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: SCE has no comments at this time.

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?

Scenarios are:

1. Business-as-Usual (BAU) Scenario

- Renewable energy procurement is largely from in-state resources
- Limited quantity of out-of-state resources available, with delivery requirements assumed
- No regional market to help reduce curtailment

Three scenarios with the following net export assumptions for excess generation

A) Net Exports limited to 2000MW
B) Net Exports limited to 5000MW
C) Net Exports limited to 8000MW

2. Regional market operations with BAU renewable energy procurement policies

- Assumes no increase in availability of out-of-state resources, but transmission wheeling charges are de-pancaked
- Curtailment of renewables is reduced through better integration

3. Regional market and renewable energy procurement

- Like Scenario 2, but with additional high-quality wind resources made available (requires new transmission)

The scenarios above should give a range of results to understand the impact of regional market expansion.

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:

On slide 33 of E3's presentation includes an assumption of 500 MW of geothermal and 500 MW of pumped storage that was manually added into the portfolio. What is the rational for manually inserting these resources instead of letting the RESOLVE model determine if they are economic?

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: SCE has no comments at this time.
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: SCE has no comments at this time.
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: SCE has no comments at this time.
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: SCE has no comments at this time
8. Are the methodology and assumptions to estimate the potential impact on California ratepayers reasonable? If not, please explain.
Comment: SCE has no comments at this time
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: WECC (w/o Canada and Mexico) and CA appears to meet the SB350 requirement
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: SCE has no comments at this time.
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: SCE has no comments at this time

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: SCE has no comments at this time
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: SCE has no comments at this time
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: SCE has no comments at this time
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: SCE has no comments at this time
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: SCE has no comments at this time

17. Other
Comment: Per slide 16 of E3's presentation the California load assumption is from 2013 IEPR. The 2013 IEPR loads are significantly higher than the 2015 IEPR ranging from 7% r in 2016 to 14% 2024.[1] As a result, E3's analysis is likely to result in over investment in generation and transmission facilities. In addition, the passage of SB350 has doubled the energy efficiency targets.[2] This additional energy efficiency is not currently incorporated into the 2015 IEPR forecast.[3] However, the 2016 Long Term Procurement Plan (LTPP) outlines a potential solution to incorporate all aspects of SB350. SCE recommends the use of the 2016 LTPP "default scenario" for load forecast.[4] On slide 28, E3 is assuming the Federal Production Tax Credit (PTC) and Investment Tax Credit (ITC) roll off in 2017. In December 2015, Congress extended these tax benefits.[5] The studies should reflect the extension of these tax incentives and their impact on resource costs.

[1] See attachment A.
[2] https://leginfo.legislature.ca.gov/faces/billNavClient.xhtml?bill_id=201520160SB350 Section 2 (a) (2).
[3] SCE does not agree with the SCE Service Area load forecast in the 2015 IEPR as it is slightly understated. However, as this is a California analysis the total California load forecast is reasonable for the proposed analysis.
[4] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M158/K117/158117030.PDF. p. 12-16.
[5] http://energy.gov/savings/renewable-electricity-production-tax-credit-ptc

Attachment A: Comparison of 2013 and 2015 IEPR Load Forecast for California

	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
2013 Statewide Coincident Peak (MW)	62545	62738	63010	63353	63757	64209	64542	64828	64981	65067
2015 Statewide Coincident Peak (MW)	58835	58597	58607	58234	57848	57599	57383	57361	57232	57003
Percent Difference (from 2015 forecast)	6.3%	7.1%	7.5%	8.8%	10.2%	11.5%	12.5%	13.0%	13.5%	14.1%

2013 Data: Form 1.5b tab, 1 in 2 coincident peak
http://www.energy.ca.gov/2013_energypolicy/documents/demand-forecast_CMF/LSE_and_Balancing_Authority_Forecasts/LSE%20and%20BA%20Tables%20Mid%20Demand%20Baseline-Mid%20AAEE.xls

2015 Data: From 1.5b tab, 1 in 2 coincident peak
http://docketpublic.energy.ca.gov/PublicDocuments/15-IEPR-03/TN209989_20160127T094920_LSE_and_BA_Tables_Mid_Demand_Baseline__Mid_AAEE.xlsx