

PUBLIC UTILITIES COMMISSION  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



CALIFORNIA ENERGY COMMISSION  
1516 NINTH STREET  
SACRAMENTO, CA 95814-5512



February 7, 2013

Steve Berberich  
California Independent System Operator  
President and Chief Executive Officer  
P.O. Box 639014  
Folsom, CA 95763-9014  
*Transmitted electronically*

**Re: Base Case and Alternative Renewable Resource Portfolios for the  
CAISO 2013-2014 Transmission Planning Process**

Dear Mr. Berberich:

This letter represents the formal transmittal of the California Energy Commission and the California Public Utilities Commission's recommended renewable resource portfolios for the CAISO's 2013-2014 Transmission Planning Process (TPP). This fulfills our ongoing commitment under the May 2010 Memorandum of Understanding to ensure the coordination of the Agencies. This year's renewable resource portfolios demonstrate the tremendous progress made towards meeting California's 33% Renewable Portfolio Standard (RPS) mandate. The renewable net short energy calculation has dropped from 45,000 GWh to 32,000 GWh, a reduction of nearly 30%. Thousands of megawatts of clean, renewable generation from both small and large-scale generators interconnected to California's grid in 2012, with an increasing amount of renewable generation expected to come online over the next several years.

As with the 2012-2013 TPP, we have identified the "commercial interest" portfolio as the appropriate base case for the CAISO to study in its 2013-2014 TPP since it represents the most likely path of renewable development in the future. The "commercial interest" portfolio heavily weights projects with an executed or approved power purchase agreement and data adequacy for a major siting application. We also highly recommend that the CAISO study the following two alternative portfolios in its 2013-2014 TPP: (1) an "environmental" portfolio, which heavily weights the positive environmental attributes of projects and (2) a "high-

distributed generation (DG)" portfolio. DG is identified as solar photovoltaic projects less than 20 MW that meet a "no backflow" criterion of 8,760 hours per year at the substation level.

In addition to the updates based on new data from the August 2012 Project Development and Status Reports filed by the Investor-Owned Utilities with the CPUC, the portfolios reflect major updates to: (1) the renewable net short calculation, (2) the environmental scores for some projects in the Desert Renewable Energy Conservation Plan, (3) the available capacity on existing transmission with and without minor upgrades to reflect projects that have recently come online, (4) the capacity values for biogas projects, with an increase from 0% to 60%; (5) the projects in the Riverside East Competitive Renewable Energy Zone (CREZ) to include projects from the Palm Springs CREZ. The portfolios also include forecasts to reflect the distributed bioenergy requirements promulgated by Senate Bill (SB) 1122.

The CPUC and Energy Commission utilized a portfolio review process that allowed for robust stakeholder participation. Initial versions of the portfolios were subject to review and comment in the CPUC's Long Term Procurement Plan proceeding. The CPUC and Energy Commission also hosted a workshop on December 19, 2012 to present the portfolios to stakeholders. Many stakeholders participated in the meeting and sixteen stakeholders filed written comments on the proposed portfolios. In contrast to last year, the comments were less extensive, largely consisting of recommendations to improve the assumptions used in the RPS calculator as well as requests for technical clarifications. No changes were made as a result of the latest round of comments, but the CPUC and Energy Commission do address the concerns raised in comments, providing a response as to why no changes were made and what assumptions will be reviewed in advance of the 2014 portfolios. The response to the comments will be available at: [http://www.energy.ca.gov/2013\\_energypolicy/documents/](http://www.energy.ca.gov/2013_energypolicy/documents/) and <http://www.cpuc.ca.gov/PUC/energy/Procurement/LTPP/2012+LTPP+Tools+and+Spreadsheets.htm>.

The CPUC and Energy Commission acknowledge that in adopting these portfolios the CAISO may need to give further consideration to well-advanced generation projects located in Nevada being connected to the Valley Electric transmission system. This may be necessary to ensure those projects are reflected on a comparable basis to discounted core projects in California, addressing differences in generation permitting practices between the two states.

We appreciate the cooperative nature of the discussions regarding the 2013-2014 TPP and look forward to working collaboratively with CAISO staff to

continue improving the process and implementing any changes in the early stages of the 2014-2015 Transmission Planning Process. If you have any questions about the details of the scenarios, please contact Carlos Velasquez at 415-703-1124 or [carlos.velasquez@cpuc.ca.gov](mailto:carlos.velasquez@cpuc.ca.gov) or Roger Johnson at 916-654-5100 or [roger.johnson@energy.ca.gov](mailto:roger.johnson@energy.ca.gov).

Sincerely,



Michael R. Peevey  
President, CPUC



Robert B. Weisenmiller  
Chair, CEC



Michel P. Florio  
Commissioner, CPUC

Cc. Mark Ferron, Commissioner CPUC  
Paul Clanon, CPUC Executive Director  
Edward Randolph, CPUC Energy Division Director  
Keith Casey, CAISO VP for Market and Infrastructure Development  
Karen Edson, CAISO VP for Policy and Client Services  
Robert Oglesby, Energy Commission Executive Director  
Roger Johnson, Energy Commission's Siting, Transmission, and  
Environmental Protection Division Deputy Director

Enclosure

## Transmission Summary by Technology (MW)

Total Out-of-State Renewable Generation	12,600	12,600	12,600
	Base	Base	Base
Scenario Name	Commercial	Environmental	High DG
Load	288,854.0	288,854.0	288,854.0
Inc EE	19,543.0	19,543.0	19,543.0
Inc PV	2,158.8	2,158.8	2,158.8
Inc CHP	-	-	-
Net Short (GWh)	32,184	32,184	32,184
	Portfolio Totals (MW)	Portfolio Totals (MW)	Portfolio Totals (MW)
Discounted Core	10,383	9,744	13,504
Commercial Non-Core	0	0	0
Generic	1,571	3,112	0
<b>Total</b>	<b>11,954</b>	<b>12,855</b>	<b>13,504</b>
Biogas	136	139	133
Biomass	57	237	57
Geothermal	648	211	211
Hydro	-	21	-
Large Scale Solar PV	5,535	5,589	3,816
Small Solar PV	2,034	3,494	6,263
Solar Thermal	1,402	1,194	1,174
Wind	2,142	1,971	1,850
<b>Total</b>	<b>11,954</b>	<b>12,855</b>	<b>13,504</b>
<b>New Transmission Segments</b>	<b>Merced - 1</b>	<b>Merced - 1</b>	<b>Merced - 1</b>
	Kramer - 1		
	Los Banos - 1		

# Transmission Summary by CREZ (MW)

Total Out-of-State Renewable Generation	12,600	12,600	12,600
	Base	Base	Base
Scenario Name	Commercial	Environmental	High DG
Net Short (GWh)	32,184	32,184	32,184
	Portfolio Totals (MW)	Portfolio Totals (MW)	Portfolio Totals (MW)
Discounted Core	10,383	9,744	13,504
Commercial Non-Core	0	0	0
Generic	1,571	3,112	0
<b>Total</b>	<b>11,954</b>	<b>12,855</b>	<b>13,504</b>
<b>CREZ</b>			<b>MW</b>
Alberta	450	450	450
Arizona	550	550	550
Baja	-	-	-
Barstow	-	-	-
British Columbia	-	-	-
Carrizo North	-	-	-
Carrizo South	900	900	300
Colorado	-	-	-
Cuyama	-	-	-
Distributed Solar - PG&E	984	1,529	3,449
Distributed Solar - SCE	565	1,255	2,345
Distributed Solar - SDGE	143	190	157
Distributed Solar - Other	-	-	-
Fairmont	-	-	-
Imperial	1,700	860	860
Inyokern	-	-	-
Iron Mountain	-	-	-
Kramer	762	62	62
Lassen North	-	-	-
Lassen South	-	-	-
Montana	-	-	-
Mountain Pass	645	645	645

Nevada C	316	316	316
Nevada N	-	-	-
New Mexico	-	-	-
NonCREZ	443	623	443
Northwest	104	104	104
Owens Valley	-	-	-
Palm Springs	-	-	-
Pisgah	-	-	-
Remote DG (Brownfield) - PG&E	-	-	-
Remote DG (Brownfield) - SCE	-	-	-
Remote DG (Brownfield) - SDGE	-	-	-
Remote DG (Brownfield) - Other	-	-	-
Remote DG (Greenfield) - PG&E	-	-	-
Remote DG (Greenfield) - SCE	-	-	-
Remote DG (Greenfield) - SDGE	-	-	-
Remote DG (Greenfield) - Other	-	-	-
Riverside East	964	1,064	964
Round Mountain	-	34	-
San Bernardino - Baker	-	-	-
San Bernardino - Lucerne	42	42	42
San Diego North Central	-	-	-
San Diego South	-	-	-
Santa Barbara	-	-	-
Solano	200	-	-
Tehachapi	2,176	2,306	2,176
Twentynine Palms	-	-	-
Utah-Southern Idaho	-	-	-
Victorville	-	-	-
Westlands	148	1,285	148
Wyoming	-	-	-
Central Valley North	25	173	25
El Dorado	407	407	407
Merced	62	62	62
Los Banos	370	-	-
<b>Total</b>	<b>11,954</b>	<b>12,855</b>	<b>13,504</b>