SDG&E's Comments on the
CAISO's April 9, 2018 Stakeholder Meeting concerning the
CAISO's "*2019 and 2023 Local Capacity Technical Study Draft Results*"

Dispatch of solar photovoltaic generators in year 2023 and beyond do not agree with assumptions used in the 2018/2019 CAISO TPP process.

There seems to be a disconnect on the dispatch of local solar photovoltaic generators available during the San Diego area system peak (which the CEC is forecasting to occur at hour ending 8 PM). Reviewing the CAISO's 2023 Local Capacity Requirement (LCR) case, solar generators in the San Diego and Imperial Valley areas, were being dispatched at levels above zero. SDG&E believes solar photovoltaic generation at 8:00 pm should be zero. This dispatch assumption does not agree with dispatch assumptions used by the CAISO in the 2018/2019 Transmission Planning Process (TPP) study plan. In Table 4.11-2 (Base Scenario Definitions and Renewable Generation Dispatch) of the 2018/2019 TPP study plan, solar photovoltaic resources in these areas are dispatched at zero.

The dispatch level of solar photovoltaic resources – and other generators -- in the Imperial Valley and southern and central Arizona areas has a significant impact on the determination of the Greater Imperial Valley SDG&E (GIV-SD) LCR and SDG&E's ability to meet it. Dispatch levels for all generators should be consistent with system conditions typical of a 6:00 pm – 10:00 pm window on a day with one-in-ten peak load levels.

LCR results using new NQC values based on the Effective Load Carrying Capacity (ELCC) methodology need to be benchmarked.

Although considered more accurate, it is challenging to compare CAISO's new LCR results with its previous LCR results. New results are different from previous results mainly because of the change in NQC methodology. This makes it harder to assess the net impact that lower load forecasts and new projects, such as the recently approved S-line project, have on the LCR computations. SDG&E is not suggesting that the new LCR results should be modified to reflect a different NQC methodology. Rather, SDG&E believes the CAISO should benchmark its most recent results against last year results to specifically identify the effect the new NQC values have on the LCR computations. Comparing last year's LCR results to the new LCR results gives a false sense of LCR variations (increase or decrease) because of other factors such as load behaviors or new projects. This observation was shared by most of the stakeholders during the presentation.

A possible option to benchmark the new results would be for the CAISO to re-run cases from last year LCR study with today's load forecast to determine the effect of the new load forecast. Or vice versa, the CAISO could re-run cases from this year LCR study with last year's load forecast to extract the effect of the new load forecast on the new cases. A similar approach can be used to determine the effect of the new NQC values of solar generators.

For instance, the new 2023 LCR need (4132 MW), post S-line upgrades, is very similar to the 2018 LCR need computed the previous year (4032 MW) before the S-line project was approved. This is despite having lower load forecasts. If we compare last year's 2022 LCR need (4643 MW) and this year's 2023 LCR need (4132 MW) there is a difference of more than 511 MW, which is almost double the estimated effect of the S-line upgrades (260 MW).

<u>Study assumptions used for each specific area should be more transparent and documented in the study plan.</u>

Each LCR area calculation uses a unique set of assumptions specific to the area. In addition to the generic study assumptions, it would be helpful if specific assumptions used for an area could be documented. SDG&E appreciates the CAISO trying to work with PTOs after the LCR results are published to clarify some of the assumptions. However, due to the short time period available for the PTO to provide comments, it would be good if the CAISO could provide assumptions at the beginning of the process or as part of the study plan. For instance:

- Assumptions regarding the Phase Shifter operating policy pre- and post-contingency are not clear. During the stakeholder meeting, SDG&E was informed that the assumptions used for the phase shifter this year were different than the ones used last year. A clear understanding of the updated study assumptions is needed to help stakeholders understand CAISO results. SDG&E notes that construction of the phase shifters was justified on the basis of its effectiveness in reducing LCRs. The phase shifters should be operated pre- and post-contingency in a manner which is consistent with reliable operations and which minimizes LCRs for San Diego area consumers.
- There is no clear set of assumptions related to the dispatch of resources outside of the San Diego LCR sub-area and Greater Imperial Valley-San Diego (GIV-SD) LCR area. This dispatch pattern is important because resources outside these LCR areas can be helpful in supporting San Diego area loads post-contingency. For instance, the South of San Onofre flow post contingency highly depends on how much generation can be redispatched in the LA Basin area. The CAISO has not provided any rationale as to why the redispatch, for example, of generators at Redondo Beach or Long Beach is inappropriate.
  The CAISO should review its practice of setting flows into the CAISO Balancing Authority at historical levels during peak load periods. With the shift of forecast peak load periods into the early evening, it may no longer make sense to set Maximum Import Capability (MIC) at levels which correspond with imports during the time of historical peak loads (which may be in the late afternoon).

The CAISO needs to continue to consider a reasonable range of options for reducing LCRs

As noted in SDG&E's comments last year, the cost of meeting LCRs is directly related to the level of LCRs. Higher LCRs result in higher costs because competitive pressures weaken as the level of LCRs approaches the available pool of local dependable capacity. If LCRs can be reduced, competitive pressures are increased and local dependable capacity prices should be lower.

While the Local Capacity Technical Study process is not the forum for evaluating the costs and benefits of different options that may reduce LCRs, SDG&E believes the level of LCRs in the GIV-SD LCR area, in the San Diego LCR sub-area, in the Western LA Basin LCR area -- and the trade-offs between LCRs in the different areas -- underscores the importance of analyzing the costs and benefits of different options that may reduce these LCRs. This analysis should continue to take place within the CAISO's annual Transmission Planning Process (TPP).

For instance, SDG&E believes the proposed **AC-to-DC conversion of the 500 kV North Gila-Imperial Valley-Miguel transmission line** in connection with the current effort of upgrading 230 kV El Centro-Imperial Valley line still warrant attention and will deliver more comprehensive LCR and congestion benefits.

Net Qualified Capacity (NQC) Needs to be Posted Along with the Starting cases

SDG&E would appreciate if CAISO could post resources' NQC list that were used in the current LCR analysis to make sure that SDG&E study is in line with CAISO's.