

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

In the Matter of the Application of PACIFICORP  
(U 901 E), an Oregon Company, for a Permit to  
Construct the Lassen Substation Project Pursuant to  
General Order 131-D.

Application 15-11-005  
Filed December 7, 2015

**SUBMISSION OF FACTS BY MT. SHASTA TOMORROW  
TO DISPUTE ADEQUACY OF  
FINAL MITIGATED NEGATIVE DECLARATION**

**FOR APPLICATION OF PACIFICORP (U 901 E),  
AN OREGON COMPANY, FOR A PERMIT TO  
CONSTRUCT LASSEN SUBSTATION PROJECT  
PURSUANT TO GENERAL ORDER 131-D**

September 22, 2017  
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**INTRODUCTION**

In accordance with instructions given during the Pre-hearing conference before the California Public Utilities Commission on September 8, 2017, **Mt. Shasta Tomorrow** presents the following facts that dispute information and determinations found in the Final MND for the Application of PACIFICORP (\*U 901 E), an Oregon Company, for a Permit to Construct Lassen Substation Project Pursuant to General Order 131-D (“Application”).

These facts are submitted to demonstrate that the Final MND is inadequate and that an Environmental Impact Report must be prepared.

**I. INTEREST IN THIS PROCEEDING**

**MT. SHASTA TOMORROW**, a California non-profit public benefit corporation,

states there are serious flaws in the Final Mitigated Negative Declaration for this Project. The Final MND fails to acknowledge, identify and mitigate some of this Project's significant environmental impacts regarding its greenhouse gas, aesthetic and noise impacts within the Mt. Shasta community.

**PREFACE:**

This submission of facts that dispute statements or determinations in the Final MND is necessary because the Final MND did not consider our public comments and information presented to the CPUC. The Final MND fails to respond to any of Mt. Shasta Tomorrow's comments submitted earlier about either the Proponent's Environmental Assessment (PEA) in December 7, 2015 or the Draft IS/MND in December 2016.

The Final MND instead claims:

*“The entirety of the comments submitted address the PEA, and many of the comments are now moot since the project has been redesigned or impacts have been mitigated where necessary. It is not possible, therefore, to ascertain which comments are relevant to the IS/MND. Since there are no specific comments relating to the adequacy of the environmental analysis in the IS/MND, no additional response can be provided or is required.”*

FACT: Mt. Shasta Tomorrow (MST)'s comments submitted in December 2016 about the Draft IS/MND do not "entirely" just address the PEA. Mt. Shasta Tomorrow's cover letter<sup>1</sup> submitted at that same time specifically states that the attached comments mostly are applicable to the Project and its IS/MND.

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<sup>1</sup> See Final MND, p. 7-55 for emailed cover letter to comments submitted by Mt. Shasta Tomorrow, Dec. 23, 2016.

All issues commented upon were applicable with one exception. Our cover letter notes that MST's comments pertaining to the revised Project description's undergrounding of expanded power lines near Lake Street are no longer relevant. Accordingly there is no valid reason for the Final MND not to have considered MST's other detailed comments about the Draft MND.

That Final MND attempts to dismiss our critical public input by essentially claiming that the Project has changed, but is not true to the large extent. The Draft MND itself supports how little the changes have been:

*“ .... the analyses and the conclusions in the 2015 PEA remain current and valid. No change has occurred with the revised Project relative to circumstances surrounding the proposed Project that would result in new environmental effects. In addition, no new information has become available that shows that the Project would result in new or more severe environmental effects which have not already been analyzed in the 2015 PEA; therefore, no new mitigation measures would be necessary.”*

If the Project has not changed (other than undergrounding one power line), then MST's comments submitted about the adequacy of the environmental review would have been still valid even if not also directed to the Draft IS/MND.

Moreover, the Final MND claims that *“information requested by the CPUC during the PEA review were fully considered...”* There is no evidence that MST's comments about the PEA and about the Draft MND were considered in the Final MND.

For that reason, Mt. Shasta Tomorrow respectfully takes this opportunity to correct some of the factual errors presented in the Final MND.

**A. Project's Climate Change Impacts Will Be Significant Due to Greenhouse Gas Emissions from Supplying Power to Crystal Geyser Water Company and CGWC's Operations.**

The Final MND, p. 5.18-6, states that the expanded powerline Project's operation would not require the combustion of fossil fuels; therefore the proposed project's cumulative impact on GHG emissions would be less-than-significant.

FACT: This Project will supply Crystal Geyser Water Company (CGWC) with an increase of about 10 MW of additional electric power beyond what the existing powerlines can handle. CGWC needs this extra power that was not used by previous water bottlers at this location so that it can heat water to brew teas, and to remove that waste heat with new air conditioners in this huge bottling facility.<sup>2</sup>

FACT: The Final MND does not analyze the indirect greenhouse gas emissions and their off-site environmental impacts resulting from supplying and using these additional 10 MW of electric power. No estimation is provided in the Final MND of the amount of greenhouse gas emissions from off-site power generation that the Project's power lines will transmit to Crystal Geyser Water Company. There is a fair argument supported by substantial evidence that the amount of those indirect GHGe emissions made

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<sup>2</sup> See MST's comments, also in Final MND at page 7-62.

possible by this Project will likely be significant because it will exceed 10,000 metric tones per year of CO<sub>2</sub>e emissions.<sup>3</sup>

FACT: This newly supplied electricity will be generated in part by combusting fossil fuels which releases additional greenhouse gases.

The Final MND accordingly is inadequate for failing to respond to Mt. Shasta Tomorrow's comments about this Project's enabling, transmitting and generation of significant emissions of harmful greenhouse gases.

**B. The MND Fails to Disclose if There Will Be Additional Visual Impacts on Scenic Views of Mt. Shasta and Surroundings Due to Increased Sizes of this Project's Overhead Wires.**

FACT: This Project proposes to reconductor and enlarge the existing distribution lines above the I-5 Freeway near Lassen Lane's freeway overpass.<sup>4</sup> This issue is described in more detail in MST's Dec. 23, 2016 comments on pages 20 to 21.

FACT: The Final MND makes no mention or analysis of the visual impacts that may be caused by the alteration, enlargement or other changes near this Lassen Lane overpass due to this Project.

FACT: The Final MND provides no analysis or supporting evidence that adverse visual impacts from such powerline expansion at this location will be less-than-significant.

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<sup>3</sup> See MST's comments, also in Final MND at pages 7-62 and 7-63.

<sup>4</sup> See MST's comments, also in Final MND at page 7-76.

The Final MND accordingly is inadequate for failing at all to respond to Mt. Shasta Tomorrow's comments about this Project's adverse aesthetic impacts. MST also challenges the Final MND and asserts our earlier comments about the adverse visual impacts for the visibly taller power poles and the increased size of power lines that would be installed elsewhere west of Interstate-5.

**C: Project's Noise Impacts Will Be Significant Due to Inconsistency with City of Mt. Shasta and Siskiyou County's General Plans' Noise Standards, as Well as State and Federal Noise Standards.**

FACT: The Final MND does not respond to any of Mt. Shasta Tomorrow's comments about this Project's potentially significant noise impacts.

FACT: Other CEQA environmental reviews in California have analyzed noise impacts during powerline construction activities to find that noise impacts may be significant. In such cases, time-of-day limitations on operations have been imposed by mitigations.<sup>5</sup>

FACT: PacifiCorp and the Final MND did not place daytime or hourly limits like other IS/MNDs for projects in California have done.

**1: The Final MND Presents No Predicted Noise Level Data Representing Residential Noise Level Exposure.**

FACT: Nowhere does the Final MND (or PEA) describe what the maximum cumulative noise levels will be from the operation of multiple pieces of heavy construction equipment at the same time.

FACT: Nowhere does the Final MND state that construction noise will **not** occur at nighttime or prior to 7:00 a.m. in the morning. Hours before 7:00 a.m. are considered "nighttime" according to local City and County noise regulations in their General Plans.

FACT: The Final MND never provides measurements of ambient noise levels in the vicinity of those homes that this Project will impact with its loud construction noise.<sup>6</sup>

Without the preparers of the Final MND first measuring ambient noise levels at noise-affected homes, it is impossible to calculate how much of an increase in noise exposure this Project's construction activities will cause at those homes. That noise measurement information is used in determining whether a short-term construction noise increase will be significant or will be less-than-significant. That scientific information is also essential in the formulation of adequate noise mitigations.

## **2: Final MND Underestimates How Severe Project Noise Impacts Will Be.**

The Final MND never considers that construction noise will be generated by more than a single piece of heavy construction equipment at one time. As such, its conclusions of construction noise being less-than-significant are unsupported by substantial evidence.

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<sup>5</sup> See Final MND, p. 7-84

<sup>6</sup> See Final MND, pp. 5.12-9, 5.12-10, 5.12-13 and 5.12-14 for construction noise discussions.



The Final MND claims, p. 5.12-13: *"Construction Noise from individual pieces of construction equipment would typically range from 70 dBA to 100 dBA at a distance of approximately 50 feet, as indicated in Table 5.12-2. Construction noise would be audible to residences located in the vicinity of the project site. However, these noise levels would be short term and would occur during daytime hours only. Compared to existing noise sources in the area (e.g., vehicles on adjacent roads and I-5, farming equipment), these intermittent noises would not represent a significant change or impact over existing noises in the vicinity."*

FACT: The Final MND, p. 5.12-9, states that approximately 43 workers would be required for construction. Not only is more than one worker likely to be working at a time, workers are likely to be operating more than one piece of heavy construction equipment at a time. The Final MND ignores that cumulative noise from construction is additive when more than one source of noise is operating at the same time.

FACT: The Final MND never discusses the significance of noise impacts to nearby residents from this Project's use of backup beepers during heavy equipment construction activities. The Final MND does not describe how loud backup beeper alarms are. Backup alarms are the loudest and often most-complained about noise sources by nearby property owners during construction.<sup>7</sup>

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<sup>7</sup> Source: Survey of 50 states' departments of transportation for nighttime construction noise generators: "Effective Noise Control During Nighttime Construction", viewable online at: ([https://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder\\_paper.htm](https://ops.fhwa.dot.gov/wz/workshops/accessible/schexnayder_paper.htm)). This document was accessed on Sept. 21, 2017 online, is incorporated by reference in this comment letter, and will be made available to the CPUC if specifically requested.

FACT: Backup alarms must generate a noise level at least 5 to 10 dBA above the background noise in the vicinity of the rear of the machine where a person would be warned by the alarm. Thus, they are significantly louder than the Project's heavy equipment noise. Yet the Final MND fails to describe their decibel rating or place limits on their loudness. Backup alarms typically produce from 97 to 112 decibels at four feet,<sup>8</sup> which attenuates to about 75 to 89 dBA at 50 feet,<sup>9</sup> and can even be heard at far greater distances than just where the nearest neighbors live. Because of its frequency, such backup alarm noise is designed to alert people even if not louder on the A-weighted decibel scale than other noise sources. These backup alarms beep about once per second at a penetrating frequency of about 1,100 Hertz designed to be easily heard by most people.

FACT: The Final MND does not analyze this Project's irritating backup warning alarm noise impacts that may occur during construction activities.

### **3. Final MND Does Not Evaluate or Mitigate Significant Sleep-disturbance Impacts of Construction Noise Occurring Before 7:00 a.m.**

The PEA<sup>10</sup> previously (and similarly now the Final MND) state: "*No construction activities would occur in proximity to existing residential uses except between the hours of 7 a.m. and 7 p.m., Monday through Friday, or*

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<sup>8</sup> Source of back-up alarm noise levels from alarm manufactured by Pollak, #41-761, "Manually adjustable Back-up Alarm," rated at 112, 107, 97 dB.

<sup>9</sup> Noise level attenuation due to distance is calculated as reduced by about 6 dB for each doubling of distance.

8 a.m. to 5 p.m. on Saturdays." But that claim rings hollow because it provides no definition or limitation on the term "**proximity**." Since the Project's construction noise could be significant and in excess of applicable standards for hundreds of feet, if not a thousand feet or more, the PEA's and Final MND's reassurances, if that, are essentially meaningless. The Final MND provides no mitigations that would reduce loud construction noise impacts to a less-than-significant level for some residences.

FACT: Nothing in the Final MND prohibits noisy construction activity before 7:00 a.m.

FACT: Some Project construction noise levels may be excessively loud at occupied residences and reach levels of over 100 dBA.<sup>11</sup>

FACT: For example, if construction noise levels are 100 dBA at 50 feet<sup>12</sup> from heavy equipment operations, then that same noise source at a distance of 1,000 feet could be as much as 74 dBA (if intervening ground was "hard") or 67 dBA (if intervening terrain is "soft").<sup>13</sup>

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<sup>10</sup> See PEA, p. 191 and see the Final MND, p. 5.12-13 for a similar statement about proximity and time of construction.

<sup>11</sup> The Final MND predicts construction noise levels of up to 100 dBA at a distance of 50 feet from a single heavy equipment operation. If more than one piece of equipment operates at the same time, that noise level at 50 feet would be louder than 100 dBA. For a house as close as 40 feet, that noise level would be louder yet. There are homes closer than 50 feet to this Project's proposed power pole replacements.

<sup>12</sup> The Final MND states that construction noise can reach 100 dBA at a 50 foot distance from the source.

<sup>13</sup> Noise level attenuation due to distance is typically calculated as reduced by about 6 dB for each doubling of distance for hard ground, and 7.5 dB for each doubling of distance for soft ground.)

To calculate a dB level at different distances from a source given a known dB level for a known distance:

$dB2 = dB1 - 10 \times A \times \text{LOG}(R2/R1)$  where:

LOG = logarithm, base 10,

A = dB drop-off rate coefficient (in this Project's case, a = 2.0 for a 6.0 dB drop off rate (point source, hard surface, no atmospheric absorption).)

FACT: The ambient sound level for some affected homes before 7:00 a.m. is at times lower than 40 dBA  $L_{eq}$ . The Project's maximum construction noise would therefore be heard at that 1,000 foot distance at between 27 to 34 dB louder than ambient noise levels.<sup>14</sup>

FACT: A home that is 1,000 feet from construction noise (i.e. about 1/5 mile) would generally not be considered to be in "the proximity" of the construction activity. The Final MND accordingly does not prohibit excessive construction noise before 7:00 a.m. at that 1,000 foot distance even though the noise impacts could be significantly sleep-disturbing for those residents who sleep in the summer with open windows.

FACT: A typical home with open windows at night for summer cooling attenuates exterior noise by about 10 dBA.

FACT: That construction noise, when reduced by that 10 dBA as it passes through an open window, might still create about 17 to 24 dBA louder noise levels indoors.<sup>15</sup>

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dB1 = dB level at know distance from source, R1  
dB2 = dB level at another distance from source, R2  
R1 = known distance from source for known decibel level dB1  
R2 = second distance from source for which known decibel level estimate (dB2) is desired

In this case, at a location 1,000' (R2) from the construction where dB1 = 100 dB(A) $L_{eq}$  at 50' (R1) from the equipment,  $dB2 = dB1 - 10 \times A \times \text{LOG}(R2/R1) = 100 - 10 \times 2.0 \times \text{LOG}(1000/50) = 74.0 \text{ dB(A)}L_{eq}$ .

<sup>14</sup> Simple math shows 74 dB – 40 dB = 34 dB louder, or 67 dB – 40 dB = 27 dB louder.

<sup>15</sup> Again, simple math shows 34 dB – 10 dB = 24 dB louder, or 27 dB – 10 dB = 17 dB louder.

FACT: A temporary noise level increase of only 5 dB is audible and capable of awakening a sleeping resident. Construction noise that is 17 to 24 dB louder than ambient conditions in a bedroom would constitute a substantial noise level increase and would be considered a significant noise impact.

**4. Locations of the Most Severely Noise-Impacted Homes Are Not Adequately Identified in the Final MND nor on its Maps. No Ambient Noise Levels are Described at Those Homes by Other Means.**

FACT: The Final MND's section on noise impacts contains no maps of Project-noise affected homes. Such maps are not found elsewhere in the Final MND either. The distances to specific homes most likely to be affected by Project noise are also not listed in any tables in the Final MND.

FACT: CEQA environmental studies throughout California routinely display maps of noise-affected homes to better enable the public to understand which residents might be harmed by projects' noise generation.

FACT: In the absence of any scaled mapping of Project noise-affected residences being presented in the Final MND, there is no substantial evidence to support the Final MND's conclusion that the nearest homes are 70 feet away and their Project noise impact exposure will be less-than-significant.

**5. Project-related Time of Day Construction Activities Are Not Adequately Regulated or Mitigated to Avoid Significant Sleep-Disturbance Impacts.**

FACT: The Final MND's Project Description does not contain any time limits for construction activities. The text, while vaguely suggesting that construction generally will occur from 7:00 a.m. to 5:00 p.m. or 7:00 p.m., places no definitive time limitations on such activities.

FACT: During hot summer weather, construction companies often begin outdoor work before 7:00 a.m. to avoid the heat. These early morning hours are times when significant sleep-disturbance impacts may occur. The Final MND however never discusses sleep-disturbance impacts.

FACT: Nor does PacifiCorp or the Final MND propose any noise-related time limits that can be ensured by enforceable mitigations.

**6. Project's Daytime Construction Noise Exposure at Existing Homes Will Also Exceed Acceptable Noise Standards**

FACT: The Final MND fails to evaluate which homes will be exposed to noise levels that exceed City, County or other reasonable noise standards even during the daytime hours. Some homes could be exposed to significant and excessive construction noise levels of over 100 dBA  $L_{eq}$  even during daylight hours.

FACT: The Final MND essentially takes the position that as long as construction noise occurs after 7:00 a.m. in the morning, that

everyone has left his or her home or is deaf, and any amount of noise impact at those homes is acceptable or is at least less-than-significant.

FACT: The "noise-reducing practices" the Final MND lists on page 5.12-14, just like the previous PEA did on its page 194, are not sufficiently enforceable or meaningful to cure the Final MND's serious deficiencies in its Project's noise impact analysis. These practices are excessively vague as worded. They are not enforceable as would be CEQA mitigations. They contain no specific performance standards by which the public can be assured any meaningful noise attenuation will occur even if utilized. They provide no substantial evidence or support for the determination that construction noise will be reduced to a less-than-significant noise level. The Final MND never identifies any threshold of significance for construction noise impacts either. In the absence of any threshold of significance, and with no evidence of any enforceable Project noise level reduction, the Final MND's determination that these noise impacts will be less-than-significant is unsupported and inadequate.

FACT: Standards for maximum acceptable construction noise exist in some California communities. For example, the City of Redding's General Plan Noise Element, p. 12, limits maximum daytime noise to 55 dBA  $L_{eq}$ .

**7. Distances to the nearest affected residences are overstated, resulting in underestimated noise level prediction.**

FACT: The Final MND, p. 5.12-6, states that "[t]hese residences occur approximately 70 feet and 580 feet from pole locations." Those are the same distances stated in the PEA. And that closest distance is wrong. The fact is that some homes are even closer than that to some Project pole locations and other Project activities. Two homes at the corner of Mill Street and Forest Street are only about 40 feet and 44 feet from a proposed power pole (#167241) that will be modified with increased voltage wires.

FACT: There is a home at the north east corner of the intersection of Forest Street and Mill Street located at 512 Mill Street which is 44' feet as measured from that power pole. (See photos below)

FACT: There is a home at the south east corner of the intersection of Forest Street and Mill Street located at 109 Forest Street which is only 40 feet as measured from that power pole. (See photos below)

FACT: If construction noise levels reach 100 dBA  $L_{eq}$  at a distance of 50 feet from the construction source at the closest distance estimated in the Final MND, then that noise level would likely be reduced by distance down to about 96 dB  $L_{eq}$  at a distance of 70 feet (assuming typically soft ground surfaces in between and using the rule that noise diminishes in loudness by about 7.5 dB for each doubling of distance over soft ground.)



FACT: By comparison to some worst-case examples, then at a house at 109 Forest Street in the City of Mt. Shasta, (which is located 40 feet from the pole location), that same construction noise would be over 102 dBA  $L_{eq}$ .<sup>16</sup> That noise level would be audibly louder by 2 dB than if assumed at a 50-foot distance. When compared to the claimed 70-foot minimum distance, the Final MND underestimates construction noise impacts at the closest homes about 6 dB by misstating the distances they are from power poles slated for replacement.<sup>17</sup>

FACT: The heavy equipment operations may be even louder at these homes at because the equipment may even be closer to these houses because that measured distance is along a diagonal from the street intersection of Mill Street and Forest Street. When parked directly in front or to the side of these corner lot homes, those distances would be reduced more.

(See photos on next pages of some of the nearest homes to this Project's proposed power pole replacement locations)

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<sup>16</sup> Noise level attenuation due to distance is typically calculated as reduced by about 6 dB for each doubling of distance for hard ground or such short distances where insufficient intervening soil area can absorb much sound. See formula above for calculation.

<sup>17</sup> Simple math: 102 dBA – 96 dBA = 6 dBA difference in noise levels.



House at 412 Mill Street is 44 feet from Project's power pole #167241 as determined with laser distance measurer





House at 109 Forest Street is measured at 40 feet from power pole #167241.



FACT: Along South Old Stage Road are homes closer to proposed pole positions than the Final MND estimates too. Along West Jessie Street are five homes within 40 to 50 feet of Project undergrounding activities. But the Final MND totally ignores that those homes so close to Project activities will be exposed to excessive construction noise levels.

These facts about noise impacts support a fair argument that this Project may have significant noise impacts upon neighbors to the construction activities that the Final MND entirely fails to disclose and mitigate. This Project may also have significant greenhouse gas emission and aesthetic impacts.

In light of these facts and reasons, the CPUC should comply with CEQA and require that an Environmental Impact Report be prepared to evaluate all of this Project's environmental consequences.

If you have any questions about these concerns, please contact me.

Sincerely,



s/ Dale La Forest

Dale La Forest

Secretary and Director,

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### **ACOUSTICAL EXPERTISE of DALE LA FOREST:**

I received a Bachelor of Architecture Degree with Master of Architecture studies in architecture and planning from the University of Michigan (1966 – 1973). My university education included architectural acoustics and the math and physics related to analysis of sound transmission. In the last 42 years, I have designed hundreds of homes in California. During the last 22 years, I have prepared expert acoustical studies for various development projects and reviewed and commented upon dozens of noise studies prepared by others. My expertise in environmental noise analysis comes from formal university level training in architecture and planning, and from many years of evaluation of acoustics as relates to environmental analysis. I regularly measure and calculate noise propagation and the effects of noise barriers and building acoustics as they apply to single-family homes near projects and their vehicular travel routes. I have designed highway noise walls, recommended noise mitigations, and have designed residential and commercial structures to limit their occupants' exposure to excessive exterior noise levels throughout California.



s/ Dale La Forest

Dale La Forest, with Dale La Forest & Associates

Professional Planner, Designer, INCE Associate (Institute of Noise Control Engineering)