects on the Manzanita and Campo Reservations and Greg Lansing's ranch lands on Ribbonwood Road and Jewel Valley Road. The Jordan / Enel Jewel Valley Wind Project on Ribbonwood Road would be within several thousand feet of our neighborhood homes. San Diego Gas & Electric's large 500 kV Sunrise Powerlink towers and lines will also be installed all along the eastern edge of McCain Valley Road east of us, and will also loop around to the north and west of our neighborhood, placing us down wind of many potential turbine, power line, and /or substation related fires / firestorms.

F91-3

The up to 134 Tule Wind turbines, that will stand almost 500 feet tall, are planned to be installed approximately 1 mile from our home along the top of the ridge just east of our property, and to north at across the top of McCain Valley.

The new Tule Wind 138 kV transmission line is also planned to run right next to the Sunrise Powerlink lines along McCain Valley Road, *or along the western edge of the BLM project site* and ridgeline to the north east of our home.

A new 5 acre substation and 5 acre operation and maintenance building, for the Tule Wind project, are also planned for private land on McCain Valley Road, or for the Rough Acres Ranch property just to the southeast of us.

Ribbonwood Road, our only access road, will be the adversely impacted by the related Project construction traffic, noise, and road damage from overweight vehicles and equipment. Our quiet neighborhood road will become an industrial highway of sorts, creating much more dangerous and invasive conditions for local residents.

**There are several main concerns that we want your agencies to address and respond to:**

1) Increased risk of fire; increased fire insurance rates or total loss of coverage due to new high risk development near our home; reduced fire fighting access due to increased potential for electrocution to fire fighters. Power lines, wind turbines, substation transformers can all start fires. This can translate into a life or death situation for us, with only one dead end access road and limited local fire fighting staff availability, equipment, and funding.

2) Noise and low frequency pollution from industrial wind turbines, some below the level of human hearing, can and does make people and animals ill when turbines are placed too close to homes, livestock, and sensitive wildlife areas. It has been reported that families have even abandoned their homes to escape the unbearable living conditions that are inflicted by these power generating turbine. Increased medical expenses and long-distance round trips for medical attention can really add up. Impacts to pets and livestock can also be severe and expensive.

3) No safe distance has been scientifically determined for industrial wind turbine set-backs. We do know that we don't want them anywhere near our home or the homes of other families. They should be placed miles and miles away from any occupied buildings, livestock, public recreation areas, campgrounds, and protected wildlife areas.

4) Electrical pollution, stray voltage, has been documented in and around other wind turbine and substation projects and homes within 1,800 feet and much more. There are indications that wind turbines and the substations that serve them are more prone to generate electrical pollution due to the intermittent nature of the energy they produce.

4) Shadow flicker from turbines can extend several thousand feet during certain times of day and can create a harmful pulsing light effect that can result in vertigo, seizures, or other adverse effects. That strobe effect also has adverse effects on pets, livestock and wildlife. Our home and property will likely be impacted during the late afternoon and evening hours.

5) Property value losses are being recorded at other wind turbine projects. We join others in requesting that Tule Wind be required to enter into binding Property Value Protection Agreements to ensure that we do not suffer lost value or the inability to sell our property, if rendered necessary, due to the adverse impacts generated by the proximity of their massive wind turbines, power lines, and substations that will surround us. Their current

F91-3  
Cont.

F91-4

F91-5

F91-6

F91-7

F91-8

F91-9

F91-10



wind testing equipment, highly visible from our homes and neighborhood, must be disclosed to potential buyers.

↑ F91-10  
| Cont.

6) We are requesting that any project approvals include binding contractual agreements for adequate and ongoing funding for third party unbiased pre-construction testing for ambient noise, low frequencies and infrasound, and dirty electricity levels to be taken both inside and outside our home and at all our property lines. We are also requesting ongoing monitoring and enforceable compliance guarantees that include shutdown of non-compliant turbines--in the event these projects are approved over our objections.

| F91-11

7) The County noise ordinance and turbine setbacks are currently inadequate to protect public health and safety and cannot be relied upon for these projects. Compliance with those standards, as stated in the Draft EIR/EIS will NOT insure against the generation of a nuisance. Your agencies must address this issue. Our rural ambient noise levels are much lower than stated in the Draft EIR/EIS. Complaints have been generated at other wind energy projects with only minimal increases in noise levels. All ranges of noise levels, audible and inaudible need to be documented at pre-construction levels--and protected for public health and safety.

| F91-12

8) We also have concerns over adverse impacts to both the quality and quantity of our well water. Tule Wind will be clearing, grading, and blasting for turbine footings and new access roads. They will also be drawing large amounts of well water from several wells on Rough Acres Ranch for cement batch plants and other operational uses. Their turbines, substation, transformers, and maintenance buildings will contain hazardous fluids that can spill or leak into the water table. Our water levels should be documented by a licensed unbiased third party prior to commercial uses at nearby wells. We have no economically viable alternative source of water available to replace what we currently have. Cumulative impacts include the Sunrise Powerlink and other projects proposed in this area.

| F91-13

9) Day time strobe lights and red blinking night lighting on the turbines and some of the transmission towers will create another nuisance both day and night ,and take away from our beautiful dark night sky, one of the few left in Southern California.

| F91-14

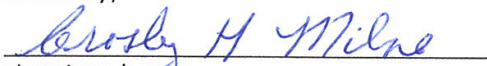
In short, we strongly object to and oppose the introduction of any additional commercial industrial scale wind turbines, the related infrastructure and power lines, and all the adverse impacts that go with them, into our quiet rural neighborhood.

Any approvals of such would constitute a nuisance based on bulk and scale, blinking lights, noise levels (including low frequency and infrasonic), disruption to the peaceful use and enjoyment of our home and property and the very real potential for adverse health effects. While ignored, denied, and dismissed by the wind energy industry, growing evidence documents that some home owners have been bought out by wind energy companies due to undeniable adverse effects. The problems are real and must be addressed by your agencies prior to any project decisions.

| F91-15

We strongly support and encourage the efforts of Backcountry Against Dumps to protect and defend our rural community from the unnecessary, expensive and invasive commercial industrial energy projects, including potential future litigation.

Sincerely,

  
signature here

cc: Donna Tisdale  
Backcountry Against Dumps  
PO Box 1275, Boulevard, CA 91905

**From:** Christopher Noland <sdrockguy@hotmail.com>  
**Sent:** Thursday, March 03, 2011 2:00 PM  
**To:** ECOSUB; catulewind@blm.gov  
**Subject:** East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects

Below are some of my comments on the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects EIS/EIR:

1. The environmentally superior no project alternative is by far the most feasible and taxpayer friendly alternative. F92-1
2. Noise impacts do not include noise from turbines. Please include a discussion on the effects of the full spectrum of wind turbine noise. F92-2
3. Based on the visual simulations presented in the EIS/EIR, please provide maps depicting locations of proposed wind turbines. The visual simulations, specifically in KOP 19, 20, 21, and 22, state the following: "conceptual representation of turbine locations only". This tells the reader of the document that locations, rather than types of turbines have been selected, and that these locations, even if preliminary, can and should be represented on a map. F92-3
4. Please include a nighttime visual simulation using current satellite data of the entire project area before and after construction. F92-4
5. Property Value guarantees are a necessity for the cumulative impacts of this project and the other projects that are discussed in this EIS/EIR. F92-5
6. The resources for groundwater for Tule Wind are extremely lacking. Groundwater has been deemed a non-issue by consultation with the County of San Diego Groundwater Geologist. As a licensed professional in the State of California, it is entirely speculative to assume that groundwater will be a non-issue at the project site. There is also no mention of groundwater resources that are going to be used by the Tule Wind project for construction. F92-6
7. Firefighting capability will be greatly reduced when extremely tall (greater than 500 foot) turbines and power lines will stretch across some of the highest fire danger areas of the county. This, along with a greater chance for ignition sources, makes this entire project something the entire County of San Diego should be concerned with. We do not have to look far back in our history of the 2003 and 2007 fires to see what wildfires can do and how important it is to have aerial firefighting resources, which if the project is built, will be severely limited. F92-7

Chris Noland  
 39524 Jewel Valley Court  
 Boulevard, California  
 619-766-4726

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**From:** Venable, Kenneth CTR NAVAIR <kenneth.venable@navy.mil>  
**Sent:** Thursday, March 03, 2011 1:06 PM  
**To:** ECOSUB; DPparent@semprautilities.com; catulewind@blm.gov  
**Subject:** FW: ECO Substation  
**Attachments:** file.pdf

Please see attached!  
Have a Great Day!

↓ F93-1

V/R  
Ken Venable  
Tel: 619.767.7432  
Cell: 619.757.0007

***Ken Venable***  
1588 Jewel Valley Road  
Boulevard, CA 91905

March 3, 2011

Iain Fisher, CPUC/Greg Thomsen, BLM  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

RE: **East County Substation**

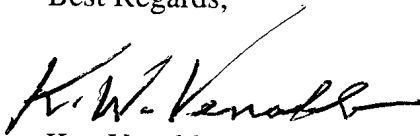
Dear Mr. Fisher and Mr. Thomsen,

Thank you for the opportunity to submit public comment on the ECO Substation Project proposed for the Mountain Empire area.

The Mountain Empire is currently at the "end of the line." The ECO Substation Project will secure much needed reliability to our electric system by tying into the existing Southwest Powerlink and providing access to new sources of clean, renewable energy for our region.

As a resident of Boulevard, I believe these benefits can be achieved with a responsible and balanced approach by the regulating agencies.

Best Regards,

  
Ken Venable

↑  
F93-1  
Cont.  
↓

**From:** Alexa <alexaadkins@aol.com>  
**Sent:** Friday, March 04, 2011 2:48 PM  
**To:** catulewind@blm.gov  
**Subject:** RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

March 4, 2011

Iain Fisher, CPUC  
 Greg Thompson, BLM  
 C/O DUDEK  
 605 Third Street  
 Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

Development of the Tule Wind project will hasten the decline of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. Over the past several decades the total population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide. Additionally, no Avian Protection Plan is proposed or has been developed and made public in conjunction with the proposed project; however there is no acceptable mitigation that will eliminate the risk of loss of the Golden Eagles.

F94-1

The Kumeyaay people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. Due to the development of most of this region there are few Kumeyaay ancestral sites left undisturbed. McCain Valley and the Jacumba are the last of such critically important sites. The proposed draft EIR/EIS has no adequate provisions to avoid the Kumeyaay ancestral districts and no mitigation will be acceptable other than complete avoidance. Many of these locations contain cremation of human remains as well as ceremonial and religious tribal gathering sites that date back thousands of years. There is no way to replace these sites once they are gone. In addition, the proposed project have no plan in place to avoid the significant and sacred cultural, historic, religious, and archaeological Kumeyaay ancestral sites in the region and doesn't address the effects of the total desecration of this highly important and significant cultural landscape of the Kumeyaay People.

F94-2

In summary, the proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project should be rejected.

Sincerely,

Daniella Adkins  
 P.O. Box 1484



Boulevard, CA 91905

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**From:** Alexa <alexaadkins@aol.com>  
**Sent:** Friday, March 04, 2011 2:47 PM  
**To:** catulewind@blm.gov  
**Subject:** RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

March 2, 2011

Iain Fisher, CPUC  
 Greg Thompson, BLM  
 C/O DUDEK  
 605 Third Street  
 Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

Development of the Tule Wind project will hasten the decline of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. Over the past several decades the total population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide. Additionally, no Avian Protection Plan is proposed or has been developed and made public in conjunction with the proposed project; however there is no acceptable mitigation that will eliminate the risk of loss of the Golden Eagles.

F95-1

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F95-2

In summary, the proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project should be rejected.

Sincerely,

Keith Adkins, Manzanita Tribal Member  
 P.O. Box 1484  
 Boulevard, CA 91905

(619)766-9126

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March 4, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

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F96-1

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F96-2

In summary, the proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project should be rejected.

Sincerely,



Theresa Angotti  
P.O. Box 1351  
Boulevard, CA 91905  
(619) 766-9023

March 4, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East  
County Substation/Tule Wind, Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

Development of the Tule Wind project will hasten the decline of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. Over the past several decades the total population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide. Additionally, no Avian Protection Plan is proposed or has been developed and made public in conjunction with the proposed project; however there is no acceptable mitigation that will eliminate the risk of loss of the Golden Eagles.

The Kumeyaay people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. Due to the development of most of this region there are few Kumeyaay ancestral sites left undisturbed. McCain Valley and the Jacumba are the last of such critically important sites. The proposed draft EIR/EIS has no adequate provisions to avoid the Kumeyaay ancestral districts and no mitigation will be acceptable other than complete avoidance. Many of these locations contain cremation of human remains as well as ceremonial and religious tribal gathering sites that date back thousands of years. There is no way to replace these sites once they are gone. In addition, the proposed project have no plan in place to avoid the significant and sacred cultural, historic, religious, and archaeological Kumeyaay ancestral sites in the region and doesn't address the effects of the total desecration of this highly important and significant cultural landscape of the Kumeyaay People.

In summary, the proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project should be rejected.

Sincerely,



David Thompson  
P.O. Box 1351  
Boulevard, CA 91905  
(619) 766-9023

F96-3

**From:** Marylubran@aol.com  
**Sent:** Friday, March 04, 2011 8:24 AM  
**To:** ECOSUB; catulewind@blm.gov  
**Cc:** dianne.jacob@sdcounty.ca.gov; tisdale.donna@gmail.com  
**Subject:** : Comments on DRAFT DEIR/DEIS FOR ECO SUBSTATION, TULE WIND & ENERGIA  
 SIERRA JUA  
**Attachments:** Comments Various on EIS Final.doc

To All Reading these Comments,

We have owned our property in Boulevard now for two years. It has been such a refuge from the craziness of the city and our work in the city. I have sat for hours listening to the silence and the murmur of the wind in the trees. We moved boulders onto the property as I love rocks and irregular shapes. I have watched for hours the sun cross the sky and play its shadow light game on the rocks making ever changing patterns.

As well as a musician, I am a trained artist and I can not tell you how I delight in the shapes of the rocks, the play of the sun with the land, the ever changing colors, the eternal wind song, seeing how it all comes together in a basic silence that awakens the remembrance in me of a deep silence also in the center of my being. This is a place of refuge, a place of spiritual feeling, a place called home.

Here at this little place in Boulevard "I loaf within the absolution of the wind,"--Philip Booth  
 and loafing, make music.

The property had not been cared for for many years. I have put many, many hours into restoring the land to its natural beauty, clearing away trash, and more trash, dead branches and dried weeds and reshaping it all so that our human presence is minimized and the essential harmony of the land can return. My sweat is in the land. "I love this land by the salt sweat it costs to own it whole."--Philip Booth

I hope you study these comments before you decide to impact things that technology does not completely understand. In this process we all have a grave responsibility because what we do will change the destiny of the land, its people, animals, birds and history.... Our power is great. We need to use it responsibly.

We need to consider more than the short term needs of our thirsty society and its overwhelming demands on the environment. We need to look at other alternatives including the sites of other abandoned California wind farms and the possibility of restoring that land to dignity by using it properly.

I was encouraged by the DEIS recognizing that the no action option is an option and hope that we can come to understand a way to preserve our land and satisfy all interests.

**Mary Lu Brandwein**  
**Homeowner/Musician**  
**39745 Jewel Valley Way**  
**Boulevard, CA 91905**  
**858 945 8739**  
[www.shakuhachi.org](http://www.shakuhachi.org)  
[marylubran@aol.com](mailto:marylubran@aol.com)

F97-1

\*\*\*\*\*

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California Public Utilities Commission  
Attn: Iain Fisher

March 4, 2011

BLM California Desert District Office  
Attn: Greg Thomsen  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

VIA E-MAIL: [ecosub@dudek.com](mailto:ecosub@dudek.com), [catulewind@blm.gov](mailto:catulewind@blm.gov)

RE: DRAFT DEIR/DEIS FOR ECO SUBSTATION, TULE WIND & ENERGIA SIERRA  
JUAREZ GEN-TIE PROJECTS

Dear Mr. Fisher, Mr. Thomsen,

I am a resident and musician living in the affected area; this is my second letter of comment on the proposed wind farm projects. This letter will discuss the collective impact of the proposed projects.

## 1. Communities and the Wind Farm Impact taken as a whole

The Draft Environmental Impact Statement for the various projects in the Jacumba-Boulevard region is extensive; I decided to focus my continuing efforts on the collective impact the various aspects of the projects would have on the environment and the communities of Boulevard and Jacumba as well as the whole surrounding desert region. The stated impacts summarized in the table presented in the Executive Summary may seem insignificant especially if kept within accepted legal mandates. Only the obvious impact of the visual effect may seem significant. But as I see it, taken as a whole, all the impacts added together, certainly seem to completely transform, not only the environment and our communities, but indeed, seem to threaten the very existence of our communities, as we know them today.

Taken together as a whole, the great changes as well as the slight changes, the total impact of these East County Wind Farms would be the total transformation of the areas involved. I am not sure that as residents this is understood. From what was said at the meetings, it would seem that things would remain pretty much as they are with a few wind turbines around, but reading through all the impacts from the table in the Executive Summary, it seems that taken as a WHOLE, just a little greenhouse gas here and herbicide there, dust here and land disturbance there, a little noise here and light there, etc. It seems **there would be a total transformation of the area** from a sleepy, quiet, beautiful residential and recreation area of peace and quiet sanity to one of intense industrial presence with substantial infrastructure. That is, roads in and out and businesses and storage areas, etc., current businesses going out of business and other businesses coming in, recreation areas being ruined and closed and all regional effort going to servicing the industrial presence. The whole character of the area would change from residential and recreational to industrial. This means it will become foreign to us for its complete change.

**"Impact AG-1:** Construction and operation activities would interfere with active agricultural operations. NMN" (No mitigation necessary).

F97-2

F97-3

**"Impact AG-2:** Operation would permanently convert DOC Farmland to non-agricultural use. NMN"

**"Impact AG-3:** Operation would conflict with existing zoning for agricultural use or permanently convert Williamson Act lands to non-agricultural use. NMN"

**"Impact AG-4:** Operation would conflict with existing zoning for, or cause rezoning of forestland, timberland, or timberland zoned Timberland Production. NMN"

**"Impact AG-5:** Operation would result in the loss of forestland or conversion of forestland to non-forest use. NMN"

**"Impact WR-3:** Presence of a project component in a designated wilderness or wilderness study would result in loss of wilderness land. NMN"

**"Impact WR-2:** Presence of a project component would permanently preclude recreational activities. NMN"

**"Impact SOC-2:** Project construction and/or presence would cause a change in revenue for businesses, tribes, or governments and would cause a substantial change in local employment. NMN"

**"Impact VIS-2:** The project would substantially damage scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway. NMN"

**"Impact WR-2:** Presence of a project component would permanently preclude recreational activities. NMN"

**"Impact WR-3:** Presence of a project component in a designated wilderness or wilderness study would result in loss of wilderness land. NMN"

**"Impact BIO-1:** Construction activities would result in temporary and permanent losses of native vegetation."

F97-3  
Cont.

**It is really a question of deciding how to use our resources.**

## **2. Visual Disturbance**

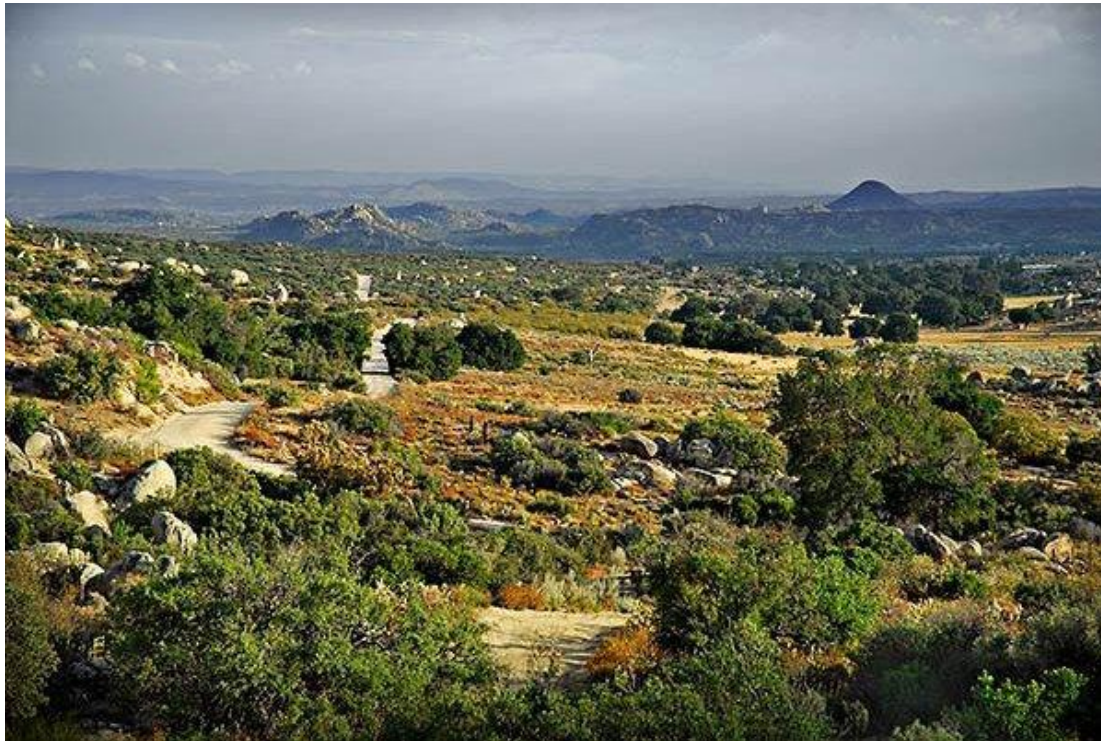
The visual disturbance is the loss of large open spaces, long views that are unavailable in the city. These open spaces are particularly wonderful and I open and wrap myself around them and so find within myself an infinitude that hours of despair and churning out work at the computer day after day, and running around on freeways, kills again and again. I come to these open spaces to remember who I really am. Our modern society with technology dwarfs the human spirit to the size of a small cell phone, a Wii or an HD TV screen. These projects would then fill these broad vistas with wind turbines not only destroying the openness, but also militating against the human spirit, taking away what nurtures the soul. The industrialization of our communities and residential areas as well as our open natural spaces surrounding them, is what we are talking about here.

People from the City of San Diego come to these areas to re-create themselves so that they can go back to the city and continue to work. These re-creation areas are not a luxury, but an absolute necessity for people living in such a concentrated area as the city full of light, noise, and traffic day and night with no rest from disturbance.

F97-4

If all the projects go in as so far planned, my property will have visible wind turbines in three directions: North, West and South. Wind turbines seem to be planned for as close as 1000 feet from the house.

↑ F97-4  
Cont.



### 3. Noise and Sound

Modern life in our society, in our cities has no silence and our lives in the city are filled day and night with noise and sound. Some people go to the desert areas for beauty, peace and quiet. As I previously mentioned in my first letter dedicated exclusively to noise and sound, not only audible sound but low frequency sound would be present too, disturbing people and wildlife and possibly contributing to the ill health of all. These noise components of the projects may well be within certain standards, but still do not allow for the quiet we are used to or the health we now enjoy.

**"Impact NOI-4:** Routine inspection and maintenance activities would increase ambient noise levels. NMN"

**"Impact NOI-3:** Permanent noise levels would increase due to corona noise from operations of the transmission lines and noise from other project components."

F97-5

### 4. Air Quality/Water/Waste

↓ F97-6

Many things would affect air quality just a little.

**"Impact GHG-2:** Project operation would cause a net increase of greenhouse gas emissions."

No mitigation required...there would be no adverse residual effects."

"GHG emissions from the O&M of the ECO Substation Project were estimated to be approximately 3,668 MTCO<sub>2</sub>E/yr (SDG&E 2009)."

F97-6  
Cont.

Herbicides, dust, exhaust emissions, toxic air contaminants would be part of the ongoing operation of the projects and I understand within certain legal limits but still above our current levels.

#### **Water**

**"Impact HYD-2:** Construction activity could degrade water quality through spills of potentially harmful materials."

**"HYD-3:** Identification of sufficient water supply."

**"Impact HYD-4:** The project could deplete local water supplies." Water supplies are already being depleted.

**"Impact HYD-8:** Where septic tanks are proposed, such facilities could impact local water quality. NMN"

#### **Waste**

**"Impact PSU-4:** The applicable wastewater treatment provider that serves or may serve the project determines that adequate capacity to serve the project's projected demand (in addition to the provider's existing commitments) is not available. NMN"

**"Impact PSU-5:** The project would not be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. NMN"

F97-7

#### **Comment:**

From what I understand of the above impacts on air quality, water and waste discussed in the project, they would seem to be minimal and well below the legal limits. "A net increase of green house gas emissions," and all the above substances released into the environment would be within or even below regulated limits. However, they would most certainly be more than what is currently experienced in our communities. For our relatively pristine area, these small amounts of this and that, all over an area enough to make room for the hundreds of wind turbines proposed, would add up to a qualitative difference that would change substantially the character of the area, albeit within legal limits.

### **5. Light**

**"Impact VIS-4:** The project would create a substantial new source of light or glare that would adversely affect day or nighttime views in the area."

**Comment:** As for light pollution at night very much can be said and the projects offer some mitigation, but what about the Mexican side of this project? Even now on the horizon there are disturbing red lights blinking which is irritating, to say the least and certainly disturb the area's astronomers. My husband is one of them. Glare in the daytime is annoying. All the installations would impinge on stargazing and the county's best area for dark nights. I realize that the impact

F97-8

of the Mexican side of the border is not within the scope of the proposed projects here discussed, but is certainly related to and cause for much concern for me.

↑ F97-8  
Cont.

## 6. Property Values

**"Impact SOC-3:** Project construction and operation would cause a decrease in property values. NMN"

**Comment:** Here no mitigation is said to be necessary.... All the property owners in the area are to just lose out. As a property owner in the affected area whose property has already lost value, I think the companies involved need to give all a "good faith" guarantee of property values with the money to be made from the project. This is a money making project and so no one should loose here. I have found nothing to address possible decreased property values in the document other than saying they need not be addressed.

F97-9

What will happen if the wind farms go in and people find they are unable to live with the noise or other conditions? Will there be a guarantee of the property value? Will there be a buyout option respecting the full non-wind farm value?

**Pre-construction "good faith" contracts need to be signed with every property owner involved.**

## 7. Fire Probability and Fire Fighting

**"Impact FF-1:** Construction and/or operation and maintenance and decommissioning activities would significantly increase the probability of a wildfire."

**"Impact FF-2:** Presence of project facilities including overhead transmission line would increase the probability of a wildfire."

**"Impact FF-3:** Presence of the overhead transmission line/facilities would reduce the effectiveness of firefighting."

**"Impact FF-4:** Project activities would introduce non-native plants, which would contribute to an increased ignition potential and rate of fire spread."

**"Impact PS-4:** Project structures could be affected by wind or lightning hazards. NMN"

**"Impact PS-5:** Facilities could suffer an outage from intentional destruction or terrorism. NMN"

F97-10

**Comment:** The proposed wind farm areas are already very delicate and in high fire zones. This area hasn't burned in 25 years and so we are due for a good burn. It is known that when fire has not passed through a region in many years, it is long overdue. The construction of these wind turbines will greatly increase the fire hazard of the areas as is recognized in the above impact statements.

Putting an industrial complex in a residential high fire area has severe responsibilities. Wind Farms increase the risk of fire many times over in an area already at risk. SDG&E does not have a good record in San Diego County with regard to fire prevention and care of electric distribution lines. This is a matter of public record. Will they suddenly do better now in East County?





SDG&E wanted to turn off service a few years ago because it could not guarantee safety from fire during Santa Ana conditions in East County, so I understand this project area will be entirely impossible to defend and will greatly increase fire risk.

**From the East County Magazine:**

**"October 13, 2008 (San Diego's East County)** - Backcountry residents are reacting with shock, praise and outrage to a notice sent by San Diego Gas & Electric (SDG&E) to 45,000 customers warning that power lines may be shut off when fire danger is high. With red flag warnings issued by the National Weather Service through Tuesday night, thousands of East County and North County residents may find themselves without power Monday or Tuesday."

It seems that currently, SDG&E does not feel it can promise customers safety with the existing power structures and now with the 5 wind farms projected...and no new fire stations, it seems that the reality of fire control has been underplayed. I don't know. I am afraid. The fire impacts are clearly stated: these projects would not only make fire more probably but also make fighting any fires more difficult. I, for one, am very afraid the small measures proposed as mitigation of this problem of dealing with fire, may not be enough.

**This fire issue alone indicates that the projects should not be carried out.**

**Inability to get fire insurance and home insurance must be dealt with also.  
Will the owners of these projects insure residents' homes if insurance companies refuse to?**

**8. Decommissioning/Partial Decommissioning and Clearing Away**

As such, I think it is important to carefully weigh all the impacts including those that may result if these projects are constructed but for whatever reasons, fail. Looking around the state and the world, this is certainly an outcome that is possible. This would be very sad. Destroying communities, scenic views, wildlife habitat and wonderful recreation areas in the interest of providing energy is a difficult decision and one that is made with the expectation of success. But success is by no means guaranteed and provisions must be made in the event that these projects fail. Provisions must be in place so that failure of these projects does not result in a mere bankruptcy with the public left "holding the bag."

There needs to be a third bonding party who will assure the removal of machinery and all physical materials related to the projects. The need to return the land to its original state when the project is finished must be assured. The companies involved can't be allowed to just walk away and leave all the worn out equipment and turbines, etc. on the land. So far there is no plan....it just states on Page B-136 that a plan would have to be drawn up. That plan and the funds for it should be set aside from the beginning because at the end there may be no funds. There are too many abandoned wind farms that one sees (12,000 in California alone it seems). These measures and funding should be in place before the beginning of construction.

F97-10  
Cont.

F97-11

Also partial decommissioning may need to be addressed if one wind turbine or two need to be shut down as a result of new standards for proximity to habitations. These wind turbines would need to be carried off and cleared away and not just turned off. Funds need to be set aside from the beginning for these eventualities.

F97-11  
Cont.

## 9. Mexican Component

No mention has been made of the Mexican component of the Wind Farms. Right now there are bright, red, blinking lights. How many more turbines will be put up in Mexico? What standards for light, noise, air quality, etc.? This is a huge unknown and very disturbing. Even though it is not part of the proposed projects, at the same time it is part of the overall project for alternative energy sources in the eastern area of the county.

F97-12

## Conclusion

Considering all the stated impacts with and without mitigation, East County and our communities will still be essentially and permanently changed and not be recognizable, if these projects proceed.

The scenic beauty will be destroyed with industrial machines,  
with blinking lights,  
a net decrease in air quality,  
a net increase in noise from many different sources  
a net increase in low frequency noise  
that possibly will cause what is called "Wind Turbine Syndrome" in some people,  
some diminishment of dark nights with turbine lights  
and more lighting of adjunct infrastructure like parking lots, etc.,  
increased fire risk,  
and decreased ability to move and fight fires,  
the decrease of agriculture, open and recreational space  
the possible contamination of ground water,  
some lessening of water supplies,  
increase in erosion  
as well as a crisscrossing of dirt roads,  
the possible introduction of non-native plant species that could very likely overrun some native plant life.

F97-13

Our communities will not be recognizable. They will certainly not grow as communities nor will they be places where people will want come to live or even come for recreation as they do now.

Jobs in the area will be INS and technology related. These projects don't just mean our communities as they are now with a few wind turbines here and there, but the complete reshaping of the whole area.

The whole character of the area will completely change.

I didn't see in the Draft Environmental Impact Statement anything speaking to the total overall effect of these projects on our communities. If there is a gradual moving away of people who can't take it and a possible sickening of the retired members and younger members of the community that have less vigor to withstand health threats, these communities as they are now could shrink considerably and be replaced with the adjuncts of the industry to be served. This means diminishment of the quality of life for all.

I have seen reports stating there may be as many as 12,000 abandoned wind turbines in California alone, perhaps some of these place could be reworked and made to function again. SDG&E already has energy investments in Montana, so why not other parts of California?

European Companies are coming here to further development wind farms (Iberdrola Renovables is a Spanish Company). Why is this? This seems to me to be very strange. Perhaps wind farms are being dismantled in Europe or not working well, so that European companies are coming to the US. We here don't know yet all the negatives of this form of energy. There are many, many more studies with real data than I have been able to study in this short time. The fact that a growing number of European countries are putting the brakes on allowing more wind turbines to go up, should raise a very BIG red flag (See a list here: <http://www.wolfeislandresidents.ca/windturbines.html>)

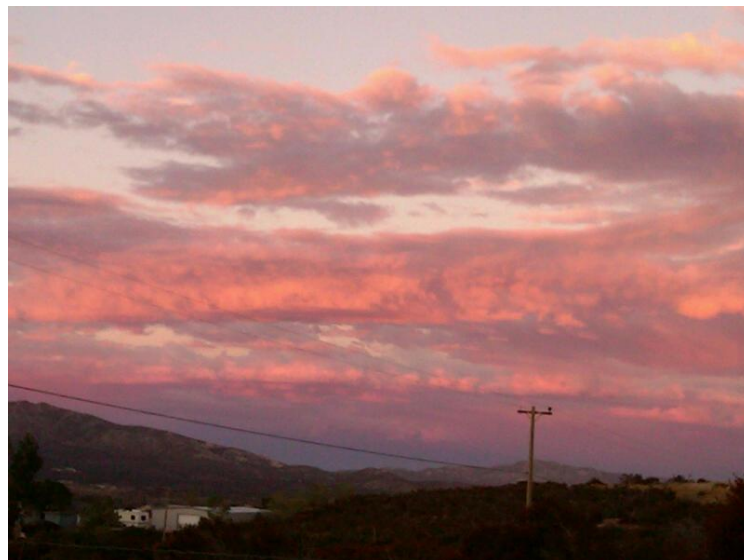
From the study itself, I understand that the overwhelming environmental impact is so great that **it is best not to construct the wind farms.** The DEIS concludes with this statement. Given the level of impact to the environment, this seems like the only answer and the one that should be the decision of those who will decide the future based on the study itself.

If it is decided to move ahead inspite of these major impacts, then in the interest of the long term health and sanity of the near-by occupants, I think it is necessary to **at least move the wind turbines away from the residential areas and schools to at least 2 to 2.5 miles.** As I discussed in my first letter of comments, this is necessary because of health indicators and an incomplete understanding of the effects of wind turbine farms on the near by inhabitants. This step would at least make it possible for our communities and the wind farms to co-exist.

F97-13  
Cont.

F97-14

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**Sent:** Friday, March 04, 2011 11:57 PM  
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**Attachments:** McCain\_Valley1.JPG; McCain\_Valley\_sill\_sm.JPG

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**DEIR/EIS Comments:**  
**Tule Wind Energy and East County Substation Projects**  
**CASE FILE NUMBERS: CACA49698, CACA51625**

Dear Mr. Thomsen and Mr. Fisher:

I was asked to provide comments on the above project by the San Diego Sierra Club. There has been some disagreement between the San Diego Chapter of the Sierra Club and the National Executive Board. The Executive Board requested in January that Sierra Club members not make visual comments on energy projects. About five minutes ago however the Executive Board of the National Sierra Clubs issued a statement reversing its position on the proposed Sunrise Powerlink.

F98-1

I think it would be an understatement to say that by far and large the members in San Diego that I've communicated with find this requested project to be unreasonable and contrary to the 100 year legacy of this organization.

I drove the length of McCain Valley about a month ago. It was breathtaking. I went to the overlook and visitor information board and then to the far camp ground and about a mile past that. See attached photos.

F98-2

I do not understand how these impacts can legally be allowed. How can you place wind mills near two camp grounds? The first camp ground will be closely impacted. Are you planning to close the camp grounds? They are there for quiet camping pleasure of the public. I do not see how these could possibly be mitigated on site. Are you going to build new ones somewhere else?

There are some rock formations looking to the south west from the main road near the overlook spur. They will be compromised by surrounding infrastructure. The overlook contained numerous vistas that I do not see how they will be able to mitigate adequately. What is now unspoiled in all directions will not be.

What is the cost of this land for this project?

What will the BLM use this money for?

What is the cost benefit of the land if they do nothing?

Why does the government lease land so cheaply when so much is given away that can not be returned?

I do not think the mitigation effort is adequate compared to the unique resource that is being taken. Iberdrola claims there are no critical species or impacts. I would disagree. The complex high desert chaparral and the wind carved rock formations are highly unique and well treasured landscapes by local San Diegans.

It is hard to imagine the suggested project is a serious suggestion. On the one hand there is a tremendous effort to preserve and protect whole ecosystems in this nation underway by the current administration. These places, including McCain Valley are the spiritual backbone of the American Experience.

The National Environmental Protection Act lays down a detailed process for public communication and disclosure of these projects. In the past five years of closely monitoring the Sunrise Powerlink to this point of commenting on the Tule Wind Project and some of the other connected actions and projects proposed, this EIS is one of the best prepared I've seen. I do hope I meet the person who wrote it in the communications and open houses that are likely to follow. My colleagues, who are far more knowledgeable and skilled in reviewing these, undoubtedly may find many additional details. However a lay person with some dedication can review this and gather a serious sense of the far reaching impacts and implications of this project without requiring an environmental science or law degree to do so. I appreciate a professional effort. This is still a very complicated, convoluted issue. The relationship of Tule Wind to the many other proposals as well as the initial Sunrise Powerlink took two hundred pages even in your document. I will not be able to filter it all.

As I did for the Ocotillo scoping letter, I would like to reference the comments by Donna Tisdale and Edie Harmon on this project and all connected actions, the several wind and solar projects and transmission line projects. As I mentioned in that letter, I've known Edie over a decade and Donna for at least half of one. Both of these women have spent thousands of hours, sacrificing time and life spent more comfortably in any number of ways, documenting the desert and high chaparral regions of our county, San Diego and Imperial County to be clearer. Edie Harmon spent so much time in the Sierra Club office with her late husband patiently at her side, that they bought him a rocking chair and put a brass plaque on it labeled "The Harmon Chair". It is a one of its kind "trophy" of appreciation to our member that probably knows more about desert issues, the BLM, and NEPA processes, in this area than anyone else.

I tell you these things now, in a federal comment period to substantiate the expertise and regard we have in the San Diego Chapter for the efforts of these two women to preserve our desert lands and communities and cultures, both human and otherwise, for the generations to come. I can only hope my own passion for the Cleveland National Forest regions of this area could evolve to mirror the professional example they have created. I could not presume to replicate the expertise they bring to this forum nor do I know off hand who could.

F98-2  
Cont.

F98-3

F98-4

I know of no reason why the points made in Donna's letter would not be fully endorsed by the collective goals of the San Diego Sierra Club and wish to incorporate her points as largely supported by the people in our local chapter if not the chapter itself.

I've been reviewing portions of the larger connected action, the Sunrise Powerlink, for five years now, though my region of greater expertise is in the Cleveland National Forest. I have numerous photos and video online on [www.youtube.com](http://www.youtube.com) under the channel "iokuok2". I am not paid, rarely if ever reimbursed, not on a grant, nor have other additional relationships to the land, that I'm aware of, in this project other than my own experience of going there. My ability to gather a plethora of facts, especially at random, especially if provided auditorily is mediocre at best. However my ability, once at hand, to synthesize, identify, predict the probable patterns and implications from non-sequitor and abstract sources of information is tested well above the upper 90 percentile and one that I don't get to exercise for daily routine efforts.

F98-4  
Cont.

This project is anything but routine.

Based upon some of this I would predict that even though there has been a good effort on this EIS, perhaps an exceptional one, we will be surprised with more connected actions in the future. The one that seems most likely comes from AB 2514 that suggests that with a large number of windmills there will be some form of reservoir and pump-storage to store and "smooth out" the energy produced by wind power.

What projects for pump storage and other energy storage are being planned to support the complex of wind farms in the area?

Have locations such as Barret Lake and Lake Morena been suggested?

F98-5

When were locations for energy storage first suggested?

When was Tule Wind in McCain Valley first suggested?

What is the alternative?

Please explain what type of generation is placed into the grid, DC or AC? Does Sunrise carry more than one?

Please explain why the one chosen was chosen. Presumably wind generation is initially DC? So why that would not be kept in DC form for as long as possible to reduce the energy loss from transmission and then converted when AC is needed?

There are questions being asked and answered way out of sequence in these energy issues. The most obvious is "Is it needed at all?"

What are the specific criteria create the urgency for this project. What are the specific criteria that require the project to be where it is instead of on an area with less pristine qualities.

We have a 500 kV power line with an in specific future of 1000kv already approved, albeit in litigation, and wind farms proposed that if brought to full fruition will convert lands managed from rural in character, to lands seriously under consideration for Federal Wilderness projection for the size of an equilateral triangle 20 miles on a side, or 173 square miles, or 110,720 acres of impact. This doesn't include the Ocotillo Projects nor the projects in Mexico that are up to three times that.

F98-6

This began as what shrinks in hindsight, as a 500kv line through Anza Borrego desert to ensure energy reliability in this region 2005. It progressed to a national prototype by some to create "green" energy and move away from fossil fuels that would remedy global warming.

However the latter has never been officially defined, nor confirmed, nor nationally supported as the essential movement. In fact the Bakken in Montana are currently being extracted in accelerated fashion to produce enough oil to double our national oil reserves.



Given that it is difficult to justify supporting a project that basically removes an enormous section of gorgeous unspoiled natural beauty, as well as uprooting houses, homes, cultures, and lives, the live of humans, as well as the lives of animals and plants, whole unspoiled systems, if part of the country is expanding the status quo in oil. It would not seem that the national policy is consistently fearful of global warming or fully integrated and mobilized, mentally or otherwise, into a solution.

Please explain what is the main driving force that legitimizes this project?

To what degree is this complex of projects to assist Mexico and the relationship we have with them? What is the main goal for that relationship inside of the scope of these projects?

From a look at the EIS in general I would conclude that the categories covered indicate very serious impacts in all of them. The BLM has done their job for the EIS in this way. These are so critical and serious that until now, given their level of impact, I do not believe this project would have had a chance of approval. Not even a casual outdoor enthusiast remotely familiar with environmental protection would have dreamed that a private corporation could claim this land for industrial development for pennies on the dollar for their profit.

I would conclude that this is not a normal situation and does not operate under a normal bell curve of NEPA approval. The EIS is NEPA required, but not “NEPA considered” in the capacity that it always has been before. Never before could someone suggest to undo a management class all the way to category IV along with two public campgrounds, a functioning resolution for off roaders and dirt bikes and a wildlife management area well regarded by hunters, hikers, and spelunkers. That this could be rationalized all the way to plausible is far and away off the bell curve.

I would like to incorporate by reference my comments to the Ocotillo scoping project. I outlined many concerns for reasons outside of environmental ones that I believe are catching the attention of the general public enough that they should warrant concern and be researched.

The EIS describes several issues that we would agree are issues for this project. Some of the following were identified by Donna Tisdale in an earlier letter:

***“For the record, this is a partial list of our major concerns with the proposed project and the overall rush to industrialize our scenic and sensitive public lands --that should be protected--and impacted low-income rural communities:***

***) Allowing commercial industrial uses on lands zoned as Limited Use by scuttling that zoning meant to protect significant and sensitive resources and converting those lands and resources to large-scale destructive industrial uses.***

***) Lack of need for this and remote projects that require new extensive, expensive and destructive transmission infrastructure at the expense of US taxpayers, utility rate payers, public lands and critical resources.***

***) The intermittent and unreliable nature of wind energy that requires an average 70-90% in backup generation.***

***) What is the designated load follower / backup source?***

***) How many connections to IV Substation is too many? What is the limit?***

***) Industry misrepresentations of Green House Gas benefits from industrial wind energy proponents should be challenged.***

F98-6  
Cont.

F98-7

F98-8

*) In the UK, a wind energy company lost a truth in advertising challenge, their GHG reduction claims were proven to be improperly based on out-dated data related to older more polluting power plants that had already been closed or retrofitted.*

*) Scale and scope of project and proximity to Anza Borrego Desert State Park, other sensitive public lands and resources,  
(and I add proximity to the Cleveland National Forest, their visual references these at over ten miles when in fact they are 3-5 miles away.)*

*) Adverse and cumulative impacts to the rural low-income community of Ocotillo, and other residential areas. (I would add to Jacumba, and Boulevard, and Lake Morena, and Campo)*

*) Adverse impacts to road quality from massive overweight construction equipment/cranes and project equipment transportation to community / public roads that have not received much if any significant repair within memory.*

*) Cumulative air quality impacts from traffic related to multiple industrial scale mining and energy projects on BLM lands in the area in addition to I-8 traffic impacts.*

*) Environmental Justice issues / disproportionate number of projects are concentrated in Western Imperial County and Eastern San Diego County. Noise and air pollution count.*

*) Significant cumulative impacts to a variety of resources from numerous massive wind, solar, and transmission infrastructure projects to the same geographic area, resources, and low-income rural communities. Both BLM and Imperial County should have a complete list, similar to that used in the joint PUB/BLM DEIR/EIS for Tule Wind, ECO Substation and Energia Sierra Juarez at Figure F-1 & F-2:  
[http://www.cpuc.ca.gov/environment/info/dudek/ecosub/Draft\\_EIR/F\\_Cumulative.pdf](http://www.cpuc.ca.gov/environment/info/dudek/ecosub/Draft_EIR/F_Cumulative.pdf)*

*) Impacts to designated critical and occupied habitat and wildlife corridors for the endangered Peninsular Bighorn Sheep. (I would add the migrating deer from the Lagunas especially during snowfall)*

*) Impacts to bird and bat populations including Golden Eagles and other raptors through direct impacts with blades, towers, transmission lines, and loss of forage and prey.*

*Ocotillo Express Scoping Comments / Tisdale/BAD/POC/ECCAC Page 3“*

*) Golden Eagles have a range of 100 miles and more. The Tule Wind DEIR/EIS top CEQA alternative is NO Project. Based on Class I impacts to Air Quality, Noise, Biological Resources, Visual Character, Fire and Fuels, and Cultural Resources.*

*) Impacts to Flat Tailed Horned Lizards, desert tortoises, other endangered and sensitive wildlife and unfragmented habitat. ( I would add to water resources and riparian areas)*

*) Impacts to a significant known concentration of Native American cultural resources, including village and camp sites, graves, ceremonial sites, Traditional Cultural Properties including Areas of Traditional Cultural Concern, Sacred Geography, and Areas of Potential Effect.*

*) Need for real and timely tribal consultations in full compliance with NHPA and other applicable laws and regulations*

*) Adverse health effects to people, pets, and wildlife from low frequency noise and infrasound , shadow flicker, and exposure to Valley Fever through newly disturbed desert soils.*

*) Adverse impacts to ground dwelling species from vibrations traveling through turbine shafts into the ground, construction of new roads and fragmentation of habitat.*

*) Conversion of public open space and recreational use (loss of use) to private commercial / industrial use in an area not zoned or compatible for such use.*

*(I would add the prohibitory impact to two campgrounds, wildlife management area, and spectacular views. The recreational impacts will create extra pressure upon what is left)*

*) Adverse impacts to property values from loss of premium open desert views and quality of life.*

*) Significant impacts to Visual Resources and wilderness experience in the adjacent Jacumba Mountain Wilderness Areas, Table Mountain Wilderness Study Area, Coyote Mountain Wilderness and ACEC, Sin*

F98-8  
Cont.

*Number Wilderness, Carrizo Canyon Wilderness, Carrizo Gorge Wilderness, Sombrero Peak Wilderness, and the Cleveland National Forest, La Posta Canyon, and Antoine Canyon, Limited Use Areas where travel is currently restricted to open routes and the camp sites and trails within all the areas named above.*

- } Impacts to historic Desert View Tower and Mountain Springs Park*
- } Conversion of rural visual resources/character to visually intrusive industrial energy park*
- } Fragmentation of large natural habitats, wildlife landscapes, and currently stable desert soils and vegetation.*
- } Loss of ambient quiet and remoteness from the urban environment.*
- } Loss of Dark Sky for scientific study and recreational use and enjoyment.*
- } Interference with aviation radar, homeland security activities, military aviation routes of travel.*
- } Interference with cell signals, radio communications, medical devices*
- } Air quality impacts and introduction of fire ignition sources in underserved rural area.*
- } Impacts to emergency Services, increased fire insurance rates, waste disposal for non-recyclable composite blades and other turbine parts that have a high rate of failure.*
- } Need for Property Value Protection Agreements for private property owners within a 5-mile radius of each turbine, along with pre-construction ambient sound testing with A and C weighting*
- } Need to prevent on-site stockpiling of discarded blades and turbine parts through permit*
- } Impacts to water quality and quantity, from contamination and overdraft in the federally designated Ocotillo Coyote Wells Sole Source Aquifer/ already in state of overdraft ,*  
*( would add the ground water near the Manzanita Reservation and Jacumba, Boulevard, and Buckman Springs area, and the indication that the developers may be thinking of buying ground water from the Lagunas and Cuyamacas.*
- } Turbines should be constructed with catch basins at base to prevent oil leaks from entering soil and groundwater.*
- } Increased soil erosion and air borne dust and pathogens.*
- } Need for local mitigation. Do not allow out of the area mitigation for any impacted species--like BLM allowed for Bighorn Sheep impacted by the Sunrise Powerlink.*
- } All environmental surveys, mitigation proposals, contracted water sources, and turbine models must be provided for public review and comment prior to project approval.*

F98-8  
Cont.

The Federal Land Policy Management Act directs that:  
the public lands be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values; that, where appropriate, will preserve and protect certain public lands in their natural condition; that will provide food and habitat for fish and wildlife and domestic animals; and that will provide for outdoor recreation and human occupancy and use.

FLMPA further requires agencies that are considering applications for rights-of-way to limit to the extent feasible the natural resource damage of the proposed project. 43 U.S.C. § 1765. FLPMA mandates that “[e]ach right-of-way shall be limited to the ground which the Secretary concerned determines [. . .] will do no unnecessary damage to the environment.” 43 U.S.C. § 1764. FLPMA also requires that “[e]ach right-of-way shall contain . . . terms and conditions which will . . . minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment.” 43 U.S.C. § 1765. These requirements are strictly enforced and cannot be easily counterbalanced by project proponents’ claims of

F98-9

inconvenience or cost. *Trout Unlimited v. U.S. Dept. of Agriculture*, 320 F.Supp.2d 1090, 1108

This is the standard that should be enforce. From the EIS however there is glaring rationalization and blatant presumption of entitlement that Environmental issues can be ignored. The level of impact from this project can not be mitigated. When you have a whole system that is not being acted upon by outside pressure, then you develop it, there is no way to rationalize its unspoiled character any more.

F98-9  
Cont.

I understand that the content of the EIS does not necessarily reflect “a proceed” or “don’t proceed” opinion of either the BLM or the person that wrote the EIS on behalf of the BLM, but the task of following through with NEPA public disclosures in the course of performing their job. It clearly demonstrates significant changes that the lay person can follow, as a NEPA document is supposed to disclose, that will occur if that project goes through.

As I also stated in my Ocotillo comments, from review of the Tule Project it is obvious that this is totally contrary to any effort, project, siting , scoping, or legal intention that the public could reasonably perceive as the general intention or direction that the BLM has taken in that area in the past. In short, it is inconceivable that this project is consistent with NEPA or FLMA criteria. It basically suggests radical alteration of McCain Valley from an unspoiled, substantially environmentally and historically significant region, by all NEPA criteria, to an industrialized one.

F98-10

Any reasonable person, regardless of their personal opinion or relationship to the land would know the general endeavors of the Sierra Club to include protecting and preserving places such as that one even if they did not necessarily agree with the Sierra Club environmental explicatives. For now I would like to assume this much is reasonably true. Also, it is reasonable to assume that regardless of their opinion on the genuine existence of global warming, by as a matter of common knowledge, a member of the public would regard the general endeavors of the Sierra Club to likely include dedicated and agile pursuit of a resolution to global warming to be a likely activity of that organization, based upon a conscience decision by that organization that the potential threat of global warming is too serious to ignore and hence requires considerable preventative action.

F98-11

The area surrounding Ocotillo for the Ocotillo Express project is enormous. It is exposed in the wide open escarpment from the mountain ranges on the west to the desert floor below. This would impact the desert in every NEPA categorical area of concern. In the updated Federal Land Management policy, there is expanded emphasis on regarding whole ecological systems when reviewing the impact of a project. These wind farms, roads, building, maintenance, water requirements, air, create direct and indirect impacts to habitat, human activities, and archeological resources totally altering the dynamics of an ecosystem. The land as an unspoiled ecological system is subject to be converted to an industrial complex. In spite of the presumed fantasy of the alterators to the land classification for areas of critical concern, these two worlds do not coincide or co-locate with integrity and to this author that ability has never been reasonable established with any consistent integrity. As the existing level 3 designation, presumably it is illegal to convert it to the other without serious extenuating circumstances. As Donna noted this land has been designated differently for perpetuity. This project is in blatant conflict with all planning and consideration up to this point.

F98-12

The Tule wind project adds to a chain of proposed projects connected and initiated by the proposed Sunrise Powerlink Transmission line project. When that project began, according to NEPA all connected actions were supposed to have been disclosed. Clearly they were not. It doesn’t take more than the studious member of the public to realize that neither of these projects would come close to legal fruition in normal times. So the only conclusion that can be reasonably extrapolated from the connected experience is that since they are not remotely legal or in keeping with the regular goals of managing public lands that the orchestrators of this project as well

F98-13

as the others either perceive, though never clearly specified in their EIS, that these are NOT normal times; or that they somehow perceive themselves entitled or in a privileged class outside of the laws for the rest of us..

We have to conclude that the ramifications of even proposing this project is serious and should be very carefully considered not only for environmental reasons but under the umbrella of other public laws as well. When does our country normally allow for exceptions of this magnitude? After all the collective assortment of green projects now on the drawing board for this region, in areas that are unspoiled, not the already impacted agricultural lands as we are often told and promised they would be considering, now create a wind mill spinning barrier from the mountains to the border impacting all life forms, ecologies, and habitats, From the desert floor at Ocotillo to the Lagunas, to the Mexican border, and as it turns out, well into Mexico in the Sierra Juarez the character and dynamics of ecosystems are splintered and altered. Only in war time or in emergencies where life and property are severely threatened has our country stepped in to undo a hundred years of protecting the most fundamental environmental standards. The implications are sweeping.

F98-13  
Cont.

I can extrapolate two actions though there may be others.

On the one hand the concerns over global warming are greater and far better known and elaborated to the government and to possibly top members of its designated stakeholder, the Sierra Club National. If this is true, consider that under the current scenario these connected projects make global warming worse. They are not a solution and they contribute to the problem. We, as Americans are no stranger to buckling down to adversity, making sacrifices to protect our country. However this isn't protecting our country. If it is then this explanation is highly over-due in contrast to the life changing impact to lives already engaged in this process for five years. These projects add to CO2 and require considerable backup fossil fuel generation. Or as some are suggesting we create huge backup "batteries" in the form of pump storage. No connected action for pump storage has been disclosed. So for this general scenario I'm reluctant to believe in its implied merits to stem global warming. What one would view as logically tangent actions to this just doesn't exist. No action in town to reduce the impacts. No efficient upgrades of the existing infrastructure. No undergrounding of Direct Current where it makes the better sense to do so. In general any of the state CEQA mandates to choose the lesser of evil impacts, albeit more expensive ones, were skirted by moving the cumulative set of perceived projects largely to federal land where disclosure is required, action not necessarily but thanks to the Energy Act, consideration for connected actions is.

F98-14

So alternatively consider that it is not about global warming but rather about money. Than the actions should include a thorough review of the balance sheets and investing habits of all connected players who propose these projects, their friends, and families, their strategies, and the public good at hand, as well as the management of green funds and their investors in the last decade. Is there a reasonable National interest? Could we be doing these things to ensure the safe delivery of the communist world into ours? We could not begin to speculate on the entitled intentions of investors or for legitimate National Security, but the BLM as managers of US Public land and resources must do so. This Ocotillo project and others like it open doors to land grabs, for pennies on the dollar to public owned resources. Does the public get the benefit? This is a question that must be answered and disclosed.

A decade ago the Sierra Club issued a request for information or FOIA on the closed door planning meetings of the contributions and intentions of the undisclosed members participating in the creation of the Energy Act of 2005. Ultimately they lost this challenge and the needs and intentions of the members of the groups participating were not disclosed. Some of these participants are commonly thought to represent the interests of other nations as well as our own. That may not be a strike against it but in light of a lack of transparency over the full and logical motives of this project and its connected action with the others since 2005 it is time to revisit the relationship of the Energy Act, the FERC corridors, and these projects. If we need an integrated resolution to global warming than one needs to begin with all of the actions and technologies well represented in the development of a coordinated plan. This one has been more the cat and mouse game of trying to acquire the

simplest explanations in timely fashion. We ask that the BLM continue to be the stewards of our lands and ensure that this review process is carried out thoroughly, transparently for the ultimate public collective good.

The time is come and overdue for the transparency of disclosures around these projects. If we are going to be successful in alleviating global warming, democracy will have to be placed first.

Last summer I received an invitation to tour the proposed Tule Wind Project. The company liaison very professionally answered my questions and set up a tour. However later we would learn that local members of the community of Boulevard were not allowed to go. When I objected to a brand new national Sierra Club Policy that prohibited local chapter member comments on energy projects, I was suddenly removed from the tour; not by Tule Wind but by the Sierra club. I had even provided some potential sites much closer to town in legitimate spirit of participating objectively. Somewhere in that shuffle I learned, though I have not substantiated, that the parent company Iberdrola Renewables, from Spain is invested, to what degree was not mentioned, from a requested FOIA, in by our former vice president Dick Cheney. When we juxtapose this with the initial portions of the pattern where the Energy Act of 2005 with Cheney at the helm was not allowing the Sierra Club access to the details of Energy Act meetings and participants, it should raise some questions as to how the National Sierra Club became so protective enough in the people that litigated out their access to information , to now prevent my participation on a tour?

**Please add my name and contact information to this project serve list for future notification. 619 934-0323.**

Sincerely,  
Cynthia M. Buxton

CoChair of the Forest Committee of the San Diego Chapter of the Sierra Club.  
Member of POC, ECCAC/ SD River Park Foundation  
Adoptive Parent of the Proposed Eagle Peak Wilderness

Imperial Beach, Ca. 91932

If you believe in democracy, trust it in a crisis.

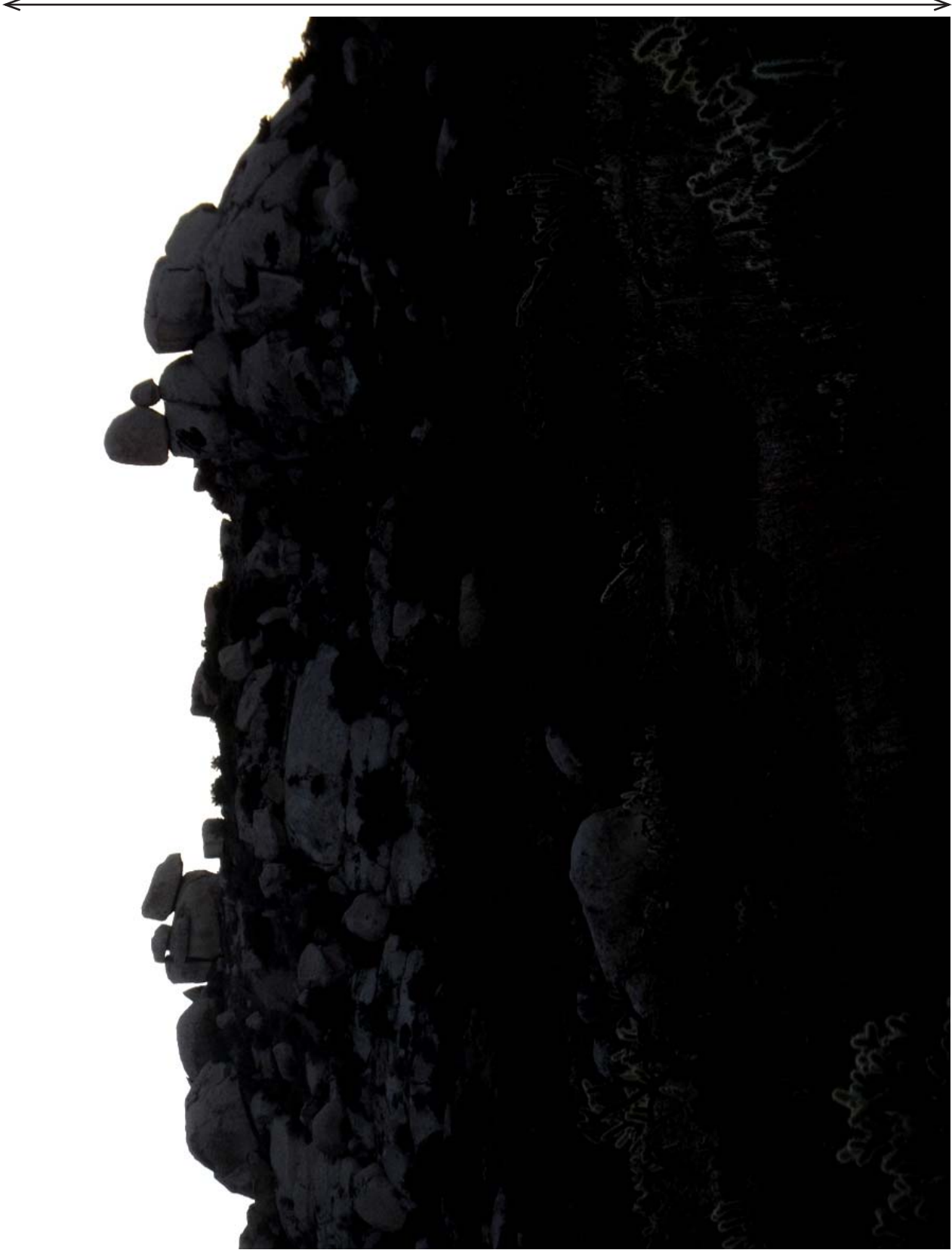
\*\*\*\*\*  
This footnote confirms that this email message has been scanned by  
PineApp Mail-SeCure for the presence of malicious code, vandals & computer viruses.  
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F98-14  
Cont.

F98-15



F98-15  
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F98-15  
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**From:** Ken Daubach <dumptruck.01@wildblue.net>  
**Sent:** Friday, March 04, 2011 10:00 AM  
**To:** ECOSUB; catulewind@blm.gov  
**Subject:** Daubach Comments  
**Attachments:** comments.docx

We have sent a hard copy of our comments with signatures in the mail. The attached and below copy are the revised and completed copy. We mailed a copy out early because we cannot always rely on our internet. We wanted to make sure that our comments got in on time. You may disregard the mailed copy.

F99-1

Below are comments from the Daubach family.

#### Boulevard's Needs

Our family has been involved in the community of Boulevard in many capacities, such as a volunteer firefighter, Fire Safe Council board members, Revitalization Committee members, CERT team, Red Cross, Mountain Empire Disaster, and the Boulevard Planning Group. It is fair to say that we have a pretty good idea of what this community's needs are. Boulevard has no community center/evacuation center for people or animals. When Red Cross came to look for a place to set up an emergency shelter, none of Boulevard's buildings were considered suitable. The fire station is inadequate and needs major renovation. The Sheriff's Department in Boulevard is only a substation and is not manned. The current Boulevard Fire and Rescue Department facility, which is not structurally sound enough to qualify as a certified emergency shelter, should either be retrofitted or built to allow for use as an authorized public emergency shelter. That shelter should be fully outfitted and stocked to serve the Boulevard community and others in need during natural or man-made disasters. The developers/owners should be required to fund these ongoing services along with their projects, which represent ongoing significant increased threat of fire.

F99-2

Socio—economic

↓ F99-3

Contrary to the projects' claims, our community is being adversely affected in a socio-economic way. We're also being jeopardized by fire, our most serious threat.

An excerpt from Wikipedia's definition of socioeconomics: "Social economics may refer broadly to the "use of economics in the study of society." More narrowly, contemporary practice considers behavioral interactions of individuals and groups or social cut capital and social "markets" (not excluding for example, sorting by marriage) and the formation of social norms. In the latter, it studies the relation of economics and social values. A distinct supplemental usage describes social economics as "a disciplined studying the reciprocal relationship between economic science on hand and social philosophy, ethics, human dignity on the other" toward social reconstruction and improvement or as also emphasizing multidisciplinary methods from such fields as sociology, history, and political science. In criticizing mainstream economics for its alleged faulty philosophical premises (for example the pursuit of self interest) and neglect of dysfunctional economic relationships,... Although harder to measure, changes of less tangible factors are also considered, such as personal dignity, freedom of association, personal safety and freedom from fear of physical harm, and extended participation in civil society."

F99-3  
Cont.

According to the 2010 census data, the combined population of Boulevard and Jacumba is 2,164 people. In the General Plan Update, it states "Recent studies conducted by the South County Economics Department Council has shown that the Mountain Empire has both lower per capita incomes and higher unemployment than other areas of the County of San Diego."

Table ES – 2 “Construction activity would temporarily cause groundborne vibration. Since it is not known whether impacted residents would agree to temporarily relocate, with mitigation listed at left, vibration impacts from blasting would remain adverse and unavoidable.” Impacted residents would have to be notified that they have an option to leave. All expenses for rental or hotel would have to be covered. Their livestock would also have to be provided for.

F99-4

Table ES – 2 impact TR A – 1:” Construction would cause temporary road and lane closures that would temporarily disrupt traffic flow. TR A-1: Prepare and implement a traffic control plan. The measures listed at left would mitigate this impact. Residential impacts would not be adverse.” The majority of the people up here have to commute to work. They are already

F99-5

driving a minimum of 40 min. to their destinations. Adding roadblocks and pilot cars will cause citizens to remain on the road longer which lengthens their workday. All the roads in the area are either dirt or two lane roads. A delay is unavoidable. When the freeway is closed, families can be split up. This happened during the last fires. Children and animals can be and were left on their own.

F99-5  
Cont.

Table ES – 2 “impact TRA-7: A noticeable increase in deterioration of roadway surface is used for the construction zone would occur as a result of heavy truck or construction equipment movements. TRA-2: Repair roadways damaged by construction activities. The measures invested at left would mitigate this impact. Residential impacts would not be adverse.” Todd Voorhees, a representative from SDG&E, "No cumulative projects were addressed for traffic study." One project estimated 500 vehicle trips a day during construction. This does not include the thousands of vehicles when the number of projects is combined. Exiting the Boulevard and Jacumba area is like exiting a foreign nation. To both the East and West are border checkpoints. Border patrol will not give waivers to anyone. This includes the construction traffic for these projects. The waiting times at the border patrol checkpoints are already very long. The construction traffic will make these waits at least three times as long. This will not only cause wear and tear on our vehicles but will cause a large waste of gas from idling vehicles, this will increase CO2 emissions. As a resident that lives off Ribbonwood Road, one of only two roads that will take you to the project sites, we have experienced first-hand the increased traffic we are already experiencing from construction. The trucks are extremely noisy and often exceed the speed limit. In one day 12 trucks went by in 20 min. When a line of trucks stops at the intersection our driveway is blocked. Our roads are fair at best. The projects say they will not affect our roads. But how can this be true? With so much increased traffic the projects must maintain these roads. The roads need to be in perfect condition when the construction is finished.

F99-6

Table ES – 5 "the project would not displace people or housing, and would stimulate the local economy." No locals are being hired. The accommodations and food are being found elsewhere, as our resources are very limited up here. The local economy is not benefiting at all. Tule wind says the economy will benefit because of the larger tax base they will add. Our communities have no infrastructure to spend the tax base on. We have no park, no senior centers, no community centers, and no evacuation centers.

F99-7

Table ES – 3 "construction and operation of the project would not result in disproportionately high or adverse effects on minority or low income populations." "Impacts EJ – 1: construction and operation would not result in disproportionately high or adverse effects on minority or low income populations." It states that this will cause no impact. One local business owner has put in for a USDA rural community grant. This grant is specifically for poor rural communities with populations under 5,000. By decreasing property values the projects are affecting low income

F99-8



populations. The projects are destroying their investments. Because of the increased fire danger these projects represent, insurance policy prices will increase. Low income families will not be able to afford insurance for their homes. Most homes in the area are over 50 years old. They are not equipped with sprinklers or other fire safety measures. They do not have water storage tanks. Fires in the County have affected the insurance rates. Some insurance companies have dropped their clients in the backcountry. Residents should be guaranteed affordable fire insurance. Socio- Economic impacts are lost investments on property, ugly views, bad roads, air quality from fumes and dust, noise from dynamite, trucks, and helicopters, increased fire danger, increased insurance, and future turbine graveyards.

F99-8  
Cont.

## Visual Adverse Impacts

In table ES-2, it states that all projects except the ES J Gen-Tie project are Class I visual impacts. Impact VIS-1 states "The project would have a substantial adverse effect on a scenic vista." It continues "When mitigation listed at left, adverse impacts to scenic vistas would remain adverse and unavoidable." Stated in Impact VIS-3 "The project would substantially degrade the existing visual character or quality of the site and its surroundings." It continues "When mitigation listed at left, impacts to existing visual character would remain adverse and unavoidable." Impact VIS -2 states "The project would substantially damage scenic resources, including trees, rock outcroppings, and historic buildings within a state scenic highway." It then states that VIS -2 poses no impact so no mitigation is required. VIS-3 and VIS-1 contradict VIS-2. One cannot affect the community while the other does not. Our family moved to this area because it was a place in San Diego County where we could afford 10 acres to keep our horses. We have invested in this property and we save money to continue to invest in this property so that it will be a future investment for our children. This is our only investment. With these projects possibly going in and many others projects in the planning stages, our property value is dropping. New homes in the area that started at \$700,000 have reduced their price to \$350,000 and still cannot sell. Some have not had a prospective buyer in over a year. The sellers must disclose all the projects going in the area. Many homes have foreclosed. Without the scenic views, we cannot sell our house for the amount we bought it for. We cannot replace our property. If we would sell our property today, we could not buy a property of the same size with the same views for that price. These projects will not guarantee property values. However, all of us are in danger of eminent domain.

F99-9

See this article:

<http://www.newsweek.com/2010/01/27/an-unquiet-nation.print.html>



Currently, this area is a dark spot. If these projects go through, this will no longer be a dark spot or a quiet spot. A quote from the article says "Light pollution is the evil cousin of noise pollution." There will have to be FAA lights on the top of all the turbines and transmission towers. The Astronomy Association also requires dark skies. <http://www.sdaa.org/> During the last eclipse, people came from the city to view the eclipse due to the dark skies. How will this be able to be mitigated? These projects are supposed to benefit our community. They will be taking away our tourism.

F99-10

Table ES – 2: "impacts VIS – 4: the project would create a substantial new source of light or glare that would adversely affect day or nighttime views in the area."

### Noise Adverse Impacts

"Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances." "With mitigation listed at left, impacts related to nighttime noise would remain adverse and unavoidable. Noise impacts from helicopter and blasting noise would be adverse and unavoidable if impacted residents do not agree to temporarily relocate." How long would the residents be displaced? Where are they expected to go? Does this include their livestock? Who will pay the costs? Livestock, domestic animals, and children have been known to be afraid of gunshots. We've personally experienced trouble with our livestock in the presence of helicopters and loud sounds. How can this be mitigated?

Some more quotes from table ES–2. "Construction activity would temporarily cause groundborne vibration." "Since it is not known whether impacted residents would agree to temporarily relocate, with mitigation listed left, vibration impacts and blasting remain adverse and unavoidable." "Adverse unmitigable noise impacts (Class I) would occur temporarily due to construction related nighttime noise, helicopters and blasting. Other noise impacts would be adverse and mitigable (Class II) and/or not adverse (Class III)." From our own experience, Border Patrol helicopters, which are smaller and do not carry anything, have disturbed goats into stampeding. This caused injuries to both the animals and their caretakers. They could not be calmed until the helicopter had left the area.

F99-11

Stated in GEO – 3 "Project would expose people or structures to potential substantial adverse effects as a result of seismically induced ground shaking, ground failure, or fault rupture." When any kind of aircraft flies low over our house all the windows shake.

Table ES – 2 “impact PS – 1 Operation could result in EMI, including interference with radar, radio, television, and electrical equipment. The measures listed at left would mitigate this impact. Residential impacts would not be adverse.” Radio reception up here is very limited. To interfere with the limited radio we have would render us without an outside news source. There is no cable for TVs and Internet. Some people up here have satellite for their television and Internet needs. There is no guarantee whether this will interfere with satellite reception or not. Antenna televisions are already fuzzy. With interference they would be obsolete. Cell phone reception is incredibly spotty up here. There needs to be a guarantee from the projects that are communication and news sources will not be cut off. There needs to be a way to contact residents during an emergency. Many locals do not have a land line and rely entirely on cell phones. <http://nawindpower.com/print.php?plugin:content.7302>

F99-12

## Fire threats

All of these projects have fire threats labeled as class I. This means they cannot be mitigated in any way. SDG&E has been trying to shut down our power over the last two years during high winds because of the extreme fire danger. SDG&E has repeatedly tried to form Red Cross Care Centers in this area for when they turn the power off. The CPUC told them not to turn the power off but SDG&E has stated that it was a suggestion and they will shut the power off when they believe it is necessary. We have repeatedly asked SDG&E to replace the wood poles with metal poles in order to decrease the fire danger. They have only switched out one line’s worth of poles from one substation to the other and these remain the only poles that are changed. When asked why these are the only poles that were changed, SDG&E said that the poles were changed for larger capacity. For a company that acknowledges the extreme fire danger in this area and often threatens to shut off the power for our own safety, they are in support of all of these many projects from the PowerLink to turbines, all projects that will only greatly increase the fire danger to our communities. We have requested the SDG&E underground as much transmission line as possible. SDG&E feels the undergrounding the transmission lines is too expensive. Yet, SDG&E still can afford to put helicopters in the air to install their transmission lines. This is both one of the most expensive and dangerous jobs out there. Helicopters and transmission lines also pose a huge fire threat. They choose to rely on the local fire departments which are composed of reserve firefighters who have little knowledge of the local area or landscape. The firefighters are not often repeat firefighters so they do not get familiar with the area. Our communities just got a grant for Street signs and it is up to volunteers to install them. It will be a slow process and even then not all the roads will be labeled. There are only two paid firefighters at the fire department at a time. They come from as far away as Irvine. If there was a disaster they might not be able to make it to the fire department, due to road closures. The firefighters will have the option to decide for their own safety purposes when they’ll fight a fire

F99-13

near transmission line or turbine. The firefighters may wait for the fire to move a safe distance away from these dangerous obstacles before they fight it. This will give the fire a chance to grow. The fire could quickly get out of control especially if winds are present. Only one fire department in the area has a generator. The water here comes from wells, so only one fire department would have access to water, if the power should go out. The firefighters serving the local fire departments have served for at most one year. They have little or no firefighting experience and no experience with transmission lines or wind turbines. McCain Valley Conservation Camp is not a fire department.

F99-13  
Cont.

Here are some things that must be mitigated in this area in relation to fire. The Boulevard/Jacumba/La Posta Fire Safe Council needs a 501(C)3. They also need storage areas, tools, and training in all three communities. There are no emergency centers in this area. There needs to be an evacuation plan and evacuation center for both people and animals. The fire departments need to be rebuilt or updated. The fire departments should be manned by four paid firefighters, on a 24hour/7 day-a-week basis. Any possible emergency center, such as the Highland community center, must have a generator. Water tanks should be made available to all residents for both fire suppression and for potable water. The Tule Wind fire plan has only the signature of Dave Nissan of Rural Fire. There are no CalFire signatures even though CalFire is mentioned many times in the plan. HAM radios and trained operators need to be available in all the communities.

## Laws

Table ES – 2 states – "Construction of the project or the presence of the project components would result in an inconsistency with federal, state, or local regulations, plans, and standards applicable to the protection of visual resources." It goes on to say "With mitigation listed at left, impacts related to project facilities and inconsistency with policies and plans protecting visual resources would remain adverse and unavoidable." Another instance of this is stated in the same table "Construction noise would substantially disturb sensitive receptors and violate local rules, standards, and/or ordinances." With the result being a residual impact as stated "With mitigation listed at left, impacts related to nighttime noise would remain adverse and unavoidable." Another violation is listed under Impact BIO –8: "Construction activities would result in the potential loss of nesting birds (violation the Migratory Bird Treaty act)." Small businesses and normal citizens would not be allowed to have exceptions to rules, standards, acts, and ordinances. There should be no exceptions to this.

F99-14

## Wildlife & Environment

↓ F99-15

On table ES-2, the impacts for all three proposed projects are listed. The biological impacts are Class I. It states "with avoidance, minimization, and compensatory mitigation, impacts to Quino checkerspot butterfly critical habitat would occur and would remain adverse and unavoidable." Also, it states "Construction activities would result in a potential loss of nesting birds (violation of the Migratory Bird Treaty Act)." The table states "Presence of transmission lines and wind turbines may result in electrocution of, and/or collisions by, listed are sensitive bird or bat species" and "with avoidance, minimization, and mitigation, operation of turbines would pose a significant and unmitigable risk of collision for Golden Eagles due to the proximity of known active nests in the proposed project; therefore, this impact would yield residual effects." Another point states "Maintenance activities would result in disturbance to wildlife and could result in wildlife mortality." Table ES-3: this table shows the ECO-substation project's effects on biological resources, visual resources, and land use. Almost all of the listed impacts are considered Class I. In table ES-4, the table shows the impacts for the Tule Wind project and alternatives. The impacts are almost all Class I, the only reason some impacts are labeled as Class II is that the number of turbines has been reduced.

F99-15  
Cont.

I have attended all the local hearings and meetings in relation to these projects. I specifically talked to a BLM representative at the last Dudek hearing in Boulevard. He said even though part of the BLM mission statement is "improve these lands", Presidential directives can override the mission statement and change its meaning. The downgrading of McCain Valley/Lark Canyon is an example of this. To me, this is similar to downgrading God. The animals affected by these projects have no voice and no choice. Land has been purchased for the bighorn sheep in another region. The local bighorn sheep cannot be given a map to access this land. A Manzanita tribal member told me that there are hundreds of bighorn sheep on the reservation and they were sorely miscounted. My husband commutes to work down Interstate 8 which travels through the locations of many of these projects. Many times he has seen herds of bighorn sheep visible from the highway. Some Border Patrol agents that I talked to have also had sightings of bighorn sheep. Just this year, two Jacumba residents saw two bighorn sheep on the corner of Interstate 8 and Kitchen Creek Rd. As an example of the disturbances to the natural environment, when the new border fence was put up in Jacumba the herd of burros that came across the border to get water could no longer cross the border so for about a month they stood on the other side of the fence and brayed. This does not even cover what happened to the bighorn sheep that migrate in this area or the other animals who might have been affected. Golden Eagles and other birds of prey as well as bats and other birds were not observed for a long enough period of time. At the last meeting in Boulevard, Ewiiapaayp tribal members attended. They gave tearful testimonies of the Golden Eagles which are spiritual and religious symbols to them. They felt that even one death was not acceptable. Even though their tribe would profit from this project, the tribal members that attended did not want any of the wind turbines on their reservation. They also felt that any turbines on the adjoining land were unacceptable. In fact, the tribal members present thought that the whole Tule Wind Project was

F99-16

F99-17

too much of a risk. They were not willing to endanger the Golden Eagles currently inhabiting this area. One tribal member said that they had 80 years of history in a journal to prove the Golden Eagles activity in the area. We live about 5 miles East of the current Kumeyaay wind farm and about 3 miles West of the proposed Tule Wind farm. In the recent years, we have noticed a sharp increase in the number of birds, from as small as hummingbirds to as large as birds of prey, with no feet, missing feet, no legs, one leg, and badly damaged wings. We have taken photos of some of these birds. No one in the area has any other explanation for this weird phenomenon other than turbines or power lines. The representatives for the Tule Wind Project stated that they count the number of fallen dead birds around turbines at their other projects. This does not account for predators carrying off the dead creatures, or birds who flew away then died, or for injured birds. Another strange occurrence has been multiple sightings of dead foxes on the two-lane roads in our community. The sightings started right after the beginning of the PowerLink project. The Quino Checkerspot butterflies do not stand a chance. If the projects are eventually decommissioned, they promise to return the land to its original form. I talked with BLM and they agree that there may always be scars and that in an arid desert community the chances of the land ever returning to its original form are rare. The turbines cannot be recycled after they are decommissioned. This project is an attempt to save the environment by doing so they are destroying the environment. Our own communities are not the only affected areas. In foreign countries where the magnets for the turbines are being made pollution is overtaking farmlands. <http://www.dailymail.co.uk/home/moslive/article-1350811/In-China-true-cost-Britains-clean-green-wind-power-experiment-Pollution-disastrous-scale.html>

↑ F99-17  
Cont.  
F99-18  
F99-19  
F99-20  
↓

#### Other environmental friendly options

Some quotes from an article by Douglas Fox, a reporter: "Low-tech actions such as weatherizing homes and installing more efficient water heaters could reduce household carbon emissions by 20% within 10 years." and "The greenest technology that we could devise in the foreseeable future might just be well-designed programs that take the guesswork out of home and appliance upgrades." CO2 emissions have not been reduced at all by using wind power. Cost increases with backup maintenance and transmission. Aboveground transmission and/or collector lines are high risk in the backcountry and should be avoided. Local rooftop and other solar are cheaper, quicker, and have little environmental impact.

↓ F99-21  
↓

#### ES J

This is a SEMPRA Generation company. Their plan is to harvest energy from wind turbines but they will not guarantee that the power they bring over the border will be from wind turbines.

↓ F99-22  
↓

Currently, the border is a danger zone especially for Border Patrol and law enforcement officers. Visitors in Mexico must take special precautions. There are many reasons for the current unrest including the inability to control drug cartels. Drug cartels make more money coming across the border, than SDG&E will make on all of its projects. If there is a loophole to crossing the border, they will find it. There is also a threat of terrorism. The local Mexicans will not receive anything from this deal except a one-time lease. This project would take a Presidential permit which would override any safety or security issues. We should probably be asking why SEMPRA would build a project like this in Mexico at this time. The real reasons would probably include the easier access to permits and lack of codes as well as the lack of competition, the easy outsourcing, and the ability to create environmentally efficient energies and resources while destroying habitats outside of your own country. This really doesn't solve anything. America should be leading in stewardship.

F99-22  
Cont.

### Lessons from PowerLink

SDG&E refused to commit to renewables on PowerLink. Presiding CPUC Commissioner Diane Grueneich voted against approving PowerLink because SDG&E refused to commit to putting any renewable energy on the line. There needs to be a guarantee of green energy when projects come in. The costs SDG&E is spending on the PowerLink (\$10 billion) could have been spent for local rooftop solar projects. They are quicker, cheaper, and have little environmental impact and no footprint. SDG&E set up Community Council meetings to be held every month to keep the residents informed. They have not been held since last May. When SDG&E representatives are asked questions, they promise to come back with answers but they never did. When you write letters, the answers that come back are just generic and do not answer the question. Cameron Durckel, at the last Planning Group meeting, was given another list of questions, most of the questions had been asked before. These are questions important to our community. He didn't even bother taking notes. He didn't attend February's meeting. He didn't bother to email the answers to the questions either. He's supposed to be the community's contact with SDG&E. The power loss on that length of line is significant. None of the power will be being used in the local area. SDG&E has already put out notices of power outages in the Alpine area that last from 6 to 8 hours. Not all of the affected consumers have generators. There are no posting in Jacumba or Boulevard to inform the community about their construction. A quote from Don Haines, an SDG&E representative, in relation to the PowerLink "is a ridiculous serpentine thing, craziest thing you've ever saw." He also said that SDG&E didn't want the southern route and didn't think it was a good idea but they would be building it anyway. They promised local jobs for the Sunrise PowerLink but their definition of local jobs is anywhere in the Imperial and San Diego counties. When the project started and no locals were hired, SDG&E explained that they needed to hire union workers. When locals went to the Union, the Union stated that you cannot be site-specific. You would have to work where they send you. SDG&E has built a batching plant out here but have not hired any locals to man it. Many of the construction trucks

F99-23



working on the PowerLink have Missouri, Arizona, and Texas license plates. The work is being outsourced from the state. The former governor came to one of the building yards for a ribbon-cutting ceremony before any permits had been obtained. The governor said this project would prevent power outages and brownouts and provide jobs for local communities. There haven't been any brownouts for years. The population of California has been moving out due to the poor economy. This is an example of how one project has not lived up to its expectations. Nine other projects are spouting the same lines but will they guarantee anything?

F99-23  
Cont.

Sempre likes to believe that the Sun rises for them.

Solar and other options

"Wisdom is good with an inheritance: and by it there is profit to them that see the sun. For wisdom is a defense, and money is a defense; but the excellency of knowledge is, that wisdom giveth life to them that have it. – Ecclesiastes 7:11-12

"If there is a ray of hope here, it could be one that travels 186,000 miles per second – sunlight."  
– Douglas Fox, reporter

Solar leaves no footprint when on:

- building
- walls
- parking lots
- etc.

F99-24

"Of all the renewable energies, only solar can do the job single-handedly. Capture just 1/1000 of the sunlight that reaches our planet's surface and we can replace our entire use of fossil fuel."  
– Vaclav Smil, an energy scientist at the University of Manitoba

Solar may be expensive but as it is more effective it would prove to be a savings in the end. The billions of dollars that are being spent on infrastructure and other projects which cause greater fire risks and leave larger footprints, could be used for creating a more reliable solar industry. Solar can make energy more reliable wherever it is.

F99-24  
Cont.

## Turbines

In a recent survey individuals voted on whether we should rely on more wind energy. 35% said yes. 65% said no. There is obviously a lack of trust in the effectiveness of wind energy.

"Turbines are too inefficient to help the environment. Ever wonder why sailing ships no longer apply the oceans with goods and passengers? It's a question wind energy advocates must ask themselves. They ignore the fact that the wind doesn't blow consistently and that its intermittent nature makes wind an unpredictable source of power and restricts wind generators from consistently reaching their potential."

<http://www.baltimoresun.com/news/opinion/oped/bs-ed-wind-skeptic-20110207,0,341520.story>

"There is nothing in which the birds differ more from man than the way in which they can build and yet leave a landscape as it was before." – Robert Lynd, *the Blue Lion and Other Essays*.

F99-25

None of these projects will guarantee that there are no adverse health effects. As for our family we live, work, and volunteer in this community. This addresses only three projects. There are more than nine projects being planned or constructed in our area. As a family, we are not looking forward to any of them. We will not be benefiting from any of them. The benefits these projects will have are strictly for investors. The amount of environmental help they will provide is inconsequential and not guaranteed. When these projects are decommissioned, what they have taken away will never come back.

John Gibson of Hamann companies (Tule Wind Project) wrote "it is hard to conceive of a vocation in California that would have much less impact on the community. It would appear that if this area were not available for such use, then the only option would be to have no project

whatsoever, anywhere." He is correct. It would not impact our community; it would erase it. Our whole way of life will be adversely impacted.

F99-25  
Cont.

All the above statements are our family's reasons for supporting a "No Project" stance.

Ken, Tammy, Michelle, Kristy, & Sherry Daubach

39954 Ribbonwood Rd.

Boulevard, CA 91905

(619)766-4033

[Dumptruck.01@wildblue.net](mailto:Dumptruck.01@wildblue.net)

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\*\*\*\*\*

March 4, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects

Dear Sirs,

I am a long time resident of the Manzanita Reservation. My wife and four children are enrolled members of the Manzanita Tribe and are direct descendants of the clans oswai, hilmiarp and neeix that inhabited the areas of Jacumba, McCain Valley and Carrizo Gorge as documented by our elders and in many writings. I am asking that you deny the above referenced projects especially the Tule Wind Project.

F100-1

These projects will destroy the Kumeyaay Cultural and Sacred sites in McCain Valley and Jacumba. The Kumeyaay Tribes have not been left with many intact sites due the development of their homelands. I hope that the laws that have been made to protect the Sacred and Burial or Cremation sites of Native Americans will be enough to protect these last Kumeyaay Archeological Districts, but I guess that is left in the hands of the CPUC and BLM and their interpretation of the laws.

The Tule wind project also threatens the Golden Eagles in this area. The Golden Eagles were used in all Kumeyaay ceremonies. It would be a tragedy to have them get killed or for them to leave the area. It is unbelievable that an endangered species can be disregarded instead of protected.

F100-2

I am asking you to seriously consider whether the benefits of these projects outweigh the devastation they will cause. Please don't devastate Sacred sites, intrude on Golden Eagle territories and industrialize our residential areas all in one project. There are many other renewable energy projects that won't be so detrimental .

Sincerely,



Santiago de los Santos  
PO Box 1545  
Boulevard, CA 91905

MAR/04/2011/FRI 06:42 PM

FAX No.

P. 001

March 4, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects

Dear Sirs,

I am writing this letter in response to the request for public comments on the above referenced projects, especially the Tule Wind project, all of which will have a significant impact on this entire area and all of the people and wildlife who live here.

I will start with the Sacred, Religious and Archeological sites in McCain Valley and Jacumba that will be desecrated by these projects, especially the Tule Wind Project. The Iberdrola Company has assured us that they will not be putting wind turbines in any of the cultural sites. They will only come near them. I urge you to really look at the sites in McCain Valley and listen to the Kumeyaay People when we tell you that it is a Kumeyaay Tribal Traditional Property. It will be devastating if this project gets approved and they start moving the earth. It is inevitable that they will find even more evidence of our people's presence in the area. It will be tragic to our people to have to once again rebury the remains of our ancestors and watch the last pieces of our history get dug up, cataloged and stored in boxes somewhere.

F101-1

The next issue of great concern to the Kumeyaay people and all people of this country is the Golden Eagle. It is unthinkable that this beautiful bird that is "protected" by the laws of the United States of America could be put in further jeopardy by these "green energy projects". It feels much like how many Native Americans were "protected" by the United States Government. Some are saying this is not Golden Eagle territory but they are wrong. There is documentation from our people about the Eagle nests and the importance of the Eagle to our people. I enclose pages from the book Southern Diegueno Customs by Leslie Spier, quoting my great great Grandfather Jim McCarty.

F101-2

I believe that there is a way for the wind energy projects to coexist with the Golden Eagles, but it will take better planning and the areas of these projects cannot be within Golden Eagle Territories. If the Golden Eagles leave these territories, where will they go? West towards the cities? East towards the 26 renewable energy projects proposed on BLM land? With all these projects on the table there has to be some room to say no the ones that will have such a detrimental and fatal impact on the almost extinct Golden Eagle.

F101-2  
Cont.

I also ask you to consider the potential health risks. There have not been enough studies conducted to ensure that these giant energy producing machines are not harmful to the health of those who live the closest to them. We don't think we should be used as the test study, only to find out when it's far too late that there are adverse health effects. There should also be adequate setbacks from homes and buildings in the event a turbine should malfunction. I know renewable energy is the future but until the United States Government has conducted the proper studies please place wind farms away from residential areas.

F101-3

I am also appalled that I wasn't afforded the right to stand up and give verbal comments at the public comment meeting on January 26, 2011 in Jacumba, California, which is usually standard procedure. We were informed that it would be more difficult to take verbal comments. This is very wrong. It was not fair to the people of this community to have their right to verbal public comments taken away by any agency. We should have been allowed to speak before each other and share our thoughts, fears and ideas with each other in a public forum as afforded by the NEPA regulations

F101-4

In closing I urge you to deny the Tule Wind Project. This project is one of the most detrimental renewable energy projects ever. There is no acceptable mitigation for the loss of the Kumeyaay People's last intact Archeological District. Please leave us one site to show our children the physical evidence and Sacred Sites of our ancestors to go along with the stories from our elders. There is also no acceptable mitigation for the loss of even one Golden Eagle. There is no other more important cultural resource to the Kumeyaay people. Please don't erase the cultural landscape of this area where our people have lived for thousands of years without the horrifying impacts that have occurred in the last few hundred years.

F101-5

Sincerely,



Angela Elliott Santos  
Manzanita Tribal Member  
PO Box 1545  
Boulevard, CA 91905



MAR/04/2011/FRI 06:43 PM

FAX No.

**SOUTHERN DIEGUEÑO CUSTOMS**

**BY  
LESLIE SPIER**

F101-6



1923]

*Spier: Southern Diegueño Customs*

307

the other hand, there were definite preferences among the gentes; that of hĩlmiarp for hĩlmiawa' and ōswai', for instance, was so strong that they commonly lived together. The other gentes regard hĩlmiarp people as the most stupid, according to a member of that gens.

There was no ownership of the groves of bearing oaks in the mountains. On the other hand, it is said that hĩlmiarp owned patches of wild plum trees (axkai) and scrub oak (xwüp) at sũkoti'p (seeping water) in Tule canyon, north of Boulevard, and of red oak (snau) at xawitcar (water in crevices) at Manzanita. Other gentes could not take these products, but these places lie within the district they describe as hĩlmiarp territory.

Each gens owned one or more eyries from which eaglets were taken for use in the mourning ceremony (ewukerũk). Hĩlmiarp gens had an eyrie on a peak called hamĩlteahwai' near Jacumba; paipa' owned another at watetayu'mp, six miles south of Guiyapipe. Another gens wishing to hold the ceremony<sup>28</sup> approaches any member of paipa', for instance. A relative of the individual approached is purposely sent, for then no payment is demanded. In each gens there are two individuals, who may be women, who watch and capture the eaglets; one of these, the eagle owner (ɛspakwĩnhõt) has this function by reason of his special knowledge, the other he chooses and trains as his assistant and successor after his death. These two watch the eaglets until they have down on their heads, when they take whatever number are in the nest, one or two. It is considered fortunate if there are two, for then there will be two used in the dance and donations will be correspondingly great. The eaglet, feeling ashamed when caught, will not eat for four days. He is kept by the recipient gens for about a month in a dome-shaped brush house, a meter high, which is provided with a door through which the bird is fed by the eagle feeder (ɛspakwũtsau'e). The eaglet will eat jack-rabbits, cottontails, and the hind quarters of deer, but not squirrels. A clay vessel, painted in a special style, is made to hold his supply of water, because he is a person (i.e., one of the tipai). This is the reason why no one would kill an eagle except at the mourning ceremony (this is true even today), and why it receives such care during its captivity. During this time, however, there is no specially religious attitude (prayers, etc.) toward the eagle. The bird cries out at daylight on the day he is to die, for he knows his approaching fate. Only one who knows how may kill him by pressing under the

<sup>28</sup> Compare Waterman, *The Religious Practices of the Diegueño Indians*, present series, VIII, 314-320, 1910.

F101-6  
Cont.

left wing over the heart.<sup>29</sup> All the feathers are saved. When used in the dance, they are the residing places of the spirits of the dead, who leave when the feathers are stored away.<sup>29a</sup>

An eagle nest, belonging to *hīlmawa'*, situated fifteen miles east of Guiyapipe on the slope facing the desert, remained when nearly all the members of the gens had died. Jim McCarty, a *hīlmiaxp*, took two birds from the nest. The owner *Pasenu'*, discovering this, came to Jim and accused him of theft. Jim did not answer until almost an entire sack of tobacco had been consumed. Then he said that, since the gens was practically extinct, they no longer owned it, but that he would for a time. *Pasenu'*, taken aback, looked around at the assemblage and then asked for the larger eagle. Jim refused; *Pasenu'*'s gens was almost gone; if he was entitled to any, it was the smaller one. So *Pasenu'* had to be satisfied with the smaller one.

The only suggestion of a totemic complex was the statement that Wildcat was a *hīlmiaxp* and therefore wildcats could not be killed by members of this gens. Nor could any others kill them for if they were discovered a fight might be precipitated. I doubt this statement, for no reason could be given why this taboo, which is apparently a general one, is connected with this gens.

It is stated further that the mocking bird (*eakwillau'*) is a *hīlmiaxp* and that it is raised by members of this gens because they want information that the bird can give. Again I believe my informant wished to enhance the estimate of his own gens by ascribing to it a relation which may rather hold for the whole tribe. Wild mocking birds tell when the daylight, months, and seasons are near. Fledglings are kept in a globular cage (*hapetütL*) of fine mescal fiber cord, twenty or more centimeters in diameter, in the bottom of which is a bed of chamissa rabbit skin (*epa'rlēmī's*), the finest rabbit fur, to keep them warm. When released the bird roosts on a pole above the house, and does not fly off for some time. The owner continues to feed it; when he moves, the bird follows shortly. When a *hīlmiaxp* goes hunting, the bird flies to him far from home, perches on his head, and thus rides back to the house. These are good birds (*isa''kwaxa'n*); one takes to them as to humans, because they understand most things.

<sup>29</sup> Coleman noted that a Northern Diegueño shaman exhibited a little red feather which he said had pierced the eagle's heart.

<sup>29a</sup> The Mono dance around a young black eagle two weeks after capturing it, then sell it to another village that they may do likewise (Powers, *Tribes of California, Contributions to North American Ethnology*, III, 398.)

**From:** Alexa <alexaadkins@aol.com>  
**Sent:** Friday, March 04, 2011 2:45 PM  
**To:** ECOSUB  
**Subject:** RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

March 2, 2011

Iain Fisher, CPUC  
Greg Thompson, BLM  
C/O DUDEK  
605 Third Street  
Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

Development of the Tule Wind project will hasten the decline of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. Over the past several decades the total population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide. Additionally, no Avian Protection Plan is proposed or has been developed and made public in conjunction with the proposed project; however there is no acceptable mitigation that will eliminate the risk of loss of the Golden Eagles.

F102-1

The Kumeyaay people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. Due to the development of most of this region there are few Kumeyaay ancestral sites left undisturbed. McCain Valley and the Jacumba are the last of such critically important sites. The proposed draft EIR/EIS has no adequate provisions to avoid the Kumeyaay ancestral districts and no mitigation will be acceptable other than complete avoidance. Many of these locations contain cremation of human remains as well as ceremonial and religious tribal gathering sites that date back thousands of years. There is no way to replace these sites once they are gone. In addition, the proposed project have no plan in place to avoid the significant and sacred cultural, historic, religious, and archaeological Kumeyaay ancestral sites in the region and doesn't address the effects of the total desecration of this highly important and significant cultural landscape of the Kumeyaay People.

F102-2

In summary, the proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project should be rejected.

Sincerely,

Ginette Gallego  
P.O. Box 1484  
Boulevard, CA 91905

(619)766-9126

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**From:** Mark Hass <mahass@earthlink.net>  
**Sent:** Friday, March 04, 2011 3:38 PM  
**To:** ECOSUB; Wind Blm  
**Subject:** Comments for submission  
**Attachments:** Wind Farm Concerns 3+4+2011.doc; Bats Curtailment\_2008\_Final\_Report.pdf; Wind FPL Carbon Offsets.bmp

Enclosed are my comments.  
Thank You,

Mark Hass  
701 kettner Blvd 68  
San Diego, Ca 92101

↓  
F103-1

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## Wind farm concerns submitted for discussion and review

From Mark Hass  
701 Kettner Blvd 68  
San Diego Ca 92101  
Party/self

The EIS Environmental Impact Study cannot be performed without identifying the specific turbine that had been selected for the project. It is impossible. Each turbine has its own noise levels, blade radiuses, optimum turbine speed, optimum wind requirements, foundation requirements, effects on Doppler radar, communication interference, overall height with regards to aviation and bird safety, life of turbines and their reliability are different and decommissioning costs cannot be established. The Meg size of the project directly impacts the number of turbines needed with regards to the output of the turbine selected.

The study submitted does not address any of these concerns in sufficient detail with many false assumptions and flawed data. I call upon the county of San Diego and State of California to show goodwill and investigate the validity of the Draft EIR/EIS. If these projects proceed and it becomes apparent do diligences was not done, and the forthcoming evidence and studies are not reviewed, then I am sorry I put my life on the line and got shot at in the name of energy, in the Middle east.

Without the specific turbine identified, no noise study can be preformed to ensure compliance with noise codes. Setbacks from residents and farms cannot be established. Flicker effects cannot be assessed and minimized. Farm animals near turbines nationwide are experiencing increased rates of still birth rates. The study by HDR Engineering is tremendously flawed. Wind studies from actual 1.5 Meg sites are as much as 20-30 decibels higher than HDR predicts. HDR must submit their source for how they obtained their turbine dbL. For the turbines at the setbacks depicted in the study this is impossible to be accurate.

The noise level of the GE 1.5 Meg turbine at 1450 ft, midrange temperatures and humidity is in the high 60db low 70 dbL range. This is also at low range winds. This sound goes up steeply when winds increase and temperatures decrease. This is actual certified wind study data that I will submit, this must be reviewed by the county. The data will clearly show that the turbines will exceed county code.

SDGE must identify the suggested noise barriers and be specific as to type and location. A fund must be set up for the county, state and Feds to draw from to protect our property and assure these mitigation measures are met. The fund should be funded at estimates plus 20%. This will ensure any unforeseen issues that arise can and will be dealt with without hesitation.

There must be specific language to ensure all mitigation is performed and items like the exhaust silencers mentions are used

F103-1  
Cont.

F103-2

There are NO additional noise reduction measures available for turbines as suggested. If there were, the multitude of 1.5 Meg sites experiencing huge noise problems would have used them. HDR must identify these measures that are available in detail AND where they have been used successfully. Plus, why not be a good neighbor and use them anyway, and have the data included in their sound study? This should be easy for sound professionals.

The project cannot go on without the ascertaining the TRUE sound impact that will take place. Again, this information is readily available from actual studies performed at actual wind farm sites with the turbines suggested by SDGE, This is a simple exercise in do diligence by all parties. Believe me, the county needs to do its homework on this, because flawed studies like the HDR report, have caused MAJOR problems for county officials elsewhere in the country, for example in DeKalb County Illinois. I would mandate our county officials contact the officials in DeKalb and learn from their lesions learned the hard way.

Other equipment dbl estimate levels are may be understated. For instance a helicopter at 500 ft above downtown San Diego is well into the high 70db range. Jack hammers are in the high 90db range. I understand using a sound model like the one used from Boston is ok and probably quite accurate. Likewise, why not use a sound study at a 1.5 Meg wind farm from an equally certified sound engineer. I will submit one.

Sound information I provide is from a Larson-Davis sound meter model 812 with calibration model CAL200 used for calibration. This meter has been allowed in previous courts in San Diego and was the instrument that I used to obtained the readings to force NGR energy center to add sound attenuation to their Kettner site. I was trained by The Navy North Island Industrial Hygienist in the early 80s on sound studies and equipment and authored articles about aircraft noise. My reading for ambient noise in similar locations is somewhat lower.

The turbine must be matched to the available wind for peak performance. In many instances wind farms have been planned with the wrong turbines selected. For instance the GE 1.5 Meg turbine needs 13 kts of wind to ENTER its peak performance window. No where in southern California does this wind exist on a daily or even weekly basis. The 20% renewable energy goals are simply not achievable with wind power. Wind companies have teamed up with smoke and mirror companies that can amazingly turn your low wind area to a high wind area with the use of satellite technology. This of course cannot be done. Actual historic wind data is available and must be used. If it were used, there would be few turbines. The information from the SDGE MET towers must be provided for my review. Wind companies traditionally install MET towers to gather a MINIMUM. Of one years wind and weather data before planning a wind farm.

F103-2  
Cont.

F103-3

Different turbines have different impacts on wildlife. The wildlife that may be impacted must be identified and proper measures must be taken to minimize the threat. For instance the Altamont Pass wind farm got a break. Its turbines kill (over 70) Eagles and other birds of prey. At a presentation by K Tyrell of BHE Environmental, a leading wind farm engineering support company, she indicates that the American bald Eagle is a victim of wind farms, but that there are federal “take” permits available. One of the major concerns in San Diego County is our birds of prey and our Condor population. Turbines decimate wildlife. The nation’s bats are extremely venerable. They are our insect and primary mosquito control. (Disease control) Can you say West Nile Virus? We must have our neighborhood experts from the San Diego Zoo and Wildlife Park weighing on this.

F103-4

In fact turbine failures are very common and FPL Florida Power and Light states the danger of being around them. The blades explode and the turbines catch on fire. The National Renewable Energy Lab has selected the GE 1.5 Meg turbine and a Siemens turbine for research funded by the federal government. The purpose is to find a way to make the more reliable and safe. They document the GE turbines with a 5-7 year life.

I met with an engineer that works for the company that makes the blades for GE. He states GE, in a cost cutting measure has chosen a double mold system in blade manufacturing. This is ultimately what causes the failures. He went further to explain there is a superior method of one piece manufacturing that would completely eliminate blade failures. Turbines hate ice, snow and wind shear or a sudden change in wind direction.

The foundations of the turbines are very deep and require substantial concrete. If the foundation site develops problems, wind farms have been able to move the turbine site without notifying the FAA and Homeland Security. The wind companies, like FPL in their EIR stated that the massive amount of earth removed in excavating a foundation would ALL fit back in the hole. This is impossible and ended up not being the case. This is pure physics. Finding areas to haul the dirt and debris to is a major problem and does create huge environmental issues. The smoke and mirrors team was at it again on this one claiming new “compacting technology” eliminated this hazard. It did not.

F103-5

Wind farms have an arrangement to circumnavigate FAA lighting requirements for tall structures. They either build the towers 10” than the requirements or they are allowed to place one light up for several towers. The hazards in both cases are severe and do open the government up to liability, not the wind farm.

Along the boarder the security of the USA is GREATLY compromised. This should raise every alarm in Washington. The US customs routinely fly low level helicopters and aircraft along the entire border. Their ability to freely patrol the boarder and rapidly respond to threats is paramount. The listening devises and other security measures deployed along our boarders will be rendered useless. And yes, terrorists and criminals operate across our boarders. Not to mention the danger to the illegal immigrants that would be transitioning the boarder around the turbines.

F103-6

Remember turbines are dangerous. Many windmill sites are littered with shattered blades and gearboxes. Let the Border Pilots speak on this issue, not management. The great Admiral Halsey once said, and he was proven right, “let the men that will perform the job make the decision”. Why would we want to turn down his advice?

F103-6  
Cont.

In a time when concern for protecting our boarders is in the headlines daily, why do we allow this breach of security to take place? The BLM has much better property available in the state for turbines.

These areas are also known for recreational hiking. How will we protect these folks?

The other MAJOR concern is the close proximity of the turbines to our nation’s military training airports and training areas, routinely used to train our military pilots. I have personally trained in these areas as a Naval Aviator. These areas must be kept clear of all hazards to aviation. The Navy literally flies from the ground up. Our pilots need to concentrate on honing their piloting skills. This is what makes them effective weapons and brings them home safe. The VERY LAST THING a pilot needs to do while managing his multi million dollar jet at mach speeds is the increased burden and responsibility of avoiding these turbines. ESPECIALLY WHILE HANDLING AN AIRCRAFT EMERGENCY! This is criminal to expose our young warriors to this avoidable severe hazard. They get enough danger in real combat! Let the pilots speak!

F103-7

Doppler radar is greatly affected by turbines. There are many instances nationwide where local wind and storm information has been compromised. Over the air television and radio is greatly disrupted. It effectively removes the nearby population access to the USA Emergency Broadcast System. I thought the system was designed for all citizens to receive crucial national and local emergency information. Especially in the active earthquake and forest fire zones we live in. Let the firemen speak!

F103-8

There has never been a property value agreement that has favored the residents near wind farms. Agreements that several have made have been not honored as is the case in DeKalb. There must be an open and fair dialogue about this.

F103-9

I would suggest with all the complexities involved with the environmental and health issues surrounding wind farms, the BLM does not posses the knowledge and experience level required to provide a sound EIS that addresses all the concerns associated with wind farm placement. Wind farms are simply to new and the short and long-term impacts with all the known concerns are not completely known yet and the upmost cautions must be utilized. The USA is littered with examples of premature acceptance of the way we manage our land, and paying (or not being able to pay) the consequences later. Both in dollars and in lives. Just look at superfund sites!

F103-10

A compromise must be reached with SDGE, (or any utility) The State of California, The US government, the Mexican government and the citizens effected, to pool their recourses to arrive at a meaningful EIS that promotes renewable energy,

but primarily protects the environment and the health and property of the citizens surrounding wind farms. There is no other right answer.

I would like to reserve the right to enter information to support the citizens of California during this review.

The major concerns again;

Noise and sound study

Flicker

Turbine location

National Security/boarder patrol concerns

Military and Customs pilot safety

Installation concerns/debris

Road new and old

Jobs, identify the jobs, be specific. No wind farm project has produced the job number promised. And nearly all are extremely part time

Land values

Animal safety/Eagles/Condors,

Decommissioning costs, there must be an escrow for this cost. FPL had mentioned 150k per turbine at one time.

Turbine reliability and safety

Aviation safety concerns/lighting and mapping. The pilots of the border patrol must testify as to the safety concerns that will be place in their office. One pilot told me "it is tough enough to fly around the mountains" while performing our mission.

Carbon Credits, give them to the state, and counties.

Taxes, be specific with numbers and where they will go.

Corporate/government landowner concerns/ business only, do not share other concerns

Wind studies

Turbine selected

Energy customers, power and credits must stay in the state. It is our 33% we are complying with.

We have already reduced our carbon footprint in the USA

Mark Hass

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F103-10  
Cont.



# Effectiveness of Changing Wind Turbine Cut-in Speed to Reduce Bat Fatalities at Wind Facilities

## *2008 Annual Report*



F103-11

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**Annual Report Prepared for the  
Bats and Wind Energy Cooperative and the Pennsylvania Game Commission**

**April 2009**



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## EXECUTIVE SUMMARY

We implemented the first U.S.-based experiment on the effectiveness of changing turbine cut-in speed on reducing bat fatality at wind turbines at the Casselman Wind Project in Somerset County, Pennsylvania. Our objectives were to 1) determine the difference in bat fatalities at turbines with different cut-in-speeds relative to fully operational turbines, and 2) determine the economic costs of the experiment and estimated costs for the entire project area under different curtailment prescriptions and timeframes.

Twelve turbines of the 23 turbines at the site were randomly selected for the experiment and we employed three treatments at each turbine with four replicates on each night of the experiment: 1) fully operational, 2) cut-in speed at 5.0 m/s (C5 turbines), and 3) cut-in speed at 6.5 m/s (C6 turbines). We used a completely randomized design and treatments were randomly assigned to turbines each night of the experiment, with the night when treatments were applied being the experimental unit. We conducted daily searches at the 12 turbines from 26 July to 10 October 2008. During this same period, we also conducted daily searches at 10 different turbines that were part of a complementary study to determine if activity data collected prior to construction with acoustic detectors can be used to predict post-construction fatalities, and to meet permitting requirements of the Pennsylvania Game Commission's (PGC) voluntary agreement for wind energy (herein referred to as "PGC" turbines). These 10 turbines formed an alternative 'control' to the curtailed turbines. We performed two different analyses to evaluate the effectiveness of changing turbine cut-in speed to reduce bat fatalities; for one we used 12 turbines to determine differences in fatality between curtailment levels and for another using 22 turbines to determine differences in fatalities between curtailment and fully operational turbines. The experimental unit in the first analysis was the turbine-night and turbines were considered a random blocking factor within which all treatments were applied. In our first analysis, the total number of fatalities estimated to have been killed the previous night, herein referred to as "fresh" fatalities, in each treatment at each turbine was modeled as a Poisson random variable with an offset of the number of days a treatment occurred within a turbine (due to the slight imbalance of the design). For our second analysis, the turbine was the experimental unit, with 12 turbines receiving the curtailment treatment, 10 the control (fully operational at all times). We used all carcasses found at a turbine to estimate the total number of bat fatalities that occurred at each turbine between 26 July and 10 October 2008 and compared fatalities using one-way ANOVA.

A total of 32 fresh bat fatalities were found at the 12 treatment turbines between 26 July and 10 October 2008. Each treatment was implemented at each turbine for at least 25 nights, with one treatment at each turbine implemented for 26 nights. At least one fresh fatality was found at each turbine, and 10 of the 12 turbines had at least 1 fatality during a fully operational night, indicating that fatalities did not occur disproportionately at only some turbines, but were well distributed among all turbines. There was strong evidence that the estimated number of fatalities over 25–26 nights differed among turbine treatments ( $F_{2,33} = 8.99$ ,  $p = 0.008$ ). There was no difference between the number of fatalities for C5 and C6 turbines ( $\chi^2_1 = 0.83$ ,  $p = 0.3625$ , 95% CI: 0.11, 2.22). Total fatalities at fully operational turbines were estimated to be 5.4 times greater on average than at curtailed turbines (C5 and C6 combined;  $\chi^2_1 = 14.63$ ,  $p = 0.001$ , 95% CI: 2.28, 12.89); in other words, 73% (95% CI: 53–87%) of all fatalities at curtailment turbines likely occurred when the turbines were fully operational.

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Estimated total bat fatalities per turbine (i.e., all carcasses found and corrected for field bias) were 1.23–4.68 times greater (mean = 2.34) at PGC turbines relative to curtailed turbines, further supporting the contention that reducing operational hours during low wind periods reduces bat fatalities. This is a conservative estimate of the difference because treatment turbines were fully operational one-third of the time during the study.

The lost power output resulting from the experiment amounted to approximately 2% of total project output during the 76-day study period for the 12 turbines. Hypothetically, if the experimental changes in cut-in speed had been applied to all 23 turbines at the Casselman site for the study period (0.5 hour before sunset to 0.5 hour after sunrise for the 76 days we studied), the 5.0 m/s curtailment used would have resulted in lost output equaling 3% of output during the study period and only 0.3 % of total annual output. If the 6.5 m/s curtailment were applied to all 23 turbines during the study period, the lost output would have amounted to 11% of total output for the period and 1% of total annual output. In addition to the lost power revenues, the company also incurred costs for staff time to set up the processes and controls and to implement the curtailment from the company's offsite 24-hour operations center.

Our study is the first U.S.-based experiment of changing cut-in speed to reduce bat fatalities, and only the third we are aware of anywhere in the world. We demonstrated nightly reductions in bat fatality ranging from 53–87% with marginal annual power loss. Given the magnitude and extent of bat fatalities worldwide, the conservation implications of our findings are critically important. However, more studies are needed to test changes in turbine cut-in speed among different sizes and types of turbines, wind regimes, and habitat conditions to fully evaluate the general effectiveness of this mitigation strategy. We plan to initiate a second year of post-construction fatality searches at the PGC turbines beginning 1 April and continuing through 15 November 2009 and will initiate searches for the curtailment study beginning in mid- late July and continuing through the second week of October in 2009 at the Casselman facility.



Photo by: E. B. Arnett, Bat Conservation International.

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## INTRODUCTION

Although wind-generated electricity is renewable and generally considered environmentally clean, fatalities of bats and birds have been recorded at wind facilities worldwide (Erickson et al. 2002, Durr and Bach 2004, Kunz et al. 2007, Arnett et al. 2008, Baerwald 2008). Bat fatalities at wind energy facilities generally received little attention in North America until 2003 when 1,400–4,000 bats were estimated to have been killed at the Mountaineer Wind Energy Center in West Virginia (Kerns and Kerlinger 2004). High bat fatalities continued at the Mountaineer facility in 2004 (Arnett 2005) and large kills also have been reported at facilities in Pennsylvania (Arnett 2005) and Tennessee (Fiedler 2004, Fiedler et al. 2007). These fatalities raise concerns about potential impacts on bat populations at a time when many species of bats are known or suspected to be in decline (Racey and Entwistle 2003, Winhold et al. 2008) and extensive planning and development of both onshore and offshore wind energy development is increasing worldwide (EIA 2008, Arnett et al. 2007a, Kunz et al. 2007).

Data previously collected at operating wind energy facilities indicate that a substantial portion of the bat fatalities occurs during relatively low-wind conditions over a relatively short period of time during the summer-fall bat migration period (Arnett et al. 2008). Some curtailment of turbine operations during these conditions and during this period of time has been proposed as a possible means of reducing impacts to bats (Kunz et al. 2007, Arnett et al. 2008). Indeed, recent results from studies in Canada (Baerwald et al. 2009) and in Germany (O. Behr, University of Erlangen, unpublished data) indicate that changing turbine “cut-in speed” (i.e., wind speed at which wind generated electricity enters the power grid) from the normal (usually 3.5–4.0 m/s on modern turbines) to 5.5 m/s resulted in at least a 50% reduction in bat fatalities compared to normally operating turbines. Altering turbine operations even on a partial, limited-term basis potentially poses operational and financial difficulties for project operators, but this mitigation may ultimately prove sufficiently feasible and effective at reducing impacts to bats at minimal costs to companies that operate wind energy facilities.

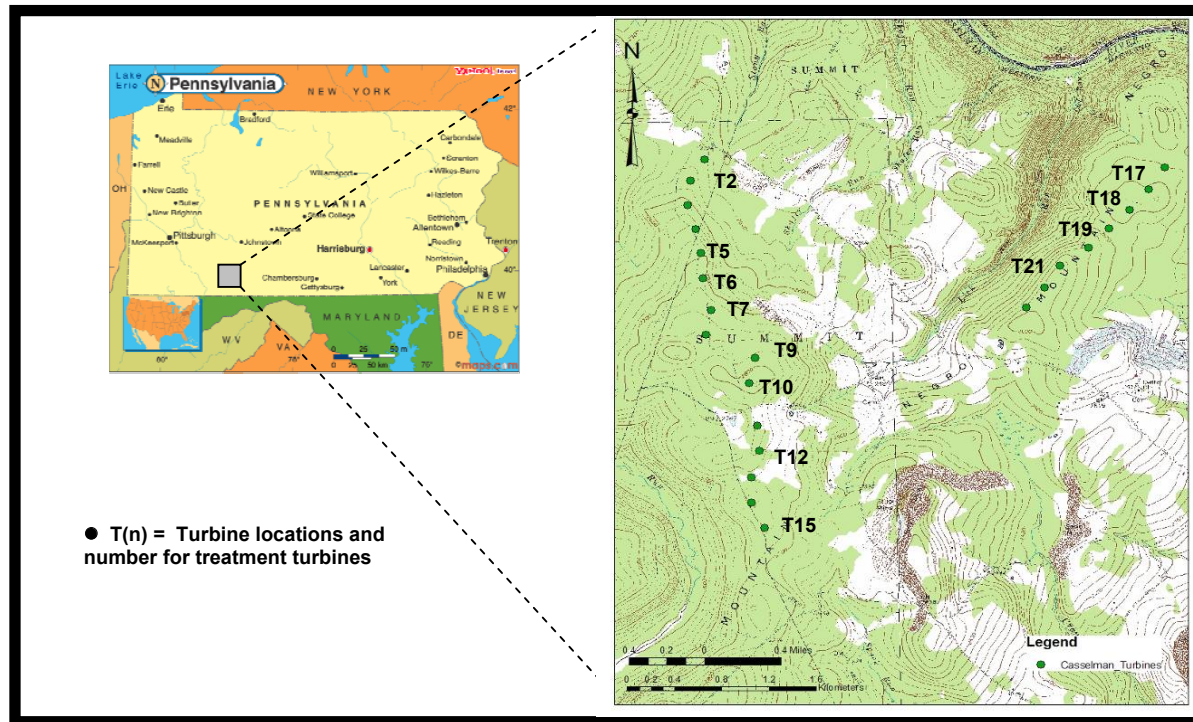
We implemented the first U.S.-based experiment on the effectiveness of operational curtailment on reducing bat fatality at wind turbines. Our objectives were to: 1) determine the difference in bat fatality at turbines with different changes in the cut-in-speed relative to fully operational turbines, and 2) determine the economic costs of the experiment and estimated costs for the entire project area under different curtailment prescriptions and timeframes. This report presents our experimental design, methods, and first year results of the study.

## STUDY AREA

The Casselman Wind Project is located near the town of Rockwood in Somerset County, Pennsylvania (Figure 1). The facility lies within the Appalachian mixed mesophytic forests ecoregion that encompasses the moist broadleaf forests that cover the plateaus and rolling hills west of the Appalachian Mountains (Brown and Brown 1972, Strausbaugh and Core 1978). Turbines at the Casselman facility are GE SLE 1.5 MW turbines with a 77 m rotor diameter, 4,657 m<sup>2</sup> rotor-swept area, 80 m hub height, variable rotor speeds from 12–20 RPMs, and cut-in speed of 3.5 m/s

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**Figure 1.** Location of the Casselman Wind Project study area in Somerset County in south-central Pennsylvania, and locations of 23 turbines at the facility. Curtailment treatment turbines have numbers next to them and no searches were performed at turbine number 22.



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([http://www.gepower.com/prod\\_serv/products/wind\\_turbines/en/downloads/ge\\_15\\_brochure.pdf](http://www.gepower.com/prod_serv/products/wind_turbines/en/downloads/ge_15_brochure.pdf)).

There are two “strings” of turbines at the Casselman site. The western string has 15 turbines and is mostly forested (herein referred to as the “forested ridge”; Figure 1). Eleven of the 15 turbines in this string occur in relatively dense, second-growth deciduous hardwood forest with a canopy height generally ranging from 15–20 m; 3 of the 15 turbines in this string occur in open hay pasture near second-growth forest and one occurs in a stand of young (<10 years old) regenerating forest. The eastern string has 8 turbines (herein referred to as “mine ridge”; Figure 1). All turbines in this string occur in open grassland reclaimed after strip mining for coal.

## EXPERIMENTAL DESIGN and HYPOTHESES

Twelve turbines were used for the operational curtailment experiment and we employed three turbine treatments with four replicates of each treatment on each night of the experiment: 1) fully operational, 2) cut-in speed at 5.0 m/s, and 3) cut-in speed at 6.5 m/s. We used a randomized block design (Hurlbert 1984) and treatments were randomly assigned to turbines each night of the experiment, with the night when treatments were applied being the experimental unit. Randomization was constrained so that on each night, each treatment was assigned to 4 turbines and over the course of 15 nights, each treatment occurred 5 times at each



turbine, in random order. Randomization was further constrained so that each of the three treatments was assigned to at least one turbine on the mine side of the site. There was a slight imbalance in the design because the study was run for 76 rather than 75 nights. Each treatment was assigned to each turbine for 25 nights, with each turbine receiving one additional treatment for one night.

On any given night, there was little variation in the wind speed among turbines (M. Huso, unpublished data), so we assumed that wind speeds were the same at all turbines on any night.

The GE 1.5 MW turbines used in this experiment generally do not rotate at low wind speeds and “feather” when winds are <3.5 m/s (i.e., turbine blades are pitched parallel with the wind and free-wheel at very low rotation rates). Thus, the actual application of the curtailment treatment was dependent on the ambient wind speed on each night. There were 4 possible levels of ambient wind speed: <3.5 m/s, 3.5–5.0 m/s, 5.0–6.5 m/s, >6.5 m/s. Table 1 presents conditions of turbines under each of these treatments and wind speeds. When wind speeds were <3.5 or >6.5 m/s, all turbines were in the same operational condition and no curtailment treatments were in effect for those times; only when wind speeds were between 3.5 and 6.5 m/s were any treatments actually effective. When wind speeds were low, bat activity was expected to be high (Table 2; e.g., Arnett et al. 2006, 2007b), and when winds were <3.5 m/s none of the turbines were expected to rotate so we expected no fatalities during these periods at any of the treated turbines because all turbines were feathered below the cut-in speed (Table 2). When wind speeds were >6.5 m/s, bat activity was expected to be low (e.g., Arnett et al. 2006, 2007b) and all turbines were rotating so we expected few fatalities during these nights as well, and hypothesized there would be no differences among treatments (Table 2). When wind speeds were 3.5–5.0 m/s, bat activity was expected to be moderate to high and turbines with two different feathering treatments were not rotating, so we expected no fatalities at these turbines, but potentially high fatalities at the unfeathered, fully operational turbines under these wind conditions. Finally, when wind speeds were 5–6.5 m/s, we expected bat activity to be moderate to low, turbines assigned the 6.5 m/s treatment were not rotating, and we expected no fatalities at these turbines and moderate to low fatalities at the unfeathered turbines. However, wind speed varied throughout the night changing the effective treatment application throughout the night. In addition, fatalities were only observed at the end of the night and it was impossible to determine when and under exactly what conditions of wind speed when a fatality occurred. Our design actively accounted for this effect by maintaining balance (4 replicates of each treatment on each night), and reassigning treatment to turbines each night. Also, the measure of fatality for a treatment was the sum of all fatalities found at a given turbine following a particular treatment assignment, thereby evenly distributing the effect of varying wind speed within a night and among nights across all turbines and treatments in the study.

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## FIELD METHODS

### Delineation of Carcass Search Plots and Habitat Mapping

We attempted to delineate a rectangular plot that is 126 m east-west by 120 m north-south (60 m radius from the turbine mast in any direction; 15,120 m<sup>2</sup> total area) centered on each turbine



**Table 1.** Possible turbine conditions (“feathered” or “rotating”) under different treatments and wind conditions at the Casselman Wind Project in Somerset County, Pennsylvania. Under the treatment condition when wind is <3.5 m/s, we expected all turbines to be feathered with no rotation.

Treatment	Wind Speed (m/s)			
	< 3.5	3.5–5.0	5.1–6.5	> 6.5
5.0 m/s	Feathered/	Feathered/	No feathering/	No feathering/
	No rotation	No rotation	Full rotation	Full rotation
6.5 m/s	Feathered/	Feathered/	Feathered/	No feathering/
	No rotation	No rotation	No rotation	Full rotation
Fully Operational	Feathered/	No feathering/	No feathering/	No feathering/
	No rotation	Full rotation	Full rotation	Full rotation

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Cont.

**Table 2.** Predicted bat activity levels under different treatments and wind conditions (based on analyses in Arnett et al. 2006, 2007b) and predicted fatality levels at the Casselman Wind Project in Somerset County, Pennsylvania.

Treatment		Wind Speed (m/s)			
		< 3.5	3.5–5.0	5.1–6.5	> 6.5
5.0 m/s	Activity	High	Moderate	Moderate	Low
	Fatality	None	None	Moderate	Low
6.5 m/s	Activity	High	Moderate	Moderate	Low
	Fatality	None	None	None	Low
Fully Operational					
	Activity	High	Moderate	Moderate	Low
	Fatality	None	High	Moderate	Low

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Cont.

sampled; this area represents the maximum possible search area for this study [see Figure 2 for an example]). Transects were set 6 m apart within each plot and observers searched 3 m on each side of the transect line; thus, the maximum plot in the east-west direction could be up to 126 m wide. However, dense vegetation and the area cleared of forest at this facility was highly varied and, thus, we eliminated unsearchable habitat (e.g., forest, tall and dense grassland) and usually did not search the entire possible maximum area. We used a global positioning system (GPS) to map the actual area searched at each turbine (see Figure 2 for an example, and Appendix 1 for plot maps). The density-weighted proportion of area searched was used to standardize results and adjust fatality estimates (see methods below). The number of transect lines and length of each line was recorded for each plot and habitat in each plot mapped with a GPS unit. We recorded the percent ground cover, height of ground cover (low [ $<10$  cm], medium [ $11\text{--}50$  cm], high [ $>50$  cm]), type of habitat (vegetation, brush pile, boulder, etc), and the presence of extreme slope and collapsed these habitat characteristics into visibility classes that reflect their combined influence on carcass detectability (Table 3; following PGC 2007).

### Fatality Searches

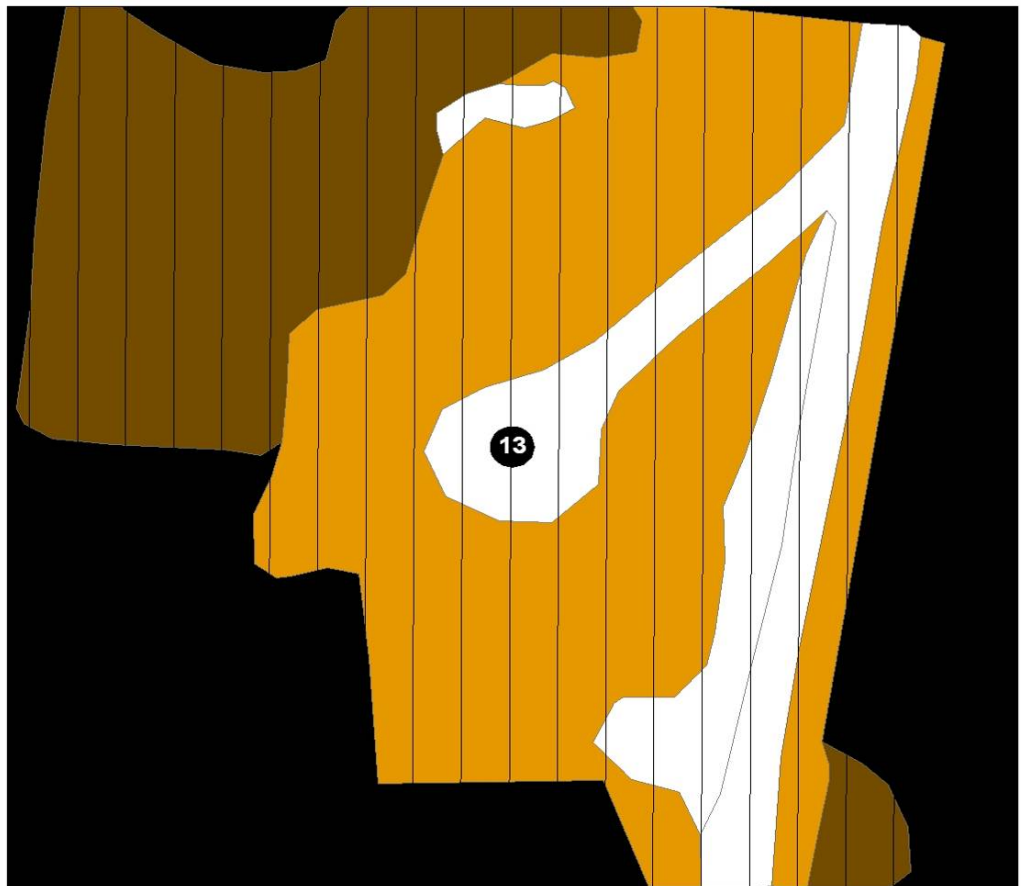
We conducted daily searches at 12 of the 23 turbines (2, 5, 6, 7, 9, 10, 12, 15, 17, 18, 19, 21; Figure 1) from 26 July to 10 October 2008. During this same period, we also conducted daily searches at 10 different turbines (1, 3, 4, 8, 11, 13, 14, 16, 20, 23; Figure 1) as part of a different study effort to determine if activity data collected prior to construction with acoustic detectors can predict post-construction fatalities (Arnett et al. 2006, 2009), and to meet permitting requirements of the Pennsylvania Game Commission's (PGC) voluntary agreement for wind energy (PGC 2007). These 10 turbines, herein referred to as "PGC" turbines, were selected because they had multiple years of acoustic data previously collected from 2005–2007 to be correlated with turbine-specific fatality data in the future (Arnett et al. 2006). We then randomly selected the 12 turbines listed above (of the remaining 13 turbines) for the curtailment study; no searches were conducted at turbine 22.

Searchers walked at a rate of approximately 10–20 m/min. along each transect searching both sides out to 3 m on each side for casualties. Searches were abandoned only if severe or otherwise unsafe weather (e.g., heavy rain, lightning) conditions were present and searches were resumed that day if weather conditions permitted. Searches commenced at sunrise and all turbines were searched within 8 hr after sunrise. We recorded date, start time, end time, observer, and weather data for each search at turbines. When a dead bat or bird was found, the searcher placed a flag near the carcass and continued the search. After searching the entire plot, the searcher returned to each carcass and recorded information on date, time found, species, sex and age (where possible), observer name, identification number of carcass, turbine number, perpendicular distance from the transect line to the carcass, distance from turbine, azimuth from turbine, habitat surrounding carcass, condition of carcass (entire, partial, scavenged), and estimated time of death (e.g.,  $\leq 1$  day, 2 days, etc.). The field crew leader (M. Schirmacher) confirmed all species identifications at the end of each day. Disposable nitrile surgical gloves or inverted plastic bags were used to handle all carcasses to reduce possible human scent bias for carcasses later used in scavenger removal trials. Carcasses were placed in a plastic bag and labeled. Fresh carcasses, those determined to have been killed the night immediately before a

F103-11  
Cont.

**Figure 2.** Sample carcass search plot at a wind turbine depicting the maximum plot size of 126 m east-west and 120 m north-south, 6 m wide transect lines (searched 3 m on each side), unsearchable area (black), and area encompassed by easy (white), moderate (light tan), difficult (dark tan), and very difficult (brown) visibility habitat.

## Turbine 13



— Transects

Habitat Classes

□ Easy

□ Moderate

□ Difficult

□ Very Difficult

■ Out

0 10 20 30 40 Meters

F103-11  
Cont.

**Table 3.** Habitat visibility classes used during this study (following PGC 2007). Data for Classes 3 and 4 were combined during our final analyses.

% Vegetative Cover	Vegetation Height	Visibility Class
≥90% bare ground	≤15 cm tall	Class 1 (Easy)
≥25% bare ground	≤15 cm tall	Class 2 (Moderate)
≤25% bare ground	≤25% > 30 cm tall	Class 3 (Difficult)
Little or no bare ground	≥25% > 30 cm tall	Class 4 (Very Difficult)

search, were redistributed at random points on the same day for searcher efficiency and scavenging trials.

### Field Bias Trials

Searcher efficiency and removal of carcasses by scavengers was quantified to adjust the estimate of total bat fatalities for detection bias. We conducted bias trials throughout the entire study period and searchers were never aware which turbines were used or the number of carcasses placed beneath those turbines during trials. Prior to the study's inception, we used EXCEL to generate a list of random turbine numbers and random azimuths and distances (m) from turbines for placement of each bat used in bias trials.

We used only fresh killed bats for searcher efficiency and carcass removal trials during this study. At the end of each day's search, the field crew leader gathered all bats and then redistributed only fresh bats at predetermined random points within any given turbine's searchable area. Data recorded for each trial carcass prior to placement included date of placement, species, turbine number, distance and direction from turbine, and visibility class surrounding the carcass. We attempted to distribute trial bats equally among the different visibility classes throughout the study period, and succeeded in distributing roughly one-third of all trial bats in each visibility class (easy, moderate, and difficult [difficult and very difficult were combined]). We attempted to avoid "over-seeding" any one turbine with carcasses by placing no more than 4 carcasses at any one time at a given turbine.

Because we used fresh bats for searcher efficiency trials and carcass removal trials simultaneously, we did not mark bats with tape or some other previously used methods (see Kerns et al. 2005) that could impart human or other scents on trial bat carcasses. Rather, we removed an upper canine tooth from each trial bat so as to distinguish them from other fatalities landing nearby

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Cont.

or if scavengers pulled the trial bat away from its original random location. Each trial bat was left in place and checked daily by the field crew leader or a searcher not involved with the bias trials; thus, trial bats were available and could be found by searchers on consecutive days during daily searches unless that were previously removed by a scavenger. We recorded the day that each bat was found by a searcher, at which time the carcass remained in the scavenger removal trial. If, however, a carcass was removed by a scavenger before detection by a searcher, it was removed from the searcher efficiency trial and used only in the removal data set. When a bat carcass was found, the searcher inspected the canine teeth to determine if a bias trial carcass had been found. If so, the searcher contacted the field crew leader and the bat was left in place for the carcass removal trial. Carcasses were left in place until removed by a scavenger or they decomposed to a point beyond recognition, at which time the number of days after placement was recorded.

## ANALYTICAL METHODS

### Comparison of Treatments

The experimental unit in the first analysis was the turbine-night and turbines were considered a random blocking factor. The total number of fatalities estimated to have been killed the previous night, herein referred to as “fresh” fatalities, in each treatment at each turbine was modeled as a Poisson random variable with an offset of the number of days a treatment occurred within a turbine (due to the slight imbalance of the design). These data were fit to a Generalized Linear Mixed Model using PROC GLIMMIX in SAS v9.1 (SAS Institute 2007) with turbine as the blocking factor. The block effect was found to be negligible and results were almost identical when the data were fit to a simple log-linear model.

### Comparison of PGC and Curtailment Turbine Bat Fatalities

For our second analysis, the turbine was the experimental unit, with 12 turbines receiving the curtailment treatment, 10 the control (fully operational at all times). We used all carcasses found at a turbine to estimate the total number of bat fatalities that occurred at each turbine between 26 July and 10 October 2008. We compared fatalities at PGC with curtailment turbines using one-way analysis of variance with each turbine as the experimental unit and  $\log_e$  (estimated total fatalities) as the response (SAS Institute 2007).

**Carcass persistence/removal.** Estimates of the probability that a carcass was not removed in the interval between searches were used to adjust carcass counts for removal bias. Removal includes removal by predation, scavenging, wind or water, or decomposition beyond recognition. In most fatality monitoring efforts, it is assumed that carcass removal occurs at a constant rate that is not dependent on the time since death; this simplifying assumption allows us to estimate fatality when search intervals exceed one day. The length of time a carcass remains on the study area before it is removed is typically modeled as an exponentially distributed random variable. The probability that a carcass is not removed during an interval of length  $I$  can be approximated as  $r_j = \hat{t}_j (1 - \exp(-I_{ij} / \hat{t}_j)) / I_{ij}$ , the average probability of persisting given its death might have occurred at any time during the interval. Data from 114 bat carcasses used in removal trials were fit to an interval-censored parametric failure time model, with carcass

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persistence time modeled as a function of visibility class. We used an alpha of 0.05 to determine if there was a statistically significant effect among visibility classes.

**Searcher efficiency.** Estimates of the probability that a carcass will be detected by an observer during a search (searcher efficiency) were used to adjust carcass counts for observer bias. Failure of an observer to detect a carcass on a search plot may be due to its size, color, or time since death, as well as conditions in its immediate vicinity (e.g., vegetation density, shade). In most fatality monitoring efforts, because we cannot measure time since death, it is assumed that a carcass' observability was constant over the period of the search interval. In this study, searches were conducted daily and carcass persistence times were long, giving a substantial opportunity for a searcher to detect a carcass that was missed on a previous search. Carcasses used in searcher efficiency trials were placed on search plots and monitored for 20 days. The day on which the carcass was either observed or removed by a scavenger was noted. Of the 100 carcasses placed in multi-day searcher efficiency trials, 4 had no visibility class recorded (2 of these had no species ID so could not be identified as bird or bat), leaving 96, 83 of which were bats, 13 were birds. Of the 83 bats, 4 were removed by scavengers before the searches took place, leaving 79. Of these, 70 were either seen or persisted beyond 7 days and were included in estimates of searcher efficiency rates. We fit searcher efficiency trial carcass data to a logistic regression model with odds of observing a carcass throughout the study period, given that it persisted, modeled as a function of visibility class. We used an alpha of 0.10 to determine if there was a statistically significant effect among visibility classes.

**Density of carcasses and proportion of area surveyed.** The density of carcasses was modeled as a function of distance from the turbine. Only carcasses found in 'easy' visibility areas were used for this analysis, and data from all turbines were used, yielding a total of 144 bat carcasses. The searcher efficiency in the 'easy' class was estimated to be 100% (see below in results) and we assumed that the carcass persistence time would be equal for all carcasses within this class and would not change as a function of distance, so that any carcasses removed before detection would be equally distributed among all distances, creating no bias. Carcasses from other visibility classes were not used because their probability of detection would be different from those in the easy class, and while we can adjust total fatality for detection probability less than 1, we cannot assume that the adjustment applies to a particular distance. Carcasses were "binned" into 2 m rings (Figure 3) extending from the turbine edge out to the theoretical maximum plot distance. We determined the total area among all search plots that was in the easy visibility class (m<sup>2</sup>) and calculated carcass density from this. We combined data from all turbines to calculate carcass density (number of carcasses/m<sup>2</sup>) in each ring. These data were modeled as a conditional cubic polynomial with the following estimated function:

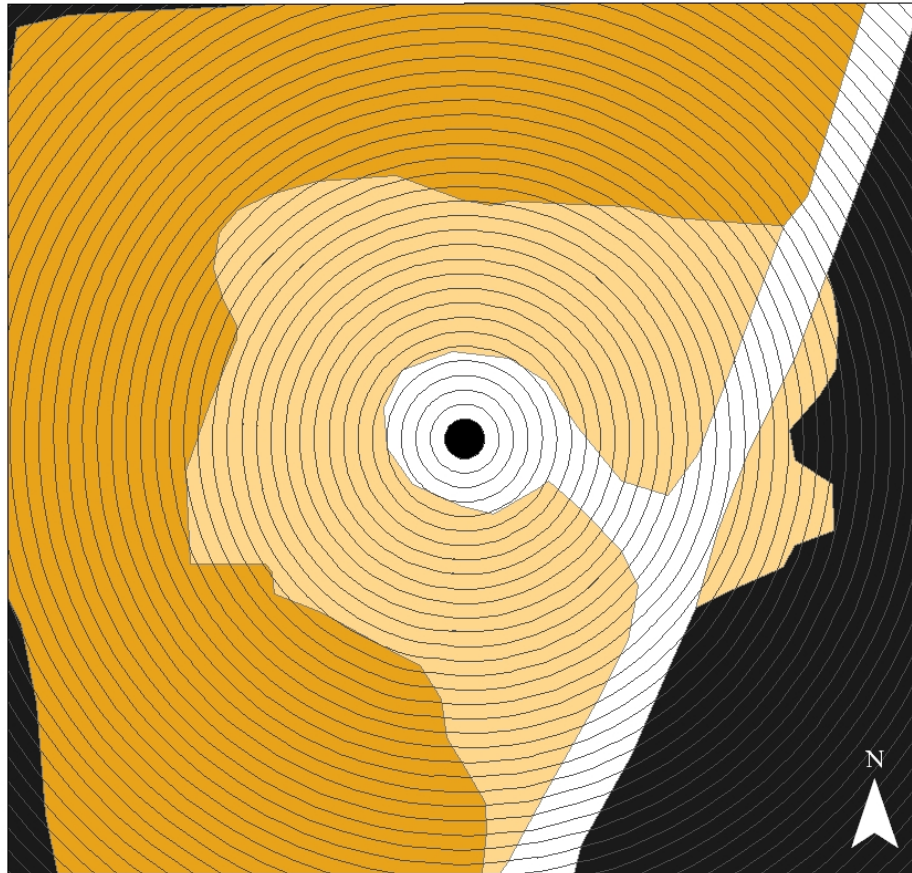
If distance  $\leq 81$ m, then density =  $\exp(-2.8573 + 0.0849 \cdot \text{dist} - 0.0028 \cdot \text{dist}^2 + 0.00001858 \cdot \text{dist}^3) - 0.01$ ; otherwise, density =  $0.00137 \cdot \exp(-0.05 \cdot (\text{distance} - 81))$

The actual, unweighted, area surveyed within plots ranged from 41.8 to 95.6% of the delineated theoretical maximum. Density of bat carcasses is known to diminish with increasing distance from the turbine (e.g., Kerns et al. 2005), so a simple adjustment to fatality based on area surveyed would likely lead to over estimates, because unsearched areas tend to be farthest from turbines. The calculated function (see above) relating density to distance from a turbine

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**Figure 3.** Hypothetical carcass search plot for a wind turbine illustrating 2 m rings extending from the turbine edge out to the theoretical maximum plot distance and the depicted “easy” searchable area (shaded area within line drawing) of the plot, used to develop weights for adjusting fatalities.

### Example Plot with 2-meter Concentric Circles



#### Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters

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Cont.

was used to weight each square meter in the plot. The density-weighted fraction of each plot that was actually searched (60.9–99.6%, mean = 82.9%) was used as an area adjustment to per-turbine fatality estimates rather than using a simple proportion. In addition, using this density weight, we estimated that the search plots represented 94.7% of the total density weighted area of the entire site, rather than only 83% of the actual surveyed area.

**Fatality estimates.** We adjusted the number of fatalities found by searchers by estimates of searcher efficiency and of the proportion of carcasses expected to persist unscavenged during each interval using the following equation:

$$\frac{c_{ijk}}{\hat{a}_i * \hat{p}_{jk} * \hat{r}_j * \hat{e}_j} = \hat{f}_{ijk}$$

Where:

$\hat{f}_{ijk}$  is the estimated fatality in the  $k^{\text{th}}$  visibility class that occurred at the  $i^{\text{th}}$  turbine during the  $j^{\text{th}}$  search;

$c_{ijk}$  is the observed number of carcasses in the  $k^{\text{th}}$  visibility class at the  $i^{\text{th}}$  turbine during the  $j^{\text{th}}$  search;

$\hat{a}_i$  is the estimated density-weighted proportion of the area of the  $i^{\text{th}}$  turbine that was searched;

$\hat{p}_{jk}$  is the estimated probability that a carcass in the  $k^{\text{th}}$  visibility class that is on the ground during the  $j^{\text{th}}$  search will actually be seen by the observer;

$\hat{r}_j$  is the probability than an individual bird or bat that died during the interval preceding the  $j^{\text{th}}$  search will not be removed by scavengers; and

$\hat{e}_j$  is the effective interval (i.e., the ratio of the length of time before 99% of carcasses can be expected to be removed, to the search interval).

The value for  $\hat{p}_{jk}$  was estimated through searcher efficiency trials and assumed not to differ among turbines, but differ with search interval ( $j$ ) and visibility class ( $k$ );  $\hat{r}_j$  is a function of the average carcass persistence rate and the length of the interval preceding the  $j^{\text{th}}$  search; and  $\hat{r}_j$  and  $\hat{e}_j$  are assumed not to differ among turbines, but differ with search interval ( $j$ ).

The estimated annual per turbine fatality was calculated for PGC and curtailed turbines using two different estimators: a modified version of an estimator presented by Johnson et al. (2003) (P. Shoenfeld, unpublished data) used by Kerns and Kerlinger (2004) and Kerns et al.

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(2005) (herein referred to as the modified estimator, which is the current estimator required by PGC 2007) but which has been shown to be biased under certain conditions (Huso in press), and an estimator newly derived by M. Huso, Oregon State University (Huso in press; herein referred to as the MH estimator). The equation for the MH estimator in this study is:

$$\hat{f} = \frac{\sum_{i=1}^u \sum_{j=1}^{n_i} \sum_{k=1}^3 \hat{f}_{ijk}}{u}$$

where  $n_i$  is the number of searches carried out at turbine  $i$ ,  $i = 1, \dots, u$ , and  $u = 10$  or  $12$  for PGC and curtailment turbines, respectively. The per turbine estimate and confidence limits were divided by 0.947 to adjust for actual density-weighted area searched and multiplied by 23 to give total annual fatality estimates (Cochran 1977). No closed form solution is yet available for the variance of this estimator, so 95% confidence intervals of this estimate were calculated by bootstrapping (Manly 1997). Searcher efficiency was estimated from a bootstrap sample (with replacement) of searcher efficiency data, carcass persistence estimated from a bootstrap sample of carcass persistence data, and these values were applied to the carcass data from a bootstrap sample of turbines to estimate average fatality per turbine. This process was repeated 1000 times. The 2.5<sup>th</sup> and 97.5<sup>th</sup> quantiles from the 1000 bootstrapped estimates formed the 95% confidence limits of the estimated fatality.

## RESULTS

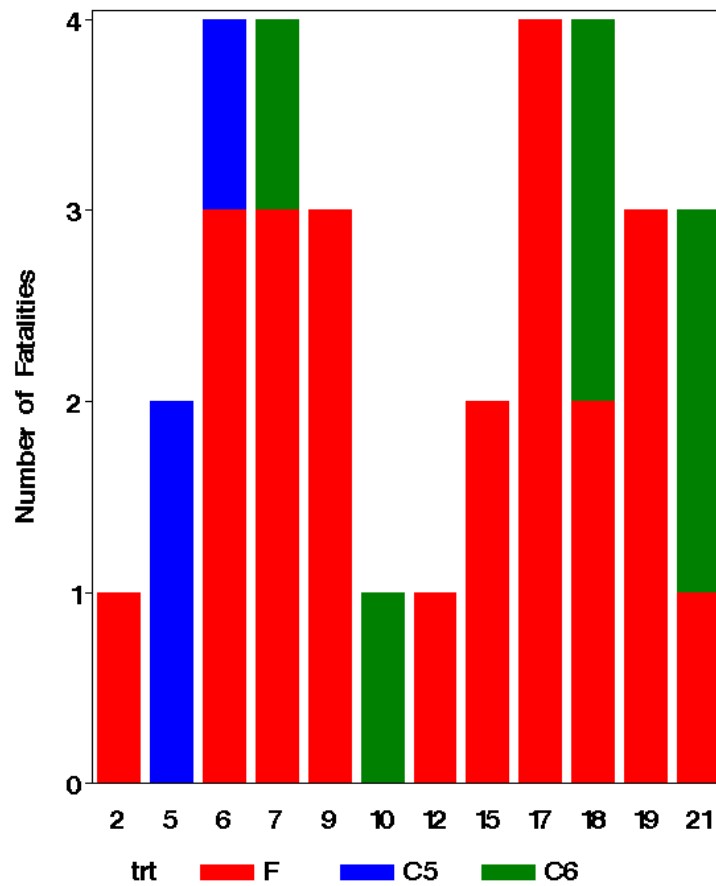
### Comparison of Treatments

A total of 32 fresh bat fatalities were found at the 12 curtailment study turbines between 26 July and 10 October 2008. At least one fresh fatality was found at each turbine, and 10 of the 12 turbines had at least 1 fatality during a fully operational night, indicating that fatalities did not occur disproportionately at only some turbines, but were well distributed among all turbines (Figure 4). We found 3 fresh fatalities at turbines that were curtailed when wind speeds were <5.0 m/s (C5) the preceding night, 6 at turbines curtailed when wind speeds were <6.5 m/s (C6), and 23 at turbines that were fully operational.

There was strong evidence that the estimated number of fatalities over 25–26 nights differed among turbines ( $F_{2,33} = 8.99$ ,  $p = 0.008$ , Figure 5). There was no difference between the number of fatalities at C5 and C6 turbines ( $\chi^2_1 = 0.83$ ,  $p = 0.3625$ , 95% CI: 0.11–2.22; Table 4, Figure 5). Total fatalities at fully operational turbines were estimated to be 5.4 times greater on average than at curtailed turbines, C5 and C6 combined ( $\chi^2_1 = 14.63$ ,  $p = 0.001$ , 95% CI: 2.28–12.89; Table 4, Figure 5). In other words, 73% (95% CI: 53–87%) of all fatalities at curtailment turbines likely occurred when the turbines were fully operational.

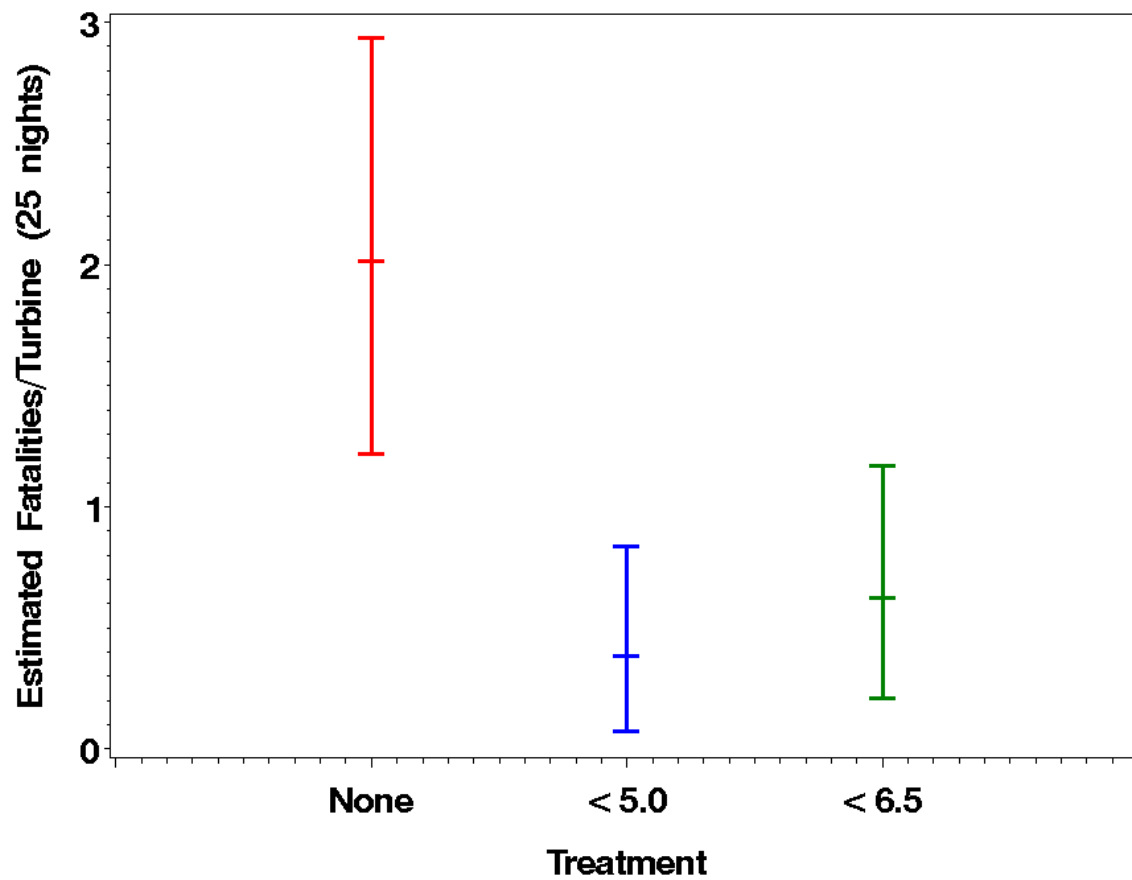
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**Figure 4.** Number of fresh bat fatalities (n = 32 total) found at each turbine for each of three operational treatments (cut-in speed changed to 5.0 m/s [C5], cut-in at 6.5 m/s [C6], and fully operational [F]) for 12 turbines at the Casselman Wind Project in Somerset County, Pennsylvania, 26 July to 10 October 2008.



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**Figure 5.** Estimated number of fresh bat fatalities per turbine, and 95% confidence intervals, over 25 nights for each of three treatments (cut-in speed changed to 5.0 m/s, cut-in at 6.5 m/s, and fully operational [none]) for 12 turbines at the Casselman Wind Project in Somerset County, Pennsylvania, 26 July to 10 October 2008.



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**Table 4.** Estimated ratio of the number of fresh bat fatalities per turbine, and 95% confidence interval, over 25 nights for each of three curtailment treatments (cut-in speed changed to 5.0 m/s, cut-in at 6.5 m/s, and fully operational) for 12 turbines at the Casselman Wind Project in Somerset County, Pennsylvania, 26 July to 10 October 2008.

Comparison	Estimated Ratio	95% Confidence Interval	
Cut-in at 5.0 vs 6.5 m/s	0.50	0.11	2.22
Fully operational vs average of 5.0 and 6.5 m/s treatments	5.42	2.28	12.89

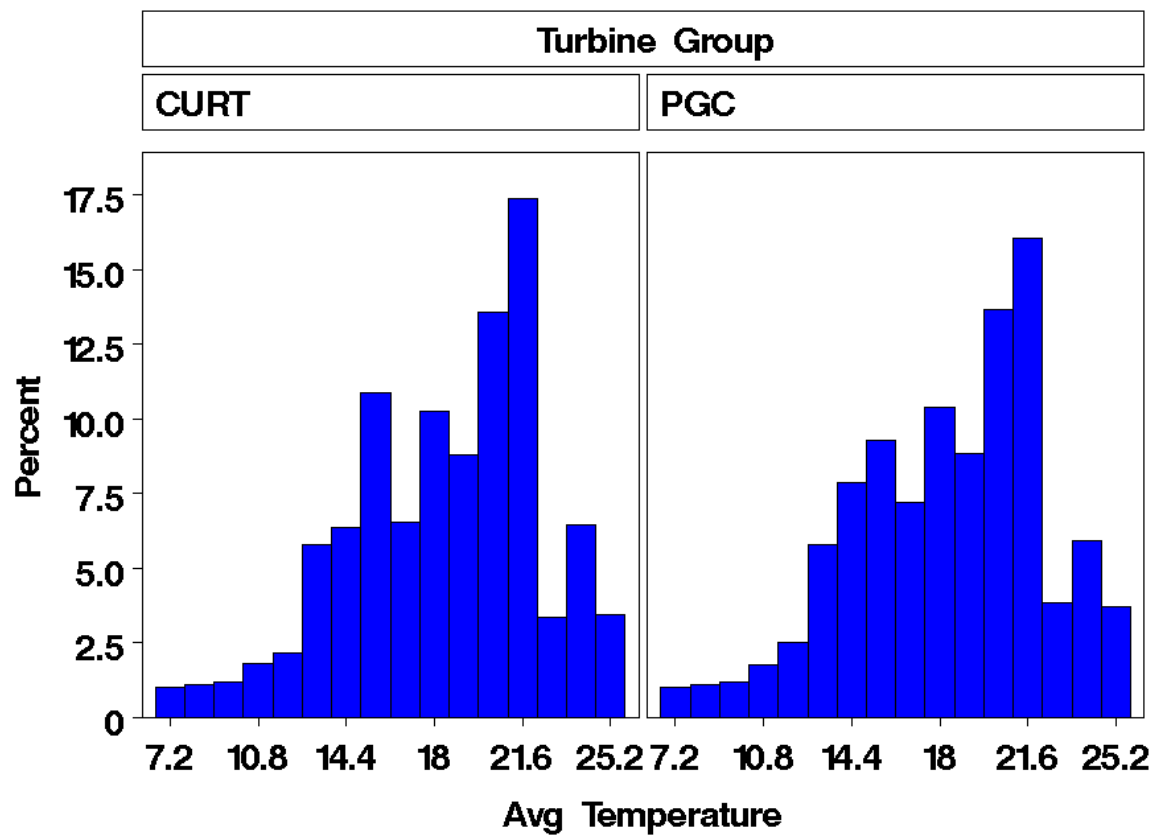
### Comparison of PGC and Curtailment Turbine Bat Fatalities

The average temperature (Figure 6), average wind speed (Figure 7), and percent of night when wind speed was <6.5 m/s (Figure 8) were similar between the PGC and curtailed turbines, suggesting no inherent environmental differences between the two groups of turbines that might have influenced our comparison of bat fatalities. However, while the average proportion of density weighted area in the easy visibility class was not statistically significantly different between the two turbine groups (Satterthwaite t-test with unequal variances,  $t_{10.9} = -1.64$ ,  $p = 0.129$ ), one PGC turbine had about 40% in the easy class when all others in the PGC and the curtailment group were ~20% or less (Figure 9). This turbine (PGC #20) could bias fatality numbers for the PGC group because carcasses at this turbine would be easier to find than at other turbines. When this turbine was omitted from the analysis, the average percent of the density weighted area in the easy visibility class was 16.7% (95% CI: 13.9, 19.5) for PGC turbines and 14.5% (95% CI: 12.5, 16.4) for curtailed turbines. Without turbine 20, there was no evidence that the average fraction of the density weighted area actually searched differed between the two groups ( $t_{19} = 0.48$ ,  $p = 0.640$ ). Thus, we concluded that comparison of the two groups was warranted, as it seemed unlikely to be strongly influenced by differences in detectability of the carcasses among the turbines.

**Field Bias Trials.** Data from 70 searcher efficiency trials for randomly placed carcasses were fit to a logistic regression model and searcher efficiency differed significantly among the visibility classes ( $\chi^2_2 = 25.8$ ,  $p = 0.0001$ ). All 30 carcasses in the ‘easy’ class that persisted long enough to be observed were found by searchers, while 17 of the 24 carcasses in the ‘moderate’ class that persisted long enough to be observed were found (Table 5). Only 2 of 16 carcasses that persisted more than 1 week in the ‘difficult’ class were found. Data from 114 scavenger removal trial for carcasses were fit to an interval-censored parametric failure time model. Using  $\alpha = 0.10$ , average carcass persistence time was not found to differ among visibility classes ( $\chi^2_2 = 1.778$ ,  $p = 0.411$ ). Average persistence time was estimated to be 28.19 (95% CI: 16.87, 50.15) days (Table 5).

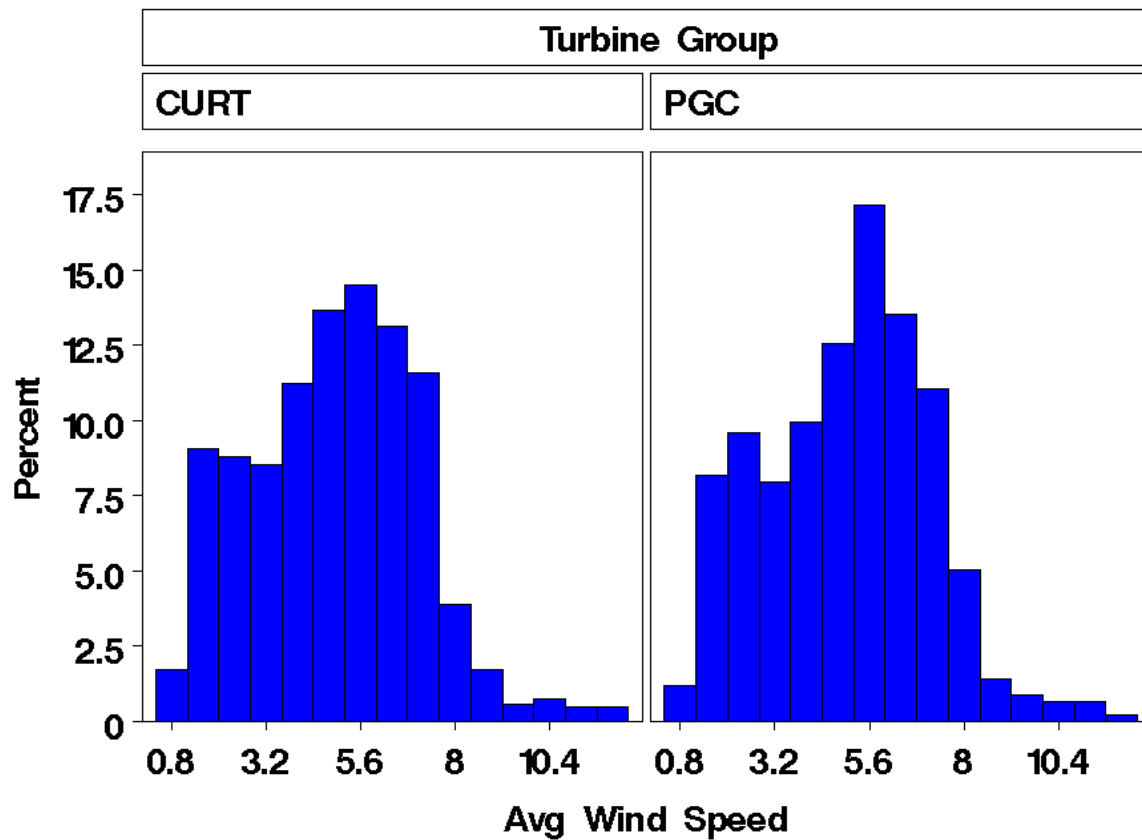
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**Figure 6.** Histograms of the percent of survey nights and average temperature (C) for 10 turbines surveyed as part of the Pennsylvania Game Commission Cooperative Agreement (PGC; n = 10) and experimentally curtailed turbines (CURT; n = 12) from 26 July to 10 October 2008 at the Casselman Wind Project facility in Somerset County, Pennsylvania.



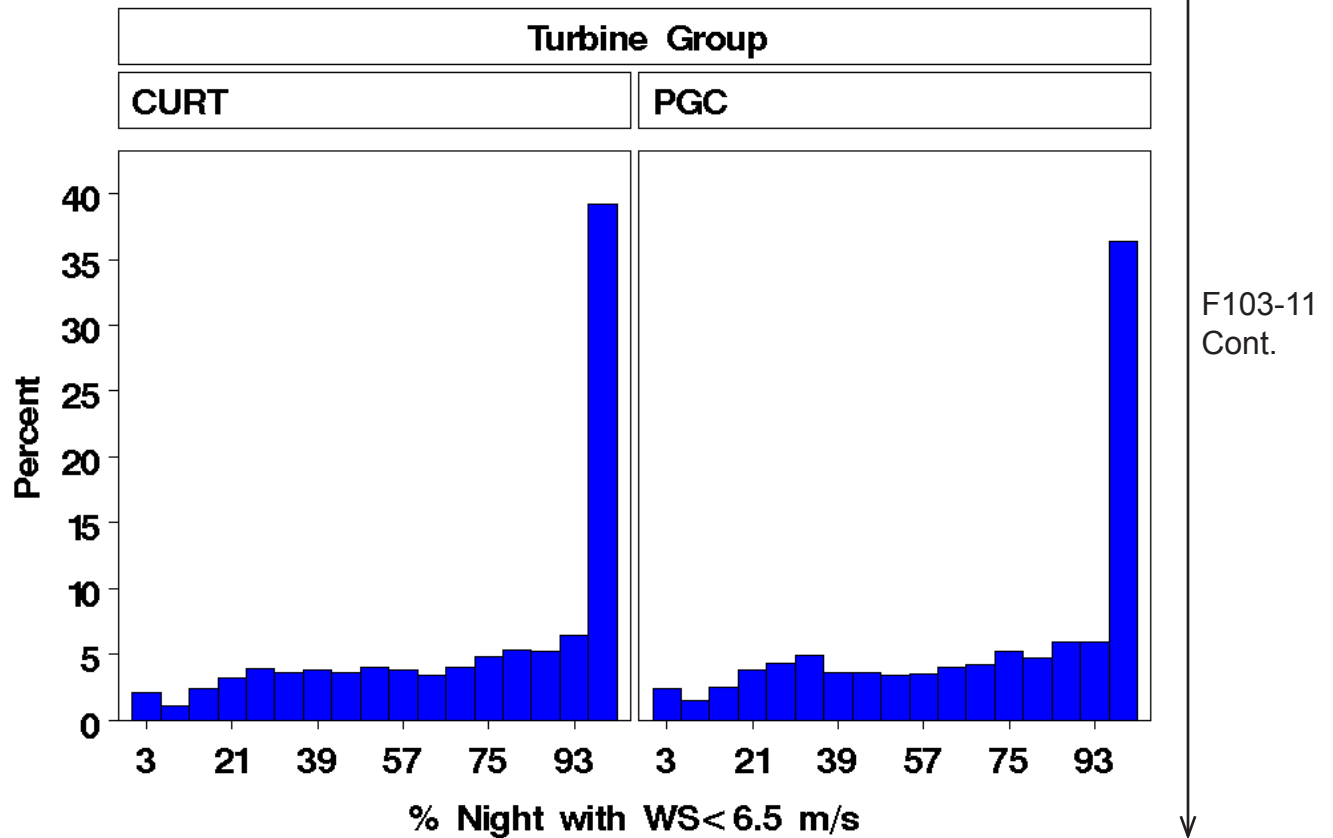
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**Figure 7.** Histograms of the percent of survey nights and average wind speed (m/s) for 10 turbines surveyed as part of the Pennsylvania Game Commission Cooperative Agreement (PGC; n = 10) and experimentally curtailed turbines (CURT; n = 12) from 26 July to 10 October 2008 at the Casselman Wind Project facility in Somerset County, Pennsylvania.

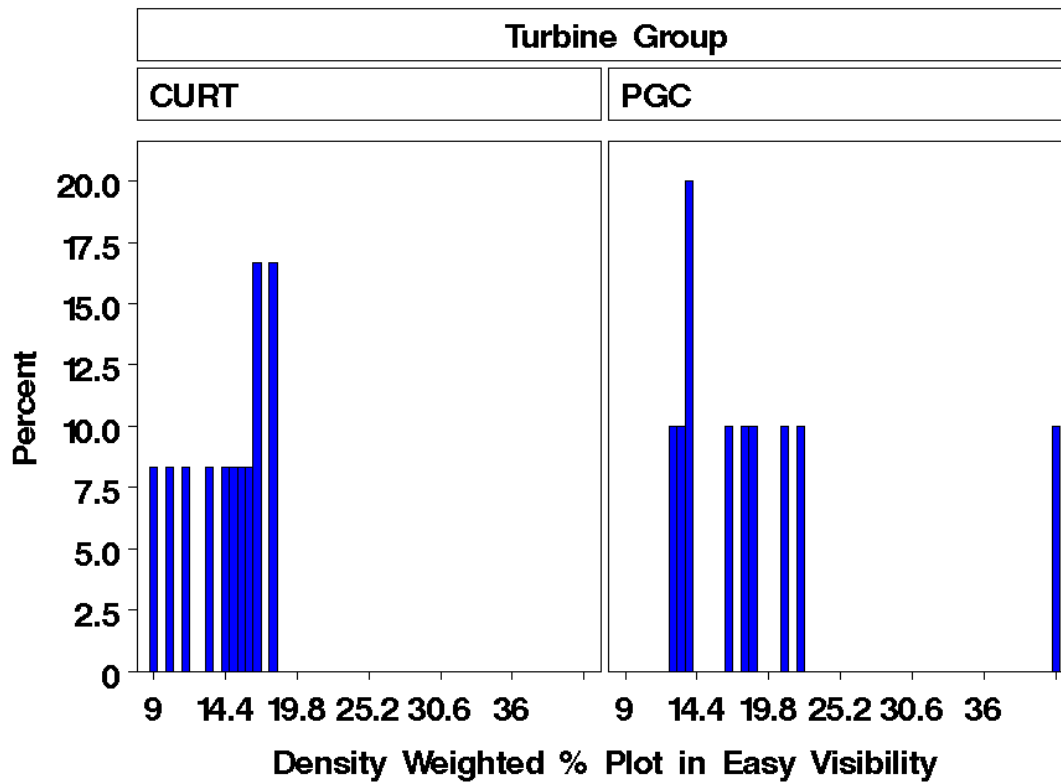


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**Figure 8.** Histograms of the percent of survey nights and percent of night when wind speed was  $< 6.5$  m/s for 10 turbines surveyed as part of the Pennsylvania Game Commission Cooperative Agreement (PGC;  $n = 10$ ) and experimentally curtailed turbines (CURT;  $n = 12$ ) from 26 July to 10 October 2008 at the Casselman Wind Project facility in Somerset County, Pennsylvania.



**Figure 9.** Histograms of the density weighted percent of plots in easy visibility habitat for 10 turbines surveyed as part of the Pennsylvania Game Commission Cooperative Agreement (PGC; n = 10) and experimentally curtailed turbines (CURT; n = 12) from 26 July to 10 October 2008 at the Casselman Wind Project facility in Somerset County, Pennsylvania.



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**Table 5.** Mean and 95% confidence intervals (CI) for searcher efficiency (proportion of available carcasses a searcher was likely to detect) and carcass persistence (average number of days a carcass was estimated to persist unscavenged or detectable by a searcher) in each habitat visibility class from the Casselman Wind Project facility in Somerset County, Pennsylvania in 2008. Difficult and very difficult classes (classes 3 and 4) were combined for the final analysis.

Visibility Class	<u>Searcher Efficiency</u>			<u>Carcass Persistence</u>		
	Mean	Lower CI	Upper CI	Mean	Lower CI	Upper CI
easy	1.000	1.000	1.000	28.192	16.866	50.153
moderate	0.708	0.542	0.875	28.192	16.866	50.153
difficult	0.125	0.031	0.313	28.192	16.866	50.153

**Fatality Estimates.** The estimated number of bat fatalities per turbine from 26 July through 11 October was 23.49 (95% CI: 16.14, 68.93) for the PGC turbines and 10.05 (95% CI: 6.76, 32.49) for the curtailed turbines using the MH estimator (Table 6). Using the modified estimator, the estimated number of bat fatalities per turbine was 14.86 (95% CI: 11.53, 32.91) for the PGC turbines and 6.60 (95% CI: 5.54, 14.56) for the curtailed turbines. The average bat fatality estimate per turbine using the MH estimator was 1.5 times greater than that of the modified estimator. Estimated bat fatalities per turbines were 1.23 to 4.68 times greater (mean = 2.34) at PGC turbines relative to curtailed turbines, using the MH estimator, and 1.61 to 2.87 times greater (mean = 2.25) using the modified estimator. This analysis provides further support for the contention that reducing operational hours during low wind periods reduces bat fatalities, but is a conservative estimate of the actual difference because treatment turbines were fully operational one-third of the time during the study.

### Financial Costs of Curtailment

At the end of the experiment, Iberdrola Renewables evaluated how much power loss had occurred by comparing daily output of the curtailed turbines with the output of turbines that were not curtailed. The lost power output resulting from the experiment amounted to approximately 2% of total project output during the 76-day study period (12 turbines, 26 July to 10 October). Hypothetically, if the experiment had been applied to all 23 turbines at the Casselman site for the study period (½ hour before sunset to ½ hour after sunrise for the 76 days we studied), the 5.0 m/s curtailment used would have resulted in lost output equaling 3% of output during the period and only 0.3 % of total annual output. If the 6.5 m/s curtailment were applied to all 23 turbines during the study period, the lost output would have amounted to 11% of total output for the

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**Table 6.** Estimated fatalities (mean and 95% confidence intervals [CI]) per turbine and for the site total, adjusted for searcher efficiency, carcass removal, and area, for PGC (fully operational) and curtailed (CURT; curtailed one-third of study period) from 26 July through October 11 for the Casselman Wind Project in Somerset County, Pennsylvania, using two different estimators (MH estimator (M.Huso, Oregon State University, unpublished data [manuscript in press] and the Modified estimator (from P. Shoenfeld, unpublished data, and Erickson et al. 2004; e.g., Kerns and Kerlinger 2004, Kerns et al. 2005; estimator currently required by PGC 2007). We also present the estimated ratio of per turbine fatality at PGC versus Curtailment turbines for the same period.

	N turbines	MH Estimates			Modified Estimates		
		Mean	Lower 95% CL	Upper 95% CL	Mean	Lower 95% CL	Upper 95% CL
Per Turbine							
CURT	12	10.05	6.76	32.49	6.60	5.54	14.56
PGC	10	23.49	16.14	68.93	14.86	11.53	32.91
Site total							
CURT	23	243.9	164.2	789.0	160.3	134.4	353.5
PGC	23	570.4	392.0	1673.7	360.9	279.9	799.1
Ratio of PGC:CURT							
		2.34	1.23	4.68	2.25	1.61	2.87

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study period and 1% of total annual output. In addition to the lost power revenues, the company also incurred costs for staff time to set up the processes and controls and to implement the curtailment from the company's offsite 24-hour operations center based in Portland, Oregon.

## DISCUSSION

Our findings were consistent with our predictions that bat fatalities would be significantly reduced by changing turbine cut-in speed and reducing the operational hours during low wind periods, and corroborate the only other studies of operational curtailment (Baerwald et al. 2009, O. Behr, University of Erlangen, unpublished data). All three studies of operational curtailment conducted to date indicate that bat fatalities can be reduced by at least 50%.

In the first analysis, our study design differed from other studies in part because we were able to change treatments easily on each night of the study from a centralized, off-site command center, thus allowing the night to be the experimental unit in our analysis. Because we used the turbine as a blocking factor, any differences in searchable area among turbines were contained in the blocking factor. The almost even distribution of fatalities among turbines indicates that there

was no strong distinction in fatality among turbines, so detected effects can be reasonably attributed to the treatments. This design is very powerful, but also is very dependent on the correct determination of fresh carcasses. If a two day old carcass was discovered, it could have been inaccurately attributed to the treatment of the previous night, rather than the night before that. Appendix 2 presents data from turbines where the potential existed for misclassification of fresh carcasses. For all but one of the fatalities attributed to a curtailment treatment, the previous treatment was a fully operational treatment. In slightly over half (12/23) of the fatalities attributed to fully operational treatments, the previous treatment was also a fully operational treatment. Thus, even if our accuracy in determining fresh carcasses was off by a day and all carcasses that were found were in fact 2 days old and hence killed during the prior treatment, the majority of fatalities would still have been associated with fully operational turbines (12 curtailed vs 20 fully operational, Appendix 2). We do not believe that our misclassification rate was that high, nor do we have reason to believe that the probability of misclassifying a carcass as fresh is in any way associated with the treatment. Thus, we assume that any error in our classification of fresh bats was equal among turbines and treatments and that it did not greatly influence the results of this study. Our second analysis demonstrated that estimated fatalities were higher at PGC compared to curtailed turbines and further supports our contention that reducing operational hours during low wind periods reduces bat fatalities. These fatality differences likely represent a conservative estimate of the effect of curtailment because the curtailed turbines were fully operational 1/3 of the time during the study.

Numerous factors influence the power loss and, thus financial costs of changing the cut-in speed of wind turbines reduce bat fatalities. These include, but are not limited to, the type and size of wind turbines and computer hardware used, market or contract prices of power, power purchase agreements and associated fines for violating delivery of power, and variation in temporal consistency, speed and duration of wind across different sites. Wind speeds in the Mid-Atlantic Highlands region are typically lowest in late summer and early fall (S. McDonald, Iberdrola Renewables, unpublished data). The loss in power production resulting from our experimental treatments was surprisingly low when considering the full annual productivity lost, but power loss was 3 times higher for the 6.5 m/s change in cut-in speed compared to the 5.0 m/s treatment. Our data indicated no significant difference in fatalities between these two changes in cut-in speed, albeit with low statistical power to detect such a difference, and thus further research at the Casselman site and other sites is needed to determine whether lower changes in cut-in speed may provide the same biological effects as higher cut-in speeds with less financial cost. Power loss during our experiment was considerably different from that reported by Baerwald et al. (2009) primarily because we curtailed turbines only at night when bats are flying and because of different market pricing for electricity between the two study sites. Technological limitations of the Vestas V80 turbines studied by Baerwald et al. (2009) forced them to change the cut-in speed for the entire duration of the study, 24 hours a day. Baerwald et al. (2009) noted that if the operational parameters could have been changed only when bats were active at night, then costs would have been even less for their study.

Higher bat activity (e.g., Arnett et al. 2006, 2007b, Redell et al. 2006, Reynolds 2006, Weller 2007) and fatalities (Arnett et al. 2008) have been consistently related to periods of low wind speed and weather conditions typical of the passage of storm fronts. The casual mechanism underlying this relationship remains unclear, but perhaps migration is less efficient for bats in

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high wind speeds and thus migratory movement by these species is reduced (Baerwald et al. 2009). Cryan and Brown (2007) reported that fall arrivals of hoary bats on Southeast Farallon Island were related to periods of low wind speed, dark phases of the moon, and low barometric pressure, supporting the view that migration events may be predictable. Low barometric pressure can coincide with passage of cold fronts that may be exploited by migrating birds and bats (Cryan and Brown 2007). Erickson and West (2002) reported that regional climate patterns as well as local weather conditions can predict foraging and migratory activity of bats. On a local scale, strong winds can influence abundance and activity of insects, which in turn influence bat activity. Bats are known to reduce their foraging activity during periods of rain, low temperatures, and strong winds (Erkert 1982, Erickson et al. 2002). Episodic hatches of insects that are likely associated with favorable weather and flight conditions may periodically increase local bat activity (Erickson and West 2002). More studies incorporating daily fatality searches are needed so that patterns such as those described above can be determined at multiple sites across regions. These data will be critical for developing robust predictive models of environmental conditions preceding fatality events, and for predicting when operational curtailment will be most effective to reduce bat fatalities.

Our study is the first U.S.-based experiment of changing cut-in speed to reduce bat fatalities, and only the third we are aware of anywhere in the world. We demonstrated reductions in average nightly bat fatality ranging from 56 to 92% with minimal annual power loss. Given the magnitude and extent of bat fatalities worldwide, the conservation implications of our findings and those of Baerwald et al. (2009) are critically important. However, additional studies are needed to test changes in turbine cut-in speed among different sizes and types of turbines, wind regimes, and habitat conditions to fully evaluate the general effectiveness of this mitigation strategy.

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## **NEXT STEPS**

We are preparing a scope of work for a second year of testing operational curtailment at the Casselman facility in summer and fall 2009. We will initiate a second year of post-construction fatality searches at the PGC turbines beginning 1 April and continuing through 15 November 2009 and will initiate searches for the curtailment study beginning in mid- late July and continuing through the second week of October at the Casselman facility. A final report on the 2-years of curtailment data gathered at Casselman will be prepared in December 2009 and distributed in February 2010, with a journal manuscript submission to follow shortly afterward.

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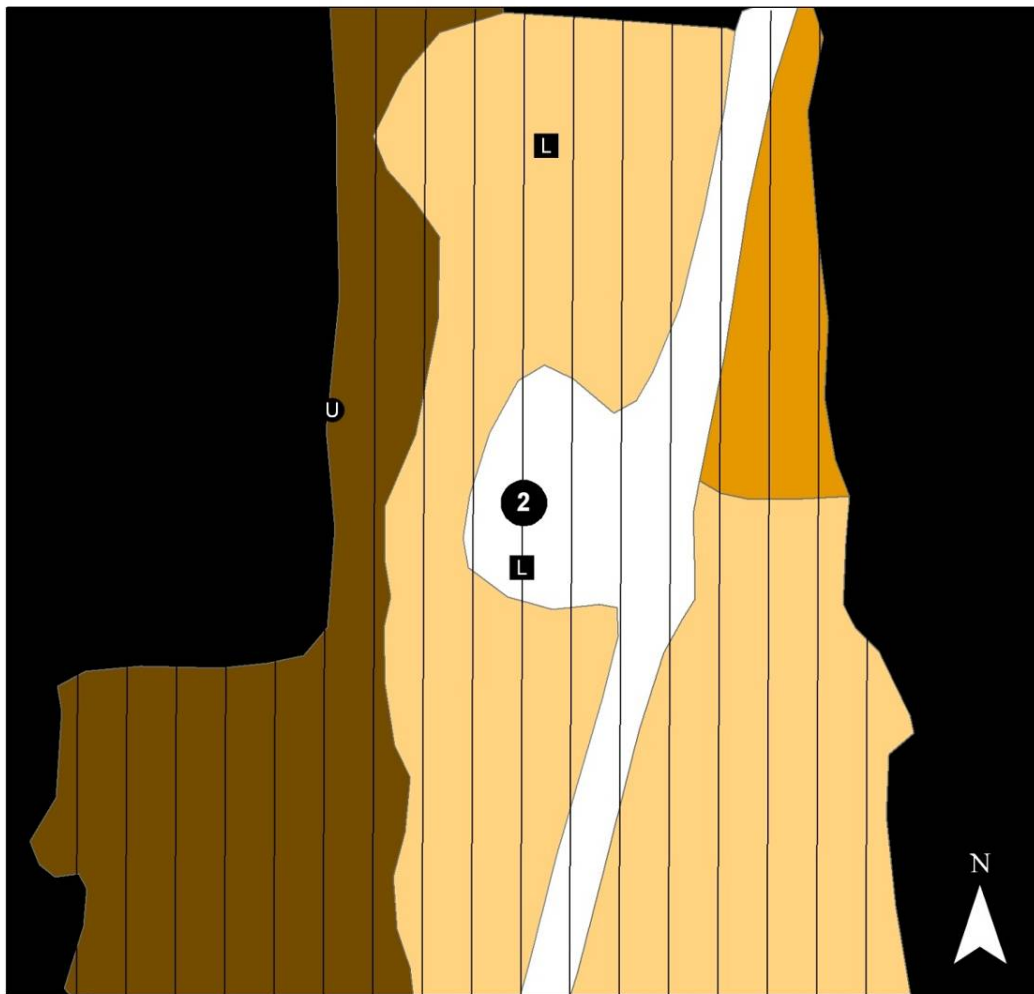


**APPENDIX 1**  
**(Turbine Plot Maps)**

F103-11  
Cont.



## Turbine 2



### Fatalities by Species

- L** LANO
- U** UNKN

### — Transects

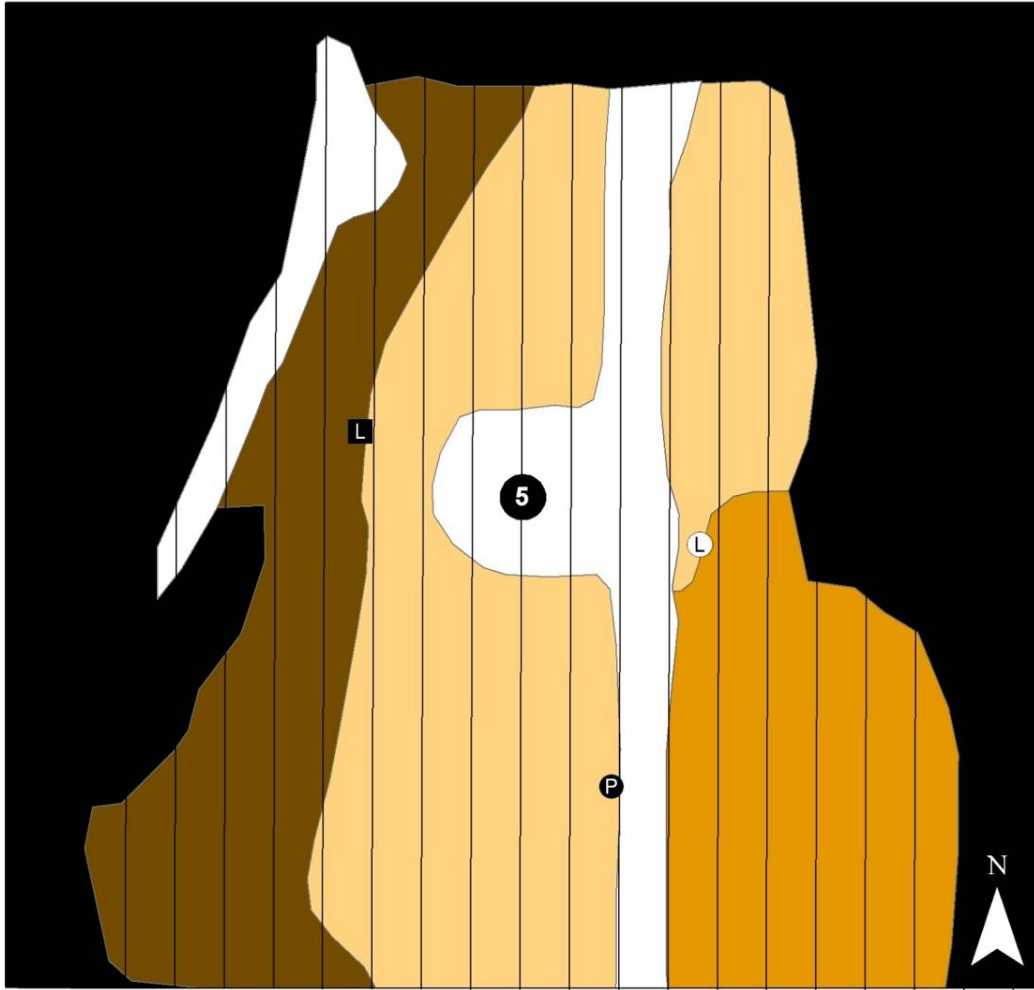
### Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters

F103-11  
Cont.

# Turbine 5



## Fatalities by Species

- Ⓛ LACI
- Ⓛ LANO
- Ⓟ PISU

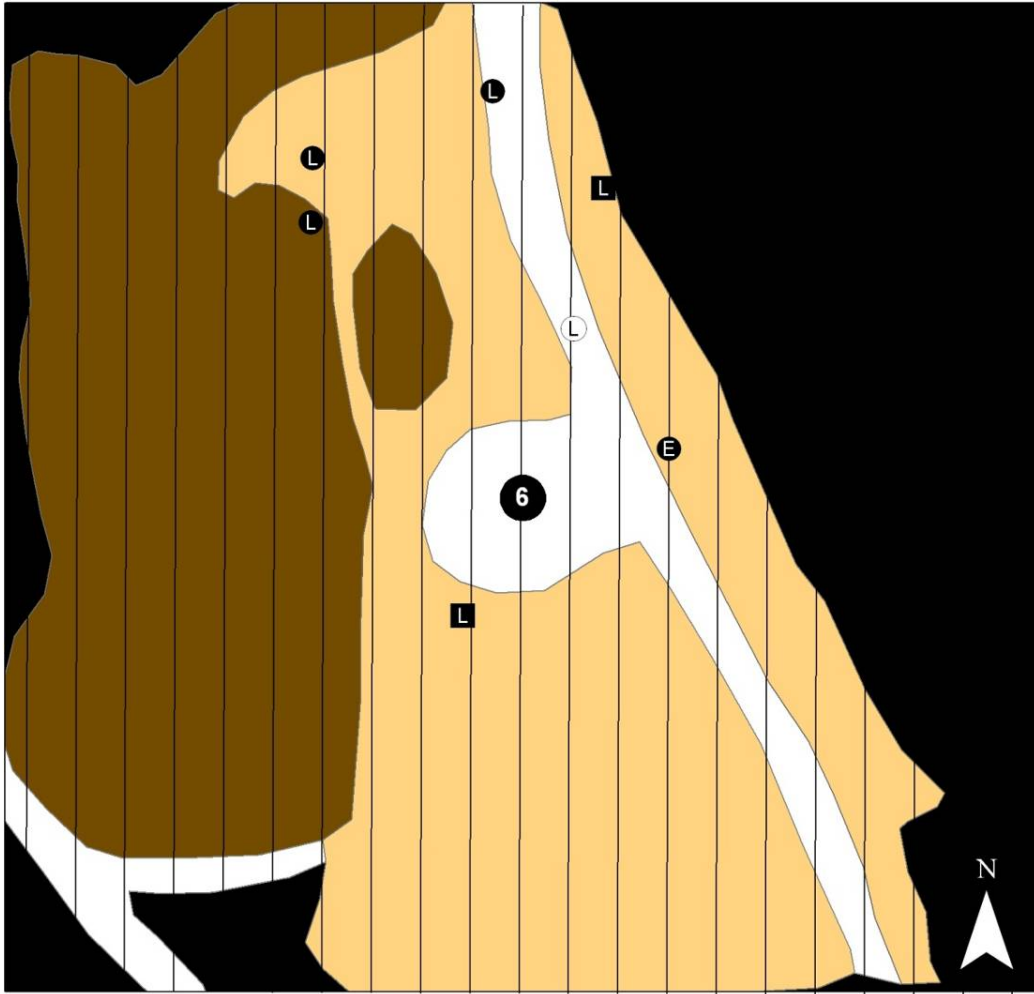
## — Transects Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters

F103-11  
Cont.

## Turbine 6



### Fatalities by Species

- Ⓔ EPFU
- Ⓕ LABO
- Ⓖ LACI
- Ⓗ LANO

### — Transects Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters

F103-11  
Cont.

# Turbine 7



## Fatalities by Species

- LABO
- LACI
- LANO
- MYLU
- PISU

## — Transects

## Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters

F103-11  
Cont.

# Turbine 9



F103-11  
Cont.

## Fatalities by Species

- Ⓛ LACI
- Ⓛ LANO

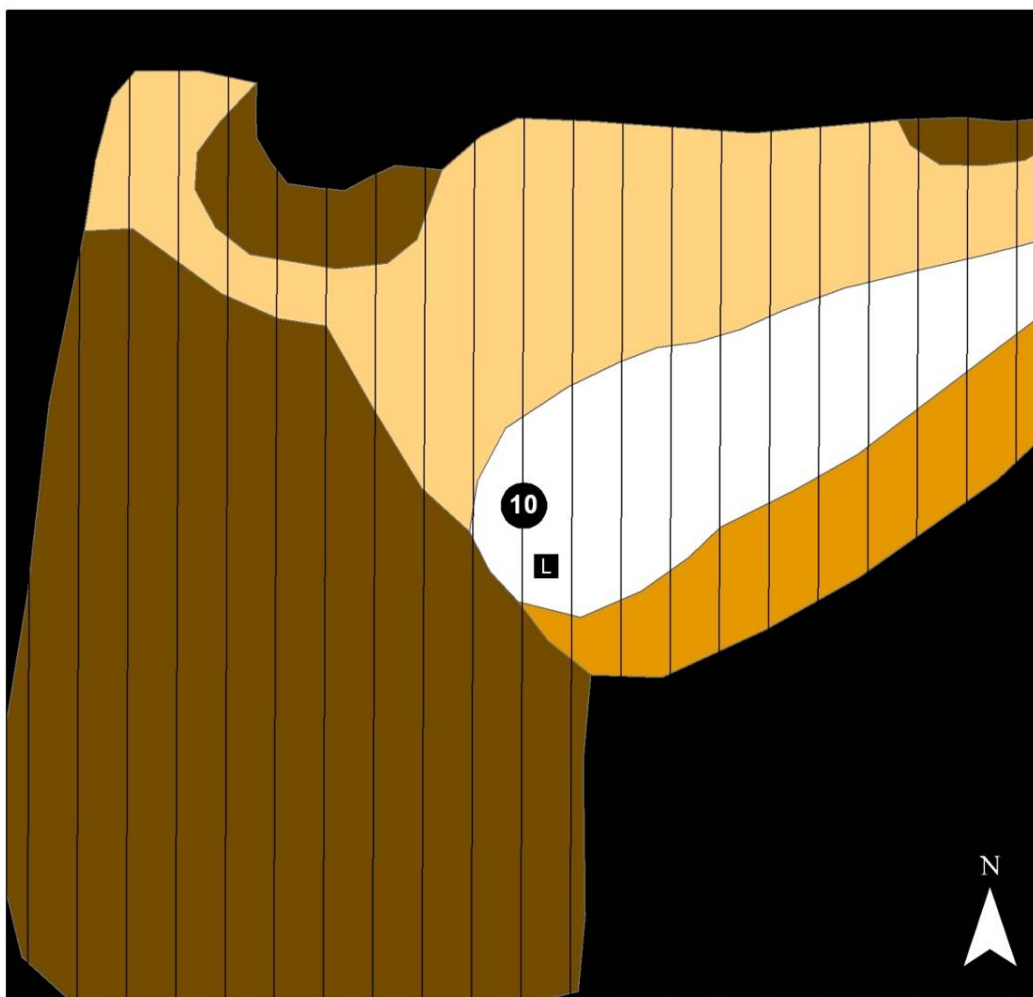
## — Transects Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters



# Turbine 10



## Fatalities by Species

**L** LANO

## Transects Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters

F103-11  
Cont.

## Turbine 12



### Fatalities by Species

● LABO

### — Transects

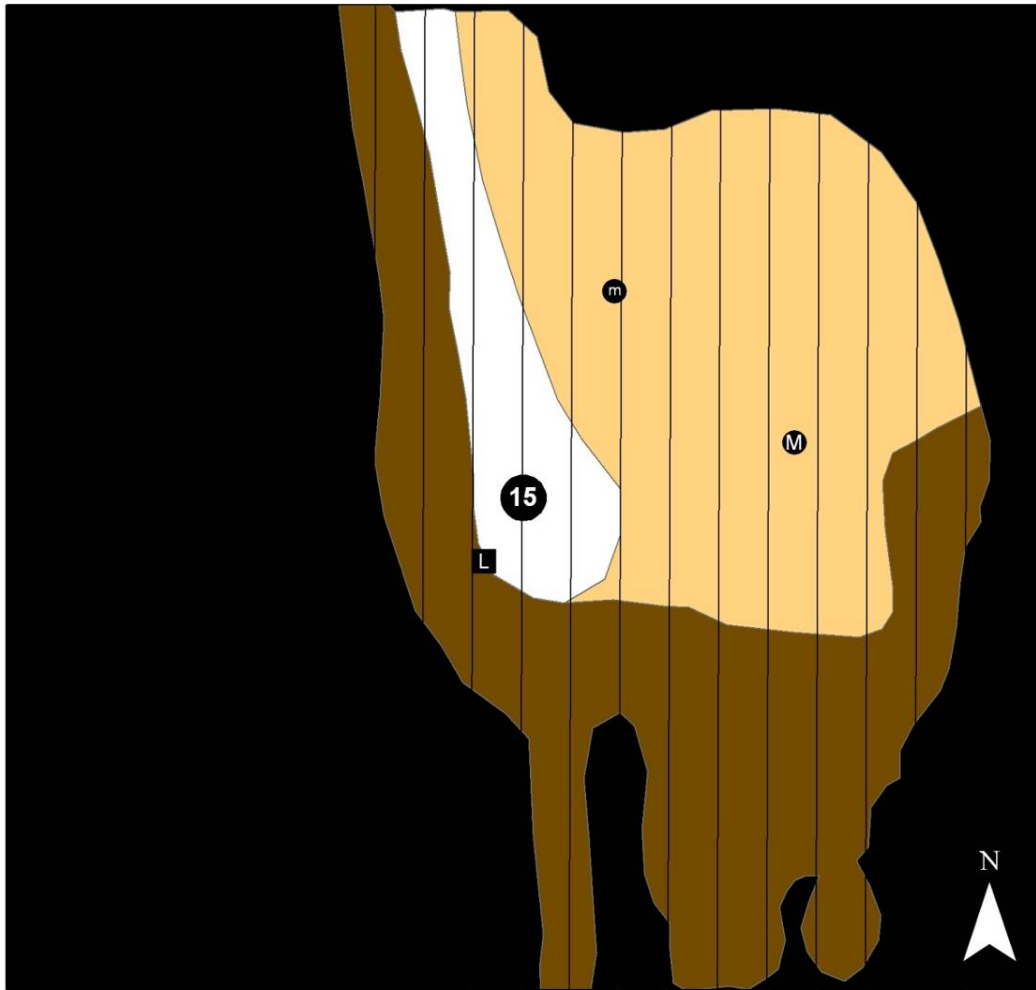
### Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters

F103-11  
Cont.

## Turbine 15



### Fatalities by Species

- L** LANO
- m** MY--
- M** MYLU

### — Transects

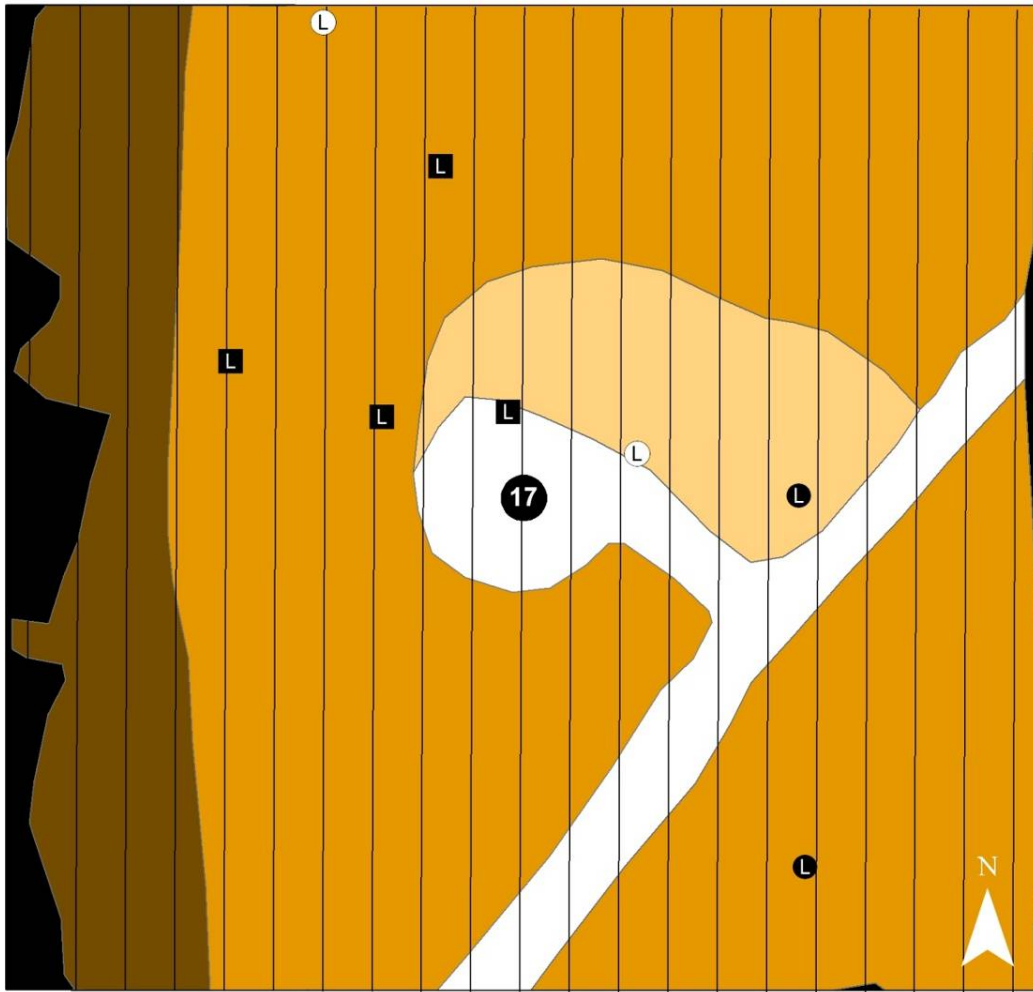
### Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters

F103-11  
Cont.

# Turbine 17



## Fatalities by Species

- LABO
- LACI
- LANO

## — Transects

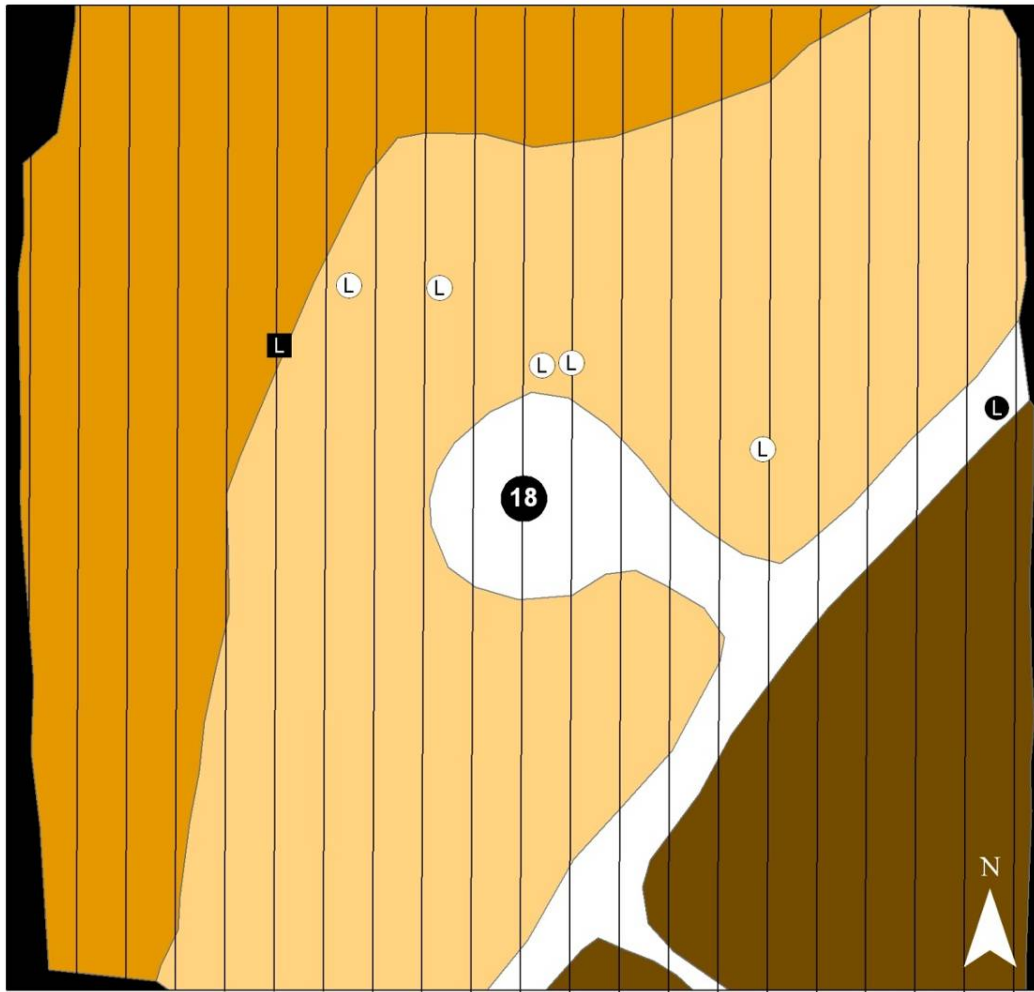
## Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters

F103-11  
Cont.

# Turbine 18



## Fatalities by Species

- LABO
- LACI
- LANO

## — Transects

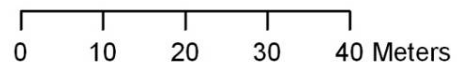
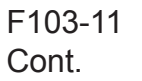
## Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out

0 10 20 30 40 Meters

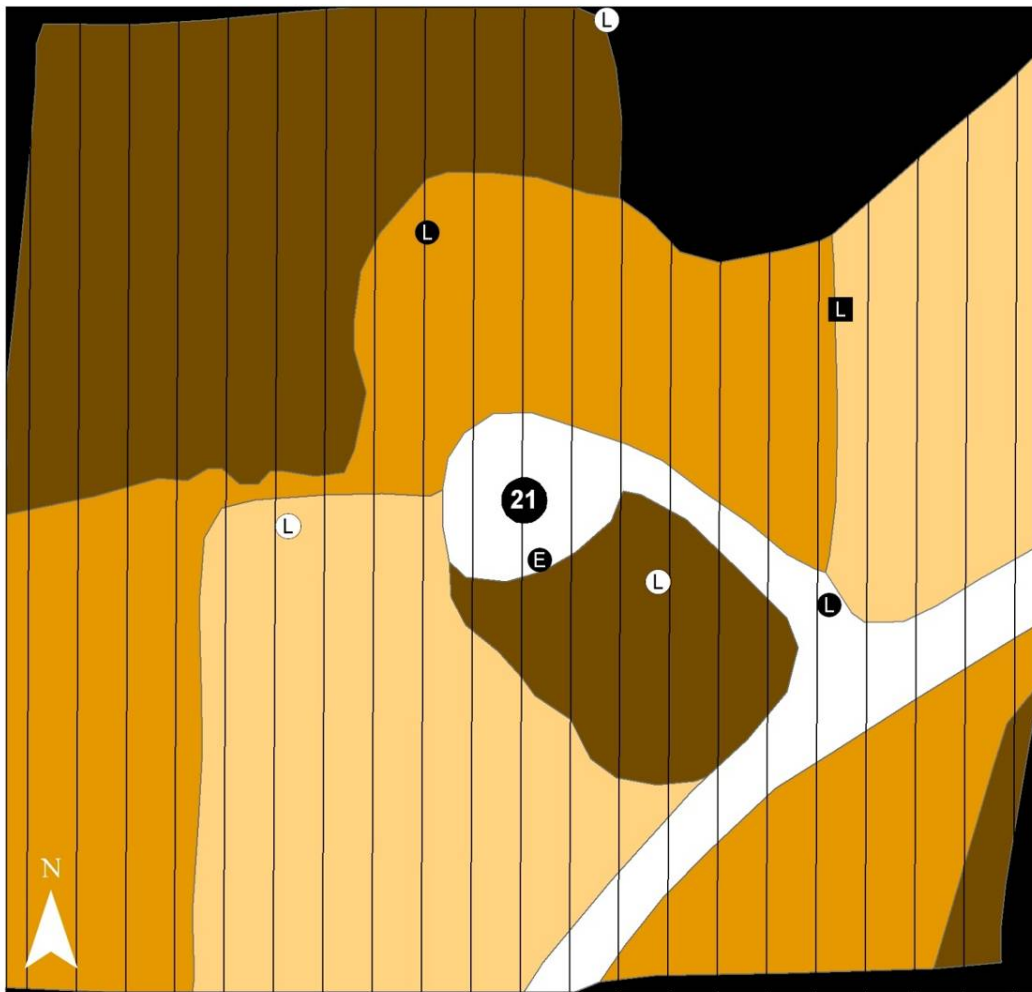
F103-11  
Cont.

## A long vertical double-headed arrow, consisting of a thin black line with arrowheads at both the top and bottom ends.





# Turbine 21



## Fatalities by Species

- EPFU
- LABO
- LACI
- LANO

## — Transects

## Habitat Classes

- Easy
- Moderate
- Difficult
- Very Difficult
- Out


0 10 20 30 40 Meters

F103-11  
Cont.

**Appendix 2.** Turbines, fatality count, and treatments that could have yielded potential for misclassification of fresh bat fatalities to treatments at the Casselman Wind Project in Somerset County, Pennsylvania.

<b>Turbine</b>	<b>Fatality count</b>	<b>Treatment</b>	<b>Prior Treatment</b>
6	1	C5	C5
5	1	C5	NF
5	1	C5	NF
7	1	C6	NF
10	1	C6	NF
18	1	C6	NF
18	1	C6	NF
21	1	C6	NF
21	1	C6	NF
6	1	NF	C5
6	1	NF	C5
9	1	NF	C5
17	1	NF	C5
2	1	NF	C6
6	1	NF	C6
7	1	NF	C6
15	1	NF	C6
17	1	NF	C6
18	1	NF	C6
19	1	NF	C6
7	2	NF	NF
9	1	NF	NF
9	1	NF	NF
12	1	NF	NF
15	1	NF	NF
17	2	NF	NF
18	1	NF	NF
19	1	NF	NF
19	1	NF	NF
21	1	NF	NF

F103-11  
Cont.

FPL Energy Carbon Offsets		Product Content Label	
Project Type	Project Certification	Project Location	% of Product*
Renewable Energy	Green-e Climate	United States	100%
The emission reductions supplied were created in:			{2007-2008}
<div>  <b>Climate</b> </div> <p>Green-e Climate is an independent certification program for greenhouse gas emissions reductions (offsets) sold on the voluntary market. It provides a way to identify products that meet the program's high environmental and consumer- protection standards. For more information on Green-e Climate certification requirements, or to find certified products, see <a href="http://www.green-e.org">www.green-e.org</a> or call 888 63-GREEN.</p> <p><small>* The percentages listed are prospective. Actual figures may vary. For more information on how much they can vary see Price, Terms &amp; Conditions.</small></p>			

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**From:** BayLink Voice Mail <support@baylinkcentral.com>  
**Sent:** Friday, March 04, 2011 4:02 PM  
**To:** ECOSUB  
**Subject:** Fax from [619-235-6275] - Friday, March 04, 2011 at 4:00 PM  
**Attachments:** FaxDocument.pdf

You received the attached fax document on Friday, March 04, 2011 at 4:00 PM From a fax machine at: 619-235-6275  
This fax was left in mailbox [17732] 760-405-9604 There are 2 pages in the attachment.

MsgRef[1023-17732:8668355]

Thank you for using BayLink Voice Mail <http://www.mybaylink.com>

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Notice of Extension of the Draft Environmental Impact Report/  
Draft Environmental Impact Statement (DEIR/DEIS) Public Review Period for:  
**East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects**

State Clearinghouse No. 2009121079

DOI-BLM-CA-D070-2010-0027-EIS (ECO Sub)  
DOI-BLM-CA-D070-2008-0040-EIS (Tule Wind)



Lead Agencies:

California Public Utilities Commission  
United States Department of the Interior, Bureau of Land Management

**PUBLIC COMMENT PERIOD EXTENSION**

By this notice, California Public Utilities Commission (CPUC) and Bureau of Land Management (BLM) are announcing the extension of the public comment period from February 16, 2011, to March 4, 2011, for the East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects DEIR/DEIS. The Joint DEIR/DEIS was released for public review on December 24, 2010.

To ensure that comments will be considered, the CPUC/BLM must receive written comments on the DEIR/DEIS by the close of the extended public review period (March 4, 2011). Written comments on the DEIR/DEIS must be postmarked or received no later than March 4, 2011. Written comments on the Joint DEIR/DEIS can be submitted via:

**Mail:** Iain Fisher, CPUC/Greg Thomsen, BLM, c/o Dudek, 605 Third Street, Encinitas, California 92024

**Email:** [ecosub@dudek.com](mailto:ecosub@dudek.com) (CPUC project email) OR [catulewind@blm.gov](mailto:catulewind@blm.gov) (BLM project email)

**Fax:** (800) 371-8854 (to send a fax, please press "2")

*Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment, including personal identifying information, may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.*

**PROJECT ABSTRACT**

The California Public Utilities Commission (CPUC) and Bureau of Land Management (BLM) have prepared a Joint Draft Environmental Impact Report/Draft Environmental Impact Statement (DEIR/DEIS) under the California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) for consideration of San Diego Gas & Electric Company's (SDG&E's) application to build and operate the East County (ECO) Substation Project. In addition, the Joint DEIR/DEIS addresses Pacific Wind Development's application to build and operate the Tule Wind Project and Energia Sierra Juarez U.S. Transmission, LLC's application to build and operate the Energia Sierra Juarez Generator Tie-Line (ESJ Gen-Tie) Project as "connected actions" under NEPA and "whole of the action" under CEQA. Therefore, the ECO Substation Project, Tule Wind Project, and ESJ Gen-Tie Project are collectively referred to as the Proposed PROJECT in the Joint DEIR/DEIS. In addition, the DEIR/DEIS also considers at a qualitative/program level the proposed Campo, Manzanita, and Jordan wind energy projects, which would connect into the proposed Boulevard Substation Rebuild component of the ECO Substation Project. The CPUC and BLM have determined that these three wind energy projects are sufficiently developed to analyze impacts where feasible. Therefore, for purposes of this EIR/EIS, the Campo, Manzanita, and Jordan projects are qualitatively evaluated at a programmatic level because sufficient project-level information has yet to be developed. The proposed Campo, Manzanita, and Jordan wind energy projects will still require project-specific environmental review and evaluation under all applicable environmental regulations once sufficient project-level information is developed. By including these nascent wind projects as components of the proposed wider PROJECT, it allows the lead agencies to further consider broad impacts, mitigation and consequences of the ECO substation project specifically, and the wider PROJECT as a whole.

*\* To go with  
MARK HASS COMMENTS*

The Proposed PROJECT would be located near the unincorporated communities of Jacumba and Boulevard, approximately 70 miles east of downtown San Diego, in the southeastern portion of San Diego County. If approved, the Proposed PROJECT would construct and operate 1) the ECO Substation Project including a new 500/230/138-kilovolt (kV) ECO Substation, a new 13.3-mile 138 kV transmission line (connecting the ECO Substation with the Boulevard Substation Rebuild), and would rebuild the existing Boulevard Substation to operate at 138/69/12 kV; 2) the Tule Wind Project, including up to 134 wind turbines and associated facilities, including an aboveground and underground cable collection system, collector substation, and an operations and maintenance facility, and an approximate 9.7-mile 138 kV transmission line to interconnect with the proposed Boulevard Substation Rebuild; 3) and the ESJ Gen-Tie Project including an approximate 1-mile 500 kV (or 230 kV) gen-tie from the U.S.-Mexico border approximately 4 miles southeast of the community of Jacumba to interconnect with the proposed ECO Substation. Approval of the Campo, Manzanita, and Jordan wind energy projects will require project level environmental review.

The Joint DEIR/DEIS describes the Proposed PROJECT, evaluates and describes the potential environmental impacts associated with the construction and operation of the Proposed PROJECT, identifies those impacts that could be significant, and presents mitigation measures, which, if adopted, could avoid or minimize these impacts. The Joint DEIR/DEIS also evaluates alternatives to the Proposed PROJECT, including the No Project/No Action Alternative, as required by CEQA and NEPA.

#### **AVAILABILITY OF JOINT DEIR/DEIS**

Copies of the Joint DEIR/DEIS are available for review at the following local libraries: Jacumba Public Library, located at 44605 Old Highway 80, Jacumba, California 91934; Campo-Morena Village Branch Library, located at 31356 Highway 94, Campo, California 91906; Potrero Branch Library, located at 24883 Potrero Valley Road, Potrero, California 91963. The DEIR/DEIS is also available on the CPUC and BLM websites at:

<http://www.cpuc.ca.gov/environment/info/dudek/ECOSUB/ECOSUB.htm>

<http://www.blm.gov/ca/st/en/fo/elcentro/nepa/tule.html>



**From:** Cmisaaacs@aol.com  
**Sent:** Sunday, March 06, 2011 6:48 PM  
**To:** catulewind@blm.gov; ECOSUB  
**Subject:** Small format glitch in Comments on DEIR/EIS for Ecosub/Tule/ESJ Gen-Tie Projects  
**Attachments:** Tule Draft EIR-EIS Comments C. Isaacs Revised.pdf

Iain Fisher, California Public Utilities Commission  
Greg Thomsen, Bureau of Land Management

Dear Sirs:

On Friday I sent you an e-mail with the subject line "Comments on Draft EIR/EIS for Ecosub/Tule/ESJ Gen-Tie Projects" and my comments in an attached file "Tule Draft EIR-EIS Comments C.Isaacs.docx."

Inadvertently, I left formatting in the footer of the document with an "adjusting" date such that any time the document is copied or saved, the date will change. This adjusting date could lead to confusion since the date at the top is "March 4, 2011", so I have stabilized the date in the footer and converted the document to PDF format, and am attaching the revised file here. I made no other revisions.

I hope that you could kindly use this latter document ("Tule Draft EIR-EIS Comments C.Isaacs Revised.PDF") to replace the original one.

Many thanks. I am very sorry for the small formatting glitch and any extra inconvenience to you.

Yours sincerely, Caroline Isaacs

F104-1

\*\*\*\*\*  
This footnote confirms that this email message has been scanned by  
PineApp Mail-SeCure for the presence of malicious code, vandals & computer viruses.  
\*\*\*\*\*

Iain Fisher, California Public Utilities Commission  
Greg Thomsen, Bureau of Land Management  
c/o Dudek  
605 Third Street  
Encinitas, CA 92024

March 4<sup>th</sup>, 2011

Via E-mail: [ecosub@dudek.com](mailto:ecosub@dudek.com), [catulewind@blm.gov](mailto:catulewind@blm.gov)

Re. Draft Environmental Impact Report/Statement for the East County Substation, Tule Wind, and  
Energía Sierra Juárez Gen-Tie Projects

This letter is a comment in response to the public review period for the Draft Environmental Impact Report/Environmental Impact Statement (Draft EIR/EIS) from the Bureau of Land Management (BLM) and California Public Utilities Commission (CPUC) on the East County Substation, Tule Wind, and Energía Sierra Juárez Gen-Tie Projects.

My interest in these projects is as a resident of the city (and county) of San Diego who has enjoyed the San Diego back country (and adjacent back country in Baja California) over many years, having grown up in the San Diego area and spent many memorable times camping and exploring there, and visiting friends and relatives in Boulevard. My interest is also as a member of the Anza-Borrego Foundation, the American Society for Environmental History, and the Forest History Society. I have some professional experience with environmental issues in my capacity as a geologist (now retired) at the U.S. Geological Survey in Menlo Park, especially as the co-editor of a series of Pacific Climate (PACCLIM) Workshop Proceedings that dealt with meteorological and hydrologic connections with past and present ecosystems.

**Overall opposition to project.** At the outset, I wish to state that I am opposed to the entire set of projects. I support renewable energy, but not at the cost of the major deleterious effects on the environment of a relatively undisturbed area with many critical conservation values. Impacts of these projects that I find particularly objectionable include the massive change that would result to the rural character of the surrounding area, degradation to the amazing scenic vistas in the area, the industrialization of the back country and the public lands, the conversion of conservation areas to industrial use, killing of birds and bats in the turbines (especially rare and endangered species), habitat reduction for native flora and fauna, habitat segmentation for wildlife (especially rare and endangered species), and degradation of hiking and other recreational activities in the area. I am also concerned about the increased fire hazards and the extra difficulties introduced for firefighting in the area, as would be most residents of San Diego County who witnessed the devastating 2003 and 2007 wildfires.

Other concerns include (1) adverse effects on the health and well-being of the local community; (2) major conflicts between the proposed projects and existing land use plans and protected conservation areas; and (3) the need to more fully consider alternative sources of renewable energy that are not as environmentally destructive.

F104-1  
Cont.

Most of my concerns are much more eloquently described and much more fully detailed in (1) the comments made on the Draft EIS for the Energía Sierra Juárez U.S. Transmission Line Project by Charles and Laurie Baker – comments which also concern the McCain Valley and the McCain Valley Resource Conservation Area – and by Aaron Quintanar (see [http://www.esjprojecteis.org/deis\\_comments.htm](http://www.esjprojecteis.org/deis_comments.htm)); and (2) comments made for the Scoping Report for the East County Substation, Tule Wind, and Energía Sierra Juárez Gen-Tie Projects by numerous organizations, elected representatives, and individuals, including Defenders of Wildlife, County Supervisor Dianne Jacob, U.S. Congressman Duncan Hunter, the Boulevard Planning Group, law offices of Stephan Volker (representing Backcountry Against Dumps, the Protect Our Communities Foundation, East County Community Action Coalition, and Donna Tisdale), the County of San Diego Department of Planning and Land Use, Howard Cook, and Denis Trafecanty (see [http://www.cpuc.ca.gov/environment/info/Dudek/ECOSUB/AppxG\\_CommentsRcd\\_vol1.pdf](http://www.cpuc.ca.gov/environment/info/Dudek/ECOSUB/AppxG_CommentsRcd_vol1.pdf) and [http://www.cpuc.ca.gov/environment/info/Dudek/ECOSUB/AppxG\\_CommentsRcd\\_vol2.pdf](http://www.cpuc.ca.gov/environment/info/Dudek/ECOSUB/AppxG_CommentsRcd_vol2.pdf) and [http://www.cpuc.ca.gov/environment/info/Dudek/ECOSUB/AppxG\\_CommentsRcd\\_vol3.pdf](http://www.cpuc.ca.gov/environment/info/Dudek/ECOSUB/AppxG_CommentsRcd_vol3.pdf) accessed through <http://cpuc.ca.gov/environment/info/dudek/ECOSUB/ScopingReport.html>).

F104-1  
Cont.

#### **SOIL RESOURCES (and related impacts on vegetation, fauna, water quality, and visual resources)**

One concern about the Draft EIR/EIS that I would like to more fully address here is the evaluation of the project's impact on soil resources. Erosion, degradation, and loss of soil are all linked to many other environmental impacts due to reduction of habitat, reduction and alteration of vegetation, visual resources due to scarring of the landscape, and the hydrology and water quality.

Soil erosion has long been identified as one of the most serious long-term impacts on the landscape related to wind farms in arid and semi-arid regions of the western U.S. As described by well-known soil erosion experts, these impacts are particularly severe for thin erodible soils that are characteristic of most California wind farm locations (Wilshire and Prose, 1987). Such soils are the dominant type in the Tule Wind Project and many of the related projects (see Table D.13-1 in Draft EIR/EIS, Section D.13, p.7-8 and accompanying text).

According to the Draft EIR/EIS, the California Environmental Quality Act (CEQA) statutes and guidelines apply to both project construction and project operation (D.13-22). However, although impacts on soil erosion that are related to construction (and decommissioning) of the project are addressed in the Draft EIR/EIS, impacts are not addressed related to operation and maintenance activities. Also not considered are impacts resulting from unplanned accidents and abandonment.

The project also would disturb a huge area of the soil surface, amounting to about 938 acres, including 665 acres permanently disturbed. Environmental impacts to soil resources *per se* are not directly addressed, especially as they relate to visual changes in the project area. In addition, I have some concerns about the adequacy of planning for intense rain events.

Each of these topics is detailed below.

**Soil erosion resulting from operations and maintenance activities.** Operations and maintenance activities that could impact soil erosion include the normal ongoing use of service and access roads, ongoing vegetation management along the access roads and around the turbine pads (including regular

F104-2

herbicide applications for fire suppression), and other likely but infrequent events such as firefighting activities and removal and replacement of dysfunctional turbines and other project elements.

Ongoing operational activities can have severe impacts on soil erosion due to normal runoff as well as to less frequent high-intensity storms along access roads. In wind farms developed in the Tehachapi Mountains in the 1980s, extensive soil erosion resulted from access roads, as vividly pictured in Wilshire et al.'s 2008 book *The American West at Risk: Science, Myths, and Politics of Land Abuse and Recovery* (p. 343) or shown on-line at <http://www.theamericanwestatrisk.com/photos.html> (Photo #11). Erosional gullying from ongoing operations and maintenance has resulting impacts on the amount and kind of vegetation cover and hence local fauna, and can also impact the local hydrology, decreasing water quality and increasing the potential for flooding downstream. Also affected is the aesthetic character of the area.

Paul Gipe, a long-time wind-energy advocate and author of numerous books promoting wind energy, wrote an article in 2003 titled "Erosion Gullies in the Tehachapi Pass: An Example of Improper Wind Development" in which he details the wind-energy industry's very poor record on soil erosion control. In that article, he shows numerous photographs of the irreversible damage to the landscape from improperly handled soil erosion. This damage results not just from construction activities, but from operations. He states, "maintaining erosion-control structures is essential to fighting erosion" and "Once gullies form, they need treatment immediately, or else erosion will accelerate exponentially during subsequent storms." Access roads are one of the major sources of such erosion and the subject of many geologic studies, as detailed in Chapter 5 of Wilshire et al.'s 2008 book.

In summary, impacts from the ongoing operations and maintenance of the wind turbines need to be evaluated in the Final EIR/EIS, and an appropriate mitigation program designed and implemented.

F104-2  
Cont.

#### **Suggested additions to the Final EIR/EIS**

**Impact: Erosion would be triggered or accelerated due to operation, maintenance, and inspection activities.** This impact needs to be evaluated in the final EIS.

**Mitigation measure: Erosion Control and Sediment Transport Control Plan.** Another "Erosion Control and Sediment Transport Control Plan" should be crafted and included in the Final EIR/EIS, covering ongoing operations and maintenance activities for the duration of any project activities.

**Soil erosion from abandonment.** Soil erosion in abandoned wind farms has also been a long-recognized problem in California. Thousands of abandoned wind turbines litter the California landscape, with resulting soil erosion from unmaintained access roads and unmonitored soil erosion controls. According to Paul Gipe, as described above, in an on-line article titled "Removal and Restoration Costs in California: Who Will Pay?", the unfunded liability of removing obsolescent and abandoned wind turbines and reclaiming and restoring sites was (as of 1997-2003) \$60-100 million, with taxpayers ultimately liable for

F104-3

costs on public lands, such as those that are under the jurisdiction of the BLM (<http://www.wind-works.org/articles/Removal.html>).

Although not planned, various situations are foreseeable that might result in abandonment, including major fires with resultant damage to the turbines, bankruptcy of the company (or subsidiary) owning the turbines, serious malfunctions of the turbines, unplanned technological obsolescence, etc. Abandonment of wind farms reduces many of their undesirable features (such as avian deaths, operational noise, fire hazards, etc.) but leaves behind visual blight and hazards to the soil surface, with attendant potential effects to vegetation, fauna, watershed quality, and air quality.

Abandonment would have impacts in most respects similar to decommissioning, requiring major efforts to prevent soil erosion and restore the vegetation and soil surface, as outlined in the Draft EIR/EIS at D.13 p. 25-26, including removal of the turbine towers and ancillary structures together with habitat restoration. But with abandonment, the company may be unable (or unwilling) to complete the work satisfactorily. Thus, in view of the number of abandoned wind turbines in the state – and the cost to the taxpayer to remove them and restore the soil – a third-party or reclamation bond seems needed to guarantee performance.

In summary, impacts from the possible abandonment of constructed facilities need to be evaluated in the Final EIR/EIS, and an appropriate mitigation program designed and implemented, preferably including a reclamation bond.

**Suggested additions to the Final EIR/EIS:**

**Impact: Erosion would be triggered or accelerated due to abandonment of turbines.** This impact needs to be evaluated in the final EIR/EIS.

**Mitigation measure: Abandonment Plan.** An “Abandonment Plan” should be crafted and included in the Final EIR/EIS, creating a third-party or reclamation bond or guarantee to cover all aspects of decommissioning (removal of turbine pads, removal of access roads, soil decompaction, and vegetation restoration after construction equipment). This plan is also related to visual resources, habitat restoration and biological resources, and fire hazards.

F104-3  
Cont.

**Soil degradation and loss.** Proposed project construction and operation (as well as decommissioning and abandonment) activities effectively remove or severely degrade a considerable amount of the soil surface in the area. From descriptions in the Draft EIR/EIS, the soil surface will be disturbed during construction by the building of staging areas, structure sites, and temporary spur roads as well as the more permanent construction of access roads, transmission lines, and turbine pads. Around these will be a zone of de-vegetation for fire control, and barbed wire to prevent unauthorized access.

According to the section on Biological Resources in the Draft EIR/EIS, the acreage involved in temporary and permanent losses of native vegetation is 149.6 acres for the ECO Substation Project, 707.1 acres for the Tule Wind Project, and 8-9 acres for the ESJ Gen-Tie Project, for a total of about 865 acres. Of this, approximately 596 acres would be permanent vegetation loss. All areas that are disturbed by construction activities to the extent of causing temporary or permanent vegetation loss

F104-4

seem logically to also have significant soil degradation (at a minimum) and loss (where permanent construction removes or covers it). According to the section on Water Resources, 938 acres of soil would be impacted, 665 acres permanently (Draft EIR/EIS, p. D.12-23).

This huge loss of the soil surface seems to me to be an impact in and of itself, irrespective of its direct and indirect impacts on the hydrology and vegetation. Desert soils are notoriously fragile, and their restoration is also extremely slow compared to soils in many other environments. This would be especially true of the relatively thin soils classed as “severely erodible” that comprise as much as 90% of the soils the Tule Wind Project. However, though indirect mitigation is included in the Mitigation Measures BIO-1a through BIO-1g for the vegetation cover, soil loss except by erosion is not directly evaluated in the Draft EIR/EIS.

In summary, the impact from the major removal of soil surface needs to be evaluated in the Final EIR/EIS, and a mitigation program designed and implemented if appropriate.

**Suggested additions to the Final EIR/EIS:**

**Impact: Soil surface would be removed and permanently degraded due to project construction, operations, and decommissioning activities.** This impact needs to be directly evaluated in the final EIR/EIS and mitigation measures designed and implemented if appropriate.

F104-4  
Cont.

**Simulation of impacts on visual resources.** Visual simulations included in Section D.3 only represent the turbines and a few other project elements at the ECO Substation, but these simulations apparently do not include access roads, transmission lines, or other project elements. These elements represent a relatively large amount of ground surface – about 595 acres of permanent vegetation loss, and 665 acres of permanent soil surface loss. In the visual resources section, a more accurate assessment of the impact of the projects should include the presence of the large turbine pads, the maintenance roads to the various sites and around each turbine and pad, the areas around both pads and roads that are planned to be de-vegetated for fire control, and the barbed wire fences surrounding all these features. Each of these adds to the impact on visual resources in the area.

**Suggested additions to the Final EIR/EIS:**

**Revised simulations showing all project elements, including turbine pads, transmission lines, access roads, de-vegetated areas around project elements, and barbed wire fencing.**

F104-5

**10-year rain event.** One item in the Tule Wind Project Applicant Proposed Measures (APM) drew my attention. According to APM-TULE-HYD-1, the applicant proposes a culvert design to meet a 10-year rain event (p. B-149) whereas the applicant is requesting a minimum 30-year right-of-way grant (p. B-85). In 30 years, the likelihood of a 10-year rain event is nearly 96%, and the likelihood of even a 100-year rain event is 26%. Both such likelihoods are quite high for preventing soil erosion over the life of the project, and the Final EIR/EIS should contain hydrologic control measures to meet much higher standards to prevent major soil loss after storms.

F104-6



In conclusion, I have many serious concerns about these proposed projects, and support the “No Action” or “Do Not Construct” alternative. For the Final EIR/EIS, more attention to issues about soil resources, erosion, loss, and degradation would be helpful.

Thank you for your thoughtful attention to my comments.

↑  
F104-6  
Cont.

Sincerely yours,

Caroline M. Isaacs  
4060 Forney Avenue  
San Diego CA 92117  
[cmisaacs@aol.com](mailto:cmisaacs@aol.com)

#### REFERENCES

Gipe, P., 2003a, Erosion Gullies in the Tehachapi Pass: An Example of Improper Wind Development: <http://www.wind-works.org/articles/TehErosion.html>

Gipe, P., 2003b, Removal and Restoration Costs in California: Who Will Pay?: <http://www.wind-works.org/articles/Removal.html>

Wilshire, H. G., J. E. Nielson, and R. W. Hazlett, 2008, *The American West at Risk: Science, Myths, and Politics of Land Abuse and Recovery*. Oxford University Press, 2008, 619 p.

Wilshire, H. and D. Prose, 1987, Wind Energy Development in California, USA: *Environmental Management*, v. 11, no. 1, pp. 13-20.

**From:** Brown, Patrick <Patrick.Brown@sdcounty.ca.gov>  
**Sent:** Friday, March 04, 2011 4:19 PM  
**To:** ECOSUB  
**Cc:** Buell, Diane  
**Subject:** Letter From Carmen Lucas  
**Attachments:** Letter from Carmen Lucas.pdf

**Expires:** Monday, March 01, 2021 12:00 AM

Please see the attached letter from Carmen Lucas. This letter was sent by mail to our office and is not considered an official County of San Diego Comment. I am merely forwarding this letter on to the appropriate source.

Sincerely,

Patrick P. Brown

**County of San Diego**

Department of Planning and Land Use  
5201 Ruffin Rd Suite B. San Diego, CA 92123  
Office: 858-694-3011

**You can monitor your account balances by clicking here:**

<http://projectbalance.sdcounty.ca.gov/COSD.aspx>

**For General Land Use Permit Information:**

<http://landinfo.sdcounty.ca.gov>

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CARMEN LUCAS  
P.O. Box 775  
Pine Valley, California

2 March 2011

## CONFIDENTIAL

DIANE BUELL  
Staff Archaeologist  
Department of Planning and Land Use  
5201 Ruffin Road, Suite B, MS 0650  
San Diego, California 92123-1666

Ref: Our telephone conversation of February 2011;

Subj: County of San Diego DPL letter dated February 7, 2011; reference:  
Energia Sierra Juarez (ESJ) Major Use Permit Well Extraction; Project  
Numbers; 3300 10014; request for information regarding cultural places

Dear Diane:

This letter is a follow-up to our phone conversation of a few weeks ago. As you know the referenced project proposes the acquisition of water from an existing Jucumba Community Service District Warm Water well, with the water to be used at the ESJ Gen-Tie construction site to control dust and construction of a new access route (150) feet by 15 feet wide) onto Old Highway 80. The proposed project is subject to the California Environmental Quality Act (CEQA) and the County of San Diego Resource Protection Ordinance (RPO).

As you know I am an Indian of Kwaaymii ancestry and live on the lands of my ancestors in Laguna Mountain. Please be advised that I only speak for my self and my self alone. I have known all of my life the sacredness of water. It has been my understanding that the "Spirit" lives in the water, I have also understood that the Creator provided "healing" powers with certain waters such as minerals, sulfur, heat

F105-1

etc. The Jucumba Warm Water/Hot Springs would be such water. It has been a well known fact that the "Warm Waters/Hot Springs of Jucumba have been used for the miracle therapeutic qualities there-in since time immemorial and to my understanding continues to be part of the Jucumba Hotel/Motel attributes.

It would seem that due to all the Archaeological surveys, test and excavations that have been conducted over the years in the Jucumba Valley as required by the California Environmental Quality Act (CEQA), hopefully all of the reports have been completed and are on file at the San Diego Service Center at San Diego State University. If so those collective documents validate that the Jucumba Valley as a whole to include the Warm Water/Hot Springs retains the essence of place and the sacredness of the landscape as a whole.

Just to name a few items of Pre-History that have been recovered and are documented in those records:

1. Shells form both the Pacific Ocean and the Gulf of California,
2. Lithic of petrified wood, chalcedony, Wonder stone and Obsidian from the Obsidian Butte as well as the Coso and Casa Diablo as well as material from the local area.
3. Pot shards with fresh water shell in the paste gives testimony that the clay was acquired form the shores/arroyos of Ancient Lake Cahuilla in the desert

Jucumba Valley would be that last and first place to rest and gather resources before continuing the long journey into the desert to the east and/or from the areas of the west to the Pacific Ocean, as the old ones proceeded with their travels on the "Yuma Trail" (Pre-history trail that travels from Yuma to the Pacific Ocean). One only needs to experience the land formations and what it is to walk from the Pacific Ocean to the Gulf of California to understand that the Warm Water/Hot Springs located in the Jucumba Valley, after such a journey would be a welcome indulgent that would reach an ultimate spiritual level.

It can not be ignored that all of these things collective as well as the unmentioned remains of the Old Ones that remain as part of the landscape, also gives testimony to the pre history use of the Jucumba Valley as a Traditional Land Scape. As such it would appear that the reference project would fall under the San

F105-1  
Cont.

F105-2

F105-3

Diego Resource Protection Ordinance (RPO) \*hopefully that would mean Preservation as well as Protection.

One last thought is that it also seems that, to use the sacred healing waters of the Warm/Hot Springs for a Construction site to control dust and the construction of a new access route is indicative of how insane the collective modern society has become. Water regardless if it is Potable or Healing, is sacred to all societies. The daily lives of the Back country of San Diego depends on Ground water ; to use such sacred water in such a disrespectful manner is extremely hard for me to comprehend and I for one find the use of water that the Creator provided for therapeutic purposes to be developed for Construction and dust control sinful.

#### RECOMMENDATION:

Find one of those Sewer Water Reclamation projects and spend the money to have that reclaimed water hauled in for all construction and dust control projects, and protect the sacred potable and healing waters.

Thank you for the opportunity to comment. Should you have any questions please feel free to contact me.

Sincerely,



CARMEN LUCAS  
Kwaaymii, Laguna Band of Indians  
Laguna Mountain, California

Copy to:

Native American Heritage Commission  
Courtney Ann Coyle, Attorney

F105-3  
Cont.

**From:** aqsurf@aol.com  
**Sent:** Friday, March 04, 2011 4:36 PM  
**To:** ECOSUB  
**Subject:** ECO SUB

**AARON QUINTANAR**

1946 Sixth Avenue, San Diego, CA 92101  
 Telephone: 619.231.5923 Email: Aqsurf@aol.com

March 4, 2011

Iain Fisher  
 CPUC c/o DUDEK  
 605 Third Street  
 Encinitas, CA 92024

I am writing you to express: 1) my support for the No Project determination for the East County (ECO) Substation, Tule Wind, and Energia Sierra Juarez U.S. Generator-Tie projects; and 2) concern regarding the failure to address cumulative impacts from connected actions in Baja California, Mexico.

The Draft EIR/EIS executive summary correctly identifies its obligations but fails to account for the entirety of the project's environmental impacts. Sempra Energy's Energia Sierra Juarez (ESJ) wind energy project should be considered as a connected action in the EIR/EIS analysis. The executive summary states:

In considering the proposed ECO Substation Project, the CPUC and BLM have evaluated a range of projects, including active generator applications that have been submitted to the California Independent System Operator (CAISO) for connections to the Southwest Powerlink (SWPL) through the proposed SDG&E ECO Substation Project. The CPUC and BLM have evaluated these projects to determine whether they are so closely related to the proposed ECO Substation Project as to be considered "connected actions" under the National Environmental Policy Act (NEPA) and "whole of the action" under the California Environmental Quality Act (CEQA). The CPUC (as the state lead agency under CEQA) and the BLM (as the federal lead agency under NEPA) have identified two projects in these categories:

- Tule Wind Project, as proposed by Pacific Wind Development (a subsidiary of Iberdrola Renewables, Inc.), which would tie into the proposed Boulevard Substation rebuild component of the ECO Substation Project
- Energia Sierra Juarez U.S. Generator-Tie Project, as proposed by Energia Sierra Juarez U.S. Transmission, LLC, which would connect to the proposed ECO Substation.

The ESJ wind project's impacts should be considered a connected action to ECO Sub projects identified above due to the plan to transport up to 1,250MW of power on the ESJ Gen-Tie.

The ESJ industrial wind energy project includes a 700,000-acre general project area and proposes the construction and installation of up to 1,000 wind turbines, 900kms of roads, substation(s), transmission lines, and maintenance facilities. Mexico's environmental ministry, Secretaria de Medio Ambiente y Recursos Naturales (SEMARNAT) granted the wind project a conditional approval. The approval is in fact a request for additional information disguised as a conditional approval. SEMARNAT attached sixteen (16) conditions to the approval, ten (10) are evidence of fundamental deficiencies in the environmental assessment submitted by Sempra's ESJ-Mex. This document and therefore the project itself fails to meet CEQA or NEPA standard. This is a critically important fact because all of the energy generated by ESJ wind project is destined for California via the ESJ Gen-Tie component of ECO Sub. The wind project's deficiencies will result in the

F106-1



inability of the ESJ wind project to secure Power Purchase Agreements (PPA) under California's Renewable Portfolio Standard (RPS) in California. This seriously calls into question the "Purpose and Need" of the ECO Substation project.

↑ F106-1  
Cont.

The ECO Sub projects in question here and connected actions in Mexico will result in harmful impacts on the U.S. Federally listed species including Golden Eagles and Quino Checkerspot butterflies.

The region along with the Sierra Juarez mountain range is known habitat for federally protected bird species and serves as a critical migratory bird pathway. The region is the historic habitat of the California condor. Current condor conservation efforts are succeeding and therefore the inevitable extension of habitat and feeding range will include the region. The region is also known habitat for federally protected Golden and Bald Eagles. Wind turbines and electrical transmission lines are known hazards to eagles, condors, and other raptors. This is especially true for juveniles who are attracted to new structures within their ranges and habitats.

F106-2

The ECO Sub projects and connected actions including the ESJ wind project will severely impact a globally recognized biodiversity region. Habitat fragmentation due to these projects will result in the breaking up of natural habitats into small isolated patches. The creation of small patches produces edge effects whereby ecosystem processes begin to breakdown. Therefore it is critically important to extend the geographic scope of impacts into northern Baja California in order to account for ESJ wind project impacts.

F106-3

Sincerely,  
Aaron Quintanar

\*\*\*\*\*

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**From:** Alexa <alexaadkins@aol.com>  
**Sent:** Friday, March 04, 2011 2:44 PM  
**To:** ECOSUB  
**Subject:** RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

March 2, 2011

Iain Fisher, CPUC  
 Greg Thompson, BLM  
 C/O DUDEK  
 605 Third Street  
 Encinitas, CA 92024

RE: SCH#2009121079 Joint NEPA/CEQA Joint DEIR/DEIS Public Comments for the East County Substation/Tule Wind. Energia Sierra Juarez Gen-Tie Projects

Dear Mr. Fisher and Mr. Thompson,

Development of the Tule Wind project will hasten the decline of the Golden Eagles. The Golden Eagle is an essential religious and spiritual symbol of the Kumeyaay people, which dates back to before recorded time. Over the past several decades the total population of the eagles in the region has been documented as significantly declining. The protection of the Golden Eagle as a primary cultural and religious symbol of the Kumeyaay Nation outweighs any potential benefits a wind project would provide. Additionally, no Avian Protection Plan is proposed or has been developed and made public in conjunction with the proposed project; however there is no acceptable mitigation that will eliminate the risk of loss of the Golden Eagles.

F107-1

The Kumeyaay people once roamed from the ocean to the desert of Southern California and into Northern Baja California, Mexico. Due to the development of most of this region there are few Kumeyaay ancestral sites left undisturbed. McCain Valley and the Jacumba are the last of such critically important sites. The proposed draft EIR/EIS has no adequate provisions to avoid the Kumeyaay ancestral districts and no mitigation will be acceptable other than complete avoidance. Many of these locations contain cremation of human remains as well as ceremonial and religious tribal gathering sites that date back thousands of years. There is no way to replace these sites once they are gone. In addition, the proposed project have no plan in place to avoid the significant and sacred cultural, historic, religious, and archaeological Kumeyaay ancestral sites in the region and doesn't address the effects of the total desecration of this highly important and significant cultural landscape of the Kumeyaay People.

F107-2

In summary, the proposed Tule Wind project will decimate the ancestral Kumeyaay sites in the last remaining Kumeyaay archaeological district and create an unacceptable risk for a significant decline in the local Golden Eagle population. As such the project should be rejected.

Sincerely,

Rafael Rubio  
 P.O. Box 1484  
 Boulevard, CA 91905

\*\*\*\*\*  
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**From:** Laurie Squillaci, RN MSNc <desertroseranchanimalsanctuary@gmail.com>  
**Sent:** Friday, March 04, 2011 7:32 PM  
**To:** ECOSUB; catulewind@blm.gov  
**Cc:** 'Steve Squillaci'

February 08, 2011  
 Iain Fisher  
 California Public Utilities Commission (CPUC)  
 C/O Dudek  
 605 Third Street  
 Encinitas, CA 92024

RE: East County Substation/Tule Wind/Energia Sierra Juarez Gen-Tie Projects

To whom it may concern,

My name is Steven Squillaci. I have lived in Jacumba for over 30 years. My wife and I are distressed over the proposed projects, listed above. Let us share our thoughts...

To start, wind turbines are unreliable. The breaks can fail; they can spin out of control, and can injure humans and wildlife. Icing or ice on the blades can fly off and also cause damage. Introduction of wind turbines and proposed electric lines and can start fires. They would introduce a new ignition source in an already high fire-danger zone. The back country is not equipped or funded if such an event were to occur. A fire of this magnitude could burn all the way to the coast, carried by the Santa Ana winds, creating great destruction in its wake.

F108-1

From personal experience, I have noticed that the wind turbines shadow flicker spooks horses which can cause serious bodily injury or death to the rider. There was no mention of this in the public safety section in the "DRAFT". This is horse country and Manzanita Horse Camp will be severely affected if these projects go through, along with private ranchers and pleasure riders. This area is also known for Big Horn Sheep. The shadow flicker can spook the sheep, subsequently, driving them out of this area. Keep in mind that they are endangered along with the Golden Eagles that had two fledglings in this area in 2010. As you can clearly see, the creation of wind turbines will have devastating effects on the natural habitat that currently surrounds us. Not only will it alter the existing landscape it will diminish the wilderness experience for residents and visitors to our area.

F108-2

Wind turbines also are known to cause noise, vibrations, and even sleep disturbances. There are also potential health effects associated with electric and magnetic fields (EMFs) which are very concerning.

F108-3

The proposed projects will destroy hundreds of square miles of views and let's not forget about the construction-related impacts to air, noise, wildlife, recreation, cultural sites, water, and erosion due to trenching and boring. It will destroy sacred Native American land and oak trees that have stood the test of time. The required Federal Aviation Administration (FAA) safety lighting, which would be placed atop the wind turbines, is also a visual concern. Clear starry nights in the back country will be a thing of the past as the lights from these projects overwhelm nature.

F108-4

Visually, from where my property is located, I can see all 5 existing wind turbines in Mexico and 11 of the Campo wind turbines. If the Mexican wind turbines are built, we will see all of those as well. We will also see the proposed substations. This will cause a visual blight and have an aesthetic impact as wind turbines are extremely obtrusive, subsequently decreasing our property value. Property value could drop up to 40 percent based on current trends and literature on wind turbines in other parts of the country.

F108-4  
Cont.

We feel that those you have hired to perform the environmental impact studies are biased, as they have a vested interest in seeing the projects through, which is concerning to us. It is a manmade disaster in the waiting. We request that you look at alternatives to the proposed projects above.

F108-5

We request that you extend the 45 day public comment period past February 16<sup>th</sup> 2011 since the "DRAFT" was put out to the public on Christmas Eve, yet because of the holidays most concerned citizens were not notified of this until mid January.

Please send an acknowledgment of receipt of this email.

Sincerely,

Mr. and Mrs. Steven Squillaci

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**From:** trish@nethere.com  
**Sent:** Friday, March 04, 2011 5:04 PM  
**To:** ECOSUB  
**Cc:** catulewind@blm.gov  
**Subject:** East County Substation/Tule Wind/ESJ Gen-Tie projects

Mr. Fisher and Mr. Thompson

I am requesting a moratorium on wind turbine project approvals until legitimate 3rd party studies are conducted -- and accepted as valid -- to determine turbine setbacks that are adequate to protect public health and safety, and to protect our sensitive wildlife ie: Big Horn Sheep, Golden Eagles, Quino Checkered Butterfly, to name a few, and a CONCISE AND CURRENT STUDY of the depth of drilling necessary to place the 40 story windmills and the possibility for the disruption of the flow of our ground water that flows over, between and around fractured rock in streams and trickles (that no one has been able to map) AND the very real possibility of disruption of the flow of that groundwater, causing it to go off in an entirely different direction, thereby bankrupting local individuals wells. Their homes and properties would become worthless and unlivable.

F109-1

We do NOT sit on a large body of water, a 7500 acre lake, and 200 feet down (if you will). NO, our water is hit and miss, here and there, flowing through fractured rock in veins and it can be caused to be dislocated, finding a new avenue in which to flow, leaving the homeowner with no water.

THE IMPORTANCE OF A SCIENTIFIC STUDY OF OUR GROUND WATER THAT SERVES THE FARMS AND HOMES IN OUR ENTIRE AREA (FROM ALPINE EAST) IS THE ABSOLUTE PRIMARY CONCERN AND MUST BE ADDRESSED. EACH INDIVIDUAL FAMILY IS TOTALLY DEPENDENT ON THIS GROUNDWATER AND THEIR INDIVIDUAL WELLS. THERE IS NO OTHER SOURCH OF WATER FOR US IN THE "BACKCOUNTRY". I CANNOT STRESS THIS ENOUGH.

F109-2

A moratorium must be put in place on the wind turbines and the entire PROJECT until this has been done by a legitimate 3rd party and accepted as valid.

According to the EIR/EIS, the environmentally superior analysis presented in section D.2 through D.18 was determined to be the NO PROJECT ALTERNATIVE.  
 So, let's go with that.

F109-3

Sincerely,

Patricia & Elliott Stuart  
 1633 Jewel Valley Rd., PO Box 1291  
 Boulevard, CA 91905

Elliott is 4th generation resident, his great-grandparents having settled the area, his great-grandmother was a McCain (of the McCain Valley clan).

Pat has lived here 40 years, retired Postmaster of Boulevard (13 years service) and previously a clerk in Jacumba Post Office for 5 years.

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**From:** Gary Clasen <gary@continentalcateringSD.com>  
**Sent:** Monday, March 07, 2011 12:37 PM  
**To:** ECOSUB  
**Subject:** energy support  
**Attachments:** energy letter.doc

Thank you for taking the time to read my letter in support of energy alternatives

Gary Clasen  
14101 hillside drive  
jamul ca, 91935  
619 669-7286

ps  
I think this attachment may not have gone through on my first try?

F110-1

\*\*\*\*\*  
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March 1, 2011

President Peevey and Commissioners  
California Public Utilities Commission  
505 Van Ness Avenue  
San Francisco, CA 94102

Dear President Peevey and Honorable Commissioners,

I want to express my support for the ECO Substation Project being proposed by San Diego Gas & Electric. This electric project is important to San Diego for many reasons.

First and foremost is it will improve reliability. As a resident and business owner located in East San Diego County, I am well aware of the need to strengthen the electric grid in our region.

Currently, SDG&E rural east county customers are at the end of the electric transmission line and must rely on power sources from the west. Wind, fires, storms and other reasons have caused outages in our backcountry. The ECO Substation Project will create a looped system providing customers with greatly enhanced electric reliability.

In addition to improved reliability, the potential for renewable energy development will be a significant benefit to East San Diego and the entire county. It will improve our environment while creating new economic opportunities for existing and new businesses by infusing dollars into the community. Furthermore, it will generate new jobs, which are needed in our region.

Please approve the ECO Substation Project to ensure that East San Diego County has a modern electric system and all of San Diego can benefit from the new clean energy development.

Sincerely,

Gary Clasen  
Jamul Resident and  
Owner Continental Catering

F110-1  
Cont.