

**CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES QUARTERLY REPORT
SEPTEMBER – DECEMBER 2013**

EXECUTIVE SUMMARY: THE PAST THREE MONTHS AT A GLANCE

BEYOND 2020: Modeling the Low-Carbon California Grid of 2030-2050

Working with the leading grid authorities, CEERT is helping organize an *in-depth study that will model the California grid* beyond the current 33%-RPS (Renewable Portfolio Standard) -by-2020 goal. The study will provide *analytic support for an aggressive 2030 carbon target* that makes at least 50% progress toward the state's goal of an 80% reduction in greenhouse gas (GHG) emissions by 2050.

The study will build *balanced renewable portfolios* that achieve this goal, and will explore *acceleration of demand-response and energy-efficiency programs, dispatch coordination* among balancing authorities, *retrofitting and right-sizing of the gas fleet* to complement preferred resources, and *strategic transmission and storage investments*.

The California Independent System Operator's (CAISO's) *new 2014 – 2016 Strategic Plan* emphasizes renewables, demand response, energy efficiency, storage, electric vehicles, and increased cooperation with other Western balancing authorities.

Now that achievement of 2020's 33% RPS goal is within sight, to continue progress toward transforming and decarbonizing the California grid, CEERT is helping to ensure that long-range system planning is accomplished to inform future energy policy decision-making.

Advancing CARB's Global Climate Leadership

Under AB 32, the California Air Resources Board (CARB) is the lead state agency charged with achieving the statute's goal of an 80% reduction in carbon emissions by 2050, according to a "Scoping Plan" that CARB must regularly update and report on to the Governor.

In the current AB 32 Scoping Plan update, CEERT has advocated for greater accounting and control of super-polluting *methane and black carbon* emissions, *doubled GHG reductions* from the electric sector, and a major expansion of *energy efficiency, demand response, renewables, and clean distributed generation*.

CEERT also proposed a new *Grid GHG Reduction Innovation Program* to jumpstart advanced technologies and clean resources that can reduce GHG emissions but are not yet in use due to higher initial costs.

With retrenchment by the EU and gridlock in the U.S. Congress, California has become the world leader in enacting innovative, effective policies to reduce anthropogenic global warming emissions.

Shaping and Implementing Clean Energy Regulations at the CPUC

By year-end the California Public Utilities Commission (CPUC) issued *five new rulemakings* that will address important energy policies in 2014.

For the new 2014 Long-Term Procurement Planning (LTPP) rulemaking, CEERT recommended that the CPUC require investor owned utilities (IOUs) to include a *50%-by-2030 RPS scenario* in their future power supply plans.

The CPUC released a decision on the IOUs' 2013 RPS Plans that, in line with CEERT's recommendations, authorized *RPS solicitations for each of the investor-owned utilities (IOUs)*, required continuing *monitoring of Imperial Valley procurement*, permitted Southern California Edison (SCE) to engage in

bilateral negotiations in addition to an RPS solicitation in 2014, and prohibited the IOUs from requiring unlimited curtailment in RPS contracts.

CEERT filed comments arguing that *RPS procurement expenditure limitations* should not limit a utility's reliance on renewables or its voluntary renewables procurement.

A Third Amended Scoping Memo in the RPS proceeding *eliminated any claim of a 33% RPS compliance target ceiling*. The proceeding will also consider revision to various components of the RPS calculator to improve current functionality.

At SCE's November Living Pilot Symposium, CEERT submitted proposals calling for *an incentive for grid reliability benefits* and a separate *incentive for GHG reductions*.

In the LTPP Track 4 on *reliability issues* in the wake of the *San Onofre Nuclear Generating Station (SONGS) closure*, CEERT advocated for a delay until the CAISO's transmission planning results are known, for a renewed commitment to preferred resources to meet all need, and for a finding that the record does not support any interim procurement of conventional resources.

CEERT argued that a *CPUC-CAISO "Joint Reliability Plan"* was adopted without public input, did not fairly account for preferred resources to meet local and system need, could lead to over-procurement of gas resources, and failed to commit to rate reasonableness and a plan to decarbonize the grid.

The CPUC issued a decision on CEERT's *Application for Rehearing* of a prior order approving under-grounding *Segment 8A of the Tehachapi Renewable Transmission Project*. In line with CEERT's arguments, the new decision limits this case to its "particular facts," makes clear that the earlier order did not launch a new transmission policy, and eliminates any suggestion that curtailment claims by renewable generators were somehow specious.

CEERT advocated extensively for the inclusion of *large-scale pumped-hydro storage* in the 1,300 megawatt (MW) Energy Storage Procurement Framework, as the technology has commercially demonstrated viability and could make a significant difference in meeting system and local reliability needs.

On *bifurcation of demand-response (DR) programs*, CEERT argued that dividing up DR resources could lead to piecemeal treatment of a Loading Order preferred resource, that the attributes of various types of DR resources should first be defined, that it is critical to maintain utility and retail DR programs, and that the CPUC needs to determine whether retail DR programs should be integrated into the wholesale market.

Solar Advocacy

CEERT worked with CEC Commissioner Karen Douglas and the Governor's office to create support from companies and environmentalists for \$3.7 million in *local assistance grants to develop renewable energy and conservation general plan elements* in the San Joaquin Valley and the Desert Renewable Energy Conservation Plan (DRECP) planning area.

The CEC recently postponed action on *Palen*, a solar thermal project, primarily because of a lack of bird mortality data. CEERT supported a request for a 90-day delay to allow additional analysis.

CEERT's understanding is that the DRECP agencies have concluded their policy discussion and selected a *preferred alternative*, and that staff is now compiling the Plan.

Southern California Activities

The Imperial Irrigation District, the County of Imperial, and the Imperial County Air Pollution Control District are collaborating on *solutions to environmental deterioration at the Salton Sea* and on *renewable energy and transmission development in the Imperial Valley*.

The seventh annual *Imperial Valley Renewable Energy Summit and Expo* will be held on March 12 – 14. CEERT Board Chair Jonathan Weisgall has again been invited to be the opening speaker. CEERT's Nicole Ochoa is on the planning committee, and CEERT Executive Director John White will be a panelist.

Clean Transportation Advocacy

CEERT is actively helping defend the *Low-Carbon Fuel Standard (LCFS)*, which survived recent legal challenges and which will be subject of CARB workshops during 2014.

We are helping develop the *AB 118 Program's 2014 Investment Plan*, which at this point includes \$20 million for EVs and charging infrastructure and \$20 million for hydrogen fueling infrastructure.

CEERT is a party to a new CPUC proceeding on vehicle/grid integration, and we are actively meeting with auto and demand response companies to explore opportunities for plug-in electric vehicles to provide value to the grid through their electric storage capacity.



The Low-Carbon Grid

California 2030 Clean Energy Electric Grid Study

CEERT has initiated and is helping organize an in-depth study of decarbonizing the California grid beyond the current 33%-RPS-by-2020 goal.

The study will provide analytic support for an aggressive 2030 carbon target that makes at least 50% progress toward the state's Climate Action Goal of an 80% reduction in greenhouse gas (GHG) emissions by 2050, and will set forth the policy actions and infrastructure investments that are necessary to reach that target. The 2030 benchmark will entail reducing electric-sector carbon emissions to 250 lb/MWh, roughly equivalent to a 55% Renewable Portfolio Standard (RPS). This benchmark is intended to support the goals that CEERT expects to be outlined in the next version of the California Air Resource Board's (CARB's) Updated AB 32 Scoping Plan.

The study will build incremental, balanced renewable portfolios that achieve this goal, and that exploit in-state resources but allow for strategic imports and exports to enhance geographic balance and cost-effectiveness. It will also explore the acceleration of demand response and energy efficiency programs, dispatch coordination among balancing authorities, retrofitting and right-sizing of the gas fleet to complement clean energy resources, and strategic transmission and storage investments.

CEERT will contract with the National Renewable Energy Laboratory (NREL) to perform the study's modeling using the Plexos chronological dispatch production cost model (which the CAISO also uses); will subcontract with General Electric (GE) to supply data on gas fleet retrofit opportunities and cost; and will make use of the California Energy Council's (CEC's) Integrated Energy Planning Report (IEPR), the Western Electricity Coordinating Council (WECC) Transmission Expansion Policy Planning Committee's 2022 Planning Case, NREL's renewable resource characterization database, and NREL's recent study on fossil plant recycling at high renewables penetration.

Recently, the consulting company E3 (Energy + Environmental Economics), under contract to most of the California utilities (both investor- and municipal-owned), published a similar study that concludes a 2030 low-carbon grid is very doable but results in a 10 – 20% rate increase and is an expensive way to reduce GHG emissions. We expect to be able to show that relatively modest policy initiatives significantly lower the cost of achieving the CARB Scoping Plan targets.

A Steering Committee that comprises representatives of renewable energy companies funding the study is directing and overseeing the project. CEERT Senior Technical Consultant Jim Caldwell and CEERT Clean Energy Fellow Ali Ehlen are managing the study, with assistance from additional team members at GE and NREL.

The project timeline calls for draft results of the study's Phase I to be delivered to the Steering Committee by April 1. Our intent is to solicit funds from the annual WECC Study Plan process to fund a Phase II effort for the spring/early summer to hone the results and define specific near-term policy initiatives.

The CAISO's 2014 – 2016 Strategic Plan

The California Independent System Operator (CAISO) recently released its 2014 – 2016 Strategic Plan. CEERT is pleased to see the Plan's emphasis on renewables, demand response, energy efficiency, energy storage, electric vehicles, and other clean energy resources, and its explicit commitment to increased regional cooperation with other Western balancing authorities.

Climate Advocacy

California Air Resource Board (CARB) 2013 Draft Update to the AB 32 Scoping Plan

CARB's second draft of its 2013 Update to the AB 32 Scoping Plan will be released January 31. Under California Environmental Quality Act (CEQA) guidelines, the Scoping Plan Update's project description will include a formal public comment period, public workshops, and a formal meeting of AB 32's Environmental Justice Advisory Committee.

This second draft report is expected to provide specific measures and targets for each sector (Natural and Working Lands, Agriculture, Waste Management, Transportation, Water, and Energy) beyond the current 2020 requirements. In the energy and transportation sectors, the Second Draft Update will set a percentage reduction for each sector to achieve by 2030, based on current 2014 greenhouse gas (GHG) emission inventories. The CARB Board will consider adoption of the Second Draft Update in May.

CEERT has been meeting with the Global Warming Action Committee (GWAC) and participating in public workshops that CARB hosted on the Scoping Plan Update. In November we filed comments on CARB's initial 2013 Draft Update that offered the following detailed recommendations and proposal:

- A complete accounting of methane, black carbon and other short-lived pollutants must be developed in order to directly regulate these pollutants.
- Methane as a potent GHG gas and ozone precursor should be aggressively targeted through a comprehensive accounting approach. Measurement, control, and reduction of emissions on a lifecycle basis are required to establish a credible inventory that includes natural gas production, pipelines, and compressors. CARB and local air pollution control districts should also put in place best available control technology (BACT) guidelines and other regulations to reduce methane leakage from landfills and from oil and gas extraction and distribution facilities.
- Measurement, transparency, accountability, and a firm 2030 goal are required. An accounting of the progress made to date and new measures proposed in the plan, including GHG reductions (i.e., tons of CO₂e), are also needed. Sector plans should include timelines, GHG reduction metrics, and a process that identifies which agency or entity is responsible for each action.
- The electricity sector must double its GHG emission reductions. Because of the long lead time required for deploying new generation facilities and a move toward electrification of the transportation sector, a long-term comprehensive strategy is required to determine what technologies not now being deployed will be needed in the future to achieve double GHG emission reductions. Achieving the right balance between preferred resources and gas resources must be made through the lens of long-term GHG reductions in order to double GHG savings post-2020.
- Energy efficiency, demand response, renewables, and clean distributed generation must all be greatly expanded to meet the load-balancing needs of California's electric grid.
- Energy efficiency measures through building and appliance programs must be extended. California should consider setting up an Energy Efficiency Utility as a state-chartered nonprofit corporation, as Vermont and Delaware have done. Zero- or near-zero-carbon distributed generation needs a policy framework to guide evolution of intelligent local networks.
- CEERT proposed a new Grid GHG Reduction Innovation Program to address the need for double GHG saving in the coming decade, based on the successful Carl Moyer Program that accelerates transportation emission reductions. The goal of this incentive program is to jumpstart advanced technologies and preferred resources not currently being deployed or considered, in order to help reduce the cost of future GHG emission reductions and modernize the grid. Incentives would be available to any advanced technology, manufacturing process, or preferred resource that can reduce GHG emissions but may not be currently in use due to higher initial costs. The proposed program relies on open architecture, public program data, and transparent GHG reduction metrics to encourage program analysis and adjustment over time.

Advocacy at the California Public Utilities Commission (CPUC)

New Rulemakings

By the close of 2013, the CPUC had issued five new rulemakings, all of which will be venues where important energy policies will be addressed in 2014 and beyond. Those new rulemakings are:

1. **R.13-09-011** (Demand Response)

Link: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M077/K151/77151993.PDF> .

This rulemaking is the successor to a prior one on demand response (DR) programs, and aims to “enhance the role of demand response in meeting the State’s resource planning needs and operational requirements.” To that end, the rulemaking is considering changes in how DR programs are defined (e.g., as “supply-side” vs. “demand-side”) in order to expand DR resources, and also to extend funding for these programs and to better align them with the California Independent System Operator (CAISO) wholesale market. *(These issues and CEERT’s positions are addressed in detail on pages 11 – 12 below.)*

2. **R.13-11-005** (Energy Efficiency)

Link: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M081/K631/81631689.PDF>.

This rulemaking is a successor to R09-11-014, which dealt with energy efficiency (EE) policy issues. In this case, the CPUC is considering ways to enhance, and avoid disruptions to, EE programs through 2015, including consideration of a “Rolling Portfolio” of EE programs that have these characteristics: long-term (10-year) CPUC-approved funding, periodic adjustments by program administrators without formal re-filing and consideration, and CPUC funding renewal “well prior to the end of the funding period.” A prehearing conference was held on December 11 and a Proposed Decision on 2015 Portfolio funding is scheduled for April. While a Scoping Memo was expected in December, none has been issued to date.

3. **R.13-11-007** (Alternative-Fueled Vehicles)

Link: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M081/K996/81996327.PDF>.

This rulemaking is a successor to R.09-08-009, which focused on initial policy and tariff issues affecting the development and deployment of alternative-fueled vehicles (AFV). R.13-11-007 plans two tracks, the first of which will evaluate the potential and value of vehicle/grid integration, including the use of vehicle batteries for demand response and energy storage. The second track will focus on developing new AFV tariffs for each investor-owned utility (IOU), which may include new rate designs for electric and natural gas vehicles and policies for residential, multi-family, workplace, and fleet plug-in electric vehicles.

4. **R.13-12-010** (Long Term Procurement Planning (LTPP))

Link: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M084/K241/84241040.PDF>.

This rulemaking is the successor to the 2012 LTPP, which continues to be the subject of a pending Track 4 (addressing SCE and SDG&E reliability needs following the closure of the San Onofre Nuclear Generating Station (SONGS)). To date, no Proposed Decision has been issued in Track 4, but in December, the CPUC nevertheless began a new 2014 LTPP rulemaking (R.13-12-010). While no scoping memo has yet issued for this 2014 LTPP, workshops were held in December on scenarios and assumptions for the next LTPP analysis, which were the subject of Comments filed on January 8.

In our Comments, CEERT expressed concern that even the expanded preferred-resources scenario only assumed a 40%-by-2030 Renewable Portfolio Standard (RPS), and we recommended inclusion of a 50%-by-2030 RPS. Other parties also expressed concern with the limited assumptions and scenarios applied to DR resources.

5. **R.13-12-011** (Water-Energy Nexus)

Link: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M084/K481/84481715.PDF>.

At its last meeting of 2013, the CPUC issued a new rulemaking, R.13-12-011, to develop a partnership framework between energy IOUs, privately owned water utilities, and public water and wastewater agencies to “co-fund programs that reduce energy consumption by the water sector.” This will include more robust methodologies for measuring the embedded energy savings from EE and conservation measures in the water sector and determining the cost-effectiveness of these projects. Given California’s current drought fears, this rulemaking may shape important and timely policies.

Renewable Portfolio Standard (RPS) Program - R.11-05-005

1. 2013 RPS Procurement Plans and Solicitations

In July and August 2013, CEERT actively urged the CPUC, in any decision on the IOUs’ 2013 RPS Plans and Solicitations, to confirm that the 33% RPS is *not* a ceiling on renewables procurement, and that the Loading Order requires all generation needs to be met first by renewable resources, notwithstanding any targets or limitations imposed by other programs or proceedings.

CEERT also urged the CPUC to address ongoing barriers to renewables development and procurement (e.g., transmission constraints), the need for greater regulatory certainty in renewables procurement and contract approval, the need for revisions to the RPS Least-Cost Best-Fit (LCBF) evaluation of bids and projects (especially to reflect appropriate time-of-delivery rates, resource valuation, and integration costs), and more effective consideration of Imperial Valley resources in RPS solicitations.

In October, the CPUC issued a Proposed Decision (PD) conditionally accepting the IOUs’ 2013 RPS Plans. On November 12, CEERT filed Reply Comments, urging the CPUC to tackle issues that the PD effectively ignored, including procurement of excess energy, an LCBF methodology, identification and allocation of integration costs, renewables diversity, and proper evaluation of all Imperial Valley renewable resources.

While the final decision (D.13-11-024) did not take all the steps that CEERT recommended, it did authorize RPS solicitations for each of the IOUs to start in mid-December 2013, required continuing monitoring of Imperial Valley procurement, permitted SCE to engage in bilateral negotiations in addition to an RPS solicitation in 2014, and prohibited the IOUs from requiring (though they could negotiate about) unlimited curtailment in RPS contracts. The link to D.13-11-024 can be found at:

<http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M081/K872/81872675.PDF>.

2. Procurement Expenditure Limitations.

On July 23, 2013, an ALJ’s Ruling was issued with an Energy Division Staff Proposal on a methodology for implementing procurement expenditure limitations (PELs) on IOU RPS procurement. On September 26, CEERT filed Opening Comments. Our main concerns with the Staff Proposal are that the PEL should not limit a utility’s reliance on or procurement of renewable generation, consistent with the Loading Order; that the CPUC should confirm that the 33% RPS is not a ceiling on RPS procurement; and that the PEL should not limit the IOUs’ “voluntary” renewables procurement. Alternative PEL proposals were also offered by SCE, CalWEA/LSA, and the California Large Energy Consumers Association (CLECA).

On December 16, the assigned ALJ (Simon) issued an e-mail ruling adopting a February-March schedule for filing and service of the revised staff proposal and any alternative proposals for an RPS PEL. And on January 13, the Energy Division sent out an e-mail and attached spreadsheet providing “an illustrative data set that includes many of the quantitative inputs necessary to establish an RPS procurement expenditure limitation.” Energy Division intends this data set to improve understanding and comparison of the proposals and has asked that it be used by any party filing a proposal to explain the calculations for implementing a proposed methodology.

3. Implementation of SB 1122.

In November 2013, an ALJ's Ruling was issued seeking comments on a Staff Proposal for implementing SB 1122, which requires the IOUs to collectively procure at least 250 MW of bioenergy generation eligible for RPS compliance on or after June 2013. While CEERT did not file comments on this Staff Proposal, we continue to track responses to determine if the CPUC is appropriately implementing this statute.

4. Evaluation of Renewable Auction Mechanism ("RAM").

On December 31, the CPUC issued an ALJ's Ruling to explore whether factors underlying the RAM's "original authorization continue to apply and whether reauthorization of the program is appropriate." Additional issues include consideration of program elements, eligibility, viability, and contract terms and conditions. CEERT is currently reviewing the ruling and questions. We have had significant concerns about reliance on the RAM to govern renewables procurement since, among other issues, it has not yielded a diverse renewable portfolio by either resource or technology type.

5. Third Amended R.11-05-005 Scoping Memo

On January 13, a Third Amended Scoping Memo and Ruling of Assigned Commissioner was issued in R.11-05-005. See: <http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M085/K506/85506394.PDF>. The new Scoping Memo extends the deadline for the conclusion of the proceeding to January 31, 2015, and continues unresolved issues, including adoption of a procurement expenditure limitation.

The new Scoping Memo also addresses implementation of PU Code Section 399.15(b)(3) (AB 327), which, significantly, eliminated any claim of a 33% RPS compliance target ceiling by changing the language of that subsection to state that the "commission may ["may" replaces "shall not"] require the procurement of eligible renewable energy resources in excess" of those quantities. Language in that section referring to "voluntary" procurement by obligated retail sellers was also eliminated.

Thus, the CPUC will now consider how this language "may affect the remaining tasks in this proceeding" and undertake analysis of "market, regulator, and operation conditions with respect to RPS-eligible procurement" in the context of this provision. And in an effort to improve the "alignment of RPS procurement" with the system planning function in the LTPP through use of the RPS calculator, R.11-05-005 will also consider revision to the various components of the RPS calculator to improve current functionality.

Long-Term Procurement Planning (LTPP)(R.12-03-014) and Living Pilot Symposium

1. Track 1 (Local Reliability) and Living Pilot Symposium.

The CPUC's LTPP rulemaking (R.12-03-014) was the focus of significant CEERT advocacy in 2013. In Track 1, we were successful in offering testimony and recommendations that the Commission relied on in D.13-02-015 to require Loading Order preferred resources (energy efficiency, demand response, and renewable generation) to be procured to meet a utility's Local Capacity Requirements. Track 1 directives focused only on Southern California Edison (SCE), and in the last quarter of 2013 SCE responded with all-source and preferred-resource-specific solicitations.

SCE's efforts have expanded to developing "Living Pilot" procurement scenarios that seek to broaden the knowledge and opportunities for preferred resources to play an even greater role in meeting local need. In early November the CPUC and SCE hosted a Living Pilot Symposium to consider multiple proposals, including two that CEERT submitted, to advance the role that preferred resources play in meeting the state's energy and climate goals.

CEERT's proposals called for an incentive for grid reliability benefits and a separate incentive for GHG reductions. Both proposals rely on transparent and accessible program data to encourage innovation, analysis, and program adjustment over time.

While SCE described the Living Pilot in its Track 4 testimony, SCE did not ask for approval or funding of that proposal in Track 4, and it does not appear that it will seek that authority by separate application. Instead, funds from other programs are being applied to the Pilot, and those with responsive resources are being encouraged to bid into SCE's Track 1 Preferred Resources Auction. Signed contracts from that auction will be submitted by SCE for approval by application, which is expected around September 2014.

2. Track 4 (SONGS Local Reliability)

Unfortunately, Track 1 was focused on SCE procurement only, and did not extend to SDG&E, or factor in reliability needs without the San Onofre Nuclear Generating Station (SONGS). The Revised Scoping Memo issued on May 21 added Track 4 to R.12-03-014 to consider the local reliability impacts of SONGS' retirement, and to give direction to assumptions to be made in CAISO studies, as well as to SCE and SDG&E in assessing the interim (2018) and long-term (2022) local reliability needs in the Los Angeles Basin local area and the San Diego sub-area resulting from SONGS' closure. (Track 2 on System Need was later cancelled, but such considerations might be renewed in the 2014 LTPP.)

Track 4 was the subject of significant CEERT activity, including submission of comments and testimony (September), participation at evidentiary hearings (October-November), and filing of Opening and Reply Briefs (November-December). Our first concern was that no additional conventional generation procurement for SCE or SDG&E be authorized until the results of the CAISO 2013-2014 Transmission Planning Process (TPP) are known. CEERT argued that the CPUC could fully consider those results, which are likely to reduce any SONGS local need, by early 2014, with time for a decision to be issued in June 2014 *if any* need were demonstrated. In our September Comments, CEERT offered a specific schedule that would allow for important updated information such as the TPP results to be considered, a recommendation that was supported by other parties, notably the Office of Ratepayer Advocates (ORA).

While not ruling on whether an interim decision would be issued, the CPUC nevertheless continued to build a record in Track 4 by allowing testimony and evidentiary hearings and briefs to go forward. CEERT actively participated in all phases of Track 4, advocating for a renewed CPUC commitment to preferred resources procurement to meet all need in the same manner as D.13-02-015 in Track 1, and for a finding that the Track 4 record does not support any interim procurement authorization of conventional resources by SCE or SDG&E. We recommended that if any interim procurement was authorized, it should include a minimum level of preferred resources and include large-scale pumped storage.

CEERT found commonality and support for our positions with ORA, NRDC, CLECA, Sierra Club, and even SCE, among others. Disappointingly, positions taken by PG&E, SDG&E, and IEP did not support a role for preferred resources for meeting local need and continued to advocate for that need being met by conventional gas-fired generation only. None of these parties supported the use of living pilots like SCE's as a means of testing the ability of preferred resources to meet local need.

CEERT believes that the Track decision will have a major effect on energy policy, especially for preferred resources.

Resource Adequacy (RA) Rulemaking (R.11-10-023) and "Joint Reliability Plan"

Fall 2013 included ongoing CPUC and CAISO consideration of issues related to flexible capacity, including CAISO's "flexible resource adequacy criteria and must offer obligation" (FRACMOO) tariff, Qualifying Capacity for energy storage and wholesale demand-response resources, and the effective load-carrying capacity of wind and solar resources. These issues were the subject of CPUC Workshops and CAISO stakeholder meetings, but have not resulted in any specific CPUC PD to date.

However, on November 8, the CPUC for the first time published a "Joint Reliability Plan" with the CAISO. See: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M081/K530/81530152.PDF> .

Because this Plan had not been the subject of public comment or any formal CPUC proceedings, CEERT took the initiative to address the Commissioners about the Plan at their November 14 meeting. Described as an agreement between the CAISO and CPUC “to continue inter-organization cooperation for future resource and reliability planning,” the Plan included several initiatives of concern to us.

At the November 14 CPUC Meeting, CEERT expressed our objections to the Plan being adopted without public input, and our concerns that it did not fairly account for Loading Order preferred resources to meet local and system need, that it could lead to over-procurement of gas resources (based on an initiative to increase revenues to those plants), and that it failed to commit to rate reasonableness and a plan to decarbonize the grid in furtherance of AB 32 and the Governor’s Climate Action Plan. The Commissioners sought to reassure CEERT, and the general public, that the Plan did not reach any specific conclusions, but was merely a commitment by the two agencies to work together on issues affecting reliability.

Nevertheless, immediately after we made our Comments, CEERT was contacted by the Office of Ratepayer Advocates (ORA), which had similar concerns with elements of the Plan, including an initiative on a “reliability services auction.” This led us to meet with ORA and NRDC in early December to discuss these issues and prepare to work collaboratively to ensure ongoing, effective reliance on preferred resources to meet California’s energy needs.

Energy Storage (R.10-02-007) and Large-Scale Pumped Storage Workshop

On June 10, 2013, Assigned Commissioner Peterman issued a ruling (ACR) seeking comment on a straw proposal for load-serving entities to procure viable, cost-effective energy storage systems from among emerging storage technologies. The straw proposal contained statements that included storage in the Loading Order.

An All-Party meeting was held on June 25, and in July, CEERT filed Opening and Reply Comments largely to ensure that any targeted procurement of energy storage, which CEERT does support, matched the requirements imposed on other preferred resources, to ensure fair treatment for all resources. One of the points CEERT stressed was that the ACR should include well-established technologies, including pumped storage, in order to lead to a diverse and reliable portfolio.

On September 3, Commissioner Peterman issued a Proposed Decision (PD) adopting an Energy Storage Procurement Framework and Design Program, and addressing the issues CEERT raised. The PD agreed with CEERT that the Loading Order could not be unilaterally changed by a single Commissioner to add energy storage, and would not be revised to do so at this time. The PD further agreed with CEERT that the RAM should not be used for energy storage, and instead adopted Requests for Offers (RFOs) as the best mechanism for solicitations. However, the PD continued to exclude large-scale (50 MW or more) pumped storage from the adopted program, despite its admitted benefits and the fact that CEERT and numerous other parties urged inclusion of this technology.

On September 23, CEERT filed Opening Comments on the PD, and argued that (1) in excluding large-scale pumped storage from the 1,300 MW Energy Storage Procurement Framework, the PD did not proceed in the manner required by law; (2) to comply with the law and meet current energy needs and policies, the PD must be modified to include large-scale pumped storage in its storage procurement targets; and (3) alternatively, the PD must be modified to identify a CPUC proceeding and schedule to authorize procurement of large-scale pumped storage in a timely manner. We held that large-scale pumped storage complies with storage definitions in AB 2514, and that to exclude it would ignore a technology that has commercially demonstrated viability and that could make a significant difference in meeting system and local reliability needs.

On September 30, CEERT filed Reply Comments emphasizing that multiple parties have urged inclusion of large-scale pumped storage in the Storage Procurement Framework. We also supported EDF Renewable Energy's and SCE's proposals for including large-scale pumped storage in the Framework. And in early October, we met with the advisors of all five Commissioners to advocate again for including large-scale pumped storage in the Framework, pointing out that Assemblymember Skinner, author of AB 2514, had written a letter supporting the addition of pumped storage to the Storage Procurement Framework.

After CEERT's extensive advocacy on the subject, on October 17 the CPUC unanimously adopted a Final Decision (D.13-10-040) that continued to exclude large-scale pumped storage, but was significantly revised, consistent with advocacy by CEERT and other parties (in particular EDF Renewables), to provide explicit next steps for considering pumped storage development and procurement, including a dedicated workshop and a deadline (180 days from the issuance of the final decision) for holding that workshop. D.13-10-040, including the concurring opinions (discussed below) on the last pages, can be found at: <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M079/K533/79533378.PDF>

While the Final Decision was adopted unanimously, Commissioners Peevey and Ferron did file a joint concurrence indicating their concerns with some aspects of the framework, including the exclusion of large-scale pumped storage. In oral comments that mirrored this joint concurrence, Commission President Peevey stated he was confident that the CPUC "can evaluate...the true value of pumped bulk hydro storage through the workshop...and further work in the Long-Term Procurement Proceeding." Commissioner Ferron stated "that ratepayers may be missing an opportunity to benefit by limiting the size of pumped storage under this decision."

The CPUC will hold a workshop on January 16 to "further explore the operational characteristics and uses for pumped storage projects." CEERT is pleased that the CPUC is keeping large-scale pumped storage on its radar, and we will continue to advocate for its inclusion in either an existing or new proceeding.

Demand Response (DR) Program - R.13-09-011

On September 25, the Commission issued R.13-09-011, an Order Instituting Rulemaking (OIR) on demand response (DR) issues. The purpose of this proceeding is to: (1) analyze current DR programs to determine whether and how the Commission should bifurcate them into demand-side resources (customer-focused programs and rates) and supply-side resources (reliable and flexible DR that meets system resource planning and operational requirements); (2) create an appropriate competitive procurement mechanism for supply-side DR resources; (3) determine the program approval and funding cycle; (4) provide guidance for transition years; and (5) develop and adopt a roadmap for coordination with other CPUC proceedings and state agencies on the future of DR in California.

Attached to the OIR was a staff proposal for three DR pilots, one for each of the IOUs. Two of the pilots will test the participation of DR in the CAISO wholesale energy market, and the third will test the effectiveness of strategies to improve customer response to time-of-use and critical peak pricing rates. The OIR also set forth six questions focusing on bridge funding, the staff-proposed pilots, and other issues.

Numerous parties responded to these questions. CEERT did not file responses because we were determining the best approach to take on DR issues. Many parties held that the CPUC should grant the IOUs a one-year bridge fund to allow current DR programs to continue through 2015. CLECA, Joint DR Parties, Olivine, SCE, and SDG&E requested a longer period for bridge funding.

On October 24, ALJ Hymes held a prehearing conference (at which CEERT was granted party status), and on November 14 the ALJ and Assigned Commissioner Peevey issued a Scoping Memo. The Scoping Memo confirmed the status of this proceeding as rate-setting, and identified a scope and schedule that would address bridge funding; pilot proposals; foundational policy issues; future program design, pro-

gram approval, and funding process; and coordination and integration with the CAISO and state agencies. Phase One issues extend to bridge funding and pilot proposals, while Phase Two will address foundational questions, among other subjects.

On December 9, ALJ Hymes issued a PD approving two-year (2015-2016) bridge funding for DR programs, which will give the CPUC time to meet its goals for this proceeding while ensuring continuity for current DR programs. The CPUC intends to use what it has learned from DR programs over the past year and a half to improve the 2015 and 2016 outcomes of the programs. Many parties filed comments on the PD, with most supporting two years of bridge funding, but several requested revisions and modifications.

On December 13, numerous parties, including CEERT, filed Responses to the Phase Two Foundational Questions posed in the Scoping Memo. We later filed a Reply to Responses to those questions.

CEERT's Responses focused solely on the issue of bifurcation. We requested clarification on the policy basis for bifurcation and noted that R.13-09-011 did not address any policy rationale for why or whether bifurcation would enhance DR's ability to help meet the state's energy goals. We were also concerned that dividing up DR resources would lead to piecemeal treatment of a Loading Order preferred resource. We argued that the first step should be clearly defining the attributes of the various types of DR resources, and that it is critical to maintain utility or retail DR programs that have been the means of expanding this valuable resource, building customer confidence, and deepening understanding of its capabilities.

CEERT also argued that bifurcation as proposed by R.13-09-011 in advance of an examination of attributes may fail to adequately recognize the value of all DR resources. We contended that the Commission needs to consider criteria to determine whether or not retail DR programs should be integrated into the wholesale market and whether these criteria should include demonstrating ratepayer benefits. Several parties shared CEERT's positions or had positions that CEERT supports. CEERT has been asked by PG&E to join a broader group of parties, including Sierra Club and EDF, to meet with Commissioners on the bifurcation issue.

CEERT anticipates that there will be a lot of movement in the DR proceeding in the next year. For now, we are pleased with the decision to adopt two-year bridge funding because it will allow for DR program and funding stability.

Renewables Transmission Planning and Development

Tehachapi Renewable Transmission Project (TRTP) Segment 8A – A.07-06-031

On July 11, 2013, the CPUC issued D.13-07-018, which granted a Petition for Modification of D.09-12-044 and approved undergrounding of Segment 8A of the Tehachapi Renewable Transmission Project (TRTP) through Chino Hills. CEERT, Southern California Edison (SCE), The Utility Reform Network (TURN), the Office of Ratepayer Advocates (ORA), Independent Energy Producers (IEP), and Terra-Gen opposed the modification of D.09-12-044. We opposed the undergrounding for several reasons: there is a risk of curtailment, Chino Hills' financial contributions to undergrounding are inadequate, and undergrounding of a 550 kV line is extremely expensive and has never before been attempted in the U.S.

On August 15, CEERT filed an Application for Rehearing of D.13-07-018, based on the fact that the decision failed to proceed in the manner required by law, was impermissibly vague, was not supported by its findings or by substantial evidence in light of the whole record, and was an abuse of the CPUC's discretion and a violation of due process. We held that the Commission must grant rehearing to, at the least, correct the most egregious legal errors in D.13-07-018.

CEERT's goal was not to seek reversal or delay in completion of this segment (which could create further risks for developers), but to improve D.13-07-018. *Of particular concern was the use of D.13-07-018 as*

precedent for future transmission planning or authorization. We believed it was important for the CPUC to make clear that there were specific, unusual circumstances that gave rise to the decision that hopefully would not be repeated. D.13-07-018, however, did not make those distinctions effectively, but indicated that it was mapping out “new” transmission policy for the state, based on a single city’s after-the-fact view of “community values” — values that pertained only to visual impact.

On November 4, in one of the quickest turnarounds CEERT has experienced on a rehearing request, the CPUC addressed CEERT’s Application in D.13-10-076, issued on a vote of 4 – 1 (Commissioner Florio dissented). In D.13-10-076, the Commission modified D.13-07-018 in response to our arguments, while otherwise denying rehearing. It appears that CEERT’s Application for Rehearing gave the CPUC an opportunity to correct some of D.13-07-018’s errors and provide a more stable precedent.

D.13-10-076 improved certain of the worst aspects of D.13-07-018 and now limits this case to its “particular facts” (which the prior order did not). It makes clear that D.13-07-018 did *not* launch a new transmission policy that might encourage other cities to seek after-the-fact relief that could prove costly for renewable developers. D.13-10-076 also restores the merits of the original TRTP order, which is a much more solid precedent for transmission projects needed to access renewable resources, and eliminates any suggestion that “curtailment” claims by renewable generators were somehow specious. The CPUC’s timely consideration of our application, and the fact that we did not seek reversal of the undergrounding, means these modifications have been achieved without further delaying completion of Segment 8A.

However, on many of CEERT’s arguments, especially those involving the CPUC’s “process” in this case, D.13-10-076 essentially gives the Commission a pass by modifying or simply ignoring (on technicalities) applicable appellate court decisions critical of similar CPUC improprieties. While these process failures remain troubling, we concluded that they are not sufficient to continue any challenge of D.13-07-018.

In late November, SCE’s Director of Regulatory Affairs met with the Commissioners’ advisors and informed them that the construction schedule for undergrounding the Chino Hills portion of the TRTP is changing, and SCE does not now expect completion until late 2016 to mid-2017. D.13-07-018 indicates that the overgrounding of Segment 8A would have taken only four months, but that even with undergrounding, the TRTP could be completed in late 2015 or early 2016. Unfortunately, as CEERT made clear in our filings, the undergrounding of Segment 8A has led to a serious delay in completing the TRTP.

On December 11, ALJ Jean Vieth issued a Proposed Decision (PD) that, among other matters, increases the reasonable maximum costs for Segments 4 – 11 by \$23 million. While CEERT is concerned about the PD’s increase of the reasonable maximum costs because the cost of the TRTP was already high and may lead to a backlash against renewable energy, we decided not to oppose the PD in order to avoid any additional delay. However, the prospect of further delays in the completion of the line, which may contribute to curtailment, and other related increased costs may eventually support renewable generators exercising the option of seeking relief from these costs in a regulatory filing to the CPUC.

Solar Advocacy: The DRECP and CDREWG

CEERT continues to engage as an advocate and active participant in the Desert Renewable Energy Conservation Plan (DRECP), which will guide energy and conservation planning for 22 million acres of California desert, and determine how much of that land will ultimately be available for solar and wind projects.

CEERT worked with CEC Commissioner Karen Douglas and the Governor's office to create support from companies and environmentalists for \$3.7 million in local assistance grants to develop renewable energy and conservation general plan elements in the San Joaquin Valley and the DRECP planning area. Strong

support from Kern and Imperial counties led to a bipartisan effort that will bring a total of \$7 million for these important planning exercises. The RFP for these local assistance grants was issued in September.

In November the DRECP released its new Gateway process, which is a good mapping tool with much potential, very strong on biology and conservation analysis, but very weak on renewable energy analysis. At the release date it did not include solar and wind resource data or the BLM Programmatic Environmental Impact Statement (PEIS) data (which is 18 months old), and therefore lacked an ability to model different possible DRECP alternatives. CEERT's Anne Baker has met with DRECP staff several times about these deficiencies, and there is now some agreement on ways to include layers of solar insolation and slope data, parcelization, and the Development Focus Areas that CEERT and LSA proposed.

In December an initial meeting was held to discuss San Bernardino County developing a county-wide planning element for renewable energy development and conservation. CEERT will continue to monitor this process.

Also in December, the Wilderness Society released a request for public support for "desert treasures," a group of unique places that it believes should be protected in the DRECP. Initial analysis indicates that with the exception of the Silurian Valley and possibly Route 66, there would be little interference with the solar industry's proposed Development Focus Areas.

The DRECP agencies are conducting a webinar on terrestrial landscape intactness issues in January.

The CEC recently postponed action on Palen, a solar thermal project, primarily because of a lack of bird mortality data. CEERT joined with LSA and others to support a request for a 90-day delay to allow additional analysis to be added to the record. Palen is a site that was approved earlier for a different solar thermal technology, so this hearing is focused on changes that result from the new tower technology.

The California Desert and Renewable Energy Working Group (CDREWG) has selected as its facilitator David Nawi, formerly with the Department of the Interior. He began work on December 2, and is spending his first 90 days interviewing CDREWG participants and state agencies, and then preparing an assessment for the group. The report will address whether the group should continue, reconstitute, or disband; which topics generate sufficient common interest to work on in the PEIS and DRECP; and other issues related to siting renewable energy projects in California.

David will schedule a meeting of the group in February to discuss his report and seek consensus on whether there is a path for going forward, what the group structure will be if the group continues, the scope and timeframe of future activities, and, if appropriate, the creation of a subsequent contract to fund those future activities.

CEERT's understanding is that the DRECP agencies have concluded their policy discussion and selected a preferred alternative, and that staff is now compiling the Plan. Once the document is completed it will be released for the first round of formal public review, which will occur sometime in the spring.

Southern California Activities

Salton Sea MOU Signing

After 10 years of litigation over the impacts on the Salton Sea resulting from the 2003 Quantification Settlement Agreement, the Imperial Irrigation District (IID), the County of Imperial, and the Imperial County Air Pollution Control District are collaborating to devise affirmative solutions to ensure the Agreement promotes public health, the environment and a green energy economy. The parties have agreed on the following terms:

- IID and the County will oppose any additional water transfers.

- The parties agree to work together and share costs to avoid the possibility of US EPA-imposed sanctions that could freeze certain transportation funding and increase the cost of PM₁₀ emissions control necessary for economic development and generation of renewable energy.
- Parties endorse and agree to work with the Salton Sea Authority (SSA) toward the implementation of a Modified SSA Restoration Plan, which may result in a smaller but sustainable Salton Sea, and to recognize the Known Geothermal Resource Area (KGRA). (The 2006 restoration plan is outdated and does not include the KGRA.)
- The parties' intention is not to relieve the state of its obligations, but to bolster state efforts to fund restoration and prevent irreversible damage to the Sea as a result of delays in appropriating funds.
- IID pledges to use its land and mineral assets in the KGRA and the area around the Sea for renewable energy development to further stabilization and restoration efforts.
- For a certain period of time IID will consider potential renewable energy development projects on IID-owned property in the KGRA to create public-private partnerships that will contribute to Sea stabilization and restoration funding.
- Parties will jointly pursue funding and supportive actions from the state and federal government, and specifically agree to secure the following from the state:
 - Fulfillment of its obligation to pay for Salton Sea restoration
 - Commitment to construct and fund new transmission
 - Use of state land at the Sea to support renewable energy development
 - Dust mitigation on state-owned property
 - Encouragement of desalination and alternative sources of water to satisfy coastal water needs
 - Acknowledgment that using water for mitigation and Sea restoration is reasonable and beneficial.
- Parties specifically agree to secure the following from the federal government:
 - Use of federally owned land at the Sea for renewable energy
 - Dust mitigation on federally owned property
 - Adoption of an energy surcharge at Hoover Dam
 - Acknowledgment that using water for mitigation and Sea restoration is reasonable and beneficial.
- IID and the County will jointly pursue a state commitment to build and fund a transmission line interconnecting IID's system for grid reliability with an export capacity of 1,400 – 1,700 MW to transfer renewable energy from the Salton Sea KGRA to load centers throughout the state. Parties understand that with this commitment will come acknowledgment of up to 1,400 MW of resource adequacy (RA) under the CPUC RA program and PPAs for an equivalent volume of must-take generation. The County agrees to work with IID on transmission siting. Pursuit of a transmission line at or near the KGRA under this MOU is intended to preserve IID as an energy balancing authority.
- IID and the County will pursue necessary approvals for recognizing parasitic load as renewable energy that would count toward IID's RPS.

2014 Imperial Valley Renewable Energy Summit & Expo

CEERT's Nicole Ochoa has been participating in the planning efforts for the 7th Annual Imperial Valley Renewable Energy Summit, which will be held March 12 – 14 in Winterhaven. The event will expand its scope this year and delve into compelling new renewable energy opportunities.

The summit will feature a tour of renewable facilities, a networking reception, a business exposition, and industry-specific break-out sessions. CEERT Board Chair Jonathan Weisgall has been invited to be Opening Speaker for the fifth year in a row. As a member of the Summit's planning committee, Nicole Ochoa helped arrange for CEERT Executive Director V. John White to be moderator of the "Statewide Initiatives/California's New Energy Future" session. CPUC Commissioner Mike Florio, CEC Commis-

sioner David Hochschild, and CAISO Board of Governors member Dave Olsen have also been invited to speak on the panel.

Clean Transportation Advocacy

Low-Carbon Fuel Standard (LCFS)

CEERT continues to be an active participant in the defense of the LCFS.

On September 18 the Ninth District Court of Appeals overruled a legal challenge to the LCFS by Growth Energy, Renewable Fuels Association, National Petrochemical Refiners Association, American Trucking Associations, and other parties, reversing an opinion by the U.S. District Court in Fresno that held the LCFS violated the dormant Commerce Clause of the U.S. Constitution. The Court of Appeals also vacated the lower court's injunction preventing the LCFS from going into effect.

This followed an earlier California Court of Appeal decision in a suit against the LCFS that claimed the program's environmental impacts were not adequately studied. The Court of Appeal ruled that the LCFS would remain in effect, and that CARB can continue to implement and enforce the 2013 regulatory standards, but should correct certain aspects of the procedures by which the LCFS was originally adopted.

Adjustments to the LCFS program will be the subject of workshops during 2014. Fuel suppliers have generated excess LCFS credits, beyond what was required, in every quarter since the start of the program. Overall biofuel volumes have remained relatively constant since 2011; the contribution of corn-derived ethanol has decrease;, and biodiesel and renewable diesel use increased dramatically during 2013. Electricity use has quadrupled since the program began, but generates less than 3% of the credits. Organizers are working on a cellulosic fuels conference of NGOs and other critical stakeholders for 2014.

CEERT continues to serve on the Advisory Committee for the Alternative and Renewable Fuel and Vehicle Technology Program. The CEC is developing the Program's 2014 Investment Plan, which was the subject of a November 4 Advisory Committee public meeting, and will be considered during a second meeting in February. The draft Investment Plan is proposing \$20 million in funding for electric vehicles and charging infrastructure, and \$20 million for hydrogen fueling infrastructure for fuel-cell vehicles.

With the passage of AB 8 the California Legislature reauthorized the Alternative and Renewable Fuel and Vehicle Technology Program through 2024. (Its original sunset date was 2016.)

Electrifying Transportation

The Governor's September 16 Summit on Plug-in Electric Vehicles (PEVs) was a success, with over 150 attendees, including more than 40 corporate executives. The "Drive the Dream" Summit showcased 16 new PEVs from eight automobile manufacturers and significant new investment in California by companies adding charging infrastructure to their workplaces and electric vehicles to their corporate fleets.

On November 22, the CPUC instituted a new proceeding on vehicle/grid integration, including the use of vehicle batteries for demand response or energy storage. This proceeding is in furtherance of the Governor's ZEV Action Plan. CEERT is a party to the proceeding and is actively meeting with automobile manufacturers and demand response companies to explore opportunities and barriers to PEVs providing value to the grid.

On December 27, the CAISO released the "Vehicle-Grid Integration Roadmap: Enabling Vehicle-based Grid Services." CEERT participated in the ZEV Action Plan workgroup that produced the VGI Roadmap, which outlines ways to maximize grid benefits by coordinating EV charging in response to grid conditions and aggregating EVs to respond to CAISO signals. The Roadmap also explores the potential for VGI services to be part of the development of demand response, energy storage, and energy efficiency.

CEERT attended the November Los Angeles Auto Show for the launch of BMW's i3 electric vehicle, the first model BMW will offer under its new "i" brand and its sustainable mobility initiative.

Fuel-Cell Vehicles (FCVs) and Hydrogen Fueling Infrastructure

At the November L.A. Auto Show Honda, Hyundai, and Toyota introduced new FCV models for sale in California during 2014 and 2015. This development was made possible because the legislation reauthorizing the Alternative and Renewable Fuel and Vehicle Technology Program contained funding guarantees for hydrogen fueling infrastructure needed to support a fleet of more than 50,000 FCVs.

CEERT is contributing to a California Fuel Cell Partnership progress report on hydrogen fueling station deployment, which is expected to be released by late spring or early summer.