


<p><b>California Public Utilities Commission</b>  <b>Electronic Filing Services</b></p> <p><b>PHONE NUMBER:</b>  415 703-2782</p> <p><b>NOTICE FOR:</b> Cadwalader Wickersham &amp; Taft LLP</p>	
<p><b>THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA</b></p>	<p><b>Confirmation Number:</b>  0000050930</p>
<p><b>NOTICE OF RECEIPT OF DOCUMENTS  VIA ELECTRONIC FILING</b></p>	<p><b>Proceeding Number:</b>  <b>R.10-12-007</b></p>
<p><b>Additional Proceeding Numbers:</b></p> <p><b>Client-Matter Name/Number</b></p> <p><b>Parties:</b></p> <p><b>Officially received by the CPUC on:</b></p> <p><b>Your email address:</b></p> <p><b>This Filing's Confirmation Number:</b></p> <p><b>Your Voice number:</b></p> <p><b>Credit Card used:</b></p> <p><b>Case Type:</b></p> <p><b>Fee Tendered - Exact Amount:</b></p> <p><b>Fee Tendered - Not To Exceed Amount:</b></p> <p><b>Forms Received:</b></p> <p><b>Pleadings Received:</b></p>	<p><b>Brookfield Renewable Energy Partners LP</b></p> <p><b>Wednesday, 02/01/2012 at 08:00:01 AM</b>  lhamer@cwtt.com  0000050930  (202) 552 - 7711  , Exp.</p> <p><b>Formal Proceeding</b>  <b>\$0.00</b>  <b>\$0.00</b></p> <p><b>Comments of Brookfield Renewable Energy Partners LP in R.10-12-007.pdf - ...</b></p>
<p><b>NOTICE:</b> This receipt <b>DOES NOT</b> constitute acceptance by the CPUC of your documents for filing. This receipt confirms that your filing <b>HAS BEEN RECEIVED</b> by CPUC on the date and time indicated. Your Confirmation Number at the top of this receipt, is issued by CPUC, and it should be used in all communications with CPUC regarding this filing. You will receive a separate email notification directly from CPUC when your filing has been Accepted or Rejected.</p> <p>Copyright © 2003-2006 Essential Publishers Inc.</p>	

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

**Order Instituting Rulemaking Pursuant to  
Assembly Bill 2514 to Consider the Adoption  
of Procurement Targets for Viable and  
Cost-Effective Energy Storage Systems.**

**Rulemaking 10-12-007  
(Filed December 16, 2010)**

**COMMENTS OF  
BROOKFIELD RENEWABLE ENERGY PARTNERS LP  
(FORMERLY BROOKFIELD RENEWABLE POWER INC.)  
ON DECEMBER 12, 2011 CPUC RULING ENTERING INITIAL STAFF  
PROPOSAL INTO RECORD AND SEEKING COMMENTS**

**Shaun P. Logue  
Vice President, Legal Services  
and General Counsel  
BROOKFIELD ENERGY MARKETING INC.  
480 BLVD. DE LA CITÉ  
GATINEAU, QUEBEC, J8T 8R3  
TEL: (819) 561-8851  
Email: [shaun.logue@brookfieldrenewable.com](mailto:shaun.logue@brookfieldrenewable.com)**

*Attorney for  
Brookfield Renewable Energy Partners LP*

**Dated: January 31, 2012**

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

**Order Instituting Rulemaking Pursuant to  
Assembly Bill 2514 to Consider the Adoption  
of Procurement Targets for Viable and  
Cost-Effective Energy Storage Systems.**

**Rulemaking 10-12-007  
(Filed December 16, 2010)**

**COMMENTS OF  
BROOKFIELD RENEWABLE ENERGY PARTNERS LP  
(FORMERLY BROOKFIELD RENEWABLE POWER INC.)  
ON DECEMBER 12, 2011 CPUC RULING ENTERING INITIAL STAFF  
PROPOSAL INTO RECORD AND SEEKING COMMENTS**

**I. Introduction**

Pursuant to Administrative Law Judge Amy C. Yip-Kikugawa's December 12, 2011 Ruling Entering Initial Staff Proposal Into Record and Seeking Comments in the above-captioned proceeding ("Energy Storage OIR"); Brookfield Renewable Energy Partners LP<sup>1</sup> ("Brookfield") respectfully submits the following comments as well as responses to questions posed by Energy Division Staff in the Initial Proposal.

Brookfield supports the Commission's proposal to evaluate barriers to entry of storage facilities on a technology-neutral basis. We also support the outcome of this proceeding leading to a competitive procurement mechanism that will allow storage technologies to compete amongst themselves and with other resources based on its value and ability to provide specific operational characteristics to the electric system in support of 33% renewable integration and other energy policy objectives (such as distributed generation).

As further outlined in our comments below, we support the Commission's general direction in addressing the barriers to energy storage captured from prior stakeholder comments

---

<sup>1</sup> In November 2011, Brookfield Renewable Energy Partners LP was formed by combining the power generation assets of Brookfield Renewable Power Fund and Brookfield Renewable Power Inc.

and provide some additional input on considerations for some of the barriers specifically around operational needs, Resource Adequacy (“RA”) accounting and their linked Commission-jurisdictional proceedings. Brookfield also requests that the Commission address an additional barrier that was not captured in the proposal which is the lack of and need for a common definition of energy storage: Namely, that it is important as a starting point in this proceeding that parties have a common definition and understanding of what energy storage is when addressing barriers and uncertainties. Lastly we also provide some considerations for application of the End-Use Framework and some potential goals or milestones in the adoption of energy storage.

## **II. Energy Storage Adoption Barriers and Proposed Next Steps**

Brookfield supports the general direction the Commission proposes to address the identified storage adoption barriers. We offer additional comments on three of the identified barriers for consideration by the Commission.

### **1. Lack of Definitive Operational Needs**

We agree with Commission that the most effective way to address this the lack of definitive operational needs is through the Long Term Procurement Planning (“LTTP”) Proceeding,<sup>2</sup> where the data from the 33% Operational Studies is being analyzed under multiple scenarios. However, we request the Commission pay close attention to the timing of the LTTP Proceeding and ensure that there is adequate lead time for the decision from this proceeding to affect and determine procurement decisions that may result from this storage proceeding. Compressed procurement timelines could result in the inability for some storage resource technologies that require long lead times for financing, licensing and development, such as

---

<sup>2</sup> Order Instituting Rulemaking to Integrate and Refine Procurement Policies and Consider Long Term Procurement Plans, R. 10-05-006 (Filed May 6, 2010).

pumped storage, to participate in the process while providing a potential benefit to other technologies resulting in less cost-effective solutions for ratepayers. Therefore we request that data and decisions from the LTPP Proceeding regarding electric system needs be fed into this storage proceeding as they become available to aid in decision-making rather than waiting until late in 2012 when the decision on LTPP will be finalized .

We also request the Commission consider as part of operational needs Governor Brown's goal as defined in the Clean Energy Jobs Plan<sup>3</sup> to achieve 12,000 MW of distributed generation by 2020. We believe that storage can play a significant role in managing intermittency of these types of resources at the distribution level. These distributed generation resources will likely not be visible or dispatchable by the California Independent System Operator Corporation ("California ISO") at the grid level, but nonetheless will have a material impact on system operations. Electric energy storage will be a key compliment to achieving these goals set by Governor Brown.

## **2. Resource Adequacy Accounting**

We support the Commission's proposal to develop RA counting rules for storage technologies and applications through the ongoing RA proceeding. The RA accounting rules the Commission develops should take into account the specific operating characteristics of the resource and its ability to provide necessary products and services to the electric system identified in the respective 20% and 33% renewable integration studies described in the LTPP Proceeding. For example, a resource that can provide specific products to the electric grid that have been identified as needed such as load following, maximum ramping, and regulation should be awarded a higher RA value than a resource that can provide fewer products or only generic

---

<sup>3</sup> Gov. Jerry Brown's Clean Energy Jobs Plan can be accessed at: [http://www.jerrybrown.org/sites/default/files/6-15%20Clean\\_Energy%20Plan.pdf](http://www.jerrybrown.org/sites/default/files/6-15%20Clean_Energy%20Plan.pdf) (last visited Jan. 31, 2012).

capacity. In addition, a storage facility that would have the capability of producing power over a longer period of time would have a higher RA value than a facility that produce power for only a short period of time. As discussed in the Commission’s proposal, the end-use framework proposed by the Commission can be utilized to help calculate RA value.

As we noted in our prior comments to the Commission, the current process of procuring only generic capacity through the RA process will not ensure that identified specialized needs of the grid are met under the 33% renewables portfolio standard (“RPS”), including any specific value that can be provided by electric energy storage. Recognizing specific resource attributes is important to better anticipate and incorporate future requirements and promote the development and deployment of long-life, capital-intensive storage projects.

### **3. Lack of Cost Transparency and Price Signals**

The CPUC proposes to create RA counting rules for storage, which is a very important step towards providing opportunities for storage technologies to compete equally with other technologies in the bi-lateral capacity market. However, there still exists the problem of the absence of locational price signals to incent investment especially in large scale capital intensive projects such as pumped-storage.

The Commission should consider other ways to provide additional transparency to the market by providing more granular data on resource adequacy contract pricing. The current RA Report provides data on contract prices broken out separately for system resources and local resources and provides pricing data on tolling agreements. Providing the average contract price by technology type, for example wind, storage, solar on a locational basis could provide the market with additional relevant information and send that appropriate investment signal while still maintaining confidentiality.

### **III. Regulatory Framework and Barriers**

Brookfield believes that the list of nine barriers captured by the CPUC in the proposal are generally thorough and the interagency proceedings have been identified at a high level, however Brookfield feels there is one barrier that the Commission has not identified. This missing barrier is one identified in comments from the Consumer Federation of California (“CFC”)<sup>4</sup> that must also be addressed is the need for a standard definition for energy storage. It is important to have a single definition for energy storage to alleviate confusion and allow parties to start from a common understanding when addressing barriers and other outstanding issues. We request that the Commission develop a definition for energy storage that is broad enough to encompass the spectrum of technologies, including pumped-storage, to ensure that the evaluation of value and cost effectiveness of electric energy storage remains technology neutral.

### **IV. Cost Effectiveness and End-Use Framework**

Since the cost and benefits of storage will vary significantly depending upon which application it is deployed in, the end-use framework can be utilized to analyze the cost benefits and viability of storage for each end-use application. In order to accomplish this, the end-use framework should be expanded to include the benefits streams for each end-use application as well as defined barriers. Potential costs can then be evaluated based the end-use application and associated benefits. This approach is consistent with SCE’s proposed end-use matrix that was presented at the last proceeding workshop in July 2011.

The CPUC proposes to leverage the existing methodology that is laid out in the Standard Practice Manual that has been used in prior energy efficiency, distributed generation, and demand response proceedings. Brookfield does not have specific comments on the existing cost

---

<sup>4</sup> See Opening Comments of the CFC on the Administrative Law Judge’s Ruling Entering Documents into Record and Seeking Comments 8 (filed Aug. 29, 2011).

effectiveness methodologies at this time. However, it seems reasonable to begin by assessing what can be leveraged from the existing methodologies, and to address and evaluate through this proceeding, as they arise, any additional model inputs that are relevant for storage projects. We are concerned that it doesn't appear that the existing methodologies are adequate to take into account the benefits that electric energy storage can provide to the electric grid across a wide range of possible futures. The addition of storage makes the system more robust and offers risk mitigation for differences between planned and actual renewable build outs, the range of possible outcomes associated with significant additions of distributed generation, and a range of load scenarios. While we recognize the challenges of precisely valuing the important benefits that electric energy storage can provide, we believe that such value is significant and should be taken into account when doing a cost-benefit analysis or establishing storage procurement targets. Further, the methodology should not overly restrictive or narrow in evaluating value energy storage resources provide.

## **V. Roadmap**

The CPUC is requesting comments on potential goals or milestones in adoption of energy storage in the near term (1-3 years), Medium Term (3-5 years), and Long Term (5 years and beyond). Our suggestions for incorporation into the energy storage roadmap are below.

### **Short Term**

- Develop a uniform definition of “energy storage.”
- Reach a decision in the LTPP Proceeding regarding system needs (using as a key enabler the completion of the 33% study analysis).
- Complete a comprehensive review of benefit streams matched with application and technology to evaluate costs/ benefits.
- Prioritize issues based on system need and technology maturity.



## **Medium Term**

- Establish an RA value for storage (using as key enablers the (1) changes to RA counting rules, and (2) outcome of the California ISO proposal for flexible capacity requirements.<sup>5</sup>
- Evaluate the need for a technology-neutral procurement mechanism.

## **Long Term**

- Undergo ongoing evaluation of value of storage applications and future system needs as they arise.

## **VI. Procurement Objectives**

There are a number of ongoing initiatives active at the California ISO and the Commission that will potentially eliminate barriers and expand opportunities for participation by electric energy storage in the wholesale energy markets, resource adequacy, and utility procurement. Those opportunities include but are not limited to, additional compensation for frequency regulation for both accuracy and mileage, new flexible ramping spot market product, RA value for storage, and the potential modifications to RA procurement requested by the CAISO to account for flexible capacity. The outcome of these initiatives and others that have been identified will be paramount towards opening opportunities for electric energy storage to compete with other resources to provide needed products and services to the electric system, provide opportunity for potential long-term contracting opportunities, and the opportunity to monetize benefits.

In parallel, through this proceeding, it will be important for the CPUC to determine the viability and cost effectiveness of electric energy storage under different applications and scenarios. Through this analysis it can be determined whether or not additional procurement

---

<sup>5</sup> See *California ISO Proposal on Phase One Issues*, Order Instituting Rulemaking to Oversee the Resource Adequacy Program, Consider Program Refinements, and Establish Annual Local Procurement Obligations, R. 11-10-023 (Filed Jan. 13, 2012).

targets are needed to meet the future needs of the electric grid that are evolving around the 33% RPS, or if goals can be achieved by effectively removing barriers that enable electric energy storage to compete with other resources to provide products and services through existing procurement mechanisms such as the LTPP Proceeding and the annual RA process.

## **VII. Conclusion**

Brookfield appreciates the opportunity to submit these comments for the Commission's consideration and urges it to act on the recommendations outlined herein.

Respectfully submitted,

/s/ Shaun P. Logue  
Vice President, Legal Services  
and General Counsel  
BROOKFIELD ENERGY MARKETING INC.  
480 BLVD. DE LA CITÉ  
GATINEAU, QUEBEC, J8T 8R3

*Attorney for  
Brookfield Renewable Power Inc.*

Dated: January 31, 2012

## CERTIFICATE OF SERVICE

I hereby certify that, pursuant to the Commission's Rules of Practice and Procedure, I have on this day served a copy of the foregoing "COMMENTS OF BROOKFIELD RENEWABLE ENERGY PARTNERS LP (FORMERLY BROOKFIELD RENEWABLE POWER INC.) ON DECEMBER 12, 2011 CPUC RULING ENTERING INITIAL STAFF PROPOSAL INTO RECORD AND SEEKING COMMENTS" on all parties identified on the attached service list. Service was effected by one or more means indicated below:

- Transmitting a copy via electronic mail on those parties who provided an e-mail address; or
- First Class mail on those parties that have not provided an electronic address to the Commission.

Executed this 31st day of January, 2012, at Washington, D.C.

/s/ Joseph B. Williams  
Joseph B. Williams  
Victoria M. Lauterbach  
Cadwalader, Wickersham & Taft LLP  
700 Sixth Street, N.W.  
Washington, DC 20001

*Attorneys for  
Brookfield Renewable Energy Partners LP*

**SERVICE LIST R.10-12-007**

**Parties**

---

DONALD C. LIDDELL  
DOUGLASS & LIDDELL  
EMAIL ONLY  
EMAIL ONLY, CA 00000  
FOR: CALIFORNIA ENERGY STORAGE ALLIANCE  
/ ICE ENERGY, INC. / WALMART STORES,  
INC & SAM'S WEST, INC.

JOHN W. LESLIE, ESQ.  
LUCE, FORWARD, HAMILTON & SCRIPPS, LLP  
EMAIL ONLY  
EMAIL ONLY, CA 00000  
FOR: SHELL ENERGY NORTH AMERICA (US),  
L.P.

MATTHEW FREEDMAN  
THE UTILITY REFORM NETWORK  
EMAIL ONLY  
EMAIL ONLY, CA 00000  
FOR: TURN

THOMAS R. DARTON  
PILOT POWER GROUP, INC. (1365)  
EMAIL ONLY  
EMAIL ONLY, CA 00000  
FOR: PILOT POWER GROUP, INC.

LAURA WISLAND  
UNION OF CONCERNED SCIENTISTS  
EMAIL ONLY  
EMAIL ONLY, CA 00000-0000  
FOR: UNION OF CONCERNED SCIENTISTS

ERIC HSIEH  
A 123 SYSTEMS  
10 AVENUE E  
HOPKINTON, MA 01748  
FOR: A 123 SYSTEMS

ANDREW O. KAPLAN  
BROWN RUDNICK LLP  
ONE FINANCIAL CENTER  
BOSTON, MA 02111  
FOR: BEACON POWER CORP.

RICK C. NOGER  
PRAXAIR PLAINFIELD, INC.  
2711 CENTERVILLE ROAD, SUITE 400  
WILMINGTON, DE 19808  
FOR: PRAXAIR PLAINFIELD, INC.

JOSEPH B. WILLIAMS  
CADWALADER WICKERSHAM & TAFT LLP  
700 SIXTH STREET, N.W.  
WASHINGTON, DC 20001  
FOR: BROOKFIELD RENEWABLE POWER, INC.

MIKE JACOBS  
XTREME POWER  
816 CONNECTICUT AVE., SUITE 200  
WASHINGTON, DC 20006  
FOR: XTREME POWER

JENNY ZYAK  
LIBERTY POWER HOLDINGS LLC (1371)  
1901 W. CYPRESS CREEK ROAD, SUITE 600  
FORT LAUDERDALE, FL 33309  
FOR: LIBERTY POWER HOLDINGS LLC

LYNN FLOWERS  
FLOWERS ENERGY CONSULTING, LLC  
4390 W. PINE BLVD.,  
ST LOUIS, MO 63108  
FOR: SOLAR RESERVE

ERIC OSBORN  
CALPINE POWER AMERICA-CA, LLC  
717 TEXAS AVENUE, STE 100  
HOUSTON, TX 77002  
FOR: CALPINE POWER AMERICA - CA, LLC

KATHERINE KRAUSE  
DIR OF WHOLESALE COMPLIANCE, U.S.  
DIRECT ENERGY BUSINESS  
12 GREENWAY PLAZA, STE. 600  
HOUSTON, TX 77046  
FOR: DIRECT ENERGY BUSINESS

BRIAN FICKETT  
VALLEY ELECTRIC ASSOCIATION  
800 E. HWY 372  
PAHRUMP, NV 89048  
FOR: VALLEY ELECTRIC ASSOCIATION

MICHAEL MAZUR  
3 PHASES ELECTRICAL CONSULTING  
2100 SEPULVEDA BLVD., SUITE 37  
MANHATTAN BEACH, CA 90266  
FOR: 3 PHASES ELECTRICAL CONSULTING

DAVID NEMTZOW  
ICE ENERGY, INC.  
1254 9TH STREET, NO. 6  
SANTA MONICA, CA 90401  
FOR: ICE ENERGY, INC.

ADAM GREEN  
SOLARRESERVE  
2425 OLYMPIC BLVD., STE. 500E  
SANTA MONICA, CA 90404  
FOR: SOLAR RESERVE

INGER GOODMAN  
COMMERCE ENERGY, INC.  
1 CENTERPOINTE DRIVE, STE. 350  
LA PALMA, CA 90623-3630  
FOR: COMMERCE ENERGY, INC.

DANIEL W. DOUGLASS  
ATTORNEY  
DOUGLASS & LIDDELL  
21700 OXNARD ST., STE. 1030  
WOODLAND HILLS, CA 91367  
FOR: WESTERN POWER TRADING FORUM;  
ALLIANCE FOR RETAIL ENERGY MARKETS;  
DIRECT ACCESS CUSTOMER COALITION

CATHY A. KARLSTAD  
ATTORNEY  
SOUTHERN CALIFORNIA EDISON COMPANY  
2244 WALNUT GROVE AVE.  
ROSEMEAD, CA 91770  
FOR: SOUTHERN CALIFORNIA EDISON COMPANY

RONALD MOORE  
SR ANALYST, REGULATORY AFFAIRS  
BEAR VALLEY ELECTRIC  
630 EAST FOOTHILL BOULEVARD  
SAN DIMAS, CA 91773  
FOR: GOLDEN STATE WATER COMPANY / BEAR  
VALLEY ELECTRIC

KLAUS SCHIESS  
KSENGINEERS  
8763 CAMINITO SUENO  
LA JOLLA, CA 92037  
FOR: KSENGINEERS

DAVID KATES  
THE NEVADA HYDRO COMPANY  
3510 UNOCAL PLACE, SUITE 200  
SANTA ROSA, CA 92083  
FOR: THE NEVADA HYDRO COMPANY

ALLEN K. TRIAL  
ATTORNEY AT LAW  
SAN DIEGO GAS & ELECTRIC COMPANY  
101 ASH STREET, HQ-12  
SAN DIEGO, CA 92101  
FOR: SAN DIEGO GAS & ELECTRIC COMPANY

GREG BASS  
NOBLE AMERICAS ENERGY SOLUTIONS LLC  
401 WEST A STREET, SUITE 500  
SAN DIEGO, CA 92101-3017  
FOR: SEMPRA ENERGY SOLUTIONS

GLORIA BRITTON  
REGULATORY AFFAIRS MGR.  
ANZA ELECTRIC CO-OPERATIVE, INC (909)  
PO BOX 39109 / 58470 HWY 371  
ANZA, CA 92539-1909  
FOR: ANZA ELECTRIC CO-OPERATIVE, INC.

DOUGLAS AMES  
AMES LAW OFFICE  
9550 WARNER AVE., STE. 250  
FOUNTAIN VALLEY, CA 92708  
FOR: TRANSPHASE COMPANY

ANDREA MORRISON  
MARKET DEVELOPMENT REGIONAL DIR.  
DIRECT ENERGY SERVICES, LLC  
415 DIXON STREET  
ARROYO GRANDE, CA 93420  
FOR: DIRECT ENERGY SERVICES, LLC

MONA TIERNEY-LLOYD  
SENIOR MANAGER WESTERN REG. AFFAIRS  
ENERNOC, INC.  
PO BOX 378  
CAYUCOS, CA 93430  
FOR: ENERNOC, INC.

DAVID ORTH  
SAN JOAQUIN VALLEY POWER AUTHORITY  
ADMIN OFF @KINGS RIVER CONSERV DISTRICT  
4886 EAST JENSEN AVENUE  
FRESNO, CA 93725

DAVID MACMILLAN  
MEGAWATT STORAGE FARMS  
3931 JEFFERSON AVE.  
WOODSIDE, CA 94062  
FOR: MEGAWATT STORAGE FARMS

FOR: SAN JOAQUIN VALLEY POWER AUTHORITY

CANDACE MOREY  
CALIF PUBLIC UTILITIES COMMISSION  
LEGAL DIVISION  
ROOM 5037  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214  
FOR: DRA

NORA SHERIFF  
ALCANTAR & KAHL  
33 NEW MONTGOMERY STREET, SUITE 1850  
SAN FRANCISCO, CA 94105  
FOR: ENERGY PRODUCERS AND USERS  
COALITION (EPUC)

TIM O'CONNOR  
ENVIRONMENTAL DEFENSE FUND  
123 MISSION STREET, 28TH FLOOR  
SAN FRANCISCO, CA 94105  
FOR: ENVIRONMENTAL DEFENSE FUND

BRIAN T. CRAGG  
GOODIN, MACBRIDE, SQUERI, DAY & LAMPREY  
505 SANSOME STREET, SUITE 900  
SAN FRANCISCO, CA 94111  
FOR: INDEPENDENT ENERGY PRODUCERS  
ASSOCIATION

VIDHYA PRABHAKARAN  
DAVIS WRIGHT TREMAINE LLP  
505 MONTGOMERY STREET, STE. 800  
SAN FRANCISCO, CA 94111  
FOR: CALIFORNIA PACIFIC ELECTRIC  
COMPANY LLC

ALICE L. REID  
PACIFIC GAS AND ELECTRIC CO.  
PO BOX 7442  
SAN FRANCISCO, CA 94120  
FOR: PACIFIC GAS AND ELECTRIC COMPANY

SARA STECK MYERS  
ATTORNEY AT LAW  
122 - 28TH AVENUE  
SAN FRANCISCO, CA 94121  
FOR: CENTER FOR ENERGY EFFICIENCY AND  
RENEWABLE TECHNOLOGIES (CEERT)

MATTHEW BARMACK  
CALPINE CORPORATION  
4160 CUBLIN BLVD., SUITE 100  
DUBLIN, CA 94568  
FOR: CALPINE CORPORATION

KEITH NAKATANI  
DIRECTOR  
CALIFORNIA HYDROPOWER REFORM COALITION  
4361 4TH STREET, SUITE 801  
OAKLAND, CA 94612  
FOR: CALIFORNIA HYDROPOWER REFORM  
COALITION

WILLIAM B. ROSTOV  
EARTHJUSTICE  
426 17TH STREET, 5TH FLOOR  
OAKLAND, CA 94612  
FOR: SIERRA CLUB OF CALIFORNIA

GREGG MORRIS  
GREEN POWER INSTITUTE  
2039 SHATTUCK AVE., SUTE. 402  
BERKELEY, CA 94704  
FOR: GREEN POWER INSTITUTE

R. THOMAS BEACH  
CONSULTANT  
CROSSBORDER ENERGY  
2560 NINTH STREET, SUITE 213A  
BERKELEY, CA 94710  
FOR: THE CALIFORNIA WIND ENERGY  
ASSOCIATION

ELIZABETH RASMUSSEN  
PROJECT MGR./REG. AND LEGAL COUNSEL  
MARIN ENERGY AUTHORITY  
781 LINCOLN AVENUE, SUITE 320  
SAN RAFAEL, CA 94901  
FOR: MARIN ENERGY AUTHORITY

BURTON GROSS  
CALIFORNIA INDEPENDENT SYSTEM OPERATOR  
250 OUTCROPPING WAY  
FOLSOM, CA 95630  
FOR: CALIFORNIA IINDPENDENT SYSTEM  
OPERATOR

KELLY M. FOLEY  
ATTORNEY  
THE VOTE SOLAR INITIATIVE  
2089 TRACY COURT  
FOLSOM, CA 95630  
FOR: THE VOTE SOLAR INITIATIVE

NICOLE A. BLAKE  
STAFF ATTORNEY  
CONSUMER FEDERATION OF CALIFORNIA  
1107 9TH ST., STE. 625  
SACRAMENTO, CA 95814  
FOR: CONSUMER FEDERATION OF CALIFORNIA

C/O ANDY BROWN  
ELLISON, SCHNEIDER & HARRIS, LLP  
2600 CAPITAL AVENUE, SUITE 400  
SACRAMENTO, CA 95816-5931  
FOR: NV ENERGY / SIERRA PACIFIC POWER  
COMPANY

DANIEL SILVERIA  
GENERAL MANAGER  
SURPRISE VALLEY ELECTRIC CORP.  
PO BOX 691  
ALTURAS, CA 96101  
FOR: SURPRISE VALLEY ELECTRIC  
CORPORATION

ROBERT MARSHALL  
GENERAL MANAGER  
PLUMAS SIERRA RURAL ELECTRIC COOP. (908)  
73233 STATE ROUTE 70 / PO BOX 2000  
PORTOLA, CA 96122-7069  
FOR: PLUMAS SIERRA RURAL ELECTRIC COOP

JACK ELLIS  
1425 ALPINE WAY / PO BOX 6600  
TAHOE CITY, CA 96145-6600  
FOR: JACK ELLIS

**Information Only**

---

BHUPEN MEHTA  
MEHTA ASSOCIATES  
EMAIL ONLY  
EMAIL ONLY, CA 00000

CARLOS LAMAS-BABBINI  
COMVERGE, INC.  
EMAIL ONLY  
EMAIL ONLY, CA 00000

CASE COORDINATION  
PACIFIC GAS AND ELECTRIC COMPANY  
EMAIL ONLY  
EMAIL ONLY, CA 00000

DIANE I. FELLMAN  
DIR - REGULATORY & GOV'T AFFAIRS  
NRG WEST & SOLAR  
EMAIL ONLY  
EMAIL ONLY, CA 00000

ERIN GRIZARD  
BLOOM ENERGY, INC.  
EMAIL ONLY  
EMAIL ONLY, CA 00000

GREGORY S.G. KLATT  
DOUGLASS & LIDDELL  
EMAIL ONLY  
EMAIL ONLY, CA 00000

JANICE LIN  
MANAGING PARTNER  
STRATEGEN CONSULTING LLC  
EMAIL ONLY  
EMAIL ONLY, CA 00000

JOHN M. SPILMAN  
GRIDFLEX ENERGY, LLC  
EMAIL ONLY  
EMAIL ONLY, CA 00000

JONNA ANDERSON  
VIRIDITY ENERGY  
EMAIL ONLY  
EMAIL ONLY, CA 00000

LON W. HOUSE, PH.D  
WEC  
EMAIL ONLY  
EMAIL ONLY, CA 00000

NOAH DAVIDSON  
RENEWABLE ANALYTICS, LLC  
EMAIL ONLY  
EMAIL ONLY, CA 00000

PHILIP L. CARSON  
ENERGY CENTRAL  
EMAIL ONLY  
EMAIL ONLY, CO 00000

RICHARD S. FLOOD  
JOHNSON CONTROLS, INC.  
EMAIL ONLY  
EMAIL ONLY, CA 00000

SEAN BEATTY  
GENON ENERGY, INC.  
EMAIL ONLY  
EMAIL ONLY, CA 00000

SEPHRA NINOW  
CALIFORNIA CENTER FOR SUSTAINABLE ENERGY  
EMAIL ONLY  
EMAIL ONLY, CA 00000

STEPHEN G. DAVIS  
KNGRID  
EMAIL ONLY  
EMAIL ONLY, CA 00000

TIMOTHY TUTT  
SACRAMENTO MUNICIPAL UTILITY DISTRICT  
EMAIL ONLY  
EMAIL ONLY, CA 00000

TOM SMOLAREK  
CYPRESS LTD  
EMAIL ONLY  
EMAIL ONLY, CA 00000

TOM STEPIEN  
PRIMUS POWER CORPORATION  
EMAIL ONLY  
EMAIL ONLY, CA 00000

MRW & ASSOCIATES, LLC  
EMAIL ONLY  
EMAIL ONLY, CA 00000

DAVIS WRIGHT TREMAINE LLP  
EMAIL ONLY  
EMAIL ONLY, CA 00000

MICHELLE GRANT  
DYNEGY, INC.  
EMAIL ONLY  
EMAIL ONLY, TX 00000-0000

SHERIDAN J. PAUKER  
WILSON SONSINI GOODRICH & ROSATI  
EMAIL ONLY  
EMAIL ONLY, CA 00000-0000

STEVEN ECKERT  
BROOKFIELD RENEWABLE POWER, INC.  
200 DONALD LYNCH BLVD.  
MALBOROUGH, MA 01752  
FOR: BROOKFIELD RENEWABLE POWER, INC.

ALI AMIRALI  
SVP  
STARWOOD ENERGY GROUP, LLC  
591 W. PUTNAM AVENUE  
GREENWICH, CT 06830

JUDITH F. JUDSON  
BEACON POWER CORPORATION  
65 MIDDLESEX ROAD  
TYNGSBORO, MA 08179

STEVEN HUHMANN  
MORGAN STANLEY CAPITAL GROUP INC.  
2000 WESTCHESTER AVENUE  
PURCHASE, NY 10577

VICTORIA LAUTERBACH  
CADWALADER WICKERSHAM & TAFT, LLP  
700 SIXTH STREET, N.W.  
WASHINGTON, DC 20001

CATHERINE SULLIVAN  
ZBB ENERGY CORPORATION  
N93 W14475 WHITTAKER WY  
MENOMONEE FALLS, WI 53051

TERRY ANDREWS  
CALMAC MANUFACTURING CORPORATION  
40191 N. 110TH PLACE  
SCOTTSDALE, AZ 85262

HARVEY EDER

DOUG DIVINE



PUBLIC SOLAR POWER COALITION  
1218 12TH ST., NO. 25  
SANTA MONICA, CA 90401

EAGLE CREST ENERGY COMPANY  
3000 OCEAN PARK BLVD., SUITE 1020  
SANTA MONICA, CA 90405

AKBAR JAZAYEIRI  
DIR OF REVENUE & TARIFFS  
SOUTHERN CALIFORNIA EDISON COMPANY (338)  
2241 WALNUT GROVE AVE. / PO BOX 800  
ROSEMEAD, CA 91770

AMBER DEAN WYATT  
SOUTHERN CALIFORNIA EDISON COMPANY  
2244 WALNUT GROVE AVENUE  
ROSEMEAD, CA 91770

CASE ADMINISTRATION  
SOUTHERN CALIFORNIA EDISON COMPANY  
LAW DEPT.  
2244 WALNUT GROVE AVE. / PO BOX 800  
ROSEMEAD, CA 91770

NANCY ALLRED  
ATTORNEY  
SOUTHERN CALIFORNIA EDISON COMPANY  
2244 WALNUT GROVE AVE.  
ROSEMEAD, CA 91770

DREW ADAMS  
VIRIDITY ENERGY  
4778 CASS ST., APT. A  
SAN DIEGO, CA 92109

ART NEILL  
ATTORNEY AT LAW  
UTILITY CONSUMERS' ACTION NETWORK  
3405 KENYON STREET, STE. 401  
SAN DIEGO, CA 92110

HAROLD GOTSCHALL  
TECHNOLOGY INSIGHTS  
6540 LUSK BLVD., STE. C-106  
SAN DIEGO, CA 92121  
FOR: NGK INSULATORS, LTD.

MARCIE A. MILNER  
SHELL ENERGY NORTH AMERICA (US), L.P.  
4445 EASTGATE MALL, STE. 100  
SAN DIEGO, CA 92121

CENTRAL FILES  
SAN DIEGO GAS AND ELECTRIC COMPANY  
8330 CENTURY PARK COURT, CP31E  
SAN DIEGO, CA 92123

HANNON RASOOL  
ADMIN. - CALIF. REGULATORY AFFAIRS  
SAN DIEGO GAS & ELECTRIC COMPANY  
8330 CENTURY PARK CT. CP32D  
SAN DIEGO, CA 92123

ALLEN FREIFELD  
VIRIDITY ENERGY, INC.  
16870 WEST BERNARDO DRIVE, ST. 400  
SAN DIEGO, CA 92127

LAURA MANZ  
VIRIDITY ENERGY, INC.  
16870 WEST BERNARDO DR., STE. 400  
SAN DIEGO, CA 92127  
FOR: VIRIDITY ENERGY, INC.

STEPHEN LOWE  
PRESIDENT AND AGENT  
EAGLE CREST ENERGY COMPANY  
74-199 EL PASEO, STE. 204  
PALM DESERT, CA 92260  
FOR: EAGLE CREST ENERGY COMPANY

ROND DICKERSON  
PO BOX 3751  
CLOVIS, CA 93613

EVELYN KAHL  
ALCANTAR & KAHL, LLP  
33 NEW MONTGOMERY STREET, SUITE 1850  
SAN FRANCISCO, CA 94015

SUE MARA  
CONSULTANT  
RTO ADVISORS, LLC  
164 SPRINGDALE WAY  
REDWOOD CITY, CA 94062  
FOR: ALLIANCE FOR RETAIL ENERGY MARKETS

MARC D. JOSEPH  
ATTORNEY AT LAW  
ADAMS BROADWELL JOSEPH & CARDOZO  
601 GATEWAY BLVD. STE 1000  
SOUTH SAN FRANCISCO, CA 94080

JEANNE M. SOLE  
CITY AND COUNTY OF SAN FRANCISCO  
CITY HALL, ROOM 234  
1 DR. CARLTON B. GOODLET PLACE  
SAN FRANCISCO, CA 94102-4682

ERIC CUTTER  
ENERGY AND ENVIRONMENTAL ECONOMIC  
101 MONTGOMERY STREET, SUITE 1600  
SAN FRANCISCO, CA 94104

FELICIA L. BELLOWS  
TORRESOL ENERGY  
100 MONTGOMERY STREET, STE. 2190  
SAN FRANCISCO, CA 94104

FLORIAN SCHUBERT  
RENEWABLE ANALYTICS, LLC  
44 MONTGOMERY ST., STE. 3055  
SAN FRANCISCO, CA 94104

KAREN TERRANOVA  
ALCANTAR & KAHL  
33 NEW MONTGOMERY STREET, SUITE 1850  
SAN FRANCISCO, CA 94105

KEVIN HIETBRINK  
PACIFIC GAS AND ELECTRIC COMPANY  
77 BEALE ST., MC B9A  
SAN FRANCISCO, CA 94105

LUCY FUKUI  
PACIFIC GAS AND ELECTRIC COMPANY  
77 BEALE ST., MC B9A  
SAN FRANCISCO, CA 94105

STEVE HAERTLE  
PACIFIC GAS AND ELECTRIC COMPANY  
77 BEALE STREET, MC B9A  
SAN FRANCISCO, CA 94105

STEVE HIETBRINK  
PACIFIC GAS AND ELECTRIC COMPANY  
77 BEALE STREET, MC B9A  
SAN FRANCISCO, CA 94105

DEBORAH N. BEHLES  
GOLDEN GATE UNIVERSITY SCHOOL OF LAW  
536 MISSION STREET  
SAN FRANCISCO, CA 94105-2968

ALAN WALTNER  
LAW OFFICES OF ALAN WALTNER  
779 DOLORES STREET  
SAN FRANCISCO, CA 94110

MONICA A. SCHWEBS  
BINGHAM MCCUTCHEN LLP  
THREE EMBARCADERO CENTER  
SAN FRANCISCO, CA 94111

IRENE K. MOOSEN  
ATTORNEY AT LAW  
LAW OFFICE OF IRENE K. MOOSEN  
53 SANTA YNEZ AVENUE  
SAN FRANCISCO, CA 94112

STACEY REINECCIUS  
POWERGETICS INC.  
2027 MARKET STREET, APT 6  
SAN FRANCISCO, CA 94114-1353

CALIFORNIA ENERGY MARKETS  
425 DIVISADERO STREET, SUITE 303  
SAN FRANCISCO, CA 94117

BRIAN CHERRY  
PACIFIC GAS AND ELECTRIC COMPANY  
PO BOX 770000, B10C  
SAN FRANCISCO, CA 94177

EILEEN COTRONEO  
PACIFIC GAS AND ELECTRIC COMPANY  
PO BOX 770000, MC B9A  
SAN FRANCISCO, CA 94177

PATTI LANDRY  
REGULATORY ANALYST  
PACIFIC GAS & ELECTRIC COMPANY  
PO BOX 770000, MC B39A  
SAN FRANCISCO, CA 94177

DANIEL CHIA  
DEPUTY DIR. - GOV'T AFFAIRS  
SOLARCITY  
3055 CLEARVIEW WAY  
SAN MATEO, CA 94402

CHRIS KING  
CHIEF REGULATORY OFFICER  
EMETER CORPORATION  
2215 BRIDGEPOINTE PARKWAY, STE. 300  
SAN MATEO, CA 94404

FARSHID ARMAN  
SIEMENS TTB  
1995 UNIVERSITY AVE., STE. 375  
BERKELEY, CA 94549

AVIS KOWALEWSKI  
CALPINE CORPORATION  
4160 DUBLIN BLVD, SUITE 100  
DUBLIN, CA 94568

SARAH BESERRA  
CALIFORNIA REPORTS  
39 CASTLE HILL CT  
VALLEJO, CA 94591

JESSIE BAIRD  
EARTHJUSTICE  
426 17TH STREET, 5TH FLOOR  
OAKLAND, CA 94612

ANDY KATZ  
SIERRA CLUB CALIFORNIA  
2150 ALLSTON WAY, STE. 400  
BERKELEY, CA 94704

ARMANDO VIRAMONTES  
LAWRENCE BERKELEY NATIONAL LABORATORY  
1 CYCLOTRON RD., MS 65, BLDG 65, RM 102  
BERKELEY, CA 94720

JULIETTE ANTHONY  
678 BLACKBERRY LANE  
SAN RAFAEL, CA 94903

BARRY F. MCCARTHY  
ATTORNEY  
MCCARTHY & BERLIN, LLP  
100 W. SAN FERNANDO ST., SUITE 501  
SAN JOSE, CA 95113

C. SUSIE BERLIN  
ATTORNEY AT LAW  
MC CARTHY & BERLIN, LLP  
100 W SAN FERNANDO ST., STE 501  
SAN JOSE, CA 95113

JOY A. WARREN  
MODESTO IRRIGATION DISTRICT  
1231 11TH STREET  
MODESTO, CA 95354

CALIFORNIA ISO  
250 OUTCROPPING WAY  
FOLSOM, CA 95630

BRIAN THEAKER  
NRG ENERGY  
3161 KEN DEREK LANE  
PLACERVILLE, CA 95667

FRANCIS TAYLOR  
ENERSYS, INC.  
3417 RABEN WAY  
CAMERON PARK, CA 95682

ALLISON C. SMITH  
ATTORNEY  
STOEL RIVES LLP  
500 CAPITOL MALL, SUITE 1600  
SACRAMENTO, CA 95814

JIM METROPULOS  
SR. ADVOCATE  
SIERRA CLUB CALIFORNIA  
801 K STREET, SUITE 2700  
SACRAMENTO, CA 95814

JOHN SHEARS  
CEERT  
1100 11TH STREET, SUITE 311  
SACRAMENTO, CA 95814

KEVIN WOODRUFF  
WOODRUFF EXPERT SERVICES  
1100 K STREET, SUITE 204  
SACRAMENTO, CA 95814

SCOTT BLAISING  
BRAUN BLAISING MCLAUGHLIN P.C.  
915 L STREET, SUITE 1270  
SACRAMENTO, CA 95814

RONALD LIEBERT  
ATTORNEY AT LAW  
ELLISON SCHNEIDER & HARRIS LLP  
2600 CAPITOL AVENUE, STE. 400  
SACRAMENTO, CA 95816

LYNN HAUG  
ELLISON, SCHNEIDER & HARRIS L.L.P.  
2600 CAPITOL AVENUE, SUITE 400  
SACRAMENTO, CA 95816-5931

KEVIN SNYDER  
HDR/DTA  
2379 GATEWAY OAKS DRIVE, STE. 200  
SACRAMENTO, CA 95833

ANN L. TROWBRIDGE  
DAY CARTER & MURPHY LLP  
3620 AMERICAN RIVER DRIVE, SUITE 205  
SACRAMENTO, CA 95864

ELIZABETH W. HADLEY  
RESOURCE PLANNER  
REDDING ELECTRIC UTILITY  
777 CYPRESS AVENUE  
REDDING, CA 96001

CALIFORNIA PACIFIC ELECTRIC COMPANY, LLC  
933 ELOISE AVENUE  
SOUTH LAKE TAHOE, CA 96150

ROSS VAN NESS  
ALCANTAR & KAHL  
1300 SW FIFTH AVE., STE. 1750  
PORTLAND, OR 97201

NATE SANDVIG  
SITE DEVELOPER  
ENXCO - AN EDF ENERGIES NOUVELLES CO.  
517 SW 4TH AVENUE, STE. 300  
PORTLAND, OR 97204

WILLIAM H. HOLMES  
STOEL RIVES LLP  
900 SW FIFTH AVENUE, SUITE 2600  
PORTLAND, OR 97204

CATHIE ALLEN  
REGULATORY MGR.  
PACIFICORP  
825 NE MULTNOMAH, SUITE 2000  
PORTLAND, OR 97232

MARY WIENCKE  
PACIFICORP  
825 N. E. MULTNOMAH, SUITE 1800  
PORTLAND, OR 97232

JIM HICKS  
OREGON PUBLIC UTILITIES COMMISSION  
PO BOX 2148  
SALEM, OR 97308-2148

SHAUN LOGUE  
BROOKFIELD RENEWABLE POWER, INC.  
480 DE LA CITE BLVD.  
GATINEAU, PQ J8T 8R3  
CANADA

MARY C. HEMMINGSEN  
BROOKFIELD RENEWABLE POWER, INC.  
STE. 458, BENTALL 5, 550 BURRARD STREET  
VANCOUVER, BC V6C 2B5  
CANADA

**State Service**

---

MERIDETH STERKEL  
CALIFORNIA PUBLIC UTILITIES COMMISSION  
EMAIL ONLY  
EMAIL ONLY, CA 00000

ALOKE GUPTA  
CALIF PUBLIC UTILITIES COMMISSION  
INFRASTRUCTURE PLANNING AND PERMITTING B  
AREA 4-A  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

AMY C. YIP-KIKUGAWA

AUDREY LEE

CALIF PUBLIC UTILITIES COMMISSION  
EXECUTIVE DIVISION  
ROOM 5024  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

CALIF PUBLIC UTILITIES COMMISSION  
EXECUTIVE DIVISION  
ROOM 5307  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

CHLOE LUKINS  
CALIF PUBLIC UTILITIES COMMISSION  
ELECTRICITY PLANNING & POLICY BRANCH  
ROOM 4101  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

CHRISTOPHER R VILLARREAL  
CALIF PUBLIC UTILITIES COMMISSION  
POLICY & PLANNING DIVISION  
ROOM 5119  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

DAVID PECK  
CALIF PUBLIC UTILITIES COMMISSION  
ENERGY COST OF SERVICE & NATURAL GAS BRA  
ROOM 4108  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

DEVLA SINGH  
CALIF PUBLIC UTILITIES COMMISSION  
POLICY & PLANNING DIVISION  
ROOM 5119  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

EDWARD HOWARD  
CALIF PUBLIC UTILITIES COMMISSION  
POLICY & PLANNING DIVISION  
ROOM 5119  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

FARZAD GHAZZAGH  
CALIF PUBLIC UTILITIES COMMISSION  
ELECTRICITY PLANNING & POLICY BRANCH  
ROOM 4102  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

JASON SIMON  
CALIF PUBLIC UTILITIES COMMISSION  
PROCUREMENT STRATEGY AND OVERSIGHT BRANC  
AREA 4-A  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

MICHAEL COLVIN  
CALIF PUBLIC UTILITIES COMMISSION  
EXECUTIVE DIVISION  
ROOM 5212  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

RAHMON MOMOH  
CALIF PUBLIC UTILITIES COMMISSION  
EXECUTIVE DIVISION  
ROOM 5206  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214  
FOR: DRA

REBECCA TSAI-WEI LEE  
CALIF PUBLIC UTILITIES COMMISSION  
PROCUREMENT STRATEGY AND OVERSIGHT BRANC  
AREA 4-A  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

ROBERT LEVIN  
CALIF PUBLIC UTILITIES COMMISSION  
ELECTRICITY PRICING AND CUSTOMER PROGRAM  
ROOM 4102  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214  
FOR: DRA

THOMAS ROBERTS  
CALIF PUBLIC UTILITIES COMMISSION  
ELECTRICITY PRICING AND CUSTOMER PROGRAM  
ROOM 4108  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

WENDY AL-MUKDAD  
CALIF PUBLIC UTILITIES COMMISSION  
INFRASTRUCTURE PLANNING AND PERMITTING B  
AREA 4-A

AVTAR BINING  
CALIFORNIA ENERGY COMMISSION  
1516 9TH STREET, MS-43  
SACRAMENTO, CA 95814-5512

505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3214

PRAMOD P. KULKARNI  
CALIFORNIA ENERGY COMMISSION  
1516 9TH STREET, MS 20  
SACRAMENTO, CA 95814-5512