

COMMENTS OF THE OFFICE OF RATEPAYER ADVOCATES OF THE
CALIFORNIA PUBLIC UTILITIES COMMISSION ON THE CAISO'S DRAFT 2015-
2016 TRANSMISSION PLAN

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I. INTRODUCTION

The Office of Ratepayers Advocates' (ORA) provides these comments on the California Independent System Operator (CAISO) 2015-2016 Transmission Plan Policy-Driven and Economic Assessment findings presented during a Stakeholder Meeting on November 16, 2015. ORA makes the following recommendations:

1. ORA supports CAISO's consideration for cancelling previously approved projects;
2. Policy-Driven projects need to take into account role for Energy Only resources going forward, and CAISO should provide clarification on the recommended mitigation measure for the Desert Area deliverability constraint on the Lugo-Victorville 500kV line;
3. CAISO should further assess the need for mitigation measures to address potential congestion in the Exchequer and POE-Rio Oso areas so that mitigations measures are installed only where they are economically justified; and
4. CAISO should provide stakeholders adequate opportunity to review Special Study analysis and findings.

II. DISCUSSION

1. ORA supports CAISO's Consideration for Cancelling Previously Approved Transmission Projects

Background

The CAISO is considering cancellation of the following 11 previously approved transmission projects:

- Bay Meadows 115 kV Reconductoring;
- Cooley Landing - Los Altos 60 kV Line Reconductor;
- Del Monte - Fort Ord 60 kV Reinforcement Project;
- Kerckhoff PH #2 - Oakhurst 115 kV Line;
- Mare Island - Ignacio 115 kV Reconductoring Project;
- Monta Vista - Los Altos 60 kV Reconductoring;
- Potrero 115 kV Bus Upgrade;
- Taft 115/70 kV Transformer #2 Replacement;
- Tulucay 230/60 kV Transformer No. 1 Capacity Increase;
- West Point - Valley Springs 60 kV Line Project (Second Line); and
- Woodward 115 kV Reinforcement.

Many of these projects were approved well in advance of their needs in the earlier transmission planning cycles. The CAISO is now taking a fresh look at their need given changed circumstances. The CAISO is continuing to review additional 19 previously approved projects and may include a recommendation for any further project cancellations in light of changed circumstances and more recent information in the January 2015 draft transmission plan.

ORA's Recommendation: ORA concurs with the CAISO for reviewing the need for previously approved projects. ORA supports the CAISO's efforts to cancel these previously approved projects that are no longer needed in light of multiple factors

including updated load forecast. Some of the previously approved projects were approved many years ago and potential solutions, such as the procurement of preferred resources to defer or eliminate the need for a proposed project, may not have been considered at the time the projects were initially approved. ORA seeks more information on the study processes that determined a lack of need for projects recommended for cancellation and the continued need for previously-approved projects that are not recommended to be cancelled.

2. Policy-Driven Projects Need to Take into Account Role for Energy Only Resources Going Forward

Background: Since there is no change in the Renewable portfolio for Northern California in 2014-15 TPP, the CAISO has not identified need for any policy-driven projects in Northern California. However, the Policy Driven Assessment did reveal new findings for policy-driven projects in Southern California. The CAISO has performed a deliverability assessment to determine the need for policy-driven projects in Southern California with a focus on the Imperial, Riverside and Kramer CREZs. Imperial and Riverside were studied together, whereas Kramer CREZ was studied as a stand-alone case.

As shown below in Table 1 – 2014-2015 and 2015-2016 RPS Portfolios, the 2015-2016 TPP RPS portfolios differed from the 2014-2015 ones for the following three CREZs: Kramer, Imperial and Riverside East. The capacity for each of these zones, which are highlighted in red, was changed to reflect transmission capability improvements, whereas the Coolwater – Lugo Transmission Project's removal resulted in the lower amount of RPS capacity selection in Kramer.

Table 1 –2014-15 and 2015-16 RPS Portfolios

CREZ	2015-2016 Portfolio	2014-2015 Portfolios	
	Base	Commercial Interest (base)	Sensitivity
Riverside East	3017	3800	1400
Imperial	1750	1000	2500
Tehachapi	1653	1653	1483
Distributed Solar - PG&E	984	984	984
Carrizo South	900	900	900
Nevada C	516	516	516
Mountain Pass	658	658	658
Distributed Solar - SCE	565	565	565
NonCREZ	185	185	182
Westlands	475	484	484
Arizona	400	400	400
Alberta	300	300	300
Kramer	250	642	642
Distributed Solar - SDGE	143	143	143
Baja	100	100	100
San Bernardino - Lucerne	87	87	42
Merced	5	5	5

For the several reliability and deliverability overloads identified under the reliability and deliverability assessment, the CAISO proposed mitigation measures such as Special Protection Schemes¹ and rating increases. For example, the CAISO’s proposed mitigation for a deliverability overload on the Lugo-Victorville 500kV line includes either increasing rating of the Lugo – Victorville 500kV line or installing flow control devices to reduce flow on Lugo – Victorville 500kV line.

Overloaded Facility	Contingency	Flow
Lugo – Victorville 500kV	Lugo - Eldorado 500kV	111.87%

ORA’s Recommendation: ORA remains concerned that the CAISO continues to perform the deliverability assessment assuming that all the renewable portfolio

¹ As stated in the NERC glossary a Special Protection System (SPS) is “an automatic protection system designed to detect abnormal or predetermined system conditions and take corrective actions other than and/or in addition of faulted components to maintain system reliability” The SPS can detect a transmission outage or an overloaded transmission facility and then curtail output or reduce load to mitigate potential overloading of transmission systems. A flow control device is an example of an SPS. California ISO Planning Standards, September 18, 2014 p.8

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 show that any proposed new transmission project to assure deliverability of new resources and/or to decrease envisioned congestion is justified. Further, the CAISO should determine whether the new proposed transmission is both necessary and the most economical alternative to meet the State's RA needs. Given the key role Energy Only resources are expected to play in meeting the 50% RPS goal beginning in the 2015-2016 TPP, ORA recommends that the CAISO restrict any policy-driven upgrades in the current transmission plan to minimize ratepayer impact.

For some assessments such as the ECO-Miguel 500 kV contingency overload, the CAISO has proposed a mitigation for 100% loadings. ORA notes that full loading of a facility is not an overload.²² ORA appreciates that the CAISO has identified several low cost solutions to loading issues. In the case of the Lugo-Victorville 500kV overload, ORA encourages the CAISO to pursue the rating increase option. If the rating modification is not possible, the CAISO should notify stakeholders and provide details of the flow control devices that the CAISO would install on the Lugo-Victorville 500kV line.

3. The CAISO should further assess the need for mitigation measures to address potential congestion in the Exchequer and POE-Rio Oso areas so that mitigations measures are installed only where they are economically justified

Background: As shown below in Table 2 – Summary of Congestion: Constrained Paths, Duration and Cost, CAISO has identified Path 26, Exchequer, POE-Rio Oso, Path 15 and COI areas as the top 5 candidate congestion zones for further study.

²² Facility Rating from the NERC Glossary of Terms states that "The maximum or minimum voltage, current, frequency, or real or reactive power flow through a facility that does not violate the applicable equipment rating of any equipment comprising the facility." [Glossary of Terms Used in NERC Reliability Standards](#), Updated November 17, 2015. p.39.

Table 2 – Summary of Congestion: Constrained Paths, Duration and Cost

Constraint	2020 Cost (K\$)	2020 Duration (Hour)	2025 Cost (K\$)	2025 Duration (Hour)
Path 26	7,007	578	3,460	231
Exchequer	1,741	1,125	2,416	1,286
POE-RIO OSO	1,240	79	1,436	75
PG&E LCR (aggregated)	281	32	733	55
Path 15/CC	91	13	333	20
Path 45	163	135	298	237
COI	718	266	252	94
Lugo - Victorville	9	1	32	3
Path 60 (Inyo-Control/Info Phase Shifter)	28	26	28	27
Path 24	0	0	16	17
Path 25	7	13	2	4
West of Devers	26,959	752	0	0
WARNERVL - WILSON	24	4	0	0
SCIT	66	1	0	0
SCE LCR (aggregated)	3,024	71	0	0
Delevn-Cortina	28	2	0	0

* Ranked by 2025 cost

ORA’s Recommendation: In the past transmission planning cycles, the CAISO had identified Path 26 and Path 15 as congested zones. The CAISO had considered several mitigation measures to address congestion in these areas and ultimately determined that they were not economically justified. The CAISO should perform similar assessments for the newly identified congestion areas of Exchequer and POE-Rio Oso so that mitigations measures are installed only where they are economically justified.

4. The CAISO should provide Stakeholders adequate Opportunity to Review Special Study Analysis and Findings

Background: The CAISO has not provided any preliminary findings associated with the 50% RPS Special Study yet. Rather, during the November 16th meeting, the CAISO merely presented the 50% RPS portfolios provided by the CPUC Energy Division using the RPS Calculator version 6.1. This Special Study is for information purposes only, and will not be used to support the need for policy-driven transmission projects in the 2015-2016 planning cycle.

The CAISO has indicated that preliminary curtailment results are being looked at with different export limit assumptions. The Special Study production simulation results will be used to identify snapshots for stability and power flow simulations.

ORA Recommendation: The CPUC RPS Calculator workshop to develop 2016-2017 TPP RPS portfolios is scheduled for December 9, 2015. It appears that the stakeholders will not have the opportunity to review the 50% Special Study findings until the end of January 2016 as part of the Draft Transmission Plan. ORA is concerned that the stakeholders will not have adequate opportunity to review the Special Study preliminary findings to provide a timely and meaningful input to the 2016-2017 TPP portfolios. Therefore, ORA recommends the CAISO to provide the Special Study analysis and findings in December 2015, in advance of the issuance of the 2015-2016 draft transmission plan.