



## Stakeholder Comment Template

### CAISO Integration of Renewable Resources (IRRP)

#### High-Level Program Plan

**Organization:** Resero Consulting

**Date Submitted:** May 1, 2008

**Organization Representative:** Jack Ellis

**Contact Number:** 650-948-0938

**Industry Segment:** (Regulatory Agency, Load Serving Entity, Generator, Marketer, Municipal Utility, Participating Transmission Owner, Non-Participating Transmission Owner, Association) Association

Instructions: The CAISO is requesting written comments on the document entitled Integration of Renewable Resources Program (IRRP) High-Level Program Plan. This template is offered as a guide for entities to submit comments.

All documents related to the CAISO's IRRP Program Plan are posted on the CAISO Website at the following link: <http://www.caiso.com/1c51/1c51c7946a480.html>

Upon completion of this template please submit (in MS Word) to Jim Blatchford at [jblatchford@caiso.com](mailto:jblatchford@caiso.com). Submissions are requested by close of business on **Friday April 25, 2008**.

***The CAISO has identified five main program Tracks for organizing the IRRP effort. Please comment whether the identified five tracks are appropriate and capture the scope of primary activities and tasks necessary to successfully integrate renewable resources.***

We suggest that the tracks be ordered somewhat differently. While the CAISO's November, 2007 report ("Report") provides many useful insights, it did not address a number of policy and market design questions that should be dealt with in this initiative. Perhaps one of the most important questions that should be addressed early in the process is what market-based products and services the CAISO needs in order to accommodate increasing amounts of intermittent resources, and we would suggest this track be at the head of the list rather than near the bottom

We suggest the tracks be ordered in the following sequence:

1. Assess and Develop Market Products
2. Identify and Develop Recommended Changes to Large Generator Interconnection and Transmission Planning Processes
3. Identify and Develop Recommended CPUC Rule Changes, CAISO Tariff Changes and Changes to Other Regional Agreements and Operating Practices



4. Perform Required Studies
5. Develop Operational Tools

***The CAISO has identified thirteen specific projects under the IRRP. Please provide comment on whether the identified fourteen projects are appropriate and whether there are other projects that should be included as part of the IRRP.***

One important task that should be added is a project to develop tools and an analytical framework for periodically assessing the required levels of the various market products and services (likely ancillary services) that support operational integration of intermittent resources. The Report estimated amounts of existing ancillary services that would be needed based on forecast amounts of intermittent resources at specific points in time. Going forward, the CAISO and stakeholders need updated estimates of the requirements for ancillary services and related, market-based products that reflect amounts of intermittent resources that have been completed and are operating rather than the CAISO's forecasts of likely levels of intermittent resources. This tool would be different from the Ramp Forecasting tool described under Project #2.

We also think it would be helpful to develop a diagram that shows the dependencies among projects so that stakeholders can more easily discuss these dependencies and so that individual projects can be sequenced correctly. For example, it will be difficult to advise the CPUC about changes to the Resource Adequacy (RA) requirements until appropriate market products and mechanisms have been developed, stakeholders have had an opportunity to explore the extent to which existing generating resource technologies can provide those products cost-effectively and until stakeholders and the CAISO understand the extent, if any, to which RA requirements should include specific operationally flexible attributes.

While we agree that the work products outlined in Project #10 (Analyze Benefits of Fast Regulation and Wind Integration) are worthwhile, it's not clear how they fit in with Task 9 from the Report, which addresses modeling of Wind generation facilities. Project #10 would appear to be more closely related to generating facilities other than wind. Regarding item 2 under Project #10, perhaps another way of addressing this issue is by attempting to assess the price at which resources would be willing to provide required amounts of dispatch flexibility on the spectrum of operational time scales ranging from sub-hourly to several hours.

We have several suggestions Regarding Project #11. First, it might be useful to determine the extent to which existing storage facilities at Helms, San Luis, Eastwood and other locations could be productively employed to store surplus off-peak generation, and to assess the circumstances under which additional storage would make economic sense. Second, although the Report made a number of recommendations regarding the need for additional amounts of conventional supply resources with operationally flexible dispatch capability, it might be prudent to first evaluate whether existing resources and resources currently under construction could provide the same amounts of operational flexibility at lower overall cost. This would necessarily involve making some assumptions about the prices for ancillary services, the incremental capital costs associated with operational flexibility in new resources, the additional costs that would be incurred if existing resources are operated more aggressively than allowed by their original design, and cost recovery mechanisms if not market-based.

Many of the projects identified in the High Level Program Plan can be conducted in parallel. Transmission studies and initial design of certain operator displays don't necessarily depend on other work elements, but we think it is very important to settle some of the basic issues around technical requirements and fully explore the extent to which they can be cost-effectively addressed using market based solutions that promote competition and encourage creative approaches before writing rules and tariffs.



***The CAISO is contemplating creating stakeholder Work Groups to support specific activities that are to be completed under the IRRP. Please indicate the projects for which a Work Group should be created and whether your company would be willing to lead and participate in such a Work Group.***

We are still trying to determine the extent of Resero Consulting's involvement in the working groups, though it is likely we will want to participate in all of them. Resero may be interested in leading the work groups that address market design issues and we expect we will be able to make a commitment one way or the other by May 14<sup>th</sup>.

***The CAISO has identified a number of critical dependencies between the IRRP and other CAISO and State initiatives (e.g., Green House Gas Emissions Reduction, Once Through Cooling Regulations, etc.). Please identify any other critical dependencies.***

We would suggest that any assumptions regarding GHG be made consistent with the assumptions used by the CPUC, CARB and WCI. Assumptions about generation retirements, reduced ratings and other impacts caused by a permanent ban on Once-Through Cooling (OTC) should also be consistent with the assumptions used in the various GHG analyses. Finally, we would note that Demand Response has a potentially important role to play in this initiative, and the extent of any participation by responsive load will depend in large measure on how well the CAISO's demand for the various ancillary services it needs to procure is reflected in the market prices for those services.