

The Center for Energy Efficiency and Renewable Technologies (CEERT) and Natural Resources Defense Council (NRDC) appreciate the opportunity to comment on the California Independent System Operator (CAISO) 2018-19 Transmission Planning Process (TPP) Preliminary Policy and Economic Assessments Stakeholder meeting.

Policy Assessment

There is a clear need for a faster and more iterative process between the CAISO and the California Public Utilities Commission (CPUC). While the CPUC utilizes a carbon target in its Integrated Resource Plan (IRP) process, the California Legislature has accelerated the 50% RPS to 2026 and increased the 2030 RPS target to 66%, the CAISO was asked to only study a 50% RPS case for the default portfolio and the more relevant 42 MMT case (roughly equivalent to a ~55% RPS) only for sensitivities in this TPP cycle. Given the long lead time for new transmission and the fast pace of transformation in the electric sector, it is clear that the slow pace of transmitting relevant portfolios results in missed opportunities for projects that may be needed for the most economical and reliable path to meeting California's greenhouse gas (GHG) reduction goals. Additionally, it would be valuable for multiple sensitivity portfolios to be transmitted to the CAISO for study, as different combinations of resources may have reliability or deliverability differences that were not accounted for in CPUC modelling that will affect the "optimal portfolio."

The results of the 2018-19 policy and economic modelling should be formally transmitted back to the CPUC with specific suggestions to develop better methodologies for selecting the "Reference System Plan" and "Preferred System Plan" in this CPUC IRP cycle. There are new insights into the CPUC's portfolios that have implications for selecting the best portfolio mix to meet California's GHG goals. In the IRP process, the 42 MMT case was found to have roughly 4% curtailment with the RESOLVE model, a capacity expansion model developed by E3, and roughly 10% curtailment with the SERVM model, a production cost model run by CPUC staff.¹ However, the CAISO modelling shows nearly 40% curtailment of wind and solar in the 42 MMT scenario.² This stark difference in modelling results suggests there are major deficiencies in the tools being utilized to develop the policy portfolios. CEERT and NRDC recommend a faster, more iterative approach between the CPUC and CAISO to resolve these differences and develop the most cost effective and reliable portfolios to reach California's GHG and energy goals.

Economic Assessment

¹ Production Cost Modeling with the Reference System Plan and the 2017 IEPR: Preliminary SERVM model results at slide 46

² Preliminary Policy and Economic Assessments, 2018-2019 Transmission Planning Process Stakeholder Meeting November 16, 2018 slide 89

CEERT and NRDC are supportive of the ISO expanding the economic evaluation process and vetting of economic study requests focus on production cost modeling to include benefits of EDAM (considering capacity costs) and consideration of interregional solutions.

We support expanding the scenarios to capture a broader range of modeling quantities and combination of resources adequacy changes as well as market influences (like EIM and EDAM) to test multiple system conditions.

Local Capacity Potential Reduction Study

CEERT and NRDC are supportive of the effort undertaken in this round of the TPP to identify transmission upgrades that reduce the dependence on natural gas-fired generators in local capacity areas. Local capacity reduction is essential to reducing dependence on gas in order to reach goals set by Senate Bill 100 and Executive Order B-55-18 and to phase out Aliso Canyon natural gas storage facility as intended by the California Energy Commission and CPUC³. The question remains how this informational study will be used and what form the results should be presented to be most valuable for CAISO, the CPUC, and other policymakers to make informed decisions to find the most cost effective path to reducing gas dependency. While what was presented in the stakeholder meeting was largely technical analysis, it's likely necessary to "translate" the results into a broader policy context for the multi-agency process to decide which projects are beneficial.

Additionally, it is unclear how these results will be integrated in the current Resource Adequacy proceeding at the CPUC. It is clear that there must be comparison of transmission upgrades, which is CAISO jurisdictional, with existing gas generator and new preferred resource costs, which is CPUC jurisdictional. CEERT and NRDC recommend the results of the Local Capacity Potential Reduction Study be submitted in the Resource Adequacy proceeding as a proposal for compliance with recently passed SB 1136, which requires the CPUC, in consultation with the CAISO, "shall ensure the reliability of electrical service in California while advancing, to the extent possible, the state's goals for clean energy, reducing air pollution, and reducing emissions of greenhouse gases".⁴

It is also clear that the composition of the renewable resource generation portfolio has critical implications for relatively near term LCR needs in Southern California. The Local Capacity Potential Reduction Study in the San Diego area graphically demonstrates that the composition of renewable resources in the Imperial Valley has a major impact on LCR needs in San Diego. Now that significant penetration of solar resources in coastal urban regions has pushed the area peak load past sunset, the lack of generation in Imperial County after sunset significantly reduces transfer capacity on the 500 kv system from the East. This significantly increases LCR

³ https://www.energy.ca.gov/releases/2017_releases/2017-07-19-energy-commission-chair-releases-letter-ailso-canyon_nr.pdf

⁴ PUC Code Section 380(b)

needs and leads directly to a resource deficit that must be mitigated soon. The value of geothermal or some form of storage in Imperial County is thus significantly understated in RESOLVE/SERVUM modeling at the CPUC. While the study suggests short term mitigation measures, it is clear that a long term solution to reduce gas fired LCR requirements in Southern California, reduce the market power of existing generation in the region, and improve the resiliency of the electric grid in light of pressures to phase out Aliso Canyon gas storage and deal with weaknesses in interstate gas transmission infrastructure will be required in the very near future.

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