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San Diego Gas & Electric Comments on RETI 2.0 Plenary Report

Additional submitted attachment is included below.

SDG&E comments on RETI 2.0 Plenary Draft Report

Overall comments:

Generally, the RETI 2.0 Plenary Report reflects a fair and thorough process, examining the transmission system in light of the 2030 RPS and greenhouse gas reduction goals. The overall methodology and approach appears sound and reasonable. And SDG&E will continue to support this effort. Following are a few specific comments relating to the assumptions and inputs that the RETI 2.0 process considered.

Specific comments:

1) On Page 7, in the section marked "Imperial Valley", SDG&E agrees on the importance of considering Path 42 as one of the constraints limiting the development of renewable resources in the Imperial Valley, but notes that this may not be the critical constraint. Other elements in the Imperial Irrigation District (IID) may be limiting, such as the S-line, the underlying 161 kV and 92 systems, and so forth. Further study is necessary to determine the optimum solution for integrating Imperial Valley renewable resources across the SCE, SDG&E, and IID systems. SDG&E would point out that lines composing Path 42 also form a part of Path 46, and would also benefit from the proposed North Gila-Miguel HVDC conversion project.
2) One Page 8, in the section marked "Desert Area Constraint Scenario", SDG&E agrees with the assessment results indicating that this may be the binding constraint towards meeting the 2030 RPS goals, and furthermore agrees with the need to further test and refine transmission solutions now. Recent history has made it clear that any major transmission upgrade proposed now will be years in the making, thus it is important to begin identifying viable alternatives and begin evaluating them for effectiveness, feasibility, and economic efficiency.
3) On page 22, on the third bullet point, SDG&E agrees with the stated concern for decreased frequency response due to a declining number of resources capable of providing frequency control. It is important not to lose sight of this on the way to meeting the 2030 RPS goals. Technology such as synchronous condensers can provide voltage support and inertia during system disturbances, but only on the order of tens of cycles to a few seconds. Advanced transmission technology such as HVDC can also provide frequency stability services during system disturbances. On a longer time scale, technologies such as pumped storage, batteries, and wind and solar generators equipped with energy storage and smart inverters can also provide frequency control.
4) On Page 38, SDG&E would like to point out that the Southwest Powerlink HVDC project could have a net capacity benefit to California of up to 1000 MW, which would reduce the cost per megawatt proportionally.

5) On Page 39, Conclusion #1, SDG&E agrees that the DAC should be one of, if not the, main focus of study going forward. We also point out that the North Gila-Miguel HVDC conversion project directly affects and can significantly increase the flow capability of Path 46. Although the HVDC conversion directly affects the southern portion of Path 46, the project better allows the optimum balancing of flows across the entire interface and can thus increase the utilization of the Path as a whole.
6) On Page 42, SDG&E agrees that the CAISO methodology for calculating Maximum Import Capability (MIC) will have significant impact on the development of renewable resources, particularly in areas outside of the CAISO.
7) On Page 42, SDG&E agrees with the conclusion that it would be useful to consider transmission constraints in the IID system from separate north and south perspectives, with the caveat that solutions for both north and south system constraints should integrate into an overall approach for optimizing the DAC transmission system. SDG&E would also point out that the HVDC conversion project would help address generation integration in both the north and south areas of the IID system, by improving operational flexibility and capacity utilization for both Path 42 and at the Imperial Valley substation.
8) On Page 43, SDG&E would qualify the statement that the HVDC conversion project would "help alleviate local inertia […] concerns". The HVDC project, when properly integrated with voltage support equipment such as synchronous condensers and energy storage systems can indeed enhance system stability and provide frequency deviation mitigation during system disturbances. SDG&E would also note that this type of frequency control is particularly effective for areas that have limited connectivity to the greater WECC transmission system, such as San Diego. A similar application was approved by the CAISO to address system stability and black start capability for the San Francisco area, leveraging the existing Trans Bay cable and voltage source control (VSC) HVDC technology.
9) On Page 51, SDG&E agrees wholeheartedly with the statement that. "the Desert Area Constraint (DAC) is likely to emerge as a serious issue prior to 2030", and would go further to say that the DAC is indeed already a serious issue facing the Southern California bulk power system. SDG&E agrees that this area should be the focus of study going forward.
10) SDG&E recommends developing a matrix of project alternatives with the relevant benefits, costs, environmental and regulatory requirements, feasibility and so forth. This approach would help facilitate decision making. The proper weighting of each attribute is of course a matter of some discussion, but a project alternative matrix would be an excellent starting point.