Comments on the RETI Draft Phase 1B Report

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Has such great haste been necessary?

Early in the RETI process, it was asserted that the process must be completed with the greatest possible haste, to avoid giving FERC any justification for usurping California's transmission planning by invoking section 1221. I suspect that this concern was exaggerated because a definite threat to invoke section 1221 would have been met by a strong political response, probably not only from California, but also from adjacent states.

On the other hand, very rapid completion of RETI would be justified if the results had to be fed into the processes of ISO, CPUC, and CEC as soon as possible to guarantee timely completion of the transmission needed to meet the 2020 RPS target.

Economic Assessment of CREZs

I offer only a few very general comments, which admittedly will identify me as a layperson.

The economic analysis appears to assume that any mixture of types of renewable power will serve equally well to meet the 33% RPS standard. This assumption appears to ignore the distinction between baseload power (geothermal?) and peaking power. Does the elaborate evaluation of capacity value completely account for real-time reliability?

The potential problems of real-time integration of various types of renewable power with other sources of power have not been addressed, as far as I can see. Perhaps integration can be assumed not to be an insuperable problem, no matter what the mixture of types of power is, if no more than 33% of the power is supplied by renewable sources.

Maps

CREZ maps and resources maps in the map directory http://www.energy.ca.gov/reti/documents/maps2/ are extremely inadequate. They give essentially no information about the location of CREZs with respect to areas about which environmentalists are concerned.

The maps of northern California and southern California CREZs in the directory http://www.energy.ca.gov/reti/documents/2008-11-12_local_agencies/maps/ , which are not accessible from the draft Phase 1B report link, do include a layer mapping black areas and a layer mapping yellow areas, but the scales of these maps are too small to give sufficiently precise information.

A layer showing land ownership (federal by agency/state by agency/tribal/private) should also be available to be added to CREZ maps. The proportions of non-federal land in some of the desert CREZs are larger than expected.

If one or more of the black, yellow, and ownership layers are overlaid on the CREZ layer, valuable information is invisible. Is depicting types of areas on layers by filling the areas with diagonal lines or cross-hatching a feasible solution? Another likely better solution is creation of a layer with lines showing CREZ boundaries; viewers could overlay this layer on the black, yellow, or ownership layers, or some combination thereof..

The small-scale maps in the draft report, mentioned above, furnish absolutely essential overviews, but they are far from sufficient for evaluation of the locations of the CREZs. The optimum maps of CREZs would be maps of individual CREZs or of clusters of CREZs in the same vicinity on a large-scale topographic base (1:100000?), or even on Google Earth-type backgrounds. These maps should contain sufficient cultural information to locate the CREZs with respect to highways, population centers, etc. – the maps of CREZs in the report display very inadequate cultural information.

The CREZ map does not show the sub-CREZs created late in Phase 1B, making evaluation of the relative environmental acceptability of these sub-CREZs impossible. Are the sub-CREZs in a CREZ always geographically separated?

Because RETI reports are essentially internet documents, the dimensions of maps are not limited by the requirement of compatibility with the page size of a bound document. The limits on map size are the maximum page sizes of available large-format printers and scanners. Features of Adobe Acrobat Reader make the viewing and printing of portions of large-format maps straightforward. Full-size hard copies would of course be more helpful to users, but printing them is not feasible for most users. The maps in RETI reports should be large-format maps if large formats enhance their usefulness.

The CREZ separation layer is difficult to see.

Some of the names of the layers are not informative. The names of the layers need to be modified or explanations of their contents inserted in the comment boxes accompanying the maps. What some of the layers depict is not clear, since turning these layers on and off does not appear to modify the displayed map.

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CREZ data

The report tabulates the total of black and yellow acreage within CREZs and within the 2-mile buffers. Black acreages and yellow acreages are of so much interest that they should also be tabulated separately. Are the black acreages inside CREZs 0 and the black acreages inside the buffers small?

The report recommends development of consistent statewide scenic quality data. It would be sporting to acknowledge that development of such a database is extremely unlikely.

Statewide analyses of environmental “cost” –vs- regional analyses

The CREZs identified by RETI are separated neatly into Northern California CREZs that will predominantly supply Northern California markets and Southern California CREZs that will predominantly supply Southern California markets. It also appears that out-of-state CREZs also separate quite neatly into northern and southern energy sources in Nevada and other political jurisdictions.

If a group of CREZs supplies a negligible proportion of the electricity demand of the Northern California market or the Southern California market, there is little benefit to comparing the environmental costs of these CREZs to the costs of the less distant CREZs that predominantly supply that market.

Regional databases for data types could be utilized in regional analyses, even if statewide databases for these data types do not exist. For example, reasonably consistent scenic quality

data are presumably available for CREZs on southern California BLM lands. I understand that fairly comprehensive Native American cultural data for the Desert have been submitted – these data might be useful in the Southern California analyses until statewide data are available.

Prioritizing location of CREZs on disturbed lands

A broad consensus supports preferentially locating CREZs on lands significantly disturbed by human activity. Information about categories of disturbed sites was given to the EWG early in its deliberations.

Unfortunately RETI did not attempt a proactive approach to locating CREZs on disturbed lands. A proactive approach would have involved a preliminary inventory of disturbed lands and attempts to ascertain their availability.

The data available for the disturbed lands environmental criterion are so limited that the criterion is a weak substitute for preferentially locating development on disturbed lands. Even if the criterion were based on much more complete data, it is only one of eight criteria.

Although RETI has so far largely ignored the potential of disturbed lands, the possibility that the transmission being designed in Phases 2 and 3 can provide transmission for some generating facilities on disturbed lands can still be investigated, and should be.

Category 1 and Category 2 lands

The third paragraph on page 2-6 refers to environmental criteria 4 and 5, the fifth paragraph refers to environmental criteria 3 and 4. Are both these references correct?

The terms ”hard line” and “soft line” are used to refer to two categories of lands in NCCPs and HCPs. Have these terms been precisely defined and has their exact significance for restriction of development been adequately discussed in the report? A search of the draft report did not find any definitions of these terms.

The different classes of Category 2 lands are not “created equal” with respect to limitations on development. Complete documentation of these differences between and within categories may not be possible at the present time, but the report should document these differences as thoroughly as possible.

Wildlife data

The possibility that wildlife species and corridor data are more complete for some CREZs than for others, which might influence the values of these criteria, was mentioned during the deliberations of the EWG. Appropriate caveats explaining why there may be differences in the completeness of these data should be noted in the report.

The methodology of the environmental assessment of CREZs

Section 1.3 of the environmental assessment concludes that “Despite limitations, the methodology developed by the EWG provides a coherent, consistent and quantitative means of estimating the relative environmental concerns [of CREZs]…”. The coherence and consistency of the developed methodology are, of course, relative. The question is whether some significantly more coherent and consistent methodologies could be devised. Attempting to devise such methodologies would require a very substantial and lengthy effort, which might not yield any clearly superior methodology. It can be argued that more elaborate methodology would not be suited to the evaluation of the incomplete and limited environmental data which are available.

During development of the methodology, the coordinators mentioned that the EWG might evaluate the quality of the environmental assessment by comparing it to other evaluations of the comparative environmental quality of the CREZs. Public input on the draft report may offer some contrasting evaluations. A more formal evaluation of the quality of the environmental assessment, for example by surveying people who know the desert well, would be a very substantial project whose results might not be informative enough to justify the effort.

The EWG's decision to include the GWh/yr normalization factor in the formulas for the environmental criteria was wise.

The EWG made definite improvements to the methodology during its lengthy development. Continuous scales for criteria are preferable to criterion values that are a function of quintiles of the data. Continuous criterion values which are a linear function of the data express the intuition that environmental costs are roughly proportional to the magnitude of the environmental effect. The present form of the disturbed lands criterion as a deduction of bonus points is superior to the original form, which involved division by zero.

Studying the table of environmental ranking results on page C-1 to better understand the influence of the individual criteria on the total environmental ranking and whether the total rankings are well correlated with actual differences in environmental impact is a daunting task.