SDG&E Comments on the
CAISO's July 29, 2019 Straw Proposal:
"Deliverability Assessment Methodology Revisions"

Submitted by	Organization	Date Submitted
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Introduction

SDG&E agrees that it is timely to reevaluate the CAISO's existing deliverability assessment methodology. Grid conditions have changed significantly since the initial development of the methodology in 2004. The methodology needs to be changed to consider the ability of intermittent resources to deliver power during peak demand conditions that have shifted later in the day. With the increased levels of Behind-The-load-Meter (BTM) generation, peak load hours now include hours-ending 1500 through 2200. SDG&E therefore supports the introduction of a "Secondary System Need Scenario" in addition to the existing "Highest System Need Scenario."

SDG&E understands there are concerns with local transmission-related renewable resource curtailment during the "non-summer peak period."[1] However, SDG&E finds that these concerns are really economic issues that involve determining the tradeoffs between the cost of potential transmission upgrades and the value of foregone Renewable Energy Credits (RECs) as well as the cost of injecting energy onto the grid when Locational Marginal Prices (LMPs) are low or negative. Accordingly, SDG&E does not believe Resource Adequacy (RA) deliverability is implicated during the "non-summer period" and does not believe that deliverability changes applicable to the non-summer peak period are needed.

SDG&E Supports Enhancing the Off-Peak Deliverability Assessment

The CAISO presents five options relative to the "non-summer peak period." SDG&E supports Option 1 which involves "updating study assumptions for the off-peak deliverability assessment such that the results provide a meaningful indication of curtailment due to transmission constraints."[2,3] (page 10) The CAISO's annual Transmission Planning Process (TPP) would perform analysis to determine whether it would be economic to expand transmission in order to reduce resource curtailments. If the CAISO determines such expansion was economic, the CAISO Board of Governors could authorize Transmission Access Charge (TAC) cost recovery for such upgrades.

[1] The CAISO straw proposal refers to this period as "off-peak."
[2] A "meaningful indication" requires analysis of multiple system conditions across an entire year and may be beyond the capabilities of conventional snapshot-in-time power flow analysis. Production Cost Modeling would provide an indication of the annual amount of potential curtailments.
[3] While the CAISO's results may provide a "meaningful indication of curtailment due to transmission constraints," such results are non-binding. It is important that each interconnecting generator perform its own assessment of possible curtailment impacts and proceed with, or terminate, the interconnection process accordingly.

Option 1 is fully consistent with the CAISO's "reliability through markets" principle. It allows Interconnecting Customers (IC) to 1) have information on transmission-constrained generation pockets that may be subject to high levels of curtailment, and 2) manage the risks of curtailment, if the IC decides to move forward with its project, by submitting price/quantity offers into the CAISO markets that reflect the IC's own assessment of its variable cost structure (e.g., variable operations and maintenance (O&M) costs and opportunity costs such as foregone renewable energy credits (REC) revenues). Option 1 avoids the inefficiencies associated with administratively-set offer prices. It also allows interconnecting generators to make their own decisions as to whether it makes economic sense to propose and pay for merchant transmission expansion beyond that which the CAISO may approve in its TPP. This approach ensures that CAISO consumers would not be obligated to fund transmission expansion beyond that which the CAISO has fully vetted through an economic study and approved in its TPP.[4]

SDG&E Does Not Support Options which Mandate that Interconnecting Generators Fund or Pay For Transmission Upgrades, or that Obligate CAISO Consumers to Pay for Transmission Upgrades, that would Reduce Curtailment During the "Non-Summer Peak Period."

Option 2 would *mandate* that interconnecting generators fund Local Delivery Network Upgrades (LDNUs) that reduce curtailment during the non-summer peak periods, in order to achieve Full Capacity Deliverability Status (FCDS) during summer peak periods. SDG&E sees no advantage for such a mandatory requirement since the risk of supply-shortages is low during the non-summer peak period. Moreover, ultimate payment responsibility for these LDNUs would rest with CAISO consumers. Outside of the CAISO's TPP process, there is no basis for determining that the benefits provided to CAISO consumers by these LDNUs, would offset the costs paid by CAISO consumers. SDG&E does not support this option as it mixes reliability issues tied to possible supply shortages during summer peak periods, to economic issues tied to curtailments during non-summer peak periods.

While Option 3 would unbundle the off-peak deliverability network upgrade requirements from the on-peak network upgrade requirements for resource adequacy purposes, it would allow interconnecting generators to *choose* to fund a transmission upgrade. The interconnecting generator's payment obligation "would be capped" (page 11) and would be refunded with CRRs. This essentially means that CAISO consumers are *obligated* to pay for the upgrade costs in excess of the cap. Unless the CAISO's TPP finds that such local or system-wide transmission upgrades are cost-effective, SDG&E does not believe CAISO consumers should pay for the upgrades. SDG&E does not support this option.

Option 4 would also allow interconnecting generators to *choose* to fund a "local" transmission upgrade, but CAISO consumers would be obligated to pay for these upgrades up to a "reimbursement cap." (page 11) As with Option 3, SDG&E does not believe CAISO consumers

[4] The CAISO's annual TPP is the appropriate forum for determining whether it is economic to reduce anticipated curtailments through new transmission, and if so, the scope of the transmission upgrades that would provide the highest overall level of benefits for consumers.

should pay for transmission upgrade costs for which there is no CAISO TPP-based evidence that such upgrades are cost-effective for CAISO consumers.

Under Option 5, a generator electing Off-Peak Deliverability Status (OPDS) would be *mandated* to fund upgrades (up to a cap) that mitigate the local constraint during the non-summer peak period. CAISO consumers would be *obligated* to pay for these local upgrades. Option 5 also "introduces a new concept to the CAISO's markets: giving curtailment/dispatch priority based on deliverability statuses." The CAISO explains that "an interconnection customer selecting 'Off-peak Deliverability Status' would be curtailed after a generator that does not have that status." (page 12)

As with Options 2, 3 and 4, SDG&E does not believe CAISO consumers should be required to pay for transmission upgrades which have not been determined by the CAISO's TPP to be cost-effective. Additionally, SDG&E believes this new concept will introduce market inefficiency in as much as it relies on administratively-set offer pricing in order to give effect to the curtailment/dispatch priority. Market efficiency is maximized when generators participate in the CAISO markets via price/quantity offers that reflect each generator's own assessment of its variable cost structure – which may include the opportunity costs associated with possible curtailment. SDG&E does not support Option 5.

The Methodology Used to Assess the Output Level of Intermittent Resources Should be Consistent Across all Scenarios Studied.

While SDG&E supports the need to revise the on-peak deliverability methodology, SDG&E has some concerns regarding the numerous production level methodologies used by the CAISO. For instance, a proposed 20% exceedance production level for wind and solar resources is used during the highest system need scenario (during the early evening hours) but a proposed 50% exceedance level is used during the secondary system need scenario (during the late afternoon hours). SDG&E does not understand the logic for using different exceedance percentages during these two time periods. Furthermore, although the proposal explains why using an average Effective Load Carrying Capacity (ELCC) probabilistic approach is not viable for deliverability assessments, the solar output value for only the SDG&E area will be based on average ELCC value. Finally, for the off-peak scenario, the proposal introduces the concept of "production level under which 90% of the annual energy is produced set the outputs to be tested in the off-peak deliverability assessment." This approach is also different from the exceedance or ELCC approach previously discussed. SDG&E recommends that more explanations be provided in the revised straw proposal on why several methodologies are needed. SDG&E continues to advocate for consistency across the CPUC and the CAISO when it comes to how a resource value is determined.