DOCKET
12-IEP-01
DATE MAY 25 2012
RECD MAY 25 2012

BEFORE THE CALIFORNIA ENERGY COMMISSION

In the Matter of the
2012 Integrated Energy Policy Report Update

Workshop on Interconnection of
Renewable Development in California

Docket No. 12-IEP-01

COMMENTS OF BRIGHTSOURCE ENERGY, INC. ON THE CALIFORNIA ENERGY COMMISSION'S WORKSHOP ON INTERCONNECTION OF RENEWABLE DEVELOPMENT IN CALIFORNIA

Arthur L. Haubenstock
VP Regulatory Affairs
BrightSource Energy, Inc.
1999 Harrison Street, Suite 2150
Oakland, CA 94612
ahaubenstock@brightsourceenergy.com

May 25, 2012

BEFORE THE CALIFORNIA ENERGY COMMISSION

In the Matter of the 2012 Integrated Energy Policy Report Update Workshop on Interconnection of Renewable Development in California	Docket No. 12-IEP-01

COMMENTS OF BRIGHTSOURCE ENERGY, INC. ON THE CALIFORNIA ENERGY COMMISSION'S WORKSHOP ON INTERCONNECTION OF RENEWABLE DEVELOPMENT IN CALIFORNIA

BrightSource Energy, Inc. ("BrightSource") appreciates this opportunity to submit its comments on the workshop held by the California Energy Commission ("CEC") on May 14th on the Interconnection of Renewable Development in California (the "Renewables Interconnection Workshop"), and joins the comments submitted by the Large-scale Solar Association ("LSA"). We were pleased to participate in the workshop, and to comment on the development of renewables portfolio scenarios by the CEC and California Public Utilities Commission ("CPUC") for study in the Transmission Planning Process ("TPP") undertaken by the California Independent System Operator Corporation ("CAISO"). The issues addressed in the Renewables Interconnection Workshop, and in the renewables portfolio scenarios, are critical to ensuring that California achieves the 33% Renewables Portfolio Standard ("RPS") requirements and its AB32 greenhouse gas goals.

BrightSource applauds the increased coordination between the Commissions and the CAISO in planning for the future infrastructure in California, as well as the adoption of the "commercial interest" scenario as the base portfolio for the TPP. Planning efforts should focus on the most probable future scenarios while leveraging past development efforts to provide clear and consistent direction to the energy market. Commercial interest is an important indicator of viability for any regulatory program; areas that appear theoretically developable but that fail to show commercial interest cannot be counted upon to provide a realistic foundation for achieving California's renewables and greenhouse gas objectives. The Energy and Public Utilities Commissions' recent recommendations, placing additional emphasis on commercial interest, will therefore place California's path on a much more firm footing, which is particularly important at this difficult juncture for the renewable energy industries. BrightSource

encourages continuing the resource scenario development in this direction as we collectively work to build California's sustainable and renewables-based energy supply.

BrightSource's comments highlight key principles and processes that should help inform policy and aid implementation. The comments are arranged in response to the questions posted to guide the panel discussion.

1. *What uncertainties should be considered in the Resource Scenarios?*

   The Resource Scenarios should consider uncertainties in the margin required to support load growth, higher RPS goals, and greenhouse gas objectives. In general, uncertainties in transmission planning involve forecasting the locations, sizes, types and characteristics of customer loads and resources. Of the two, uncertainties surrounding resources development currently presents a higher degree of uncertainty not only due to the nature of new resource developments, but also the potential operation and dispatch patterns of both new and existing resources coupled with the potential retirement of existing resources.

   Uncertainties in planning can be reduced by giving more weight to the assumptions that are more certain and analyzing sensitivities by varying assumptions that are less certain. For example, resources with clear information (such as those with executed & approved PPAs or verified participation in other approved procurement) should be preferred over those with no or very little information available. Uncertainties can then be examined by running sensitivity studies.

   Uncertainties are also an issue with respect to environmental concerns. Current Desert Renewable Conservation Plan scenarios, which remain in draft at this stage, are driven by minimization of potential conflict, but do not provide reliable indications of the extent of actual conflict, nor the degree to which actual conflict can be resolved or mitigated. Reliance on high-level environmental screens can provide false assurances for development in areas that may prove to possess environmental conflict, and stunt development in areas that may be fully appropriate for development.

2. *How can we improve the renewable calculator model?*

   The renewable calculators should produce assumptions that are realistic for the future electric transmission system conditions while furthering policy goals and supporting planning philosophy. It is therefore important to first set the objective(s) that the Renewable Calculator is to support, and then determine the design requirements necessary to support those objectives.

   a. The objectives of the Renewable Calculator should include:

- Attaining policies and their timelines as floor, rather than as a ceiling (e.g., RPS, AB 32)
- Ensuring reliability needs are met (Resource Adequacy, ancillary service and other reliability characteristics, match of supply to changing load shape)
- Minimizing risk factors (overconcentration in particular renewable resource areas or in particular technologies, or overreliance on limited transmission elements)
- Cost (focusing on system cost, rather than costs of individual elements, such as balancing renewables to reduce the need for conventional backup that could increase cost as well as emissions)
- Planning philosophy (larger transmission upgrades with greater longevity and less need for near-term replacement, versus smaller transmission upgrades with greater likelihood of additional, near-term future upgrades; balancing risk of over- versus under-planning of transmission relative to promoting renewable energy growth and achieving overall system cost and emission reduction)

b. The Design Requirements can then be developed to achieve those objectives, for example, to:

- Reduce uncertainties – Put more weight on resources with more information available and with greater certainty of developing. Resources that hold signed PPAs are typically located at sites that have multiple factors in favor of resource development. Therefore, if the original developer that holds the PPA fails to develop the site, it would have a greater likelihood of being developed by others than a site that does not have that degree of commercial investment.

  The steps to determine the resources to be included could then be as follows: First, develop the transmission planning base case assumptions to include existing resources and the new resources that have greater indicia of certainty. Then, select other new resources that are less certain based on parameters to support policies. Uncertainties can then be investigated in the transmission planning process itself to make sure that the right transmission lines are built at the right time.
- Consider planning horizons and lead times. A 50-year planning horizon versus a 10-year panning horizon would produce different optimal solutions for the future system. Transmission facilities that are optimally planned for the next 30 years may look under-utilized at the 10th year snapshot, yet be the more cost-effective resource in the long run (as well as reducing overall environmental impact and permitting burdens). Lead times must also be taken into account. It generally takes 5 – 10 years to plan, permit and construct a new transmission line; this is much longer than the lead times for generation projects. Therefore, while we can wait to start the engineering design and construction (which represent the majority of the cost) of a new transmission line until the resource picture is clearer, it would be

prudent to start the planning studies farther in advance (these are part of the normal annual planning activities).

- Recognize the limitation of the simplified approach. There can be many ways of mitigating potential transmission problems with different levels of transmission costs. If a new transmission upgrade is triggered in planning, that does not necessarily mean that the exact transmission upgrade identified in the database would be desirable or be implemented. Very often, smaller transmission projects may be a better solution. However, if the resources are not modeled in the TPP, there would be no opportunity to assess the range of possible solutions. Therefore, removing resources (especially those that have signed PPAs) based on this simplistic screening would be counterproductive, increasing inefficiency and uncertainty and potentially increasing costs in the long run.
- Make moderate changes. Frequent and drastic changes from one year to the next can hurt planning efforts and investment decisions for both transmission and generation. Regulatory certainty is particularly important in this area, and short-term reductions could delay or eliminate cost-effective, longer-term solutions.
- Make realistic assumptions, updated information & consistent data. For example, assuming that a few thousand of MW of a generic resource would be able to use existing transmission capacity may not be realistic, and could lead to policy failure if these assumptions delay transmission that actually is appropriate, needed and cost-effective. BrightSource has provided updated resource data to the CEC and CPUC for use in the 2012-2013 TPP, and appreciates the opportunity to do so.
- Consider future advances in technologies. Depending on the planning horizon, future advances in technology can lower the costs of certain resources, including both transmission and generation, as well as make other types of resources available. It is important that cost reduction assumptions are applied on a neutral, principled basis to all technologies, including transmission and generation, with transparency- and not create unjustified distortions by assuming those cost reductions will apply only to a subset.
- Increase transparency. BrightSource applauses the Commissions' effort to include stakeholder input, and looks forward to actively participate in future discussions.
- Avoid redundancy. Leveraging the results from work efforts that have already taken place will increase efficiency and effectiveness. For example, the work undertaken by a load-serving entity in selecting and signing a PPA with a generation project, and by the Public Utilities Commission in reviewing and approving PPAs, should increase certainty with respect to those resources relative to others that have not had that level of review. The Renewable Calculator should prioritize those resources, absent a strong indication that the resource- or others in its location- would not be viable. .

3. *What policies or goals should be considered in the development of the scenarios? How should DG policies be reflected in the scenarios?*

In addition to the objectives identified for the Renewable Calculator, BrightSource suggests that the following goals be considered for the scenarios:

- Forecasting & Response- technology needed to provide visibility and control to the grid operator (which may require new technology, particularly for DG)
- Lead time for needed new technologies, and assuring investment in new infrastructure is consistent with lead time.

4. *How do we make the process work efficiently so that the identification and permitting of transmission in California facilitates the development of renewable generation?*

   a. Increased coordination between the various Agencies:
      - Long-range planning needs consistent with all policy objectives (avoiding current potential for insufficient transmission to meet policy objectives)
      - Short-term implementation needs to put timely "steel in the ground" to meet generation project COD requirements.

   a. Provide information so developers can assess areas that can reasonably expect availability of transmission capacity for development of potential sites. For example, the annual transmission planning process at the CAISO can provide information on potential transmission availability for the next levels of generation development. Similar types of information can be provided by the publicly-owned utilities ("POUs").
   b. Develop "quick fix" transmission upgrade projects with lower costs and shorter lead times to meet immediate needs, in addition to larger transmission projects that can serve multiple purposes. These would be preferable to medium-term fixes that take too long, cost too much and will need expensive replacement soon after the fixes are implemented. Short-term fixes would help bridge the gap between the operation dates of the generation resources and the larger transmission project needed to transmit the power to the load centers.
   c. Once a transmission project is approved, it should be implemented with milestone schedules, and corrective actions if schedules slip.

5. *Are there incentives or penalties that can be incorporated into the procurement process that would encourage renewable generators to locate in desirable transmission areas?*

   The following are examples of incentives/penalties that can be incorporated into the procurement process:

   a. Work with development community to identify realistic development areas
   b. Identify "desirable" areas for bid evaluation, examples:
      – improved Transmission Ranking Cost Report ("TRCR")
      – provide "points" for desirable generator characteristics and locations
   c. Include mechanisms to ensure timely availability of needed infrastructure

d. Enforcement of milestones through corrective actions

6. *What information is needed by the stakeholders (Load Serving Entities, developers, regulators) to assist in decision making?*

   The information needed includes:

   a. Portfolio fit and timing of need for new resources
   b. The value (quantitative and qualitative) a resource type can provide
   c. Potential environmental impacts
   d. COD of the resource
   e. Timing and costs of transmission upgrades

BrightSource again thanks the Commission for the opportunity to participate in the Renewables Interconnection Workshop and to provide these comments. We look forward to future participation in the Commission's efforts to improve the policy framework for California's renewables energy supply.

Respectfully submitted,

__/s/_____
Arthur Haubenstock
VP Regulatory Affairs
BrightSource Energy, Inc.

May 25, 2012