

The ISO received comments on the AV Clearview Phase I Transmission Project – New Alternative Evaluation August 6 Stakeholder Call from the following:

1. Bay Area Municipal Transmission (BAMx)
2. California Public Utilities Commission (CPUC)
3. Critical Path Transmission
4. Southern California Edison (SCE)

Copies of the comments submitted are located on the *2012-2013 Transmission planning process – additional study assessments* page at: <http://www.caiso.com/planning/Pages/TransmissionPlanning/2012-2013TransmissionPlanningProcess-AdditionalStudyAssessments.aspx> under the AV Clearview Phase 1 heading.

The following are the ISO's responses to the comments.

No	Comment Submitted	ISO Response
<b>1</b>	<b>Bay Area Municipal Transmission (BAMx)</b> <b>Submitted by: Robert Jenkins and Barry Flynn, Flynn RCI</b>	
<b>1a</b>	<p><b><i>The Plan of Service of the Project Lacks Justification</i></b> The AVClearview project has been proposed as an alternative to SCE's Coolwater-Lugo 230 kV Transmission Project, the functional purpose of which is to provide Full Capacity Delivery Service (FCDS) to generation projects in the West Mohave area. However, there are elements to the proposed project whose role in providing such FCDS are not clear and have not been explained. These include:</p> <ol style="list-style-type: none"> <li>1. The purpose and need for a 500/230/115 Yeager Substation.</li> <li>2. The purpose and need for two 500 kV lines between Windhub Sub and the proposed Yeager Substation.</li> <li>3. The purpose and need for a 115 kV back-up supply to Edwards AFB. If such a backup is justified, other, lower cost alternatives must be explored.</li> <li>4. The purpose and need for 500 kV facilities and additional 500/230 kV transformer capacity. A determination should be made whether a 230 kV DCTL between Windhub and Kramer meets the functional purpose. If additional bank capacity is needed, can it be included in the plan in such a manner that the decision can be postponed until the actual generation development is better understood? For example, installing the transformer at Windhub would allow utilization of existing transformers until the need for the bank is justified by generation projects actually moving forward.</li> </ol>	<p>The current scope of the AV Clearview project was proposed by the project proponent. Design variations of the project would be considered as needed to determine the best option for meeting the identified needs.</p>
<b>1b</b>	<p><b><i>The Ultimate Need for Additional Transmission in This Area Is Uncertain</i></b> The need for transmission upgrades in this area to meet the 33% RPS is questionable. In the CPUC/CEC portfolios, while the Commercial Interest shows 762 MW in the Kramer CREZ, both the Environmental and DG portfolio only show 62 MW. Therefore, more fundamental than the comparison of Coolwater-Lugo 230 kV potentially providing 720 MW of</p>	<p>Slide 9 only lists the projects in the ISO queue in the Pisgah and Jasper areas and the amounts of deliverability available to those projects from either of the two transmission options. The Kramer area generation in the queue and in the portfolios also requires the Coolwater-Lugo transmission project or equivalent upgrades to ensure their deliverability.</p>

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	<p>FCDS versus 500 MW for AV Clearview, is whether either project is needed for the 33% RPS goal. While slide 9 lists four proposed generation projects that could benefit from either of these transmission projects, whether any of these generation projects have PPAs or have made any substantial deposits toward transmission expansion costs should be an important consideration in not only the project scope selected, but also the pacing of committing to any transmission upgrades on their behalf.</p>	
1c	<p><b>The Lack of Cost Information Results in an Incomplete Comparison.</b> While the CAISO analysis begins to compare the capability of each alternative to provide FCDS to generators in the interconnection queue, cost information is an important part of the selection process. This would include not only the total project costs, but also the willingness to commit to cost caps. Also needed is a breakdown of component costs, so that individual elements of the scope can be separately considered.</p> <p><b>Conclusion</b> BAMx does not support the AV Clearview Project nor the Coolwater-Lugo project at this time. BAMx believes there are ways to reduce the scope of the proposed AV Clearview. Such reduced scope needs to be evaluated, and then the projects need to also be compared on a net TAC impact before recommending/approving either one as needed to meet the State's 33% RPS goals.</p>	Thank you for the comments.

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<b>2</b>	<b>California Public Utilities Commission (CPUC)</b> <b>Submitted by: William Dietrich, CPUC</b>	
<b>2a</b>	<p><b>1. CPUC Staff appreciates CAISO studying the modified AV Clearview project.</b></p> <p>CPUC Staff appreciates CAISO's continuing evaluation of the AV Clearview project, including the latest iteration.</p>	Thank you for the comments.
<b>2b</b>	<p><b>2. CPUC Staff looks forward to CAISO's future evaluation of project refinements and related cost estimates.</b></p> <p>CAISO indicated it intends to continue working with project sponsors on refinements to project components and costs.<sup>1</sup> CPUC Staff looks forward to receiving the refinements of project components and costs and CAISO's evaluation of those refinements.</p>	Thank you for the comments.

<sup>1</sup> CAISO, "AV Clearview Phase I Transmission Project – New Alternative Evaluation" Powerpoint, slide 10, Aug. 6, 2013.

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<b>3</b>	<b>Critical Path Transmission</b> <b>Submitted by: Ken Davis, Critical Path Transmission</b>	
<b>3a</b>	<p><u>Comment 1 – CAISO’s (unstated) Conclusion: AV Clearview is the superior technical solution for the grid</u></p> <p>A careful read of the CAISO’s preliminary alternatives analysis reveals that the initial conclusions do not follow from the CAISOs own findings.</p> <p>Specifically, the analysis clearly states that:</p> <p><b>CAISO finding #1: AV Clearview is equivalent in its ability to provide deliverability to the LGIA, Mojave Solar Project</b></p> <p><b>CAISO finding #2: AV Clearview is superior in its capacity to provide deliverability to the CPUC planning scenarios.</b></p> <p>Through the arbitrary inclusion of queue positions in the Cluster 3 and Cluster 4 study process for projects that (a) do not have executed LGIAs, (b) have been rejected by the CPUC and/or abandoned by the project sponsors, and (c) are not part of the CPUC planning scenarios upon which the CAISO agreed to conduct their studies, the CAISO was able to find a small difference between the projects and used it as the sole justification to favor the incumbent utility.</p> <p>The difference in deliverability that favors Coolwater-Lugo in the Pisgah region is insignificant in terms of being able to fully interconnect the two queue positions, and is a fraction of the increased deliverability that favors AV Clearview in the Kramer region. It is inconsistent and appears prejudicial for the CAISO to apply value to future deliverability only when it favors the incumbent utility – particularly when the analysis contradicts the CAISO/CPUC MOU and pertains to phantom projects interconnecting into phantom substations that the CAISO has deleted from the estimated cost of the Coolwater-Lugo Project.</p> <p>Specifics regarding this comment follow in subsequent comments, herein.</p>	<p>The ISO is obligated to provide their requested interconnection service to projects in the ISO queue pursuant to the ISO Tariff.</p>
<b>3b</b>	<u>Comment 2 – Direct Cost Comparison of the Two Alternative Projects</u>	Thank you for the comments.

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	<p>In the 2012-2013 Transmission Plan, the CAISO concluded that the additional benefits of AV Clearview could not be justified by the higher cost of the previous configuration. Now that AV Clearview has been reconfigured to meet stated objectives of the CAISO study, the preliminary CAISO study report of August 2, 2013 omitted any cost data for the two alternative projects, which are provided here for completeness, openness and transparency.</p> <ul style="list-style-type: none"> <li>• The estimated cost of the AV Clearview Transmission Project (as studied by the CAISO) is \$270 million.</li> <li>• The estimated cost of Coolwater-Lugo, as publicly stated by SCE is \$542 million.</li> <li>• The estimated penalty to California ratepayers for building Coolwater-Lugo in lieu of the AV Clearview alternative is \$272 million.</li> </ul> <p>To reiterate and emphasize, the premium that would be charged to the California ratepayers to construct Coolwater-Lugo is <b>more than a quarter of a billion dollars</b> – a tax on ratepayers of <b>more than \$40M each year for three decades</b>, with no identified benefit other than forestalling competition in transmission development. To place this in perspective, in lieu of this additional and unnecessary expenditure, the California ratepayers could pay to put average-sized rooftop systems on more than 2,000 homes, every year, for 30 years, at no cost to the homeowner.</p> <p>As part of the current study, and earlier in the 2012-2013 Transmission Planning Process the CAISO has chosen to unilaterally downgrade the Coolwater-Lugo cost estimates. While the CAISO may conjecture that elements of the Coolwater-Lugo project are not required, SCE does not agree and has stated so on more than one occasion that it intends to construct Coolwater-Lugo per the FERC-approved scope of work.</p> <p>It is our belief that, above and beyond the strictures of FERC order 890 and their FERC- approved tariff, the CAISO has a fiduciary responsibility to the California ratepayers to <u>objectively report</u> the Project Sponsor's cost estimate and the costs approved by FERC, and not to report what it alone hopes the Coolwater-Lugo costs will be while the Project Sponsor remains conspicuously silent.</p> <p>In line with the analytical basis established in the CAISO's previously published analysis, an appropriate <u>report from CAISO to the CPUC should</u></p>	

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	<p><u>reflect the fact that the AV Clearview Project cost estimate is less than half of the Coolwater-Lugo Project Sponsor's cost estimate.</u></p> <p><u>Project cost estimate is less than half of the Coolwater-Lugo Project Sponsor's cost estimate.</u></p>	
3c	<p><u>Comment 3 – Project Sponsor Cost Containment Discussion</u></p> <p>The profits of SCE, like all Investor Owned Utilities, are regulated and guaranteed by the ratepayers of California. What is of particular concern to the ratepayers and regulatory agencies are the exceptional profits, to the detriment of ratepayers, due to overruns on transmission projects.</p> <p>And while SCE has not yet requested ROE adders for the Coolwater-Lugo Project, they have petitioned to FERC that they believe “the ROE adders are appropriate” for Coolwater-Lugo and have left the door open to request them in the future.</p> <p>To take a single example of the TRTP line, SCE requested and received transmission incentives from FERC in the form of ROE basis points above their guaranteed profit margin, CWIP in ratebase and abandoned plant, in order to provide enough incentive to take the development risk and construct an approximately \$1.7 billion transmission project. FERC granted SCE a 125 ROE basis point adder along with the CWIP and abandoned plant.</p> <p>After a decade of cost overruns, TRTP is estimated at present to have a final constructed cost of more than \$3 billion. These cost overruns are slated to receive the same ROE adder incentives, thus <b>incentivizing and rewarding rather than discouraging cost overruns</b>. Cost overruns on TRTP mean that SCE boosts the base for its Fixed Charge Rate by \$1.3 billion (with no added value to ratepayers), which costs the ratepayers an estimated \$4.2 billion in unplanned transmission access charges over the next 30 years. The 125 basis point ROE adder on that \$1.3 billion <b>provides SCE an additional quarter of a billion in profit as a perverse reward</b> for cost overruns.</p> <p>Independent transmission developers can protect ratepayers by voluntarily foregoing incentives for runaway cost overruns. Critical Path is committed to not only forgoing ROE incentive adders above the costs in our FERC filing, but proactively working with regulatory agencies to incentivize budget discipline in the construction of the AV Clearview Project and all transmission projects. This is</p>	Thank you for the comments

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	<p>best accomplished by limiting equity returns in the case of acute overruns.</p> <p><b>Recognizing that, at present, there is no state-level enforcement mechanism to properly align cost containment incentives, the project sponsors of AV Clearview recommend a means to bring market-type incentives to transmission finance.</b> This could, for example, take the form of providing the ratepayers with a one-time opportunity to acquire from the project sponsor an interest equal to 100% of the cost overrun at the blended project rate of return, should AV Clearview (or any transmission project) costs exceed the FERC-filed budget by over 150%.</p>	
3d	<p><u>Comment 4 – Clarification of Deliverability of CPUC Renewable Generation Portfolio</u></p> <p>The <i>preliminary</i> CAISO study results obscure the difference between the two alternative projects regarding to the amount of renewable generation that can be delivered from the Kramer CREZ. In the interest of clarity, the facts are the following:</p> <ul style="list-style-type: none"> <li>• AV Clearview can deliver all of the 765 MW of renewable generation in the CPUC generation portfolio baseline scenario while also likely eliminating the Kramer SPS.</li> <li>• Coolwater-Lugo can only connect all of the 765 MW of renewable generation but only if the Kramer SPS is <i>increased</i> from its present level to compensate for the project's deficiencies in deliverability.</li> <li>• If AV Clearview is analyzed using the same increased SPS that allows Coolwater-Lugo to meet the CPUC generation portfolio requirements, then the AV Clearview interconnection capacity increases to approximately 1,400 MW.</li> <li>• The CAISO has described the Kramer SPS as basically a local generation curtailment arrangement with a low probability of occurrence and low consequence to load or grid stability; in practical terms, this means an opportunity to increase the SPS further to allow AV Clearview to deliver even more renewable generation (perhaps up to 2,000 MW) from the Kramer CREZ.</li> </ul> <p>It is misleading for the CAISO to describe the striking difference in CPUC generation portfolio deliverability as "both projects can deliver the Kramer zone</p>	Thank you for the comments.



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	<p>renewable generation” and “with AV Clearview the existing Kramer SPS may no longer be required.”</p> <p><b>The CAISO has a responsibility to the CPUC to state the facts clearly and succinctly: With comparable protection schemes in effect, the AV Clearview Transmission Project can deliver at least twice as much renewable generation from the Kramer CREZ as Coolwater-Lugo. Coolwater-Lugo.</b></p>	
3e	<p><u>Comment 5 – Logic and Methodology of Cluster Study Analysis</u></p> <p>The primary purpose of the comparative analysis of the two alternative projects conducted at the behest of the CPUC should be:</p> <ul style="list-style-type: none"> <li>• Evaluate each project’s ability to deliver generation from the existing LGIA signatory, and</li> <li>• Determine any additional benefits of the projects, such as increased grid reliability, increased deliverability of renewable generation.</li> <li>• Evaluate each project’s cost relative to the benefits realized in the CAISO study.</li> </ul> <p>In determining potential additional benefits, the CAISO departed from the Transmission Planning Process protocol of using the CPUC renewable generation portfolio and chose to analyze deliverability of a very specific subset of the cluster 3 and 4 potential LGIAs in the Jasper and Pisgah areas. The analysis and conclusions reached by the CAISO is deficient in a number of ways:</p> <ol style="list-style-type: none"> <li>1. The CAISO mischaracterizes the results, to the sole benefit of the incumbent utility, by stating that AV Clearview would require an upgrade of the Lugo-Jasper 230 kV line to be an “equivalent substitute” for Coolwater-Lugo “in the context of the ISO Generation Interconnection study process” and the cost of that upgrade would need to be added for AV Clearview to be equivalent.</li> </ol> <p>The factual results of the CAISO study, as shown in the CAISO Deliverability Capacity Table, clearly contradict this claim. In practical terms, the deliverability of the two transmission alternatives are identical: <u>Both</u> Coolwater-Lugo and AV Clearview (<u>without</u> the added Jasper-Lugo upgrade) can provide deliverability of</p>	<p>Thank you for the comments.</p> <p>One clarification is that the CAISO has identified a technical solution for AV Clearview to provide an equivalent deliverability amount as the Coolwater-Lugo project would provide. Both project alternatives would need to include reconductoring of the Jasper-Lugo 230 kV line if all of the queued generation at Pisgah were to be constructed.</p>

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	<p>Q135 (60 MW) plus Q552 (60 MW) and one of, but not both of the two 400 MW generators (Q240 and Q241). <u>Both projects</u> would require an N-0 SPS to provide deliverability if all four of the generators in the queue were to be eventually built.</p> <p>The only difference between AV Clearview and Coolwater-Lugo in this regard is that the CAISO has identified a technical solution for AV Clearview to provide deliverability in the event that all four projects are built: upgrade the rating of the Jasper-Lugo element. No such solution has been identified that would allow Coolwater-Lugo to meet these same requirements, short of a complete reconductoring of the existing Pisgah-Lugo transmission line, at unknown (but nonetheless greater) cost to California ratepayers.</p> <p>2. While the CAISO has indicated that review of deliverability of potential LGIA projects is a tariff-allowed departure from their usual transmission planning study protocol, they have not indicated why they chose to limit this review to only the Pisgah region, or to exclude other considerations such as congestion relief and the elimination of SPS.</p> <p>3. The selection of these particular four potential LGIA projects as a basis for the CAISO to make the case for Coolwater-Lugo is very perplexing. In particular, we are aware of the two solar thermal generators (Q240 and Q241), and while technically still “in progress” for their Interconnection Agreement, do not have a permit, do not have a PPA and have already been rejected for approval by the State of California. These two projects might be generously deemed “dormant.” The remaining two LGIA projects would interconnect into the Jasper substation, the cost of which the CAISO conveniently removed from the Coolwater-Lugo estimated cost.</p> <p>We have been unable to find any evidence that these projects are likely to ever be constructed, despite outreach to the solar industry, the CPUC (who has assigned an assumed generation of <b>zero MW</b> for the Pisgah CREZ under all MOU planning scenarios), the CEC (who would be responsible for the project permitting) or the DRECP (who would have to reconcile the siting of these projects with a proposed Mojave Trails National Monument).</p> <p><b>At best, the deliverability of these two projects should be a footnote in the CAISO analysis indicating an immaterial risk for future capacity in the area, not the centerpiece of an argument to incur hundreds of millions in additional</b></p>	

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	<b>cost for California ratepayers.</b>	
<b>3f</b>	<p><u>Comment 6 – Competition Delayed is Competition Denied</u></p> <p>At the time of the initial approval of Coolwater-Lugo as an LGIA, CPUC Commissioners Peevey and Florio wrote to the ISO to express their grave concerns over the way in which the LGIA process served as a substitute for true ‘Transmission Planning’ that would bring the benefits of competition to the grid and to ratepayers.</p> <p>Despite some small actions at the margin, the CAISOs actions, such as in this case, act as a barrier to entry for non-incumbents. If the CAISO study procedures are a moving target, such as is now visible in the AV Clearview study, non-incumbents willing to compete in the market have no assurance that the process to study a project today will be the same tomorrow.</p> <p>After years of advocacy, the High Desert Power Authority was informed last summer that AV Clearview would be evaluated as an alternative to Coolwater-Lugo. It required an additional six months and delivery of a developer funded engineering study to induce the CAISO to begin their evaluation, and only 8 weeks later were the developers made aware of the metrics upon which the alternatives would be evaluated. Once the project was pared to meet the metrics that were finally revealed, we now learn in this preliminary analysis of alternatives that perhaps the CAISO would like to alter both the economic and the technical bases for their results.</p> <p>The CAISO’s conscious decision to avoid the entire topic of cost – perhaps the topic of greatest consequence in the CPUC’s upcoming CPCN process, pushes the CAISO to the very limits of FERC Order 890 compliance in terms of following the guiding principles of openness, transparency, comparability and information exchange.</p>	<p>Thank you for the comments. The ISO included a special study to review the previous version of the AV Clearview project in its 2012/2013 transmission plan process within the scheduled timeline. A special study outside of the normal process was then initiated to study the latest version of the AV Clearview project, as well as a special stakeholder meeting. Both of these steps were taken to be able to provide input into the anticipated CPCN process led by the CPUC. The ISO expects to be in a position to provide input into the CPCN permitting process, within the timelines of that process.</p>

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	<p>In the case of this Mojave Solar Project LGIA, the impacts of forestalling competition (in favor of a more expensive Coolwater-Lugo project) amounts to additional hundreds of millions of dollars to California ratepayers and the lack of technical innovations for the CAISO grid. Because of the magnitude of the impact to the ratepayers, it may make sense for the Board of Governors to solicit alternative transmission projects for all of the LGIA projects that the previous CAISO management protected from a competitive transmission planning process.</p> <p><b>Regardless of intention, these moving targets and indefinite delays are inherently anti- competitive, in that they serve only to protect the utility monopoly.</b></p> <p>And while we absolutely appreciate the recent efforts of the CAISO Board of Governors to force SCE to adhere to an August CPCN submission (only years later than originally proposed), we hope they will respond accordingly should SCE respond in letter, but not in spirit to the admonition of the Board.</p> <p>Specifically, what action should the Board take if SCE submits an incomplete CPCN application that ends up rejected by the CPUC? This completely avoidable months-long delay is expected by all in the industry, reflects a thinly-veiled delay tactic, and is an affront to the pro-competition efforts of the CAISO Board.</p> <p>In sum, competition delayed in competition denied. Both these preliminary study results and the ever expanding calendar of their completion and consideration are reflective of the legacy of utility monopoly, and of an institutional bias in favor of the incumbents and against projects that can bring the benefits of competition to the California transmission marketplace.</p>	

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<b>4</b>	<b>Southern California Edison</b> <b>Submitted by: Jorge Chacon and Kevin Richardson</b>	
<b>4a</b>	<p><b>1. <u>The New AV Clearview Phase 1 Proposal is not on its own an equivalent substitute for SCE's Coolwater-Lugo</u></b></p> <p>SCE agrees with the CAISO's conclusion that the new AV Clearview alternative is not on its own an equivalent substitute for the Coolwater-Lugo 230 kV line in the context of the CAISO Generation Interconnection study process. An upgrade of Lugo-Jasper 230 kV line should be added to the scope and cost estimate for the AV Clearview Phase I alternative. In addition, the Coolwater-Lugo project also facilitates the interconnection of new resources in the Lucerne Valley area and future load serving in the Apple Valley area.</p>	Thank you for the comments.
<b>4b</b>	<p><b>2. <u>The Kramer RAS is Needed</u></b></p> <p>SCE's existing Kramer Remedial Action Scheme (RAS) is a generation tripping scheme designed to mitigate transmission line and transformer bank thermal overloads and system instability that could occur during certain single and double transmission component outages in the Kramer Junction area. Specifically, the Kramer RAS mitigates three transmission components for thermal overloads and four transmission components for system instability. Because the Kramer RAS mitigates for system instability in more cases than it mitigates for thermal overloads and because the CAISO's August 2013 AV Clearview analysis did not include post-transient or stability analysis, it is premature to state the Kramer RAS may not be needed under new transmission scenarios. Additionally, it is important to note the AV Clearview Proposal would require new SPS to address impacts to South of Kramer transmission under outage of transmission connecting Windhub to Antelope and/or Whirlwind, connecting Windhub to Yeager, and connecting Kramer to Yeager as described in sections 4c and 4f.</p>	Thank you for the comments.
<b>4c</b>	<p><b>3. <u>Lockhart Substation has been renamed Sandlot Substation</u></b></p> <p>The Lockhart Substation referenced in the CAISO's August 2<sup>nd</sup> AV Clearview Analysis and August 6<sup>th</sup> Stakeholder Presentation is actually called Sandlot Substation.</p>	Noted. Thank you.
<b>4d</b>	<b>4. <u>Deliverability Assessment</u></b>	Thank you for the comments. The ISO welcomes any analysis that SCE would like to provide for ISO consideration. Referring to the previous response to Critical Path

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	<p>SCE understands that the CAISO is evaluating the revised AV Clearview and Coolwater-Lugo Projects for a relative comparison of how each project could support the classification of new energy resources as Full Capacity Deliverability Status so that they can qualify for Resource Adequacy. However, such studies represent only part of the required analysis needed to fully evaluate and compare projects. The complete analysis must include a reliability assessment in order to identify all impacts that need to be addressed by each project proposal. This reliability assessment includes proper definition of required SPS, short-circuit duty mitigation, transient stability performance, post-transient voltage performance, telecomm requirements, protection requirements, and substation requirements just to interconnect the project. While SCE appreciates the Deliverability Assessment, such studies are inadequate to reach a conclusion that the full scope of a project has been properly identified. Given that the Coolwater-Lugo Project has had both deliverability and reliability assessments completed, it is premature to conclude that all impacts of the AV Clearview have been identified.</p>	<p>Transmission, the ISO's studies are focusing on the technical capabilities of the transmission alternatives brought forward for the purpose of informing the CPUC's CPCN process.</p>
4e	<p><b>5. Phasing of the AV Clearview Proposal</b></p> <p>As stated in SCE's March 12 comments, it continues to be evident that the proponents of the AV Clearview Project have not sufficiently defined the project so that it can be fully assessed in the CAISO's Transmission Planning Process. Each AV Clearview Project proposal to date has been reviewed by the CAISO and been dismissed when it was assessed as part of the CAISO's annual Transmission Planning Process. With the fifth version of the AV Clearview Proposal, the High Desert Power Authority fails to provide any meaningful supporting documentation to justify the claims of this reconfigured project derived from a previously dismissed proposal. Therefore, the CAISO should dismiss this latest version of the AV Clearview proposal without prejudice.</p> <p>Notwithstanding SCE's concerns regarding the incomplete proposal, SCE offers the following technical comments on the CAISO's analysis of what is now called AV Clearview Phase 1.</p>	<p>Thank you for the comments.</p>
4f	<p><b><u>a. The New AV Clearview Phase 1 Proposal is not on its own an equivalent substitute for SCE's Coolwater-Lugo Project</u></b></p> <p>As noted previously, SCE agrees with the CAISO's August 2<sup>nd</sup> report and August 6<sup>th</sup> Stakeholder presentation that the AV Clearview Proposal is not on its own an equivalent substitute for the Coolwater-Lugo Transmission Project. However, SCE</p>	<p>Please refer to the above response.</p>

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	<p>would like to point out that an equitable comparison would require the addition of the cost, scope (including design) of the portion of the Coolwater-Lugo Transmission Project between Lugo and Jasper 230 kV to the AV Clearview Proposal to allow for an equitable comparison. Note that the design of this portion should include long-term load serving and system need considerations, beyond the 10-year planning window, as new transmission is costly and should therefore withstand the test of time. The design should enable improved reliability benefits at the existing Lugo Substation as well as future load serving benefits in the High Desert area, specifically the Town of Apple Valley. Given that the two projects serve different objectives and are located in different geographic areas, comparing the projects is difficult at best. However, if the CAISO is going to provide a cost comparison, the comparison should be based on satisfying equitable Purpose and Need which would require the upgrades between Lugo and Jasper in both the Coolwater-Lugo and AV Clearview Phase I projects. Such inclusion would result in a cost comparison of the AV Clearview Phase I against the Coolwater to Jasper portion of Coolwater-Lugo Transmission Project. This comparison would, in essence, compare the cost of a new 42-mile double-circuit 500 kV transmission line, new Yeager 500/220/115 kV Substation with two 500/220kV transformer banks and one 220/115 kV transformer bank, new 5-mile 115 kV line to Edwards, 500 kV substation upgrades at Windhub to terminate the new 500 kV lines from Yeager, 220 kV substation upgrades at Kramer to terminate the new 500 kV lines (initially operated at 220 kV) from Yeager, and substation upgrades at Edwards to terminate the new 115 kV line from Yeager against the cost of a 34-mile double-circuit 220 kV line and 220 kV substation upgrades at Coolwater and Jasper to terminate the lines.</p>	
4g	<p><b><u>b. Cost Comparison</u></b></p> <p>SCE recognizes that the CAISO is continuing to work with project sponsors on refinements to project scope and costs. SCE urges the CAISO to ensure that any cost comparison is based on equipotential scope and cost estimate assumptions that are comparable. SCE reiterates that no documentation has been provided by High Desert Power Authority to support the assertion that AV Clearview is a lower cost alternative to the Coolwater-Lugo project. SCE has significant experience with transmission project development and construction costs, as it has recently constructed hundreds of miles of 500 kV transmission lines. In contrast, the cost figures presented to date for the AV Clearview project appear to have significant errors and oversights. More importantly, as concluded by the CAISO, the scope of</p>	Please refer to the above response.

No	Comment Submitted	ISO Response
	AV Clearview project is not equitable to Coolwater-Lugo project so scope adjustments would have be considered in order to compare the two distinct projects	
4h	<p><b><u>c. A Better LGIA Solution</u></b></p> <p>The assertion that the newly created Windhub to Kramer connection, through a proposed Yeager Substation, provides an immediate option of a Coolwater-Lugo alternative is incorrect. Such a connection could operate as a revolving door sending power from the Tehachapi area to the Kramer area, thus aggravating the existing Kramer-Lugo 220 kV transmission line capacity constraint or sending Kramer area power to the Tehachapi area thus aggravating loading on the 500 kV transmission lines serving the Tehachapi area. Clearly, the connection cannot offer simultaneous benefit to both the Tehachapi and Kramer areas.</p> <p>High Desert Power Authority makes the assertion that this immediate option would not require any special protection schemes or curtailments. This assertion is incorrect and reflects a lack of understanding regarding how the system operates. In the case of sending power from the Kramer area to the Tehachapi area, studies performed for numerous generation interconnection requests have identified that specific 500 kV outages serving the Tehachapi area (Whirlwind and Windhub Substations) will necessitate a new Northern Area 500 kV SPS. Adding more flow from Kramer would exacerbate the need for such SPS, or require additional 500 kV transmission between Vincent, Antelope, Whirlwind, and Windhub, and would require the implementation of new SPS logic that otherwise would be unnecessary. Such SPS logic would have to expand the identified SPS participants to either include resources from the Kramer area into the Northern Area SPS or simply disconnect the Windhub connection to remove the Kramer area resource contributions. However, such action would result in the creation of overloads south of Kramer, since the system would revert back to today's topology, as disconnecting the AV Clearview Phase 1 Project from Windhub would remove the new transmission from service. This action would necessitate a new SPS that is solely needed due to the AV Clearview Phase 1 Project. Since loss of the Windhub connection can also occur following simultaneous outage of both Yeager to Windhub 500 kV transmission lines, assuming both will be co-located in a common corridor, the simple statement "without requiring any special protection schemes or curtailment" made by High Desert Power Authority is without factual basis.</p> <p>On the other hand, in the case of sending power from the Tehachapi area to the</p>	Please refer to the above response.



No	Comment Submitted	ISO Response
	<p>Kramer area, this additional power will need to flow south of Kramer towards the Lugo Substation on the existing Kramer-Lugo No.1 &amp; No.2 220 kV transmission lines. These transmission lines are already at capacity and are the bottleneck for requiring new transmission South of Kramer. This situation would aggravate existing transmission constraints in the Kramer area, which would require additional infrastructure to mitigate (i.e., the Coolwater-Lugo 230 kV Project).</p>	
4i	<p><b><u>d. Two Times the Transfer Capability</u></b> Given the facts above, it is unclear how the assertions suggesting the AV Clearview project can provide two times (2X) the transfer capacity of the Coolwater-Lugo 230 kV Project can be true. Based SCE's review of the proposal, the AV Clearview Phase 1 Project would not provide any operational benefits, but would rather create new operational complexities that would not exist with the Coolwater-Lugo 230 kV Project.</p>	Please refer to the above response
4j	<p><b><u>e. A Better Solution for Western Mojave Generators</u></b>  The Tehachapi area underwent an extensive stakeholder planning process before being approved by the CAISO. This extensive stakeholder planning process included three conceptual studies whereby high-level plans comparable to the high-level plans currently being proposed for the AV Clearview Project were developed. However, unlike the AV Clearview Project, the Tehachapi area had significant input from numerous parties. Following the conceptual studies, two collaborative study groups were formed consisting of members from the renewable generation community, CPUC, CEC, CEERTS, utilities, CAISO, consultants, and other stakeholders. The collaborative study groups further evaluated and developed plans for needed transmission into Tehachapi. Such collaborative study groups took two years to further vet the transmission requirements. One final collaborative study group was convened under the leadership of the CAISO. This final collaborative study group continued to include members from the renewable generation community, CPUC, CEC, CEERTS, PG&amp;E, and SCE. The point of all the above is to note that the Tehachapi Transmission Project ultimately approved and licensed at the CPUC was a well thought-out and well-designed project with input from numerous parties external to SCE including the Tehachapi Area renewable generation community. The assertions made by High Desert Power Authority that the need for a new collector substation is driven by "the inadequate design of the Windhub Substation" and that the needs of the renewable generation community have not been met is therefore misconstrued and misleading.</p>	Please refer to the above response

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	<p>The Windhub Substation design was shaped by numerous inputs received from the Tehachapi Area renewable generation community. The fact that the Windhub Substation is fully subscribed by queued interconnection requests whose total is approaching the maximum 4,000 MW substation design capability and which 1,559 MW are already in-service should not be characterized as a “shortcoming of the Windhub substation design”. In fact, the opposite is true. The interconnection requests already in queue with the Point of Interconnection identified to be Windhub Substation and Whirlwind Substation total 3,166 MW and 3,759 MW respectively. There is actual generation project development already completed or in progress at these two locations as evidenced by executed LGIAs. This generation development activity clearly demonstrates that the Windhub Substation design (and Whirlwind Substation) has properly addressed the local Windhub Substation area (and Tehachapi Area) renewable generation needs. Such generation project development also provides a factual basis to dismiss High Desert Power Authority statements that “many generators are facing the challenge of interconnection prior to the ITC deadline of January 1, 2017.” The fact is that all generation projects in queue through the end of Queue Cluster 3&amp;4 seeking interconnection in Western Mojave or in the Tehachapi Area can be interconnected prior to January 1, 2017 provided timely execution of a Generation Interconnection Agreement. All of the generation projects through Queue Cluster 3&amp;4 have been tendered draft Generator Interconnection Agreements. Consequently, there is zero evidence supporting High Desert Power Authority’s statement regarding the Windhub design.</p> <p>High Desert Power Authority also appears to misunderstand the Tehachapi Renewable Transmission Project (TRTP). The statement that a fourth collector substation “will eventually have to be constructed if the Tehachapi line is to reach its 4,500 MW capacity” is incorrect. To begin with, there is no “Tehachapi line” but rather a Tehachapi project (TRTP). This project includes three collector substations, Highwind, Whirlwind, and Windhub substations, which will support interconnection of the stated 4,500 MW capacity value. In fact, the three collector substations will support interconnection of up to 8,000 MW with 6,925 MW already seeking interconnection. It is important to note that the 4,500 MW value is the incremental capacity provided south of Vincent once TRTP is completed. Since the AV Clearview Phase 1 (or Phase 2) does not increase south of Vincent capability, there is no real justifiable basis supporting the statements made that a fourth collector substation will be required to reach its 4,500 MW limit.</p>	

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4k	<p><b><u>f. A Better Solution for the Region</u></b></p> <p>High Desert Power Authority’s statement that this is a better solution for the region since it provides economic activity two years sooner is without merit . The underlying assumption for this statement is that the licensing of such a project will be fast-tracked since the licensing agency can somehow make things go faster relative to the CPUC. It is important to note that CPUC involvement is not eliminated since SCE will still have to seek some level of review from the CPUC for the work involved at Windhub and Kramer Substations. In addition, SCE will need to perform a reliability assessed for the proposed AV Clearview Phase 1 Project. These problems involve the creation of new contingencies requiring SPS expansion or new SPS development. None of the scope for such new SPS has been properly defined and the level of CPUC required involvement has not been defined. As such, when looking at the project comprehensively, the two-year savings may vanish and ultimately longer lead times may result when the full extent of the project scope and complete CPUC involvement is properly identified.</p> <p>With regards to energy redundancy to Edwards AFB, no such need has been identified. Review of outage history has revealed that the existing 115 kV line serving Edwards AFB has not experienced a prolonged outage over the last 10 years. All outages have been categorized as “open and reclose” operations and have thus been minimal in duration. The proposed “energy redundancy” aspects will therefore not exist since the proposed line would be operated normally open and would close only upon loss of the existing 115 kV line. As such, the exact same outage duration will be experienced with or without the proposed 115 kV line. Consequently, this line segment provides for no real measurable benefit and has not been identified to be required in any of the load serving studies that have been performed over time.</p> <p>Additionally, High Desert Power Authority’s assertion that a 115 kV connection from its proposed Yeager Substation to SCE Edwards Substation is an integral part of the AV Clearview Project and results in “significant savings to ratepayers” is incorrect. High Desert Power Authority’s claim for “significant savings to ratepayers” runs counter to the fact that CAISO has not identified a need for an additional source line into Edwards Substation which is currently sourced from SCE Holgate Substation. In fact, CAISO in its February 1, 2013 Draft 2012-2013 Transmission Plan, after studying High Desert Power Authority’s proposed 115 kV line from</p>	<p>Please refer to the above response</p>

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	<p>Yeager Substation, found that connecting a 115 kV line from Yeager Substation to Edwards Substation would result in multiple line overloads to the new Yeager-Edwards 115 kV line as well as the existing Edwards-Holgate 115 kV and Holgate-Kramer 115 kV lines. CAISO's proposed mitigation was to keep the Yeager-Edwards 115 kV line open resulting in a line that is neither needed nor connected to the Edwards Substation.</p> <p>Rather than removing this component from the AV Clearview Project, High Desert Power Authority in both its February 25, 2013, and February 12, 2013 comments left this 115 kV line in and described it as either an open line or a backup for Edwards Substation. Moreover, as SCE noted in its February 25, 2013 comments, the AV Clearview Project would require SCE's Edwards Substation to be rebuilt to accommodate High Desert Power Authority's proposed Yeager-Edwards 115 kV line. The proposal to build a new 115 kV line from Yeager Substation to Edwards Substation should be dismissed as ill-conceived as it lacks both need and a basis from which to assess claimed ratepayer benefits.</p>	
41	<p><b><u>g. Claim that Coolwater-Lugo will face Environmental Challenges</u></b></p> <p>The Coolwater-Lugo 230 kV transmission line would be approximately 62 total miles in length and would incorporate the Garamendi Principles of using existing and expanded rights-of-way. Approximately 28 miles of the Coolwater-Lugo 230 kV transmission line would be on existing ROW, approximately 17 miles would be adjacent to an existing LADWP 500 kV transmission line corridor, and only approximately 17 miles would be on new ROW not adjacent to existing structures. On the other hand, the AV Clearview Phase 1 Project would require approximately 42 miles of new ROW not adjacent to existing structures for the Windhub-Yeager-Kramer lines and approximately two miles of new ROW possibly next to adjacent SCE structures for the Yeager-Edwards 115 line, which has not been proven to be needed. Phase 2 would require approximately 34 miles or more of new ROW not adjacent to existing structures for the underground Yeager-Tucker DC line.</p> <p>Existing corridors and previously disturbed lands present fewer environmental challenges than using undisturbed lands and undergrounding. Moreover, SCE has already begun conducting both biological and cultural surveys along the potential alternative routes in coordination with the BLM Field Office in Barstow. Furthermore, the Coolwater-Lugo 230 kV Project Team has done considerable outreach with Agencies, Cities, County, Military, Non-Governmental Organizations</p>	Please refer to the above response

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	(NGOs), the Public, and Native American Tribes to create routes that will have as few environmental challenges as possible. Table 1, below, notes the Coolwater-Lugo 230 kV Project outreach to date. (see SCE comments for table)	
<b>4m</b>	<p><b><u>h. Operational Benefits</u></b></p> <p>High Desert Power Authority previously stated that the “AV Clearview Phase 1 Project offers difficult-to-quantify yet real operational benefits, among others, the ability to increase power transfer capability to load centers via DC phase shifting as well as reactive power support currently needed by nearby 115 kV lines”. This statement continues to be factually incorrect with the new previously dismissed proposal, which no longer includes DC phase shifting. As discussed above, a connection could function as a “revolving door” moving power from one area to another area depending on actual system conditions. Both of the areas in question are not load centers of SCE, PG&amp;E or SDG&amp;E. Consequently, the project does nothing to increase transmission capability to the load centers. In the case of SCE and SDG&amp;E, transmission capacity to move power to the load centers is south of Vincent and south of Lugo as the load centers are located south of Vincent and south of Lugo. In the case of PG&amp;E, transmission capacity to move power to the load center is north of Midway (and perhaps north of Whirlwind). This project is located in an area that is north of Vincent and north of Lugo but south of Midway (and electrically south of Whirlwind). Consequently, this project cannot possibly increase power transfer capability to load centers. As far as the reactive support stated, none of the studies performed for the numerous generation interconnection requests have identified a need for reactive support.</p>	Please refer to the above response
<b>4n</b>	<p><b><u>i. Low Cost Future Expansion Opportunities</u></b></p> <p>With the new previously dismissed proposal, future expansion will cost more than the previously suggested “low cost future expansion opportunities”. SCE did not view the previous Phase 2 Project scope as a low cost future expansion opportunity and with the cost to implement Phase 2 likely growing, SCE continues to have concerns with a broad statement that future expansion opportunities are “low cost”.</p>	Please refer to the above response
<b>4o</b>	<p><b><u>Summary</u></b></p> <p>SCE’s review of the new “new” AV Clearview Phase 1 Project has resulted in continued significant issues. The AV Clearview Phase 1 Project will create new operational complexities and will not provide the needed transmission to the Western Mojave Generators. As discussed above, the AV Clearview Proposal</p>	Please refer to the above response.

No	Comment Submitted	ISO Response
	<p>cannot be a better solution for Western Mojave Generators, the Region, or Q125's LGIA. As a result, SCE's Coolwater-Lugo 230 kV Project continues to be the most cost effective project because the AV Clearview Phase 1 Project would not perform as claimed or meet the purpose and need of SCE's Coolwater-Lugo 230 kV Project, which also includes facilitating the interconnection of new resources in the Lucerne Valley area and future load serving in the Apple Valley area.</p>	