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 Study initiative posted on February 4, 2016.

Please submit comments to regionalintegration@caiso.com by close of business February 19, 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 initiative proposal.

1. Do you think the proposed study framework meets the intent of the studies required by SB350? If no, what additional study areas do you believe need to be included and why?
Comment: Generally yes, the framework appears to meet the intent. However, there are additional benefits that may not be fully realized in the study due to the limited nature of the models and time available to perform the study. For example, the additional transmission outside of the current footprint envisioned by the studies to support the supply of out-of-state renewables brings additional benefits beyond those to be studied including reliability benefits, improved renewables integration, insurance value for emergency outages, additional EIM benefits, additional load/resource diversity, and congestion relief throughout the west including at the current ISO interfaces such as COI. To the extent these additional benefits are not quantified, they should be analyzed and qualitatively identified with the results.

2. Five separate 50% renewable portfolios are being proposed for 2030 as plausible scenarios for the purpose of assessing the potential benefits of a regional market. Are these portfolios reasonable for that purpose, and if no, why?
Comment: Generally yes, except that the assumptions for transfer capability of renewables using existing transmission may be overstated. Sensitivities should be performed to determine if benefit results are sensitive to this assumption.
3. To develop the five renewable portfolios the RESOLVE model makes a number of assumptions resulting in a mix of renewable and integration resources for the scenario analysis (rooftop solar, storage, retirements, out of state resources etc.) Do you think the assumptions associated with developing the renewable portfolios are plausible? If no, why not?
Comment: There are a number of factors that make it difficult to determine the plausibility of the specific portfolios. The total renewables for each scenario may be plausible, but the mix may not be realistic based on feasibility of permitting and cost of transmission. For example, a lower cost of transmission plus a higher capacity factor makes it reasonable to predict more WY wind and less NM wind.
4. The renewable portfolio analysis assumes certain costs and locations for the various renewable technologies. Do you think the assumptions are reasonable? If no, why not?
Comment: Regarding the locations, see response to item 3 above.
5. The renewable portfolio analysis makes assumptions about the availability and quantity of out-of-state renewable energy credits ("RECs") to California. Do you think the assumptions are plausible? If no, why not?
Comment:
6. The renewable portfolio analysis makes assumptions about the ability to export surplus generation out of California (i.e., net-export assumptions). Do you think these assumptions are reasonable? If no, why not?

Comment:
7. Does Brattle's approach for analysis of potential impact on California ratepayers omit any category of potential impact that should be included? If so, what else should be included?
Comment:
8. Are the methodology and assumptions to estimate the potential impact on California ratepayers reasonable? If not, please explain.
Comment:
9. The regional market benefits will be assessed based assuming a regional market footprint comprised of the U.S. portion of the Western Interconnection. Do you believe this is a reasonable assumption for the purpose of this study? If not, please explain.
Comment:
10. For the purpose of the production cost simulations, Brattle proposes to use CEC carbon price forecasts for California and TEPPC policy cases to reflect carbon policy implementation in rest of WECC. Is this a reasonable approach? If not, please explain.
Comment:
11. BEAR will be using existing economic data, and generation and transmission data from E3, the CAISO, and Brattle. These data are currently being developed. Are there specific topics that you want to be sure to be addressed regarding these data?
Comment:

12. The economic analysis will focus on the electricity, transportation, and technology sectors to develop the economic estimates of employment, gross state product, personal income, enterprise income, and state tax revenue. These results will be further disaggregated by sector, occupation, and household income decile. Do you think these sectors are the appropriate ones on which to focus the job and economic impact analysis? If no, why?
Comment:
13. Under the proposed study framework, both economic and environmental impacts of disadvantaged communities will be studied. Based on the study overview do you think this satisfies the requirements of SB350?
Comment:
14. The BEAR model will evaluate direct, indirect, and induced impacts to income and jobs, including those in disadvantaged communities. Do you think additional economic analysis is required? If yes, what additional analysis is needed and why?
Comment:
15. The environmental analysis will evaluate impacts to California and the west in five areas – air quality, GHG, land, biological, and water supply. Do you think additional environmental analysis is required? If yes, what additional analysis is needed and why?
Comment:
16. The environmental analysis presentation identified a number of potential indicators for the various impacts. Are the indicators sufficient? If no, what additional indicators would you suggest?
Comment:

17. Other

Comment:
To reinforce comments provided above, there are additional benefits that may not be fully realized in the study due to the limited nature of the models and time available to perform the study. For example, the additional transmission outside of the current footprint envisioned by the studies to support the supply of out-of-state renewables brings additional benefits beyond those to be studied including improved renewables integration, insurance value for emergency outages, additional EIM benefits, additional load/resource diversity, and congestion relief throughout the west including at the current ISO interfaces such as COI. To the extent these additional benefits are not quantified, they should be analyzed and qualitatively identified with the results.

Furthermore, we support the realistic assumption that incremental transmission capacity can be added to the system to support out-of-state renewables (and with the added benefits described herein) at a lower cost than adding multi-billion dollar HVDC additions.