

**Highlights of the RETI Phase 1B Executive Summary**  
**[<http://www.energy.ca.gov/reti/documents/index.html>]**  
**January 7, 2009**

RETI is a collaborative stakeholder **planning process** initiated as a joint effort among the California Public Utilities Commission, the California Energy Commission, and the California Independent System Operator together with publicly owned and investor owned utilities. RETI's work is undertaken by a 29-member Stakeholder Steering Committee (SSC) that involves a broad range of participants, first to gather information and advice, and then to build consensus support for specific plans for renewable energy and related transmission development.

The **ultimate goal** of RETI's work is to identify major upgrades to California's electric transmission system needed to access competitive renewable energy zones (CREZs) sufficient to meet the state's energy targets. Phase 1 identified those CREZs that can be developed in the most cost effective and environmentally benign manner.

The Phase 1B Report is a **high-level screening** analysis. Potential renewable energy projects have been grouped into CREZs based on geographical proximity, development timeframe, shared transmission constraints, and additive economic benefits. CREZs have been ranked according to cost effectiveness, environmental concerns, development and schedule certainty, and other factors to provide a renewable resource base case for California.

The need for transmission to meet California's energy goals will be influenced by future statewide electricity consumption and the use of generation technologies which do not require transmission, such as photovoltaic (PV) generation in urban areas.

While California is moving assertively to deploy energy efficiency and clean distributed generating technologies, including PV in urban areas, abandoning transmission planning for renewable in favor of much heavier reliance on energy efficiency and distributed generation greatly increases the risk of not being able to meet **state policy goals** by 2020.

**Two assessments** were made in the Phase 1B Report. The **economic** assessment estimates the cost of developing renewable resources and transmitting the energy to California's consumers. The **environmental** assessment reflects the level of environmental concern associated with each CREZ using eight criteria.

Eight environmental ranking scores for each CREZ were summed to provide a total ranking score of relative environmental concern for each CREZ but do not intend to represent the level of concern in any individual project which may occur within a CREZ.

Identification of CREZs took into account the areas in which **existing law and policies prohibit or restrict energy development**. These laws and policies were identified by RETI's Environmental Working Group (EWG).

The RETI renewable energy target is the amount of additional renewable energy needed to provide 33 percent of California's electric energy consumption in 2020.

Sensitivity analyses illustrate the effect of different policies and technologies costs. At the direction of the SSC members, the study treated major transmission projects in Southern California approved by the CAISO or publicly owned utilities as already built. Thus, some generating projects in CREZs near these facilities thus were not assessed for a portion (or all) of their transmission route. However, a sensitivity analysis was performed to investigate the effect of this assumption (of "cost free"

transmission) on CREZ ranking and found little effect whether or not these transmission costs were included. A more detailed analysis of transmission costs addressing all of these issues will be carried out in Phase 2, **and used to re-rank CREZs** as appropriate.

Results of the economic and environmental assessments are intended only to **guide initial planning** of the transmission facilities necessary to meet state renewable energy goals. The **assessments are not intended to usurp local, state or federal project permitting authority, nor to impinge on the ability of renewable energy to be developed in other areas.** Any project, whether inside or outside a CREZ, may seek access to transmission capacity developed as a result of RETI or otherwise, consistent with market processes, transmission policy and permitting requirements.

Five resource areas, containing 29 CREZs and additional individual resources, were identified in California. Also, smaller-scale non-CREZ resources were modeled in California, and included distribution-level solar photovoltaics and biomass projects which do not require large scale transmission upgrades. Significant resources were identified in other states, British Columbia and Baja California Norte.

The CREZs fell into four groups. Six CREZs have the lowest (best) combination of economic and environmental ranking scores. Six CREZs have economic ranking scores as low (good) as the first group but have higher (worse) environmental ranking scores. These six CREZs are all relatively small. Four CREZs have lower (better) environmental ranking scores and higher (worse) economic ranking scores. Fourteen CREZs received relatively poor (higher) ranking scores in both assessments.

CREZs receiving lower (better) environmental ranking scores tend to have more energy potential than CREZs receiving higher scores. The criteria used by the EWG appear to favor larger and more energetic resource areas.

Only eight CREZs would interconnect to the northern section of the California transmission grid; all have relatively high environmental scores; only two received relatively good economic scores. Thus it appears that a large majority of undeveloped California high-density renewable energy potential is in Southern California.

The EWG was unable to assess out-of-state resources on a basis that was comparable to the assessment of California CREZs but will continue to search for data which could be used to compare out-of-state resources to California CREZs. Economically, there appear to be out-of-state resources that could justify the cost of new transmission construction and still be competitive with in-state California resources.

**Phase 2** work falls into two main tasks. The CREZ Refinement Work Group will conduct detailed evaluations of identified CREZs, including on-the-ground assessment of permitting and project development feasibility. These assessments will confirm, or modify, the estimates of generation potential for each CREZ. **CREZ boundaries may be adjusted** as a result of this process to avoid areas in which development appears infeasible, or make more extensive use of degraded lands.

The Conceptual Transmission Planning Work Group will identify the most effective ways to connect CREZ to the statewide and west-wide electric systems. **Phase 2 will not identify specific geographic transmission routes, but the RETI EWG will conduct a high-level environmental assessment of conceptual transmission routes.**

Phase 3 work will translate conceptual transmission plans into detailed plans of service for commercial transmission projects that can be presented to the CPUC, POU governing boards and City Councils for approval.