

RIR Assumptions - - Questions posed during the
February 5, 2008 Stakeholder Meeting
February 11, 2008

Question 1: Who is going to do the production costing simulations?

Answer 1: Plexos Solutions will be a subcontractor to DPC and assist in completing the production costing simulations.

Question 2: How are we going to pick new renewable resource locations?

Answer 2: The selection of new renewable locations for the scenarios of various combinations of renewable resources will be selected by various ways, but in general we will use the following approach. First, the existing renewable resources and the amount of renewable energy from these resources will be determined. Second, the utilities will be requested to provide information on renewable resources that have been contracted by January 2008. These resources could be contracted, under construction, or approved by the appropriate authorizing body or agency. Third, additional potential renewable resource location will be identified using the renewable resource list from the Energy Commission Intermittency Analysis Project (IAP). Fourth, further additional potential renewable resource locations will be identified and selected as needed by reviewing the CAISO queue list for renewable locations within the CAISO region. Finally, the out of state renewable locations will be selected from other reports and studies by the Energy Commission and consultants. Each renewable resource scenario can be made up of a different mix of technology types, which would total to the same amount of energy over the year. The system Resource Adequacy Requirements will be respected in each renewable resource scenario. Any non-renewable resources needed to achieve Resource Adequacy will be recorded for each scenario. Because the RIR Project will consider scenarios of various combinations of renewable resources, in the end, all resource locations will be considered in one scenario or another.

Question 3: Will renewable locations drive new transmission, or will ability to use existing transmission (with slight upgrades) drive renewables, or will there be an iterative economic analysis with IRP type optimal gen+trans solution?

Answer 3: The ability to use existing transmission is a consideration in the RIR Project study, as in all transmission planning studies. The focus of the RIR Project study, however, is on transmission needs in northern California. Transmission need is driven by locations and amounts of resources and loads within the study area. As such, the study does not "optimize" the locations and amounts of the renewable resources. Further, the selection of new renewable locations for the scenarios of various combinations of renewable resources will be as described in Answer 3; thus, while some scenarios could select resource locations considering the impact of existing transmission (with slight upgrades), there is no requirement that all scenarios do so.

The objective of this study is the identification of the "least regrets" transmission reinforcements that are needed regardless of the exact location and magnitude of the renewable resource capacity in each zone. In other words, there could be multiple zones that would use the same or similar transmission expansion. So for the purpose of identifying "least regrets" transmission

reinforcements, it would not necessarily matter in which zone the renewables are eventually developed and exported from.

The analysis will be completed in several steps. Once the potential renewable locations are determined, these locations will be placed in renewable zones. The number of zones will be driven by the information developed in the process outlined in the Answer to Question 2 above. The analysis of transmission requirements will follow the methodologies developed in the SVA and IAP. The potential transmission problems will be identified for each resource scenario (which consists of a combination of resources in multiple zones), and the utilities would develop potential solutions. The potential transmission solutions can then be tested against the resource scenarios, and eventually ranked according to the number of scenarios in which the same solutions appear.

Question 4: What about solar's magnitude?

Answer 4: Solar resources' magnitude will be calculated the same way the magnitudes of all resource types are calculated. The capacity of a renewable technology is calculated from the associated energy using the associated expected capacity factor and expected availability under the condition modeled in the base case. The energy that can be available will be based on research performed by the CEC and published in CEC reports such as the SVA and the IAP, modified as necessary with updates from the CEC.

Question 5: Is the selection of solar projects North of Path 26 centric in this study?

Answer 5: No, like all other renewable energy, the locations and magnitudes are selected based on considerations in the Answer to Question 2.