

BAMx Comments to CAISO with Respect to CAISO Led Effort on Imperial County Transmission Consultation

The Bay Area Municipal Transmission group (BAMx)¹ appreciates the opportunity to comment on the Imperial County Transmission Consultation – Draft Discussion Paper dated July 2, 2014, and the associated stakeholder presentation on July 14.

1. BAMx applauds the CAISO for bringing forth these issues at this time. Although the results of any studies would need to be incorporated into the CAISO 2014-15 planning process, this meeting and description of issues allows for a broad stakeholder input before the CAISO develops its position. Such early stakeholder engagement facilitates a much more in-depth understanding of the issue rather than waiting until the draft transmission plan, which gives stakeholders a short period of time to understand, analyze, and comment. We commend the CAISO for having this discussion now and encourage the CAISO to expand on this type of pre-draft report activity.

2. The CAISO and some stakeholders recognize that the issue at hand is deliverability for resources that allow buyers of renewable projects' output to count the generators' dependable capacity toward their Resource Adequacy (RA) needs. However, there continues to be a perception held by some stakeholders that major transmission needs to be constructed in order to obtain the energy from resources in the Imperial Valley to meet California's 33% Renewable Portfolio Standard (RPS) requirement based goal. From comments in the stakeholder meeting, it appears that the CAISO is in agreement that that the congestion risk is low from the energy produced by the renewable resources in the CPUC-specified RPS portfolios. If so, the CAISO needs to be clear on this point. If this is not the CAISO's position, or if the congestion risk is unclear, then the scope of the work under this initiative should be expanded sufficiently to address this important parallel issue. It is imperative that stakeholders understand the distinction and the nature of the limitations on this section of the transmission system that imports resources from Imperial Valley. Congestion and deliverability are two very distinct concepts.

¹ BAMx consists of Alameda Municipal Power, City of Palo Alto Utilities, and City of Santa Clara, Silicon Valley Power.

3. The CAISO noted at the Stakeholder meeting that much of the Full Capacity Deliverability Service (FCDS) for the Imperial County has already been allocated to generators in the CAISO interconnection queue. The CAISO should provide a summary table with the amount of resources with the current system FCDS as well as the FCDS with the currently approved transmission expansion plan. Also included in the table should be the RPS portfolio amounts for this area. This would allow stakeholders to have a better quantitative understanding of the existing gap. A further enhancement would be information on the amount of resources that are in the RPS portfolios with executed PPAs. Lastly, such a table should also include the likely additional development of legislatively mandated geothermal procurement.

4. The state has a surplus of system RA capacity to meet its 33% goal, even after accounting for the San Onofre Nuclear Generating Station (SONGS) shutdown and the retirement of some once-through cooling (OTC) plants. The planning reserve margin is 115% in 2029 and 114% in 2030 under the Trajectory Scenario. These numbers do not account for the fact that even though there is excess system RA capacity, the state will be adding resources for local capacity and flexible capacity needs that count towards system RA purposes, which will add to the excess. The CPUC Scoping memo dated March 26, 2014, that contained the above planning reserve margins stated: "In the 2012 LTPP proceeding (R.13-014), the Commission found that there is no need to procure additional system capacity. Thus, this ruling seeks parties' feedback on whether, to be consistent with that determination, the IOUs' should assume in their LCBF methodologies that system capacity in the context of resource adequacy requirements has zero value and whether they should evaluate bids accordingly." This statement by the CPUC highlights the need to bifurcate the Imperial County transmission constraints into a congestion issue, if any, and the RA capacity counting issue ("deliverability").

5. If new transmission is needed to provide deliverability, then that transmission should not be funded as Policy-Driven projects paid for by all ratepayers, as there is no State policy to obtain RA from renewable resources. The proposed state laws requiring contracting for geothermal output do not require obtaining RA capacity from the resources. The CAISO has commented previously that its focus on FCDS is due to requests from generators for such service. Generator requests for FCDS flows from how the CPUC determines that utilities should value RA, it does not mean that generators should be shielded from the price signals associated with such a request by designating Area Delivery Network Upgrades as Policy-Driven and including them in the transmission plan. To be an approved project in the transmission plan (TPP) there must be a clear connection to a specific policy objective, which in the case of the 33% RPS requirement, is an energy objective. Stated differently, "deliverability at any cost" is not a public policy objective.

6. It is clear from the Aspen study that most of the projects being proposed as Group 2 and 3 projects in the presentation will have major adverse environments impacts and be very difficult to site. Any proposed solution that includes building a major new transmission line must have significant and clear public benefits that cannot be reasonably met through alternative means.

7. If the transmission capacity needed to obtain additional RA from the Imperial Valley resources can be accomplished without expensive transmission upgrades, those mechanisms should be pursued. We support the concept of re-allocating Max Import Capacity (MIC) expected to be unused to interties where there is an expectation of use, such as those interconnecting to the Imperial Irrigation District (IID). That said, such a transfer should not occur unless the transferred MIC actually gets utilized to meet the state's RA needs. Therefore, it is important to investigate timing issues for any MIC transfer. The CAISO and other stakeholders appear to be aligned in supporting this concept. If Tariff changes are required to accomplish this goal, we suggest that a separate stakeholder process be started as soon as possible. A decision on the details of such a re-allocation scheme should not need to occur before such a process is started. We do not have any detailed recommendations on needed Tariff changes at this time, but we would like to point out that this is one of many reasons, in addition to reviewing the requested information above, to hold a second stakeholder meeting on Imperial County Deliverability. An additional meeting should help the CAISO develop a starting proposal for the separate Stakeholder process.

BAMx appreciates the opportunity to comment on the CAISO the Imperial County Transmission Consultation – Draft Discussion Paper. BAMx looks forward to working with the CAISO staff to continue to improve and enhance the planning process in California.

If you have any questions concerning these comments, please contact Barry Flynn (888-634-7516 and brflynn@flynnrci.com)

**Comments of Boston Energy Trading and Marketing on
Imperial County Transmission Consultation Discussion Paper and Addendum**

Boston Energy Trading and Marketing ("Boston Energy") appreciates the opportunity to comment on the CAISO's Imperial County Transmission Consultation Stakeholder Meeting convened on July 14, 2014 and the Imperial County Transmission Consultation technical addendum released on July 31, 2014.

Merchant Transmission Solutions Should be Considered as Potential Solutions

As a general comment to both the draft discussion paper and the technical addendum, Boston Energy urges the CAISO to consider all options for addressing concerns regarding import capability needs into the CAISO Balancing Authority. Specifically, Boston Energy urges the ISO to consider Merchant Transmission upgrades as a potential solution for addressing deliverability concerns out of IID into the CAISO, or any external interface with for that matter. Merchant Transmission upgrades are a proven option for increasing transfer capability in the CAISO and other ISO/RTO markets, and shouldn't be excluded from consideration because of the potential for increasing transfer capability into the ISO, rather than strictly from within the ISO boundaries.

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The California Consumers Alliance (CCA) appreciates the opportunity to comment on the Imperial County Transmission Consultation – Draft Discussion Paper dated July 2, 2014, and the associated stakeholder presentation on July 14 and applauds the consultative approach early in the planning process.

The CAISO asks the following:

“There are major 500 kV AC or HVDC transmission options from Imperial County to the ISO. Are there other options to consider?”

The following clarifications by the CAISO would assist stakeholder understanding and would allow for a more informed comments and useful participation:

- 1) It is not clear from slide 10 of the CPUC’s July 14, 2014 presentation why the CAISO used the study assumptions from the CPUC 2012 Long Term Procurement Plan (LTPP) Track 4 Scoping Memo, rather than those assumptions plus the CPUC’s procurement authorizations which were issued in connection with Track 4 of the 2012 LTPP. Please explain.
- 2) It is not clear from the CAISO’s presentation what the San Diego /LA basis Local Capacity Requirements (LCRs) are, and the year(s) the LCRs are applicable. Please clarify.
- 3) It is not clear from the CAISO’s presentation what the impacts of the proposed group II and group III transmission projects on the IID MIC are, if any. Please provide an estimate of these impacts on the IID MIC.

The CCA believes until the above issues are clarified a comparison of the group II and group III alternatives is premature.

The CAISO asks the following:

“Considering the information documented in the existing Aspen environmental feasibility analysis of potential corridor designations in southern California, what additional information could be provided to Aspen to supplement their study?”

It is clear from the Aspen study and the CAISO’s presentation that most of the Group II and III transmission projects will have major adverse environmental impacts, are very difficult to site, and have very high costs. Any proposed solution that includes building a major new transmission line must have significant and clear reliability and/or public policy benefits that cannot be reasonably met through alternative means. Aspen should

be asked to evaluate the comparative environmental feasibility of adding distributed generation, energy efficiency and/or demand response in the LCR areas.

The CAISO asks the following:

“Is the reallocation of Maximum Import Capability from the transmission path from Arizona to the transmission paths from Imperial County a viable option? If so, what approaches should be considered by the ISO to implement this proposal?”

The following clarifications by the CAISO would assist stakeholder understanding and allow for more informed comment and useful participation:

- 1) It is not clear how many MW of renewable or non-renewable energy and dependable RA capacity are assumed exported out of the IID balancing authority into the CAISO balancing authority and by what date. Please provide clarifying data.
- 2) It is not clear if the CAISO’s existing deliverability mechanism allows for an adjustment to the historical-based MIC when new intertie transmission goes into service. If it does allow for adjustment, how is historically-based MIC is adjusted to accommodate the system changes? Please explain.

The CCA makes the following assumptions:

- 1) The main driver behind the need to increase the deliverability from IID to the CAISO is that the three IOUs would purchase 500 MW of new geothermal generation built within the IID balancing authority area (including these generators’ Resource Adequacy (RA) counting rights).
- 2) 500 MW would need to be “deliverable” from the IID balancing authority to the CAISO balancing authority.
- 3) There are currently zero megawatts of available deliverability out of the IID balancing authority, even including the approved second tie between the IID balancing authority and the CAISO balancing authority near Imperial Valley substation.
- 4) According to the CAISO’s presentation the reallocation of the currently-available MIC from the Palo Verde tie to IID, along with the reallocation of the additional MIC provided by the approved Delany-Colorado River line, would provide an additional 500 MW of MIC from the IID balancing authority into the CAISO balancing authority.

Please verify that the above assumptions are accurate. Given the above assumptions, the CCA believes the reallocation of unused MIC from the Arizona tie

to the IID would be a least cost and environmentally superior option for achieving an additional 500 MW of deliverability from the IID balancing authority.

The CCA believes that in the long-run a better approach for accommodate MIC needs at different tie points between the CAISO balancing authority and neighboring balancing authorities would be to replace the historically-based method with a forward-looking study-based approach. A separate stakeholder initiative should be started to discuss this change.

The CCA believes that the state has surplus of system RA capacity though 2029 even after accounting for the San Onofre Nuclear Generating Station (SONGS) shutdown and the retirement of some once-through cooling (OTC) plants.¹ The state also has no shortage of renewable resources to meet its 33% RPS goal. These numbers do not account for the fact that, the state will be adding resources for local capacity and flexible capacity need that may also count towards system RA purposes. These additions will add to the projected surplus.

If additional deliverability beyond 500 MW from the IID balancing authority discussed above is required to accommodate the full deliverability of new generation into the CAISO balancing authority the additional new transmission should be funded by the benefitting generators, rather than as a Policy-Driven projects paid for by all ratepayers. This would provide an important price signal to guide generators in location decisions and would help to minimize the overall delivered cost of power. The CCA believes that “deliverability at any cost” is not prudent public policy.

The CCA appreciates the opportunity to provide comments on the CAISO’s Imperial County Transmission Consultation – Draft Discussion Paper. The CCA looks forward to working with the CAISO staff to continue to improve and enhance the planning process in California.

If you have any questions concerning the above comments please contact the CCA’s Ron Dickerson at calconsumersalliance@gmail.com.

Thank you.

¹ The CPUC Scoping memo dated March 26, 2014

**California Department of Water Resources State Water Project's Comments
to California Independent System Operator for the
Imperial County Transmission Consultation Stakeholder meeting
July 28, 2014**

The California Department of Water Resources-State Water Project (CDWR-SWP) appreciates the opportunity to provide these comments on the Imperial County Transmission Consultation Stakeholder meeting held by California Independent System Operator (CAISO) on July 14, 2014.

CDWR-SWP believes that re-directing the transmission for Imperial County through the CAISO control area could change congestion patterns. Therefore, CDWR-SWP recommends that prior to making a decision on re-directing, CAISO perform congestion tests and inform the Market Participants of the expected changes in congestion patterns that would occur.

Additionally, CDWR-SWP recommends that the CAISO not change the current Maximum Import Capability (MIC) allocation method that allows Existing Transmission Contracts, Transmission Ownership Rights, and old contracts (Pre-RA Import commitments) to be allocated a part of MIC.

Please contact John Yarbrough (916-574-0665 and johny@water.ca.gov) or Aseem Bhatia (916-574-0674 and abhatia@water.ca.gov) with any questions.

**Comments of the Staff of the California
Public Utilities Commission**

**On the California ISO's Imperial County Transmission Consultation Issue Paper
(Including the July 14, 2014 Stakeholder Meeting)**

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July 28, 2014

Introduction

The Staff of the California Public Utilities Commission ("CPUC Staff") appreciates this opportunity to provide comments on the California Independent System Operator's ("CAISO") *Imperial County Transmission Consultation Draft Discussion Paper* posted July 2, 2014 as well as on topics discussed at the subsequent stakeholder meeting on July 14, 2014. This represents a valuable opportunity to provide recommendations regarding not only studying and planning RA deliverability from the Imperial Valley area, but also regarding fundamental RA deliverability and Maximum Import Capability (MIC) issues, and regarding 2014-2015 Transmission Planning Process (TPP) priorities for studying the Southern California bulk system while recognizing acute environmental siting constraints.

CPUC Staff comments cover the following topics.

1. Reallocating MIC to Imperial County is of unclear value to the CPUC, and there should be more comprehensive evaluation and stakeholder consultation of MIC intertie reallocation choices, instead of a one-off approach. The initiative should compare historical scheduling-based versus proactive flow-based approaches to MIC, with the goal of avoiding unnecessary limitation of deliverability from an area and preserving optimal, economic, and reliable deliverability from all resource areas.
2. Delivery capability out of the Imperial Valley (IV) area should be assessed and discussed with stakeholders in conjunction with the 2014-2015 TPP, considering the implications of MIC methodology choices, CAISO- and IID-interconnected resources, and reliability benefits for coastal load centers.
3. The CAISO's assessment of Southern California bulk system reliability in the 2014-2015 TPP should account for generation resources recently authorized by the CPUC. Any additional transmission additions that the CAISO wishes to

consider should be focused on transmission options for which severe environmental obstacles have *not* been identified. Transmission planners should wait to see what generation and other resource projects emerge from recent CPUC-authorized procurement before assuming that a need for more transmission exists.

4. During the July 14 stakeholder workshop on MIC reallocation, CAISO staff also raised questions regarding transmission options to mitigate for SONGS. If the CAISO wishes to initiate a SONGS-specific transmission options consultation, CPUC Staff requests that that topic be addressed in a separate initiative with that title.

CPUC Staff comments on the above topics are detailed below.

1. *Reallocating MIC to Imperial County Is of Unclear Value, and Requires More Comprehensive Evaluation and Stakeholder Consultation of MIC Intertie Allocation Choices. The Initiatives Should Compare Historical Scheduling-Based Allocation Versus Proactive Flow-Based Approaches to MIC, With a Goal of Avoiding Unnecessary Limitation of Deliverability from an Area and Preserving Resources' RA Values Where Possible.*

Reallocating MIC to Imperial County may create unintended consequences that the CPUC Staff does not yet fully understand. In light of the fact that there will be winners and losers if this approach is pursued, and further, because recently approved transmission elements may change the IV deliverability assessments, it is premature to change the MIC Intertie allocation without further review and analysis.

It is important that the CAISO clarify and discuss with stakeholders the range of options and implications for the suggested MIC reallocation, including how this fits into the overall process for MIC allocation. This includes the role of the extended (forward-looking) MIC allocation process that may apply for access to areas containing substantial new preferred resources. This clarification and discussion deserves a separate initiative or other sustained interaction with stakeholders. Some of the issues and questions that should be pursued include the following:

- a) The options for suggested MIC reallocation and their implications should be identified and discussed, such as:
 - The amount of reallocation (MW added and removed);
 - The value of a stable MIC reallocation method versus readjustments ;

- The fate of a reallocation if a subsequent infrastructure upgrade occurs or if the “extended MIC” approach is subsequently applied to one or more of the affected interties or resource areas; and
 - The role of Transmission Ownership Rights, Existing Contracts and Pre-RA Import Commitments.
- b) Using effectiveness factors to guide MIC reallocation among interties implies that a physically limiting constraint exists, which may be jointly, though not necessarily equally, impacted by flows on the different interties. However, historically based MIC reflects historical *scheduled* flows that may in fact leave significant headroom to increase import flows without violating reliability requirements or overloading lines. Therefore, the CAISO should fully explain and discuss whether increased MIC allocation to the Imperial County area (or any intertie/area) actually means that a MIC reduction for other interties/areas is physically (electrically) necessary to ensure that imports at the various interties’ MIC levels can be simultaneously reliably maintained.
- c) It is one thing to be conservative about conferring import RA value (i.e., MIC) for planning purposes when it is unclear if resources will be available to fill a given intertie above some historically observed level. However, it is another thing to use such historically based limits to limit RA deliverability for known new resources that would utilize interties above historical levels on a forward-looking basis. Based on the CAISO presentation at the workshop, this dichotomy appears to underlie the rationale for the extended MIC methodology. However, it represents a disconnect between the historically based method and the expanded MIC method, especially when applied to the same or interacting ties. Before deciding whether to pursue a suggested MIC reallocation that would reduce the MIC for other ties when increasing the MIC for the IV area, there should be consideration of first applying the “extended MIC” approach to see if the IV MIC could be increased (first without upgrades, then with upgrades as necessary), while preserving MIC levels for other interties in a physically reliable manner.
- d) The CAISO should discuss with stakeholders the range of possible scenarios for MIC at other interties if transmission upgrades are added to increase IV deliverability. Should the MIC at other ties remain unchanged even as the IV MIC is no longer determined by “maximum aggregate historical schedules,” or if grid infrastructure has been upgraded for IV in a manner that may enhance the physical ability to reliably support flows on *other* interties?
- e) The CAISO should clarify and discuss with stakeholders how MIC may be impacted differently depending on whether new resources seeking RA deliverability are interconnecting *outside* of the CAISO area and would be imported across interties, or interconnecting *downstream* of the interties, for example at the new collector substation near the IV substation, and thus are not designated as imports.

- f) The CAISO should clarify if MIC reallocation from PV to IV avoids transmission upgrades, and if so which upgrades that are already approved or planned for the future.

2. *Delivery Capability Out of the Imperial Valley (IV) Area Should be Assessed and Discussed with Stakeholders in Conjunction with the 2014-2015 TPP, Considering MIC Methodology Issues, CAISO- and IID- Interconnected Resources, and Reliability Benefits for Coastal Load Centers.*

CPUC staff appreciate and support the CAISO's stated intent¹ to assess, within the 2014-2015 TPP, deliverability from the IV area, including the most efficient solutions to achieve previously targeted deliverability levels and to deliver a higher level of Imperial County renewable resources as specified in a sensitivity portfolio provided by the CPUC for 2014-2015 TPP studies. These studies of deliverability should:

- a) Identify and explain the baseline level of deliverability with approved transmission infrastructure additions, excluding the Delaney-Colorado River project. The baseline level of deliverability should be reported and explained under: (i) the current MIC allocations, (ii) the suggested MIC re-allocation, and (iii) the maximum physically reliable IV deliverability levels assuming imports at current MIC levels at other interties.
- b) Study the parameters identified in (a) but assuming the Delaney-Colorado River project to be in service.
- c) The CAISO should identify and explain the IV deliverability achieved by specific yet-to-be-approved infrastructure additions, where such additions would aim to achieve the previously targeted IV deliverability level and separately deliver resources in the sensitivity portfolio being studied in the 2014-2015 TPP. This should be done with and without the Delaney-Colorado River project, and with and without setting flows at current MIC levels on other interties.
- d) The CAISO should explain *if and how*, under the above scenarios, the IV area deliverability level and its interaction with MIC levels on other interties vary depending on whether the IV resources in question are assumed to interconnect directly to the CAISO-controlled grid versus to the IID grid.

¹ E.g., as emphasized on page 2 of the approved 2013-2014 Transmission Plan and on page 3 of the Draft Discussion Paper for the Imperial County Transmission Consultation.

- e) For any options identified and studied for enhancing deliverability from the IV area, the CAISO should explain the amount of benefits (or lack of benefits) for electric reliability in the Los Angeles Basin and San Diego local areas.
- f) The CAISO should assess infrastructure options to address IV deliverability that are less likely to encounter serious environmental permitting and siting obstacles.

3. *The CAISO's Assessment of Southern California Bulk System Reliability in the 2014-2015 TPP Should Account for Recently Authorized Resource and Transmission Additions and Should Give High Priority to Illuminating Transmission Options for Which Severe Environmental Obstacles Have Not Been Identified.*

Substantial resource and transmission additions have been authorized by the CPUC and CAISO respectively since the Southern California bulk system reliability studies in the 2013-2014 TPP. The updated 2014-2015 TPP studies should account for this changed baseline when assessing potential further infrastructure additions supporting bulk system reliability in this area.

Furthermore, as indicated by Aspen's environmental feasibility analysis conducted for the California Energy Commission,² major Southern California bulk system transmission options identified and preliminarily assessed by the CAISO in the 2013-2014 TPP generally face significant, daunting environmental siting and permitting obstacles.

Thus, it is essential that the CAISO's 2014-2015 TPP studies of any transmission options to support Southern California bulk system reliability provide information and analysis on options that:

- a) are appropriate in magnitude and location for reliability issues that exist *after* fully accounting for benefits of recently authorized resource and transmission additions, and
- b) do *not* entail extremely challenging environmental obstacles.

Finally, the CAISO's Southern California bulk system reliability studies and its policy-driven studies should clearly identify and assess synergies and interactions between reliability and policy, such as accessing preferred resources.. Specific infrastructure additions might

² *Transmission Options and Potential Corridor Designations in Southern California in Response to Closure of San Onofre Nuclear Generating Station (SONGS) Environmental Feasibility Analysis*, May 2014 CEC-700-2014 -002

provide both reliability and access to preferred resources, or infrastructure identified for one purpose could reduce the need for investments for other purposes. For example, investments to support long-term access to IV resources might simultaneously reduce the need for and value of transmission investments aimed at supporting coastal load center reliability, or vice versa.

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Imperial County Transmission Consultation

Draft Discussion Paper

Dated: July 2, 2014

Comments Submitted: July 28, 2014

Summary:

Section 3.3 of the Discussion Paper highlights the possibility of a reallocation of Maximum Import Capability between intertie locations. Specifically, the ISO posits a reallocation of import “counting” rights from Arizona interties to Imperial County interties (“Imperial Reallocation”). In this discussion and during the conference call, the CAISO asks stakeholders to identify areas that may need to be addressed if this possibility becomes a straw proposal.

First, Calpine suggests that the ISO maintain the constraint of simultaneity. That is, the current MIC process was designed to ensure that the level of imports “counted” as RA be limited to an amount that can be simultaneously delivered at peak conditions. This constraint is necessary because we know that the non-simultaneous import capacity is significantly larger than that which can flow instantaneously, for example, due to stability or transfer limits.

Since this simultaneous limit is very difficult to model prospectively, the CASIO tariff and BPMs create a mechanism which uses historic flows to establish the maximum simultaneous import capability. Any Imperial Reallocation Straw Proposal should clearly specify how the simultaneity constraint will be satisfied. The Discussion Paper suggests the use of effectiveness factors for reallocations, a useful concept that should be further explained.

Second, the ISO should evaluate the effects of reallocating RA “counting” rights on existing multi-year RA import contracts. That is, RA contracts with terms greater than one year (to the extent that such exists) could be significantly harmed by a temporary or permanent “reallocation” of RA counting rights.

Finally, and most controversially, the Independent System Operator should identify and evaluate any potential claims of undue preference or discrimination created by a reallocation of import capacity which has the clear intention of favoring one form and location of renewable energy over all others.

Thanks

**Comments of the Center for Energy Efficiency and Renewable
Technologies
On
The Imperial County Transmission Consultation Draft Discussion
Paper
July 28, 2014**

CEERT commends the CAISO for publishing a discussion paper and convening the Imperial County Transmission Consultation Stakeholder Meeting on July 14. This action relatively early in the TPP cycle allows time to reflect on this important issue before it is too late to perform any quantitative analysis of potential solutions.

CEERT makes the following comments and looks forward to seeing a redraft of the discussion paper based on this round of stakeholder comments. Further, CEERT urges the CAISO to conduct the second tentative Stakeholder Meeting following the issuance of the revised discussion paper.

CEERT strongly believes that the issues discussed reach far beyond the relatively narrow topic of deliverability of specific resources located in the Imperial Valley and have far-reaching consequences for all of California. CEERT further believes that the issues will only grow in importance as the grid rapidly evolves into a carbon-constrained future. In summary and as detailed below, CEERT makes the following short term, mid term and long term suggestions on the topic of Imperial County Transmission Deliverability:

Short Term [Less than six months]

In the short term, CAISO should clarify the current status of IID deliverability under its interpretation of the current MIC allocation methodology in the CAISO Tariff and Business Practices Manual. In the 2013 TPP,¹ in testimony before the CA Legislature,² and at least three times during the July 14 Stakeholder meeting, the CAISO has stated that the forward looking MIC allocation from the IID Balancing Authority will be

¹ Recommendations on the Policy Driven Projects SCE and SDGE Areas, Sonzhe Zhu, Feb 12, 2014 @ slide 5.

² Testimony of Phil Pettingill, CAISO, at Assembly Natural Resources Committee Hearing on SB 1139, June 26, 2014.

1000 MW when all currently planned and approved transmission upgrade projects are placed into service.

CEERT, however, believes that CAISO could alternatively take the position expressed by Southern California Edison in its 2014 RPS Procurement Plan³, a position that CEERT supports. Specifically, if and when the IOU LSEs procure resources from the IID Balancing Authority area, that up to 1400 MW of MIC from IID will be made available as enshrined in CPUC decision D.12-11-016 and agreed to by the CAISO⁴.

CEERT believes that it is inappropriate for the CAISO to treat the IID branch group any differently than any other branch group that imports into its Balancing Authority. To the extent that events such as the closure of SONGS results in a lower total MIC, that CAISO, by its formal agreement with D.12-11-016 remains obligated to forecast at least 1400 MW of forward looking MIC to the IID branch group.

Regardless of which of these positions is adopted by CAISO, it should clearly state its position so as to remove any residual confusion surrounding the capacity value of potential near term procurement of renewable resources from IID. In this regard, some parties have asserted that the 1000 MW figure (or the alternate 1400 MW figure) is “gross deliverability” and must be reduced by projects requesting full deliverability status with a connection point on the SDGE bus at the Imperial Substation. CEERT disagrees. A direct interconnection established through the GIP (Generator Interconnection Process) has, up until now, never impacted MIC from imports into the CAISO Balancing Authority, and there is no basis to conclude that it should do so here.

Mid Term [Six months to one year]

In various forums, CAISO has signaled that it believes there is residual need for new capacity in Southern California after procurements authorized in the CPUC’s 2012 LTPP, and that it intends to make that case in the 2014 LTPP proceeding later this year. While CEERT does not share this view of residual need, CEERT agrees that the CPUC’s 2014 LTPP is the appropriate forum to have this debate.

³ SCE 2014 RPS Procurement Plan, @ p.57

⁴ D-12-11-016 at 17-20

However, CEERT cautions against CAISO asserting a procurement need before developing and reviewing alternatives to satisfy that need with resources from East of the Southern California load pocket. This approach will avoid the CPUC being faced, as it was in the 2012 LTPP, with authorizing procurement without a clear view of the cost or feasibility of alternatives to fill that need. At a minimum, any recommendation by the CAISO for procurement of new capacity to serve Southern California load should be accompanied by proposed transmission alternatives that can satisfy that need through deliverable imports into the load pocket.

Specifically, while much of the July 14 stakeholder meeting was taken up with discussing what appeared to be infeasible or prohibitively expensive transmission alternatives to increase deliverability from West of Colorado River, two projects that are feasible were presented.

First, Neil Millar stated during the meeting that the CAISO had concluded that the flow controller between Imperial substation and the CFE system could be the smaller and less expensive phase shifting transformer without compromising reliability. However, to the extent that increased deliverability would be required to satisfy a residual Southern California need with imports, then, the more expensive AC/DC:DC/AC flow controller that adds 400 MW of deliverability over the phase shifting transformer should not be excluded from consideration.

Second, the “Enhanced TE-VS” project discussed in the July 14 meeting that would provide ~ 1500 MW of deliverability, appeared, at best, to be extremely difficult to site. In that circumstance, CEERT believes that the plain vanilla TE-VS project, while only providing roughly 500 MW of deliverability, but was rated by Aspen as relatively easy to site, is relatively inexpensive to construct, and should continue to be considered.

Long Term [Next two to three years]

CEERT notes that much of the material presented at the July 14 stakeholder meeting was not simple, clear, or generally understood by the audience at that meeting. By the end of that meeting, in fact, there appeared to be widespread confusion regarding CAISO’s deliverability analysis even among those participants with a high level of technical knowledge and experience with the concept of “deliverability” and its application to imports.

CEERT believes that this outcome results from fundamental shortcomings in the current MIC allocation methodology. Specifically, this methodology has

its roots in historic assumptions from a bygone era, and relies on arcane power flow studies that are notoriously sensitive to nuances in base case definitions and forward looking dispatch and contingency assumptions. As a result, the methodology no longer appears to produce common sense, good policy-driven solutions. In fact, CEERT would argue that the “policy” underlying the current MIC allocation scheme is in direct contradiction to adopted state energy policy and needs to be revised and reconstructed from the ground up.

CEERT has no illusions as to the long and contentious nature of a process to recreate an accounting scheme to decide which of the few, out of hundreds, can get paid to import “RA capacity” across a very complicated set of interrelated tie points that report only to Kirchhoff’s Laws and do not recognize FERC or CPUC jurisdiction or WECC Path ratings or state borders or loading orders.

The problem begins with the concept that historic flows can be used for any other purpose than to demonstrate that importing that amount of energy with some feasible dispatch is possible during high load conditions in CA. The baseline for these flows occurred in an era when a very substantial portion of California’s imports was coal from plants in AZ, NM, NV and elsewhere throughout the interconnected WECC. Today, some of those coal plants no longer exist, many have planned retirement dates in the next few years, and none can sign long-term contracts with CA LSEs. Yet, these historic flows echo through MIC calculations today and long into the future. The current MIC allocation scheme encourages LSEs to sign RA contracts and import energy and capacity from mainly existing natural gas plants located in the same branch group as the old coal plants in order to preserve an entitlement to the valuable resource which is a MIC allocation. That makes no policy sense in a carbon-constrained world, effectively discriminates against similar gas plants located inside the borders of the CAISO Balancing Authority, and works to exclude preferred resources from replacing the old order.

The problem is compounded as the definition of what constitutes an “import” changes with innovations such as dynamic scheduling and changes to the CAISO Balancing Area boundaries. When the CAISO absorbs entities such as VEA or builds new transmission lines such as Delaney/Colorado or Harry Allen/El Dorado which expand the CAISO borders, but the LSEs contract with other generators who remain “importers” to maintain historic

MIC allocations, the premise that import flows are feasible because they occurred in the past becomes suspect.

CEERT notes that on the very same day as the Stakeholder Meeting, July 14, IID formally filed to become a PTO and have a portion of its collector system become part of the CAISO grid, and thus convert any generator who interconnected to that portion of the collector system from an import subject to branch group MIC allocation to a full deliverability generator with valuable project specific RA rights.⁵

The problem is compounded further as, over time, generators at or near the expanding borders of the CAISO observe these events and choose to construct gen ties to the CAISO border and file under the GIP (Generator Interconnection Process) for full deliverability rights. By so doing, they potentially secure permanent project specific RA and FRACMOO payments that could substantially increase in value in the near future.

The problem is compounded even further when the CAISO proposes to use “effectiveness factors” to reassign MIC allocations to different branch groups. CEERT clearly understands the fundamental physical reality that it is best if generators supplying RA capacity are not all clustered just upstream of the fault that is the n-1 contingency in the power flow study. However, that reality does not mean that it is appropriate to assign a hard and fast effectiveness factor to those generators and effectively derate their deliverability vs. a generator in another branch group. That calculation assumes that the original allocation was derived from a power flow study that established some base “effectiveness factor” that was now going to be altered. Clearly that is not the case.

To harden the grid against the fault being studied by using effectiveness factors derived from a power flow simply makes the grid more vulnerable to faults that are not studied. Certainly, the grid would have been even worse off in the 2011 San Diego blackout if this process had been used in previous deliverability assessments to raise the MIC allocation of the Palo Verde branch group at the expense of resources in Imperial County. Protecting the grid against brush fires in Eastern San Diego County that might take out the SWPL and/or the Eco lines must be balanced against protecting the grid

⁵<http://www.caiso.com/documents/IIDCoverLetterApplicationforParticipatingTransmissionOwnerStatusandDraftTOTariff07-14-14.pdf>

from, say, a large earthquake on the San Andreas fault that takes out the Colorado Devers line and/or the El Dorado Lugo line.

A precise and unambiguous answer to this conundrum is simply not possible, but, surely, one underlying principle of a rational MIC allocation scheme is diversity. Further concentration of MIC allocation to one of the largest existing branch groups is not good for reliability.

It is CEERT's belief that even if we have not yet reached a tipping point where the current allocation scheme collapses under its own weight, that such a result is inevitable given the trends in load and resources that lie before us.

In addition to revising and updating the underlying assumptions and design of the methodology, we need to recognize the importance of spurring innovation and implementing the state's loading order policy, as well as the CAISO strategic plan objectives. The unintended consequence of the current methodology is to reward existing out of state fossil resources at the expense of similar existing resources inside California plus crowd out new preferred resources that do not enter CAISO over the existing branch groups. If unchanged, this will unnecessarily drive up ratepayer costs as the "missing money" from the market drives up capacity payments to in state resources to prevent "disorderly retirement."

CEERT respectfully asks that the CAISO take the above short and middle term actions while stepping back and reexamining the entire process for assigning MIC to imports from a clean sheet of paper. In performing this task, the following principles should be utilized:

- Ensure a diversity in supply across all intertie points and test the system against multiple potential fault scenarios.
- Reflect load and resource conditions going forward. Do not use historic flows to establish specific MIC allocations.
- MIC allocation is a policy matter, not a power flow issue. Ensure that the process follows adopted State energy policy and the CAISO Strategic Plan⁶
- Treat electrically similar resources consistently

⁶ Follow the loading order. See D-13-02-015 at pp.10-11, also D-14-03-004 at pp. 14-16



July 28, 2014

Gary DeShazo
Director – Regional Coordination, Infrastructure Development
California Independent System Operator
250 Outcropping Way, Folsom, CA 95630
regionaltransmission@caiso.com

Subject: Imperial County Transmission Consultation Draft Discussion Paper

Dear Mr. DeShazo:

I am writing to provide information in support of the ISO's request for additional options to consider as transmission solutions for Imperial County deliverability issues.

DATC participated in the recent Imperial County Transmission Consultation Stakeholder meeting on July 14, 2014. We recognize the varied interest in renewable energy and transmission development in the Imperial County area. DATC also recognizes the importance of developing cost-efficient projects that create value to California retail customers. Therefore, DATC would like to respectfully submit a project to the CAISO for its consideration as it evaluates potential solutions to Imperial County deliverability issues.

The projects presented at the July 14th CAISO meeting are multi-billion dollar projects whose large scope may make them hard to complete. We recommend that the CAISO consider other options which may address individual problems with modular projects rather than a single project to fix multiple issues. Moreover, the following proposed solutions may cost *significantly less* than the proposed multi-billion dollar projects. We encourage the CAISO to consider route analysis for this modular solution for the 2014-15 TPP.

The attached DATC HVDC project suggestion could also help address southern California coastal issues related to SONGS and OTC retirements. The project proposed route is only about 15 miles. The proposed route may be challenging, but because of its relatively short length the use of an underground cable could improve its feasibility. The Imperial County renewable outlet could be addressed by other modular concepts which are not discussed in this material.

Thank you for the opportunity to provide input in the interest of developing a robust, reliable and cost-effective grid in California.

Sincerely,

Will Hazelip



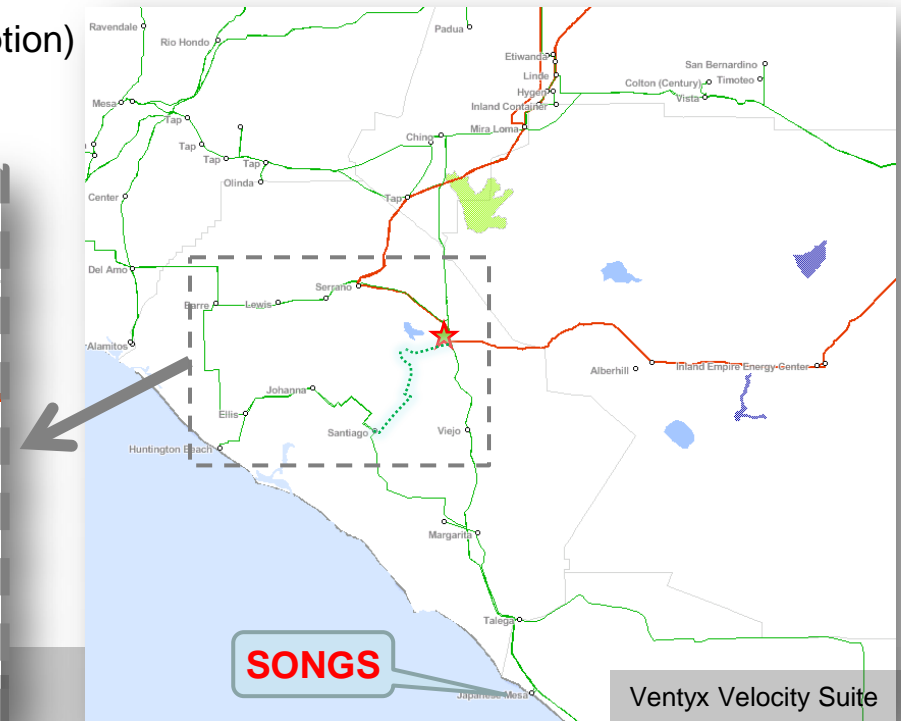
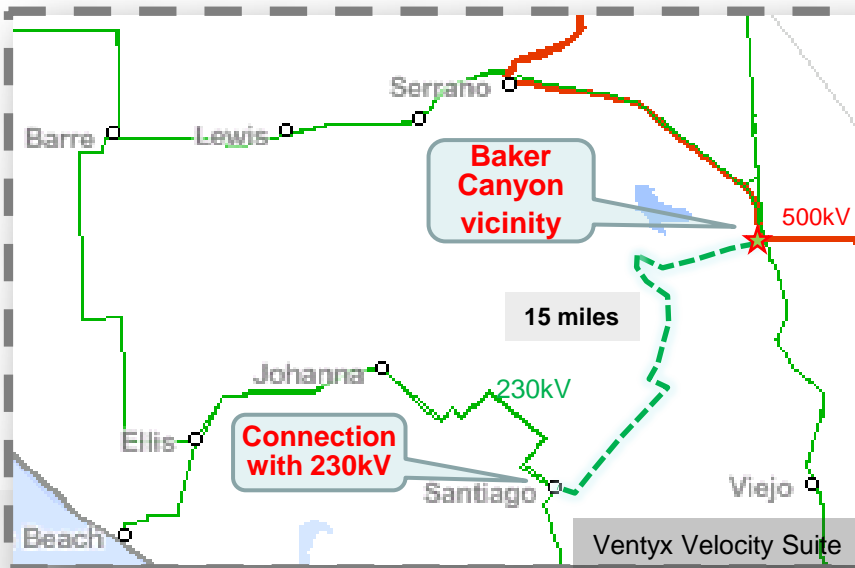
DATC Comments for Project Suggestion

CAISO Imperial Co. Transmission Consultation
Stakeholder Meeting



Concepts (1DC) & (1AC)

- Connection with 500kV south of Serrano – to Santiago 230kV
- Project options:
 - (1DC) **HVDC** with added controllability
 - (1AC) or **AC** with 500/230 transformation,
 - 500/230 transformation + 2-230kV to Santiago
 - connection to Chino-Viejo 230kV (AC option)
- Route evaluation (~15 mi)



DATC SONGS Concepts

HVDC (Preferred)

- **(1DC) : Baker Canyon – Santiago VSC HVDC**
 - 1000MW, +/-320kV HVDC line,
 - connection along 500kV ROW S. of Serrano
 - **15 mi** to Santiago 230kV (mix of OVHD & cable)

AC (Alternate)

- **(1AC) : Baker Canyon-Santiago AC**
 - connection along 500kV ROW S. of Serrano
 - 500/230kV at new sub
 - **15 mi** to Santiago 230kV (dbl ckt, mix of OVHD & cable)
 - connection with Chino-Viejo 230kV (optional)

Contact information

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July 28, 2014

California Independent System Operator
250 Outcropping Way
Folsom, CA 95630

Re: EnergySource LLC Comments on the Imperial County Transmission Consultation Draft Discussion Paper (2014-2015 Transmission Planning Process)

EnergySource LLC (“EnergySource”) is pleased to have the opportunity to provide comments on the July 2, 2014 “Imperial County Transmission Consultation Draft Discussion Paper.” EnergySource participated in the CAISO’s July 14, 2014, workshop and offers the following comments and recommendations, based on the Draft Discussion Paper and the presentations made at the workshop.

EnergySource appreciates CAISO’s initiative and foresight in commencing this process early enough to ensure that it may inform the outcome of the 2014-2015 Transmission Planning Process (“TPP”). In particular, EnergySource supports the Draft Discussion Paper’s commitment to review and study the transmission solutions that would be necessary to enable previously-targeted levels of renewable import from Imperial County:

[T]he California ISO intends to consider transmission concepts that have been put forth in past processes as possible means to both address local capacity needs in the LA Basin/San Diego area and to provide opportunity for additional renewable generation to develop in Imperial County. On balance, the California ISO believes that consideration of these issues should inform the 2014-2015 transmission planning studies.¹

The CAISO’s timely decision to focus on solutions to deliverability of in-state renewable resources from the Imperial Valley is critical to development of those resources, and to meeting the state’s longer range policy commitments to clean, renewable energy and decreased reliance on out-of-state fossil resources.

¹ CAISO Draft Discussion Paper, p. 3.

I. THE CAISO SHOULD CLARIFY THE CURRENT STATUS OF DELIVERABILITY FOR IN-STATE RENEWABLE GENERATION OUT OF IMPERIAL COUNTY TO THE SAN DIEGO AND LA BASIN AREAS AND THE ASSUMPTIONS USED TO QUANTIFY AVAILABLE DELIVERABILITY

The first step needed to enable useful stakeholder input and ensure an informed discussion of available solutions is for CAISO to clarify the current status of deliverability for Imperial County resources, taking into account available information and CAISO's interpretation of the current maximum import capability ("MIC") allocation methodology.

As evidenced by discussion during the July 14 Stakeholder Meeting, there are several conflicting figures for the deliverability out of Imperial County into the CAISO Balancing Authority, and significant uncertainty regarding CAISO's assumptions and intentions. The Draft Discussion Paper states that "Despite the impacts being heavily offset by other reinforcements proposed in the transmission plan, only 1000 MW of the 1715 MW of the Imperial County renewable generation portfolio amounts developed for the 2013-2014 transmission planning process can be made deliverable without additional actions."² In contrast, Southern California's 2014 RPS Procurement Plan assumes that up to 1400 MW of MIC will be available, reflecting the CPUC's determination in Decision 12-11-016, which CAISO expressly supported. Other figures can be found in various California agency planning documents.

In order to provide some level of clarity to stakeholders and a reasonable starting point for these discussions, the CAISO should confirm in the final draft of the Discussion Paper that there is at least 1,000 MW of deliverability out of Imperial County into the CAISO Balancing Authority today, without further system improvements. A simple declaration confirming deliverability of at least 1,000 MW would go a long way to providing short-term certainty.

Second, to provide long-term certainty, the CAISO should clearly articulate the assumptions and the data sets that will be used to establish deliverability. As the comments at the July 14, 2014 workshop reflected, CAISO stakeholders are frustrated with a general lack of clarity as to the current available MIC, and the CAISO's intentions and assumptions for identifying a MIC going forward. EnergySource understands and appreciates that the CAISO's approach to dealing with deliverability issues has been necessarily affected by recent developments such as the retirement of SONGs, and evolving policies regarding renewable development and resource adequacy. However, in order to move forward, stakeholders need to understand the CAISO's foundational assumptions.

As discussed in the July 14 workshop, the "Process for allocating MIC to LSEs – Steps 2-13 in Tariff Section 40.4.6.2.1, Available Import Capability Assignment Process" is complex and

² CAISO Draft Discussion Paper, p. 2.

somewhat opaque to parties that are not involved in the process.³ As suggested at the workshop, a CAISO “White Paper” describing the process should be published as soon as possible to facilitate informed stakeholder participation in the review and potential reform of this important process.

II. CAISO SHOULD ESTABLISH A METHODOLOGY FOR ALLOCATING THE MAXIMUM IMPORT CAPABILITY THAT REFLECTS THE CURRENT STATE POLICY OF FOSTERING IN-STATE RENEWABLE GENERATION

At the workshop, the CAISO Staff explained that the current system for allocating the MIC among interties and branch groups is based on “historic” flows. While the use of historic data was a reasonable starting point for allocation of the MIC, it is now time for the CAISO to allocate the MIC based on the state of California’s procurement policies aimed at fostering the development of in-state renewable generation, providing the certainty that these preferred resources will qualify as Resource Adequacy (“RA”) resources.

Reflecting prior policy and procurement decisions, the historic flows were primarily from out-of-state fossil generators, including out-of-state coal plants. California State policies have evolved from this historic basis toward policies that, for example, no longer allow for procurement of such resources on a long-term basis.⁴ Many of these historic resources have either ceased operations or their long-term contracts are facing termination as a means of “divesting” California’s utilities of higher emitting resources.

California’s Greenhouse Gas (“GHG”) and Renewable Portfolio Standard (“RPS”) policies, among other policy initiatives, are moving the State’s procurement policies away from the “historic” import of fossil fueled resources toward a portfolio of in-state, renewable generation, firmed and shaped as needed by local resources, including base-loaded geothermal resources.

The “historic” import allocation policy is plainly at odds with adopted state policy to give preference to “preferred resources” consistent with the State’s loading order. Without revision, the current practice of relying on “historic” flows will have the undesirable effect of giving preference to out-of-state fossil generators and exporting California ratepayer dollars, all in contradiction to adopted state energy policy.

The reallocation of the MIC away from “historic” flows is not a technical issue; it is a policy issue. The MIC should be revised to emphasize current state policies intended to foster

³ See July 14, 2014, CAISO Workshop Presentation, Slide 60.

⁴ Senate Bill 1368 (Perata, Chapter 598, Statutes of 2006).

the development of in-state renewable generation. The MIC allocation process should be revised to incentivize in-state renewable generation over historic, out-of-state fossil fueled resources.

III. RATHER THAN CONTINUING TO EXPLORE TRANSMISSION ROUTES AND OPTIONS THAT ARE ADMITTEDLY “CHALLENGING” IF NOT INFEASIBLE, THE CAISO SHOULD DIRECT ITS RESOURCES TOWARDS CLARIFYING DELIVERABILITY AND UPDATING THE MIC PROCESS TO REFLECT CURRENT STATE POLICES RELATED TO PROMOTING IN-STATE RENEWABLE GENERATION

While we appreciate the thorough and comprehensive work of Aspen Consulting on its reconnaissance level review, much of the July 14 CAISO Stakeholder meeting was taken up with discussing infeasible or prohibitively expensive, long-term transmission alternatives to increase deliverability from West of Colorado River. The report considered regional transmission routes evaluated by Aspen and “finalized by the California ISO in early October 2013.”⁵ The routes described were characterized most optimistically as “Possible but Challenging” and, at the other extreme, as “Challenging” or Very Challenging”.

Although it is useful to look at some of these longer-term possibilities, the near-term effort to enable deliverability of renewable resources from Imperial County should be more focused on smaller, more feasible projects such as portions of the larger routes examined. Of even greater potential value, rather than focusing on larger, multi-year transmission routing projects, which are more appropriately discussed in the ongoing CAISO Transmission Planning Process, the allocation of the MIC should focus on more modest and imminently more feasible transmission improvements like phase shifting transformers and IID’s proposed path 42 parallel line to I-10.

While EnergySource does not want to dissuade thinking about larger, more grandiose transmission solutions, in the context of the MIC, we believe that the CAISO should look for smaller, more feasible project segments and system components to allow for deliverability of in-state renewable resources.

Sincerely,



Jeffery D. Harris

Attorneys for EnergySource LLC

⁵ Discussion Paper, p. 7, footnote 5.



IID

A century of service.

www.iid.com

Imperial Irrigation District Comments on Imperial Valley Consultation Draft Discussion Paper (July 2, 2014)

The Imperial Irrigation District (“IID”) appreciates the opportunity to provide these initial comments on the Imperial Valley Consultation Draft Discussion Paper. IID supports this initiative and looks forward working with the CAISO and stakeholders to improve the deliverability methodology and place resources in the IID Balancing Authority Area (“BAA”) on equal footing with resources elsewhere. State policy identifies not only the Imperial Valley Renewable Energy Zone but also resources specifically in the IID Balancing Authority itself as meeting renewable planning scenarios. A durable solution to this issue is imperative. Resources from the IID BAA cannot have the rug pulled out from under deliverability assumptions every time there is a system condition change, while deliverability from resources with which they compete is preserved, apparently at their expense. This doesn’t make policy or technical sense since many of these resources may be electrically similar. Renewable resources in the IID BAA count toward fulfillment of a retail sellers’ Product Content Category 1 obligations under the RPS law and regulations, and the IID system has the ability to export capacity and energy to the CAISO BAA.

It was the close work of the CAISO and IID together that drove the initial recognition of a 1400 MW Maximum Import Capability (“MIC”) in 2010. IID is confident that if that spirit of constructive engagement is replicated, this issue can be solved.

General Principles for a Durable Solution

Before delving into specific issues, IID sets forth for consideration general principles it proposes should guide any resolution of this issue:

1. A common basecase and set of assumptions should be agreed to so that IID and the CAISO can work with an accurate and consistent set of facts and study inputs. IID believes strides have been made in this area;
2. The deliverability methodology should be well understood by interested stakeholders, replicable in studies, and transparent.
3. The deliverability methodology should be based on sound technical principals and match the physics of the system, not based on an historical artifact.
4. Electrically similar resources should be treated similarly. The deliverability methodology should not discriminate against imports given that they are being counted for Resource

Adequacy (“RA”) and meeting California load serving entity (“LSE”) needs therefore. Imports should not have their RA deliverability diminished by generator interconnections to the CAISO Controlled Grid.

5. Any solution must be durable to allow for reliance in the procurement process, reflect commercial requirements for purchase power agreements, and to align with anticipated forward RA obligation for California LSEs. Moreover, it should facilitate long term purchasing of RA products as the CAISO considers multi-year capacity obligations.

Specific Issues in the Draft Discussion Paper

Aligning Study Assumptions

IID concerns about certain of the MIC numbers published by the CAISO, including the affect of the proposed Delaney-Colorado River project, were driven in part by different basecase assumptions between IID studies and those of the CAISO, which led to different conclusions as to the project’s impact on MIC from IID. This illustrates the importance of common sets of assumptions that underlie the deliverability methodology.

IID has worked to resolve those issues with the CAISO. This process would benefit from new numbers being published to reflect updated assumptions. Also, going forward, there should be a robust process to align not only IID and CAISO assumption but other elements of the basecase and other study parameters to ensure that the parties are working of a common and accurate set of facts and assumptions.

Clarifying the Ability of IID to Deliver Energy to the CAISO BAA versus “Deliverability”

At the Workshop IID observed some confusion on this issue, with “deliverability” being interpreted by some as the inability of IID to deliver energy over its transmission system for import into the CAISO market. In fact, IID has the physical transfer capability to deliver significant energy and capacity at its ties with the CAISO. With completion of Path 42 IID additions already underway, IID will be able to wheel nearly 2000 MW to its tie points with the CAISO. The “deliverability” test does not measure this, but instead allocates rights to import into the CAISO BAA for RA counting purposes. This distinction needs to be clear in this process.

The Ferron ACR Directs and Assumes 1400 MW of MIC from the IID BAA, not the Imperial Valley as a Whole

The Assigned Commissioner Ruling of Commissioner Ferron states: “I conclude that it would be unreasonable for an IOU to use a MIC less than 1,400 MW for imports from the IID BAA as part of its LCBF evaluation of project bids within the 2011 RPS solicitation.” *Ferron ACR, June 7, 2011*. The CAISO has committed that the 1400 MW number for the IID BAA be preserved.

Yet, it appears from the Draft Discussion paper that the CAISO methodology is “taking off the top” resources connected electrically adjacent to the IID BAA. This practice raises technical questions on how the methodology can treat in a discriminatory manner resources that are electrically similar, and in some cases virtually identical. It is inconsistent with a sustainable deliverability policy that generation interconnection can be allowed to degrade the deliverability of other resources. The electrical flows created by these resources are similar if not identical, and discriminatory treatment points to fundamental flaws in the methodology itself.

IID has worked constructively to facilitate the development of resources in and around the Imperial Valley, with the collaboration of the CAISO. It is a clear case of “no good deed goes unpunished” that the ISO would propose to penalize resources in the IID BAA because of that collaboration.

The Aspen Study

IID would like further explanation as to why routes for transmission that it has proposed, and were in the CAISO request window, were not included in the Aspen routing analysis. IID’s proposed route utilizes its own existing rights-of-way for a significant portion of the line, and may have siting advantages over other alternatives.

Allocation of MIC from Palo Verde Branch Group to IV Branch Group

IID recognizes the CAISO’s discussion of reallocation of import capability from the Palo Verde Branch Groups to the Imperial Valley Branch Groups. This concept needs further exploration in light of a more robust understanding of the deliverability methodology. In particular, how generation interconnection and retirements affect related branch groups, and what tariff or other changes would be necessary to effectuate this reallocation should be explored.

Process

Given the confusion as to the MIC methodology that was evident at the first stakeholder meeting, IID firm believes the second optional stakeholder meeting will be needed for further consultation on this issue.

Jamie Asbury
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INDEPENDENT ENERGY PRODUCERS

To: CAISO

From: Steven Kelly
Policy Director

Date: July 28, 2014

RE: Imperial County Transmission Consultation: Stakeholder Mtg July 14, 2014

IEP appreciates the opportunity to comment on the CAISO's Imperial County Transmission Consultation Stakeholder Meeting convened on July 14, 2014 and the Imperial County Transmission Consultation Draft Discussion Paper (issued July 2, 2014).

At the stakeholder meeting, a number of issues were raised for further clarification. In light of the fact that a revised Discussion Paper will be circulated in August for the next stakeholder meeting, and this revised Discussion Paper presumably will address some or all of the outstanding questions and issues raised at the stakeholder meeting, IEP will limit its comments at this point to the following observations and questions.

1. **Need Clarity on Planned Imports From Imperial County.** The issue paper states that since 2011 the California ISO has targeted enabling 1400 MW of renewable generation imports from Imperial County to be deliverable. (p. 2) Later, the paper speaks of a "portfolio amount" of 1715 Mw specified for the Imperial County reflecting potential generation in the geographic area, whether connected to the ISO grid or the IID grid in the area. (See Ftnt 2). Finally, the paper references that, post SONGs, only 1000 MW of the 1715 MW can be deliverable without additional actions. (p. 2) Moreover, the paper discussed the CPUC/CEC resource portfolios forecast amount of 1000 MW of new renewable generation in the Imperial County, as well as a sensitivity of 2500 MWs in the Imperial County. (p. 3) Finally, the paper discusses the "remaining local capacity deficiency in the LA Basin/Sand Diego area could reach 900 MWs." (p. 3)

For the next version of the discussion paper, it would be helpful if paper discussed in more detail the basis of these numbers and how they all tie-together, if at all.

2. **Group III Transmission Projects Serve Multiple Interests.** The issue paper describes Group III transmission projects as those that "provide reliability benefits but also could play a role in achieving future state policy objectives by enabling additional renewable generation in the Imperial zone..." This approach to qualifying these types of projects raises a number of issues and potential concerns.

For example, assume a Group III project proposes to take renewable power from Imperial County and delivery this power into the LA Basin near SONGS (e.g. Inland Substation or thereabouts). IEP considers a segment of this entire project to be equivalent to a “renewable trunkline” facility delivering power from, for example, the IID substation to the CAISO grid (e.g. Devers Substation). A second segment of this entire project, i.e. from the point of interconnection to the CAISO grid (e.g. Devers Substation) to an area in the LA Basin (e.g. Inland Substation), is clearly a reliability component. In light of this reality, we note two important concerns:

First, IEP would be concerned that the transmission necessary to deliver renewable resources from Imperial County to the CAISO grid was delayed due to the permitting/siting issues associated with the reliability component of the transmission project.

Second, IEP would be concerned if the entire Group III transmission project was characterized as needed for public policy purposes to integrate renewables and, more importantly, if the entire cost of the transmission line were imputed to the RPS program. The RPS program is subject to cost containment provisions, and imputing the entire cost of a Group III transmission line to the RPS would unnecessarily and wrongly impair achievement of the states’ RPS objectives.

From IEP’s perspective, this type of Group III project should be considered as two separate transmission line segments and treated as such from a planning and permitting perspective.

3. Reallocation of Maximum Import Capability (MIC). The concept of re-allocating MIC at one intertie to another intertie based on its effectiveness factor is intriguing and warrants further review. Certainly, additional clarify must be added to the concept for stakeholders to fully understand and appreciate its implications.

With regards to the general concept of reallocating MIC, IEP raises the following issues for clarification and further discussion:

- Will reallocation of MIC impair existing contracts entered into by individual LSEs with electric generators?
- What will be the methodology for determining the Effectiveness Factor applied when determining the reallocation of MIC? What is the proposed Effectiveness Factor?
- IEP understands that the CAISO Board recently approved the Delaney-Colorado River 500 kV transmission line. In light of this approval, what is the impact of the increase deliverability from Imperial County (i.e. 225 MWs) on the need for and results of the MIC reallocation concept?
- How fungible will be the final deliverability? For example, will Load-Serving Entities (LSEs) be able to trade re-allocated deliverability?

IEP appreciates the opportunity to provide these comments and participate in the Imperial County Transmission Consultation process.

July 28, 2014

To: California Independent System Operator
250 Outcropping Way
Folsom, CA 95630

Submitted via email to: regionaltransmission@caiso.com

Subject: Comments of The Nature Conservancy on the California Independent System Operator's Imperial County draft discussion paper and associated materials.

1. Introduction and Summary

The Nature Conservancy (Conservancy) appreciates the opportunity to submit comments in response to the California Independent System Operator's (CAISO) Imperial County draft discussion paper and associated materials.

The mission of the Conservancy is to conserve the lands and waters on which all life depends. To achieve that mission, the Conservancy strongly supports the emission reduction goals¹ and renewable energy mandates² established by the state of California to benefit Earth's climate. We urge continued action to facilitate California's transition to a low carbon energy system; this transition should be guided by a comprehensive planning process that has the objective of meeting multiple goals, including protection of nature.

For these reasons, the Conservancy supports comprehensive planning for land use, energy generation and transmission development as the best path forward for California's energy future. We appreciate the increased coordination between the CAISO, the California Public Utilities Commission (CPUC), and the California Energy Commission (CEC) on this topic, and we encourage this to continue.

The following comments address planning for renewable energy in Imperial County, integrating land use planning into transmission planning, and specific conservation considerations for the Aspen Study.

¹ Global Warming Solutions Act of 2006 (AB 32).

² California's 33 Percent by 2020 Renewables Portfolio Standard.

2. Renewable Energy Development in Imperial County

The Conservancy has been actively involved in planning for renewable energy within the Mojave and Sonoran Deserts of California. Most recently, the Conservancy has participated in the Bureau of Land Management's (BLM's) Western Solar Program and in the Desert Renewable Energy Conservation Plan (DRECP), contributing a Mojave Desert Ecoregional Assessment³ that evaluated conservation value across these ecoregions.

The Conservancy's principal focus in renewable energy development in the California deserts has been to use science-based analysis to help ensure that renewable energy facilities are sited and conditioned in ways that preserve the remarkably intact and fragile natural communities of California's Mojave and Sonoran Deserts, and to preserve migration corridors and connectivity between key habitat areas.

We strongly support the development of renewable sources of energy to mitigate the increasing threat of climate change. However, if not located, built, and operated responsibly, energy projects can negatively impact biodiversity, harm wildlife and their important habitats, and diminish water resources, especially in fragile desert environments. The Conservancy supports siting renewable energy facilities in locations where ecological impacts can be minimized, contained, or mitigated. In California's desert region, these locations are on degraded lands, close to economic centers and existing transmission lines.

Within Imperial County, there are significant areas that have been identified as highly converted through the Sonoran Desert Conservation Framework⁴ (Figure 1). Highly converted lands are urban, suburban and agricultural lands that are heavily altered and their ecological context is highly compromised. Siting of renewable energy facilities in highly converted lands minimizes impacts to a wide range of desert wildlife and habitats.

The Conservancy has been supportive of efforts to increase the development of geothermal development around the Salton Sea. We believe that with proper planning, siting, and application of best management practices, the future development of geothermal energy projects in this area can benefit the stability of California's electrical grid, help meet our climate change goals, and provide a potential revenue source for addressing some of the environmental and public health issues at the Salton Sea.

³ Randall, J. M., S.S. Parker, J. Moore, B. Cohen, L. Crane, B. Christian, D. Cameron, J. MacKenzie, K. Klausmeyer and S. Morrison. 2010. Mojave Desert Ecoregional Assessment. Unpublished Report. The Nature Conservancy, San Francisco, California. 106 pages + appendices. Available at:

http://scienceforconservation.org/downloads/mojave_desert_ecoregional_assessment

⁴ Conservation Biology Institute. 2009. A framework for effective conservation management of the Sonoran Desert of California. Prepared for The Nature Conservancy.

3. Integrating Land Use and Transmission Planning

The Conservancy has strongly advocated for improved improve integration of land use, generation, and transmission planning⁵ and we view the Imperial County Stakeholder Consultation process as an important step forward in this direction.

The CEC's 2013 *Integrated Energy Policy Report* (IEPR) identifies the need for California to better synchronize the planning and permitting processes for renewable generation and the power lines needed to bring that generation to market⁶. We appreciate that CAISO, together with the CPUC and CEC, is taking a longer term view of Imperial County and has undertaken a study of the transmission solutions needed to increase deliverability from this region. The Conservancy has been supportive of comprehensive energy planning that uses landscape-scale planning to *first* identify preferred areas of least-impact for development and *then* strategically plans transmission investments in these areas for timely development and delivery of renewable energy. This approach is increasingly important with the implementation of the BLM Western Solar Program, and the development of the DRECP; critical to the success of getting renewable energy developed in zones – or development focus areas – is ensuring that these areas are adequately studied and then are prioritized for transmission investments that may be required. This is a key building block in the foundation of comprehensive energy planning.

We appreciate that the CEC initiated the Aspen Study, “Transmission Options and Potential Corridor Designations in Southern California in Response to Closure of San Onofre Nuclear Generating Station (SONGS): Environmental Feasibility Analysis”⁷. To our knowledge, this is the first time that the environmental feasibility of potential transmission options has been studied prior to a solution being identified through the CAISO’s annual Transmission Planning Process. We feel strongly that it’s important to understand the environmental dimension and feasibility of infrastructure decision-making as early as possible in the process, and with this report, CAISO has this valuable information as it considers increased deliverability from Imperial County. To this end, the Conservancy has a few detailed recommendations in response to the following question posed by CAISO at the workshop:

⁵ The Nature Conservancy, March 13, 2014, Comments of The Nature Conservancy on the California Independent System Operator’s 2014-2015 Transmission Planning Process Unified Planning Assumptions and Study Plan.

⁶ The IEPR recommends: “In the longer term, identifying preferred development areas for renewable resources and then planning the transmission to serve those areas could alleviate issues with the current unsynchronized approach and encourage renewable development that minimizes impacts on California’s environment. The key to overcoming the synchronization challenge is to develop a long-term transmission plan for preferred renewable generation zones.” California Energy Commission. 2013. 2013 Integrated Energy Policy Report. Publication Number: CEC-100-2013-001-CMF.

⁷ Lee, Susan, Brewster Birdsall. (Aspen Environmental Group). 2014. *Transmission Options and Potential Corridor Designations in Southern California in Response to Closure of San Onofre Nuclear Generating Stations (SONGS): Environmental Feasibility Analysis*. California Energy Commission. Publication Number: CEC-700-2014.

“Considering the information documented in the existing Aspen environmental feasibility of potential corridor designations in southern California, what additional information could be provide to the Aspen to supplement their study?”

4. Additional Environmental Considerations in Transmission Siting in the Study Area

Aspen has appropriately included environmental sensitivities and constraints such as Anza-Borrego Desert State Park, Santa Rosa-San Jacinto National Monument, National Forest Lands, Agua Tibia Wilderness, and the Santa Margarita Ecological Reserve. The Nature Conservancy also recommends that Aspen supplement their study with the following environmental sensitivities and constraints.

a. The Santa Ana-Palomar Linkage between Temecula and Rainbow

Nearly all of the identified transmission alternatives (e.g., 3, 4, 5, 6) appear to bisect the Santa Ana-Palomar linkage⁸ between Temecula and Rainbow. The Santa Ana-Palomar linkage contains the last remaining relatively intact habitat connecting the Santa Ana Mountains, including the Santa Margarita Ecological Reserve, Santa Rosa Plateau Ecological Reserve and Marine Corps Base Camp Pendleton, to the inland chain of largely-protected mountain ranges, i.e., the Palomar, San Diego, San Jacinto and San Bernardino Mountains. Protecting the Santa Ana-Palomar Linkage will help continue key ecological and evolutionary processes by providing habitat for numerous species of native wildlife, and ensure that conservation investments in existing protected areas are not compromised. The Nature Conservancy, other conservation organizations, and federal, state, and local agencies have invested over \$100 million in conservation within this region (Figure 2). The Nature Conservancy offers to share with Aspen select conservation data sets from within this region for use in the environmental feasibility analysis.

b. Other Protected Lands

Several of the alternatives appear to intersect with lands that are protected (e.g., protected lands around the Santa Margarita River, the Santa Rosa Plateau which The Nature Conservancy protected and which is now managed and largely owned by Riverside County and the California Department of Fish & Wildlife). Protected lands are an integral part of an environmental feasibility analysis for infrastructure development and this data should be included.

⁸ SC Wildlands, Santa Ana Mountains to Palomar Mountains Connection:
http://www.scwildlands.org/projects/missinglinkages/link_santana2palomar.aspx

We recognize that this is a corridor study process, and that any transmission project subsequently brought forth pursuant to a selected alternative will be permitted by the respective public agencies that have jurisdiction. That said we feel it important to mention that Alternative 2 appears to cross the San Dieguito River and that any specific transmission project that moves forward within this corridor should plan for and minimize impacts to the river.

5. Conclusion

The Nature Conservancy appreciates the opportunity to provide comments to the California Independent System Operator's Imperial County draft discussion paper and associated materials. We appreciate the coordination between the CAISO, CPUC, and CEC to study transmission options needed for increased deliverability from Imperial County, and look forward to subsequent opportunities to discuss. If you have any questions, my contact information is included below.

Respectfully submitted,



Erica Brand
Project Director
CA Renewable Energy Initiative
The Nature Conservancy
415-281-0451
ebrand@tnc.org

Figure 1: Conservation Values in the Mojave Ecoregion and California Sonoran Desert

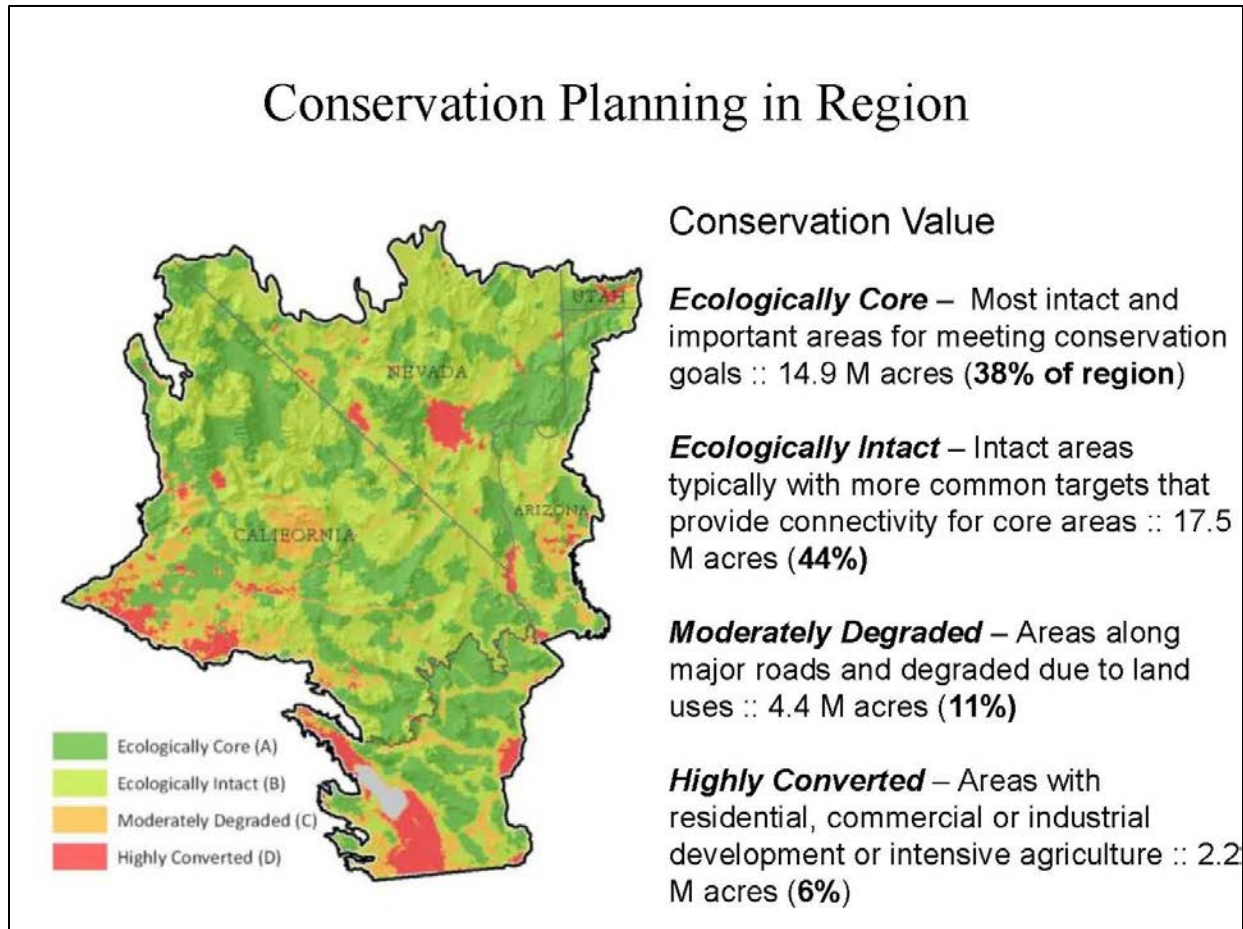
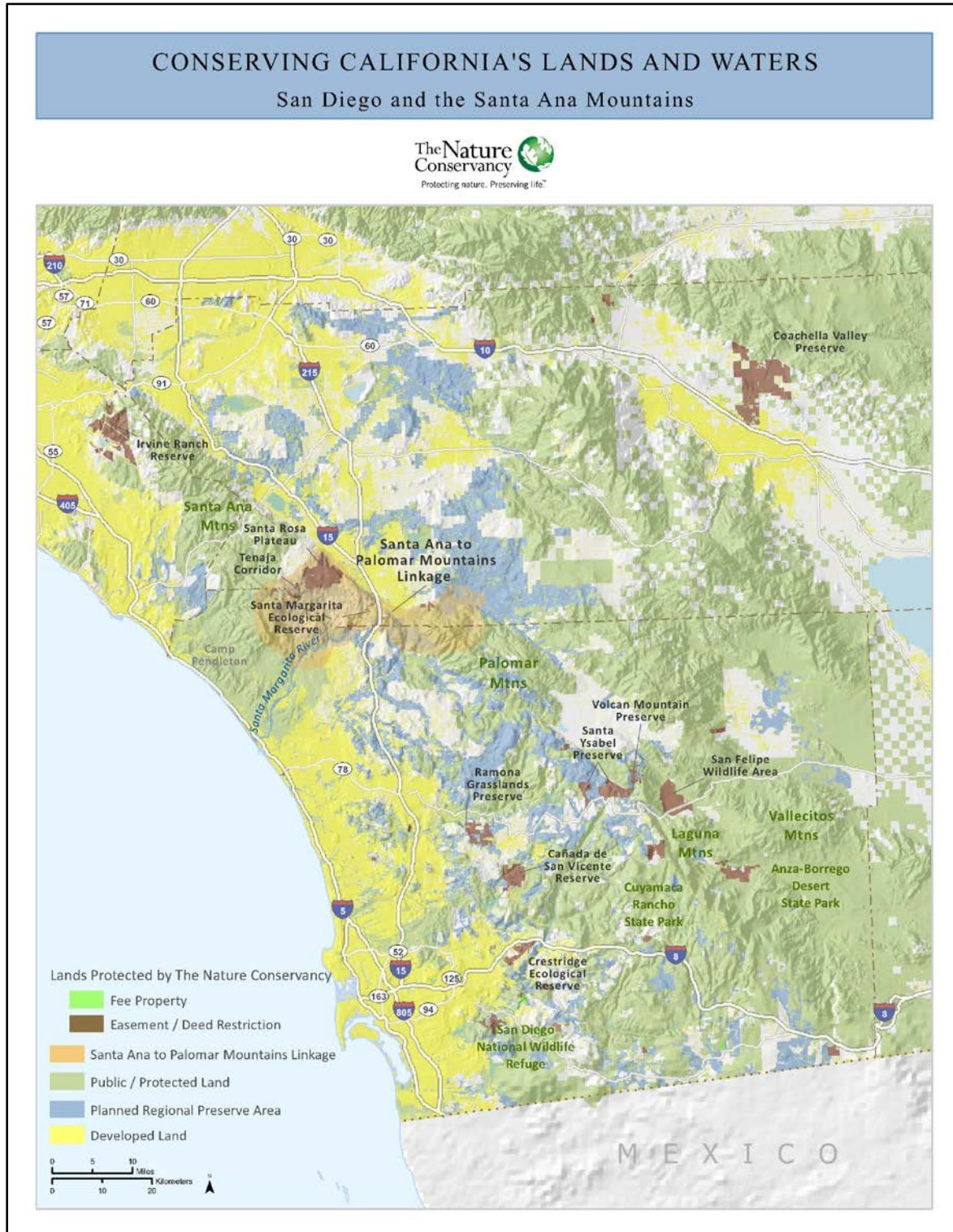


Figure 2: The Nature Conservancy: Conservation Investments and the Santa-Ana Palomar Linkage





THE HYDRO COMPANY, INC.

DBA THE NEVADA HYDRO COMPANY, INC.

July 28, 2014

RegionalTransmission@CAISO.com
California Independent System Operator
250 Outcropping Way
Folsom, CA 95630

RE: Comments on Materials presented at the Imperial County Transmission Consultation Stakeholder Meeting
The Talega–Escondido/Valley–Serrano 500 kV Interconnect Project (FERC Docket ER06–278 and PUC Docket A.10–07–001)
The Lake Elsinore Advanced Pumped Storage (FERC Project P–14227 and dockets ER12-1302, ER12-1305, ER12-1312 and P–11858)

Dear Sir or Madam:

The Nevada Hydro Company (“Nevada Hydro”) has reviewed the materials presented by the California Independent System Operator (“ISO”) at its July 14, 2014 Imperial County Transmission Consultation Stakeholder Meeting (the “Meeting”). The ISO requested that stakeholders provide input on issues it identified in the presentation at the Meeting,¹ particularly on that portion provided by Aspen Environmental Group (“Aspen”). Nevada Hydro also has clarifications and comments to be included in the record for this proceeding. As described in detail herein, Nevada Hydro is providing input on the following topics:

- The goals, options and alternatives presented as potential solutions were confusing;
- Nevada Hydro’ transmission project now under consideration as a Group II project in the 2013–2014 Transmission Plans was not described nor analyzed correctly; and,
- Nevada Hydro believes that that the grand projects presented miss some subtle but important opportunities the ISO should now be considering.

1. Introduction

Although its Talega–Escondido/Valley–Serrano 500 kV Interconnect (the “TE/VS Interconnect”) was mentioned numerous times within the Presentation, Nevada Hydro noted that the ISO apparently is still not clear on the scope and status of the project. Nevada Hydro has described many times to the ISO its two landmark projects under development in southern California that, although they pre–date the demise of the San Onofre Nuclear facility (“SONGS”), are ideally situated to solve that and other issues

¹/ PowerPoint titled: “Imperial County Transmission Consultation Stakeholder Meeting”, July 14, 2014 (“Presentation”).

facing California ratepayers and ISO operators. These projects are the TE/VS Interconnect and the Lake Elsinore Advanced Pumped Storage (“LEAPS”) projects. These projects have been described in detail in formal filings to a variety of venues at the ISO numerous times, including the following:

Date	Topic
October 12, 2009	Letter to Laura Manz, Vice President Market and Infrastructure Development
October 14, 2009	Letter to ISO Board Members
December 23, 2009	Letter to Keith Casey, Vice President Market and Infrastructure Development
February 25, 2013	Comments on 2012–2013 Draft Transmission Plan and February 13, 2013 Transmission Planning Process Stakeholder Meeting
October 14, 2013	Filing to Request Window
November 15, 2013	Letter to Neil Millar on SONGS Replacement Projects
February 25, 2014	Comments on Draft 2013–2014 Transmission Plan
March 17, 2014	Comments of The Nevada Hydro Company to ISO Board of Governors on the 2013–2014 Transmission Plan

All of these filings, as will this, essentially make the same points:²

With regard to our TE/VS Interconnect,

- The Federal Energy Regulatory Commission (“FERC”) and the US Forest Service (“Forest”) have issued their Final Environmental Impact Statement (“Final EIS”) (which is now being updated) showing precise routing, mitigation and conditions that would be required to construct the project. This EIS was published in FERC Docket P–11858, and may be found at the following link: <https://www.dropbox.com/sh/h8esqz0uj483ar8/AABGBXIPz1nrkyJUoaKA1Y1a>
- Nevada Hydro has completed all of the routing, engineering and environmental work towards obtaining the required permit to construct. The project is precisely defined and has been reviewed in detail from each of these perspectives. See Nevada Hydro’s Application and

² / All of the documents referenced in the remainder of this section have previously been provided to the ISO.

Proponents Environmental Assessment filed with the California Public Utilities Commission (“PUC”) at:

http://www.cpuc.ca.gov/Environment/info/aspen/nevadahydro/talega_escondido_valley_serrano.htm

- In 2005, Congress directed, through Section 1221(a) of the Energy Policy Act of 2005, 119 Stat. 594, 946-951 (2005) (16 U.S.C. § 824p) (“EPAAct”), that the Secretary of Energy identify “any geographic area experiencing electric energy transmission capacity constraints or congestion that adversely affects consumers” as a National Interest Electric Transmission Corridor. On August 6, 2006, well before SONGS went dark, the United States Department of Energy (DOE) issued a preliminary National Electric Congestion Study (Congestion Study), designating the southern California region as a “critical congestion area” under Section 1221 of the EPAAct. The TE/VS Interconnect is right in the middle of this identified area.
- After extensive analysis by Aspen in connection with its approval process for SDG&E’s Sunrise Powerlink, the California Public Utilities Commission (“PUC”), in dockets A.05-12-014 and A.06-08-010, identified the TE/VS Interconnect as the preferred transmission alternative in that FEIR/FEIS (“Sunrise FEIR/FEIS”). This document may be accessed on the PUC’s website at: <http://www.cpuc.ca.gov/Environment/info/aspen/sunrise/sunrise.htm>
- FERC has granted incentive rates to the project in Docket ER06–278 (122 FERC ¶ 61,272) after Nevada Hydro demonstrated with independent evidence that the project provides benefits to ratepayers.
- Nevada Hydro’s EPC contractor, Barnard Construction, has provided a detailed cost estimate to construct the project.

With regard to our LEAPS pumped storage facility:

- As it has with regard to the TE/VS Interconnect, FERC and the US Forest Service have issued a final Environmental Impact Statement (“EIS”) (which is now being updated) showing precise routing, mitigation and conditions that would be required to construct the project. This EIS was published in FERC Docket P–11858, and may be found at the following link: <https://www.dropbox.com/sh/h8esqz0uj483ar8/AABGBXIPz1nrkyJUoaKA1Y1a>
- The project has a high queue position and completed interconnection agreements with both SCE and SDG&E. See FERC Dockets ER12-1302, ER12-1305 and ER12-1312.
- FERC has issued a Preliminary Permit to Nevada Hydro in Docket P–14227 (141 FERC ¶ 62,071). Preliminary permits are intended to “preserve the right of the permit holder to have the first priority in applying for a license for the project that is being studied”,³ including its connection

³ / With regard to this quote, FERC references a court case called *Mt. Hope Waterpower Project LLP*, 116 FERC ¶ 61,232, at P 4 (2006). The decision states, “The purpose of a preliminary permit is to encourage hydroelectric development by affording its holder priority of application (i.e., guaranteed first-to-file status) with respect to the filing of development applications for the affected site.”

to the grid, whether called the “LEAPS generation tie line”, “LEAPS Transmission Alternative”, “forest route”, “TE/VS” or the TE/VS Interconnect.

- As described above, LEAPS is in the middle of the EAct Section 1221(a) National Interest Electric Transmission Corridor.
- In November 2006, under the provisions of Sections 1223 and 1241 of EAct, the FERC identified LEAPS as an “advanced transmission technology,” defined as a “technology that increases capacity, efficiency, or reliability of an existing or new transmission facility.”⁴
- The benefits to grid operation of advanced pumped storage facilities like LEAPS, particularly in connection with the loss of SONGS and increasing reliance on intermittent renewable resources is now clear.
- Ordering Paragraph 1 of the PUC Decision on “Track 4” from the long term procurement docket requires that the utilities procure capacity from “large pumped hydro facilities” like LEAPS.⁵ In the same decision, the PUC also noted that energy storage facilities like LEAPS are to be considered as “Preferred Resources”.⁶

As a result, Nevada Hydro requests that the ISO and Aspen incorporate an assessment of the TE/VS Interconnect as it has been described by Aspen in the Sunrise FEIS/FEIR and by the Forest and FERC in their FEIS.

Nevada Hydro’s detailed comments follow.

2. Nevada Hydro’s Comments on requested topics

The ISO sought stakeholder input on a number of specific topics. Nevada Hydro is here providing its input on two of these topics.

2.1 Goals, Options and Alternatives

On page 69 of the Presentation, the ISO sought stakeholder input on whether there are other options to consider addressing transmission issues from Imperial County to the ISO. Nevada Hydro found it difficult to respond to the question because we found the purpose(s) of the Meeting to be somewhat unclear. From its title, Nevada Hydro believed that the meeting was to address issues relating exclusively to Imperial County. Bullets on slide 4 (“There is varied interest in the Imperial County area including factors that drive the need for study”) note that these studies were driven by “Past efforts by the ISO & CPUC to enable renewable generation development in Imperial County”. However, bullets also note that the meeting is to address “Deliverability impacts related to early retirement of SONGS and the implementation of California’s Once Through Cooling (OTC) requirements”

⁴ / See Federal Energy Regulatory Commission, *Order on Rate Request*, Docket Nos. ER06-278-000 et seq., issued November 17, 2006 at ¶ 27.

⁵ / Decision Authorizing Long-Term Procurement for Local Capacity Requirements Due to Permanent Retirement of the San Onofre Nuclear Generations Stations, Decision 14-03-004, March 13, 2014.

⁶ / *Id.*, at Footnote 3.

as well as “reliability benefits in the LA Basin/San Diego area.” With goals this varied, Nevada Hydro found it difficult to understand which alternative and options were addressing which goals. Nevada Hydro hopes that next time, the ISO clarify that the Meeting has broader relevance than just Imperial County, that it is also addressing Group II study issues. It may also help to break out the meeting into more manageable, topic-specific sub-groups.

Notwithstanding the title of the Meeting, it might have been helpful if, for example, the 2nd bullet on slide 5 (“There are three key objectives which the ISO seeks to achieve through the consultation effort”) explicitly mentioned that these “transmission options” included those from Group II, not just “transmission options from Imperial County to the ISO”. Clearly, with the inclusion of the Aspen’s report, the Meeting was intended to address this broader view.

The Aspen Report addresses the Group II issues in the TPP, not Imperial County issues.⁷ Nevada Hydro was further surprised by the apparent last minute inclusion of the Aspen Report at this Meeting. In Nevada Hydro’s view, the Aspen Report should have been presented in a meeting explicitly addressing the TPP and Group II, not Imperial County related information. Lastly, the Aspen Report should have been provided with sufficient lead time to allow for proper review by stakeholders.

2.2 Supplemental Material for Aspen

On page 69 of the Presentation, the ISO sought stakeholder input on the following requested topic:

Considering the information documented in the existing Aspen environmental feasibility analysis of potential corridor designations in southern California, what additional information could be provided to the Aspen to supplement their study?

Nevada Hydro understands that the ISO identified the end points and asked Aspen to determine feasible routes and to assess permitting issues. However, both Aspen and the ISO know the precise details of Nevada Hydro’s TE/VS Interconnect: the ISO has identified the TE/VS Interconnect as one of 3 Group II projects in its TPP, as presented on slide 15 of the Presentation. Aspen was the environmental consultant to the PUC for the EIER/EIS for the Sunrise project that included the TE/VS Interconnect as the preferred transmission alternative, and was the environmental consultant in the PUC proceeding for approval of the TE/VS Interconnect. With its project so clearly defined and well analyzed, Nevada Hydro requests the following 5 modifications be incorporated into the Aspen Report, the Presentation and final Meeting documentation:

1. Incorporate Aspen’s analysis of the TE/VS Interconnect as described in the environmental documents Aspen prepared for the PUC for the Sunrise Powerlink. Nevada Hydro reminds Aspen and the ISO that Aspen identified what they called the “LEAPS Transmission-Only Alternative” as the “most environmentally superior” transmission route, preferable to other

⁷ / The title of the report is, “Transmission Options and Potential Corridor Designations in Southern California in Response to Closure of San Onofre Nuclear Generating Station (SONGS) – Environmental Feasibility Analysis” (“Aspen Report”).

- alternatives.⁸ Aspen must also modify page 30 of the Presentation (Relevant CEQA & NEPA Documents”) to reflect properly the relation of this document to the TE/VS Interconnect.
2. Incorporate the project configuration and conclusions of the FEIS into its analysis of the project and permitting issues.⁹ Reference to the FEIS should also be added to the list of “Relevant CEQA & NEPA Documents” on page 30 of the Presentation.
 3. Incorporate (and perhaps update) the detailed analysis and conclusions developed in the PUC’s “Interim Preliminary Report on Alternatives Screening for: San Diego Gas & Electric Company Valley - Rainbow 500kV Interconnect Project”.¹⁰ This document identifies the TE/VS Interconnect as the “forest route” and is particularly important regarding the potential feasibility of the suggested “Inland” substation and alternatives connecting thereto. The report assessed 45 alternatives to the route proposed by SDG&E which itself is strikingly similar to Alternative 6 in the Presentation. Reference to the document should also be added to the list of “Relevant CEQA & NEPA Documents” on page 30 of the Presentation.
 4. Although it is listed on slide 30 of the Presentation, there is presently no “Relevant CEQA & NEPA Documents” for the West of Devers Upgrade, so there should be no reference to this unfinished effort. Alternatively, if the ISO chooses to retain reference to a document that does not exist, they should do the same for the unfinished EIR analysis for Nevada Hydro’s projects from its PUC proceedings.
 5. Differentiate the TE/VS Interconnect as defined in the above described documents, as a stand-alone segment from any extensions the ISO may wish Aspen to consider. Thus, for example, Alternative 3 on page 40 of the Presentation (Transmission Alternatives: Permitting Likelihood by Segment) should include as the first segment “Lake/Alberhill¹¹ to Case Springs” and a second segment could then be “Case Springs to Inland.” With a published final EIS and Aspen’s analysis in the Sunrise proceeding, the TE/VS Interconnect faces “no major obstacles to permitting or construction” and this designation should be reflected in Aspen’s Report and the Presentation.

⁸ / For a summary, Nevada Hydro suggests that the ISO review Executive Summary section 7.4 “Comparison of Environmentally Superior Northern Route, Southern Route, and LEAPS Transmission Alternatives” of the Sunrise FEIR/FEIS. The document may be found at this web location:

http://www.cpuc.ca.gov/Environment/info/aspensunrise/feir/001%20exec_summary_FINAL.pdf

⁹ / The document may be found at this web location:

https://www.dropbox.com/s/55qiucayfxth7bx/LEAPS_FEIS%20Complete.pdf

¹⁰ / The document may be found at this web location:

<http://www.cpuc.ca.gov/environment/info/dudek/valleyrainbow/valleyrainbow.htm>

¹¹ / Although their locations are less than a mile apart, Nevada Hydro’s TE/VS Interconnect formally is connected to the proposed “Lake Switchyard” not to SCE’s proposed “Alberhill” facility. The PUC will likely determine the preferability of either location as a substation site.

3. Nevada Hydro's comments on other issues

In addition to responding to the above specific requests of the ISO, the following subsections address other issues from the Meeting.

3.1 Aspen's environmental feasibility analysis fundamentally mischaracterizes the project and status of the TE/VS Interconnect.

As addressed in detail in Section 2, notwithstanding its FEIS, the fact that it was determined to be the preferred transmission alternative in the PUC's Sunrise proceeding, that its "forest route" was identified as perhaps the only viable route for the Valley–Rainbow project, and that Nevada Hydro has a precisely defined project, route, cost and ratebase authorization from the FERC, the ISO failed once again to give proper consideration to the TE/VS Interconnect. Nevada Hydro has undertaken a huge amount of environmental and routing feasibility work in connection with its TE/VS Interconnect, as has Aspen, and none was reflected in the Meeting or in Aspen's Report.

The "TE/VS (Forest)" route (as the TE/VS Interconnect was referred to in the Meeting) is not nearly 140 miles, does not transition at the undefined "Inland" site, and as described herein and in Nevada Hydro's other filings to the ISO, its "likelihood of successful permitting" is not "challenging". With a published final EIS and Aspen's analysis in the Sunrise proceeding, in fact, the TE/VS Interconnect faces "no major obstacles to permitting or construction". Nevada Hydro requests that the record be corrected.

As the Aspen Report focused on Group II, the ISO should have studied the TE/VS Interconnect as submitted into the request window, and not added an additional 110 miles of difficult to permit routing to conclude the TE/VS Interconnect has similar permitting difficulties to other projects assessed by the ISO and Aspen in this Meeting.

Nevada Hydro understands that the ISO, of course, can study any potential connection it wishes. Although the ISO Tariff allows that the ISO "may" study projects submitted to the request window, if permitability is a concern, as it seemed to be in this Meeting, the ISO sensibly should assess projects with advanced siting conclusions like those presented in the FEIS and Sunrise FEIR/FEIS in connection with Nevada Hydro's TE/VS Interconnect. Unfortunately, uniquely singling the TE/VS Interconnect out for this "dumbing down" treatment is counterproductive.

Clearly, the ISO cannot simply ignore these facts about the TE/VS Interconnect to try and make it appear that all of the project proposals it has under consideration in the various elements of the TPP are all similarly situated, for they are not. The TE/VS Interconnect has been precisely defined in its FEIS as well as in the Sunrise FEIR/FEIS. Nevada Hydro filed the project into the ISO's "request window" and so the ISO has precise details on the placement of each tower and configuration of each connection point and on the overall permitability of the route. Nevada Hydro has facts supporting its contention that the TE/VS Interconnect is the solution to the situation caused by SONGS and if properly evaluated, could also help by delivering Imperial County renewables to Talega or into San Diego across a second circuit added to the TE/VS Interconnect.

3.2 The “Inland” site re–raises the specter of SDG&E’s ill–fated foray into Temecula with their Valley–Rainbow proposal

On March 23, 2001, SDG&E proposed to construct an approximately 30-mile, 500 kV transmission line that would connect the Southern California Edison Company (“SCE”) Valley Substation with a proposed Rainbow Substation in northern San Diego County in PUC docket A.01–03–036. The proposed project also included a second 230 kV circuit to the Talega-Escondido transmission line. This project looks a lot like “Alternative 6” and the suggested “inland” location a few miles from the proposed Rainbow location.

These similarities are critical for the ISO to consider now, as the Valley Rainbow proposal produced an immense amount of controversy that was reflected in the unprecedented level of participation by the local community, with roughly 20,000 residents registered as intervenors at the PUC! The local Pechanga Tribe was also instrumental in the project’s demise.¹² Aspen and the ISO should carefully consider whether it is wise to continue advancing consideration of alternatives in this area, and may wish to review the issues raised in this proceeding.

Although no formal EIS/EIR was prepared, as Aspen did note, the PUC completed a preliminary alternatives analysis, described herein at Footnote 10. This analysis was prepared to see if other, less controversial routes could be utilized for the proposed connection. It is interesting to note that this report concluded that the TE/VS Interconnect was likely the only viable route for this connection. As a result, the TE/VS Interconnect is electrically identical to the Valley–Rainbow project, and is located just a few miles up the road from the route proposed by SDG&E.

In its 2001 approval of the project, the ISO Board noted that “a 500 kV project such as the Valley Rainbow project,” is needed”, approving the electrical configuration and components but “without determining a route and substation site”. The Memo from ISO Staff to the Board in connection with its action noted the controversy surrounding the current route, and “encouraged” SDG&E to pursue the TE/VS Interconnect route though Forest Service land (SDG&E did not follow this suggestion). ISO Staff noted:

The decision of the former Board to require a competitive solicitation was based to a significant degree on strong community opposition to the Valley-Rainbow Project from the citizens of the Temecula Valley. Since October 2000, additional information has emerged regarding a potential alternative route for the Valley-Rainbow Project, in association with a pumped storage project at Lake Elsinore. The project includes a transmission line that can be extended to connect Valley substation to the proposed Rainbow substation and would thus be functionally equivalent to the project proposed by SDG&E . . . Unlike the route proposed by SDG&E, the route associated with the Lake Elsinore project will have minimal impacts on residential communities.

¹²/Nevada Hydro was therefore surprised to see that the proposed “inland” site abuts Pechanga tribal land.

*SDG&E can and should be encouraged to explore the Forest Service land alternative and other alternatives that would minimize impacts on affected communities.*¹³

Nevada Hydro would also like to point out an error in the Aspen report. On page 10 of the full report, Aspen states that “Ultimately, SDG&E withdrew its application to the CPUC . . .” In fact, SDG&E did not withdraw its application, but it was instead dismissed by the PUC in Decisions 02–12–066, 03–05–038 and 03–06–030.

4. Conclusion

Nevada Hydro believes that that the grand projects provided to Aspen for evaluation miss some subtle but important opportunities. For instance, there are reliability benefits to be gained by completing segments of these larger suggested routes. The ability to stage the development of segments of the various alternatives may alter permitting assumptions on individual segments, while the overall alternative may be ranked as “very challenging”. We believe the base TE/VS Interconnect is one such segment of a grander scheme that provides much needed reliability benefits that the grander plan may find more difficult to achieve. Nevada Hydro’s TE/VS Interconnect will relieve the present reliability deficiency caused by the SONGS retirement, which is no small problem. This will provide the time for consideration of ways to mitigate the looming impacts of OTC retirements while not having the “Sword of Damocles” hanging above the CAISO’s head due to the SONGS retirement.

There are a number of projects that have been proposed by stakeholders for resolving the long-term reliability issues of southern California without resorting to the last ditch solution of large numbers of new, GHG-producing, natural gas fired generators. Rather than having just the small number of large-scale projects that may succumb to each one’s worst siting issues, Nevada Hydro suggests that a more openly developed collection of segments drawn from the various aspects of large-scale project proposals may be able to resolve the reliability issues for the long term. One step in helping that process succeed would be to have Aspen evaluate smaller segments of the larger proposals. This will inform stakeholders of avenues to solutions that can be assembled successfully while helping address critical reliability issues segment-by-segment. Of course, Nevada Hydro believes that the first step should be the approval of the TE/VS Interconnect.

Sincerely,

/s/ David Kates
David Kates

¹³ / Memo to ISO Board of Governors from James Detmers, Acting Vice President of Operations, Armando J. Perez, Director of Grid Planning and Steve Greenleaf, Director of Regulatory Policy regarding Board Action on the Valley-Rainbow Transmission Project, March 23, 2001.

Submitted by	Company	Date Submitted
Charles Mee, Senior Utilities Engineer Charles.Mee@cpuc.ca.gov (415) 703-1147 Traci Bone, Attorney Traci.Bone@cpuc.ca.gov (415) 703-2048	Office of Ratepayer Advocates	July 28, 2014

**COMMENTS OF THE OFFICE OF RATEPAYER ADVOCATES OF THE
CALIFORNIA PUBLIC UTILITIES COMMISSION REGARDING IMPERIAL
COUNTY TRANSMISSION PLANNING ISSUES FOR THE 2014-2015 TRANSMISSION
PLANNING PROCESS**

On July 14, 2014, the California Independent System Operator Corporation (CAISO) hosted a stakeholder meeting to discuss the Imperial County transmission planning issues, and invited stakeholder comments on these issues. The Office of Ratepayer Advocates (ORA), an independent consumer advocate within the California Public Utilities Commission (CPUC), submits the following comments:

1. It Is Appropriate For The CAISO To Address Imperial County Transmission Planning Issues And To Actively Involve Stakeholders At This Early Stage.

ORA supports the CAISO's identification of Imperial County Transmission Planning issues for discussion at this time. Although the results of any studies regarding these issues will not be formally addressed until development of the CAISO's 2014-15 Transmission Plan, the CAISO's hosting of the stakeholder meeting and request for comments at this early stage allows for broad stakeholder participation in development of a CAISO position. Such early stakeholder engagement facilitates more educated stakeholder understanding of the issues which is not possible when stakeholders are faced with a draft transmission plan addressing a host of issues that must be understood, analyzed, and commented on by stakeholders in a short period of time. ORA appreciates the CAISO's approach here and encourages the CAISO to expand on this type of pre-draft report stakeholder engagement.

2. The CAISO Should Clarify The Scope Of The Problem – Congestion Versus Deliverability

Both the CAISO and a handful of stakeholders realize that the primary issue regarding Imperial County transmission planning is the deliverability of renewable resources that have chosen the Full Capacity Delivery Service (FCDS)¹ option in their generator interconnection requests. This option allows buyers of the renewable resource to count the generation capacity toward their Resource Adequacy (RA) needs. However, there continues to be a perception in some stakeholders' minds that major, new transmission infrastructure is needed to obtain renewable energy (not capacity) from the resources in Imperial County to meet California's 33% Renewable Portfolio Standard ((RPS) mandate.

Thus, there appears to be some confusion regarding RA deliverability – the primary issue presented in the CAISO's Imperial County Transmission Consultation stakeholder meeting on July 14, 2014 – and congestion – which is a different issue. Discussions at the July 14, 2014 stakeholder meeting suggest that the CAISO believes that the congestion risk associated with the renewable generators providing energy under the RPS is low, and that the primary issue to be addressed is RA capacity deliverability. However, the CAISO should clarify its position on this point. If this is not the CAISO's position, or if the congestion risk is unclear, then the scope of the work under this initiative should be expanded to expressly identify and address the congestion issue. It is also important that stakeholders understand the distinctions between RA deliverability and congestion, and the technical characteristics of the limitations on the Imperial County portion of the transmission system.

3. RA Oversupply Requires A Reappraisal Of How RA Deliverability Should Be Addressed

Currently, notwithstanding the closure of the San Onofre Nuclear Generation Station and the retirement of some once-through-cooling plants, California has a surplus of system RA capacity. The current planning reserve margins are 115% in 2029 and 114% in 2030 under the California Public Utilities Commission 2012 Long Term Procurement Plan (LTPP) Trajectory Scenario. These numbers do not account for the fact that though California currently has excess system RA capacity, any additional resources for local capacity and flexible capacity needs will also be counted for system RA capacity, and will therefore add to the excess. The CPUC 2014 LTPP

¹ If generator developers request to interconnect to the transmission grid and choose the Energy Only Delivery Service option, the transmission provider only needs to upgrade the transmission grid to address any interconnection and reliability issues. However, if the generator developers choose the Full Capacity Delivery Service option, the transmission provider needs to upgrade the transmission grid to address any deliverability issues, as well as interconnection and reliability issues.

proceeding's Scoping Memo dated March 26, 2014 addressing these RA over-supply issues asked parties to comment on the possibility that the RA status of system capacity should have "zero value" in bids received:

"In the 2012 LTPP proceeding (R.12-03-014), the Commission found that there is no need to procure additional system capacity. Thus, this ruling seeks parties' feedback on whether, to be consistent with that determination, the IOUs' should assume in their [Least Cost Best Fit] methodologies that system capacity in the context of resource adequacy requirements has zero value and whether they should evaluate bids accordingly."

Such an acknowledgement highlights the need for the CAISO to modify its historic approach to reflect the new resources that will be added to the grid's local and system reliability which will address RA deliverability issues. Generally, when dependable generation capacity is not plentiful, deliverability might be required for the RA capacity to be deliverable to load centers during peak hours; however, when dependable generation capacity is more than enough, requiring all those generation capacity to be deliverable will most likely lead to transmission over-build.

4. The Costs For Full Deliverability Of RPS Resources Should Not Be Socialized

If new transmission is triggered by generator requests for RA deliverability, then transmission should not be funded as Policy Driven projects paid for by all ratepayers because there is no State policy to obtain RA from specific resources such as renewable resources. For example, the proposed state laws such as requiring the contracting for geothermal project output do not require the purchase of RA capacity from these resources. The CAISO has commented previously that its focus on FCDS is due to requests from generators for such service. Generator requests for such service do not mean that generators should be shielded from the price signals associated with such a request. Generators who request the FCDS should be fully responsible for the associated transmission upgrade costs.

5. Environmental Impacts Must Be Justified By Significant and Demonstrable Public Benefits

It is clear from Aspen's presentation at the CAISO's Imperial County Transmission Consultation stakeholder process meeting on July 14, 2014, that most of the projects being proposed so far and labeled as Group II and III projects² have major adverse environmental impacts and will be

² Group II projects are considered potential LA/San Diego connector projects that would be identified through a longer term analysis (10 to 20 year) in 2014-2015 or 2015-2016 cycle to address evolving load forecasts and the potential for preferred resources and storage and Group III projects are those that provide reliability benefits but also could play a role in achieving future state policy objectives by enabling additional renewable generation in the

difficult to site. This highlights that any proposed solution that includes building a major new transmission line must have significant and clear public benefits that cannot be reasonably met through alternative means.

6. Deliverability Options Requiring No Transmission Upgrades Should Be Pursued

Notwithstanding the foregoing concerns, if the deliverability capacity needed to obtain additional RA from the Imperial County resources can be obtained without expensive transmission upgrades, those mechanisms should be pursued. ORA supports the concept of re-allocating the Maximum Import Capability (MIC)³ that is expected to be unused from some interties to other interties where there is an expectation of use, such as those interconnecting to Imperial County. ORA supports this approach. If tariff changes are required to accomplish this goal, ORA proposes a separate stakeholder process be initiated as soon as practicable. A decision on the details of such a re-allocation scheme need not be decided before such a process is begun. ORA has no detailed recommendations on needed tariff changes at this time, but observes that this is one of many reasons to hold a second stakeholder meeting on Imperial County deliverability issues.

7. The CAISO Should Prepare A Chart Identifying The Status Of The Allocation Of The Maximum Import Capability Available In The Imperial County

The CAISO noted during the April 14, 2014 stakeholder meeting that much of the MIC for the Imperial County has already been allocated to generators in the CAISO interconnection queue. Using the table below as a template, the CAISO should provide the amount of resources to which this statement applies, and identify the current system MIC. The table should also include the larger generators who have chosen the FCDS option, and their construction timeline as well as the CPUC's RPS portfolio capacity amounts for this area. This would allow stakeholders to have a better quantitative understanding of the gap to be bridged. A further enhancement would be information on the amount of resources that are in the portfolios that have executed Power Purchase Agreements. Lastly, the table should also include likely additional development of legislatively mandated geothermal procurement amounts.

Imperia zone, and they may obviate the need to advance a future reliability-driven Group II project. (CAIOS Draft Discussion Paper titled "Imperial County Transmission Consultation", dated July 2, 2014)

³ The Maximum Import Capability is derived based on a detailed 13-step process set forth in CAISO Tariff Section 40.4.6.2 to allocate intertie transfer capabilities to generators outside of California for importing their Resource Capacity to CAISO.

Imperial County MIC Allocation Report

Generator Name	Generator 1	Generator 2	Generator 3	Total
Dependable Gen Capacity (MW)				
In CPUC RPS Portfolio?				
Geothermal Mandated?				
In CAISO Interconnection Queue?				
Requested FCDS?				
Allocated MIC (MW)				
Total Available MIC	NA	NA	NA	



Comments of Pacific Gas & Electric Company
2014-2015 Transmission Planning Process: Imperial County Transmission Consultation

Submitted by	Company	Date Submitted
Elijah Gilfenbaum (415) 973-4370	PG&E	07/28/14

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to comment on the California Independent System Operator’s (CAISO) July 14th Stakeholder Consultation on Imperial County Transmission.

PG&E recommends additional discussion through subsequent meetings to ensure that the implications of the various approaches discussed in this Stakeholder Consultation are adequately understood by stakeholders, and suggests that a focused discussion is particularly needed on the implications of the Maximum Import Capability (MIC) Reallocation approach.

In addition, PG&E would like to seek further clarification and confirmation on the following issues:

- Whether the forecasted RPS portfolios sent to the CAISO by the CPUC and CEC through the annual transmittal letter should be considered fully deliverable for planning purposes
- Whether the MIC target of 1,400 MW from Imperial Irrigation District (IID) should be considered a firm planning assumption to be upheld even if it comes at significant cost

PG&E thanks the CAISO for its consideration of these matters.

1. PG&E believes that further discussion is needed before the CAISO considers implementing the approaches laid out in this Stakeholder Consultation.

PG&E believes that it would be premature to commit to any of the approaches laid out by the CAISO. More time is needed for a deeper discussion of the issues so that the full implications can be understood by all parties. In particular, at the stakeholder meeting it appeared that there is still confusion about the MIC Reallocation approach, and the tradeoffs involved between Palo Verde and IID MIC rights. CAISO staff seemed to indicate during the stakeholder meeting that this issue does not require an immediate decision, and therefore, PG&E supports an additional stakeholder meeting.

While it is not necessary to pick one of the approaches laid out during the stakeholder meeting immediately, PG&E does believe that near-term confirmation is needed with respect to how the potential upgrades in question are to be studied in the 2014/2015 Transmission Planning Process (TPP). PG&E agrees that the interaction between LCR-driven transmission and the issues related to

deliverability from Imperial County should be studied in the 2014/2015 TPP, but believes that a policy-driven basis for approval of those upgrades is not warranted at this time, and seeks clarification from the CAISO on this issue.

2. PG&E would like to see further clarity regarding the deliverability requirements of the RPS portfolios developed for various planning processes.

Since 2010, the CAISO, CPUC, and CEC have committed to coordinate transmission planning assumptions through a Memorandum of Understanding (MOU) among the agencies. Through this MOU, the Commissioners and senior staff have jointly agreed to the RPS portfolio assumptions that should be used as inputs into the planning process. However, while the number of MWs by location and technology are very clear in these portfolio assumptions, the choice of whether or not to assume this incremental procurement requires Full Capacity Deliverability Status (FCDS) remains unclear.

The deliverability targets laid out in this consultation suggest the CAISO has interpreted that these portfolio assumptions do require FCDS for all MWs contained within. However, PG&E seeks clarity as to whether this is the intended interpretation, and suggests that the CAISO ask the agencies to be explicit on this point in subsequent submissions to the CAISO (the next is expected in February 2015 for the 2015/2016 TPP and 2016 Long Term Procurement Plan (LTPP)). PG&E would like to highlight that energy-only contracts are viable, evidenced by the fact that a number of energy-only RPS Purchase Power Agreements (PPAs) have been signed by load serving entities (LSEs), and therefore it is reasonable to assume that some portion of the incremental portfolio is likely to be signed as energy-only, particularly in areas where significant upgrades would be needed to ensure deliverability.

The cost/benefit of Resource Adequacy (RA) vs. network upgrades is currently an issue in the 2014 RPS Plan, where the CPUC has asked parties to comment on its proposal to assume the value of capacity from RPS procurement to be zero. While PG&E, in its comments to the CPUC, has argued that RA from fully or partially deliverable RPS resources does have positive value, PG&E notes that it currently expects the RA value from non-flexible resources to be low for the foreseeable future, and, with respect to energy-only deals, the RA value, by definition, would be zero. Given the CPUC's aforementioned proposal in the 2014 RPS Plan, PG&E believes it is timely and appropriate for the CAISO, CPUC, and CEC to jointly determine the extent to which FCDS should be assumed in the RPS portfolio planning assumptions used in the CAISO's TPP and the CPUC's LTPP.

3. PG&E suggests that the basis for the current target MIC value of 1400 MW from IID should be reexamined.

While MIC Reallocation is one approach to ensure the target amount of deliverability from IID, it is unclear whether this target is a desirable policy choice, and whether the relative value of RA from IID and Palo Verde warrants such a tradeoff. In its Draft Discussion Paper, the CAISO cites a

2011 Decision¹ from the CPUC as the basis for its target MIC value of 1,400 MW from IID. However, PG&E's interpretation is that this decision was never intended to become a policy driver for new transmission upgrades or RA market rules. Instead, it was more narrowly meant to influence the procurement decisions LSEs were to make in their 2011 RPS solicitation. PG&E believes further discussion would be useful as to whether CPUC's 2011 decision is a sufficient basis for maintaining the MIC target at 1,400MW, and whether this target should be upheld indefinitely, even if doing so drives costs in other aspects of the market.

4. An in-depth discussion about the role of MIC rights at the Palo Verde intertie should be on the agenda for the next stakeholder meeting on August 28th

At the stakeholder meeting, the CAISO explained its rationale for why the MIC Reallocation approach would not necessarily result in a net decrease in RA value. PG&E's understanding of the CAISO's argument is that because long-term contracts may roll off in the future, LSEs will not have as much need for MIC rights at Palo Verde, and any excess MIC at Palo Verde would not be utilized. Therefore, in the CAISO's line of reasoning, it makes sense to reallocate a portion of the available MIC from Palo Verde to IID so that it can be utilized by expected future contracts.

However, PG&E has a different interpretation. The value of Palo Verde MIC rights does not apply exclusively to long-term dedicated import contracts. Regardless of whether some long-term dedicated import contracts from the Southwest may be rolling off over the next decade, LSEs can still use MIC rights for system RA compliance. The MIC methodology creates a pool based on the historical simultaneous imports into the CAISO system as a whole, and the MIC Reallocation approach would reduce the size of that pool. In this way, the total amount of MIC at all interties will potentially be decreased because the amount of MWs each LSE can request is reduced. PG&E suggests a focused discussion on this point at the next stakeholder meeting so that the implications for the overall RA market can be fully vetted.

¹ Rulemaking 11-05-005: Assigned Commissioner's Ruling (ACR) issued on June 7, 2011

Submitted by	Date Submitted
Pinnacle West Capital Corporation Jason Smith, jason.smith@pinnaclewest.com (602) 250-2668	July 28, 2014

PNW appreciates the opportunity to comment into the CAISO Imperial County Transmission Stakeholder Consultation Process to inform the 2014-2015 Transmission Planning Process on mitigation of loss of Imperial Valley Import Capability. We believe it is important to maintain the previously targeted 1,400 MW of Imperial Valley Import Capability in order to facilitate the continued development of Imperial Valley (IV) area geothermal resources which will add valuable base load renewable capacity and energy to the CAISO resource portfolio in the future. We offer the following specific comments on the process:

Determination and Allocation of Maximum Import Capability (MIC):

It was clear from the meeting that the methodology CAISO uses to determine CAISO system MIC and how that MIC is allocated to the external tie lines is not widely understood. There appears to be one method using historical flows to determine the annual “operational MIC limitations” and another analytical method for determining the MIC needs looking forward for planning purposes.

PNW recommends that the CAISO develop communication tools that will help stakeholders better understand these processes. PNW also recommends that CAISO revisit the possibility of having a more technical basis for both current year operating MIC and forward looking MIC, and determine if a consistent approach would be feasible and useful for both timeframes.

ASPEN Briefing on Environmental Feasibility Analysis:

All of the options from the ASPEN evaluation appear to go significantly farther South and East than what may be necessary to achieve additional MIC from the IV area. PNW recommends that the CAISO revisit opportunities for solutions that focus on the SCE to northern San Diego area to see if significant MIC from the IV region could be gained from those solutions. If possible, these alternatives may also be more environmentally feasible.

Reallocation of Maximum Import Capability from Arizona to the IV Area:

PNW understands the proposed reallocation but is concerned with the one-for-two tradeoff on overall System MIC. This should be considered a near term solution, with continued commitment by the CAISO to maintain its long term MIC projections through system upgrades.

In closing, PNW reiterates our appreciation for this important first step by the CAISO to foster an understanding of the MIC determination methodology and to gain insight from stakeholders on potential ways to restore the previously targeted levels of MIC from the IV area. PNW is very interested in transmission planning and development in the southern portion of the CAISO and commits to remaining engaged in this specific process and the general 2014-2015 CAISO Transmission Planning Process in order to support the CAISO in planning and developing its future transmission system for optimal reliability and economic operation for the benefit of the CAISO customers and the overall WECC interconnected transmission system.

**SDG&E's Comments on the
CAISO's July 2, 2014
Imperial County Transmission Consultation Draft Discussion Paper**

“Deliverability” to Loads is Not Limited to Loads in the San Diego and LA Basin Areas

The CAISO's July 2, 2014 *Imperial County Transmission Consultation Draft Discussion Paper* indicates that the CAISO is consulting with stakeholders “on options to address renewable generation deliverability out of Imperial County to the San Diego and LA Basin areas in support of the California ISO's transmission planning process.” As a threshold matter SDG&E notes that the “deliverability” of generation is not limited to loads in the “San Diego and LA Basin areas.” Deliverability is needed to all loads within the CAISO Balancing Authority.

Stakeholders Need a Clear Understanding of the Renewable Resources that the CAISO is Planning For

The CAISO notes that the “early retirement of SONGS materially shifted anticipated electrical flow patterns and negatively impacted the ability to provide deliverability to future increased generation potential in Imperial County.” It would be helpful if the CAISO could provide a detailed listing of the locations, quantities and types and timing of the referenced “future increased generation potential in Imperial County.” There is ambiguity between what the CAISO may consider as “existing” generation in Imperial County, what the CAISO may consider as “future” generation potential in Imperial County and what the CAISO may consider as “future increased” generation potential in Imperial County.

Also, it is unclear how much of the future generation within Imperial County is expected to be interconnected within (i) the CAISO balancing authority, (ii) within the IID balancing authority, and (iii) within the Western Area Power Administration (WAPA) balancing authority.

Page 10 of the CAISO's July 14, 2014 presentation package states that the CAISO “Considered and approved modest transmission reinforcements to support a 1400 MW deliverability from IID.” Page 10 then states that “The 2013-2014 transmission plan identified the impact of the SONGS retirement on forecast incremental deliverability from Imperial County area.” It is unclear whether the term “forecast incremental deliverability” refers to “deliverability from IID” that is *in addition to* the referenced 1400 MW number, or in addition to some other number.

Page 67 of the CAISO's July 14, 2014 presentation package states that reallocating available unallocated MIC for year 2015 from the Palo Verde branch group would result in a “433 MW increase” in MIC for the Imperial Valley branch groups. What this “increase” would be in addition to is not specified.

The stakeholder process would be enhanced if the CAISO provided the details that would allow all parties to have a common understanding of the resources, deliverability projections, and timing that are at issue in this consultation.

“Deliverability at Any Cost” is Not a Public Policy Objective

The CAISO’s paper is focused on “renewable generation deliverability.” It does not address the question of whether it makes economic sense to provide “deliverability” for all of the “future increased generation potential in Imperial County.” SDG&E believes there should be some assessment of whether consumers would be better off (i) procuring renewable generation on an “energy only” basis thereby avoiding the transmission costs that would make such generation deliverable and buying Resource Adequacy (RA) capacity from sources that do not require incremental transmission capacity, or (ii) procuring renewable generation with both energy and RA capacity attributes, which could mean incurring transmission costs to make such generation deliverable for RA counting purposes.

The CAISO’s paper introduces the concept of reallocating Maximum Import Capability (MIC) from the “Palo Verde branch group to the Imperial Valley branch groups...to facilitate additional deliverability from Imperial County without requiring system upgrades.” The idea is that “MIC at one intertie could be reallocated to another intertie based on its effectiveness factor.” At the July 14, 2014 stakeholder meeting the CAISO indicated that, currently, the “unallocated” Palo Verde branch group MIC is 1266 MW. As SDG&E understands it, the CAISO then subtracted 400 MW of “future increased generation potential” in Arizona -- presumably dependable renewable generation capacity included in the RPS portfolio provided to the CAISO by the CPUC – to arrive at an available unallocated MIC number of 866 MW. (Page 67 of the CAISO’s July 14, 2014 presentation package.)

Given the most limiting contingency conditions, the CAISO stated that reallocating this available unallocated MIC to the Imperial Valley branch groups would result in a 433 MW increase in the Imperial Valley branch groups’ MIC; i.e., dependable generating capacity at the Imperial Valley branch groups is only 50% as effective in mitigating the critical contingency impacts as dependable generating capacity at the Palo Verde branch group. The difference in effectiveness factors between the Palo Verde branch group and the Imperial Valley branch groups needs to be accounted for before deciding whether it makes sense to proceed with a reallocation of MIC.

Additionally, before deciding to reallocate the currently available unallocated MIC, consideration needs to be given to the likely availability of dependable generating capacity on the Palo Verde and Imperial Valley branch groups; dependable generating capacity that CAISO Load Serving Entities (LSEs) could procure in the future to utilize the currently available unallocated MIC. In this regard, SDG&E notes that the Palo Verde branch group is connected to areas with large amounts of existing generation; Arizona, New Mexico and the El Paso area in west Texas. In contrast, the amount of existing dependable generating capacity within the IID balancing authority that would be available to utilize reallocated MIC is much smaller, and may in fact be zero assuming IID needs all of its existing internal generation to meet IID’s own balancing authority needs. It could very well turn out that any MIC reallocated to the Imperial

Valley branch groups could only be used by CAISO LSEs if new dependable generating capacity is constructed within the IID balancing authority.

SDG&E understands that the RPS portfolios currently being used for CAISO planning purposes contemplate significant amounts of “future increased generation potential” in Imperial County. It is unclear how much of this “future increased generation potential” is within the IID balancing authority and would therefore require MIC, and how much would be connected within the CAISO balancing authority and therefore not require MIC. Recent history suggests that renewable resource developers prefer to interconnect within the CAISO balancing authority. If this trend continues, it is not obvious that there is a pressing need for increased MIC on the Imperial Valley branch groups.

Considering the existing availability of dependable generating capacity east of the Palo Verde branch group, considering that dependable generating capacity within the IID balancing authority is only half as effective as dependable generating capacity on the Palo Verde branch group, and assuming that new generation would have to be constructed within the IID balancing authority in order for any increase in MIC to be of use, SDG&E believes the concept of reallocating currently available MIC from the Palo Verde branch group to the Imperial Valley branch groups is of dubious value.

Finally, SDG&E questions the practicality of MIC reallocation since it would seem to require the CAISO to make an upfront guess of the amount of MIC that CAISO LSEs will leave unrequested on the Palo Verde branch group during each year’s annual 13 step allocation process. If the CAISO guesses wrong, it could be depriving CAISO LSEs the opportunity to procure cost-effective dependable generating capacity from existing sources of dependable generating capacity east of the Palo Verde branch group. SDG&E is concerned that any such guesses made by the CAISO are pre-judging market outcomes and may be unwarranted intrusions into the market participants’ commercial interests.

The Environmental Feasibility of New Transmission Connecting Imperial County to the San Diego Area Via the Banning Pass Should be Analyzed

Aspen Environmental Group’s May, 2014 consultant report on “*Transmission Options and Potential Corridor Designations in Southern California in Response to Closure of San Onofre Nuclear Generating Station (SONGS), Environmental Feasibility Analysis*” evaluates eight transmission alternatives. An alternative not analyzed was a route that connects the Imperial Valley to northeast San Diego. That route travels north on the west side of the Salton Sea and then turns west just north of the Anza-Borrego Desert State Park (ABDSP), avoiding ABDSP altogether. This route was presented to Aspen, however, at that time Aspen chose not to study this particular route.

At the July 14, 2014 stakeholder meeting an Aspen Environmental Group representative suggested that this route was not analyzed because there was a desire to “keep distances manageable.” SDG&E appreciates the economic savings that can be realized by constructing transmission within corridors that connect two points on as straight a path as possible. However,

this is often not possible. Moreover, under existing law, economics are not a determinative factor when evaluating environmental feasibility.

Whether the route proposed above is more or less environmentally feasible than the other routes evaluated in the May, 2014 report is unknown. As options for addressing the impacts of the SONGS retirement and the anticipated shut down of coastal generation using Once-Through-Cooling (OTC) technologies are being considered, it would be helpful to know the comparative environmental feasibility of this route.

**Sempra USGP Stakeholder Comments:
CAISO 2014-2015 Transmission Planning Process
Imperial County Transmission Consultation July 14, 2014 Meeting**

Submitted by	Company	Date Submitted
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Sempra US Gas and Power (Sempra USGP) appreciates this opportunity to provide the following comments on the 7/2/2014 CAISO Imperial County Transmission Consultation discussion paper, and the 7/14/2014 stakeholder meeting held at the CAISO. CAISO has undertaken this stakeholder effort to explore options to expand import deliverability for potential future renewable generation from Imperial County. The comments address the option of reallocating import capacity from other intertie points, to import capacity from the Imperial County area.

1. Any Re-allocation of Maximum Import Capability (MIC) Should Occur After On-System Deliverability Needs Are Met, and Should Reflect LSE Renewable Procurement Decisions

At the 7/14/2014 meeting, the CAISO requested stakeholder input on the following question:

“Is the reallocation of Maximum Import Capability from the transmission path from Arizona to the transmission paths from Imperial County a viable option? If so, what approaches should be considered by the ISO to implement this proposal?”

Currently, MIC at an intertie is determined annually based on historical imports during peak periods. Existing transmission contracts and pre-Resource Adequacy (RA) program imports are subtracted from the available capacity to determine the capacity available for allocation to Load Serving Entities (LSE) and other market participants in the CAISO annual multi-step nomination process. Renewable capacity from off-system resources may be credited by an LSE to meet RA requirements to the degree the LSE acquires import capacity in the annual allocation process.

An efficient and equitable option to accommodate a reallocation of MIC between intertie points could be based on the annual CAISO intertie allocation process. The CAISO could establish conversion effectiveness ratios for various potential import points (for example, the CAISO has estimated an approximate 2 for 1 ratio between imports from Arizona and imports from the Imperial Valley area). If allowed, market participants acquiring import capacity at relevant interties through the CAISO annual multi-step process could have the opportunity to

Sempra USGP Stakeholder Comments:
CAISO 2014-2015 Transmission Planning Process
Imperial County Transmission Consultation July 14, 2014 Meeting

convert import capacity between interties based on the effectiveness ratios established by the CAISO. This change would allow market participants to better coordinate their procurement decisions with available import capacity, and would align with the existing multi-step import allocation process. Such an approach would be preferable to a static assumption-driven reallocation of import capacity, and allows market participants more flexibility to dynamically and efficiently manage their procurement decisions.

In establishing the import capacity available for allocation (or reallocation), it is important that the CAISO continue to preserve deliverability protocols for existing generators interconnected to the CAISO grid, and new generators participating in the interconnection and resource transitions processes.

**Sierra Club
Audubon California
Defenders of Wildlife
Natural Resources Defense Council**

July 28, 2014

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California Independent System Operator (CAISO)'s Imperial County draft discussion paper

1. *Introduction*

The Sierra Club is a national nonprofit organization of approximately 2.5 million members and supporters (over 380,000 who live in California) dedicated to exploring, enjoying, and protecting the wild places of the earth. The Sierra Club's concerns encompass protecting our lands, wildlife, air and water while at the same time rapidly increasing use of renewable energy to transition towards a carbon-free future.

With over 150,000 members and supporters in our state, Audubon California connects people with birds, nature and the environment that supports us all. For over a century, our national network of community-based nature centers, chapters, scientific, education, and advocacy programs engages millions of people from all walks of life in conservation action to protect and restore the natural world. The Imperial Valley/Salton Sea and the surrounding agricultural fields have been recognized by Audubon as a globally significant Important Bird Area in an international program to identify key locations critical for the conservation of birds, and a key stopover on the Pacific Flyway for migratory birds.

Defenders of Wildlife has approximately 1.2 million members and supporters nationally including approximately 170,000 in California. Defenders of Wildlife is dedicated to protecting all wild animals and plants in their natural communities. To this end, we employ science, public education and participation, media, legislative advocacy, litigation, and proactive on-the-ground solutions in order to impede the accelerating rate of extinction of species, associated loss of biological diversity, and habitat alteration and destruction.

The Natural Resources Defense Council ("NRDC") has over 1.2 million members and online activists nationwide, more than 250,000 of whom live in California. NRDC uses law, science and the support of its members and activists to protect the planet's wildlife and wild places and to ensure a safe and healthy environment for all living things. NRDC has worked to protect wildlands and natural values on public lands and to promote pursuit of all cost effective energy efficiency measures and sustainable energy development for many years.

Our organizations are each committed to a carbon-free future, and strongly support the emission reduction goals found in the Global Warming Solutions Act of 2006, AB 32. We also support California's electricity "loading order" as the preferred sequence for meeting electricity demands. The loading order lists energy efficiency and demand response first, renewable resources second and natural gas-fired power plants third.

As we transition toward a clean energy future, it is imperative for our future and the future of our wild places and wildlife that we strike a balance between addressing the impacts of large scale energy development with the impacts of climate change on our biological diversity, fish and wildlife habitat, and natural landscapes. To ensure that the proper balance is achieved, we need smart planning for renewable power that avoids and minimizes adverse impacts on wildlife and wild lands. To that end, we have each participated as active stakeholders on California's Desert Renewable Energy Conservation Plan (DRECP) and were deeply engaged in developing the Bureau of Land Management (BLM)'s Solar Energy Program. A number of our groups are also engaged in work on Imperial County's Geothermal/Alternative and Transmission Element Update.

2. Geothermal development at the Salton Sea.

We are pleased to see the CAISO study transmission options to Imperial County, and that one of their considerations in doing so is recognition of interest in geothermal development at the Salton Sea. We are also pleased to see the National Renewable Energy Laboratory's work to provide technical support and guidance to the Salton Sea Authority on the potential for geothermal and transmission development to offset Salton Sea restoration costs.

Our organizations have worked for years on resolving the fish and wildlife and air quality issues around the Salton Sea created by the water transfer authorized in the Quantification Settlement Agreement. The fate of the Salton Sea and its surrounding communities in Imperial and Riverside Counties will rely on future restoration projects to address the loss of habitat for fish and birds and the air quality problems created by dust from a receding Salton Sea.

Additional geothermal development around the Salton Sea could be sited on exposed playa to minimize dust emissions and could potentially generate funding for habitat and air quality projects around the Sea. Geothermal is a carbon-free resource that will help California continue its decarbonization trajectory and add diversity to the existing fleet of clean energy resources. With proper planning, siting, and application of best management practices, the development of future geothermal energy projects at the Salton Sea can benefit California's electrical grid, help meet our climate change goals, and provide mitigation and a potential revenue source for addressing some of the environmental and public health issues at the Salton Sea.

Transmission constraints are a barrier to developing significant new geothermal resources at the Salton Sea. The CAISO should consider the benefits of developing geothermal at the Salton Sea when analyzing options to address deliverability from Imperial County to the California ISO's balancing control areas.

3. Aspen Environmental Feasibility Analysis.

We are pleased to see the California Energy Commission¹ engaged Aspen to study the environmental feasibility of potential transmission options prior to a solution being identified through the CAISO's annual Transmission Planning Process. Potential environmental conflicts should be determined as early as possible in generation and transmission planning, using the most robust information available. The Garamendi Principles require that rights-of way (ROW)s are *justified by environmental, technical, or economic reasons*.² Avoiding harm to protected species should be key to complying with the Garamendi Principles.

The Santa Rosa and San Jacinto National Monument is correctly identified as constrained. Not only is there is express legislative intent to preserve the scenic values of the Monument, but also the proposed route traverses a designated Conservation Area under the Coachella Valley Multiple Species HCP/NCCP as well as critical habitat for endangered Peninsular bighorn sheep. Thus, the area is inappropriate for new transmission ROWs, as are current or proposed wilderness areas. In addition to the land use constraints specifically identified by Aspen, there are a number of other designations which indicate high biological value and potential environmental conflicts, including: Areas of Critical Environmental Concern or Desert Wildlife Management Areas on BLM managed lands, BLM known raptor use areas, US Fish and Wildlife critical habitat unit or core area/core recovery area, areas subject to state and federal recovery plans and areas within the reserve design for a Habitat Conservation Plan or Natural Communities Conservation Plan. Aspen should particularly consider impacts to Peninsular bighorn sheep as a number of routes appear to conflict with Peninsular bighorn sheep habitat.

Aspen should consider DRECP data in analyzing transmission routes. The Aspen Analysis seems to rely a good deal on work done in connection with the Sunrise Powerlink. Since that time, the California desert has been extensively studied and catalogued in connection with the DRECP, resulting in a massive increase in understanding of sensitive species and natural vegetation communities in Southern California. This data is publicly available³ in GIS layers. It would be a huge oversight to not take advantage of such up-to-date, granular data early in the transmission planning process.

The Aspen Analysis should provide information on generation facilitated by the various transmission options. The environmental conflicts and benefits of a particular transmission option are not limited to the on-the-ground impacts of the line itself. Indeed, transmission decisions may result in vastly different climate and biological impacts. We understand that much of this data is analyzed at the California Public Utilities Commission during the Certificate of Public Convenience and Necessity process. However, given the pivotal role that transmission plays in guiding generation, it is important to provide this information to the public and decision-makers as early as possible. This information should include what, if any types of generation would be facilitated by the various transmission options and the general location of such generation.

We appreciate the opportunity to provide comments to the CAISO's Imperial County draft discussion paper and associated materials. As discussed above, sustainably-sited and operated renewable generation

¹ Lee, Susan, Brewster Birdsall (Aspen Environmental Group) 2014. *Transmission Options and Potential Corridor Designations in Southern California in Response to Closure of San Onofre Nuclear Generating Stations (SONGS): Environmental Feasibility Analysis*. California Energy Commission. Publication Number: CEC-700-2014 ("Aspen Analysis").

² Senate Bill 2431, Garamendi, Chapter 1457, Statutes of 1988.

³ <http://drecp.databasin.org>

in Imperial County could bring multiple benefits to Southern California. Transmission lines to deliver these resources to San Diego and the LA Basin should be sited in accordance with the Garamendi Principles and avoid or minimize harm to sensitive wildlife and wildspaces.

Sincerely,



Sarah K. Friedman
Senior Campaign Representative
Sierra Club



Garry George
Renewable Energy Director
Audubon California



Kim Delfino
California Program Director
Defenders of Wildlife



Helen O'Shea
Director, Western Renewable Energy Project
Natural Resources Defense Council

July 29, 2014

**COMMENTS ON BEHALF OF THE CITIES OF ANAHEIM, AZUSA, BANNING,
COLTON, PASADENA, AND RIVERSIDE, CALIFORNIA
ON THE DRAFT DISCUSSION PAPER FOR THE
IMPERIAL COUNTY TRANSMISSION CONSULTATION**

In response to the ISO's request, the Cities of Anaheim, Azusa, Banning, Colton, Pasadena, and Riverside, California (collectively, the "Six Cities") submit their comments on the ISO's Draft Discussion Paper for the Imperial County Transmission Consultation, posted on July 2, 2014, and the ISO's subsequent stakeholder meeting held on July 14, 2014. The comments below address the proposed transmission solutions for deliverability out of Imperial County that are candidates for further assessment in the ISO's transmission planning process for 2014/15 and the ISO's proposal to consider eliminating a portion of the Maximum Import Capability ("MIC") from the Palo Verde branch group and reallocating the MIC to the Imperial Valley branch group(s).

The Six Cities also have two general comments regarding deliverability from the Imperial County area. First, with respect to this stakeholder proceeding, the Cities are unclear as to whether the expected outcome of this transmission consultation will be recommendation for a particular project to be approved in the 2014/15 transmission plan, or whether this process will simply result in a narrowing of options for further study in the 2014/15 transmission plan and in subsequent plans, for eventual adoption if the need for a transmission solution to facilitate increased deliverability from Imperial County becomes more definitive. Focusing the objective of this stakeholder proceeding may help stakeholders better formulate their positions.

Second, the Six Cities urge the ISO to assess the level of need for transmission solutions to provide deliverability from the IID area on an ongoing basis. Based on the information in the draft discussion paper, it seems that the expected quantity of anticipated resources for which transmission may be needed has shifted within the past several years and may continue to do so. The Cities are concerned that transmission costs not be incurred that may eventually become stranded based on resources in the Imperial County area not developing as anticipated. The assessment should include all factors that influence the need, or lack of need, for particular transmission projects.

1. Proposed Transmission Solutions for Deliverability

The Six Cities are troubled by the fact that stakeholders are being asked to provide input regarding potentially very expensive transmission projects to facilitate deliverability out of Imperial Valley on an abbreviated timeline with very little data, other than what appear to be basic estimates, concerning the cost of these projects. The cost of some of the projects as stated in the discussion paper ranges from \$700 million to \$5.7 billion, and the Cities have not located any cost estimates for the projects as configured in the Aspen report on the environmental feasibility of certain options commissioned by the California Energy Commission. The Six Cities observe that several of the routes evaluated by Aspen include substantial undergrounding,

including (for example) an underground route located within a state park having terrain described as “granite bedrock” with biologically sensitive resources in the vicinity. As stakeholders have now observed with respect to other transmission projects, routes that involve even modest lengths of undergrounding may raise transmission costs by a large magnitude, and lengthy segments that will be undergrounded within difficult, hard-to-access terrain in environmentally vulnerable areas are likely to be just as, if not more, costly on a per-mile basis than other underground projects that have been either recently completed or are currently underway.

If the ISO intends to rely on environmental feasibility assessments performed outside the ISO’s transmission planning process to narrow the range of transmission solutions under consideration, the ISO should also look to cost as an important factor in considering which options are most viable. In that regard, the ISO may need to consider alternate routes from those that have been studied thus far and, as to all routes that the ISO intends to consider for its transmission plan, develop a detailed understanding of cost impacts so that stakeholders may be fully informed about the policy choices being made to facilitate deliverability from Imperial Valley. With respect to these large projects, it may not be sufficient to simply defer considerations of cost until after a project has been selected, put out for competitive solicitation, and competing bids received with varying cost estimates (and, potentially, no firm cost containment commitments). Serious consideration should be given to selection of a project (or projects) that will be economic for ratepayers, just as the ISO intends to give serious consideration to only those projects that are viable from an environmental feasibility perspective.

2. Reallocation of MIC from the Palo Verde Branch Group to the Imperial Valley Branch Group(s)

In the Six Cities’ view, the ISO has not made available sufficient information regarding this possible approach in order for stakeholders to fully consider its implications. As was recommended at the July 14th stakeholder meeting, the Six Cities request that the ISO publish a detailed issue paper discussing in more detail how MIC is currently allocated, the logistics of how a reallocation would work (including the contemplated timing for when the reallocation would occur) and how market participants, including market participants that may rely on the availability of MIC at this branch group to import Resource Adequacy resources, would be affected. The issue paper should explain why eliminating 866 MW of MIC at the Palo Verde branch group to produce a net gain of 433 MW of MIC at the Imperial Valley branch group(s) (for an overall loss of 433 MW of MIC to imported Resource Adequacy resources) is a reasonable approach, even if the Palo Verde branch group is not fully subscribed at this particular time. Stakeholders should have the opportunity to fully consider if attaining a policy goal of greater procurement from the Imperial Valley area is worth forgoing future opportunities to rely on Resource Adequacy resources from other areas outside of the ISO, such as Arizona, that may be available for long-term procurement now or otherwise offer more competitive pricing or other advantages.

The Six Cities found troubling the ISO’s rather casual suggestions at the July 14th stakeholder meeting that additional MIC beyond the 433 MW reallocation that is currently under consideration could be reallocated if capacity associated with Existing Transmission Contracts

(“ETCs”) and Transmission Ownership Rights (“TORs”) were no longer granted priority in the MIC allocation process. Although it is not entirely clear what exactly the ISO may be considering with respect to elimination of ETC and TOR priority at this time, the Six Cities oppose implementing sweeping policy and tariff changes that substantially diminish the value of ETCs and TORs by reducing their allocated priority share of MIC (and LSEs’ ability to rely on these longstanding contract arrangements). This is certainly not the forum in which to consider these broad changes and, in the Six Cities’ view, doing so in order to shift MIC to a preferred set of import branch groups for policy reasons is unfair and shortsighted. It is unfair because the ISO committed to preserving the value of existing contracts, and it is shortsighted because it appears that MIC reallocation would achieve, at best, a temporary uptick in the ability to import RA resources from the Imperial Valley (*albeit* at a reduced level, based on the ISO’s data showing that the MIC reallocation to Imperial Valley is only 50% effective), but would not fix the fundamental problem of a lack of transmission to provide deliverability for Imperial Valley resources.

Submitted by,

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California

Stakeholder Comments Template

**Imperial County Transmission Consultation
SCE Comments on Draft Discussion Paper & July 14
Stakeholder meeting**

Submitted by	Company	Date Submitted
Karen Shea Ayman Samaan Eric Little	Southern California Edison	July 28, 2014

SCE appreciates the opportunity to participate in the CAISO’s Imperial County Transmission Consultation stakeholder process. Given the complexity of the issues, SCE recommends confirming the stakeholder meeting in August, preferably an in-person meeting at the CAISO.

SCE recommends that the CAISO evaluate an alternative transmission line to achieve increased deliverability from Imperial County. Additionally, SCE requests that the CAISO not make changes to the import counting rights process at this point and convene a stakeholder process that would then be able to better evaluate potential changes as well as identify other potential alternative proposals.

1. Recommended Transmission Alternative to Evaluate in the CAISO’s TPP

SCE suggests the CAISO evaluate a **new 500kV AC transmission line from Devers Substation to IID’s Midway Substation** as a proposed mitigation to increase the deliverability out of Imperial Valley. The proposed mitigation would:

- Utilize existing IID ROW
- Have a reduced cost relative to other alternatives due to a relatively shorter AC transmission line
- Increase system transfer capability beyond current Path 42 upgrade project which will enable IID to export more renewables
 - Based on a preliminary power flow analysis, an additional 1,200 MW transfer capability is achievable
- Utilize available capacity due to the WOD project, which is underway

SCE has performed a power flow study and the preliminary results show that the line can provide the deliverability and reliability needs for the Imperial Valley area. However, additional assessment is needed and SCE recommends that the CAISO

evaluate this option as a potential solution to substantially increasing incremental deliverability from Imperial County.

2. Reallocation of Maximum Import Capability

SCE appreciates the July 14 discussion on MIC, and it was a good step. However, more discussion is still needed.

SCE would like to note as well that the MIC is on a different “track” as compared to the transmission planning process, and it might be prudent to have further discussion on this issue before any decision on next steps is made.

These discussions could then include alternate methodologies as well as the compromises and benefits that a change could impart.

2.1. Import Counting Rights Process Should Not Be Changed

In their white paper, the CAISO acknowledged:

While redistributing import capability among certain interties may address the same issue that the expanded MIC methodology was attempting to resolve it is important to mention that it would likely not be on a “one-for-one” basis.

While SCE understands the potential need for import allocation at IID, it is not clear that there is a logical way to determine how many import counting rights to take from other locations to make such available. SCE notes that PV is a liquid trading point that provides great potential for the use of import counting rights to meet RA obligations. Taking from PV will therefore not be without opportunity cost. It would be very difficult for the CAISO and market participants to make a decision in such matters without understanding the value of increased IID availability while at the same time reducing value from PV. SCE therefore recommends that the CAISO not make changes to the import counting rights process at this point and convene a stakeholder process that would then be able to better evaluate potential changes as well as identify other potential alternative proposals.

3. Detailed Alternatives for CAISO Consideration

SCE has discussed the issue internally and would appreciate stakeholder vetting of two alternatives prior to a decision as to what changes might be made.

In one alternative, the CAISO could modify the MIC process to more closely resemble the CRR process. In this case a tiered (quantities made available in several tiers to prevent overloading of any given point immediately) allocation process would be used that would allow market participants to request any import point on the grid without the CAISO first defining the quantities at any point. The CAISO would then evaluate the requests for, and maximize the amount of capacity granted subject to simultaneous feasibility.

In a second alternative, the CAISO could get to a certain point in the allocation process (e.g. step 10 or 11) and offer alternatives based on what is still available. The CAISO could grant import capacity based on a set of points or a different quantity if the set of points included IID. Using this method would allow participants to obtain the quantities of points with the most value, and allow a later tier for trades between the remaining capacity and its effective equivalent at the IID branch group.

SCE understands that either option would require a significant amount of analysis and discussion. SCE, however, believes that any proposal to reduce capacity from a point, such as PV, in order to increase import capacity from IID, would require significant analysis and discussion.

Please feel free to contact us with questions. Thank you for the opportunity to provide these comments.



July 24, 2014

CAISO Regional Transmission (via email)

Re: Southwestern Power Group Comments on IID Transmission Issues

Dear CAISO,

SouthWestern Power Group (SWPG) appreciates the opportunity to submit comments in response to the CAISO's July 2, 2014 Imperial County Transmission Consultation white paper and the related July 14 presentation materials. SWPG is an Independent developer of utility-scale generation and transmission in the Desert Southwest.

SWPG is developing a double-circuit 500 kV interstate transmission project between central New Mexico and Metro-Phoenix. The purpose of the project is to deliver primarily renewable energy from NM and AZ to western markets (at the Palo Verde hub).

SWPG offers the following comments on the IID transmission issues, in particular with respect to the possibility of the CAISO reallocating RA import capacity to address the IID renewables.

Reallocating the RA import capacity (MIC) from other interties, in particular the Palo Verde intertie, would be a substantial change in policy. As the ISO identifies, the MIC policy was expanded in 2011. The expanded MIC policies provided further assurance that efficient supplies of renewable energy could be obtained from adjacent markets; that the ISO would make best efforts to determine the maximum existing import capability and that the ISO would perform upgrades to expand the MIC should LSEs contract for supplies outside the CAISO boundaries. This MIC expansion policy ensured that California LSEs could contract with the most efficient supplies of renewable energy, even if such supplies existed outside of the CAISO's boundaries. By doing so it provided stability for renewable development by allowing developers to count on MIC being made available from existing capacity or through upgrades. Now allowing reallocation would be a substantial change to that policy that may likely have significant ramifications for renewable developers and LSEs.

A decision to remove import capability at Palo Verde and shift it to IID will likely result in a more costly renewable solution. The CAISO has not indicated that it would consider reallocation because IID renewable supplies are much less costly. Rather the ISO's proposal to consider reallocation is predicated significantly on state policy objectives. Palo Verde MIC capacity exists because certain energy supplies from the southwest are cost effective for Californians. To simply curtail the ability to deliver from that region to provide capacity for IID resources – irrespective of economics – will necessarily raise the cost of clean energy for Californians. This is not only true because it would simply preclude PV supplies without demonstrated cost effectiveness, but more importantly because any increase in IID import capacity through this means requires a 2 MW decrease in PV import capacity.

Even the possibility that the ISO would take import capability from one geographic market and give it to another creates significant instability in the renewable market. Given past policies, the MIC capacity has been stable and/or increasing over time. If it can be simply taken away through a re-allocation, this would create substantial risks in the market place and thereby creates inefficiencies. While SWPG appreciates the ISO's careful and explicit deliberation on this issue, the choice to reallocate should be considered very carefully by the ISO given the instability such a change in MIC policy would create.

We urge the ISO to be very cautious before considering undoing the expanded MIC policy. If such a policy is going to be reconsidered the CAISO must address questions including:

- Under what conditions is it appropriate to reallocate MIC?
- How does the ISO rightly decide which markets are provided existing MIC?
- How is increased MIC allocated between the respective geographic markets?

The CAISO should support a MIC allocation policy that is rational, has certainty, and is equitable. SWPG looks forward to the CAISO's subsequent thinking on this issue and appreciates the opportunity to submit these comments.

Sincerely,

A handwritten signature in blue ink that reads "David A. Getts". The signature is written in a cursive, flowing style.

David Getts
General Manager

Comments from ZGlobal, Inc. and Regenerate Power (“REGP”)

On

Imperial County Transmission Consultation Stakeholder Meeting, July 14, 2014

REGP and ZGlobal appreciate the opportunity to participate in the ISO Consultation process to explore ways to improve deliverability from Imperial County.

REGP is located in Menlo Park, California. Regenerate Power LLC¹ is backed by Potomac Energy Fund, a developer, financier, owner and operator of utility-scale renewable energy assets. REGP has teamed with Imperial Irrigation District (“IID”) to develop and finance the Strategic Transmission Expansion Project (“STEP”).

The STEP Transmission alternative was submitted to ISO in November 2013 to provide an alternative solution to deliver renewable energy to LA & San Diego local areas. Our analysis shows that the cost of renewable energy and the STEP is less than other alternative solutions facing the OTC & SONGS retirement, while providing local reliability needs.

REGP and ZGlobal have some questions and comments on the draft discussion paper and on the presentation material.

Questions on the draft discussion paper:

1. Page 2, Overview, third line, “California ISO has targeted enabling 1400 MW of renewable generation imports from Imperial County to be deliverable.” Is 1400 MW targeted for Imperial County or for IID? Table 4.1-1 in the 2013-2014 Transmission Plan identifies 1715 MW for Imperial County, not 1400 MW.
2. Page 3, first paragraph, “...sensitivity of 2500 MW in the Imperial County.” How is ISO planning to allocate 2500 MW generation between ISO and IID service territories?

¹ <http://www.regeneratepowerllc.com/>

Questions on presentation material:

1. First bullet on page 5 has not been explained in detail, hence this question: Once ISO determines the deliverability capability out of Imperial County, how will ISO allocate it among various entities within Imperial County? For example, how will IID BA's share be determined?
2. Page 63, if target MIC is determined based on external resources in 33% RPS, isn't this a chicken and egg situation? The whole purpose of increasing MIC is to remove the disadvantage developers are facing today in getting contracts with LSEs. If MIC is available, developers will build and meet 33% RPS, otherwise they won't. ZGlobal suggests establishing target MIC through other means, such as expected generation, steps taken by developers, engineering judgment, etc.
3. Page 67, how is 50% effectiveness factor determined for IID BA imports? What is the limiting element?
4. Can the above 50% factor be increased through network upgrades within IID, including upgrades of the tie lines with ISO?
5. Is ISO developing a new MIC methodology to address future systems with new lines, upgraded circuits, new generators, new substations, etc.? All of which, collectively, will significantly change the system topology.
6. If an entity makes an investment to upgrade their system to increase MIC, how can that investment (MIC value) be protected? For example, if IID invests money to upgrade their system to increase MIC, isn't that reasonable to expect the MIC value will be maintained to justify investment? What will happen to that MIC value if new generation comes at Imperial Valley substation, Sunrise Power Link, or N.Gila – IV line?
7. If generation interconnection to the ISO reduces deliverability from the IID BA, who should be responsible to pay for upgrades to maintain deliverability?

Comments on presentation material:

1. REGP and ZGlobal strongly support ISO consultation process to develop a better way to restore Imperial Valley deliverability capability through Stakeholder input.
2. Reallocation of excess capabilities from one area to another where it is needed the most is a sound policy and REGP and ZGlobal strongly support it. Such a policy would increase the

utilization of existing transmission, encourage renewables development in a local area, and optimize local resources and economic development.

3. In terms of ISO's request for other 500 kV transmission options to consider, ZGlobal proposes ISO consider the following:
 - a. A 500 kV DC line from IID Hooper substation (new 230 kV substations) near the Salton Sea to existing SONGS 230 kV substation. This is a 185 Mile line with total capacity of 2200 MW. Initial Phase I capacity will be rated at 1100 MW.
 - b. A series of upgrades and new construction of several 500 kV and 230 kV facilities will make up the "IID collector system". This IID collector system would facilitate the export of 1100 MW to CAISO grid and simultaneously another 1100 MW to the southwest of geothermal and solar energy. This project is called Strategic Transmission Expansion Project ("STEP").
 - c. Numerous technical benefits can be realized from this project due to its strategic location:
 - c1. Significant voltage support in southern Orange County and northern San Diego County through DC line using Voltage Source Converter ("VSC") technology with +/- 750 MVAR SVC.
 - c2. Provides a parallel path to the constrained N.Gila – Imperial Valley 500kV line; the source of the September 2011 blackout.
 - c3. Provides a second path of energy into SDG&E service area independent of the Sunrise Power Link and Southwest Power Link.
 - c4. By removing existing transmission constraints the import capability into SDG&E will increase leading to increased utilization of the existing Sunrise Power Link and Southwest Power Link
 - c5. Provides a new and direct-connect and deliverable renewable energy generation pathway to both SCE and SDG&E load centers.
 - c6. Improves the IID connection to SDG&E / CAISO at the Imperial Valley substation from a single 230 kV line to a double circuit 230 kV line rated at 1600 MW.
 - c7. Strengthens the interconnection among the southwest region, Mexico and California.

c8. Eliminates most, if not all, reliability issues² on the CAISO Grid.

4. In terms of ISO's request for reasonable methodologies for the California ISO to consider, REGP and ZGlobal propose one potential methodology:
 - a. To evaluate MIC for any BG, start with a normal summer peak power flow case. Create a new power flow case with zero MW export from this BG into ISO.
 - b. Run category B contingencies on this new power flow case which has zero MW export. Note any overloaded facilities. Under ideal conditions there should be no overloaded facilities because no generation has been added. If any overloaded facilities are identified, it is not the responsibility of the BG under evaluation because that BG is not exporting any power into ISO grid. Such overloads can be classified as "pre-existing overloads".
 - c. Now increase generation into that BG until any new overloaded facility shows up. This overloaded facility is solely caused by the exports. The amount of export is the MIC for that BG without any upgrades. The MIC can be increased if the overloaded facility is upgraded. Then you increase the export until the next overloaded facility shows up. The process can continue provided the exporting entity has enough resources to export and is also willing to pay for upgrades as they emerge.

² Currently, one of the most binding constraints that limit the imports of power into SDGE and portion of SCE is the loss of North Gila – IV 500 kV Line. The STEP proposal eliminates this binding constraint.