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

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:

Yes. While CLECA commends the consultants and CAISO staff on the significant work underlying the study results, it is not clear whether SB 350's requirements for regionalization – that studies determine it is in California ratepayers' *best* interest -- have been met.[1] SB 350 lists six topics to be studied to determine the impact on ratepayers:

1. overall benefits to ratepayers,

[1] PU Code 359.5(a).

2. GHG emissions reductions and other air pollutants,
3. Jobs and economic impacts,
4. Environmental impacts in California and elsewhere,
5. Impacts in disadvantaged communities, and
6. Reliability and integration of renewable energy resources.

CLECA focuses primarily on analyses of the overall benefits to ratepayers in the form of reduced costs for ratepayers, reliability and the integration of renewable resources. CLECA supports efficient markets as they generally enable ratepayer savings. Here, however, the ratepayer savings are only 2-3% of retail rates in 2030[2]; this forecast is speculative, small enough that it could be "noise" in the model or a function of the nature of the assumptions. Reasonable people can disagree on the reasonableness of assumptions. CAISO and its consultants have characterized their assumptions and analyses as "conservative".[3] While that term may be appropriate for some of the assumptions, other assumptions are arguably highly optimistic. More detail should be provided in the written report on the CAISO's choice of assumptions, particularly where stakeholders have disagreed with an assumption; some examples of assumptions that warrant further explanation (if not revision) are:

- the general inclusion of 500 MW of geothermal resources in most, if not all, scenarios,
- the general exclusion of SB 350's mandated goal for increased energy efficiency in most scenarios,
- the assumption that the Renewable Portfolio Standard (RPS) product content category (PCC) requirements can be met with a portfolio with more of the incremental RPS procurement from out-of-state resources than in-state, and
- the assumption of a 2030 footprint that spans all of the U.S. WECC BAAs, except the federal power marketing agencies.

These are actually quite optimistic, rather than conservative, assumptions. CLECA continues to question their reasonableness, despite the CAISO's brief responses in the March 18th Stakeholder Comment and ISO Responses from Feb. 8, 2016 Study Proposal. More detail is needed to substantiate these assumptions in the final written report.

The potential benefits of a regional ISO have not yet been clearly demonstrated to outweigh the costs and risks. The lack of a written report makes it difficult to evaluate the results; a 400+ slides power point presentation, while helpful, cannot take the place of a cohesive, detailed, written report. CLECA looks forward to reviewing the final written report and very strongly suggests that it include the results for Scenario 1b in summary charts and tables which compare the Scenario 1a results with Scenarios 2

[2] May 24 Presentation, at Slide 108/brattle.com.
[3] May 24 Presentation, at Slide 107/brattle.com.

and 3. Stakeholders should also have the opportunity to comment on the final written report prior to its transmission to the Governor.

While the potential dollar impact appears large ($1-$1.5 billion in 2030 in cost savings), this is spread over the load for the entire state of California. The resulting ratepayer savings are not overwhelming; the impact on retail rates is small (2-3%); as noted, this could be the result of modeling noise, forecast error or driven by the assumptions. Some of the assumptions remain problematic, particularly for Scenario 3. While disclaiming any changes to the PCC, the results show 58% of the incremental RPS procurement from resources outside the state of California; the total portfolio share of such out-of-state resources is 31% under Scenario 3. It is difficult to see how this significant level of procurement outside California's borders in a regional ISO would qualify for the RPS PCC 1. Will 21,679 GWh (7,694 MW) of out-of-state renewable resources really all be able to be dynamically transferred? This, with the assumed footprint and the oddly dis-similar transmission cost estimates for out-of-state renewables, calls into question the reasonableness of Scenario 3.

Also, the *best* cost result for ratepayers is achieved in the high energy efficiency sensitivity scenario (mandated by SB 350); however, all other scenarios rely on the mid-case additional achievable energy efficiency in the IEPR, and do not meet SB 350 EE goals. Given these points and others discussed below, CLECA is not yet convinced that regionalization is in the best interests of California ratepayers.

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 CAISO assumes that SB 350's renewable procurement goal of 50% is met in all scenarios and sensitivities. However, because "the state agencies have not yet agreed on how this goal [the energy efficiency goal] should be accounted for in state planning efforts", the assumption is that SB 350's EE goal is *not* met, except for the high EE sensitivity.[4] This appears to "cherry-pick" statutory mandates; it should be revised to reflect the 2016 Long Term Procurement Plan default scenario, which is

[4] Stakeholder Comment and ISO Responses from Feb. 8, 2016 Study Proposal, dated March 18, 2016, at 16.

consistent with SB 350. As shown below, the lowest ratepayer costs per RESOLVE are achieved in the high EE sensitivity for ALL the 50% renewable portfolio scenarios.[5]

Net total costs ($MM) for CAISO[6]	**Scenario 1a**	**Scenario 1b**	**Scenario 2**	**Scenario 3**
High EE Sensitivity	$2,076	$1,859	$1,536	$1,446
Base Case	$2,578	$2,289	$1,934	$1,840
High out-of-state	$2,390	$2,332	$1,848	$1,790
High flexible loads	$2,424	$2,294	$1,965	$1,870
Low portfolio diversity	$2,482	$2,079	$1,623	$1,540
High rooftop PV	$2,542	$2,140	$1,740	$1,660
55% RPS	$3,671	$3,102	$2,543	$2,392
Low cost solar	$2,423	$2,244	$1,949	$1,838

As an industrial ratepayer representative, CLECA supports low-cost results, such as those shown in the high EE sensitivity. Given the statutory imperative for EE in SB 350 (the same legislation also requiring these studies), the study analyses should be re-done to include the high EE as a base case assumption and included in all other sensitivities.

[5] *See* May 24 Presentation, at slide 57 (table showing reduced renewable procurement overall due to higher EE; this leads to lower costs); *see also* Id at slide 56 (graphing differences between the base assumptions and the high EE sensitivity).

[6] This does not include the hand-picked portfolio results for the munis, just the CAISO; See E3 Renewables Portfolio for CAISO SB 350 – Inputs and Results Workpaper.

Equally importantly, Scenario 3 reflects "the *likelihood* of allowing renewable resources located outside of California but within the expanded balancing area to be used to meet California's RPS."[7] The below table is reproduced from the SB 350 workpapers available by request to the CAISO.

Out-of-state Resource accounting	**Scenario 1a**	**Scenario 1b**	**Scenario 2**	**Scenario 3**
OOS share of incremental 33-50% portfolio	33%	23%	34%	58%
OOS share total portfolio	23%	19%	23%	31%

It is not clear that, even with dynamic transfers, so much out-of-state RPS procurement would be able to comply with the RPS PCC. Further, there is no evidence that the legislature is or will be willing to revise the RPS PCC,[8] despite having increased the RPS target to 50%. Because this portfolio of more regional procurement to meet the RPS is not credible or likely, the Scenario 3 results do not appear sound; CLECA recommends focusing on Scenario 2 results as more reasonable than Scenario 3 for this reason. (Scenario 2, however, like Scenario 3, is flawed by the heroic assumption regarding the future ISO footprint; this is discussed more below).

The transmission cost estimates for the out-of-state renewable transmission cost assumptions do not appear comparable, calling their reasonableness into question:

- $50/kW-yr for 1500 MW of transmission capacity for New Mexico wind;
- $129/kW-yr for 3000 MW of transmission capacity for New Mexico wind;
- $88/kW-yr for 2,875 MW of transmission capacity on PacifiCorp's Gateway segments D and F.[9]

[7] Id, at 18.

[8] PCC 1 includes eligible resources directly interconnected to a grid within the CAISO BAA, or dynamically transferred and beginning in 2017, 75% of the RPS requirement must be in this category. PCC2 includes simultaneously purchased energy and Renewable Energy Credits (RECs) from an RPS facility whose delivery is firmed and shaped; 15% may be in this category. PCC3 is for unbundled RECs, and it is limited to 10% of the overall RPS requirement.

[9] May 24 Presentation, at Slide 81 (E3 references the cost data in the October 2015 Technical Appendix: Regional Coordination in the West: Benefits of PacifiCorp and California ISO Integration). The 2015 Technical Appendix states, "In 2024, the development of Energy Gateway Segments D and F is assumed to provide 2,875 MW of incremental wind capacity to the expanded PacifiCorp-ISO footprint. … Energy Gateway Segments D and F support 2,875 MW of Wyoming wind at a real levelized cost of $252 million per year." (2015 Technical Appendix, at 24, 27)

CLECA also continues to question the reasonableness of procuring 500 MW of geothermal in all scenarios; while the CAISO characterizes this "as an investment in minimizing renewable integration issues",[10] given its costs and its baseload nature, procuring 500 MW of geothermal may not be a reasonable investment.

b. The assumed regional market footprint in 2020 and 2030

The 2020 footprint with just PacifiCorp and the current CAISO BAA seems reasonable (and 2020 appears a more feasible "go-live" date than January 1, 2019); an expansion encompassing all other BAAs throughout the WECC except those in Canada, Mexico and the federal power marketing agencies does not seem to us to be a reasonable assumption.

It would be more reasonable to have the 2030 expansion include those BAAs that have expressed interest in joining the EIM and perhaps a sensitivity could include those located in states whose policies are more aligned than not with California's policies. Despite CAISO's prior rejection of this suggestion by stakeholders, it should be re-considered.

c. The electricity system (production simulation) modeling

Slides 105 and 108 show the California Ratepayer impacts in 2030 of approximately 2-3% of retail rates for scenario 2 (approximately $1 billion in savings in 2030) and Scenario 3 (approximately $1.5 billion in savings in 2030).[11] As discussed above, Scenario 3 does not seem probable, and Scenario 2 shares the flawed footprint assumption with scenario 3. In CLECA's view, given inevitable forecast error, Scenario 1b results in comparable California Ratepayer savings in 2030 to Scenario 2. Both Scenarios 1b and 2 result in average California retail rates in 2030 of 19.7 ¢/kWh and 19.4 ¢/kWh, respectively. The difference in total ratepayer dollar savings between Scenario 1b and Scenario 2 is less than a billion dollars (out of a revenue requirement exceeding ~$50 billion).[12]

Further, the curtailment results between Scenario 1b and Scenario 2 are close as well: 2% and 1.6% cost impacts, respectively, in the base case.[13] As the slide deck states, "Higher export capability in Scenarios 1b, 2 and 3 mitigate over-generation conditions and renewable curtailments in California."[14]

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10 Stakeholder Comment and ISO Responses from Feb. 8, 2016 Study Proposal, dated March 18, 2016, at 42.

11 May 24 Presentation, at slides 105 and 108.

12 May 24 Presentation, at slide 109/brattle.com; see also id at slide 110/brattle.com.

13 May 24 Presentation, at slide 45.

14 May 24 Presentation, at slide 160/brattle.com; see also id at slide 110/brattle.com.

CLECA understands the negative bid price floor is currently -$150/MWh, not the -$40/MWh or the $0.MWh in the model, and a negative bid price floor of -$300/MWh has been discussed. Ratepayer savings appear greater with a less-negative price floor (you don't have to pay as much for others to take your power).[15] It remains unclear to CLECA why a $40 negative price floor and a $0 negative price floor were modeled. Regardless, as shown in the graph on slide 161, Scenario 1b mitigates the impact of negative pricing on California ratepayers similarly to the two regionalization scenarios.[16]

d. The reliability benefits and integration of renewable energy resources

The benefits to California ratepayers from the impacts on reliability and integration of renewable energy resources of a more regional ISO will be impacted by the Regional RA policy and the Transmission Access Charge policy. It is difficult to evaluate the reasonableness of the results of the SB 350 analyses without knowing what those policies will be; CLECA appreciates that this concern is understood and recognized, and also appreciates the additional extensions to the schedules for these market structure initiatives. We reiterate that, once governance (a complicated topic) is addressed, the market structure initiatives should be able to be considered on a holistic basis with the SB 350 study results.

In the CPUC's Integrated Resource Planning (IRP) workshop on June 14, 2016, E3 presented its Pathways model, which is a bottom-up, user-defined, set of portfolios that are not optimized. E3's Pathways model looks at how to reduce GHG emissions economy-wide at low/reasonable cost. Notably, as was discussed at the workshop, that E3 model's initial results showed renewable curtailment being successfully addressed in multiple scenarios without regionalization in the context of GHG emission reductions as its primary goal/constraint.

e. The economic analysis

It appears that scenario 1b results in more jobs than scenarios 1a, 2 and 3.[17]

f. **The environmental and environmental justice analysis**

No comment at this time.

[15] May 24 Presentation, at Slide 105/brattle.com.
[16] May 24 Presentation, at Slide 161/brattle.com.
[17] May 25 Presentation, at slide 12 (BEAR); *see also* BEAR Model Results Data, sum rows 58-79 for columns B, C, D, E on BEAR_Results sheet (workpaper available by request to CAISO).

3. Other
Comment: It is still not clear why the "go-live" date for a more regional ISO must be January 1, 2019.[18] SB 350 requires the studies to be finalized and presented with governance changes in mid-2017; this recognizes that the critical analysis, policy debate and development, and viable stakeholder processes take time. CLECA reiterates its concern that, even with the delays in the schedules thus far, the needed time is not being provided.

[18] Stakeholder Comment and ISO Responses from Feb. 8, 2016 Study Proposal, dated March 18, 2016, at 97.