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THE OFFICE OF RATEPAYER ADVOCATES' COMMENTS ON THE CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION'S Draft 2016-17 Transmission Plan

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The Office of Ratepayer Advocates (ORA) is the independent consumer advocate within the California Public Utilities Commission (CPUC), with a statutory mandate to obtain the lowest possible rates for utility services consistent with reliable and safe service levels, and the state's environmental goals. ORA appreciates the opportunity to comment on the draft California Independent System Operator Corporation's (CAISO) 2016-17 Transmission Plan and the associated February 17th stakeholder meeting.

California's transmission planning should be based on accurate information about the impact of changing load characteristics.

California is undergoing a fundamental change in the way customer load interacts with and demands services from the CAISO-controlled grid. With the steady growth of customers embracing behind-the-meter (BTM) generation, the recent legislative mandate to double the energy efficiency goals, and the greater reliance on preferred resources,¹ including distributed generation, the forecast of both the net peak demand and load profile are in transition. While the California Energy Commission's (CEC) nascent efforts in estimating the changes in the magnitude and timing of the peak system demand are only just becoming available, the impacts of increased energy efficiency goals on transmission grid demands are yet to be quantified. Until the impacts of changing load characteristics are understood and quantified, expansion of the transmission grid should be limited to those critical areas that are necessary to maintain compliance with reliability standards or to support public policy direction in the most cost-effective manner.

ORA supports the CAISO's continued review and evaluation of previously approved projects including the previously approved projects placed on hold, and recommends that the CAISO should narrowly define the allowable scope of ongoing work on all remaining proposed reliability projects.

In light of the fundamental changes in the load characteristics described above, ORA supports the CAISO and Participating Transmission Owners' (PTO) efforts to review previously approved reliability projects to determine whether the reliability needs still exists and if so, whether the

¹ Public Utilities Code Section 454.55.

currently identified scope of work is appropriate. In this planning cycle, the CAISO has proposed the cancellation of thirteen reliability-driven projects and placed another sixteen reliability-driven projects on hold in Pacific Gas and Electric Company's (PG&E's) service territory. Based upon PG&E's most recent cost estimates provided to the CPUC, these projects represent a cumulative cost of almost \$4.5 billion. Most of these costs are associated with the sixteen projects that have been placed on-hold rather than cancelled.

ORA supports CAISO's reevaluation of the proposed reliability projects in San Diego Gas & Electric Company and Southern California Edison Company's service territories, as well as the PG&E reliability projects placed on hold, and recommends that their reevaluation be prioritized. For those projects that the CAISO ultimately determines should proceed with either the original or a reduced scope, the CAISO should provide transparent documentation demonstrating the current project area reliability needs and the project's contribution to identified reliability needs.

For the four projects that the CAISO has instructed PG&E to proceed with, but not filed at the CPUC for the required certificate or permit, ORA is concerned about continuing to accrue costs on these projects that may ultimately be cancelled or significantly revised. For this reason, ORA recommends that the CAISO clearly define the exact work and information needed to assist with a project decision, and requests that PG&E proceed with only this defined scope of work. Finally, the decision to either cancel or change the project scope should be made as soon as possible in order to avoid unnecessary customer costs. While the CAISO indicated that such a decision would not be formalized until the Board action in the next planning cycle (March 2018), the CAISO should inform PG&E and stakeholders of its findings at the earliest opportunity in order to minimize unnecessary costs.

The CAISO should consider whether operational measures that meet applicable planning standards, rather than new transmission projects, are a better solution to avoid performance violations.

The CAISO's transmission assessment revealed that in some instances where long-term transmission projects are proposed to resolve system performance violations, operational standard measures are effectively addressing system requirements. With the current declining load projections and the uncertainty in load characteristics described above, ORA recommends considering these operational solutions as permanent long-term solutions, unless the incremental reliability benefits associated with a long-term transmission project justify the cost.

For example, the Midway-Andrew Transmission Project was approved during the 2012-13 transmission planning process to replace an existing Special Protection System (SPS) that would drop load in event of a multiple contingency. As this load is not in a High Density Urban Load Center, short-term and long-term reliance on such a SPS is an acceptable mitigation under the North American Electric Reliability Corporation (NERC) and CAISO Planning Standards. Nevertheless, the CAISO approved the Midway-Andrew Transmission Project at a forecast cost of \$120-\$150 Million. More recent estimates reflect an increase of over 350% to \$600-\$700 million. While ORA was concerned with the lack of a cost/benefit analysis in the original project approval, these concerns have been greatly amplified as the costs spiral higher.

This is an example where CAISO should consider the success of the interim, more cost effective solution instead of implementing unnecessary development. The CAISO, through a stakeholder process, should establish a process to evaluate options for projects with operational standard measures in place. This evaluation should take into account the value of improved reliability versus the cost of a new project. Furthermore, the CAISO should maintain an on-going list of all such projects and update the evaluation as new cost information about the cost of long term transmission solutions becomes available.

The CAISO should defer additional deliverability assessments for determination of policy-driven transmission until the role of energy only (EO) resources in achieving a higher renewable portfolio standard (RPS) is understood.

Although the Draft 2016-17 Transmission Plan does not identify any need for new policy-driven transmission projects, ORA remains concerned that the CAISO continues to perform the deliverability assessment assuming that all the renewable portfolio resources need to be fully deliverable. Rather than designating transmission projects as policy-driven solely to allow intermittent renewable projects to satisfy the state's system Resource Adequacy (RA) needs, the CAISO should undertake a cost-benefit analysis to determine whether any proposed new transmission project is needed to assure deliverability of renewable resources and/or to decrease envisioned congestion. Further, the CAISO should determine whether the new proposed transmission is both necessary and is the most economical alternative to meet the state's RA needs. Given the key role Energy Only (EO) resources are expected to play in meeting the 50% renewable portfolio standard (RPS) goal, the CAISO should continue to defer additional policy-driven upgrades until the role of EO resources in the 50% RPS is understood.

The CAISO should provide information from its 50% RPS Special Study for use in the RPS calculator.

ORA supports the CAISO's ongoing efforts to study the feasibility and consequences of using energy-only procurement to integrate the additional renewable resources necessary to meet the 50% RPS goal. ORA's prior comments asserted that the energy-only transmission option, would allow California to achieve the 50% RPS requirement using the existing transmission infrastructure. The CAISO's 2016-17 Transmission Planning Process (TPP) 50% RPS Special Study findings seem to confirm that assertion, where no major incremental reliability issues were observed in the In-State Energy-Only Deliverability Status (EODS) portfolio relative to the In-State Full Capacity Deliverability Status (FCDS) portfolio, except for a few renewable zones such as, the Tehachapi, Mountain Pass and Eldorado, Valley Electric Association and Nevada SW zones. A majority of these reliability issues can likely be avoided by appropriately adjusting and rebalancing the renewable portfolios that would be developed by the CPUC going forward. For example, the existing transmission capability of the El Dorado and Mountain Pass area to accommodate EODS resources could be lowered from the current 2,735 MW to an appropriate level to avoid major reliability issues. ORA respectfully requests that the CAISO provide the CPUC with the critical information it has gathered as part of the 50% RPS Special Study characterizing transmission cost and availability for FCDS and EODS resources to update the RPS Calculator for developing the 2017-18 TPP renewable portfolios and the Integrated Resource Planning (IRP) model for the 2018-19 TPP portfolios.

Another key finding of the 50% RPS Special Study is that renewable curtailments in all the portfolios was primarily driven by over-generation rather than internal transmission constraints. Therefore, building additional delivery network upgrades may not be an appropriate economic and/or reliability solution to reduce renewable curtailments. Moreover, increasing the ability of the CAISO to export excess renewable energy during over-generation periods would likely have the most meaningful impact in respect to lowering the renewable curtailments. Therefore, ORA encourages the CAISO to perform an assessment of realistic levels of net exports that can be achieved by the CAISO Balancing Authority Area in the 10-year planning horizon. As a reference, ORA notes that the CAISO had assumed 5,000 MW of net exports in the Mid-case, and 8,000 MW for the High-case in the CAISO's SB 350 Study.

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