

July 10, 2009

Ms. Clare Laufenberg Gallardo
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Subject: Comments on RETI Phase 2A Draft Report

Dear Ms. Laufenberg Gallardo:

Southern California Edison appreciates the opportunity to provide comments on the Renewable Energy Transmission Initiative Phase 2A draft report and is pleased to offer the following comments for your review and consideration.

1. RETI Conceptual Transmission Plan: The development of the transmission components in the Conceptual plan is based on certain simplifying assumptions and methodologies listed below, along with our comments:
 - a. Application of a uniform renewable development success factor of 40% across all CREZs which may not materialize in a real world scenario based on development pace and timing, sizing and cost, evolving environmental and siting issues, and network configuration changes.
 - b. Voltage level selection of any given transmission line segment in the Conceptual plan is based on the thermal ratings of a typical 500 kV and / or 230 kV transmission line against the fixed renewable capacity of a CREZ. Any variation in the CREZ capacity size, timing, location, environmental and siting considerations, system costs, and ongoing network modifications may result in the selection of a different voltage level for the line segments than currently shown in the Conceptual plan. The selection of a different voltage level for a given line segment will be based on extensive substantiation by detailed "Plan of Service" studies involving adequate resolution of all technical, sizing, timing, economical and environmental / siting concerns associated with a specific CREZ and its interconnection facilities. It is possible that the selected voltage level of a line segment in the Conceptual plan maybe changed with the completion of detailed technical analysis under "Plan of Service" studies justifying such change.
 - c. Although the Conceptual plan has developed a list of transmission line segments to connect all the CREZs, they are conceptual in nature and

based on preliminary analysis. The RETI "Shift Factor" methodology, utilizing a "single network configuration" for all of California was used, which assumes all line segments in the plan to be in service and the renewable power from all CREZs are being injected to meet the RETI "Net Short" of each utility all at the same time in the "Shift Factor" case simulation. The process may be adequate for the development of the "Conceptual plan"; however, it is possible that any generation variation (on or off) at a given CREZ location based on seasonal changes or any network configuration changes will produce a different set of results and may affect the selection and categorization of line segments in the plan. It is reassuring that the draft plan report notes that the ultimate transmission plan capable of being implemented can be developed only after detailed studies are undertaken and completed.

2. Line segments in the Conceptual plan and their categorization under the Foundation, Delivery and Collector groups have been updated with the results of the additional assessment and study work completed by the Conceptual Plan Work Group (CPWG) since June 10, 2009. It is important that these line segment updates with the latest data and information be included in the Final RETI Phase 2A Conceptual Transmission Plan Report.
3. SCE would like to point out that there are cost discrepancies between the calculated costs of the RETI Tehachapi Group 15 line segments included in the conceptual plan against the most recent cost estimates of the Tehachapi Segment 4-11 project filed in the CPUC CPCN proceedings by SCE.

Similarly there are cost discrepancies between the calculated costs of the RETI Riverside line segments between the new Midpoint 500 kV substation and Valley 500 kV substation (representing the California portion of the DPV2 Project) and the most recent cost estimates for the California portion of the DPV2 Project filed by SCE with the Supplemental information on Petition for Modification of Decision No. 07-01-040 under CPUC CPCN Application proceedings on June 26, 2009.

Listed below are the numerous factors for the cost discrepancies:

- i. RETI line segment costs are based on a generic set of standardized unit cost factors that included costs for existing line tear down, new line construction, line reconductoring, and line termination at a fixed value of 25% for all line segments. RETI costs do not include cost for line relocation, multiplying factors for different ROW terrain considerations, land costs, Special Protection Schemes (SPS) and telecommunication modification costs and minor protection and control work costs.
- ii. On the other hand, the SCE CPUC filed costs for the Tehachapi Segment 4-11 Project are preliminary total estimated costs and

include costs of segment components (segment 4 through 11), substation modifications, voltage compensation, land rights and easement acquisitions, facilities acquisitions, and all telecommunication, protection and control including SPS as well as terrain factors and various contingencies and uncertainties. The preliminary cost estimates will be further refined after the conclusion of the final engineering and design phases of the project and following the awarding of major material and construction contracts.

- iii. SCE has provided its cost numbers for the RETI Phase 2A Conceptual plan based on the RETI methodologies and has extracted the RETI costs out of its CPUC filed costs using the best possible estimates for the different factors being excluded under the RETI standardized unit cost approach compared with the preliminary total estimated cost approach used for the CPUC filed costs.
- iv. SCE also had to translate the Tehachapi Segment 4-11 project into the RETI Tehachapi 15 line segments to properly account for the differences between "Tehachapi segments 4-11" amounting to 8 segments and the "RETI Tehachapi Group 15 Line Segments". These numerical differences in the two types of segments offered its own challenges, but SCE was able to manage and calculate the cost numbers as accurately as possible. Although a little simpler, similar efforts were also made to develop the RETI Riverside group line segments cost for the California portion of the DPV2 project based on its filed costs in the CPUC proceedings.

Cost Results:

RETI Tehachapi (15 line segments) Costs: The total cost of the RETI Tehachapi 15 line segments is \$989.8 million dollars, while the SCE CPUC filed cost, in 2008 cost adjusted dollars, is \$959.6 million dollars for the Tehachapi Segment 4-11 Project on a comparable basis accounting similar project elements and their costs under both options. Also, it must be noted that the total Tehachapi (Segment 4-11) project cost for all project elements (no RETI type exclusions like land costs, terrain factors etc.) filed in the CPUC CPCN proceedings is \$1,643.8 million dollars (cost in 2008 dollars) or \$1,715.5 million dollars (cost in 2009 dollars).

RETI Riverside Group (representing CA portion of the DPV2 Project) Costs: The total cost of the RETI Riverside 3 line segments is \$490.8 million dollars (cost in 2008 dollars per unit cost tables), while the SCE CPUC filed cost, in 2008 cost adjusted dollars, is \$504.3 million dollars on a comparable basis accounting for similar project elements and their costs under both options and the same cost in 2009 dollars is \$526.3 million.

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Please note that the RETI SCE CPUC filed cost for DPV2 (California portion only) includes the cost of line terminations at the Desert Center and Midpoint substations similar to the inclusion of the Midpoint switchyard cost in the SCE filed CPUC costs.

SCE requests that the above cost details for the RETI Tehachapi Group (15 line segments) costs and the RETI Riverside Group (3 line segments between Midpoint to Valley representing California portion of the DPV2 project) costs be included in the description of costs in the main report as well as in Appendix H – Line Segment Data.

4. Information contained in the RETI Conceptual plan report may be useful to “inform” the generation interconnection processes under LGIP protocol and utilities’ transmission planning processes but should not be used as the only transmission solution.
5. SCE reserves the right to suggest additions and modifications and to also offer comments on Section 3.9 Recommendations for Study and Development of Line Groups when that section is completed and reported by RETI.

Thank you for your consideration of the above comments. Please contact me at 626-302-9644 or patricia.arons@sce.com or Shashi Pandey at 626-302-9621 or shashi.pandey@sce.com should you have any questions concerning them.

Sincerely,



Patricia L. Arons