

# Memorandum

**To:** ISO Board of Governors

**From:** Laura Manz, Vice President of Market & Infrastructure Development

**Date:** July 15, 2009

**Re:** RETI Update

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*This memorandum does not require Board action.*

## EXECUTIVE SUMMARY

The purpose of this memorandum is to update the ISO Board of Governors (the Board) on the *Renewable Energy Transmission Initiative* (RETI).

In early 2008, the California Public Utilities Commission (CPUC) and the California Energy Commission invited the California Independent System Operator Corporation (the ISO) to work with a broad range of stakeholders to develop and build support for a plan to build the transmission infrastructure needed to meet California energy and environmental goals.

The agencies initiated this effort to make meaningful comparisons between renewable resources likely to be developed in the next several years and to coordinate development of these resources with the significant transmission infrastructure needed to deliver the resources to the market and customers. The RETI analysis ranks the renewable resources in California using both economic and environmental criteria. RETI provides important analysis and data to those responsible for developing California's infrastructure.

The RETI process has brought multiple stakeholders together to improve prospects for reaching consensus on where potential renewable resources are located and where the transmission should be built. RETI has also spurred a new level of commitment among energy agencies and utilities to work together to make improvements to planning and permitting processes in California. For example, since the RETI process, the ISO, the IOUs and the publicly-owned utilities joined to form the California Transmission Planning Group to formalize our mutual commitment to joint statewide planning and development of joint projects.

Additionally, once the competitive renewable energy zones (CREZs) are finalized as part of the RETI process, the CPUC and the CEC will have information from which to draw for designating Energy Resource Areas corresponding to the ISO's Location Constrained Resource Initiative tariff amendment adopted to help finance transmission trunk lines to remote resources. RETI has proceeded in three phases:

***Phase 1: Develop a statewide renewable resource assessment to identify CREZs that best justify building major transmission upgrades.***

On behalf of the RETI Stakeholder Steering Committee, the CPUC contracted with Black and Veatch to conduct an extensive study to identify areas in the state with the greatest economic potential for development of renewable resources, taking environmental considerations into account. Phase 1 was divided into two sections. The *Phase 1A Report* (accepted by the RETI Stakeholder Steering Committee on May 21, 2008) described the methodology, assumptions and resource information that would be used in Phase 1B. The *Phase 1B Report* is a high-level screening analysis grouping potential renewable energy projects into CREZs, based on geographic proximity, development timeframe, shared transmission constraints and other economic benefits. CREZs were also ranked according to cost effectiveness, environmental concerns and other factors. The first attachment to this memo provides a graphic representation of the CREZs showing the relative amount of resources in key CREZs ranked by cost and environmental concern.

***Phase 2: Refine CREZ analysis to prioritize zones and develop statewide conceptual transmission plans.***

Phase 2 of RETI (also divided into phases) has involved a more detailed evaluation and re-ranking of the CREZs identified in Phase 1, as well as production of a conceptual statewide transmission plan. A Phase 2A draft report was issued June 3, 2009. The technical work group that prepared this report first prepared a comprehensive list of potential network line segments with enough capacity to provide access to all CREZs and to allow delivery of renewable energy to all load serving entities, adequate to meet their policy goals. These conceptual connections were then compared with environmental maps delineating land use restrictions or other environmental sensitivities. Each line segment was evaluated and then grouped into categories relative to its value in: 1) providing access to renewable energy resources; 2) enabling energy transfers between major load centers; and 3) delivering energy to those loads.

While there are several details, assumptions and caveats to consider in reading and understanding the Phase 2A report, in general the final line segments were grouped into three categories of facilities as shown on the second attachment of this memo. The renewable “foundation” lines represent north-south/south-north energy flow on the network between Palm Springs and Sacramento. The fourteen or so line segments in the foundation group are considered “no regrets” lines, meaning they are likely essential to be able to deliver renewable energy from any CREZ to major load centers, under a variety of circumstances. The “delivery” lines (approximately thirteen major lines) move foundation lines to major load center, and the “collector” (access) lines carry power from the CREZs to foundation and delivery lines. The Phase 2A report will be finalized by early August 2009.

***Phase 3: Complete detailed transmission service plans for each CREZ, with a consensus determination of need documented in the ISO and publicly owned utility transmission plans.***

The stated purpose of Phase 3 of RETI is to develop detailed service plans for each CREZ. It is unclear at this juncture whether the development of detailed transmission plans following the RETI Phase 2 conceptual plan will occur within the RETI process itself (as a “Phase 3” deliverable) or separately through the ISO and publicly-owned utilities’ planning processes. In any case, it is likely that RETI will play a useful role going forward as a forum for multiple stakeholders to meet and discuss the final transmission plans and projects to meet the 33% goal.

Next steps for the ISO include taking the results of RETI produced to date to develop a 33% conceptual transmission plan by September 2009 that includes the results of generation interconnection studies and a conceptual level reliability assessment. From there, the ISO will work with the California Transmission Planning Group to prepare a work plan for finalizing a statewide transmission plan and engaging with RETI as appropriate to ensure transparent and active collaboration with stakeholders.



