

Stakeholder Comments Template

Submitted by	Company	Date Submitted
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Please use this template to provide written comments on the Clean Energy and Pollution Reduction Act Senate Bill 350 (SB350) Study initiative posted on April 25, 2016.

Please submit comments to regionalintegration@caiso.com by close of business
June 22, 2016

Materials related to this study are available on the ISO website at:
<http://www.caiso.com/informed/Pages/RegionalEnergyMarket/BenefitsofaRegionalEnergyMarket.aspx>

Please use the following template to comment on the key topics addressed in the workshop.

1. Are any of the study results presented at the stakeholder workshop unclear, or in need of additional explanation in the study’s final report?

Comment:

1. Please clarify on page 8 of the summary of findings overall benefits to CA ratepayers what constitutes “RPS Portfolio related capital investments” and “production, purchase & sales cost”. According to the chart the ratepayer savings benefits are largely from these two categories when comparing Regional 1A vs 2 and Regional 1A vs 3.

2. Please organize comments on the study on the following topic areas:

- a. **The 50% renewable portfolios in 2030**
- b. **The assumed regional market footprint in 2020 and 2030**
- c. **The electricity system (production simulation) modeling**
- d. **The reliability benefits and integration of renewable energy resources**
- e. **The economic analysis**
- f. **The environmental and environmental justice analysis**

Comment:

- a) The 50% renewable portfolios in 2030.
 - The portfolios and sensitivities should also accurately portray the renewable potential of the Westlands CREZ including the current and future price of power from the area. The current short term (by 2020) construction ready generation opportunity of Westlands is 1,240 MW’s and the medium/long term buildout of Westlands and the San Joaquin is in excess of 6,500 MW’s and up to 10,000 MW’s by expanding the existing transmission system in the region.
 - The LCOE for Westlands is higher than what the market is seeing in 2015 from the area and we would also like to see the detailed assumptions that go into the 2030 forecast since technology price declines, BOS cost reductions and efficiencies, and increase in performance of panels and inverters can influence the LCOE forecasts for solar over the next 15 years. Furthermore, the LCOE for the OOS looks extremely low if the transmission costs are baked in so it would be great if the CAISO can clarify this it would be appreciated.
 - The incremental cost assumptions for the in-state renewable transmission for Westlands 2,500 MW’s seems high and further information is needed to understand the CAISO’s assumptions here since the CAISO energy only special study in the 2015-16 TPP states that there is capacity up to 2,300 MW’s if generators are connecting to the high voltage system.

- b) The assumed regional market footprint in 2020 and 2030.
 - WSP has no comments.
- c) The electricity system (production simulation) modeling.
 - WSP has no comments.
- d) The reliability benefits and integration of renewable energy resources.
 - WSP would like to see the CAISO analyze additional sensitivities on 3,000 MW of storage with low cost solar toward meeting the 50 percent RPS and the retirement of Diablo generation and the repurposing of the 1,300 MW Helms pump storage facility to provide diurnal load shaping and storage flexibility.
- e) The economic analysis.
 - WSP expresses our concern for the economic analysis on job reduction and household income benefits for Westlands renewable energy zone as analyzed in the BEAR model. According to the BEAR model the households in the Central Valley would benefit more overall in Regional 3 scenario due to higher household income of \$300 to \$550 and decreased groundwater use resulting from generation being developed out of CA. Furthermore, the BEAR model concludes that Central Valley households would prefer to have lower construction related environmental impacts from generation developed in the valley and would prefer to import generation from out of CA to meet the state's energy needs.
 - WSP does not agree with the conclusions of the BEAR model because we believe that central valley households would prefer to see more renewable energy developed (not less), that is predominately union labor, in the valley. WSP points to the 2014 UC Berkeley Labor Center report that said that CA had created 10,200 well paid jobs in CA for construction of utility scale solar. The report said on average union jobs in utility scale solar paid \$78,000 per year and offered solid health and pension benefits. Compare this to Wyoming, a state that has adopted right to work laws prohibiting unionization, and the CAISO RPS portfolios studies showing almost 2,500 MW's of low cost wind displacing low cost CA solar under Regional 3 scenario and this "outsourcing" of unionized renewable energy jobs from CA should be concern for Central Valley households and ratepayers.
- f) Environmental and environmental justice analysis.
 - WSP has no additional comments other than to say we agree with ASPEN's analysis of the generation development opportunity of Westlands solar and the overall environmental benefits of developing utility scale solar on drainage impaired farmlands in the valley.

3. Other

Comment: