

Renewable Energy Transmission Initiative (RETI)
DRAFT Minutes of Stakeholder Steering Committee Meeting
November 14, 2008

The RETI Stakeholder Steering Committee met at the California Energy Commission in Sacramento on November 14, 2008, beginning at 10:00 AM. Three members attended by WebEx, and the meeting was accessible to observers via WebEx. Attendees are listed below. Minutes were compiled by Dave Olsen of CEERT.

The committee took the following actions:

1. **Approved minutes, as revised.** Minutes of the August 20, 2008 SSC meeting were approved, with Item 4 revised to read: “Agreed that “disturbed land,” as that term was defined at the August 20, 2008 SSC meeting, should not be a criterion used in environmental rating of CREZ.”
2. **Agreed to add a statement on the need for transmission for renewables to the Preface of the Phase 1B report.** RETI coordinators were directed to revise the language proposed at the meeting to incorporate comments made by SSC members, and to circulate the revised draft to members.
3. **Discussed major issues in the draft Phase 1B report.**
 - **Uncertainty analysis.** The weight of transmission costs in some CREZ, the wide range between the best case and worst case economic rankings for most CREZ, and the lack of uncertainty analysis around environmental rankings, in combination, argues for developing a no-regrets transmission plan capable of connecting all identified CREZ. Adding in uncertainty about developability of projects in CREZ, and lack of convergence between identified CREZ and bids LSEs are receiving, it is too early to take some CREZ off the table. The sense of the meeting was that Phase 2 planning should consider all CREZ identified in Phase 1. Language should be added to the Executive Summary calling attention to the uncertainty and sensitivity analyses and the perspective they provide on Phase 1 results.
 - **Quantity and geographic distribution of CREZ; concentration of CREZ in corridors.** Top-ranked CREZ in the draft Phase 1 report revolve around highly concentrated resources in Tehachapi, Kramer and Victorville, while geographic dispersal of renewable generation is known to provide system operational benefits. Top-ranked CREZ in the draft report also imply high and potentially unworkable corridor loadings, e.g., for the North of Vincent and North of Lugo corridors. Removing proxy projects may reduce implied corridor loadings to workable levels. At the same time, RETI should plan transmission to provide access to more than just the renewable net short; if LSEs have to over-procure by 20%-30% to make up for contract failure, RETI should plan for an even larger quantity of renewables procurement, because CREZ represent collections of projects.
 - **Out of State (OOS) and Northern California Resources.** Include these resources on the supply curve showing the economic assessment of CREZ. Because Northern Nevada and Pacific Northwest resources are likely to be imported through Northern

California. RETI should help plan for transmission needs in Northern as well as Southern California. Because of lack of comparable data, no environmental rating could be performed for OOS resources; as a result, they don't appear on the bubble chart in the Executive Summary of the draft Phase 1B report. If environmental data can be obtained and put in comparable format to California data, OOS resources should be included on the bubble chart, which shows a relative environmental score as well as a relative economic score.

- **Pre-Identified vs. Proxy projects.** There was general agreement that a visual representation of the percentage of proxy projects in each CREZ vs. pre-identified projects should be added to the bubble chart. The sense of the meeting was that Phase 2 work should give more weight to pre-identified projects, especially those in which generators have made substantial financial commitments, e.g., in the CAISO GIPR process. But the developability of some pre-identified projects remains difficult to determine; and developers may have current, financially substantial interest in areas shown in the draft Phase 1B report only to have proxy projects. The SSC should establish a subgroup to determine how Phase 2 should weight Proxy vs. Pre-Identified projects.
- **Relationship to CAISO GIPR process.** CREZ confirmation in Phase 2 should take advantage of or incorporate the results of the CAISO's first cluster of projects identified in its Generation Interconnection Process Reform (GIPR) process. Generators advancing in this process must pay large dollar deposits by Nov. 25.
- **No assumption of full build-out of CREZ.** There was general agreement that RETI should not assume that the generation potential in any CREZ will be fully built out. Language communicating this point should be strengthened in the Phase 1B report.
- **Twentynine Palms Base Expansion.** The military prefers that the acreage proposed to be added to the Marine Corps base be removed from consideration as potential CREZ locations in the draft Phase 1B report. Given NEPA requirements, a decision on this proposal is two years away. In light of this fact, the BLM recommended, and the SSC agreed to leave the potentially affected CREZ in the report, but to add language indicating that the approximately 1,000 MW of generation could be eliminated if the base expansion is approved.
- **Transmission costs and deliverability assumptions.** The Black & Veatch economic assessment assumes simultaneous deliverability of the full nameplate generation capacity of all CREZ. It is very expensive, and commercially unnecessary, to assume every project must have 100% Available Transmission Capacity. Language pointing this out should be added to the Phase 1B report. The sense of the meeting was that Phase 2 planning should not assume full deliverability of the nameplate rating of all generation; and that transmission costs should be re-examined, especially as a percentage of generation costs.
- **Incommensurability of economic and environmental rankings.** Phase 1 economic and environmental assessments rank CREZ only relative to other CREZ. It is not possible to combine these economic and environmental rankings into one number representing a combined economic-environmental score. Phase 2 work should not be constrained by Phase 1 priority ranking. Environmental rankings should be used primarily as a tool to help assess CREZ developability.
- **System-wide perspective on CREZ prioritization.** An iterative process of evaluating the effects of adding different combinations of CREZ in different locations

- **Capacity valuation** in economic assessment. There was brief discussion, and some agreement, that the capacity value of wind and solar resources requires further discussion about whether the base case should be changed to account for operating revenues realized by gas-fired generators.
 - **Photovoltaic thin film sensitivity; estimate of distributed generation energy potential.** A footnote should be added to economic ranking charts describing CREZ results if large-scale installation of thin film is assumed to be economic. A legend should be added to the bubble chart and economic supply curves clarifying that the Phase 1 base case assumed central station solar thermal to be the most cost-effective solar technology. There was brief discussion, and some agreement, that report language describing this sensitivity should be strengthened to convey that the costs associated with expanding the infrastructure necessary to connect large quantities of distributed thin-film PV were not taken into account in Phase 1, and as a result, may overestimate the economic potential of thin film installations.
4. **Agreed to address key issues in an SSC document providing guidance for RETI Phase 2.** The sense of the meeting was that: 1) several issues in the draft Phase 1B report require clarification or revision; 2) the draft Phase 1B report and CREZ identification generally reflect assumptions developed in Phase 1; and 3) that it would be more effective for the SSC to focus on guiding the RETI process going forward than on substantial rewriting of the draft Phase 1B report.

To this end, the SSC formed a subcommittee to draft a document intended to guide Phase 2 work. Members include: Jan Strack, SDG&E; Robert Jenkins, PG&E; Mike DeAngelis, SMUD; John McCaull, geothermal generators; Arthur Haubenstock, solar generators; Shashi Pandey, SCE. RETI coordinators were directed to prepare an initial draft of such guidance document and circulate it to subcommittee members.

At the same time, the draft Phase 1B report will be revised to incorporate comment from SSC members, other stakeholders and the public. Comments are due November 19, 2008, to Clare Laufenberg Gallardo/CEC: claufenb@energy.state.ca.us.

5. **Reviewed the revised Phase 2 scope of work.** The Phase 2 Work Group established at the last SSC meeting has divided into two groups, in recognition of the tasks required: one to focus on conceptual transmission planning for adding CREZ to the statewide grid; and one to focus on refining CREZ boundaries and composition and confirming Phase 1 estimates of CREZ generation potential.

Terry O'Brien, director of the CEC Siting Division, reported on site visits he and his staff had made to potential CREZ in Southern California. This revealed potential obstacles to the developability of generating projects in several CREZ, including placement of proxy projects in areas having already built development or zoned for other uses; and fragmentation of land ownership, which could make it difficult or expensive for generators to acquire the land for renewable energy development. Environmental and

permitting restrictions not evaluated in Phase 1 could also limit project developability and thus CREZ output.

The SSC Phase 2 guidance document (item #4 above) will outline working assumptions and key tasks for both Phase 2 work groups.

6. Set the following schedule for concluding RETI Phase 1:

- **November 19:** Comments on draft Phase 1 Report due to Clare Laufenberg Gallardo at the CEC.
- **November 24:** SSC meeting at CPUC, San Francisco, 10:00 AM-4:00 PM.
- **December 4:** Phase 1B Draft Final Report posted.
- **December 18:** SSC meeting at CEC, Sacramento; Phase 1 Final Report proposed for adoption. (Note this change from the Dec. 17 date set at the SSC meeting, due to unavailability of meeting space at the CEC and CPUC on Dec. 17).

- 7. Confirmed November 24** as the date of the next **SSC meeting**, at the CPUC in San Francisco. Agenda is to finalize revision of the draft Phase 1B report, after considering comments received by November 19; and to discuss and agree on SSC guidance for Phase 2. Preparation: review comments on the draft Phase 1B report which will be posted on the RETI website on Nov. 20, 2008.

The meeting was adjourned at 4:25 PM.

November 14, 2008 SSC meeting attendees

SSC members:

PG&E	Robert Jenkins
SDG&E	Jan Strack (for Linda Brown)
SCE	Shashi Pandey (for Gary Tarplee)
SMUD	Mike DeAngelis
CAISO	Gary DeShazo
SCPPA	Dave Walden (WebEx)
NCPA	Nannette Engelbright (for Jim Pope)
Sierra Club	Carl Zichella
IEP	Steven Kelly
Biomass	Gregg Morris
Geothermal	John McCaull
Solar	Rainer Aringhoff
Wind	Dariush Shirmohammadi
Military	Tony Parisi
BLM	Bob Doyel (for Duane Marti/Jim Abbott)
Counties	Joe Bertotti
Farm Bureau	Karen Mills
Counties	Andy Horne (WebEx)
DRA	David Peck (WebEx)
CPUC	Paul Douglas (for Anne Gillette)

CEC Clare Laufenberg Gallardo

Not Present:

IID Juan Carlos Sandoval
LADWP Mohammed Beshir
NRDC Johanna Wald
NAHC; BIA Dave Singleton
US Forest Service Mike Chapel

Coordinating Committee members attending:

CEC Chuck Najarian

B&V: Ryan Pletka

Observers:

CEC Terry O'Brien, Jim Bartridge
CPUC Billie Blanchard
BLM Ashley Conrad-Saydah
Brightsource Arthur Haubenstock
Opti-Solar Greg Blue
CalWEA Faramarz Nabavi, Nancy Rader
DWR Lee Terry
CEERT Ryan Drobek
Interested
Citizen John Moore

WebEx Observers:

SDG&E Pamela Mills
Navigant David Oliver
Ausra Roger Gray
U.C. Lloyd Cibulka
Aspen Suzanne Phinney
Lodi Electric Demy Bucaneg
The Wilderness Society Alice Bond
Sempra Lujuanna Medina
CEC Roger Johnson
Invenergy Matt Giblin
SCE Carrie Thompson
6 unidentified call-in users

Coordinators:

Rich Ferguson, Dave Olsen – CEERT