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 May 23, 2016, presentations May 24-25, 2016, and additional data released as of June 10, 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?
Comments: CDWR appreciates CAISO's efforts to evaluate potential impacts of the proposed regional market to California ratepayers in accordance with SB 350's legislative mandate. As the largest single user of electricity in California, CDWR has a particular interest in understanding financial and other implications of the proposed regionalization to CDWR's ability to continue delivering affordable water to millions of California residents and agricultural users. CDWR seeks clarification on the following aspects of the preliminary SB 350 Study Results: 1. In SB 350 studies, Scenario 1a serves as the baseline scenario for year 2030. This scenario assumes no changes to the current CAISO footprint and also assumes that renewable energy procurement will continue to be obtained largely from in-state resources. During the May 24-25 workshop, the study authors suggested that certain benefits of the EIM market had been accounted for in Scenario 1a. However, neither the PowerPoint presentation for the workshop nor the data released by CAISO in support of SB 350 studies appear to contain a clear explanation as to what assumptions related to the EIM and its benefits were used for Scenario 1a. In particular, it is not clear what entities, including PMAs, were assumed to be participating in the EIM market in 2030 under Scenario 1a. Did the study authors assume that the EIM footprint in 2030 will remain the same as it currently exists, or does Scenario 1a assume a reasonable expansion of the EIM footprint by 2030? CDWR believes that the studies should assume that, absent regionalization, EIM's 2030 footprint (and therefore associated benefits) would be larger than the current EIM footprint. In assessing the benefits of the proposed regional market, it would be helpful for CDWR to see a comparison between regional Scenarios 2 and 3 and a 2030 "non-regional" scenario that includes all balancing authorities in the U.S. WECC participating in the 2030 EIM. CDWR believes that such a comparison would allow the stakeholders to understand the separate benefits of regionalization that may not be achieved by continuing EIM development. 2. It is not clear whether and to what extent potential changes in TAC rates to California customers have been accounted for in the SB 350 studies. As the largest single user of electricity in California, CDWR sees firsthand the impact of the recent extreme increases in transmission access charges. These increases

impact CDWR's mission to develop and deliver affordable water to more than 24 million Californians who rely on CDWR for part of their water supply, and to a large part of the Central Valley agricultural lands. As CDWR stated in recently submitted comments on the May 20, 2016 Revised Straw Proposal for TAC Options, additional costs that are not fairly allocated based on benefits are of great concern to CDWR.

As far as CDWR understands from the discussion during the May 24-25 workshop, the study authors assumed no increases in TAC costs for California customers under any of the regional scenarios analyzed by the SB 350 studies. As CAISO explained, changes in TAC and existing wheeling revenues and costs would offset each other, therefore resulting in no overall increases in TAC costs for California. CDWR has concerns about the validity of this assumption.

As currently proposed in the Revised Straw Proposal on TAC, California customers will continue bearing the full financial responsibility for the existing transmission facilities within the current CAISO footprint and will also be responsible for at least a portion of new regional facilities planned and approved under an integrated transmission planning process. Given that Scenario 3 would require significant investments in new transmission infrastructure to allow renewable energy procurement from outside of California, it is reasonable to assume that TAC costs for California customers would increase under Scenario 3. Note that such infrastructure would include not only infrastructure needed to deliver, e.g., WY and NM wind generation under contract to California, but also to deliver the 5000 MW of wind generation assumed built to supply contracts beyond RPS requirements for non-California utilities. While it is true that current purchases of out-of-state resources (or exports of in-state resources) are subject to wheeling charges, those charges are borne by the exporter/importer that is the beneficiary of the transaction and therefore do not necessarily translate into increased costs for all California consumers. TAC costs, unlike wheeling charges, are currently socialized, and burden those that don't benefit. CDWR is quite certain that even transmission that is built for the primary purpose of delivering the output of new generators will carry some flows from other sources, and, depending on the TAC methodology ultimately adopted, could be included in a socialized TAC, of which California ratepayers will pay a share, whether or not any of them contract with the new generation.

Further, the Revised Straw Proposal on TAC does not contain a methodology for allocating the costs of new regional transmission facilities approved under an integrated planning process, but rather leaves this task to the future body of state regulators. Without such a methodology, CAISO's assumptions regarding regional TAC costs are difficult to verify and rely on.

3. It is unclear what assumptions were made concerning future in-state wholesale demand response or distributed generation for Scenario 1a in 2030. In response to CDWR's February19 comments, the CAISO responded that existing capability will continue. This assumption does not seem to include ongoing and additional market changes that could greatly influence in-state demand response capability or development between now and 2020 (for example, SWP wholesale demand response provided by Participating Load), nor does it detail these potential changes in 2030. Thousands of MW's in IOU demand response programs are under review by the CPUC that may be bid as Proxy Demand Resource (PDR) or Non-Generator Resource into the wholesale market, and further influenced by CAISO's recent proposal to enhance these products by allowing real-time load bids to increase consumption of energy.

CDWR's additional comments are provided below. As stated in previously submitted comments on various regionalization issues, CDWR remains concerned that the aggressive timeline established by CAISO for the various regionalization initiatives leaves the stakeholders with insufficient time to fully understand and evaluate the proposed changes.

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

No comment at this time.

b. The assumed regional market footprint in 2020 and 2030

Scenarios 2 and 3 are based on the assumption that all balancing areas in the U.S. WECC except the Federal Power Marketing Agencies would join the regional ISO by 2030. This assumption represents an extreme case scenario; therefore, it would be helpful to see an analysis of a more conservative scenario including only PacifiCorp and/or only part of the western balancing areas joining the regional ISO by 2030. Having a PacifiCorp-only analysis would be particularly valuable, to the extent that these analyses are intended to be used to evaluate the consequences if

PacifiCorp joins the CAISO.

c. The electricity system (production simulation) modeling

Scenario 1b represents business as usual with an assumed maximum export capacity increased to 8000 MW (rather than 2000 MW assumed for Scenario 1a). Scenarios 2 and 3 also are based on an 8000 MW export capability. Unfortunately, Scenario 1b is evaluated only as a sensitivity analysis and not one of the fully analyzed scenarios. In particular, none of the published non-confidential analysis shows the job impacts in California of Scenario 1b. CDWR believes that a comprehensive comparison of Scenario 1b to Scenarios 2 and 3 would allow an evaluation of the effects of regionalization, rather than benefits that can be achieved primarily through greater CAISO export capability (even if CAISO's footprint does not change).

d. The reliability benefits and integration of renewable energy resources

CDWR would like to point out that one of CAISO's contractors, E3, recently argued in analysis done for the CPUC that greenhouse gas reduction efforts outside of the electrical sector (e.g., in the building sector and the transportation sector) are likely to rely on electrification. That E3 analysis, which was presented during the June 14, 2016 CPUC IRP Workshop in San Francisco, concluded that the resulting increase in electrical load, much of it flexible, will reduce the frequency of renewable curtailment. As a consequence, the shift of the new renewable resource mix towards out-of-state wind seen in Scenario 3 may be directed at solving a problem which will not actually exist or which will be less significant than assumed in SB 350 studies. It would be helpful for CDWR if SB 350 studies also considered the impacts of electrification due to GHG reduction efforts outside the electricity sector (at the levels E3 has already modeled for the CPUC) and the potential impacts of such electrification on loads and load shapes, and hence on the optimum RPS procurement mix as determined using E3's RESOLVE model.

e. The economic analysis

CDWR has the following comments and concerns regarding the economic analysis:

1. As CDWR understands, SB 350 studies are based on the assumption

that the first joining entity (PacifiCorp) and all subsequently joining entities will bear their fair share of costs associated with regionalization. CDWR is concerned that the actual benefits to California customers would be lower than anticipated in the studies if the CAISO can enter into bilateral agreements offering incentives for new PTOs to join the regional entity.

2. The studies conclude that GMC rates will be significantly lowered as a result of regionalization. It is not clear what assumptions were made by the studies' authors with respect to the governance structure of the regional ISO that would be funded by GMC. Pursuant to the Proposed Principles for Governance of a Regional ISO released on June 10, 2016, the CAISO is considering a governance scheme consisting of an ISO Board, a separate body of state regulators, certain stakeholder committees, and also creation of a funding mechanism to facilitate participation by various advocacy groups. This proposed structure is more complex (and therefore likely more expensive to operate) than the current CAISO governance structure. It is not clear whether the additional layers of regionalized ISO governance contemplated in CAISO's June 10th proposal were taken into consideration in analyzing potential GMC impacts to the California customers. Further, the studies assume PacifiCorp load will be included in calculating GMC rate(s), but PacifiCorp has recently advocated not to pay GMC or to be phased into paying the GMC, which could greatly impact the results of this study and negatively affect California ratepayers.

f. The environmental and environmental justice analysis

No comment at this time.

3. Other

Comment:

No comment at this time.