

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

Order Instituting Rulemaking to Integrate and  
Refine Procurement Policies and Consider  
Long-Term Procurement Plans

R.10-05-006

**MOTION OF  
PACIFIC GAS AND ELECTRIC COMPANY (U 39-E) AND  
SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E)  
TO STRIKE PORTIONS OF THE TESTIMONY SUBMITTED BY  
WOMEN'S ENERGY MATTERS AND PACIFIC ENVIRONMENT**

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May 10, 2011

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WOMEN’S ENERGY MATTERS AND PACIFIC ENVIRONMENT**

Pacific Gas and Electric Company (“PG&E”) and Southern California Edison Company (“SCE”) respectfully submit this motion pursuant to Rule 11.1 of the California Public Utilities Commission’s (“Commission’s”) Rules of Practice and Procedure to strike the below-identified portions of the prepared written testimony of Barbara George on behalf of Women’s Energy Matters (“WEM”) and of Bill Powers on behalf of Pacific Environment (“PE”) as beyond the scope of this proceeding as defined in the *Order Instituting Rulemaking*, dated May 13, 2010 (“OIR”) and the *Assigned Commissioner’s and Administrative Law Judge’s Scoping Memo for Track II Bundled Procurement Plans*, dated January 13, 2011 (“Scoping Memo”).

**I. DISCUSSION**

The OIR defined the issues to be resolved in this proceeding as “procurement-related issue(s) not already considered in any other procurement related dockets in Table 1.” (OIR, p. 18.) To be included in the scope of the proceeding, the issue must also: “(1) Materially impact procurement policies, practices and/or procedures; (2) Be narrowly defined; and (3) Demonstrate consistency with one or more of the LTPP proceeding goals set forth in R.08-02-007. Therefore issues that do not meet this standard *are not* in the scope of the proceeding.” (OIR, p. 18.)

To be admitted in evidence, WEM and PE, as proponents of such evidence, must also demonstrate that the evidence is relevant to the proceeding. (Evid. Code § 350.) Evidence is relevant if it has “any tendency in reason to prove or disprove any disputed fact that is of consequence to the determination of the action.” (Evid. Code § 210.)

WEM and PE submitted prepared written testimony on issues that are **outside the scope of the proceeding and are therefore irrelevant.** Accordingly, PG&E and SCE request that certain portions of the WEM and PE testimony be stricken, as discussed in detail below.


**A. WEM’s Proposals to Close California Nuclear Power Plants and Replace Their Output with Other Resources Are Outside the Scope of This Proceeding.**

WEM’s Alternative Bundled Procurement Plan in testimony sponsored by Barbara George (hereinafter “WEM testimony”) proposes that the long-term procurement plans (“LTPP”) include preparation to shut down both Diablo Canyon Power Plant (“DCPP”) and San Onofre Nuclear Generating Station Unit Nos. 2 and 3 (“SONGS 2 & 3”) **due to seismic concerns, speculating, without an evidentiary basis,** about the recent earthquake and tsunami in Japan. (WEM testimony, pp. 8 - 10.) WEM’s unsupported assertions raise issues that are not within the scope of this docket and cannot be resolved in this proceeding.

First, WEM suggests that the events at the Fukushima Daiichi nuclear power complex provide the basis for the immediate shutdown of California’s nuclear facilities. However, the consideration of such an argument is **within the exclusive jurisdiction of the Nuclear Regulatory Commission** (“NRC”), not this Commission. It is well-established under the relevant case law that regulation of **nuclear safety, design, and operational issues at private power plants** is solely the province of the NRC under the Federal Atomic Energy Act.<sup>1/</sup> Any legitimate concerns WEM


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<sup>1/</sup> See, e.g., *Pacific Gas and Elec. Co. v. State Energy Resources and Development Commission*, 461 U.S. 190, 213 (1983) (establishing that where the stated purpose of the state regulation is nuclear safety, the law is preempted, regardless of whether there is an actual conflict with federal law); *English v. General Electric Company*, 496 U.S. 72, 85 (1990) (holding that state regulation of nuclear power plants also is preempted where the regulation

may have about the continued safety of DCPD and SONGS 2 & 3 operations can only be considered and addressed by the NRC. It is not yet clear what the scope of the NRC response to the earthquake and tsunami at the Fukushima Daiichi nuclear power plant will be, but it is very clear that they have the expertise and jurisdiction  to make those judgments.<sup>2/</sup>

Second, WEM's arguments concerning nuclear power are not "narrowly defined" as required by the OIR. (OIR, p. 18.) Instead, WEM seeks a broad inquiry into the safety and benefits of continued operation of California's nuclear facilities. These broad issues are not "narrowly defined."

Third, WEM mischaracterizes the impact on California nuclear facilities resulting from the California State Water Resources Board's ("Board's") policy, on once through cooling of generation facilities pursuant to Section 316(b) of the Federal Clean Water Act. (WEM, pp. 7-8.) The Board is reviewing the implications of changes to once through cooling of nuclear plants consistent with the policy it adopted under Section 316(b) and that review will not be completed in the time frame of this proceeding. It cannot be now determined what the result of that review will be but there is no reasonable basis to now presume that either of California's operating nuclear facilities will be shut down as a consequence of that review. More fundamentally, however, if WEM has concerns about the Board's once through cooling policies, it should raise them with the Board, not in this proceeding.

Fourth, WEM's concerns are clearly outside of Track II, which is limited to addressing the investor-owned utilities' ("IOUs") bundled s. Broad policy concerns about the future of

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has "some direct and substantial effect on the decisions made by those who build or operate nuclear facilities concerning radiological safety levels.").

<sup>2/</sup> WEM's claims that "neither earthquakes nor tsunamis" were explored during the licensing process for SONGS 2 & 3 or DCPD. (WEM testimony, p. 9.) This is untrue, which a review of the NRC's regulations that governed the licensing of nuclear power plants (10 CFR Part 50), or a review of the existing licenses of either SONGS 2 & 3 or DCPD would have indicated.

nuclear power in California are clearly outside the scope of the procurement products and processes at issue in the IOUs' bundled plans.

Accordingly, PG&E and SCE request the Commission to strike the following portions of WEM's testimony: Page 7 (beginning at "LTTP should include closure of nuclear power plants" through page 11 (end of the first paragraph); and page 14 ("Additional issues related to nuclear power plants shutdown") through page 16, second paragraph. The portions of the WEM testimony PG&E and SCE request to be stricken are included in Attachment A.

**B. Interconnection of Generating Facilities To the IOUs' Distribution Systems Is Outside The Scope of This Proceeding.**

WEM also proposes to expand this proceeding to address revisions to Rule 21 which addresses interconnection of generating facilities to the IOUs' distribution systems. Rule 21 interconnection issues are being considered by the Commission in another proceeding,<sup>3/</sup> as WEM admits. (WEM testimony, p. 13.) Further, the CPUC is in the process of reinstating the Rule 21 working group, which is reviewing various interconnection issues.

This interconnection of generators to the IOUs' distribution systems under Rule 21 is outside the scope of the proceeding and, therefore, PG&E and SCE request the Commission to strike the following portions of the WEM testimony: page 13, last paragraph and page 14, first and second paragraphs.

**C. The Terms And Conditions Of Procurement Contracts Are Outside The Scope of This Proceeding.**

WEM's testimony related to contracts terms used in the Renewables Portfolio Standard ("RPS") Program is being considered in other RPS proceedings. In particular, the Commission recently approved the IOUs' 2011 RPS Plans in Decision 11-04-030, including form RPS

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<sup>3/</sup> *Order Instituting Rulemaking Regarding Policies, Procedures and Rules for the California Solar Initiative, the Self-Generation Incentive Program and Other Distributed Generation Issues*, R.10-05-004 (filed May 6, 2010).

contracts, and will be considering the 2012 RPS Plans in R.08-08-009. The OIR listed the RPS docket R.08-08-009 and successor dockets, where RPS contract terms are considered, as proceedings that include issues that are outside of the scope of this proceeding. Because the terms and conditions of RPS contracts are clearly outside the scope of the proceeding, PG&E and SCE request the Commission to strike the following portions of the WEM testimony: page 14 (paragraph entitled “Resolve problems in contract language”).

**D. WEM’s Proposals Regarding Grid Maintenance are Outside The Scope of This Proceeding.**

WEM’s Alternative Bundled Procurement Plan would include “grid operational stability” proposals in this proceeding, including a proposal to “regularly wash[] saltwater residue off of key components at substations on weekends . . . .” (WEM testimony, p. 15.) Maintenance of the utility grid, including utility substations, is not an issue within the scope of the proceeding, as it is not a procurement policy issue. (OIR, p. 18 (limiting consideration of issues to “procurement related issues”).) Accordingly, PG&E and SCE request the Commission to strike the following portions of WEM’s testimony: page 15, last two paragraphs (entitled “Grid operation stability”).

**E. The Commission Should Strike Energy Efficiency Program Proposals By WEM and PE.**

**1. Energy efficiency program proposals are outside the scope of this proceeding.**

Finally, both WEM’s and PE’s testimony contain proposals regarding the IOUs’ energy efficiency (“EE”) programs. WEM’s extensive proposals include programmatic proposals, tree planting, organization of PG&E’s department that manages PG&E’s EE programs, evaluation, measurement and verification (“EM&V”) of EE programs, cost recovery, and program targets. (WEM testimony, pp. 16 – 20.) PE’s testimony, sponsored by Bill Powers, also contains EE program proposals. (PE testimony, pp. 14-16.) The OIR states: “[w]e will not consider new EE

go on this proceeding.” (OIR, p. 12, fn. 22.) The OIR also lists the EE procurement related-dockets *and successor dockets* as the appropriate proceedings in which to address EE proposals and specifically provides that issues addressed in listed procurement proceedings are “not in the scope of the proceeding.” (OIR, p. 18, and Table 1, Section 2.) The IOUs’ current EE portfolios will be in place through at least 2013.<sup>4/</sup> The appropriate venue for EE proposals is the proceeding in which the Commission will consider the IOUs’ next EE funding applications, currently anticipated to be filed for the period beginning 2014. For this reason, PG&E and SCE respectfully request the Commission to strike the following testimony as out of the scope of this proceeding: WEM testimony, pages 16 – 21 (through paragraph 10); PE testimony (excerpted in Attachment B), pages 14-16.

**2. Several of WEM’s proposals were already considered by the Commission in energy efficiency proceedings.**

WEM’s EE proposals also should be stricken because it seeks to re-litigate issues it previously raised that were already considered by the Commission in dockets R.09-11-014, A.08-07-021, A.08-06-004, and R.09-01-019. The WEM proposals already considered by the Commission include WEM’s proposals to: (1) reduce the peak load with efficient Air Conditioning (“AC”) installations; (2) treat EE as a procurement resource; (3) adopt the ISO New England’s manual for measuring demand-side management resources; (4) establish an On-Bill Financing revolving fund for reduction of peak energy usage; (5) revise existing EM&V; and (6) revise the current method to recalculate EE goals.<sup>5/</sup> This proceeding should not provide an opportunity for WEM to re-litigate these issues.

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<sup>4/</sup> Assigned Commissioner Ruling (ACR) Regarding 2010-2012 Energy Efficiency Program Cycle, R.09-11-014 (Dec. 23, 2010).

<sup>5/</sup> See e.g. D.09-06-016, p. 30; D.10-09-034; and D.10-05-049.

In one such example, the Commission, in Decision 09-06-016, granted intervenor compensation to WEM for its contributions to Decision 08-09-040 adopting the California Long Term EE Strategic Plan, which included WEM’s proposals to link integrated demand-side management (“DSM”) with procurement and address peak load caused by AC usage. WEM also raised this issue in Rulemakings 08-07-021 and 09-11-014. In WEM’s testimony in this proceeding, WEM again comments on the contribution of EE/DSM offerings as a procurement resource and the use of peak reduction through efficient heating, ventilating and air conditioning (“HVAC”) in a manner similar to WEM’s prior contributions to the Strategic Plan Proceeding.

In a second example, WEM’s testimony proposes that the Commission “establish a revolving fund for On-Bill Financing of peak-reducing measures.” (WEM testimony, p. 19.) This proposal was already considered in the proceedings related to Decision 09-09-047.<sup>6/</sup> Finally, WEM’s testimony states that the IOUs inappropriately focus on shareholder incentives rather than “ensuring that EE can serve as a reliable resource, comparable to energy supplies.”<sup>7/</sup> This issue was previously considered by the Commission in R.09-01-019, where the Commission specifically considered issues relating to EE incentives within the context of that rulemaking. It is inappropriate for WEM to attempt to re-litigate EE incentives in this forum. For this reason, PG&E and SCE respectfully request the Commission to strike the following testimony as out of the scope of this proceeding: WEM testimony, pages 16 – 21 (through paragraph 10).

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<sup>6/</sup> D.09-09-047, p. 280. D.10-05-049 awarded WEM intervenor compensation for its participation in the proceedings leading to Decisions 09-05-037 and 09-09-04.

<sup>7/</sup> WEM testimony, p. 18.

## II. CONCLUSION

For the reasons set forth above, PG&E and SCE request the Commission to strike the portions of the WEM and PE testimony discussed above and included in Attachments A and B, and to exclude such documentation from the record in this proceeding.

PG&E is authorized to sign on behalf of SCE.

Respectfully submitted,

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By: \_\_\_\_\_ /s/  
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On Behalf of Pacific Gas and Electric Company  
and Southern California Edison Company

Dated: May 10, 2011

# **ATTACHMENT A**

**Excerpts From Testimony of Barbara George  
on Behalf of Women's Energy Matters**

Docket: : R.10-05-006  
Exhibit Number : \_\_\_\_\_  
Commissioner : Michael R. Peevey  
Admin. Law Judge : Peter Allen  
Witnesses : Barbara George  
: and Martin Homec

Order Instituting Rulemaking to Integrate  
and Refine Procurement Policies and  
Consider Long-Term Procurement Plans.

Rulemaking 10-05-006  
(Filed May 6, 2010)

**WOMEN'S ENERGY MATTERS  
TESTIMONY: WEM'S ALTERNATIVE  
BUNDLED PROCUREMENT PLAN  
FOR BUNDLED TRACK II**

May 4, 2011

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**LTPP should include closure of nuclear power plants**

In May 2010, California ordered a phaseout of once-through cooling (OTC) for power plants.

Initial reports included nuclear power plants in the ban:

State water regulators on Tuesday ordered coastal power plants to begin phasing out a cooling process that is blamed for killing billions of aquatic organisms every year. After a nine-hour public hearing, the five members of the state Water Resources Control Board voted unanimously to adopt regulations for 19 power plants that draw billions of gallons of ocean and estuary water each daily for cooling.

The board said the so-called "once-through" cooling process inadvertently traps a staggering number of fish, larvae and eggs each year, including an estimated 62,000 delta smelt — a species listed as threatened under the federal Endangered Species Act.

*In the case of Diablo Canyon, nearly 2.3 billion gallons of seawater — carrying an estimated 1.5 billion fish and crab larvae per year — are circulated through the cooling system each day. Many, if not all, of the larvae are killed by the 20-degree temperature increase or are eaten by barnacles and other crustaceans that line the cooling water pipes. The heated water has also altered the marine ecology of the plant's discharge cove.* "California water regulators adopt new rules for Diablo and other power plants," by Robin Hindery, AP; in May 5, 2010 San Luis Obispo Tribune <http://www.sanluisobispo.com/2010/05/04/1128067/diablo-canyon-cooling-regulations.html>

### **Prudent response to Fukushima requires shutdown of CA nuclear reactors**

The disaster at Fukushima Daiichi nuclear power complex in Japan is ongoing; Japanese authorities recently predicted that it will be the end of the year at least before the situation is even stabilized. This indicates that there is still a potential for radiation levels from several broken, leaking reactors and fuel pools to increase to the point that workers must suspend activities and leave the area, with unknown consequences.

The Fukushima tragedy is the third wakeup call in thirty years, proving beyond a doubt that nuclear power<sup>3</sup> is the greatest threat to the reliability of the electricity system, the viability of the economy, and indeed the survivability of the human race that the world has ever known.

Even the nuclear industry anticipates a need for evaluation and retrofits of California's nuclear power plants to incorporate "lessons learned" from Fukushima. WEM believes that a permanent shutdown is warranted based on reliability and economic considerations that are within the CPUC's jurisdiction; also to protect lives and preserve the gene pool.

It is incumbent on the Commission to begin preparing for a shutdown of Diablo Canyon and San Onofre nuclear reactors in either case. Both reactors sit on and near multiple faults capable of major earthquakes; both sit on oceanfront real estate where tsunamis are a possibility. The earth's tectonic plates can heave at any moment, without warning.

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<sup>3</sup> Nuclear power is also the breeding ground for nuclear weapons, because every nuclear reactor produces plutonium, the key ingredient for nuclear weapons. Technology for "reprocessing" nuclear spent fuel to extract plutonium is no secret; if a county has nuclear power it can readily manufacture bombs.

People can argue all day long that Fukushima will or won't be repeated in California, but the incredible fact remains that neither earthquakes nor tsunamis were explored during the licensing process for either San Onofre or Diablo! A leaked transcript of three NRC hearings on Earthquake and Emergency Planning, during the Diablo Canyon licensing process, finds the Commissioners discussing how to paper over the fact that they intended to license Diablo without studying earthquakes, just as they had done for San Onofre. NRC Chair Palladino declared, "[E]arthquakes are really no worse than fog or whatever" in that they may cause momentary delay<sup>4</sup>

One thing that is known for certain is that every nuclear accident has revealed design flaws and human shortcomings that were ignored or undreamed of in advance.<sup>5</sup>

*We should appreciate having the luxury of commencing orderly shutdown and decommissioning procedures rather than having to endanger workers and the public trying to obtain a partial shutdown under desperate emergency condition like in Fukushima and Chernobyl — facing decades of wrestling with unquiet reactors, and having to explain to former residents why vast regions will be uninhabitable for centuries.*

*Then there are the astronomical costs if anything goes wrong with nuclear power, which the industry managed to foist onto the public through the Price-Anderson Act capping the utilities' liability. In Japan, not only the power company but other major industries are now at risk. Food products are already embargoed, and people are wondering if they're willing to risk exposure to radioactivity from Japanese electronics and cars? Worldwide fears are so grave that Secretary of State Hilary Clinton and her Japanese counterpart recently pledged publicly to deny access to information, to promote "calm."<sup>6</sup>*

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<sup>4</sup> NRC transcripts of closed meetings 7/25/1984, 7/30/84, and 8/3/84.

<sup>5</sup> For a fairly comprehensive list of nuclear accidents in the US at commercial reactors, research facilities and weapons complexes, see <http://www.lutins.org/nukes.html>

<sup>6</sup> Having American and Japanese leaders publicly pledge to collude on censorship was a lamentable spectacle. But at least it provided a reference point for when we should quit believing public reports about Fukushima. This is perhaps preferable to the completely surreptitious decades-long tampering with radiation and mortality statistics in the U.S., and official downplaying of radiation dangers, which are described in the book *Deadly Deceit*, by Jay M. Gould and Benjamin Goldman, 1990, or the stonewalling by Soviet authorities of hundreds of thousands of deaths and degraded health for millions of people from Chernobyl and from explosions in a nuclear waste storage facility in the Urals Mountains near the town of Kyshtym in 1957.

**Ample resources exist to cover local reliability, resource adequacy or unexpected demand** WEMBPP ensures resource adequacy statewide and local reliability in all areas with power plant shutdowns, including gas or diesel OTC plants as well as nuclear power plants (“NPPs”). Our plan also provides plenty of power for potential increases in demand over the ten-year horizon, even beyond the 15% reserve requirement.

**Renewables.** There are renewables developers who would be delighted to have more business. Marin Energy Authority put out a Request for Proposals (RFP) in Jan. 2011 for 40 MW of power from within 200 miles of Marin; it received bids for 600 MW, all viable projects from developers with excellent track records. Clearly, there’s no shortage of power if utilities are willing to ask. These projects are expected to be up and running within the five-year window covered by WEMBPP; most can be online within two years.

**Conventional power.** The option exists for utilities to buy power through Power Purchase Agreements (“PPAs”) from newer combined cycle plants that have been underutilized.

**Demand resources and DG.** The number 1-2-3-4 options in WEMBPP’s recommended portfolio are demand resources — energy efficiency and demand response — as well as CHP and local solar DG. We mention these preferred resources last because IOUs and the Commission has up to now failed to fully appreciate their capabilities.

*The Commission can easily learn from the very successful experience of Sacramento Municipal Utility District (SMUD), which used demand resources — primarily energy efficiency — for replacement power, after precipitously shutting down its nuclear power plant, Rancho Seco, in 1989.<sup>7</sup> The owner of Three Mile Island (TMI) also solved its problem of replacement power with energy efficiency.*

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<sup>7</sup> The shutdown began with an unplanned outage following an incident at the plant. It never reopened, because the public subsequently voted for permanent closure and SMUD complied with the decision of its ratepayer-owners.

**Interconnection and contract issues**

The tariff that sets metering and operating standards for self-generation facilities interconnected to the utility distribution system, Rule 21, issues must be incorporated in the long-term procurement plans. Although the Commission regulation of interconnection of independent power producers with the regulated utilities electric systems is being addressed in other proceedings (R.10-05-004, et al.), it must also be considered as a part of the procurement policies required of the regulated utilities in this proceeding.

The regulated California utilities' interconnection procedures approved by the Commission and known as Rule 21 is hindering the achievement of California's distributed generation goals. The workshop organized by the Commission's Energy Division and held on April 29, 2011, presented an opportunity for independent power producers (IPPs) to describe their experiences with the Commission mandated policies. Many IPPs explained that they had tried to construct projects and interconnect, but most had failed. The few IPPs who announced success also explained their problems. Too few projects are now interconnected to the State's electric system and the problem is the dysfunctional Commission procedures.

This issue also has federal aspects because federal law, the Public Utilities Regulatory Policy Act (PURPA), and the agency mandated to implement this law, the Federal Energy Regulatory Commission (FERC) have another program and separate procedures for interconnecting IPPs with the regulated utilities' electric systems. The regulated utilities have been requiring the IPPs to choose which procedures they are opting to use. Those who choose the Commission mandated Rule 21 procedures have failed to interconnect their projects.

#### **Resolve problems in contract language**

Utilities' contract language for small renewable projects have had the effect of killing their opportunity to get financing. The problem was a clause in the contracts, which allowed the utility to cancel the contract at any time if they could get a better deal! This clearly needs to be changed.

#### **Additional issues related to nuclear power plants shutdown**

##### **Deploy solar DG and EE in cities and counties where local reliability is an issue**

Several areas may experience local reliability issues when power plants are shut down pursuant to the State's Water Quality Control Board ban on once-through-cooling (OTC).

According to CPUC's presentation to the Senate Energy Committee hearing on nuclear power safety issues April 14, 2011, California needs 595MW to meet CAISO's local reliability capacity requirement in the Los Angeles Basin if and when San Onofre Nuclear Generating Station (SONGS) shuts down.<sup>10</sup>

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<sup>10</sup> *Nuclear Power Plant Issues at the CPUC; Senate Hearing April 14, 2011*, by Gurbux Kahlon, Program Mgr., Energy Division, slide 6.

As noted above, a variety of DG and EE resources are available that can either serve or erase local reliability needs. These resources are perfect for deployment in populated areas; indeed most of them *require* populations to exist!

To address local reliability, WEM recommends an appropriate mix of solar DG, energy efficiency, demand response, CHP, and/or other renewables and hydropower (including pumped storage). The actual mix would depend on what resources are readily available in the local area, or where transmission capacity exists to import them from nearby regions.

Resources that can provide storage and fill in the blanks for intermittent renewables include hydro (whether or not renewable), pumped storage, geothermal, and in some cases CHP. ISO may provide system power for these purposes, or batteries, fuel cells, and “Bloom boxes” may be used to the extent that they are financially and environmentally attractive.

Longer-term, as the microgrid develops, batteries of electric cars and hybrids may also be useful as storage media.

The amount of each resource in the overall mix would depend in part on how quickly they are needed. Energy efficiency (and demand response) can be up and running most quickly, so they should take precedence in any urgent situation.

### **Grid operational stability**

CPUC’s 4-14-11 presentation to the Senate Energy Committee (described above) also stated that SONGS provides “grid operational stability” in addition to its capacity. Ibid, slide 6. WEM recommends initiating meetings with ISO immediately to determine what else might be able to fulfill this requirement.

WEM took part in two years of meetings in San Francisco in which ISO maintained there was a need for a minimum of 200 MW of in-town resources for grid operational stability, which prevented shutting down the ancient Hunters Point Power Plant even after local capacity requirements were met. In the end, it turned out that grid stability could be achieved by the simple expedient of regularly washing saltwater residue off of key components at substations on weekends, when usage is typically low so these lines can be temporarily disabled.

### **Replacing “strategically located” resources, e.g. Diablo Canyon Power Plant**

CPUC's presentation stated that Diablo Canyon Power Plant ("DCPP") "is not located in a transmission constrained area [and] it does not fall into a Local Capacity Area defined by CAISO." It concluded with the vague assertion: "DCPP is strategically located but is not critical for grid stability." Ibid, slide 7. Meetings with ISO should determine exactly what is meant by "strategically located," and take steps to determine how to mitigate that.

WEM assumes that this means that DCPP serves power to a wide range of communities in northern and central California. If correct, this would offer the opportunity to replace power in each community along the lines described above for replacing San Onofre power in the Los Angeles area.

### **How to *really* make Energy Efficiency #1 in the "Loading Order of Resources"**

#### **(1) Decapitate the peak with efficient a/c, insulation, white roofs and trees**

We plan "supply" resources to meet peak load — a hot afternoon when air conditioners are cranked up to the max, and cash registers, computers, tvs, refrigeration, and all kinds of machinery are humming.

*The most elegant and cost-effective way to meet that peak is to make all those energy end-uses more efficient — simply eliminating the high usage, which cuts off the peak.* Examples of energy efficiency that can dramatically reduce peak load are more efficient air conditioning; "recommissioning" of HVAC, which ensures that air conditioners are properly charged and maintained; "shell" measures such as insulation that tighten up the outer "shell" of a building; white roofs that reflect the sun's heat rather than absorbing it; and planting shade trees to shield the south and west sides of buildings against the summer sun. *All of these measures serve to reduce load from air conditioning, which is forty percent of peak load in California.*<sup>11</sup>

Ever since it shut down its nuclear power plant, SMUD has been funding the Sacramento Tree Foundation to plant shade trees throughout the city. This has saved vast amounts of energy — by *lowering the outdoor temperature* in the city 7 degrees!

Perversely, California's energy efficiency evaluation system rewards items that save "baseload" instead of peak — because they are used more hours day or night and during all seasons. This is why some 90% of our EE dollars are spent on lighting.

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<sup>11</sup> "Assistance in Updating the Energy Efficiency Savings Goals for 2012" Itron Inc, Submitted to CPUC March 24, 2007, Table E1-1 page E1-2.

*California needs to prioritize peak savings by evaluating energy savings based on the value of the supplies that are deferred or displaced.*

One of the most effective way to do that is to allow EE to bid against supply resources in RFOs, as described further below. There are successful examples of this practice in other states.

California urgently needs to treat EE on a par with supply side resources, most urgently by tracking where and when savings occur — but also by changing the “culture” of both EE and procurement, to foster greater understanding of how these things can fit together. Other ways to increase energy savings at specific times and places are described below.

### **(2) Redefine the EE department as part of Energy Supply**

The first step in making energy efficiency (EE) the top of the loading order is to redefine the EE department as part of the energy resources division in the company’s organizational structure. In PG&E’s case this is called “Energy Supply.”

Currently, PG&E’s EE dept. is part of “Customer Care.” This erroneous designation is one reason why the company’s “procurement planners” had no communication with EE planners, and therefore had no idea how to use EE as a resource, as they testified in the 2007 LTPP hearings.

### **(3) Treat EE as a real resource**

CPUC need not wait for the Legislature to direct it to use EE as a resource — this has already happened in AB57, and the Community Choice law specifically envisioned use of EE for local reliability.

The Commission has yet to provide the basic policy necessities for EE to function as a resource. These most local, tangible and well-defined resources are treated as disembodied, floating above each IOU’s territory as one large, generalized number — “energy savings” that are simply everywhere! but nowhere when you need them...

Other states quit making this mistake a few years ago and developed the means for determining reliability based on EE. In those states EE operates on a par with energy supplies — and is held to higher standards of performance. At well over a billion dollars a year of EE spending, it’s high time for California to follow suit.

**(4) Adapt ISO New England's Manual for measuring demand resources**

*California urgently needs to track EE spending and savings in ways that enable it to substitute for supply side resources (or transmission/distribution).*

Currently, California's elaborate Evaluation, Measurement & Verification (EM&V) system spends \$100m per 3-year EE cycle, measuring almost everything *except* what's essential for utilizing EE as a resource, namely *where* on the grid the savings are achieved (and where the money is spent). Another major problem is that *EM&V reports are published up to a year after the end of the EE cycle — i.e., up to four years after the savings were made.*

The reason for this disconnect is that EM&V has been primarily occupied with determining “shareholders incentives” for utilities based on the results of EE programs — rather than ensuring that EE can serve as a reliable resource, comparable to energy supplies.

Unfortunately, there has been a lack of communications between the procurement proceedings and the energy efficiency proceedings— similar to the lack of communication between the procurement and EE depts. of the utilities.

*The EM&V system is under the purview of CPUC, therefore the ALJ and Commissioner in this proceeding should direct changes to be made to EM&V, to enable EE to fully function as a resource.*

Utilizing energy efficiency as a resource would require, among other things, better “ex ante” projections of how much savings each measure is expected to achieve (in context of the program design);<sup>12</sup> rigorous “baseline” measurement (what was replaced by the efficiency measure); and more “real-time” EM&V, measuring EE impacts on the grid as they occur, rather than long after the fact, which in some cases is even after the end of the “useful life” of the measure.

As described below, ISO-New England has developed EM&V guidelines that enable EE to bid into RFOs. In our 2-23-11 Prehearing Conference Statement, WEM recommended that the Commission utilize or adapt *ISO New England Manual for Measurement and Verification of Demand Reduction Value from Demand Resources (Manual M-MVDR)*, Revision: 2, Effective Date: June 1, 2010, which is posted with other ISO-NE manuals at [http://www.iso-ne.com/rules\\_proceeds/isone\\_mnls/index.html](http://www.iso-ne.com/rules_proceeds/isone_mnls/index.html)

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<sup>12</sup> Currently, utilities are rewarded for *exaggerating* ex ante estimates — shareholders incentives are based on these numbers. An independent third party should be

**(5) Revise RFO rules to enable bidding by demand resources (and DG)**

*RFO terms must be revised to allow demand-side resources including EE and Demand Response (“DR”) the opportunity to bid.<sup>13</sup>*

In the LTPP hearings in 2007 (in R0602013), PG&E’s top procurement planner rejected more efficient air conditioning as eligible to address peak load, on the basis that peak load-serving supplies had to be “ramping” and “dispatchable” — neither of which applied to EE.

ISO-New England made EE eligible to bid in its auctions beginning four years ago. In the very first year it was allowed to bid, Energy Efficiency won the auction with a variety of EE resources totaling 1000 MW of peak capacity. This most cost-effective resource continues to win “procurement” contracts in the six states encompassed by ISO-New England; see the latest results here:

[http://www.isone.com/committees/comm\\_wkgrps/mrktls\\_comm/dr\\_wkgrp/mtrls/2009/dec22009/index.html](http://www.isone.com/committees/comm_wkgrps/mrktls_comm/dr_wkgrp/mtrls/2009/dec22009/index.html)

**(6) Establish a revolving fund for On-Bill Financing of peak-reducing measures**

Many current EE programs risk failure to meet goals because customers can’t afford the “customer share” of EE costs — which can run as much as 95% of the total cost of an efficiency item or service — and have great difficulty accessing loans in this poor economy. “On-Bill Financing” (OBF) removes this barrier by providing 100% of up-front costs, which are then paid back by retaining the amount of the old bill (reflecting higher usage) until repayment is completed, and only then dropping the bill to the new, lower usage.

*Residential programs have proved successful in other states, and should be launched in California without delay.* Currently, the only OBF programs are for small businesses (PG&E only recently launched a small OBF program; SDG&E and SCE have had successful programs for several years).

OBF programs can prioritize peak-reducing measures such as efficient air conditioning, shell measures, white roofs and trees.

**(8) Increase the capability of EE to meet goals — and increase the goals**

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<sup>13</sup> RFO terms should also be revised to allow bidding by Distributed Generation (DG).

There are serious performance problems with utility EE programs, which could negatively affect the achievement of EE goals subject to this LTPP. These problems have not been fully resolved — some have not yet been examined. They include:

**Massive shortfalls in utility performance.** 2006-08 utility EE portfolios measured lower than 65% of goals for all utilities; major 2004-05 programs were in the 40% range. 2010-12 performance could also be poor, in part because economic problems and the tight credit market are severely limited the ability of customers to finance their share of the costs. Federal stimulus funds are helping somewhat, but will be depleted before the end of the cycle. Unfortunately, a major program that is using most of the stimulus funds (“Energy Upgrade California”) has design flaws that may result in much of the federal funding being wasted on unsuccessful marketing and energy audits instead of actual energy savings. This program largely bypasses hot inland areas where peak savings are most needed.

**Only 20% of EE goals credited as available to reduce supplies, in last LTPP.** The LTPP decision D0712052 credited only 20% of EE goals as actually available to serve load (i.e., reducing energy supplies) citing uncertainty about utility performance as well as confusion among utilities, CEC and CPUC about how much EE was already “embedded” in demand forecasts. This led to a multi-year study conducted by CPUC and CEC staff. Uncertainty remains, which the current LTPP will have to resolve. Among other issues, there is a dispute about whether or not short-lived measures will be replaced (e.g. CFLs, which last only a couple of years in commercial applications); “cumulative savings” assumptions rely on replacement but so far, utilities refuse to be responsible for this.

Staff has identified ongoing work on this issue including “refining IOU program estimates”, and “identifying and estimating overlap among programs, standards, and naturally occurring savings.”<sup>14</sup>

#### **(9) Ensure use of actual IOU goals from EE proceedings**

The actual goals CPUC set for utility EE programs in 2004 (in D0409067) would provide less than 0.3%/year reductions — i.e. less than 3% over ten years; in 2008 and 09 these goals were *further reduced*. These numbers bear no relation to the much higher goals in the CPUC’s

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<sup>14</sup> CEC Draft forecast, May, 2009, p. 149,

*“Strategic Plan for Energy Efficiency through 2020” (updated January 2010) or the ARB goals. The Planning Assumptions reflects the lower goals set in EE proceedings, but the ALJ and parties to this proceeding should be aware of the confusion on this issue and make sure the IOUs’ numbers reflect the actual EE goals.*

**(10) Recognize that EE savings from RFOs would be *additional* to “EE goals”**

The Commission should understand that an RFO allowing EE could capture savings — particularly peak savings — that are not likely to be realized in current EE programs.

The overall potential for EE savings is far greater than what is reflected in current goals, which are based on studies of a very limited number of EE measures. Many effective peak-reducing measures were not included in the potential studies nor in current programs. Other savings are unlikely to be captured because incentives are inadequate in this economy and there is very little financing available.

If we end up with a hybrid system (including RFOs in addition to utility-controlled EE programs), there is all the more reason for updating EM&V to be able to sort out and properly evaluate the impact of energy savings on the grid.

# **ATTACHMENT B**

**Excerpts From Testimony of Bill Powers  
on behalf of Pacific Environment**

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Integrate and Refine  
Procurement Policies and Consider Long-Term  
Procurement Plans.

Rulemaking 10-05-006  
(Filed May 6, 2010)

**TESTIMONY OF BILL POWERS, P.E.**

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Dated: May 4, 2011

Attorneys for Pacific Environment

Achieving all cost-effective energy efficiency measures will not happen over the next decade if PG&E and other utilities continue to rely on piecemeal energy efficiency rebate programs to deliver energy efficiency gains. PG&E provides modest rebates across a wide range of appliances, including (but not limited to) lighting, dishwashers, clothes washers, hot water heaters, and room air conditioners. For example, the rebate on a hot water heater ranges from \$30 to \$50.<sup>67</sup> PG&E offers no rebates for the biggest contributor to summertime peak load demand – central air conditioners.<sup>68</sup>

A major element of the state's *Energy Efficiency Strategic Plan* is to advance residential and small commercial heating, ventilating, and air conditioning systems to ensure optimal equipment performance. The plan targets a 50 percent improvement in efficiency of heating, ventilating, and air conditioning systems by 2020, and a 75 percent improvement by 2030. Air conditioning loads are the cause of over 30 percent of California's total peak power demand in the summer. Meeting this load has a costly impact in the form of additional generation, transmission, and distribution resources.<sup>69</sup>

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<sup>67</sup> PG&E hot water heater page:

<http://www.pge.com/myhome/saveenergymoney/rebates/appliance/waterheater/index.shtml>

<sup>68</sup> PG&E central air conditioner webpage:

<http://www.pge.com/myhome/saveenergymoney/savingstips/centralair/index.shtml>

<sup>69</sup> Ibid, p. 53.

PG&E relies on an Itron analysis of energy efficiency measures in evaluating its energy efficiency performance.<sup>70</sup> Itron largely avoids the issue of increasing the efficiency of central air conditioning units, by stating that the 2006 federal standard for new units is Seasonal Energy Efficiency Ratio (SEER) 13 and the highest SEER rating of economical central air conditioning units is 14.<sup>71</sup> Itron goes on to state there is little difference between SEER 13 and SEER 14 in terms of efficiency, and therefore no economic justification for upgrading from SEER 13 to SEER 14.

However, the average SEER rating for in-use central air conditioning units in California is approximately SEER 10, not the 2006 federal minimum standard of SEER 13 for new units.<sup>72</sup> Competitively-priced central air conditioning units with ratings as high as SEER 21 are commercially available. There is about a 20 percent installed price difference between a SEER 13 or 14 unit and a SEER 21 unit. An incremental energy efficiency improvement of nearly 30 percent is realized by selecting a SEER 21 unit over SEER 13 when compared to the SEER 10 basecase.<sup>73</sup> Itron does acknowledge that major energy efficiency reductions can be achieved in residential and commercial heating and air conditioning systems, though in the context of emerging technology instead of off-the-shelf technology.<sup>74</sup>

The difference in the installed cost (prior to rebates) of a reference case Carrier Corporation 3-ton SEER 13 residential central air and heating unit, which costs approximately \$9,000, and a state-of-the-art Infinity® 21 unit (SEER 21) is around \$2,000.<sup>75</sup> Carrier offers a rebate on high efficiency units that reduces the cost difference between the SEER 13 and SEER 21 alternatives by about \$1,000.

The duration of the summer on-peak period in PG&E service territory is about 768 hours.<sup>76</sup> The SEER 21 unit would save approximately 900 kWh relative to the SEER 13 unit over 768 hours.<sup>77</sup> Summer peak savings would be \$270 per year, assuming a Tier 3 residential rate of \$0.30/kWh.<sup>78</sup> The simple payback for the \$2,000 additional cost of the Infinity® 21, without the Carrier rebate, would be 8 years. With the \$1,000 Carrier rebate, the simple payback would be 4 years.

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<sup>70</sup> PG&E, *PG&E 2007-2016 Long-Term Procurement Plan*, Volume I, p. IV-13, reference to "Itron Potential Study."

<sup>71</sup> SEER is relative measure of energy efficiency. A SEER 20 air conditioning unit uses one-half the energy required by a SEER 10 unit to produce the same amount of cooling.

<sup>72</sup> S. Okura, M. Brost – RLW Analytics, Inc., and R. Rubin – SDG&E, *What Types of Appliances and Lighting Are Being Used in California Residences?*, 2005. In 2005, 53% of California residences had some form of cooling system.

<sup>73</sup>  $[(21 - 10)/21] - [(13 - 10)/13] = 0.52 - 0.23 = 0.29$  (29 percent)

<sup>74</sup> Itron, *California Energy Efficiency Potential Study*, May 24, 2006, Chapter 11 - Emerging Technology Energy Efficiency Potential, p. 11-5 and p. 11-6.

<sup>75</sup> Avalanche Mechanical (Carrier installer) quote to B. Powers for 3-ton SEER 21 central air conditioning and heating unit, September 4, 2007. Quote includes cost of new insulated ductwork.

<sup>76</sup> PG&E defines the summer peak period as May 1 to October 31, noon to 6 pm, excluding weekends and holidays. This is approximately 768 hours per year.

<sup>77</sup>  $(4 \text{ kWh} \times 768 \text{ hr}) \times [(10/13) - (10/21)] = 900 \text{ kWh}$ . This is the electricity savings of a 3-ton SEER 21 unit compared to a SEER 13 unit over 768 hours of operation.

<sup>78</sup> See the discussion of PG&E's tiered residential rate structure in Chapter 9.

In addition, the typical reduction of about 2 kW in residential electricity demand when upgrading from an existing 3-ton central air conditioning unit to a SEER 21 unit would eliminate \$600 per year in peaking gas turbine fixed costs. This is the cost associated with new peaking gas turbine capacity, like 760 MW Marsh Landing or 200 MW Mariposa Energy Center, that would otherwise be built to meet the peaking load.<sup>79</sup>

At a minimum, the value of upgrading to a highly efficient 3-ton central air conditioning unit ranges from \$600 to \$870 per year. This includes the avoided cost of new peaking gas turbine capacity that would otherwise be built or contracted for to meet the demand, and the value of high-cost electricity that is not needed because of the high efficiency of the unit.

Itron does not address new thermal storage air conditioning systems now on the market that could nearly eliminate cooling-related peak demand if installed in new and existing buildings. The Southern California Public Power Authority (SCPPA) has contracted with Ice Energy for 53 MW of ice storage air conditioning units. SCPPA will install more than 6,000 Ice Bear units at 1,500 government and commercial buildings in its member communities.<sup>80</sup> Most of the units are being installed at existing buildings. Graphs of the peak cooling demand reduction achieved by these commercially available thermal storage systems are presented in Appendix F.

Substantial peak load reduction can also be achieved by upgrading existing commercial and institutional cooling systems. Many commercial buildings use electric motor-driven centrifugal chillers to provide cooling. Centrifugal chillers typically consume more electricity than any other single energy-consuming device in a commercial building.<sup>81</sup> The Center for Sustainable Energy in San Diego has conducted hundreds of energy efficiency evaluations on chillers. Over 90 percent of these systems operate with relative low efficiency, in the range of 1.0 to 1.2 kW/ ton of cooling, using oversized pumps, constant speed equipment, and controls that do not work well.<sup>82, 83</sup>

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<sup>79</sup> CEC, *Comparative Costs of California Central Station Electricity Generation*, January 2010. Table B-4, p. B-5. Fixed cost of a new conventional 50 MW peaking gas turbine in 2009 is \$303/kW-yr. Therefore, annual cost of 2 kW of peaking capacity:  $2 \text{ kW} \times \$303/\text{kW-yr} = \$606/\text{yr}$ .

<sup>80</sup> Public Power Daily, *SCPPA to Rollout 53-MW Storage Project*, January 27, 2010.

<sup>81</sup> Platts Purchasing Advisor, *HVAC: Centrifugal Chillers*, 2004.

<sup>82</sup> The term “kW per ton of cooling” is a measure of the electric energy necessary to operate a commercial or institutional chiller plant.

<sup>83</sup> One ton of cooling load is the amount of heat absorbed to melt one ton of ice in one day, which is equivalent to 12,000 Btu per hour.

## **CERTIFICATE OF SERVICE BY ELECTRONIC MAIL OR U.S. MAIL**

I, the undersigned, state that I am a citizen of the United States and am employed in the City and County of San Francisco; that I am over the age of eighteen (18) years and not a party to the within cause; and that my business address is Pacific Gas and Electric Company, Law Department B30A, 77 Beale Street, San Francisco, CA 94105.

I am readily familiar with the business practice of Pacific Gas and Electric Company for collection and processing of correspondence for mailing with the United States Postal Service. In the ordinary course of business, correspondence is deposited with the United States Postal Service the same day it is submitted for mailing.

On the 10<sup>th</sup> day of May, 2011, I caused to be served a true copy of:

**MOTION OF  
PACIFIC GAS AND ELECTRIC COMPANY (U 39-E) AND  
SOUTHERN CALIFORNIA EDISON COMPANY (U 338-E)  
TO STRIKE PORTIONS OF THE TESTIMONY SUBMITTED BY  
WOMEN'S ENERGY MATTERS AND PACIFIC ENVIRONMENT**

- [XX] By Electronic Mail – serving the above via e-mail transmission to each of the parties listed on the official service list for R.10-05-006 with an e-mail address.
- [XX] By U.S. Mail – by placing the above for collection and mailing, in the course of ordinary business practice, with other correspondence of Pacific Gas and Electric Company, enclosed in a sealed envelope, with postage fully prepaid, addressed to those parties listed on the official service list for R.10-05-006 without an e-mail address.

I certify and declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on this 10<sup>th</sup> day of May, 2011 at San Francisco, California.

/s/  
\_\_\_\_\_  
STEPHANIE LOUIE