

**Stakeholder Comments**  
**2012-2013 Transmission Planning Process**  
**Stakeholder Meeting April 2, 2012**

Submitted by	Company	Date Submitted
Chifong Thomas cthomas@brightsourceenergy.com (510) 250-8166	BrightSource Energy, Inc.	April 16, 2012

BrightSource Energy, Inc. (BSE) appreciates the opportunity to submit the following comments in response to the California Public Utilities Commission (CPUC) and California Energy Commission (CEC) joint March 12<sup>th</sup> letter (updated on March 23<sup>rd</sup>)<sup>1</sup> to the California Independent System Operator Corporation (CAISO)<sup>2</sup> transmitting the proposed renewable portfolios for the 2012/2013 Transmission Planning Process (TPP). The comments also discuss the related issues raised at the April 2 CAISO Stakeholder meeting on the same topic.<sup>3</sup>

1. Introduction

For several years, stakeholders have been urging the CAISO to link its transmission planning process with the CPUC's resource procurement process. It is imperative that the CAISO use appropriate procurement information in its transmission planning process, so that the transmission plans, consistent with the CAISO tariff, reflect the generation resources that are most likely to be built and to need transmission.

Fortunately, California's preferred resource mix has come into focus over the past several years as the investor-owned utilities have executed, and the CPUC has approved, the power purchase agreements (PPAs) that California needs to meet the renewable portfolio standards for 2020. Unfortunately, the Resource Portfolios Letter incorporates out of date information, generic resources in the wrong locations, and faulty assumptions in its resource portfolios. As a consequence, the resource portfolios in the letter do not represent an accurate picture of the generation projects that are most likely to be developed. These portfolios must be corrected if they are to be used as

<sup>1</sup> The letter, as well as all of the supporting documentation used to develop the letter transmitting the resource portfolios, will be referred to herein as the "Resource Portfolios Letter."

<sup>2</sup> Collectively, the CPUC, CEC and CAISO will be referred to as the "agencies."

<sup>3</sup> BSE is also a member of the Large-scale Solar Association (LSA), and it incorporates LSA's comments by reference.

inputs to the TPP, to avoid conflict with the CAISO Tariff, and, perhaps more importantly, to avoid development of a transmission plan that will not meet its intended purpose and that will impose undue costs on the development of renewable energy in California.

BSE is concerned about the unjustified, and seemingly unreasonable, assumptions incorporated into the Resource Portfolios Letter, without any stakeholder input or review. Based on these erroneous assumptions, the portfolios have eliminated projects that are more certain -- those with approved PPAs and real project investment -- with less certain and generic projects, many of which are not likely to materialize. Many of the projects included in the portfolios are based on generic cost projections (rather than contracted-for costs) and unreasonable assumptions that these made-up projects will not require transmission infrastructure upgrades. Thus, the resource portfolios provide less, rather than more certainty as to the projects most likely to be built, and conflict with the CAISO Tariff's requirement that the TPP will result in the best transmission for the projects most likely to materialize.

BSE has three major, but related, concerns with respect to the development of the resource portfolios.

- First, the process by which the resource portfolios were developed was completely non-transparent, and the relevant stakeholders had no upfront opportunity to discuss which assumptions and data sets should be used. While BSE appreciates this opportunity to comment now, the CPUC representative indicated at the stakeholder meeting, after the Resource Portfolios Letter had been delivered, that it was not likely that the resource portfolios would be altered based on comments. If this is true, and the resource portfolios are not modified despite the faulty assumptions and incorrect input, then this comment opportunity does not provide stakeholders with any *meaningful* input into the development of the resource portfolios—as required by the CAISO Tariff and by the Federal Energy Regulatory Commission (FERC).
- Second, and most important, BSE believes that many of the assumptions made in the resource portfolios are not reasonable or just, and that they lead to a demonstrably erroneous and discriminatory result. In several instances, and as discussed below, the Resource Portfolios Letter made assumptions that have little or no basis in fact. Moreover, the Resource Portfolios Letter did not include other assumptions that should have been incorporated into the portfolios, such as the integration of Valley Electric Association (VEA), and associated generation, into the CAISO-controlled grid.

- Third, using the erroneous assumptions made to develop the resource portfolios, and upon only a quick review, BSE has identified several apparent errors in the RPS Calculator.<sup>4</sup> In addition, the Energy Division's database contains numerous errors that should have been corrected and could have a substantive impact on the final results.

In order to remedy these deficiencies, the portfolios must be modified *where errors have occurred and/or where assumptions are not reasonable*. The CAISO is required under its Tariff, as well as several orders by FERC to ensure that such changes are made, so that its TPP rests on a base case that accurately reflects the generation most likely to materialize.

## 2. Procedural Flaws

Last year, stakeholders raised numerous concerns because the resource portfolios were developed through a non-transparent process at the CPUC. Stakeholders did not have meaningful input into the process; rather, the resource portfolios were presented as a *fait accompli*. In response to these concerns, the CAISO committed that the process would be more transparent and allow for more stakeholder input this year. Unfortunately, the portfolio-development process this year was even less transparent, and the new portfolios did not even use the same criteria governing last year's process. Instead, new, seemingly arbitrary, and as yet not fully explained criteria were employed to create the portfolios.

Moreover, although the agencies held one stakeholder meeting after the letter was delivered, and are now allowing for comments, CPUC staff stated that it does not envision modification of the March 12 Letter.<sup>5</sup> The CAISO stated that the agencies would carefully review the comments and modify the portfolios only *if* "appropriate," but also that time is short and any deficiencies might only be corrected in later cycles.

These statements suggest that stakeholder input will not be considered, or acted upon, in any more meaningful way than in the process for the last planning cycle, when stakeholders were also told that any deficiencies would be corrected next year. The CAISO cannot rely on resource portfolios without ensuring that the rules used to create them, as well as the results of their application, comply with its Tariff obligations and will allow for a just and reasonable TPP<sup>6</sup>

Because of the numerous changes the CAISO has made to the Generator Interconnection Process, which now relies more heavily on the TPP, it is even more

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<sup>4</sup> Stakeholders do not have sufficient information about the RPS Calculator to properly assess it, and the CPUC staff indicated that some functions were disabled because of irregularities in the program. Thus, BSE and other stakeholders cannot accurately determine if the calculations were performed correctly and/or whether corrections of errors would change the results.

<sup>5</sup> The CPUC staff member said that any changes would require a very high bar because the CPUC Commissioners had already approved the portfolios.

<sup>6</sup> See, e.g., CAISO Tariff Section 24.4.6.6;

important for the TPP to rest on a base case that reflects the most likely resource scenarios. In the past year, the CAISO has adopted the Clusters 1-4 Deliverability Technical Bulletin and the TPP-GIP Integration, which is scheduled to be filed at FERC next month. Both of these initiatives increase the importance of the TPP with respect to generator interconnections. Under the Deliverability Technical Bulletin, projects are subject to additional curtailments if the TPP is not robust, and under the TPP-GIP Integration, the TPP governs **all** ratepayer-funded delivery network upgrades. Thus, more than ever, it is important to get the TPP right—and essential to avoid undue, discriminatory impact.

The CAISO has an independent duty to ensure that the TPP is transparent and provides for open access. It cannot lawfully meet this duty by accepting inputs to the TPP (i.e., the resource portfolios) that were developed through a non-transparent process, using unsubstantiated and untested assumptions that lead to unjust and unreasonable results. It is not enough for the CAISO to promise that mistakes will be corrected in the next planning cycle; rather, the CAISO has an obligation every year to ensure that it is complying with its Tariff and with FERC's Open Access rules. Thus, the agencies must use this minimal stakeholder process in a meaningful way, and must correct any deficiencies in the portfolios before they are used in the TPP.

### 3. Errors Related to Assumptions and/or Omission of Relevant Considerations

As noted above, the most troubling aspect of the resource portfolios are many of the new assumptions that were made, with very little explanation, no prior stakeholder input, and faulty or no justification. If the assumptions incorporated into the calculator are erroneous and/or unreasonable, then the results will be flawed. Thus, the CAISO must ensure that the assumptions made in developing the resource portfolios in the Resource Portfolios Letter are reasonable, just, and non-discriminatory before it can apply any of the portfolios to its TPP. If any of the assumptions is not reasonable, the error must be remedied in order for the TPP to comply with FERC's open access standards.

#### a. Change in Criteria for Discounted Core

The change in criteria for the discounted core, which now requires approved PPAs and an approved major construction permit has not been justified and is unreasonable. The renewable resource portfolios look out to 2020, and it is simply not commercially reasonable for projects with a commercial operation date of 2015 or beyond to have received their major construction permit by February 2012. It is much more reasonable to include, at the very least, projects with PPAs that have achieved data adequacy.<sup>7</sup>

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<sup>7</sup> BSE notes that it would not be commercially reasonable for many projects with commercial operation dates in the second half of the decade to have even filed for a major permit; thus, for those projects, lack of data adequacy is not an indicator that they are not viable. For next year's process, BSE believes that

A CPUC- approved PPA is by far the milestone that provides the most certainty that a post-2014 project will be constructed. Because of the disconnect in timing between transmission and generation construction, transmission must be planned well in advance of construction of the generation project. Thus, an approved PPA is **the most certain information available that such a project will move forward, when combined with data adequacy** – and it should certainly be utilized in favor of uncertain and speculative information about projects that don't yet exist and do not have procurement contracts. As noted, the CAISO's tariff requires it to create "a baseline scenario reflecting the **assumptions about resource locations that are most likely to occur** and one or more reasonable stress scenarios that will be compared to the baseline scenario" for the TPP.<sup>8</sup>

The agencies also have not explained why the resource portfolio selection process places limitations on projects in the discounted core that trigger transmission.<sup>9</sup> In order to be eligible for the discounted core, a project must have a CPUC-approved PPA. When the CPUC reviews contracts for approval, it takes transmission costs into account. Thus, it not just and reasonable to prohibit projects from entering the discounted core merely because they trigger a transmission upgrade, and the Resource Portfolios Letter does not offer any independent justification for this requirement.

Moreover, even if it were reasonable to consider transmission for inclusion in the discounted core, the 67% Requirement is unreasonable. First, the Resource Portfolios Letter does not explain how the 67% Requirement was developed. Second, this methodology will almost never result in projects that require new transmission being included in the discounted core. Under current rules, given the size of the interconnection queue, it would be almost impossible for a new line to be triggered and over 2/3 filled with projects that have both a PPA and a final construction permit.

Thus, as a practical matter- and without any justification- the 67% Requirement, excludes projects that trigger new transmission from being included in the discounted core. Using the latest RPS Calculator provided by the CPUC, for all but the "commercial interest" scenarios the hurdle would have to be lowered to 27% before the first group of new-transmission-related generation (which relates to the Kramer CREZ) would be selected. In other words, even for the most favorable CREZ, the discounted core projects would load the new line to only 27% of the CREZ, far less than the 67% Requirement selected.

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executed and approved PPAs should be weighted much more heavily. However, at the very least, the 2012-13 portfolios utilized by the CAISO must revert back to last year's definition of the discounted core.

<sup>8</sup> CAISO Tariff, Section 24.4.6.6 (emphasis added).

<sup>9</sup> The CPUC did not include projects in the discounted core that triggered transmission unless over 67% of the new line was filled with discounted core projects (the "67% Requirement").

Finally, the “High DG” case illustrates the illogic of the criteria used for the selection process, as well as the discriminatory effect of the criteria. In the High DG case, the agencies, without justification, added 5,000 MW of DG to the “discounted core” (in addition to assuming that such addition would have no transmission costs associated with it, which has no justification, as discussed below). At the stakeholder meeting, the CPUC staff representative stated that the assumption not based on any contracted-for or real DG projects, but rather potential projects that might arise because of future policy decisions that have not yet been made by the Commission. He also explained that the 5,000 MW addition to the discounted core were **in addition to** DG included based on current programs, such as the Renewable Auction Mechanism.

Thus, the additional 5,000 MW of DG added to the discounted core do not have PPAs, permits or CAISO queue positions. At the same time, projects that have CPUC-approved PPAs with California utilities are not included in the discounted core, even if they have a permit application and are deemed data adequate – and even if it would not be commercially reasonable from a timing perspective for those projects to have obtained a final permit. This disparate treatment of different resource types is clearly discriminatory and unjustified, and has the effect of replacing more certain projects with less certain projects in the portfolios.

#### b. Transmission Assumption Errors

The resource portfolios make at least two assumptions concerning transmission costs that are not reasonable.

##### i. DG Transmission Assumptions

First, the March 12 Letter assumed that DG projects would have zero transmission impact and that they would save ratepayer funds through “avoided” T&D costs. This assumption is patently unreasonable, particularly in light of recent CAISO study results indicating potentially significant transmission needs triggered by DG. These assumptions also conflict with recent technical reports such as the report by NREL, the DOE, Sandia Lab, and EPRI that suggest infrastructure is likely needed to accommodate higher DG penetration.<sup>10</sup> Thus, while each individual DG project may not require major transmission infrastructure, the addition of DG at the levels assumed in the portfolio will clearly require upgrade of the T&D system, as well as pose several integration costs and challenges. Therefore, it is not reasonable to add all of the assumed DG at zero transmission cost, plus provide an adder for “savings.”

Even if a high-DG case would save transmission costs, the CPUC has not explained why it is reasonable to assign an adder for avoided transmission cost. Under

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<sup>10</sup> See, e.g., NREL Technical Paper, Updating Interconnection Screens for PV System Integration, NREL/RP-5500-54063 (Feb. 2012).

this assumption, **any** project, whether DG or not, that does not trigger new transmission receives an adder for avoiding additional T&D costs. Applying an adder to DG projects only seems to double count any *potential* benefits associated with DG with respect to transmission—potential benefits, we note, that are certainly not true in all cases, as it is clear that at least a significant portion of these projects will require some degree of distribution system costs, and potentially indirect network transmission costs as well. This double-counting is clearly erroneous, and the Resource Portfolios Letter did not provide any justification for this assumption.<sup>11</sup>

In its presentation at the CAISO Stakeholder Meeting, CPUC staff cited a report by Energy+Environmental Economics concerning the technical potential of DG in California, apparently as support for its assumptions concerning DG. However, the CPUC acknowledged that the report was a preliminary assessment, had not been vetted through a stakeholder process, and has not been adopted by the CPUC. Moreover, the report itself states that while the addition of high quantities of DG may be technically feasible, there are significant challenges to overcome, such as interconnection issues, geographical development issues, and massive industry expansion in a relatively short period.<sup>12</sup> These major uncertainties were not factored into the various assumptions made about DG in any way. These significant flaws strongly suggest that the assumptions regarding the costs and feasibility of DG cannot properly be used to dictate the results of the resource portfolios and/or the transmission planning process.

ii. CREZ and Out of State Projects vs. non-CREZ Projects Transmission Assumptions

The second faulty transmission assumption is the distinction between assignment of transmission cost between CREZ and out-of-state projects and non-CREZ projects. The RPS Calculator upon which the March 12<sup>th</sup> Portfolios Letter is based added estimated transmission costs for CREZ and out-of-state projects based on the most recently available information. It is well understood that these proxy costs are not very accurate. For example, the CAISO Phase I studies, the purpose of which was

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<sup>11</sup> The “adder” for avoiding additional T&D costs also appears to be geared toward achieving a desired result, which is not permissible since the procurement process should govern the state’s policy goals. The agencies would have been more justified to include an “adder” for solar thermal projects, which increase grid reliability and avoid integration costs. This adder would have been justified based on the CPUC’s 2012 RPS procurement methodology, which is planning to adopt a “net market” valuation. The March 12 Letter does not explain why no adder was applied to solar thermal projects, and no stakeholder discussion was received on this issue prior to the portfolios being developed.

<sup>12</sup> See *Technical Potential for Local Distributed Photovoltaics in California – Preliminary Assessment*, Energy+Environmental Economics, March, 2012. <http://www.cpuc.ca.gov/NR/rdonlyres/8A822C08-A56C-4674-A5D2-099E48B41160/0/LDPVPotentialReportMarch2012.pdf>

to develop transmission cost caps, are not detailed and assume that the entire queue will be constructed; therefore, assumptions for transmission cost estimates based on such studies will not be accurate.

Perversely, where no transmission information was available (i.e., non-CREZ projects), the Resource Portfolios Letter assumed that there would be **no** transmission costs associated with the projects, even though the points of interconnection for these projects are not clearly identified and many of them are large scale projects over 100 MWs in size. Based, at least in part, on this assumption, non-CREZ projects were selected at a much higher rate than CREZ and out-of-state projects – in other words, favoring the less-certain projects over the more certain projects, simply because there was less information available about the less-certain projects. This assumption stands the CAISO Tariff's requirements for the TPP on its head, and cannot be a permissible assumption for the TPP's use.

For example, non-CREZ projects in the Cost Constrained case were projected as being over 6,850 MW (compared with Commercial Interest, where it is only approximately 4,800 MW), far above the level determined only last year. And yet, under the Resource Portfolios Letter's analysis, **no new transmission would be needed to accommodate almost 7,000 MW of projects.**

This assumption has not been justified, and, in fact, it appears to be unreasonable on its face, particularly because it disadvantages projects located in a CREZ, which were identified by RETI as being of high value for renewable resources. It is also not reasonable to assume that there will be no additional transmission triggered. For example, the Riverside County non-CREZ identifies approximately 2,200 MW. It is unlikely that this quantity of generation in one area would not trigger any new transmission.

Thus, the process, and the resulting portfolios, are clearly discriminatory. The Resource Portfolios Letter does not justify, and cannot justify, these faulty assumptions. A more reasonable approach would be to assign an average transmission cost of CREZs across all similarly situated projects in the same county, or to remove transmission costs altogether in determining the resource portfolio to be included for further investigation by the CAISO. In order to use the portfolios for the TPP, the agencies must remedy these deficiencies and re-run the RPS calculator.

c. VEA Transition Agreement not Included in Assumptions

The Resource Portfolios Letter does not appear to consider resources located in VEA's service area, even though FERC has approved the integration of VEA's transmission system into the CAISO's balancing authority in early 2013. In fact, the recommended "cost constrained" portfolio includes only 142 MW from the entire state of



Nevada, even though CAISO and VEA have entered into a FERC-approved Transition Agreement, under which parties are expending substantial resources to effectuate the transition. There thus appears to be a disconnect between the resource portfolios and the Transition Agreement, which was entered into primarily to allow the CAISO “to achieve efficiencies in providing renewable resources in the Valley Electric service area to California and [] to enhance the regional transmission grid.”<sup>13</sup>

The CAISO must ensure that the TPP considers transmission upgrades necessary to integrate and deliver proposed renewable generation on the VEA system to CAISO load serving entities. In addition, the assumptions used in developing the TPP must be consistent with the assumptions that support the FERC-approved Transition Agreement.

#### d. Environmental Scoring Criteria

BSE is also concerned about the new environmental scoring criteria. The draft renewable energy study areas (RESAs) used to rank projects for the portfolios are only preliminary, and include a number of subjective factors that make it impossible to determine whether these scores have been fairly assigned. The Desert Renewable Energy Conservation Plan (DRECP) process has not yet issued preferred or other alternatives, and no decision has been made establishing renewable energy areas within the DRECP planning area. It is fully inappropriate to base the CAISO’s transmission planning effort on such preliminary data.

Moreover, these environmental scoring criteria focus primarily on land use and siting issues and ignore many important environmental factors, including water use, air emissions and greenhouse-gas impacts, which are all environmental benefits that the RPS was intended to achieve. Finally, the scoring appears to be largely arbitrary, and its accuracy is difficult, if not impossible, to verify. The March 12 Letter does not provide any explanation for the reasons that the various categories were assigned a particular environmental score.

#### 4. Substantive Errors in the Portfolio

Because the RPS calculator is very difficult to utilize, and because of the short time frame for submitting comments, BSE reviewed only a small portion of the database relevant to its projects. Even in this brief review, BSE found at least three substantive errors. First, the Hidden Hills Ranch and the Rio Mesa projects were both deemed data adequate prior to February 2012 (October 2011 and January 2012, respectively) and thus should have received scores of 50, not the assigned 100, on the permitting

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<sup>13</sup> CAISO’s Filing Letter in Docket No. ER12-84-000 (October 14, 2011).

criteria. Moreover, CPUC staff stated that non-CREZ projects were given a transmission adder of zero dollars in the RPS calculator. While BSE takes issue with that assumption, as discussed above, it must be evenly applied, if made. However, the Hidden Hills Project – a non-CREZ project - was ascribed a transmission cost of \$2.99, with no explanation for the discriminatory treatment. Finally, BSE believes that significant information, such as project location, used to develop the portfolios is outdated, which has led to incorrect results.

Based on informal conversations with other Stakeholders, BSE believes that there are other errors throughout the RPS Calculator, which casts doubt on the accuracy of the final results. Considering the resource portfolios are going to be used as inputs into the TPP, it is vitally important to ensure just, reasonable and non-discriminatory results that the data is cross-checked appropriately. It is unclear from the Resource Portfolios Letter and the RPS Calculator whether the agencies used any quality control mechanisms, and it is apparent that stakeholders with the most information – i.e., the developers that own the projects – had no ability to check the accuracy of the results before the resource portfolios were sent to the CAISO. Thus, any such corrections must be made now, and the calculator must be re-run, with more reasonable assumptions (as discussed above) to ensure that the results are accurate.

## 5. Conclusion

While BSE appreciates this opportunity to comment on the resource portfolios, it is concerned that the opportunity is far too little to meet even minimal standards of due process, and is certainly insufficient to allow the resource portfolios to form a legitimate basis for the TPP, consistent with the CAISO Tariff and FERC requirements. The participating agencies should have engaged in a robust stakeholder process over the last year while the resource portfolio inputs were being developed. This did not occur, and unfortunately, the resulting portfolios carry with them the errors that could have been corrected had there been a stakeholder process- and that must be corrected to provide a just, reasonable and non-discriminatory basis for the TPP. The CAISO has an independent obligation to ensure the correction of the faulty assumptions and the errors before the portfolios can be used in the TPP. Without such corrections, the CAISO cannot comply with its duties under its Tariff and the Federal Power Act.