SDG&E's Comments on the
CAISO's October 1, 2014
"*Imperial County Transmission Consultation, Draft, Second Discussion Paper*"
and the
October 8, 2014 Stakeholder Meeting

Progress has been made in refining data applicable to Imperial County.
SDG&E appreciates the CAISO's effort to refine and clarify the renewable generation and deliverability data applicable to Imperial County. The technical addendum and additional clarifying language provided in the October 1, 2014 "*Imperial County Transmission Consultation, Draft, Second Discussion Paper*" is helpful in understanding the relevant issues. As was noted at the October 8, 2014 stakeholder meeting, the CAISO will be providing further clarifications as to which numbers reflect Net Qualifying Capacity (NQC) and which numbers reflect nameplate capacity. Issues associated with Resource Adequacy (RA) deliverability turn on NQC.

There is stakeholder support for rationalizing the cost of transmission upgrades against the value of the RA counting rights that such upgrades provide.
At the October 8, 2014 stakeholder meeting that CAISO indicated that, for study purposes, it assumes all resources in the Renewable Portfolio Standard (RPS) portfolios evaluated by the CAISO must be deliverable; i.e., will count towards CAISO Load Serving Entities (LSEs') RA requirements. In the first round of comments a number of stakeholders questioned whether this assumption made sense considering that system RA capacity values are currently low, and expected to remain low for the foreseeable future. (PG&E, SDG&E, BAMx)

In its annual Transmission Planning Process (TPP), the CAISO should consider whether the cost of transmission upgrades that would make renewable resources in the RPS portfolios deliverable, is offset by the benefits such transmission would provide. It may be that certain renewable resources have greater value to consumers as Energy Only resources than as full capacity resources; especially considering the CAISO's observation that congestion on the transmission system is likely to be quite limited.

SDG&E notes that any resources that cannot attain full capacity status via the transmission upgrades that are approved through the CAISO's annual TPP, have the option of paying for transmission upgrades that would provide such status. A generator will not pay for a transmission upgrade that confers full capacity status if the generator believes the resulting increase in the value of its generating project to LSEs is less than the cost of the transmission upgrade.

The concepts discussed in the Imperial Valley Transmission Consultation need to be transferred into other CAISO proceedings.

At the October 8, 2014 stakeholder meeting, the CAISO clarified that the concepts discussed in the Imperial Valley Transmission Consultation process would need to be pursued in other proceedings if stakeholders determined the concepts had merit. As indicated above, SDG&E believes there is stakeholder support for determining whether renewable resources in the RPS portfolios evaluated by the CAISO are, overall, more valuable to consumers as Energy Only resources or as full capacity resources. The CAISO's annual TPP would seem to be the best place to make this determination since this is where all of the benefits of potential new transmission can be taken into account in a comprehensive and comparative manner.

RPS Calculator Model

On October 10, 2014 a CPUC Administrative Law Judge (ALJ) issued a ruling in the Renewables Portfolio Standard Program proceeding (Rulemaking 11-05-005) soliciting comments on a CPUC Energy Division paper that describes revisions to the RPS calculator model that are already under way as well as other possible revisions. The possible revisions include changes that would recognize the tradeoff between (i) the cost of transmission upgrades that provide RA deliverability, and (ii) the increased capacity value of renewable generating projects that are provided that RA deliverability.

Level of RA Capacity Value

Another possible change is a reduction in the system RA capacity value that the model currently assumes each fully deliverable renewable generator will receive. This change is intended to reflect the current and forecast surplus of system RA capacity. As long as the amount of RA capacity available from existing resources exceeds what CAISO LSEs need to meet their system RA requirements, the value of system RA capacity will be lower than the cost of a new gas turbine (the RPS Calculator model currently values all RA capacity at the cost of a new gas turbine).

Determining NQC

A related change already being incorporated in the RPS Calculator model modifies the way NQC values are established for renewable resources. Currently NQC is determined based on the correlation of a resource's expected output with the time of expected peak loads. With increasing amounts of intermittent renewable generation, the time periods of greatest reliability risk are likely to change. The modifications currently being implemented in the RPS Calculator model would establish NQC based on an Effective Load Carrying Capability (ELCC) approach. ELCC reflects a resource's relative ability to contribute to grid reliability needs in all hours of a year, not just during the peak load hours. The use of ELCC will tend to reduce the NQC of resources that are primarily available during peak load hours (such as solar) and tend to increase the NQC of resources that have availability over a wider range of time periods (such as wind). Modifications to the RPS Calculator model that are currently in progress are intended to develop RPS portfolios that will be used in the CAISO's 2015-2016 TPP; they will not change the RPS portfolios that are currently under evaluation in the CAISO's 2014-2015 TPP. Possible modifications to the RPS Calculator model proposed in the CPUC Energy Division paper would influence the development of RPS portfolios used in the CAISO's 2016-2017 TPP.

While SDG&E believes the CAISO's annual TPP is the best place to determine whether renewable resources in the RPS portfolios evaluated by the CAISO are, overall, more valuable to consumers as Energy Only resources or as full capacity resources, it is also important that the RPS portfolios which are provided as inputs to the CAISO's annual TPP, reflect a similar – though less comprehensive – determination. Accordingly, stakeholders in the Imperial County Transmission Consultation process need to weigh-in on the CPUC Energy Division paper. Further, because the results of modifications to the RPS Calculator model will not find their way into the CAISO's annual TPP until the CAISO's 2015-2016 TPP at the earliest, any CAISO decisions on transmission upgrades for Imperial County arising out of the currently-in-progress 2014-2015 TPP need to recognize the limitations of the current version of the RPS Calculator model.

Determining Maximum Import Capability (MIC)

The current process for determining the amount of generating capacity in non-CAISO Balancing Authorities (BAs) that can be counted towards CAISO LSEs RA requirements, is primarily based on historical flows across the interties during peak load periods. However, given the existing transmission limitations between the CAISO and IID BAs, the CAISO has adopted an expanded Maximum Import Capability (MIC) methodology. The CAISO explains that:

> "Once the new target expanded MIC has been established for the base case resource portfolio developed in the TPP, and during the same TPP cycle, the CAISO will conduct a deliverability study for this intertie(s), in order to assure simultaneous deliverability of the base case resource portfolio….Any transmission additions required in order to maintain deliverability of the base case portfolio resources may be approved as policy-driven transmission in the TPP under tariff section 24.4.6.6." (page 6)

The expanded MIC methodology introduces a forward-looking study process for determining the deliverability of generating capacity located in non-CAISO BAs. Based on comments made at the stakeholder meeting, it appears there is stakeholder support for moving to a forward-looking study process for determining MIC. SDG&E believes it is time to consider whether the current historically-based MIC process should be completely replaced by a forward-looking study process, similar to what the CAISO is doing for MIC from the IID BA into the CAISO BA. The current historically-based MIC process likely understates the maximum amount of capacity that can be simultaneously imported into the CAISO BA during critical time periods. Further, by adopting a forward-looking study process to establish MIC into the CAISO BA, the existing restrictions on immediately counting the full amount of capacity from resources that come on line in a non-CAISO BA, could be eliminated.[1]

As noted above, any decision to adopt a forward-looking study process to establish MIC will not be made in the Imperial County Transmission Consultation process. Instead, the CAISO indicates that such a decision would be made in connection with the Stakeholder Initiatives Catalog process. Section 10.7.1 of the October 1, 2014 "*Draft 2015 Stakeholder Initiatives Catalog*" briefly describes a "Comprehensive Review of Methodology for determining

[1] This restriction is described in section 4.2.1 of the CAISO's October 1, 2014 "*Imperial County Transmission Consultation, Draft, Second Discussion Paper*."

Maximum Import Capability." Stakeholders in the Imperial County Transmission Consultation process need to participate in the Stakeholder Initiatives Catalog process in order that the concept of replacing the existing historically-based MIC process with a forward-looking study process is accorded the appropriate priority.