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California Energy Commission
DOCKETED
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# BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE STATE OF CALIFORNIA

1516 NINTH STREET, SACRAMENTO, CA 95814

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APPLICATION FOR CERTIFICATION

Docket No. 11-AFC-01

Rob Simpson, Helping Hand Tools and Mr. Powers' Response to Pio Pico PMPD Alternatives Comments

Helping Hand Tools and Mr. Bill Powers submits the following comments to Pio Pico PMPD Alternatives comments located on pages 3-9 through 3-10.

1. Mr. Vidaver stated that the PPEC would provide a number of services that cannot be provided by rooftop solar, including the ability to change output over a wide range within a few minutes, in order to meet load-following needs and provide frequency response in the San Diego area. (Ex 206.)

The CEC denied an application for a 100 MW natural gas-fired peaking gas turbine plant, the Chula Vista Energy Upgrade Project (CVEUP) in San Diego County, in June 2009. The justification for the CVEUP project, "to meet the need for additional electric generation capacity, energy, and ancillary services in Southern California and, in particular, quick-start peaking capacity needs identified . . . for the San Diego Local Capacity Requirements Area," is the same justification put forth by the CEC for the Pio Pico project. The CVEUP application was

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<sup>&</sup>lt;sup>1</sup> CVEUP FSA, p. 3-1, August 2008.

denied in part because the CEC opined that rooftop PV could potentially achieve the same objectives for comparable cost.<sup>2</sup>

The June 2009 CVEUP decision implies that any future applications for gas-fired generation in California should be measured against using distributed PV to meet the demand. Yet the CEC FSA does not even consider distributed solar. Only natural gas fired turbines or internal combustion engines are considered. The final CEC decision in the CVEUP proceeding states:<sup>3</sup>

"Photovoltaic arrays mounted on existing flat warehouse roofs or on top of vehicle shelters in parking lots do not consume any acreage. The warehouses and parking lots continue to perform those functions with the PV in place. (Ex. 616, p. 11.)... Mr. Powers (expert for intervenor) provided detailed analysis of the costs of such PV, concluding that there was little or no difference between the cost of energy provided by a project such as the CVEUP (gas turbine peaking plant) compared with the cost of energy provided by PV. (Ex. 616, pp. 13 – 14.)... PV does provide power at a time when demand is likely to be high—on hot, sunny days. Mr. Powers acknowledged on cross-examination that the solar peak does not match the demand peak, but testified that storage technologies exist which could be used to manage this. The essential points in Mr. Powers' testimony about the costs and practicality of PV were uncontroverted."

The CEC in the Pio Pico proceeding considers the 2009 CVEUP denial to be irrelevant because the CEC did not administratively identify CVEUP as "precedent-setting." None of the CEC participants at the Pio Pico hearing could confirm that they were familiar with the conclusions in the CVEUP decision.

The failure of the CEC to give any weight to prior CEC decisions that the CEC itself does not officially identify as precedent setting is contrary to that legal framework.

SDG&E has over 700 MW of existing combustion turbines under its control. Nearly 200 MW of this capacity is on land leased by the third-party owner, NRG, from SDG&E. The lease expires in 2013. SDG&E will not renew the lease that would allow nearly 200 MW of fully operational gas turbine capacity to continue serving the San Diego area at low cost relative to building and operating Pio Pico.

Peak demand in SDG&E territory has remained static for six summers (2006 – 2011). The peak load to date in SDG&E territory in 2012 of 4,300 MW is nearly 350 MW less than the 2010 peak of 4,643 MW. There is no evidence to support a finding that more peaking capacity is needed to meet increased demand.

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<sup>&</sup>lt;sup>2</sup> CEC, Chula Vista Energy Upgrade Project - Application for Certification (07-AFC-4) San Diego County, *Final Commission Decision*, June 2009.

<sup>&</sup>lt;sup>3</sup> *Id.* at pp. 29-30.

2. Mr. Vidaver further stated that the output of solar resources is highly variable.

This is factually incorrect as it relates to distributed PV resources. Distributed PV is predictably available in aggregate on days with scattered clouds, when the output of multiple geographically-dispersed PV systems is combined. This output characteristic of multiple-geographically dispersed distributed PV systems is shown in Figure 1.

The San Diego area already has at least 15,000 distributed PV systems.<sup>5</sup> The output from these dispersed PV systems on days with scattered clouds is reliable in aggregate due to the dispersion of these PV systems over hundreds of square kilometers of developed areas in San Diego County.

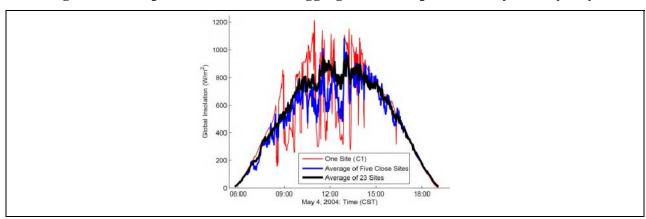


Figure 1. Multiple PV Sites Smooth Aggregate PV Output on Partly Cloudy Days

There is no need for additional fast response peaking units to address distributed PV output variability. Distributed PV output is either a clear day bell curve, a partly cloudy day "flattened" bell curve as shown in Figure 1, or a cloudy day with no output. None of these scenarios require fast response output from peaking units.

3. If the PPEC were not built, there would be less quick-start, generating assets that can compensate for the intermittency of solar and wind power generation facilities. (Ex. 200, p. 6-17.)

Distributed PV has no intermittency issues that would require quick-start resources. Even if all potential wind power in the San Diego region was fully developed, the existing fleet of 700 MW of combustion turbines in SDG&E territory could readily address fluctuations in wind output during high demand summer days.

The CEC fails to state that demand already changes rapidly in SDG&E territory due to widely varying load over the course of a 24-hour day. Figure 2 is a bar chart showing hourly demand in

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<sup>&</sup>lt;sup>4</sup> Lawrence Berkeley National Laboratory, *Implications of Wide-Area Geographic Diversity for Short-Term Variability of Solar Power*, September 2010, p. 25. See: <a href="http://eetd.lbl.gov/ea/emp/reports/lbnl-3884e.pdf">http://eetd.lbl.gov/ea/emp/reports/lbnl-3884e.pdf</a>.

<sup>&</sup>lt;sup>5</sup> J.C Thomas – SDG&E, San Diego/Solar Stakeholder Collaboration Rates & Educational Overview, January 25 & 27. 2012, p. 48.

SDG&E service territory over 24 hours on September 27, 2010, the day that SDG&E recorded the highest one-hour demand in 2010. Demand increased nearly 450 MW per hour from 10 am to 11 am on September 27, 2010. Demand declined nearly 500 MW per hour from 10 pm to 11pm. SDG&E territory is already equipped with sufficient peaking resources to address rapid changes in load.

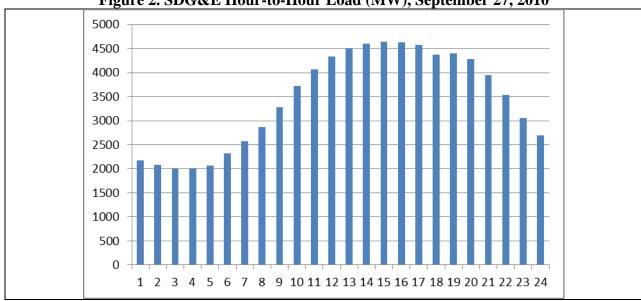


Figure 2. SDG&E Hour-to-Hour Load (MW), September 27, 2010

The 700 MW of existing peaking gas turbine resources that SDG&E has at its disposal now far exceed the 150 to 206 MW of wind power that it has under contract, or has applied to contract for, in SDG&E territory. There is one operational wind farm in San Diego County, the 50 MW Kumeyaay wind farm in Boulevard. SDG&E recently received approval of a power purchase agreement with Sempra Generation for between 100 and 156 MW of wind power from Baja California, and with Ocotillo Wind for between 265 and 315 MW of wind power Imperial County. 7,8 The Baja wind power would be interconnected directly to the SDG&E grid near Jacumba. 700 MW of existing peaking gas turbine capacity can easily handle any output variability from up to 571 MW of wind power.

4. Solar and wind technologies increasingly are playing an important role in meeting the state's energy demands. At this time, however, those resources cannot replace facilities such as the PPEC.

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<sup>&</sup>lt;sup>6</sup> California Independent System Operator OASIS database, September 27, 2010 "System Demand - Actual": http://oasis.caiso.com/mrtu-

oasis/home.jsp?doframe=true&serverurl=http%3a%2f%2farptp10%2eoa%2ecaiso%2ecom%3a8000&volume=OASIS

SDG&E Advice Letter 2247-E (U 902-E), California Public Utilities Commission, Subject: Request for Approval of Renewable Power Purchase with Energía Sierra Juárez U.S., LLC, April 19, 2011.

<sup>&</sup>lt;sup>8</sup> CPUC Resolution E-4458, SDG&E requests approval of a renewable energy power purchase agreement, as amended, with Ocotillo Express LLC, January 12, 2012.

The CEC stated in the 2009 decision denying the CVEUP project that distributed solar could in fact potentially replace a quick-response gas turbine. The CEC in the Pio Pico PMPD simply ignores the 2009 CVEUP decision.

For the above mentioned reasons Helping Hand Tools respectfully requests this committee to deny the application for certification.

Respectfully submitted on August 27, 2012.

## /s/ Gretel Smith

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Staff Counsel for Helping Hand Tools and
Attorney for Rob Simpson



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## APPLICATION FOR CERTIFICATION FOR THE PIO PICO ENERGY CENTER PROJECT

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## Docket No. 11-AFC-01 PROOF OF SERVICE

(Revised 7/10/2012)

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## **DECLARATION OF SERVICE**

Helping I docume www.er	el Smith, declare that on, _August 27, 2012, I served and filed a copy of the attached Rob Simpson, Hand Tools and Mr. Powers' Response to Pio Pico PMPD Alternatives Comments, datedAugust 27,, 2012. This not is accompanied by the most recent Proof of Service list, located on the web page for this project at: <a href="mailto:nergy.ca.gov/sitingcases/piopico/index.html">nergy.ca.gov/sitingcases/piopico/index.html</a> .  Summent has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the
Commis	ssion's Docket Unit or Chief Counsel, as appropriate, in the following manner:
(Check all that Apply)	
For service to all other parties:	
<u>X</u>	Served electronically to all e-mail addresses on the Proof of Service list;
_	Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses <b>NOT</b> marked "e-mail service preferred."
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For filing with the Docket Unit at the Energy Commission:	
X	by sending one electronic copy to the e-mail address below (preferred method); OR
	by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:
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OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:	
_	Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:
	California Energy Commission Michael J. Levy, Chief Counsel 1516 Ninth Street MS-14 Sacramento, CA 95814 michael.levy@energy.ca.gov
I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.	

/s/ Gretel Smith
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