

## Stakeholder Comments Template

### Subject: Regional Resource Adequacy Initiative – Load Forecasting Working Group, June 22, 2016

Submitted by	Company	Date Submitted
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This template has been created for submission of stakeholder comments on Load Forecasting Working Group for the Regional Resource Adequacy initiative that was held on June 22, 2016. Upon completion of this template, please submit it to [initiativecomments@caiso.com](mailto:initiativecomments@caiso.com). Submissions are requested by close of business on **July 12, 2016**.

Please provide feedback on the Regional RA Load Forecasting Working Group:

#### 1. Current Load Forecasting Capabilities and Practices:

- a. Please provide comments and any additional information that you wish to share in order to describe your organization's current load forecasting practices and capabilities in order for the ISO and other stakeholders to understand the differences in current practices amongst LSEs.

CDWR's load forecasting practice for Resource Adequacy starts with establishing a frequency based estimate of a median case hydrology and includes the use of a monthly State Water Project (SWP) network model. Initial estimates of the power generation and load of 30 water facilities within a network of 700 miles of canals and pipes and 8 SWP reservoirs are calculated. As the water year evolves and more information becomes available on anticipated water deliveries, these initial estimates of generation and load get updated. Accordingly, the distribution of water during the year and within the SWP network is based on continuously updated hydrology and a corresponding change in water allocations (until May of each water year). Moreover, CDWR's load and generation estimates for the SWP are also subject to other variable

factors such as current reservoir storage levels and reservoir storage strategies, environmental regulatory restrictions, instream flow requirements, flood control requirements, coordinated operations with the U.S. Bureau of Reclamation, estimated municipal and agricultural water demands, water transfers, conveyance structural limitations, and typical operational patterns, as well as maintenance and outage limitations. The unit outage limitations, water demands, and updated hydrology can all be components that fluctuate significantly, resulting in changes to CDWR's power estimates and thus dictating the need for reassessment and evaluation of CDWR's load forecast on a monthly basis.

- b. Do you believe that your organization could support an hourly load forecasting proposal as previously described in the ISO's Second Revised Straw Proposal?

CDWR cannot support such an hourly load forecasting proposal, if it does not allow for monthly updates for loads that cannot be effectively forecast so far in advance and for which historical patterns are not a reliable indication of future performance. CDWR's current Resource Adequacy forecasting is based on a monthly model. As explained above, CDWR updates its forecasts multiple times during the water year as the hydrology conditions evolve during the precipitation season. Given that SWP's power and water delivery operations depend heavily on varying hydrological conditions and a range of other factors, hourly forecasting would not be feasible for the SWP. Furthermore, such a forecast would be largely meaningless since CDWR's actual hourly schedules can be highly variable. Hot temperatures in the summer, for example, will drive the water demands higher and thus change CDWR's load shaping to manage increased water demands in the Central Valley and Southern California. As another example, when solar generation peaks during days of mild weather, CDWR is able to adjust its load schedules to help the CAISO to mitigate solar over-generation conditions.

## 2. Coincident Peak Forecasting Methodology Options

If the ISO proposed to require LSE specific forecasts for only the 12 monthly peaks, there would be a need to adjust individual forecasts to determine the coincidence peak contribution in order to capture the benefits of load diversity. In order to determine the annual and monthly RA requirements for individual LSEs and recognize the benefit of load diversity in an expanded BAA the ISO is considering some options and requests stakeholder feedback on the following options:

- a. Option 1) Allowing individual LSEs (or local/state forecasting agencies, including the CEC for California LSEs) to have the ability to provide both their Non Coincident Forecasts (no coincidence adjustment) and Coincident Peak Forecasts to the ISO (no ISO specified Coincidence Factor methodology, LSEs can utilize coincidence forecast calculation method suited for their needs individually, and this option is still subject to ISO coincidence method guidelines that would be provided, as well as ISO review).

- i. Please indicate if your organization supports or opposes an approach of providing flexibility in the coincidence forecasting methodologies.

CDWR supports providing LSEs with flexibility in establishing forecasting methodologies. As explained above, CDWR's loads are subject to varying hydrology, demand, and capacities, none of which factors are necessarily similar from one year to the next. Therefore, it is essential for CDWR to retain the flexibility in the coincidence forecasting methodologies.

- ii. Also, if your organization would support or oppose this approach, please describe why this option is preferable or not to your organization.

CDWR believes that allowing flexibility in providing forecasts to the ISO would be consistent with CDWR's operational needs and abilities, and would also be consistent with CDWR's current forecasting processes, which have been proven to work over the last few years. Further, such flexibility would also allow CDWR to provide the ISO with more accurate forecasts that would be reflective of load requirements unique to CDWR operations. As already stated, many variables contribute to CDWR's load forecast, and thus continuous updates are needed as water availability and weather driven demand change. As discussed below in response to question 2.c, CDWR believes Option 1 could be workable provided that it is modified to allow LSEs (or at least those who have substantial load components that are difficult to forecast accurately so far in advance) to update their forecasted demand for the monthly RA planning process.

- b. Option 2) Requiring individual LSEs (or local/state forecasting agencies, including the CEC for California LSEs) to have the ability to only provide their Non Coincident Forecasts (no coincidence adjustment) and the ISO would apply a specified Coincidence Factor formula to all individual LSE load forecast submittals uniformly in order to determine the Coincidence Peak forecasts for individual LSEs (ISO

specified Coincident Factor methodology with actual formula to be determined through this stakeholder process).

- i. Please indicate if your organization supports or opposes an approach of the ISO utilizing a predetermined coincidence factor methodology.

CDWR opposes this approach because historical trends are generally not representative of CDWR's future operations. For example, for CDWR, historical coincident factor (CF) can vary in the range below 0.5% to above 2% for the same month for different years, and coincident load can vary significantly for the same month (in the order of multiples of the smallest coincident peak load). CAISO's proposed methodology to calculate CFs requires historical data input, and for CDWR those values vary widely. Applying widely varying coincident peak factors to CDWR forecasted non-coincident peak load may not represent the actual operations and thus would be of limited value.

- ii. Also, if your organization would support or oppose this approach, please describe why this option is preferable or not to your organization.

See response 2.b.i above.

- c. If your organization does not support any of these potential options and believes there are other possible proposals that the ISO should consider please provide a detailed description of an alternative approach.

CDWR prefers Option 1 with an additional provision that would allow CDWR to update (on a monthly basis) its forecasted demand for the monthly RA planning process. For the reasons stated in section 1, CDWR needs to reassess its load forecast on a monthly basis. CDWR's hourly forecasts would likely be meaningless due to variability of CDWR's load. Therefore, CDWR believes that CAISO should allow LSEs (or at least those who have substantial load components that are difficult to forecast accurately so far in advance) to make system coincident peak forecasts on both an annual and a monthly basis for RA planning purposes. Therefore, one single demand forecast number as the coincident peak forecast for the month than hourly forecast should be adopted for RA planning purposes.

3. Please provide any additional comments on the load forecasting working group and proposal.

No other comments at this time.