

## **SDG&E's comments on the CAISO's Discussion and Scoping Paper on Renewable Integration Phase 2**

SDG&E believes the CAISO is moving in the right direction with its scoping paper on Renewable Integration. Specifically, we appreciate CAISO's efforts to develop a comprehensive listing of potential market design changes and enhancements that merit serious consideration and have the potential to be implemented over the next several years. By taking a holistic, long-term approach that considers the interactions between distinct market elements and rules, the roadmap provides a logical context from which to evaluate proposed market design changes. Likewise, having a broad overview and a roadmap, rather than just attacking each issue separately should ensure that the results fit together and don't create unintended consequences. The CAISO's plan to create the Roadmap by the end of 2011 and to begin work on specific market changes for adoption by early in 2012 seems to be an appropriate way to proceed.

SDG&E believes the CAISO's list of "Candidate Elements" is comprehensive enough to cover a wide range of design changes and appropriately considers areas within CAISO markets that could be expanded when considering a higher level of penetration of renewable integration resources in its markets. However, SDG&E would like to remind the CAISO and other market participants that additional elements will likely be adopted through this process and therefore, CAISO should not conclude that it has identified a complete list of integration requirements. For example, we should expect that additional items will most certainly arise once results are published from the 20% and 33% Variable Renewable Integration studies. Also, some assumptions we rely on today with respect to renewable integration may change over time. As an example, over the past few months two large thermal solar projects were modified to be photovoltaic projects; given the different operating characteristics of the these differing types of plants, this may require adjustments to the results of the 33% renewable integration study and change the requirements for new products. Therefore the CAISO should determine an ongoing process whereby the integration plan can be modified as needed.

SDG&E specifically supports two of the suggested integration elements because of their importance in ensuring the proper functioning of the CAISO markets in the long-term. These are the development of a capacity market and the proper allocation of the costs of intermittency to those resources causing the costs. SDG&E recognizes that these are likely to be among the most contentious issues and will therefore require an extensive discussion by CAISO and stakeholders. Further, there are other items on the list that must be tackled sequentially in order to ensure successful implementation in the CAISO markets.

SDG&E, like the CAISO, is very concerned that the loss of Once Through Cooling plants may be an issue when considering renewable integration, especially considering that the results from the 20% Renewable Integration Study indicate that natural gas generators can expect to see their energy revenues decrease as more renewable come on line. In language from the capacity market discussion, the "Missing Money" (the difference between what generators need to continue operating and what they receive from the energy markets) is likely to increase, which will decrease the likelihood that these

resources will continue to operate. With respect to cost allocation for integration costs, it is critical that all costs associated with integrating each resource be quantified and applied to that individual resource in order for appropriate price signals to be generated by resource when CAISO performs its least cost dispatch.

Lastly, SDG&E is concerned that to the extent that the loss of Once Through Cooling plants requires the procurement of additional local resources in order to meet local needs, as opposed to broader needs, that these costs be appropriately borne by those entities that benefit from those local resources.