

PG&E Comments on the RETI Phase 1B Draft Report
November 19, 2008

PG&E supports the RETI process in its efforts to increase the transmission access to areas with promising renewable generation development potential. The screening process to date summarized in this report is a first step at a high level analysis of potential development areas. This Phase 1B report reflects a useful snapshot in a dynamic process as the Competitive Renewable Energy Zones (CREZ) continue to be refined to reflect the competitive markets and environmental limitations. However, it is important to recognize the limitations of the work done so far.

As the RETI moves into Phase 2, PG&E offers the following policy level observations about the limitations of the Phase 1B Report and how it will be used in the future:

1. The CREZ Does Not Accurately Reflect Actual Commercial Development Of Renewables Resources.

PG&E engages in a commercial process including annual renewable resource solicitations and bilateral negotiations with third party developers that have resulted in the execution of a number of large Power Purchase Agreements. While the location of these projects spans the length of the west coast, larger projects with which PG&E has contracted are located in the Mohave Mountain Pass and Pisgah areas, Johnson Valley, Carrizo Plains, Coalinga, Solano County and the Pacific Northwest.

These PPAs are generally reflective of the competitive projects that the market is bringing forward to PG&E, yet none of these projects are in the areas that scored well in the RETI screening process. Additionally, some of the highest ranking CREZs (Fairmont and Victorville A) have little or no developer identified projects and consist almost entirely of “proxy” projects. This disconnect between the commercial market and the RETI findings suggests that there are factors that influence renewable resource development that are not captured in the RETI analyses.

2. The Quantities of Renewable Generation In the CREZs Are Overstated

Based on factors such as wind data, solar insolation, water availability, etc, the RETI analyses estimate the potential renewable energy that may be available within a CREZ. These estimates should be viewed as theoretical values and the real potential is likely to be much less. Constraints such as fractured land ownership and BLM development caps are likely to significantly limit the development of renewable resources in some of the higher ranking CREZs. Additionally, the analyses did not consider how the cumulative impacts of such large concentrated development may impact the local environment and therefore limit the potential development of renewable resources in an area. Therefore the theoretical CREZ energy potential will need to be in excess of any net short calculation.

The Phase 1B report also identifies a very large potential for distributed PV in California. While PG&E is encouraged by this resource option, the report should note that the estimated quantities have not incorporated a detailed assessment of the ability of the electric system to accept these resources. For example, in areas where there are large parcels of undeveloped land suitable for 20-40 MW

PV installations many of the PG&E substations are small, with a capacity much less than this amount. Therefore the total distributed PV potential is likely substantially less than the estimates suggested in the Phase 1B report.

3. The CREZs Are Overly Clustered And Should Reflect Greater Geographic Diversity for Reliability and System Operability

The majority of the higher ranking CREZs are located in a relatively small area generally around Edwards AFB (Tehachapi, Fairmont, Kramer, Victorville A). These areas account for approximately 24,000 MW of the 26,000 MW of the CREZs that have superior economic and environmental ratings. Such high geographic concentration of renewable resources raises both reliability and system operability concerns.

There is expected to be limited transmission corridors potentially available to access the region generally around Edwards AFB. Concentrating the State's renewable resources in this area and moving the energy through a few high capacity corridors creates a risk for a major disruption in the State's power supply due to a major event such as fire that could impact either the resources or the transmission corridors. Greater geographic diversity of resources would reduce this risk.

There has been much research into the challenges to the operability of the electric system that may be created by a high penetration of intermittent renewable resources.¹ Among the findings of these reports is the importance of geographic diversity of intermittent resource to help mitigate the cumulative impact of the resource variability, such as system ramping and operating reserves.

4. Out of State (OOS) CREZs Need to be Fully Considered

Out-of-state resources account for a significant amount of the utilities' current signed contracts, and are anticipated to continue to play an important role in meeting California's RPS objectives. While the report identifies potential quantities and cost of OOS resources, they are omitted from both the CREZ tabular and graphical summaries.

The quantity of economic OOS resources is also likely underestimated in the report. For example, British Columbia and the Pacific Northwest have a relatively low Weighted Average Rank Cost, yet the report limits the capacity from these resources. Additionally, OOS resources can be expected to be even more attractive to the extent that the quantities from the in-state CREZs are adjusted as discussed above.

5. The CREZs Should Be Updated in Phase 2 To Reflect Current Market And Economic Conditions And Should Not Be Considered Binding Precedents For Purposes Of the Existing Transmission Planning and Resource Siting Processes.

The findings of this report have been characterized in various public meetings and conference calls as being a "coarse screen" based upon high level, often generic, assumptions. Therefore the findings of this of the Phase 1B Report

¹ For example, the CEC's Intermittency Analysis Project, July 2007 (CEC-500-2007-081)

should not be considered binding or exclusionary for purposes of the CPUC's, CEC's or ISO's planning or siting processes. The Phase 1B report should clarify that parties may identify resource and transmission opportunities through the existing, more detailed study process for which parties may subsequently file applications to facilitate renewable resource development with the appropriate permitting authorities.

Moreover, the CREZs to be considered in Phase 2 should not be unduly limited by the Phase 1 results. As the uncertainty analysis shows, relatively modest changes in assumptions can have significant impacts on the competitiveness of any particular CREZ. Given this variability and challenges in developing renewable resources, the ultimate transmission opportunities that emerge from RETI need to be flexible so that they can adjust to new information and accommodate what the market ultimately brings forward. Several processes are moving forward in parallel with RETI; the CAISO is performing its serial and transitional group generation interconnection planning, the LSEs are conducting RFOs and executing contracts for renewable resources, the Western REZ is conducting similar analyses, and multiple stakeholders are participating in the Northern California Regional Integration of Renewables Study. This information should be used to inform the RETI Phase 2 activities.

6. The Environmental Assessment Section Should Be Clarified To State That It Is A High Level Planning Study And Is Not Intended To Replace Or Preclude Site Specific Environmental Studies.

The Environmental Assessment section should contain more specific language regarding the purpose of this assessment and its relationship to current and future projects.

The Economic portion of the document (Section 3-4) states that the purpose of the exclusions is for conceptual planning, and is not site specific: "The exclusions have simply been applied for the purposes of determining potential developable resources and performing high-level transmission planning. It is very important to emphasize that the purposes of these exclusions [meaning economic] is for conceptual transmission planning and not to recommend specific project siting and land use decisions. Conversely, candidate lands shown as "open" for development should not necessarily be assumed to be appropriate for siting plants either. All projects will still need to proceed through all local, state, and federal permitting processes; RETI does not supersede these authorities."

Similarly, this RETI environmental assessment should identify that the RETI CREZ development and analysis is intended as a high-level planning study and not intended to replace site-specific studies; nor is this study intended to preclude an applicant from applying for a project outside the designated CREZ zones or in lands designated as exclusion or avoidance. For example, the preamble to the draft WWEC PEIS had similar language when it stated, on page 1-11:

The Agencies also note that designating a system of energy corridors would not preclude an applicant from applying for a ROW outside of the designated energy corridors, and the current process to authorize ROWs would apply to the application.

7. The Environmental Assessment Should Be Modified To Remove State Wetlands From the Definition Of Lands With “Absolute Restrictions.”

Section 1.2.1 of the Environmental Assessment on Restricted Areas, states that areas identified by the EWG as Category 1 lands have absolute restrictions. It should be recognized that it is an overly conservative to define state wetlands as category 1. The no net loss policy does not restrict development; rather, it is designed to ensure that development is compensated for so that the net result is “no net loss”². Placement of state wetlands in the Category 1 discussion in Section 2.1 of this document, does not reflect the ability to compensate to achieve a “no net loss.”

8. The Phase 1B Report Should Contain A Sensitivity Analysis That Includes The Costs Of The Tehachapi, Sunrise, DPV2 and Green Path Projects In The CREZ Ranking.

The Phase 1B report assumes that the transmission costs for the Tehachapi, Sunrise, Dever-Palo Verde 2 and Green Path are “sunk costs” and therefore excludes the costs of these non-operational transmission lines from the CREZ ranking. This omission of costs is a major driver of the economic ranking results. A sensitivity case where these costs are included in the CREZ ranking should also be presented in the Report.

Section 3.6.2, at “variable costs” notes that the CAISO TAC was used as a proxy for all resources; it unclear if the report adjusted the current TAC upward to account for the assumed “sunk costs” of Tehachapi, Sunrise, DPV2, and/or Green Path.

9. Specific Edits:

p. 3-12: “Pacific Gas and Electric Company (PG&E) ~~is,~~ PacifiCorp, Avista Corp., and British Columbia Transmission Corporation are proposing development a transmission line ~~with British Columbia (BC)~~ to access renewable generation location in ~~the province~~ British Columbia (BC).”

p. 3-16: “Pacific Gas and Electric Company (PG&E) ~~has,~~ PacifiCorp, Avista Corp., and British Columbia Transmission Corporation have proposed...”

p. 3-30: “...available in the near ~~them~~ term...”

p. 4-18: “PG&E ~~has,~~ PacifiCorp, Avista Corp., and British Columbia Transmission Corporation have proposed...”

p. 4-18: “In Phase 1A RETI ~~determined~~ assumed that...”

p. 4-18: “...the anticipated cost to develop the ~~PG&E~~ transmission line to BC...”

p. 5-8: “The cost uncertainly assessment is detailed first, ~~r~~ followed...”

² The no net loss policy is described in the California Wetlands Conservation Policy (Executive Order W-59-93)