

BEFORE THE
PUBLIC UTILITIES COMMISSION
OF THE
STATE OF CALIFORNIA



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Order Instituting Rulemaking to Continue
Electric Integrated Resource Planning and
Related Procurement Processes

R.20-05-003

**OPENING COMMENTS OF SHELL ENERGY
NORTH AMERICA (US), L.P. ON THE PRESIDING
JUDGE'S OCTOBER 13, 2021 RULING**

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In accordance with the schedule established in the Presiding Judge’s October 13, 2021 e-mail Ruling, Shell Energy North America (US), L.P. (“Shell Energy”) submits its opening comments on the accompanying Commission Staff Paper that addressed procurement of additional thermal generation resources -- in particular, “upgrades” to existing gas-fired generation facilities - to maintain and enhance system reliability. In its opening comments, Shell Energy also responds to the questions presented in the Presiding Judge’s Ruling.

Shell Energy proposes that the Commission modify its June 2021 mid-term reliability procurement decision (D.21-06-035) to expand an LSE’s eligible incremental procurement to include the following: a) efficiency upgrades to existing thermal generation resources; and b) new, efficient generation resources with peaking capability that are able to burn pipeline-blended

hydrogen. These two categories of thermal generation resources should be included among the eligible resources to meet an LSE's mid-term reliability procurement requirement.

I.

INTRODUCTION

The Commission Staff Paper states that “[o]ne key consideration regarding the state of the CAISO gas fleet is potential reliability risk from early retirement of the aging gas fleet, including older combustion turbines and CHP units rolling off long-term qualifying facility (QF) settlements.” Staff Paper at p. 6. The Staff Paper states that “in the near- and mid-term, analysis shows that nearly all of the gas fleet is retained to meet system reliability needs. The potential for gas plant upgrades . . . is one option for responding to this reliability risk within the CAISO gas fleet.” *Id.* at p. 7.

In its September 27, 2021 opening comments on the Presiding Judge's preferred system plan (“PSP”), Shell Energy stated that “[n]atural gas-fired generation continues to play an important role in maintaining reliability.” Shell Energy Comments at p. 6. In response to the Presiding Judge's October 13, 2021 questions and the accompanying Commission Staff Paper, Shell Energy urges the Commission to encourage efficiency upgrades and improvements at existing thermal generation facilities, as well as the deployment of new, efficient peaking resources that are capable of burning pipeline-blended hydrogen, to displace older and less efficient gas-fired generation resources. These actions are consistent with the Commission Staff Paper, which notes that the RESOLVE analysis “finds it economic to invest in upgrading efficient plants in 2024, while allowing less efficient plants to retire after 2030.” Staff Paper at p. 11.

Shell Energy’s position on the continued need for thermal generation to meet reliability requirements is shared by other parties. For example, in its opening comments on the proposed PSP, IEP stated: “[R]etention of most, if not virtually all, of the state’s existing gas-fired capacity is needed to meet ambitious GHG targets while maintaining reliability at a reasonable cost.” IEP Comments at p. 8. IEP stated further: “California will need to retain (or repower) nearly every MW of gas-fired generation that has come online since 2000, and possibly older units as well, to maintain reliability at a reasonable cost.” Id. at p. 9.

Retaining and enhancing existing thermal generation (through efficiency improvements, upgrades and capacity additions) will provide reliability attributes required to complement the State’s increasing reliance on intermittent RPS resources, including RPS resources combined with energy storage. As noted in the Commission Staff Paper, “[a]llowing gas upgrades lowers CAISO system costs in all scenarios, consistent with their selection by RESOLVE’s least-cost optimization.” Staff Paper at p. 12.

Furthermore, adding new, efficient peaking resources with the capability to burn pipeline-blended hydrogen in large (e.g., 50 percent) proportions will enhance reliability and facilitate the replacement of older, less efficient thermal resources.¹ The Staff Paper noted: “[B]y upgrading the capacity of any gas plant more efficient than the least efficient plant, system operators have additional capacity with reduced emissions rates from which to derive more efficient optimal dispatch with lower costs and lower emissions. All else equal, adding capacity to relatively efficient gas plants should reduce GHG emissions, because their generation will

¹ For example, the GE TM2500 can burn up to 70 percent hydrogen. CDWR recently installed four 30 MW GE TM2500 units in California under emergency authorization: two of these units are interconnected with the CAISO; and two of the units are interconnected with the Balancing Authority of Northern California (“BANC”) at Roseville Energy Park.

offset the generation from less efficient units when not all capacity is needed.” Staff Report at p. 13.

The Commission should encourage efficiency upgrades at existing gas-fired generation facilities, as well as the deployment of new, efficient peaking generation that is capable of burning pipeline-blended hydrogen, by including such generation resources among the eligible incremental resources that LSEs may procure to meet the Commission’s mid-term reliability goal set forth in D.21-06-035. Moreover, the Commission should not prefer upgrades to existing thermal generation facilities over new, efficient hydrogen fuel-capable peaking resources. The market should decide which generation facilities are developed and deployed to meet system reliability needs.

The Commission should modify D.21-06-035 to permit LSEs to meet their proportionate share of the 11,500 MW procurement requirement (less the specified 2,500 MW of zero emissions procurement necessary to replace Diablo Canyon, and less the specified 2,000 MW of long lead-time resources) with efficiency upgrades to existing thermal generation and/or new, efficient peaking resources that have the capability to burn pipeline-blended hydrogen in large proportions.

II.

RESPONSES TO THE PRESIDING JUDGE’S QUESTIONS

Shell Energy responds to the questions presented by Presiding Judge Fitch in her October 13, 2021 e-mail Ruling as follows:

1. The assumptions and conclusions of the RESOLVE analysis that includes gas capacity upgrades as a candidate resource.

Response: No response.

2. Whether gas capacity upgrades at existing sites should be considered as eligible resources for the procurement requirements of D.21-06-035? If so, which of the various procurement process steps of D.21-06-035 would need to be amended, and how?

Response: Yes. An efficiency upgrade at an existing thermal generation facility should be considered an “eligible resource” to meet the incremental procurement requirement of D.21-06-035. In addition, new, efficient peaking generation with the capability to burn pipeline-blended hydrogen in large proportions should be eligible to meet an LSE’s incremental procurement requirement under D.21-06-035.

Shell Energy does not take a position on the “procurement process” that must be undertaken by the IOUs to procure such resources. The question about the “procurement process” does not apply to ESPs. The Commission does not regulate the ESP procurement process.

3. Whether load serving entities that wish to contract with gas capacity upgrades at existing sites, if permitted by the Commission, should be required to demonstrate that they first attempted to procure non-emitting resources. If so, what should this demonstration consist of, and on what timeframe?

Response: No. Thermal generation (efficiency upgrades to existing thermal resources, as well as new, efficient peaking generation with the capability to burn pipeline-blended hydrogen in large proportions) should be eligible for a portion of an LSE’s D.21-06-035 procurement obligation under the same terms and conditions as any non-emitting resource. An LSE should not be required to show that it attempted to procure incremental capacity from a non-emitting resource before it may count, toward its mid-term reliability obligation, procurement from an otherwise eligible efficient upgraded or new thermal generation resource.

4. If the Commission allows gas capacity upgrades at existing sites, whether the Commission should restrict or prohibit gas capacity upgrades in disadvantaged communities, as defined by the CalEnviroScreen tool, or impose some other/additional criteria.

Response: No response.


III.

CONCLUSION

Existing thermal generation resources can be upgraded and enhanced to contribute to meeting system reliability needs. The owners of existing gas-fired generation resources should be encouraged, through the Commission's IRP procurement rules, to undertake efficiency upgrades to facilitate the State's transition to a carbon-free resource mix. Retaining and enhancing the efficiency of existing thermal generation resources will provide the reliability attributes required to complement the State's increasing reliance on intermittent RPS resources. Retaining and enhancing thermal generation resources also will provide necessary backup for RPS resources combined with energy storage.

The Commission also should encourage the development of new, efficient peaking generation with the capability to burn pipeline-blended hydrogen to facilitate the displacement of older and less efficient thermal resources. The Commission should modify D.21-06-035 to provide that gas capacity efficiency upgrades at existing sites, as well as new, efficient peaking generation with the capability to burn pipeline-blended hydrogen in large proportions, are eligible to meet an LSE's mid-term reliability procurement requirement.

Respectfully submitted,



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