

## **Comments of the Center for Energy Efficiency and Renewable Technologies on the Proposed Concept Outline for the California Renewable Electricity Standard**

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The Center for Energy Efficiency and Renewable Technologies (CEERT) appreciates the opportunity to comment on the Proposed Concept Outline for the California Renewable Electricity Standard (RES), and encourages the Air Resources Board (ARB) to continue its open dialogue with stakeholders during this accelerated rulemaking process. CEERT supports the development and adoption of a regulation that is consistent with the 33% renewable energy target and that builds upon and complements the existing 20% Renewable Portfolio Standard (RPS) program. However, realizing that the ARB's RES Program may require statutory authority, CEERT views the ARB process as a complement to pending legislation. With that said, CEERT considers the ARB process to be an opportunity to foster improved coordination and transparency among California's energy stakeholders and to integrate the completed and ongoing efforts of the California Public Utilities Commission (CPUC), California Energy Commission (CEC), California Independent Systems Operator (CAISO), and other regulatory agencies.

The State's energy agencies have collectively conducted a number of relevant studies and forecasts to profile and project California's energy system out to 2020. Namely, the CEC's Integrated Energy Policy Report (IEPR), CPUC's Long Term Procurement Plan and 33% Implementation Analysis, and CAISO's 33% Integration Analysis should inform the ARB rulemaking process. An initial need of the rulemaking will be to establish a clear picture or a unified vision of the statewide demand for and supply of electricity out to 2020, including the required increase in renewable generation and the concomitant decrease in fossil generation. This vision should estimate how much electricity California needs and how much of that electricity must come from fossil resources. This will give the ARB, joint energy agencies, and stakeholders a better sense of how much renewable energy is necessary to get to 33%. Therefore, CEERT suggests that the ARB try to synthesize the existing studies to develop a statewide plan to bring 33% renewables online in a way that enhances system reliability and brings economic development and air quality improvements to California.

### **RENEWABLE ELECTRICITY STANDARD**

CEERT offers the following comments in response to the Requests for Feedback in the Proposed Concept Outline for the California RES.

#### **Applicability**

CEERT believes that all types of California load-serving entities (LSEs) should be required to comply with the 33% RES, including California electrical corporations, electric service providers, community choice aggregators, electrical cooperatives, and local publicly owned electric utilities. In order to reduce the burden on the smallest of these parties, however, CEERT would support an energy procurement exemption threshold of a few hundred GWh. Additional information is necessary to determine whether

the 500 GWh threshold is sufficiently low; therefore CEERT may recommend a specific threshold later in this process.

## **Eligibility**

### *Eligible Technologies*

CEERT discourages the ARB in its RES rulemaking from changing the existing list of renewable resources currently eligible for the RPS program under the CEC's RPS Eligibility Guidebook. CEERT also opposes the loosening of limitations placed on certain existing RPS eligible technologies during this rulemaking. As such, CEERT supports the ARB's decision not to extend eligibility to large hydroelectric or nuclear facilities.

CEERT believes that changes to the list of eligible renewable resources based on the CEC's RPS Eligibility Guidebook could produce either positive or negative environmental impacts and that a separate process may be necessary in the future to consider such changes. Regardless of the technology, however, this accelerated 33% RES rulemaking process is not the appropriate venue for undertaking such changes. If the ARB feels strongly that new technologies should be added to the list of eligible resources, or that existing RPS program limitations should be modified, it should work with the CEC and other energy agencies to identify an appropriate venue for that decision to be made.

### *Delivery and Renewable Energy Credits (RECs)*

CEERT understands the ARB's need to conduct further evaluation of the eligibility criteria, delivery requirements, and environmental conditions currently applied to imported power, and is not prepared to offer comments on the potential impact of modifying the delivery requirements at this time. However, the ARB could encourage the CEC to reevaluate the delivery requirements in a new proceeding. During such deliberations, CEERT recommends that the current delivery requirements remain in place. CEERT may also comment on the ARB's proposal to allow REC-only transactions (where RECs are traded separately from energy generation) once the implications of such a decision become clearer.

Given the uncertainty and controversy surrounding RECs and delivery, CEERT recommends that the ARB hold a collaborative workshop with the CEC, CPUC, and CAISO to address the implications of changes to existing rules.

## **Compliance and Enforcement**

### *Trajectories for Compliance*

As a first step to ensuring achievement of the 33% RES, the ARB should require all regulated entities to submit long-term compliance plans before the program begins. These plans should outline each entity's trajectory for compliance with the 33% RES. The investor-owned utilities (IOUs) can and should link their compliance plans with the Long-Term Procurement Plans submitted and approved biennially by the CPUC. Such plans would provide the ARB and the joint energy agencies with assurances that the regulated entities have explored potential challenges and solutions to achieving 33% renewable electricity, and can be used through 2020 to evaluate each entity's commitment to compliance. The

ARB, CPUC, and CEC could also use these plans to establish benchmarks for demonstrable progress, which could be evaluated at the end of each compliance period.

#### *Metrics for Compliance*

CEERT believes that an energy (MWh) metric will provide the ARB with the simplest, most straightforward method of monitoring compliance with the RES, and feels strongly that a greenhouse gas metric based on a number of assumptions should not be used for enforcement. The ARB may still want to convert energy into a greenhouse gas reduction value for its own internal performance measurement. However, as the ARB monitors and enforces compliance with the 33% RES, it should be sure to consider the procurement and delivery information packaged in annual compliance reports from the CEC and/or CPUC alongside annual emissions reports required under AB 32.

Additionally, the ARB must consider and measure the displacement of fossil fuels before making any statements regarding GHG reductions. Evaluating actual emissions data from all electrical generation facilities is necessary to evaluate the GHG reductions resulting from the RES.

#### *Interim Compliance Targets and 2020 Deadline*

Given the concerns expressed above, CEERT recommends that the compliance schedule include annual reporting obligations with enforceable compliance targets at three year intervals, and a fixed, enforceable compliance target at 2020.

The ARB Proposed Concept Outline notes that if the ARB finds that a shortfall is due to circumstances beyond the reasonable control of the regulated party, the ARB may allow up to three years for that shortfall to be remedied. CEERT strongly encourages the ARB to add specificity to this allowance. In particular, this allowance should only be offered at the end of the interim compliance periods, and should not be offered as an extension to the 2020 deadline. Furthermore, CEERT recommends that the ARB grant the allowance only if it determines the following:

- The regulated entity has undertaken all reasonable measures to develop and construct new transmission lines or upgrades to existing lines in a timely fashion.
- The regulated entity has taken all reasonable operational measures, as verified by the CAISO, to maximize deliveries of electricity from eligible renewable energy resources in advance of transmission availability.
- The regulated entity has taken all reasonable measure to develop programs that maximize deliver of electricity from distributed renewable energy resources.
- The regulated entity has prudently managed portfolio risks, relied on sufficiently viable projects, sought to develop its own eligible renewable energy resources, and procured an appropriate level of renewable generation necessary to comply with the renewables portfolio standard to compensate for foreseeable delays or insufficient supply.

Again, the ARB should only grant this allowance if the above criteria are met, and should not apply the three-year flexible compliance window to the 2020 deadline. All regulated entities should meet the 33% RES by 2020, without exception.

### **Calculation of Excluded Load**

#### *Technologies Promoted in the AB 32 Scoping Plan*

CEERT does not believe that deployment of other technologies promoted in the AB 32 Scoping Plan should reduce the RES obligation for regulated parties just because these technologies reduce a regulated party's load. CEERT is particularly concerned with the inclusion of CHP, distributed generation (DG), and electricity used to charge electric vehicles under the LCFS in the excluded load calculation, and suggests that the ARB use the same protocols used by the CEC in its demand forecast.

#### *Future Load Deliveries to Plug-In Hybrid Vehicles*

CEERT also has concerns about considering the exclusion of LCFS and plug-in and battery electric vehicle (PiEVs) related load and recommends that the ARB exercise caution when considering the implications of this issue.

As CEERT has noted in joint comments filed with the CPUC regarding the Alternative Fueled Vehicle Proceeding (R.08-12-009)<sup>1</sup>, although a move from continued fossil fuel use in conventional internal combustion engines to PiEVs is beneficial, the ARB & PUC can ensure much greater benefits from this transition by ensuring that a well-planned alternative-fueled vehicle program:

1. shifts a significant amount of charging to off-peak times, thereby avoiding new capacity builds and increasing utilization of existing plants;
2. encourages customers to use integrated renewable energy to charge their vehicles;
3. promotes the use of the most energy-efficient PiEVs.

If California is to achieve its AB32 and longer term climate goals, the two most significant GHG emissions sources in the state – the electrical utility and transportation sectors – will both need to achieve deep emission reductions by 2050. Moreover, the PiEV fleet must continuously improve in efficiency over time and be powered from an electrical grid that itself is progressively and deeply de-carbonized during the approach to 2050.<sup>2</sup> This conclusion points to a need for state policy and regulation to move towards recognition that these two sectors will become more tightly integrated and that their emissions as well as their benefits need to be understood in the aggregate. In fact, having a PiEV fleet enables for the

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<sup>1</sup> See *Opening Comments & Reply Comments* of the Environmental Coalition. Available at: <http://docs.cpuc.ca.gov/Published/proceedings/RO908009.htm>

<sup>2</sup> State Alternative Fuels (AB 1007) Plan; Alternative and Renewable Fuels and Vehicle (AB 118) Program; Yang et al., 2008, *Identifying Options for Deep Reductions in Greenhouse Gas Emissions from California Transportation: Meeting an 80% Reduction Goal in 2050*. See also presentations to the October 28, 2009, CARB Public Workshop on 2050 Automotive Sector Greenhouse Gas Emissions Modeling Assumptions and Scenarios: The Role of Zero Emission Vehicles. (i) Joshua Cunningham, ARB Staff (ii) Simon Mui, NRDC (iii) Karen Webster and Marc Melaina, NREL and, (iv) Joan Ogden, UC-Davis ITS, available at: <http://www.arb.ca.gov/msprog/zevprog/2009zevreview/2009zevreview.htm>. Also see HM Treasury, October 2007, *The King Review Of Low-Carbon Cars*.

greater use and inclusion of variable renewables such as wind energy, which are in danger of otherwise being undervalued and underutilized.<sup>3</sup>

Further still, the increased utilization of renewable generation by PiEVs will improve the displacement of transportation-related emissions by utilizing power with substantially lower GHG emissions than the average California grid mix. The use of off-peak power largely sourced from renewable power sources comes with the added benefit that it has the potential to improve the system load factor and reduce the need for the cycling of power plants thereby increasing plant efficiencies.

The ARB in conjunction with the CEC and PUC should work together to create incentives to pair growth in PiEVs with the production and use of renewable electricity. Additionally, encouraging consumers to shift their vehicle charging to off-peak hours, and matching the increasing PiEV load to the availability of variable renewables will also advance the state's demand response, demand-side management, energy efficiency, renewable, and climate goals. At the same time, this will allow agencies and utilities to recognize the contribution of renewable generation to resource adequacy. CEERT believes that using more renewable power sources is the best way to ensure that a growing PiEV fleet achieves the greatest overall reductions and minimizes any additional emissions from the electricity sector.

## **ADDITIONAL COMMENTS ON THE RES PROGRAM**

### **Additional Electricity Measures Required Under AB 32**

All energy measures in AB 32 other than those which currently qualify for RPS requirements should be separate and additional. While Energy Efficiency, Million Solar Roofs, and Combined Heat and Power (CHP), and the Low Carbon Fuel Standard (LCFS) will all help the State achieve ambitious greenhouse gas reduction targets, the ARB must ensure that the measures remain discrete in their enforcement and monitoring. In particular, CEERT would like to emphasize that energy efficiency and combined heat and power are *not* renewable technologies, and therefore should not receive preferential treatment under the RES.

### **Resource Adequacy**

CEERT suggests that the ARB work with the CEC, CPUC, and CAISO to correctly count the net qualifying capacity (NQC) of variable wind and solar power generation that can meet the IOUs' resource adequacy (RA) requirements. In June 2009, the CPUC issued Decision (D.) 09-06-028, which replaced the existing rule for counting the NQC of these resources based on historical production averages with an "exceedance" methodology that is focused on determining the percentage of the generation available from these resources as a whole during "important" hours. It has been CEERT's position that the exceedance methodology adopted by the CPUC as proposed by the CAISO, Southern California Edison Company (SCE), and San Diego Gas and Electric Company (SDG&E) inappropriately reduces the RA value

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<sup>3</sup> NREL (2006), A Preliminary Assessment of Plug-In Hybrid Electric Vehicles on Wind Energy Markets. Technical Report NREL/TP-620-39729. April 2006.

of these resources. Further, in adopting the exceedance methodology, the CPUC ignored a recent study and record support for use of a methodology based on Electric Load Carrying Capacity (ELCC).

The CPUC decision is the subject of two appeals (applications for rehearing) challenging the order, one of which was filed by CEERT. These appeals are currently pending before the CPUC. CEERT encourages ARB not to repeat the mistakes of D.09-06-028 and instead rely on current studies supporting an ELCC calculation of the RA value of variable renewable resources. CEERT, therefore, urges CARB to work with the CEC to update the CEC's previously conducted studies to determine the ELCC of wind and solar energy resources on the California electrical grid. The CEC should use those ELCC values in establishing the contribution of wind and solar energy resources toward meeting RA requirements, and the ARB should rely on those results.

### **Federal and State RES Interactions**

CEERT recognizes the uncertain future of federal energy policy, however suggests that in the event of a federal RES, the ARB should be aware of potential interactions between a state and federal program. To prevent renewable energy in excess of the federal RES from being sold off and used for federal RES compliance by an entity with no state RPS (double-counting), California should ensure that a Federal REC is retired for every MWh of renewable energy used to meet the California RES.

### **Additional Regulatory Barriers**

Undoubtedly, the ARB is under pressure to complete an enormous and complicated task within an accelerated timeframe. While the 33% by 2020 target is not only laudable, but essential to achieving California's economic development, climate, and environmental goals, implementation will prove challenging. With that in mind, CEERT urges the ARB to consider additional regulatory barriers (e.g. procurement, siting and permitting of renewable generation facilities and transmission, and integration of intermittent renewable resources) currently impeding the development of renewable electricity in California. As one of the key players in California energy policy, the ARB should be involved in efforts to find solutions to these challenges.