



June 17, 2020

California Independent System Operator
250 Outcropping Way, Folsom, CA 95630
regionaltransmission@caiso.com

Dear CAISO Transmission Planning:

**RE: Western Grid Comments on CAISO 2020-21
TPP Long-Term Local Capacity Technical Study**

Western Grid Development LLC (“Western Grid”) appreciates the opportunity to comment on the CAISO’s Planned Long-Term Local Capacity Technical Study for 2030. During the June 3, 2020 Transmission Planning Process Stakeholder Call, the CAISO invited stakeholder comments. Western Grid comments focus on four issues related to the Long-Term Local Capacity Technical Study:

1. LA Basin should be a “target area” for the Long-Term Local Capacity Technical Study.
2. Long lead-time new transmission options to access out-of-basin resources must be studied at appropriate scale.
3. CAISO’s conservative valuation of the Local Capacity Requirements (“LCRs”) reduction benefits should be modified.
4. Qualitative scores should be developed to facilitate comparison of alternative solutions for LCR gas plant replacement.



LA Basin should be a target area for LCR Study

The LA Basin should be one of the targeted LCR Areas where the CAISO will identify transmission options that combined with batteries could eliminate or materially reduce reliance on gas-fired generation.

Western Grid agrees with the CAISO that the Criteria the CAISO uses to select the targeted LCR areas for the 2020-21 TPP Long Term LC Technical Study should include: Technical parameters of the gas resources, including the age of the gas resource; and proximity to, or impact on, disadvantaged communities (DAC). (June 3 Stakeholder Meeting Slide 7).

However, Western Grid also asks the CAISO to use Local Basin Air quality as a criterion. The LA Basin LCRA has among the worst air quality in the State, and accordingly should be a high priority target study area for the CAISO to study transmission and battery options for elimination or material reduction of the gas fired generation. Improving air quality is at the heart of the SB 100 2045 zero-carbon portfolio requirement.

Western Grid, along with other parties agree that LA Basin should be a high priority target study area for gas plant retirements. In recent joint comments to the CPUC OIR the California Environmental Justice Alliance, Sierra Club, NRDC, and Union of Concerned Scientist stated:

.... two LCR areas with the worst air quality in California are the LA Basin LCR and the Greater Fresno LCR Area. These are also home to many disadvantaged communities we recommend that be LA Basin LCR and the Greater Fresno LCR area be prioritized in this procurement Cycle (CPUC OIR on IRP and Procurement, June 15, 2022 Joint Comments of CEJA, Sierra Club, NRDC and UCS, page 11).



Long lead time new transmission to access out of basin resources must be studied at appropriate scale

The CAISO should take this opportunity to study the role of new long lead-time transmission to access out-of-basin resources. Western Grid supports the CAISO stated goal for the Long-Term LC Technical Study of “Identify transmission options that combined with batteries could eliminate or materially reduce gas fired generation”. (CAISO June 3, 2020 - 2021-22 TPP Stakeholder Meeting Slide 6).

Western Grid believes that, for the LA Basin, this Long-Term Local Capacity Technical Study should seek the combination of battery and new transmission that allows for at least 3,000 MW of Gas retirements in the LA Basin by 2030. In addition, Western Grid recommends the CAISO study a “ bounding case” scenario where 100% of the Gas plants are retired in the LA Basin by 2030 or 2035. By including a bounding case scenario in the CAISO 2020-21 TPP Long Term LC Technical Study, policy and decision makers can better understand the infrastructure that will ultimately be needed to serve the LA Basin reliably with a zero-carbon portfolio.

Further, only by studying a significant amount of gas plant retirements will the benefits of new transmission be evaluated at sufficient scale for the benefits to be recognized. If the CAISO sets its goal on small incremental gas retirements of a few hundred MWs, the solution will always be high cost incremental in-basin solutions such as in-basin solar and batteries combined with small band-aid transmission solutions to shore-up the existing transmission system. To the extent a study is based on a partial solution it may be too late to gain the benefits of new transmission access to needed resources.

As the CAISO indicated in its December 15, 2020 OIR comments at page 4:



As a result, the transmission planning process requires an actionable plan **immediately** if the Commission wishes to consider transmission-dependent resource buildouts such as out-of-state resources, **offshore wind**, or efforts to *reduce local capacity needs*. (emphasis added)

California needs to start planning for full implementation of SB100, the CAISO results for a closure of at least 3,000 MW of gas plants plus the bounding scenario of 100% gas plant retirement in the LA Basin LCRA can play a critical role in providing information needed to support development of rational resource and transmission decisions. Western Grid believes the CAISO will find that new long lead time transmission will be needed to allow retirement of large amounts of LCR gas generation. This long-term LCR Technical study can go a long way to identify “no regrets” transmission solutions to allow retirement of gas plants in the LA LCRA. That in turn will support and inform resource planning decisions at the CPUC that can lead to actionable guidance from the CPUC in time for the CAISO to identify and approve “no regrets” transmission additions in the 2021-22 TPP.

Western Grid strongly agrees with the CAISO that actionable guidance from the CPUC is needed ASAP. Western Grid’s also believes there will be a need for new large transmission to allow high potential renewable resources inside California to supply the energy and capacity needed to allow retirement of gas plants in LCRAs. Western Grid’s proposed PTEP HVDC subsea transmission cable from the Diablo Canyon switchyard to the switchyards of up to three retiring gas plants in the LA Basin, capable of delivering 2,000 MW of NP-15 energy to the LA Basin, is an example of such a project. A new transmission line such as PTEP could successfully deliver power from the Central Valley or other less costly renewable rich areas in NP-15. And the CAISO has already determined it can reduce LCRs in the LA Basin by 1993 MWs on a net basis. This is the magnitude needed for meaningful solutions to reducing reliance on gas plants.

As described in more detail below, our studies show the PTEP is cost effective and has a positive B/C Ratio by delivering NP15 power to displace LA Basin gas plants. However, as



an added bonus the Western Grid PTEP can enable the development and delivery of OSW in high quality wind zones off the California Central Coast.

There is little doubt that batteries will be part of the solution to gas plant retirements. But, if the CAISO does not plan needed transmission now and assumes that batteries are a complete solution, and later finds that the battery solution is not feasible or sufficient to replace the gas plants, it will be too late to reverse course.

CAISO's conservative valuation of the Local Capacity Requirements ("LCRs") reduction benefits should modified

In recent TPP cycles, the CAISO has consistently used a conservative value for LCR when calculating the benefit cost ratios for transmission and resource additions that can reduce LCRA requirements. In this 2020-21 Long Term LC Study the CAISO should use publicly available data to determine the most recent prices the LSEs have actually paid to procure LCR contracts.

For the LA Basin Western Grid found from publicly available information that recent actual LCR gas plant procurement prices paid averaged \$ 8.90 kw/month. When the CAISO evaluated the PTEP in the 2019-20 TPP, CAISO found the PTEP could eliminate the need for 1,993 MW of LCR in the LA basin, but the B/C ratio was 0.21 using a "conservative" LCR value of \$ 1.89 kw/month. However, If the actual prices paid for LCR procurement were used, combined with congestion relief and other benefits of the PTEP the CAISO would likely have found a positive B/C ratio for the PTEP.

CAISO may have access to other sources of actual LCR procurement prices paid and may not reach the exact same dollar per Kw/month cost, but Western Grid urges that the full actual prices paid for LCR procurement not be discounted by a value attributable to system RA. The CAISO should assume the CPUC will have authorized sufficient system resource procurement by 2030, and the CAISO should base its studies on the assumption that the CPUC will have authorized sufficient system procurement and sufficient system RA resources are available to replace the LCRA gas plants that are retired in 2030.



Western Grid's proposed use of actual LCR procurement prices paid for calculation of LCR value and resulting B/C ratios will allow easier interpretation of the project benefits in solving the problem at hand, specifically the value of a project in allowing retirement of gas plants in LCR areas.

With Western Grid's proposed improvements, the resulting cost benefit ratios will also facilitate comparison of costs for: (1) continuing to retain LCR resources, (2) in-basin and out-of-basin alternatives for meeting LCR, (3) the CPUC and others to facilitate the formulation of policy and planning guidance, and (4) properly implementing the goals of FERC Order 1000 by allowing independent transmission project developers to more accurately communicate with their audiences and funders on the merits of a project.

Qualitative scores should be developed to facilitate comparison of alternative solutions for LCR gas replacement

Western Grid applauds the CAISO for proposing an in-depth study of targeted LCRA to identify transmission options that combined with batteries could eliminate or materially reduce gas fired generation.

The CAISO should develop a set of qualitative values and score alternative replacements of retiring gas plants in LCRA, whether the replacements are in-basin battery or new transmission solutions. The qualitative scoring should be based on at least the following criterion.

- Life cycle costs, including the cost of removal and disposal
- Recharging requirements
- Feasibility of siting and permitting
- Available land
- Ability to repurpose existing transmission and related infrastructure that remains when gas plants retire
- Ability to support LCRA reliability with inertia, voltage and frequency support.
- Contribution to a diverse California resource mix



- Wild fire exposure
- Impact on air quality
- Impact on DACs.

The CAISO may determine that the CPUC would need to contribute to a qualitative scoring exercise. If so, Western Grid urges appropriate collaboration with the CPUC staff.

Western Grid believes qualitative scoring can use a simple plus, minus, neutral score, or a more ambitious scoring system, but whatever scoring system the CAISO uses, qualitative assessment will supply important information to support timely policy and planning decisions that can allow gas plant retirement and lead to a diverse new resource mix supported by the needed new transmission. Good planning decisions regarding an optimal balance of in basin batteries and diverse out of basin resources Those decisions should not be driven by studying battery recharging characteristics and capabilities alone. And the best battery and transmission solutions should be compared to allow decisions to be made based on more attributes than just the initial cost to build.

Thank you for your consideration!

Sincerely,

A handwritten signature in black ink, appearing to read 'M. S. ...', is positioned above the typed name.

Vice President
Western Grid Development LLC



Western Grid
Development LLC

604 Sutter Street, Suite 250
Folsom, CA 95630
916.985.9461