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(2013 IEPR)*

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CEERT Comments on
Electricity Infrastructure Issues
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TO: California Energy Commission: docket@energy.ca.gov
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I. Introduction

The Center for Energy Efficiency and Renewable Technologies (CEERT) appreciates the opportunity to provide these comments regarding the 2013 Draft Integrated Energy Policy Report Update (2013 IEPR Update).

In order to best protect grid reliability and begin progress towards a greenhouse gas reduction plan for the coming decades requires continued coordination between the CEC, the PUC, the ISO, and ARB.

CEERT recommends the following actions:

II. Increasing investment in renewable energy to meet AB 32 greenhouse gas reduction goals

The Draft AB 32 Scoping Plan states that “emissions from 2020 to 2050 will have to decline at more than twice the rate needed to reach the 2020 emissions limit.” Because of the long lead time required for deploying new electric generation facilities, California must develop a long-term comprehensive strategy to achieve this accelerated rate of emissions reduction after 2020.

California is well on its way to achieving its goal of generating a minimum of 33% of its electricity using renewable energy resources such as wind, solar thermal, solar photovoltaic and geothermal. However, increasing penetration of renewables must be undertaken with greater attention to load balancing, geographic diversity, and a balanced and diverse renewable portfolio. Now that we have essentially met our Renewables Portfolio Standard (RPS) obligation, it is time for recalibration to determine what technologies are needed in the future that are not being deployed from a GHG reduction.

Both the AB 32 Scoping Plan and the IEPR must set a 2030 goal for greenhouse gas reductions in the electricity sector to continue the progress made to date by the RPS and investments in distributed generation. At minimum, they should frame the issue for discussion of the regulatory and legislative actions needed to continue making progress beyond 2020. The two plans must be consistent in their commitment to developing specific benchmarks, including GHG reduction metrics, which agency has responsibility for specific actions, and the appropriate time frame for their development and public review.

In the last decade, wind and solar projects primarily have come online or are under contract because of their lower first cost. However, the utilities have not contracted other resources like geothermal, and very little solar thermal with storage, biogas, or biomass from forest slash. We need to deploy more of these workhorse renewables in the future. These high-value technologies are considered preferred resources, but RPS procurement to date has not considered their other attributes, such as high GHG reductions per kilowatt of capacity, which would bring the electricity sector closer to the goal of doubling GHG emissions reductions. Before California decides to significantly increase its reliance on natural gas (the state is already over 62% dependent on natural gas for net dependable capacity), a careful accounting of the impact on meeting current and future GHG targets must be undertaken, including accurate measurement of the life cycle methane emissions from natural gas production and distribution. Methane is an extremely powerful greenhouse gas, and we cannot make accurate assumptions about the likely impact of increased natural gas consumption without much better inventories and measurements of methane emissions.

The need for replacement power due to the permanent shutdown of SONGS and the pending retirement of once-through cooling plants presents a significant risk of increasing GHG emissions. If the power from SONGS is replaced by natural gas plants, it could result in an increase of 8 million metric tons of CO₂e emissions per year. This impact has already been observed through recent EPA data, which document that California's emissions rose 11% between 2011 and 2012.¹ To minimize greenhouse gas emissions resulting from load balancing, California should modernize and retrofit selected natural gas plants to make them more flexible and ensure grid reliability. Finding the right balance between all of these resources must be through the lens of long-term GHG reductions in order to double the savings in the decade ahead. We must start that recalibration now. Otherwise, we may end up with an electrical supply mix that actually increases, rather than reduces GHG emissions over time.

Reforming and integrating long term procurement is a necessary step in recalibrating our energy policies to align with deep GHG reductions with improving grid reliability. AB 177 (Perez) would establish an integrated planning and procurement policy for the electricity sector based on the simultaneous achievement of renewables, reliability and GHG goals. It would set a 2030 renewables target of 51% and a 2050 GHG target as determined by CARB. California has demonstrated through the RPS, California Solar Initiative, and Self Generation Incentive Program that we can successfully deploy renewables and clean energy technology on a large scale. The challenge for the future is to deploy the right mix of renewables, demand response and low GHG technologies to meet reliability and grid stability needs.

We must greatly expand targeted energy efficiency, demand response, renewables, and clean distributed generation as the core strategy for meeting the load balancing needs of California's electric grid. If California is to successfully achieve greater reductions in greenhouse gas emissions and sustained, orderly expansion of clean energy, we must tear down the silos of energy planning and procurement and recognize the linkages between greenhouse gas emissions, renewables, reliability, and affordability, and adopt policies and planning to achieve these goals simultaneously.

¹ Web posting. Stecker, Tiffany. Energy and Environment reporter, Tuesday October 29, 2013.

III. Living Pilot

The living pilot proposed by Southern California Edison to respond to the SONGS closure will give us an opportunity to test solutions such as demand response combined with other strategies so that we can analyze and evaluate how best to have an integrated, well-functioning electricity system with the lowest GHG impact. CEERT submitted two proposals for preferred resources: 1) an incentive which provides for grid reliability benefits; and 2) an incentive for GHG reductions and savings. Both proposals rely on transparent and accessible program data to encourage innovation, analysis, and program adjustment.

IV. Extending energy efficiency measures through building/appliance programs

California should consider setting up an Energy Efficiency Utility as a state-chartered, non-profit corporation, as Vermont and Delaware have done, in order to achieve higher levels of energy savings in every region of the state at lower cost. This corporation could be organized by county, building on new and existing Regional Energy Efficiency Networks such as CCSE in San Diego. Similarly, Sonoma County is actively considering setting up a non-profit corporation to pursue energy efficiency savings in the region.

Zero or near-zero carbon distributed generation needs a policy framework to guide evolution of intelligent local networks. Such a framework could start with: a) principles for Open Access to the distribution system; and b) rate restructuring and time of use pricing, with a distribution charge to pay for upgrading and maintaining more capable local grids. An all-technology feed-in tariff tied to GHG reductions should also be considered.

V. CEERT's proposed Grid GHG Reduction Innovation Program

To address the need for double GHG savings in the coming decade, CEERT is proposing a new program, inspired by the successful example of ARB's Carl Moyer Program for transportation emission reductions. The goal of this incentive program would be to jumpstart advanced technologies and preferred resources not currently being deployed or considered, help reduce the cost of future GHG emissions reduction, and modernize the grid.

The GHG Grid Reduction Innovation Program would incentivize any advanced technology, manufacturing process, or preferred electricity resource that can reduce GHG emissions but may not be currently in use due to higher first cost. It relies on open architecture, public program data, and transparent GHG reductions metrics to encourage program analysis and adjustment over time.

As part of California's AB 32 Clean Energy Investment Plan, \$100 million would be allocated annually to demonstrate high-value GHG reduction technologies that provide grid stability and reliability, with incentives awarded based on competitive solicitations.

VI. Coordinated agency action is required to address challenges that continue to constrain reliance on Demand Response

CEERT has urged improvement in Demand Response programs and access by all customers as a "preferred" means of reducing and meeting local and system need. The Draft IEPR does provide certain recommendations on dealing with challenges facing Demand Response, but CEERT believes it is important to emphasize that, as of today, there is no one market mechanism or program structure that can effectively maintain the valuable DR resources that are currently being provided in existing utility programs and provide new incentives and opportunities to grow DR. Policy statements alone are not sufficient to ensure that companies or customers will undertake the risks and costs of providing DR.

resources. Programs and incentives must be in place that appropriately value and provide certainty for customers participating in DR.

Funding and designing pilot test market products must be balanced with maintaining current or existing programs, especially to ensure the continuation of valuable DR and to assure current customers of the ongoing value of participation.

The resolution of the CPUC's Rule 24 issues regarding participation of bundled-service IOU customers in third-party DR aggregation programs is still needed to enable DR participation in the ISO market. Further, it must be understood that, while the Draft IEPR is correct that resolving Rule 24 issues is a critical step, even taking that step will not be sufficient alone to develop robust wholesale market participation.² Thus, there is an immediate need to address regulatory and market barriers to DR, including conditions being imposed by the CAISO to limit reliance on DR to meet contingencies and/or serve as local capacity resources in a manner that is not followed by any other ISO in the country. As an example, the fact that DR may not be able to meet a rigid 30-minute response time is used by CAISO, but *not* other ISOs, to exclude DR from consideration as a local capacity resource. The Draft IEPR should be revised to recognize that the CAISO's treatment of DR continues to be a significant market barrier to DR and must be addressed and changed.

In addition, while timely consideration of issues raised in the CPUC's current DR Rulemaking (R.) 13-09-011 is important, as the Draft IEPR recommends.³ However, it is not necessarily the case that the Joint Reliability Framework, as currently proposed, is sufficient for this purpose. Unresolved issues related to proposed auctions, timing, and resource eligibility must be resolved in a manner that will effectively encourage preferred resources to participate fully.

Increasing the level of customer participation requires consideration of successful models and incentives in other regions that have been used to gain acceptance of DR.

VII. Strategic Transmission Investment Plan

We strongly support the continued inclusion of the Pisgah-Lugo project. While there are concerns about the potential environmental impacts it is essential that transmission be built to the Mojave region in order to access the best solar resource in the country. We support the Desert Renewable Energy Conservation Plan and believe the Plan will include an appropriate solar energy zone.

² Draft IEPR, at pp. 48-49.

³ Draft IEPR, at p. 52.