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: No, for several reasons. First, the decision to model the entire Western Interconnection as part of the study process is flawed in several respects. First, the proposal squarely before the CAISO and stakeholder is the addition of PacifiCorp as a Participating Transmission Owner (PTO). No other proposal is presented. Even additional new PTOs, such as PacifiCorp's affiliate company NV Energy, will not result in anything close to a West-wide footprint. As such, the study will not realistically assess the implications of CAISO regional expansion on California consumers, either in the form of benefits or additional costs. Second, significant portions of the grid in the Western Interconnection are owned and operated by the federal government, i.e. the power marketing administrations)the Western Area Power Administration and the Bonneville Power Administration), the Bureau of Reclamation, and the Army Corp of

Engineers. This applies to both generation and high voltage transmission. There are considerable statutory, regulatory, and contractual limitations on the use of federal facilities. It would therefore not be consistent with law, as a limited example, to optimize the grid over a consolidated West-wide Balancing Authority Area, when the use of federal facilities is constrained by the operation of law. Such an assumption presents a false assessment of realistic outcomes, unless it is the asserted belief of the CAISO that federal reclamation law and the Northwest Power Act are going to be rewritten by Congress, and a host of regulatory and commercial changes are going to be numerous agencies and market participants, to enable unfettered use of federal facilities. That assumption is not supportable.

There are other significant pending issues that would appear to affect study outcomes. It is CMUA's understanding that PacifiCorp intends to continue in the Northwest Power Pool Reserve Sharing Group (RSG). It is not clear how that is possible given the plans to consolidate Balancing Authority Areas with the CAISO, and also the completely different operational paradigm reflected in the CAISO unit commitment and "Day Two" market, in contrast to the operation of the RSG. As it relates to study assumptions, reserve sharing requires a commitment to the dedication of identified transmission and associated resources to meet identified events that trigger the reserve sharing obligations. This appears nowhere to be reflected in the study.

Finally, while the statutory language in SB 350 was focused rightly on the impacts to California consumers, to make a meaningful determination of the flow of relative benefits to PacifiCorp and CAISO consumers, it is appropriate for the studies to assess benefits that accrue to other regions in the study. This should be as granular as possible to enable the California Legislature to completely understand the relative benefits in any consideration of regional expansion of the CAISO.

Over all of this, CMUA is making the presumption that these studies assess the impacts of regionalization that are entirely incremental to those which could be derived through the Energy Imbalance Market.

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: No. Transmission assumptions appear to be flawed. First, based on the February 8th discussions CMUA is concerned that inadequate attention is given to the cost implications of transmission to California consumers. Under the initial Transmission Access Charge (TAC) proposal, California consumers potentially stand to bear a significant share of the Gateway projects and other planned interregional projects. This would greatly affect the net benefits to California consumers. Also, it is unclear what is driving certain transmission assumptions. It appears based on the cursory description of these complex modeling efforts, that certain transmission projects that have been evaluated in other existing regional Order No. 1000 processes have been discounted or simply not considered in the RESOLVE model. CMUA is concerned that, as a result, the benefits of identifying the least cost combination of resources and minimizing "over build" in all business as usual (BAU) cases are overstated. In addition, the portfolio's being studied by E3 in this current process are vastly different than the portfolio's studied by E3 in other forums. As such, some explanation of rationale for the differences, including differences in assumptions and outputs is needed. CMUA also is concerned that the study makes unwarranted assumptions regarding current procurement rules, and how regionalization may affect procurement rules in the future. There are several issues here. Currently, the CPUC is approving renewable power purchase agreements from renewable resources highly distant from California's geographic boundaries. The assumption of a Westwide grid affects this issue. An expanded grid that includes only PacifiCorp *may* affect competitive delivery of certain resource areas, but it may not. The bottom line is that a simplistic assumption that resources will be procured that would have not been PCC1 but for ISO regionalization is a simplistic assumption that could drastically overstate the possible benefits of regionalization to California consumers.
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:

No. First, as stated above, prior E3 studies made different assumptions with respect to resource mixes. The differences between those and current study assumptions should be fully explained and vetted with stakeholders. Second, there is no way for stakeholders to ascertain with any degree of certainty that the proposed key assumptions are reasonable. Also, it appears that the models that are being utilized for the SB350 studies do not model the voltage requirements/reliability impacts that will occur as Once Through Cooling units are shut down and incremental resource needs (conventional or renewable) are met by out of state resources transmitted over very long distances.

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:

No. The indicated projections of utility scale solar prices appear to be significantly overstated, which would affect study outcomes. Polling of CMUA members for the purposes of these comments reveals public domain data for utility scale solar purchases ranging from the mid-$30/MWh to roughly $50/MWh.

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:

CMUA cannot comment on the market portfolios of other entities, but comments made by stakeholders at the February 8th stakeholder meeting suggest that the assumptions should be subject to further examination and vetting with stakeholders. It appears that there are considerable amounts of renewables that are not now under contract. Also, based on those discussions it appears that the IOUs have procurement headroom in PCC 2 and 3. Further, the stay of the Clean Power Plan (CPP) may slow demand for renewables in other parts of the West. The overall analysis and study process would benefit from greater transparency and disclosure of all of the major and minor assumptions included in the modeling efforts. Even beyond that, it is unclear whether smaller retail sellers in California, like CMUA members, will be able to take advantage of large scale solar thousands of miles from their load service areas.

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: See Answer 2, regarding transmission assumptions.
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: Yes. First, there does not appear to be adequate assessment of potential impacts on California due to exposure to significantly higher transmission costs. This is especially critical since, particularly under CAISO's initial "Transmission Access Charge Options" proposal, California consumers are on the hook for significant portions of new high voltage transmission facilities. CMUA presumes that transmission choices will affect both the overall benefits and also the potential for cost shifting between sub-regions.
8. Are the methodology and assumptions to estimate the potential impact on California ratepayers reasonable? If not, please explain.
Comment: No. See above responses. CMUA urges the CAISO to adopt a process that runs additional sensitivity analyses that include both quantitative and qualitative assessments.
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: No. The CAISO should take an incremental approach that models a PacifiCorp/CAISO footprint, for the reasons stated above. There is no Westwide CAISO proposal on the table. Further, there are substantial restrictions on the optimization of certain generation and transmission assets. A Westwide assumption is not reasonable.

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: CMUA has limited comments on this issue. CMUA would assume that the recent stay of the CPP highlights the need to have several sensitivity analyses in this process so the results are not overly dependent on one set of assumptions.
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: CMUA's concerns regarding the data are generally outlined above.

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: CMUA has no comment on this matter at this time, other than to note that the reasonableness of this analysis will be dependent upon the reasonableness of the underlying grid studies.
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: CMUA has no comment 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: CMUA has no comment 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: CMUA has no comment 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:

With respect to this question, CMUA notes that we have raised significant questions and concerns with respect to the assumptions as to what transmission investments are made in various planned scenarios. As such, we expect that to have an impact on environmental assessments. Overall, there appears to be so little information available for review and the analysis is so poorly outlined that it is difficult to make an intelligent suggestion on whether the environmental analysis indicators are sufficient or to recommend additional ones.

17. Other

Comment:

The stakes of this process are extraordinarily high. Based upon the schedule and process set forth in the ISO's materials, it seems unlikely that the ISO is planning an iterative study process whereby model runs are vetted with stakeholders and input can be provided, comments received, and the study work product improved. Indeed, it appears likely that certain study assumptions, such as the Westwide study as opposed to modeling the proposed PacifiCorp and CAISO footprint, may driven by the availability of existing data sets through prior study work. CMUA is forced to conclude that this process may be driven by an artificial timeline that seeks to present proposals on governance in the first half of this year. It borders on unconscionable that this crucial process, which is rushed and poorly considered, undergirds some of the most important market policy decisions California has made in two decades. That such an important and complex policy discussion is given a dozen weeks or so to resolve, and that the reason given is to point to the regulatory preferences and schedule of one of the out-of-state proponents, fails on its face the requirements set by the legislature in SB 350.