

BEFORE THE CALIFORNIA ENERGY COMMISSION

In the matter of,
*2012 Integrated Energy Policy Report
Update (2012 IEPR Update)*

Docket No. 12-IEP-1C
WORKSHOP
RE: Electricity Infrastructure
Planning

**WOMEN'S ENERGY MATTERS
COMMENT RE CEC 6-22-12 LOS ANGELES WORKSHOP
ON ELECTRICITY INFRASTRUCTURE – S. CALIFORNIA**

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Barbara George, Executive Director
Women's Energy Matters
P.O. Box 548
Fairfax CA 94978
415-755-3147
wem@igc.org

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Women's Energy Matters (WEM) respectfully submits these comments to CEC pursuant to the CEC Meeting Notice for the 6-22-12 Lead Commissioner Workshop on Electricity Infrastructure Issues in California.

A version of these comments was previously submitted as WEM's 6-24-12 Testimony on Local Capacity Requirements in the CPUC's Long-Term Procurement Plans ("LTPP" - R1203014). The Energy Commission is involved in many of the same issues. Therefore, we have reworded parts of this document to make specific recommendations to the CEC, but we have also included our recommendations to the CPUC and our analysis of CPUC processes to the extent that we feel they are relevant to issues in the IEPR or provide useful background information.

California currently lacks a coherent planning process for emergencies

The CEC sponsored a workshop on Electricity Infrastructure Issues in California on June 22, 2012 in Los Angeles, at which the San Onofre outage was discussed extensively. Commissioners from CPUC and CEC, and the leadership of CAISO, ARB and the South Coast Air Quality Management District presided over the workshop, and heard presentations from representatives of all the agencies, SCE, SDG&E, LADWP, other industry stakeholders, business leaders, public interest groups, and members of the public.

It was clear to participants at the workshop that California lacks a coherent planning process to deal with major unexpected changes in the system. This oversight has been brought into stark relief by the extended outage of the San Onofre Nuclear Waste Generating Station (SONWGS), which has been offline since January 31st this year. Energy agencies and the utility have repeatedly insisted that there could be "rolling blackouts" this summer because of the outage. They depict themselves to the media as "scrambling" to find replacement options. The scramble has taken place exclusively in back rooms, without transparency and without opportunity for public input prior to announcement of major decisions.

WEM Comment to CEC re 6-22-12 LA Workshop

The authority to make critical decisions for major contingencies such as a nuclear power plant outage is scattered amongst several agencies, with little attempt at coordination amongst them. There are huge gaps, big enough for 2150 MW of nuclear power to fall right through. California agencies and utilities are not prepared – and it’s critical that they get prepared as soon as possible.

Further equipment failure, human error, and/or major earthquake or tsunami could take out San Onofre and/or Diablo Canyon and/or Palo Verde. Absent sensible advance planning and precautionary measures, this could cause system collapse in Local Capacity Areas and possibly the overall energy system. Planning for the potential continuation of the San Onofre outage through next summer, 2013, is especially needed.

Fran Inman, head of the LA Chamber of Commerce, said she was glad she had not brought any business colleagues to the meeting because they would be frightened if they heard how unprepared we are to deal with unexpected developments in the electricity system.

The false belief that nuclear plants would always be there was clear at the LA Workshop. The Air Resources Board representative stated, “we couldn’t imagine losing San Onofre,” and most of the agency and utility representatives echoed that thought. No one told him he needed to plan for that contingency, in any case he would need input from the CPUC and ISO in order to do that. He’s waiting for them to tell him what to do.

While several presenters indicated that backstops for summer 2012 have been cobbled together to prevent blackouts, they displayed little certainty about the future if the outage continued, and some indicated that we could still have problems this summer if, for example, it’s hotter than usual. Such uncertainty could set California up for parties to overcharge, or game the system.

A May 17, 2012 statement by the Federal Energy Regulatory Commission (FERC) acknowledged that even with both San Onofre reactors out of service, the CA reserve margin is still more than 15%, even in the “Local Capacity Areas” of W. Los Angeles, Orange Co. and San Diego — the areas usually served by San Onofre. However, FERC warned of possible “elevated prices” in S. Calif. and said “staff will follow market operations closely, including supply and demand conditions and any

market participant behavioral issues.” WEM infers that this means traders may be lying in wait for a chance to manipulate prices as summer temperatures soar.¹

Lessons learned from the current San Onofre shutdown?

The agencies responsible for California’s electric power needs were unprepared for the current San Onofre outage. Neither have they prepared for the potential long-term shutdown of either San Onofre or Diablo Canyon — whether inadvertent or intentional. This flies in the face of contingency planning which is supposed to *expect the unexpected*. Dealing with antique nukes, the potential for human error, and a landscape riddled with earthquake faults — extended, unplanned outages should be *expected*.

Instead, most of those in charge seem to presume that *nothing serious will go wrong*, and that nuclear plant licenses will be extended.

The panel at the LA Workshop seemed to lack a sense of urgency. “These things take time” was the echo from the panel. However, as we have seen with San Onofre (and Fukushima Daiichi), nuclear power plants don’t fail according to our time schedule. Regulators can’t afford to continue to buy into the mythology of the nuclear industry, which has distracted them from doing their basic job.

The CPUC provides a technical spreadsheet² on their website to aid in long term planning. On the spreadsheet under the category (OTC), it lists “not retiring” as the expiration dates for both Diablo Canyon and San Onofre nuclear power plants.

The agencies make us more vulnerable by prioritizing the shutdown of the non-nuclear Once-Through-Cooling (OTC) plants. While these urgently need to be shut down, the damage they could cause is slight compared to the quarter-million-years of damage associated with nuclear catastrophes. Documents presented by CAISO as the basis for the current CPUC Long-term Procurement Plans (LTPP), like the Energy Division Straw Proposal Planning Assumptions, assume an orderly shutdown of OTC gas plants. But despite the six-month SONWGS outage, none of ISO’s scenarios account for a continued outage or permanent shutdown of this nuclear plant in the next ten years.

¹ http://www.ferc.gov/market-oversight/reports-analyses/mkt-views/2012/05-17-12.pdf#xml=http://search.atomz.com/search/pdfhelper.tk?sp_o=1,100000,0

² <http://www.cpuc.ca.gov/PUC/energy/Procurement/LTPP/LTPP2010/2010+LTPP+Tools+and+Spreadsheets.htm>
Technical Attachment Spreadsheet with further description of inputs into the L&R Tables:
TechnicalAttachmentSpreadsheetv5.xls

This makes the documents in the LTPP proceeding largely irrelevant, especially for “Track 1” which is supposedly addressing Local Capacity Areas (LCAs).

The most significant LCAs at issue in this LTPP encompass the W. Los Angeles-Orange-Co.-San Diego areas, which are connected although they span several utility territories that are served by San Onofre (SCE, SDG&E, Riverside POU).

Strangely, we have yet to hear CPUC, CEC or CAISO call for the LTPP documents to be redone to reflect the SONWGs outage, and for the schedule to be adjusted so that CAISO, CPUC or parties can go through the painstaking process of adjusting them to reflect current reality. While this is happening, we could make ourselves useful by discussing how to address the need for replacement resources this summer, and what policies need to be developed to deal with this type of emergency situation.

The agencies seem to be under a spell, thinking that somehow everything will be magically restored, and we'll go on as before in nuclear lalaland.

The CEC, CPUC and other agencies need to demonstrate they have learned the lesson that long-term nuclear outages can happen, by expediting both short-term and long term plans that assume this reality.

DEAD NUKE?

Monday, June 18, 2012, the Nuclear Regulatory Commission presented the results of its investigation into the steam generator problems at San Onofre. The picture that emerged from that hearing clearly demonstrated that nuclear engineering has become more of an experiment than a science. See the information on Steam Generator problems, below.

Edison still clings to its reactors, treasuring the “cheap” energy they supposedly produced, without counting the reliability problems or the potential costs. For example, the cost of delivering power to a zombie nuke’s cooling system even after it’s dead, for at least 10 years. The NRC requires reliable delivery of power *to* nuclear reactors, regardless of whether the reactors are contributing anything but headaches to the grid:

2.2.1.2. Nuclear Plant Interface Coordination (NUC-001-2)

The purpose of this standard is to ensure coordination between the nuclear plant generator operators and transmission entities to ensure safe operation and shutdown of the nuclear plant. The NUC-001-2 standard requires transmission planners and planning coordinators to perform planning studies and analyses in

accordance with the Nuclear Plant Interface Requirements, Appendix E of the Transmission Control Agreement and the coordination agreements that the ISO has in place with the nuclear plant generator operators and the applicable participating transmission owners. 10-11 These agreements provide voltage requirements, as well as stability requirements, for the off-site power supply to the Diablo Canyon Power Plant (DCPP) and San Onofre Nuclear Generating Station (SONGS) under various generating or transmission contingency conditions.³

⁹ <http://www.nerc.com/page.php?cid=2%7C20>

¹⁰ <http://www.nerc.com/files/NUC-001-2.pdf>

¹¹ http://www.caiso.com/Documents/TransmissionControlAgreement-Updatedas-Dec3_2010.pdf

There are zillions of other costs as well, such as the potential for 40 years of fuel rods in the spent fuel pool (or the dry casks, if they breach) to melt down, explode and catch fire following further human error, equipment malfunction, or an earthquake or tsunami...

Even if we somehow escape these disasters, there are still the uncounted costs of the doubling in childhood cancers within 5 km radius of nuclear plants — from “normal” nuclear operations, according to a German study.⁴ And the costs (and greenhouse gas emissions) of at least a quarter of a million years of managing nuclear waste.

San Onofre steam generators have proved unreliable and cannot be counted as a reliable source of energy.

The NRC has determined that Southern California Edison’s (SCE) redesign is responsible for the steam generator problems. There have been questions whether SCE misled NRC to evade rigorous design review in a license amendment process, in which case it could face fines. Now it appears that the problems are much deeper. The NRC may have been complicit in a cover-up of significant design changes. The industry and its lapdog agencies, first the AEC and now the NRC, have been reluctant to reveal the industry’s serious mistakes and shortcomings to the public.⁵

³ Source: 2011/12012 ISO Transmission Plan March 23, 2012, pp. 26 – 27.³

⁴ Epidemiologische Studie zu Kinderkrebs in der Umgebung von Kernkraftwerken : (KiKK-Studie), 2007; The study can be downloaded at: <http://doris.bfs.de/jspui/handle/urn:nbn:de:0221-20100317939> See Background Information on the study (in English) by its publisher, the German Federal Office for Radiation Protection, at <http://www.bfs.de/en/kerntechnik/kinderkrebs/kikk.html>

⁵ Three whistleblowers described the fatal design flaws of GE’s Mark 1 reactors (presaging the explosions in Fukushima, which are Mark 1s) but the agency refused to acknowledge the issue because it might have alerted the public to the fallibility of the industry, potentially crippling it as it was just getting started.

The NRC stressed that they knew about the redesign. It turns out that all U.S. nuclear power reactor steam generators are having problems⁶. So the NRC was looking for a redesign that solved the problems. It appears that they were not only aware of the changes SCE was making – they were anticipating that these would serve as a fix for this generic problem. There should have been a license amendment – but there wasn't. Why? Was that because the NRC and the nuclear industry were afraid of alerting the public and the regulators that they had a serious chronic problem?

NRC Augmented Inspection Team (AIT) Project Manager, Greg Werner, stated in the NRC 6/18/2012 public meeting in San Juan Capistrano, that Mitsubishi Heavy Industries underestimated the pressure of the radioactive steam that runs through the tubes. The engineering design calculations in their computer simulations predicted pressures 300-400% lower than how the steam actually moves inside the tubes. This resulted in tube vibrations that caused years of premature wear on steam generator tubes⁷. One of the steam generators in Unit 3 leaked radiation into the air after being installed for only 11 months, resulting in the current total shutdown of San Onofre.

NOTE: the AIT Manager's estimate of a 300-400% error factor means *even their error factor is plus or minus 100 percent!* It appears that the state of nuclear engineering – rather than being an exact and precise science – is, in essence, a nuclear experiment.

Current cost estimates for repairing or building new steam generators are similarly imprecise, ranging from \$150 to \$800 million. At the LA Workshop, public interest parties pledged to oppose foisting any of these costs onto ratepayers, who are already paying nearly \$700 million for the previous order.

It is unacceptable for Californians to be dependent on a large power source that is experimental. We were lucky the tube failures did not result in a cascading tube failure⁸, which could have resulted in a major radiation leak, basically closing down Southern California and perhaps creating another “nuclear exclusion zone.” Some potential impacts:

⁶ NRC “Steam Generator Tube Integrity Requirements and Operating Experience in the United States”, <http://pbadupws.nrc.gov/docs/ML0925/ML092530081.pdf>.

⁷ <http://sanjuancapistrano.patch.com/articles/nrc-manufacturing-mistakes-miscalculations-caused-radiation-leak#photo-10363778>

⁸ http://fairewinds.org/sites/fairewinds.org/files/reports/Fairewinds_FOE_SanOnofreSteamFailuresCouldHaveBeenPrevented_2012-5-14.pdf

- Closure of two of the busiest ports in California that import 40% of the goods to the United States and worth \$1 billion dollars a day.
- Closure of the tourist industry in Southern California (e.g., Disneyland, Hollywood, California's beaches)
- Contamination of California's food supply and vineyards. California's wine would gain a new reputation – vintage Fukushima USA.
- Devastation of California's real estate market and businesses.

We cannot afford these consequences in California. The risk is not worth any benefit.

Location, location, location

There was discussion at the LA Workshop of the fact that the location of resources matters. This appeared to be a surprise to some, although the ISO was very clear that the ability of generators to serve specific loads depends very much on where they are.

Currently, the Huntington Beach gas-fired power plants (3 and 4) ("HBPP") provide the needed voltage and MW's to compensate for San Onofre being off-line this summer. However, the ISO stated that once the new Walnut Creek Energy Center goes on-line, Huntington Beach's air pollution credits will be transferred to Walnut Creek, and HBPP would no longer be available due to air pollution. In fact, all air credits have been used in the S. California LCAs.

Most importantly, Walnut Creek is on a different transmission path, so it cannot be utilized for voltage support, capacity or energy to replace San Onofre. Note: The Commission based part of their approval of Walnut Creek on the ISO's report stating there would be no negative impact if Walnut Creek replaced Huntington Beach. Apparently, they didn't consider the possibility of San Onofre being off-line in the summer.

Energy Efficiency alternatives should be allowed to compete on a level playing field

California's concerns about summer peak energy demand, air credits and carbon emissions can more effectively be addressed by targeting aggressive efficiency measures, particularly central air conditioner replacements, to the LCAs served by the San Onofre nuclear power plant.

The current San Onofre outage highlights serious gaps in California's procurement policies. It is noteworthy that Energy Efficiency, the number one resource in the Loading Order, has been ignored until very recently in the resource options proposed for the San Onofre outage. The Commission needs to address this oversight immediately.

Long-term, the CPUC and CEC need to develop better policies for using demand resources, DG and small renewables, particularly for emergency replacement requirements caused by nuclear outages (and unexpected loss of other large facilities) — but also for replacement of Once-Through-Cooling gas plants — as WEM proposed over a year ago in the previous LTPP, R1005006.⁹ These policies should follow the Loading Order, be transparent, and allow for public input. Furthermore, the Commission, CEC, and CAISO need to do what they can to ensure policy coordination with each other and other agencies, including CARB, S. Coast Air Quality Management District and the State Water Resources Control Board.

WEM recognizes a need for more rigorous and frequent evaluations of energy efficiency projects, in order for them to be used as capacity comparable to supply side resources. For this, we recommend that California adopt policies similar to the ISO-New England Manual for Measurement and Verification of Demand Reductions from Demand Resources.¹⁰ We note that one of the most important things needed to qualify grid-compatible EE resources is *their location*. WEM recommends that location be specified by distribution substation (rather than zip code) to provide for the data to be easily plugged into CAISO's models.

WEM noted in last year's LTPP, that there may be too much resistance to reconfiguring the Evaluation, Measurement & Verification (EM&V) for EE programs — which are focused on determining shareholders incentives for utilities, rather than grid-compatible EE resources. Therefore, WEM recommended giving grid-compatible EE another identity, calling it *Procurement Demand Reduction*.

We recommend a pilot Procurement Demand Reduction program focusing on energy efficiency measures targeted to specific circuits in the LA Basin-Orange Co.-San

⁹ See, e.g. May 23, 2011 WEM Alternative Bundled Procurement Plan, Errata, in R1005006.

¹⁰ The latest Manual is posted on the ISO-NE Web site: http://www.iso-ne.com/rules_proceds/isone_mnls/ See file labeled, M-MVDR.

Diego LCAs, to relieve constraints caused by the outages of San Onofre Units 2 and 3. Substantial grid-reliable load reductions could be achieved in time for next summer when the Huntington Beach Units 3 and 4 will likely no longer be available.

It would still be possible to achieve meaningful reductions this summer. For this, there could be a special “Summer Initiative” EE program targeting the LCAs formerly served by San Onofre. This could be ordered by CPUC or CEC. Cities, counties, other public agencies and third parties should be allowed to independently administer it, if SCE and/or SDG&E continue to overlook this option.

Targeting EE to this area to achieve demand reductions this summer would further reduce any credible risk of rolling blackouts or brownouts due to the nuclear outage. *To the extent that EE reduces the load, it would also reduce the need for voltage support.*

Such a pilot program would not yet provide for “official” recognition of EE as providing capacity and resource adequacy, unless the CPUC and ISO take unusually quick steps to designate grid-reliable EE, as providing net qualifying capacity (“NQC”).¹¹

(In order to obtain NQC status in the usual timeline, CPUC would need to create new rules in the current LTPP for enabling grid-reliable EE and other demand resources to compete on a more level playing to meet Local Capacity Requirements.)

Such energy efficiency programs would create jobs in the economy and reduce ratepayer electric bills, which would help struggling families and also provide more expendable income that would feed the local and state economy.

Energy efficiency can provide all this without producing carbon emissions or air and water pollution. Thus EE, renewables and storage would be the ideal combination of resources to replace nuclear power plants — because they are far cleaner and emit less greenhouse-gases than nuclear power or gas resources.

Updated EE Avoided Costs expected to increase focus on peak load reductions

According to the CEC, air conditioning is approximately 30% of peak load, but for many years utility energy efficiency efforts devoted to heating and air conditioning systems

¹¹ The CPUC and ISO should also move as quickly as possible to provide NQC designation for Demand Response, “customer” solar and small renewables attached to the distribution systems.

(HVAC) have been limited, especially in residential programs.¹² The Commission included HVAC in the “Big Bold Energy Efficiency Strategies” (BBEES) to try to increase focus on this area.

Unfortunately, the BBEES have been largely excluded from the projections for 2013-2020 in the “Uncommitted Incremental EE Report,” and the Navigant Potential study on which EE goals were based — and therefore were not reflected in the CAISO sensitivity study for the LCRs (in this year’s LTPP). This is unrealistically pessimistic, and will lead to major forecast errors.

By making major changes in EE Avoided Costs assumptions, the CPUC has recently removed the most serious barrier to EE programs focusing on HVAC, fans, evaporative coolers and “shell measures” that reduce energy for cooling (e.g. insulation, white roofs). New Avoided Costs are closer to reflecting the actual costs of peak power, while previous figures used averages, which flattened out the value of the peak.

The old EE Avoided Costs resulted in an overwhelming focus on lighting in EE programs. This is because lighting is utilized more hours of the day and throughout the year, so when the greater number of hours were multiplied by averaged EE Avoided Costs, efficient lighting *appeared to* provide much more “bang for the buck” than efficient air cooling measures. Most importantly for utilities, the old flawed Avoided Costs calculations led to greater “shareholders incentives” bonuses for EE programs that paid little attention to the peak.

While some commercial lighting is on during peak hours, most of the energy savings from residential lighting occurs at night, making it virtually useless for reducing peak power. (Over half of the IOUs’ billion-dollar a year EE programs in 06-08, and just slightly less of their \$1.3 billion 2010-12 programs, consisted of incentives for Compact Fluorescent Lights (“CFLs”), which consumed almost all residential program dollars.)

A little-appreciated consequence of the old EE Avoided Cost methodology was that it led to higher rates, because the peak continued to increase (largely unaffected by

¹² In part, this is because the Commission is reluctant to grant rebates unless contractors pull building permits for HVAC replacement and also obtain HVAC installation training and certification. Air conditioner replacement often takes place after an older HVAC unit quits working, thus there is often great pressure to do it quickly at the lowest possible cost. The vast majority of HVAC replacements are done without permits or certification, due to the increased cost and delay of the permitting and certification processes.

EE), while EE reduced the need for baseload. In other words, the overall costs of energy production have had to be spread over fewer hours of use. This is especially true of baseload, which is produced whether it's needed or not.

Ever-higher peaks have also been driving increased rates, because the need for additional capacity is imposed on all customers although it's only needed for a few hours a year. Peak load has been relentlessly driving procurement of new gas power plants and to a certain extent new transmission as well. The costs of keeping this capacity available for use, as well as building and operating new power plants, have to be recovered during fewer hours of operation (the peakiest peak). This is less and less sustainable for everyone.

CA could reduce rates with capacity markets that include demand side resources

WEM recommends that CPUC and CEC should look into creation of a Capacity Market that includes demand-side resources, such as the "Forward Capacity Market" that has been operating since 2009 in ISO-New England territory.¹³

By contrast to the current system, energy efficiency measures that address peak power, and other demand side resources (demand response and distributed generation, including rooftop solar) would contribute to economic recovery through *lowering rates for all ratepayers*, in addition to those who benefit from EE programs. *Demand-side resources would avoid the need for nuclear power, and would reduce or eliminate the need for replacement or repowering of other Once-Through-Cooling power plants.* Thus, utilizing EE and other demand resources would clean up the air and water, reduce global warming emissions, and provide many more jobs and local economic benefits through the program work as well as overall rate reductions.

Greater use of demand-side resources would also assist in the growth of renewables, by offsetting their higher costs. A higher RPS would become more affordable.

Current EE programs are ineffective at reducing residential air-conditioning load

Even at the relatively meager level of expenditures of current EE programs, there have been savings from residential HVAC. According to SCE's report dated April 30, 2012, its 2010-12 Residential Quality Maintenance and Commercial Quality Maintenance

¹³ http://www.iso-ne.com/regulatory/ferc/filings/2009/oct/er10-000_10-29-09_fca_3_results_filing.pdf

Development had spent \$8,798,018 and achieved savings of 657,611 kWh and 324 kW. The program initially had a much lower budget and tiny goals: Initial budget of \$3,080,674, projected savings of 9,235 kWh, 15 kW.¹⁴

Recommendations for aggressive EE targeted to replace San Onofre nuclear power

An aggressive residential HVAC equipment rebate program and long-term finance program could provide substantially more reductions in peak demand. The Sacramento Municipal Utility District has such a plan and their application process is very simple¹⁵ (unlike SDG&E and SCE).

A more aggressive HVAC rebate and finance program targeted to the San Onofre pocket area would be effective in replacing power from the crippled nuclear plant. In addition, rebates for whole house fans, attic fans, ceiling fans and insulation would help significantly reduce peak demand.

EE could also reduce or eliminate the need for less savory replacement options like the Huntington Beach facilities. Over time, these measures could significantly defer or displace the need for other gas plants and transmission upgrades.

Current SCE and SDG&E rebate programs discourage residential energy efficiency

To the extent that the Energy Commission provides administration, oversight, or collaboration with CPUC regarding future EE programs using federal funds, ratepayer dollars and/or financing, we hope CEC will push for more improvements over current practices.

SCE and SDG&E are allowed to collect and spend billions of dollars of ratepayer money for energy efficiency programs. *As of April 30, 2012 SCE still had almost half a billion dollars in its 2010-12 energy efficiency budget that was supposed to be used by the end of 2012; SDG&E had over \$100 million.*¹⁶

From the customer's point of view, IOU programs discourage participation and make it difficult to access EE dollars, especially for HVAC.

¹⁴ <http://eega.cpuc.ca.gov/Documents.aspx> See Report Name: SCE.MN.201201.1.xls - Note: These figures are taken from utilities' monthly reports, which have not yet been subject to CPUC's independent Evaluation, Measurement & Verification (EM&V).

¹⁵ <https://www.smud.org/en/residential/save-energy/rebates-incentives-financing/heating-and-cooling/index.htm>

¹⁶ <http://eega.cpuc.ca.gov/Documents.aspx> See Report Names: SCE.MN.201204.1.xls; SDGE.MN.201204.1.xls

- SCE and SDG&E offer residential customers limited rebates to upgrade to more efficient central heating and cooling (HVAC) systems.¹⁷ They only offer rebates on *installation costs* for new air conditioning systems.¹⁸ The number of contractors to choose from is small and there are other hurdles that make this program less attractive. The information is difficult to find on SDG&E's website¹⁹. It refers you to a vendor website²⁰ for information, with no mention of rebate amounts.
- SDG&E's Energy Efficiency Business Rebates Product Catalog²¹ lists rebates available to business. No central air conditioning systems are included.
- SCE's Business Solutions Directory²² contains the most complete and current list of eligible equipment ("solutions") and qualification criteria for incentives available to customers through SCE's 2010–2012 Energy Efficiency Program. It also includes a summary of Demand Response Technology Incentives available for customers installing qualified equipment that enables load-shifting strategies. Updates on program changes (due to funding availability or other reasons) are located on the website for SCE Energy Management Online Application Tool²³. SCE has recently added "ice storage air conditioning installation rebates" to their HVAC Optimization Program.²⁴ However, none of this helps the residential customer.

Other changes in EE and LTPP should greatly increase energy savings

EE will be improved in 2013-14, when the CPUC offered to allow cities within Regional Energy Networks to administer EE independently. Also, the Rules process in Track 1 of the LTPP will hopefully establish a process for EE (and DG) to compete in procurement – either as a capacity market or in the micromanaged RA/LTPP process.

¹⁷ <http://sdge.com/save-money/your-whole-house/upgrade-and-save>

¹⁸ <http://www.ac-quality.com/homeowners/qi>

¹⁹ <http://sdge.com/save-money/your-heating-and-cooling-systems/increase-your-ac-confidence>

²⁰ <http://www.acqualitycare.com/Projects/>

²¹

<http://sdge.com/sites/default/files/documents/483825208/Business%20Rebates%20Product%20Catalog.pdf>

²² <http://www.sce.com/nrc/ems/download/solutionsdirectory.pdf>

²³ <https://www.sceonlineapp.com/>

²⁴ <http://asset.sce.com/Documents/Business%20-%20Energy%20Management%20Solutions/HVACOptimizationIceStorageFactSheet.pdf>

Failure to utilize EE and solar drives us into a false “choice” between nuclear and gas

In last year’s LTPP, WEM analyzed PG&E’s relicensing documents for Diablo Canyon, which demonstrate the impact of NRC guidelines that envision the use of only one “single” resource to replace full amount of a nuclear power plant. This forces a false choice of natural gas or coal “baseload” as the only alternative to nuclear.²⁵

California may be falling into this trap by making gas plants the central feature of replacement resources for San Onofre this summer.

Huntington Beach Power Plant

The Huntington Beach Power Plant (HBPP) Units 3 and 4 have been brought back online to provide for reliability. Mission owns HBPP. Edison initially sold all of HBPP to AES, but Mission recently bought back Units 3 and 4, in order to utilize the emissions credits, which it plans to transfer to the Walnut Creek Energy Center when (and if) it starts up in fall, 2012. Walnut Creek is currently under construction.

At the 6-22-12 CEC workshop, there were discussions of the relative capabilities of HBPP and Walnut Creek to backstop for a continued outage of San Onofre. While Walnut Creek is larger, and obviously newer and cleaner, ISO’s representative said it provides none of the grid support supplied by HBPP, so it could not be used next summer if San Onofre is down.

However, the ISO appears to have stated otherwise in CPUC Resolution EGPB-12²⁶ dated April 26, 2011:

The California Independent System Operator (CAISO) examined the grid reliability implications of retiring HB Units 3 and 4 and designating Walnut Creek as the replacement. After conducting power flow simulations, the CAISO concluded that the transaction would not create any reliability concerns.

The simulations indicate that even under certain double transmission outage conditions near Huntington Beach, the CAISO could dispatch other generation or utilize existing voluntary load dropping programs.

Audience member Ben Davis asked if San Onofre is still down next year, could we bring HBPP back online? That appeared to be a non-starter with the agencies. This is all the

²⁵ WEM Opening Comments on Track 1 Proposed Decision, pp. 13-16

<http://docs.cpuc.ca.gov/efile/CM/161780.pdf>

²⁶ http://docs.cpuc.ca.gov/word_pdf/COMMENT_RESOLUTION/134146.pdf

more reason why the use of demand resources should be prioritized for this local capacity area.

WEM's proposal for clean resources planning for nuclear outages pending in CPUC's LTPP for the past year — since May, 2011

WEM proposed that utilities begin to report all load, generation, and demand resources by distribution substation, so that we can determine what the resources attached to utility distribution systems already contribute to the contribute to the grid.

The CEC should begin to consider the demand forecast in a similar manner.

CPUC's Energy Division asked utilities to report (1) the actual historic loads at summer peak and (2) mix of customer classes — at the distribution bus level. However, their Straw Proposal revealed that utilities were unable to produce all of this information.

Energy Division noted:

Discussions with SCE revealed two things:

The California ISO/SCE transmission modeling conventions for the SCE transmission system controlled by the California ISO were unknown to the SCE organizational units with access to individual customer usage data; and No information was readily available about the composition of load by customer class at summer peak conditions.

A series of conference calls by CPUC and CEC staff with SCE pursued these concerns over the spring and summer months of 2011. Parallel discussions with SDG&E and PG&E revealed the same concerns to greater or lesser degree depending upon circumstances unique to each utility. ED Straw Proposal, p. 3.

What utilities said they COULD provide could be used to develop more information as follows:

- The customer's address – which could be mapped to a particular distribution bus
- The customer's rate schedule - which would reveal what class it is in
- Whether the customer participates in net-metering – which would reveal the presence of solar panels.

It should be possible for utilities to utilize information in customer records in their billing systems while at the same time cross-referencing it with information about their distribution systems?

Will Edison's money problems lead to poor procurement choices?

According to investment advisories, Edison International, the parent company of Southern California Edison, faces potential default of its power plant-owning subsidiary, Edison Mission Energy. Over 5000 MW of Mission's portfolio consists of coal.²⁷

According to its organizational chart online, Edison International has only two subsidiaries — the utility and the power plant owning subsidiary, Edison Mission Energy ("Mission").

Edison's utility subsidiary, Southern California Edison (SCE), is majority owner of San Onofre Nuclear Waste Generating Station (SONWGS), which has been shut down for six months because of serious problems with its nearly-new steam generators, and may be unable to restart.

SCE's operating revenue was approximately \$10.6 billion in 2011. Sources of energy to serve SCE's customers during 2011 were approximately: 36% purchased power; 21% CDWR; and 43% SCE-owned generation. Nasdaq website, quoting SEC filings.

We have little information about Mission, *which is privately held. However, the ratings agencies have downgraded its stock and warned of default.*²⁸

Edison Mission Energy's portfolio: mostly coal

WEM analyzed the listing Edison Mission Energy's portfolio on Edison International's website, as follows:

Coal (EME share)	Oil peakers	Nat Gas (EME share)	Cogen (gas)	Wind	Total MW project
5664	381	286	346.3	179	7407

In the California energy crisis of 2000-2001, the Commission initially attempted to hold utility holding companies to their promise to protect utilities from the vagaries of a deregulated market, even if that meant cashing out the assets of their unregulated subsidiaries. Instead of protecting utilities, the holding companies chose to protect the assets of their unregulated subsidiaries, which were heavily invested in coal and gas-fired

²⁷ See chart, EME power plants listed on Edison International website.

²⁸ Edison's credit rating: <http://www.edison.com/files/eixcreditratings.pdf>
<http://mlvb.net/biz.yahoo.com/e/120229/93083510-k.html>

power plants. The Commission forced ratepayers to bail out the companies. PG&E later lost its power plant subsidiary, but Edison International's power plant subsidiary survived — Edison Mission Energy. Now it appears that Mission is in trouble.

But once again, the interests of the private owners of Mission appear to be influencing the choices of a regulated utility. It is telling that SCE is prioritizing its nuclear and gas resources in California, rather than moving to truly clean energy, which would prioritize energy efficiency — supposedly number one in the State's Loading Order of resources.

Conclusion

WEM asks the Energy Commission to consider these comments in the preparation of its IEPR update this year and its actions in relation to the San Onofre outage.

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Respectfully Submitted,

/s/ Barbara George

Barbara George, Executive Director
Women's Energy Matters
P.O. Box 548
Fairfax CA 94978
415-755-3147
wem@igc.org