CENTER FOR ENERGY EFFICIENCY AND RENEWABLE TECHNOLOGIES
QUARTERLY STAFF REPORT
MAY – AUGUST, 2010

EXECUTIVE SUMMARY: THE PAST FOUR MONTHS AT A GLANCE *(pages 1–2):*

Advocacy at the CPUC *(full report on pages 3 – 4)*
CEERT continued to recommend a joint CPUC-CEC hearing to address continued confusion and next steps on *the use of TRECs* for RPS compliance. We seek modifications that ensure consistency between the CPUC's proposed decision on TRECs and the CEC's "delivery" eligibility rules in order to foster certainty and reliability in RPS procurement in California.

CEERT supported CalWEA's and LSA's *objections to inappropriate curtailment contract language* in SCE's 2010 RPS Procurement Plan.

The CPUC adopted CEERT's position that utilities' initial *smart-grid deployment plans* be reviewed as part of a single proceeding.

In CEERT's comments on the CPUC's proposed Long Term Renewable Resource Planning Standards, we requested an additional workshop to discuss stakeholder questions about the Staff Report, and argued that the Staff Report could *better account for the value of renewables* by using a methodology similar to Dr. Lori Schell's large-scale solar waterfall study. We also proposed including a scenario under which two-thirds of the *renewable ARRA projects* would be assumed to obtain their permits by 9/30/2011.

CEERT will file comments supporting a value-based feed-in tariff to provide market certainty and equality, rather than the Energy Division's proposed Renewable Auction Mechanism.

Big Solar Permitting and Planning *(full report on pages 4 – 6)*
Currently, *15 Big Solar projects* are applying for ARRA funding. If all are completed, they will bring 7,260 MW of new renewable capacity on line, and provide a storehouse of experience that will move California a giant step toward its RPS and AB 32 goals.

Among the plants' obstacles CEERT has helped overcome are: encouraging the projects' early adoption of *dry cooling technologies*; providing for project developers' *coordinated wildlife habitat acquisitions*; encouraging the participation and *engagement of independent labor unions*; and helping overcome delays and inconsistent policies on *transmission interconnection* to allow the orderly phasing of projects.

During the July 14 DRECP meeting, Kevin Sweeney and CEERT's John White gave presentations to the stakeholder committee, outlining the need to develop desert land for renewable energy facilities. CEERT met with both industry and desert conservationists to identify *additional permitting and planning reforms*.

Southern California Activities *(full report on page 6)*
CEERT is advocating for greater flexibility in the new *once-through-cooling rule* in order to maintain grid reliability and LADWP's ability to import renewables between now and 2021.

CEERT has been citing findings from *our survey of jobs at 16 proposed renewables plants* in Southern California counties where unemployment in the construction and utility sectors is running very high.

Renewable Energy Transmission Initiative (RETI) *(full report on page 6 – 7)*
RETI has been collaborating with the California Transmission Planning Group to prepare *renewable generation scenarios* and review results. CTPG has identified several *high-priority transmission up-grades* needed to maintain reliability under multiple scenarios, and has asked RETI to provide assistance with *modeling of out-of-state renewable generation and transmission development*.

Low-Carbon Grid and Renewables Integration Program *(full report on pages 7 – 9)*
Grid and integration issues that CEERT is tracking include the CAISO's *Revised Transmission Planning Process*, the CAISO's *Small and Large Generator Interconnection Process, demand response, dynamic transfer and pseudo-ties, convergence bidding,* and *multi-year forward-capacity markets*.

CEERT will provide feedback to the CPUC and CAISO on *renewable integration model methodologies*.

We also continue to encourage the CAISO to examine *low-cost alternatives that will aid in renewable integration*, including virtual balancing area consolidation, shared balancing resources, sub-hourly scheduling, and demand response.

Climate Advocacy *(full report on pages 9 – 10)*
Through formal written comments and oral testimony, CEERT will engage in CARB's September hearing on its proposed *33% Renewable Energy Standard* regulation.

In CARB's proceeding on a *regional cap-and-trade program*, CEERT will advocate for the appropriate treatment of renewable energy and RECs, push for inclusion of a set-aside for voluntary purchases of renewable energy, and provide feedback on allocating emission allowances within the electricity sector.

Community Outreach *(full report on page 10)*
CEERT participated in a *Central Valley Air Quality Coalition planning session* in Fresno and a *Tribal Renewable Energy Symposium* at UC Riverside. The latter event gave CEERT an opportunity to develop good relationships with tribal members who are working to protect cultural resources in the desert.

Transportation Advocacy *(full report on pages 11 – 13)*
Largely through CEERT's efforts, the *Plug-in Electric Vehicle Collaborative Council* was formed and convened on July 29, with John White representing CEERT. The PEVCC plans to deliver a Strategic Plan for California EVs for public release in December.

To foster greater consensus on crucial transportation issues, CEERT co-organized, co-sponsored and co-hosted the *2010 Advanced Automotive Technology Symposium* in Sacramento on May 19 – 20.

CEERT continues to advocate that CARB *retain EV load within the RPS baseline*.

CEERT continues to be active in negotiations to ensure that responsible third parties can fairly participate and innovate in the *Low-Carbon Fuel Standard credits market*.

The CEC honored CEERT's request that *AB 118 funding for liquid-fuel alternatives* be expanded beyond ethanol and biodiesel to include any low-carbon fuels that can displace either gasoline or diesel.

Recent V. John White Testimony, Meetings, and Speeches *(full report on pages 13 – 14)*
John spoke at several hearings, meetings, and conferences over the past four months.

Advocacy at the CPUC

Renewable Portfolio Standard (RPS) Program Implementation

In May, CEERT's advocacy on RPS implementation continued to focus, both at the CPUC and CEC, on our recommendation for a joint CPUC-CEC hearing to address continued confusion and next steps on the use of tradable renewable energy credits (TRECs) for RPS compliance. The CPUC's Decision (D.) 10-03-021, which sought to approve limited use of TRECs, was the subject of multiple petitions for modification and applications for rehearing, including one CEERT filed on April 15 that focused on jurisdictional questions about the CPUC's and CEC's roles in developing RPS rules.

On May 6, the CPUC issued D.10-05-018 staying D.10-03-021 to permit consideration of the petitions for modification. A further order resolving those petitions was projected to be issued in late May or June. This time frame was not met, and a Proposed Decision (PD) removing the stay and modifying D.10-03-021 was not issued until August 25.

CEERT plans a full review of this PD, especially in light of a new 33% RPS bill having failed in the Legislature's recent session, and will file comments on the PD, which are due on September 14. CEERT's goal will be to ensure that the new PD is in fact consistent with the presently effective language of the RPS statute and the respective regulatory responsibilities of the CPUC and CEC.

The new PD raises the previous limit on the use of TRECs for investor-owned utilities (IOUs) to 40% of their RPS annual procurement targets and grandfathers previous approval of RPS contracts as bundled, even if by the terms of the new PD those contracts would be considered RECs procurement. The new PD, however, continues to maintain the CPUC's adopted distinctions of what constitutes "bundled" RPS procurement to which CEERT had previously objected.

CEERT will continue to seek modifications that ensure consistency between the CPUC's determinations and the CEC's "delivery" eligibility rules. Until legislation alters the current RPS statute, CEERT believes that consistent application of that statute and resulting rules is imperative to foster certainty and reliability in RPS procurement in California.

In this regard, CEERT attended the CEC's first hearing on modifications to its RPS eligibility guidebook on August 30. While this hearing did not address "delivery" eligibility or the CPUC's D.10-03-21 or the pending Proposed Decision, CEERT has learned that the CEC does plan to hold a hearing, with the CPUC in attendance, on these issues in mid to late September.

2010 RPS Procurement Plans

On May 6 CEERT participated in an All Party Meeting with CPUC Commissioner Peevey, which was held to address objections by the California Wind Energy Association and the Large-Scale Solar Association to inappropriate curtailment contract language contained in SCE's 2010 RPS Procurement Plan. CEERT has supported CalWEA's and LSA's objections.

It became clear during the meeting that SCE was alone among the IOUs in inserting these provisions. President Peevey concluded by directing SCE to "fix" the problem or expect that the proposal would be rejected. While SCE filed a further amendment to its 2010 RPS Procurement Plan in July, CalWEA and the Independent Energy Producers Association (IEP) filed comments in July and August objecting to SCE's modified approach to curtailment and other contract provisions. To date the Commission has made no formal or final resolution of this issue or the IOUs' 2010 RPS Procurement plans.

CPUC's Smart Grid Rulemaking

In June, the CPUC issued D.10-06-047 adopting requirements for the IOUs' Smart Grid Deployment Plans to be submitted in 2011 pursuant to Senate Bill 17 (Padilla). In August, the CPUC held a prehearing conference and workshops on pending security and metrics issues. A ruling is expected, but has not yet been issued, on security and third-party access issues on which parties may comment. The comment schedule following the workshops on metrics was suspended at the end of the workshop in favor of the CPUC staff preparing a new metrics list, with review by the IOUs, that will then be the subject of further review and comment by all parties. (Also see pages 12 – 13 for more on this topic.)

Long-Term Procurement Plan Proceeding

CEERT is actively involved as a party in the CPUC's Long-Term Procurement Plan (LTPP) Rulemaking (R. 10-05-006). Thus far, CEERT has filed comments on the CPUC's proposed Long Term Renewable Resource Planning Standards. In these comments, CEERT requested an additional workshop to discuss stakeholder questions about the Staff Report, and asked for overarching clarifications on the assumptions and inputs proposed in the Staff Report.

Among these questionable inputs and assumptions, CEERT argued that the Staff Report could more fully account for the value of various renewable energy technologies by using a methodology similar to Dr. Lori Schell's waterfall study "Value Proposition of Large Scale Solar Power Technologies in California" for all technologies. CEERT also proposed inclusion of a scenario under which two-thirds of the renewable electricity projects eligible for ARRA funds or federal loan guarantees would be assumed to obtain their permits by September 30, 2011.

The CPUC has yet to release its Scoping Memo, which is expected within the next week or two, and which should provide some detail about how its staff intends to respond to party comments. CEERT will continue to engage, and intends to collaborate with other environmental and industry stakeholders for the remainder of this proceeding.

Feed-In Tariffs (FITs)

On August 24, ALJ Mattson issued a Proposed Decision approving an expanded 20 MW FIT for the large IOUs using the Energy Division's proposed Renewable Auction Mechanism (RAM). CEERT previously filed comments on an expanded FIT that opposed the RAM due to our support of a value-based fixed-price structure. However, the Commission has decided to move forward with the RAM despite our efforts to convince them otherwise. CEERT does intend to file comments, which are due on September 13, suggesting a value-based FIT to provide market certainty and equality.

Big Solar Permitting and Planning

Project Development

State and federal regulators have continued to focus on renewable projects that are applying for ARRA financing. Currently, 15 large-scale solar projects that represent 7,260 MW of new renewable capacity are applying for ARRA funds. Nine of the 15 projects are solar thermal, and the remaining six are photovoltaic; eight would be sited on BLM land, and the other seven on private lands.

The projects farthest along are First Solar's Antelope Valley Solar Ranch (a PV project on private land), and NextEra's Beacon plant (a solar thermal project on private land). Beacon has received its permit from the CEC — the first such permit issued for large-scale solar in over 20 years.

Five additional projects (with 2,370 MW of capacity) of the nine solar thermal plants that require CEC permits have had their "presiding member's proposed decision" (PMPD) issued — the step just before final approval. Those five are BrightSource's Ivanpah project, Solar Millennium's Blythe project, Aben-

goa's Mojave Solar project, Tessera's Imperial Valley project, and NextEra's Genesis project. Close behind are Solar Millennium's Palen project and Tessera's Calico project.

The ARRA projects in total represent a wide range of siting strategies, business models, and technologies. If a significant number of these plants successfully navigate the permitting process, it will provide experience and momentum for the development of additional projects that will be needed to achieve California's RPS and AB 32 goals.

A key barrier to successful and timely permitting for large solar projects has been the lack of coordination and cooperation between state and federal agencies. CEERT played a critical, behind-the-scenes role in identifying and advocating for the appointment of designated point persons in Secretary Salazar's office and in the California Governor's office. CEERT has met regularly about the permitting of shovel-ready solar projects with Steve Black at the U.S. Department of Interior and with Michael Picker and Manal Yamout, special advisors to Governor Schwarzenegger.

We have acted as informal intermediaries between project developers and the state/federal agency team, and have helped coordinate responses and actions to resolve problems. We have also facilitated cooperative discussions between the Governor's office, utilities, and the California Independent System Operator. We have helped improve communications and misunderstandings between developers, labor unions, and environmentalists.

Among the problems that we helped overcome were: encouraging solar thermal projects' early adoption of dry cooling technologies; providing for project developers' coordinated wildlife habitat acquisitions; encouraging the participation and engagement of independent labor unions, such as the Carpenters and Laborers, to encourage competition and open dialogue; and helping overcome delays and inconsistent policies on transmission interconnection to allow the orderly phasing of projects.

The passage and implementation of SB 34 8x has highlighted significant hurdles for coordinated permitting efforts. The measure established an in-lieu mitigation fee that would allow developers to offset their projects' impacts by paying into a fund that advances the regional conservation plan the Department of Fish and Game created. But momentum is lagging: no companies have used the mechanism thus far, and none are likely to do so until DFG finalizes the program standards. The Desert Renewable Energy Conservation Plan (DRECP) science panel is currently reviewing the program to identify solutions.

Planning

The DRECP has a new executive director, David Harlow, and a new assistant director, Michael Valentine — both retired government officials with extensive Natural Community Conservation Planning (NCCP) experience. Under this new leadership, the DRECP met on July 14 and August 11.

During the July 14 meeting, Kevin Sweeney and CEERT's John White gave presentations to the stakeholder committee, outlining the need to develop desert land for renewable energy facilities. They estimated it would take 50,000 acres to meet the state's 2020 RPS goal, and up to 600,000 acres to meet the 2050 climate goal.

At the August 11 meeting, Wayne Spencer shared the DRECP science panel's recommendations that the data currently used is inadequate and that current conservation land-use plans should be maintained. The panel's report is open for comments until September 10.

While CEERT agrees the data is limited, we believe that should not constrain the DRECP from developing an effective new plan, and should not be used as an excuse for inaction. Dr. Spencer noted this report fills the legal requirement for the NCCP process and the Renewable Energy Action Team, and stakehold-

ers will have to determine how much of the recommendation to adopt. The new management team will present a new workplan, timetable, and direction on roles and responsibilities to the DRECP at its September 8 meeting.

Working with Stakeholders

CEERT staff continues to reach out to various stakeholders in the ongoing Big Solar discussion. Ryan Drobek recently helped host a DOE team that was on a fact-finding tour of solar projects applying for ARRA funds.

CEERT continues to participate in the Mantell group, which is encouraging environmental organizations and solar developers to work together to resolve solar development issues in the desert. Recently, some of the environmental groups working outside the Mantell Group proposed to the Department of the Interior a process for reviewing and making adjustments to projects on BLM land.

CEERT has met with both industry and desert protection advocates to identify additional permitting and planning reforms. Among the ideas we developed that show promise for broad agreement are: providing CEC funding for planning assistance to local governments in the DRECP process to support development of model ordinances and general-plan renewables elements; mapping of disturbed private agricultural land that no longer has access to water and is thus suitable for solar development; extending in-lieu fees for wildlife mitigation beyond 2010 ARRA projects and including wind and geothermal; and initiating a habitat conservation planning effort for the Central Valley to enable faster approval of renewable projects.

CEERT has acted as liaison between the CAISO, project developers, and state and federal agencies on transmission interconnection and renewable project planning issues. We have also helped connect and engage stakeholders and DRECP officials with the ongoing work of RETI and the utilities' California Transmission Planning Group.

Southern California Activities

Once-Through-Cooling (OTC) Plants

Power plants cooled by ocean water must meet a new rule that the State Water Quality Control Board approved in May. The rule affects three natural gas plants that LADWP operates in Los Angeles. Late in the legislative session, LADWP sought to pass a bill that would push back compliance with the rule by 11 years, until 2031 — which drew strong condemnation from the environmental community. After a week of heated debates between environmentalists, the utility, and legislative leaders, marine protection groups and LADWP reached a compromise to negotiate about increasing the rule's flexibility.

The new OTC rule currently calls for water-intake reductions by facility, not by unit or turbine. CEERT believes there is value in looking at the LADWP gas fleet unit by unit, in order to determine what power plants need to be repowered, retrofitted, or retired, and what the new cooling systems' true costs are.

We are also concerned that there may be a need for greater flexibility in the rule, in order to maintain grid reliability and the utility's ability to import renewables between now and 2021. CEERT has been educating marine protection groups and other stakeholders since 2009 about the need for a flexible power system that can balance renewables during the same period that the plants' cooling systems must be retrofitted and the city works to meet a 35% RPS and divest from coal.

US EPA Coal Ash Re-Classification Hearing

On September 1, the U.S. EPA held a regional hearing in Denver on its Proposed Coal Ash Rule. The EPA is considering two alternatives to reduce pollution from coal ash waste. The more restrictive of the two classifies coal ash as a hazardous "special waste," and the less restrictive as non-hazardous waste. Testimony at the hearing varied between industry opposition (including from a representative of Inter-

mountain Power Plant in Utah, whose majority owner is LADWP), and environmental and Native American support for the hazardous waste classification. A decision is expected this year.

Jobs Report

CEERT has been citing summarized findings of our survey of construction and operations jobs at 16 proposed renewables plants in Southern California. Additional research shows that most job categories for the plants are experiencing high unemployment rates in the surveyed project counties, where unemployment in the construction and utility sectors runs from 15% to over 30%. John White will include some of our findings in his mid-September presentation at the California Employment Development Department/Office of the Governor's Renewable Workforce Training Conference. The conference will focus on the jobs and training needed to build expected renewables plants in California over the coming years.

Renewable Energy Transmission Initiative (RETI)

CEERT continued to coordinate RETI's work through the summer, with leadership from Rich Ferguson and assistance from CEERT's Ryan Drobek and Carl Linvill of Aspen Environmental. Efforts focused on collaboration with the California Transmission Planning Group (CTPG) to prepare renewable generation scenarios and review results. CTPG's Phase 3 Report was posted September 2, identifying several high-priority transmission upgrades needed to maintain reliability under multiple scenarios.

CTPG has asked RETI to provide assistance with modeling of out-of-state renewable generation and transmission development. Collaboration with continue for the rest of the year on CTPG Phase 4 work.

CEERT's work with RETI and previous successful coordination of the Tehachapi Collaborative Study Group were funded under sole-source contracts with the California Energy Commission. The Commission has decided that future coordination services for RETI should be chosen through a competitive solicitation, and issued an RFP in early August. CEERT is responding to the RFP with a proposal, and the Commission should decide the outcome by the end of September.

Low-Carbon Grid and Renewables Integration Program

CEERT continues to track key renewables integration issues at the CAISO, CPUC, and FERC.

Revised Transmission Planning Process (RTPP)

The CAISO's RTPP has hit a temporary speed bump at FERC. The RTPP is the proposed framework for building new transmission that will enable CA to reach 33% renewables by 2020, and also provides the template for future transmission planning.

The RTPP distinguishes between reliability, economic, and policy-driven transmission projects. Economic projects are those that deliver cheaper energy or capacity, and policy projects include those needed to reach statewide renewables goals. Specifically, the CAISO's RTPP would give the right of first refusal to PTOs to build projects needed for reliability, projects under the location-constrained resource interconnection tariffs, and projects related to long-term congestion revenue rights. Merchant developers could build projects identified as "public-policy-driven" or "economic."

Merchant developers have complained about the class of projects PTOs would get to build with no competition, as well as CTPG's role in identifying the conceptual transmission plan. FERC found the CAISO's RTPP filing lacked "specificity and clarity" and could be "discriminatory," and pointed out that transmission projects continue to be developed using the Large Generation Interconnection Procedures, even though transmission projects under RTPP and CTPG are arbitrarily subjected to potential procedural restrictions, pointing to the lack of a holistic transmission planning process in California.

Workshop on Renewable Integration Model Methodologies
As a component of its LTPP proceedings, the CPUC recently held a workshop on renewable integration methodologies that highlighted integration models from the CAISO and PG&E. Both models were designed to examine operational requirements and market impacts under a 33% renewables penetration, and under a selection of other scenarios (six in total).

Both simulation models have extreme sensitivity to the magnitude of weather forecast variability. The consequence of this extreme model sensitivity to input parameter uncertainty is that the absolute magnitude of simulated results may be highly uncertain. Because of this, such simulation models are often better suited to comparing the relative magnitude of consequences obtained from different scenarios rather than defining the absolute value of a particular scenario's results. Given that the results of these models will be the basis of operational requirements for integrating renewables, CEERT is taking a closer look at input model assumptions, and will be providing feedback to the CPUC and the CAISO.

Renewables Integration Market & Product Review
The CAISO has recently introduced this new initiative to provide a forum for examining market design enhancements required for renewables integration. CEERT continues to encourage the CAISO to examine low-cost alternatives that will aid in renewable integration, including virtual balancing area consolidation, shared balancing resources, sub-hourly scheduling, and demand response. For example, such sharing of balancing resources and operating reserves is currently being considered in the WestConnect planning area through their ACE Diversity Interchange and other programs. Such approaches are first steps toward shared dispatch across BAAs that would provide much greater aggregate flexibility to balance each system with more highly interconnected renewables.

Small and Large Generator Interconnection Process (S/L-GIP)
Addressing the breakdown of the existing serial generator interconnection process, the CAISO has developed this initiative in an attempt to streamline the interconnection process. Several major issues have been resolved, including the format of the annual cluster study process, the size of projects that can access the fast-track alternative, ways to apply for deliverability in order to provide resource adequacy, and interconnection financial security postings. This initiative is now in final draft form and will be presented to the CAISO board at its September meeting.

Dynamic Transfer and Pseudo-ties
The CAISO's Dynamic Transfer and Pseudo-ties initiative is developing protocols for importing and exporting power across balancing area boundaries (interties). Multiple stakeholder processes have continued to refine the nature of such transactions. However, this initiative has now been delayed due to the complexity of interfacing the CAISO balancing area requirements with those of its neighbors, and as a result of scheduling constraints and applicable NERC and WECC standards. Several key outstanding issues remain to be resolved, including how to manage the physical and financial aspects of curtailment issues when dynamic schedules exceed available allowances, application of CAISO congestion management protocol to dynamic scheduling, noncompliance penalties, and who controls dynamic transfer allowances.

Demand Response
CAISO has recently opened its market to a new Proxy Demand Response (PDR) product. Demand response providers can now bid electricity reduction capabilities into the CAISO Day-Ahead and real-time markets as well as provide capacity in the ISO ancillary services market. Demand response resources give the CAISO a low-cost, flexible mechanism for balancing variable energy resources on the grid. In addition, the CAISO continues to work on developing a Reliability Demand Response (RDR) product which will be available only during peak-demand events. Capacity payments for PDR and RDR are currently only accessible to DR providers or aggregators through contracts with LSEs, and so the lack of availability of such capacity payments may hinder uptake of these useful products into the market.

Convergence Bidding

The CAISO is in the process of complying with a FERC mandate to implement convergence bidding. All major IOUs have recently submitted their proposed implementation plans. Convergence, or virtual, bidding is a purely financial instrument that causes prices in the Day-Ahead market to converge with prices in real-time markets.

There are many advantages of convergence bidding — primarily that it makes markets more predictable and hence more efficient. In addition, convergence bidding can minimize monopoly or monopsony power within transmission-constrained regions. The main application of convergence bidding to renewables integration is in providing a hedging mechanism to protect against changes in day-ahead schedules.

The main application of convergence bidding for IOUs is as a hedging mechanism against fluctuations between Day-Ahead and real-time markets. IOUs are arguing for varying degrees of control in how they will be allowed to participate in convergence-bidding markets. The main concern shared by the CPUC, the CAISO and the IOUs is in third parties manipulating or gaming the markets. Given transaction costs associated with convergence bidding, and given the difficulty of gaming market prices without having access to proprietary transmission outage information, the likelihood of such gaming is most likely quite low. Nevertheless, TURN among others is advocating for a reevaluation of IOU market participation rules some time after the market has been introduced.

Capacity Markets, EE and DR

This June, the CPUC came to a final decision in its 2005 LTPP proceedings and rejected a proposal for a centralized wholesale capacity auction mechanism administered by the CAISO. Instead, the CPUC has chosen to continue to rely on the existing resource adequacy program's use of bilateral contracting for procuring capacity. The current resource adequacy program relies upon the imposition of short-term (year-ahead) procurement obligations on load-serving entities. This approach has historically been used to assure the availability of existing resources to the CAISO for reliable grid operations.

However, many parties are concerned that it does not provide adequate price signals or sufficient certainty to promote investment in new generation, including such services such as demand response or energy efficiency. These parties argue that it is necessary to modify the program by providing for a multi-year forward commitment of capacity resources. Despite these concerns, and despite the initial success of multi-year forward-capacity markets in NE-ISO and PJM that provide capacity payments to EE and DR providers as well as generators, the CPUC has concluded that a multi-year forward procurement obligation should not be adopted at this time.

Wind Victory

In response to protests from AWEA and other wind interests, FERC recently rejected Puget Sound's proposed wind integration rate. This would have been the first wind-only integration rate. Puget had attempted to justify the proposed rate based on its use of a hypothetical proxy unit (a gas plant) to provide a load-following service to wind resources. FERC rejected Puget's proposal since it had not shown that the rate it proposed to charge for the service was just and reasonable. This order raises the bar for other utilities that might seek to impose such integration charges on wind.

Climate Advocacy

33% Renewable Electricity Standard (RES)

In September of 2009, Governor Schwarzenegger ordered the California Air Resources Board to implement a 33% Renewable Energy Standard rather than signing legislation that had passed through the Senate and Assembly. CARB released its proposed regulation this past June and was to adopt it by July; however, recognizing that the legislative discussions had some momentum, the Governor requested that

the agency postpone the hearing until its September Board Meeting. Now that legislation has failed to pass, CEERT plans to engage in CARB's process through formal written comments and oral testimony prior to and during the September meeting. We welcome input from our board members and affiliates.

Western Climate Initiative and Implementation of AB 32

Interest in the cap-and-trade program of the Western Climate Initiative (WCI) had been waning, but given the failure of federal climate or energy legislation this past summer, eyes have turned back to regional programs. On July 27, the WCI Partners released their design recommendations, which broadly described their vision for a robust cap-and-trade program. The Partners did reach agreement on the proper treatment of RECs and null power, which CEERT believes accomplishes the goals of fair treatment of renewable generators and proper accounting. However, not all stakeholders are satisfied.

Participation of each member state and province in the regional cap-and-trade program is questionable, and will likely depend on the outcome of a number of statewide elections this coming November. Of course, all eyes are on California to see what happens with Proposition 23.

Given the uncertainty, CARB is likely to wait until after the election to release its Proposed Regulation for the cap-and-trade program. CEERT will continue to advocate for the appropriate treatment of renewable energy and RECs in this proceeding, and will continue to push for inclusion of a set-aside for voluntary purchases of renewable energy in the proposed regulation. CEERT is also coordinating with a number of environmental groups to provide feedback to CARB on the utilities' proposal for allocating emission allowances within the electricity sector.

Community Outreach

CVAQ

CEERT continues to be an active member of the Central Valley Air Quality (CVAQ) Coalition. CVAQ comprises more than 70 community, public health, environmental, and environmental justice organizations that represent residents of the San Joaquin Valley and work to improve the health of Californians by seeking full and vigorous enforcement of the federal Clean Air Act, strengthening state law and air district regulations on air quality, and educating the public on the serious health impacts of air pollution.

On April 30 – May 1, CEERT participated in a CVAQ strategic planning session in Fresno. Coalition members reviewed and discussed an external evaluation of CVAQ, reflected on its most recent strategic plan, considered changes to its organizational structure, and set campaign priorities for the coming year.

Outreach to California Tribes

CEERT staff was invited to participate in the Tribal Renewable Energy Symposium at UC Riverside's Palm Desert Center on April 16. Representatives from BLM, the U.S. Forest Service, and the state Native American Heritage Commission served on panels that informed tribal members from the region about the various government venues where generation and transmission project permitting reviews are underway, and how they could engage in policymaking processes such as RETI and DRECP. The event was organized by the UCR California Center for Native Nations, the San Manuel Band of Mission Indians, the Twenty-Nine Palms Band of Mission Indians, and the Native American Land Conservancy.

The event gave CEERT staff an opportunity to meet and develop good relationships with members of tribes that are working to identify and protect cultural resources in the Mojave and Colorado deserts.

Transportation Advocacy

Electrifying Transportation

Last summer CEERT began advocating that representatives from the utilities, car companies, charging equipment and services companies, regulatory agencies, consultants, researchers, and NGOs start a collaborative process to produce a Vision and Action Plan for electric vehicle (EV) deployment in California.

We recommended that the collaborative process work to:

- Develop a Vision and Action Plan for EVs in California that fits EV deployment to California's emissions goals, and identifies deployment barriers and solutions.
- Develop proposed guidelines for streamlining the charger installation permitting process.
- Develop a plan for advanced-battery and EV safety and operation training for first responders and fleet operators.

Such a Vision and Action Plan would serve as a road map for enacting physical, operational, and pricing policies that would enable practical, effective vehicle-charging load management and a rapid expansion of the EV fleet. Key policy issues would include incentives for off-peak charging, metering questions, and the integration of vehicle charging with smart-grid technology.

We felt this Vision and Action Plan would help the CEC and CARB design their annual funding strategies for the AB 118 program's Alternative and Renewable Fuel & Vehicle Technology and Air Quality Improvement components. It would also help the CPUC develop rules by July 1, 2011, on deployment of infrastructure sufficient to enable widespread use of plug-in hybrid and electric vehicles, per SB 626 (Kehoe 2009). As mentioned in our last Quarterly Report, discussions during a March 16 CPUC workshop on EVs seemed to persuade many stakeholders of the real need for such a collaborative process.

Largely through CEERT's efforts, the Plug-in Electric Vehicle Collaborative Council (PEVCC), which includes many of the key stakeholders, was formed and convened on July 29. John White is representing CEERT on the PEVCC. We will be organizing meetings of key staff from PEVCC member organizations to identify the central issues that need to be resolved and the actions that will be necessary to ensure a successful launch of new EVs during the next 12 – 18 months. The PEVCC is planning to deliver a Strategic Plan for California EVs for public release in December.

CPUC's Electric Vehicle Rulemaking

In May, the CPUC issued a Phase 1 Proposed Decision addressing whether electric vehicle charging stations are subject to CPUC regulatory jurisdiction. This Proposed Decision was significantly revised over the next two months, and in late July, the CPUC issued D.10-07-044, which held that the Commission did not have jurisdiction to regulate charging stations as public utilities. However, the decision does identify sources of Commission regulatory authority that permit it to address potential impacts of electric vehicles in a manner that will help California achieve its GHG and renewable energy goals.

The CPUC also indicated that it would initiate Phase 2 to address policies to overcome barriers to the widespread use of electric vehicles. A ruling to initiate Phase 2 was issued on August 30, scheduling a workshop for September 27 and seeking comments on a CPUC staff white paper on metering arrangements and the IOUs' role in supporting vehicle charging.

2010 Transportation Conference

CEERT continues to work closely with CARB staff, the major vehicle manufacturers, and NGOs to build a consensus on CARB's proposed revisions to the Low Emission Vehicle (LEV III) regulations, which set performance standards for typical passenger vehicles sold in California. CEERT is serving as technical lead for California's NGOs, and helps them understand the issues in the negotiations between CARB and

the vehicle manufacturers on criteria emissions performance. We have hosted numerous in-depth discussions with vehicle manufacturers on the anticipated emissions performance of future vehicle technologies.

Much of the work has focused on challenges facing the new California-compliant diesel cars and new lean-burn gasoline engine technologies that vehicle manufacturers will need to employ to meet Pavley II/ LEV III GHG requirements. We are pleasantly surprised that to this point negotiations on the new targets for emissions limits of non-methane organic gases (NMOG) and nitrogen oxides (NOx) have gone quite well, and there appears to be consensus among all parties on the proposed NMOG+NOx targets. Discussions will continue on this issue, and on CARB's proposed emissions limits for particulate matter.

To foster greater consensus on these issues of crucial statewide and national significance, CEERT co-organized, co-sponsored and co-hosted the 2010 Advanced Automotive Technology Symposium with Audi, BMW, Daimler, Honda, Mazda, Mitsubishi, Volkswagen, the Robert Bosch Corporation, and the U.S. Coalition for Advanced Diesel Cars. The Symposium was held in Sacramento on May 19 – 20.

Attending were representatives from CARB, CEC, San Joaquin Valley and South Coast Air Districts, California Fuel Cell Partnership, California Electric Transportation Coalition, Association of International Automobile Manufacturers, key legislators (e.g., Senator Fran Pavley and Assembly Member Nancy Skinner) and their staffs, and NGOs throughout California. Presenters included the leading engineers from the vehicle manufacturers, Tom Cackette (CARB Deputy Executive Officer in charge of revising the vehicle regulations), Barry Wallerstein (Executive Officer, South Coast Air Quality Management District), and CEERT staff.

The two-day Symposium allowed considerable opportunity for discussions during the presentations. A fuel cell vehicle (Mercedes-Benz A-Class), two electric vehicles (BMW Mini-E and Mitsubishi MiEV), and several examples of the latest in advanced diesel and gasoline cars (Audi, BMW, Mercedes-Benz, and Volkswagen) were on display and available for Symposium attendees to test-drive.

CPUC's Smart Grid Rulemaking

On June 24 the CPUC issued a decision establishing the framework utilities are to follow when preparing their Smart Grid deployment plans. (CEERT had advocated for this prior to the passage of SB 17.)

Utilities' deployment plans are to include: 1. a vision statement on how their Smart Grid will foster innovation, meet the state's environmental goals, and empower consumers while protecting their privacy; 2. a baseline snapshot of their grid's current state; 3. a strategy for deploying their Smart Grid; 4. a strategy for ensuring grid security and cyber security; 5. a roadmap for deploying their Smart Grid; 6. cost estimates; 7. quantified benefits; and 8. metrics for assessing progress. The utilities must also explain how each aspect of their deployment plan furthers SB 17 goals and meets federal requirements. Beginning October 2012, utilities will also be required to file annual progress reports on their Smart Grid programs.

In its decision, CPUC adopted CEERT's position that utilities' initial deployment plans be reviewed as part of a single proceeding. (However, the Commission did not adopt our recommendation to undertake periodic programmatic reviews of Smart Grid deployment across the utilities.) After the initial review of deployment plans, subsequent reviews of Smart Grid programs will occur as part of utilities' general rate cases or special applications. The Commission will require the utilities to adhere at a minimum to national standards of the Department of Homeland Security, North American Electric Reliability Corporation, and National Institute of Standards and Technology on interoperability, security and privacy, etc.

On July 25 – 26 the CPUC held workshops on potential metrics for tracking the deployment of smart-grid equipment, investments, and improvements in operational and environmental performance. The CPUC

decided to conduct additional workshops on the topic, and prepare a new proposal on metrics for further work by the IOUs and the parties. The timeline for this phase of the proceeding was extended into 2011.

Renewable Portfolio/Electricity Standard (RPS/RES) and Zero Emissions Vehicle (ZEV) Regulations
While utilities had initially asked that the load associated with EVs not count toward the RPS baseline, they have not pursued this request. CARB staff appears to be leaning toward retaining the EV load within the RPS/RES baseline. CEERT will continue to track this issue and advocate that CARB retain EV load within the baseline.

Low-Carbon Fuel Standard (LCFS)
CEERT is participating in the Sustainability, Electricity, and High Carbon Intensity Crude Oil (HCICO) Screening Workgroups under the LCFS.

The Sustainability Workgroup has met twice and is currently focusing on soil issues.

The Electricity Workgroup has met once to discuss the definition of regulated parties and how to track electricity usage as a low-carbon fuel under the LCFS. Who other than utilities should qualify as a regulated party capable of earning LCFS credits is still being negotiated between CARB, the utilities, third parties providing charging services to EV owners, and NGOs. Utilities believe that, as generators of electricity, they should own all credits that accrue when electricity is used to power a vehicle. The LCFS allows for some third parties to earn credits if they make investments in providing equipment and bundled services. Utilities acknowledge that they will earn 90 – 95% of the credits, even with significant third-party participation in the LCFS market. CEERT will continue to be active in these negotiations to ensure that responsible third parties can fairly participate and innovate in this market.

The HCICO screening group has been helping CARB develop an initial screen for crude oil imported into California that might exceed the carbon footprint of the state's baseline crude mix. If CARB determines that an imported crude oil is likely to have a large carbon footprint, then the importer of that crude will be required to provide CARB with a detailed life-cycle analysis.

AB 118 Alternative and Renewable Fuel & Vehicle Technology Program
The CEC approved its $108 million 2010 – 2011 Investment Plan at its July meeting, targeting $24.5 million for battery electric vehicles and $13 million for hydrogen fueling infrastructure for fuel cell vehicles. The Commission honored CEERT's request that funding for liquid-fuel alternatives be expanded beyond ethanol and biodiesel to include any low-carbon fuels that can displace either gasoline or diesel. CEC staff has already begun to develop a 2011 – 2012 Investment Plan.

Recent V. John White Testimony, Meetings, and Speaking Engagements
On May 20, at the invitation of Senate Energy and Natural Resources Committee Chairman Jeff Bingaman, CEERT Executive Director V. John White testified in Washington, DC, at a Committee hearing on renewable energy development in the California desert and coordination of federal permits for renewable energy projects and transmission lines.

On May 18 at CEERT's Sacramento offices, John and CEERT hosted a seminar and discussion with Curtis Moore on short-lived pollution and global warming.

On May 24 – 27 in Dallas, John participated in numerous meetings at AWEA's WINDPOWER 2010 — the largest energy trade show in America.

On July 6 – 7, John held a series of meetings in Washington, DC, with federal and state officials on NEPA, ARRA projects, new transmission lines, the DOE Loan Guarantee Program, and the need for

increased federal coordination on renewable energy initiatives. The meetings were with representatives of the Department of Energy, Department of the Interior, Office of Management and Budget, Council on Environmental Quality, the Vice President's office, and White House staff.

On July 14, John participated in a meeting with California Resources Secretary Lester Snow on DRECP, the 33% RPS, and the ARRA project approval deadline.

On July 29, John took part in the initial meeting of the Plug-in Electric Vehicle Collaborative Council, which seeks to create an Electric Vehicle Strategic Plan for California.

During the quarter, John presented at the Green Energy Business Conference in Bakersfield, the Pira-International CSP Conference in San Diego, the Solar 2010 Forum in Arizona, the Environmental Law Symposium Culture Week at UC Davis, and the California Air Pollution Control Officers Association's Climate Change Forum in San Francisco, among other venues.

John and CEERT co-sponsored and met with a champion student team from the California Mathematics and Engineering Science Achievement program. The seven students beat out 14,000 others nationwide to sweep the national wind energy engineering design competition. Terra-Gen and enXco also sponsored the students' trip to Sacramento.

In October, John will be traveling to Germany to visit and confer with executives of Bosch, BMW, Daimler, and Volkswagen/Audi.