DICKSON GEESMAN

November 8, 2022

Mr. Siva Gunda, Vice Chair
California Energy Commission
715 P Street
Sacramento, CA 95814

TRANSMITTED BY EMAIL

Re: A4NR Comments on 21-ESR-01 Workshop held on October 28, 2022

Dear Vice Chair Gunda:

On behalf my client, the Alliance for Nuclear Responsibility ("A4NR"), I submit these initial comments on your impressive Lead Commissioner Workshop regarding the Energy Commission's duties under newly enacted legislation. A4NR is particularly focused on the Commission's Diablo Canyon-related responsibilities under SB 846. Having served in 2002-2008 as the Commission's lawyer member, and as its Executive Director in 1979-1983, I appreciate the historical irony of the CEC's new role in determining the future of a plant whose exemption from Energy Commission siting requirements was such a prominent feature of the 1974 Warren-Alquist Act.

1. Have PG&E's 2021 locational concerns been adequately addressed?

A4NR urges the CEC staff to take particular care in defining precisely the electricity reliability needs that each relicensed Diablo Canyon reactor would be expected to meet during a potential five-year extended operations period. Just last year, PG&E raised the following significant concerns to the Energy Commission about transmission congestion and reliability resource location:

> The scope of the multi-year reliability study should include how often congestion on major paths (e.g., Path 26) and loss of load hours occur simultaneously:
>
> According to the information presented during the CEC workshop, the current scope of this study includes "how much" and "when" is "additional capacity beyond current procurement orders needed to meet the 0.1 LOLE standard." PG&E asks that the question of "when" should capture the year of need for additional capacity and provide

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information about the hours and months of need for additional capacity to help stakeholders procure the right type of resources.

In addition, and to the extent the CEC's model allows planning area (e.g., PG&E's planning area) specific LOLE analysis, PG&E asks that the CEC also include an inquiry about "where" additional capacity is needed within the scope of this study. The question of "where" should include an assessment of how often congestion on major paths (e.g., Path 26) and loss of load hours occur simultaneously and planning area specific LOLE during the hours of congestion. **Without this additional information, new resources will likely be added at the wrong locations and will fail to help achieve the intended grid reliability goal.** (emphasis added)

PG&E's review of the congestion during the August 2020 heat wave and a zonal stack analysis shows that the planned once-through-cooling (OTC) thermal plant retirements in Southern California creates a zonal deficiency south of Path 26. **The inclusion of "where" as a criteria [sic] in the CEC analysis will demonstrate that the goal of grid reliability will be better achieved by physically locating new capacity resources in the right locations, such as south of Path 26.** (emphasis added)[1]

2. Is there a North-to-South Path 26 constraint during grid-stressed conditions?

Prior to the 2020 rolling outages, after observing that the Path 26 allocation had not been fully used in either direction in recent years, a CPUC Energy Division analysis in 2019 concluded that "(t)he scenarios under which the North-to-South allocation would be violated appear unlikely."[2] A sensitivity analysis performed by the Energy Division earlier in 2022 to validate LOLE and ELCC calculations for R.21-10-002, however, indicated that "location of resources between north and south to minimize Path 26 congestion may modestly influence the total amount of resources and RA obligations needed to achieve a desired level of LOLE."[3] Based upon slides 6 – 8 of the CEC staff's presentation at the

[1] July 23, 2021, PG&E Comments on the Joint Agency Workshop (CEC-CPUCCAISO) on Summer 2021 electric reliability and natural gas reliability, TN# 238985, CEC Docket No. 21-IEPR-04.
[2] https://www.cpuc.ca.gov/-/media/cpuc-website/files/uploadedfiles/cpuc_public_website/content/utilities_and_industries/energy/energy_programs/electric_power_procurement_and_generation/procurement_and_ra/ra/cpuc-path-26.pdf
[3] https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M452/K750/452750851.PDF

October 28, 2022 workshop, it would seem imperative to fully assess the locational aspects of California's reliability needs during the 2025 – 2030 period to better understand which of those needs a relicensed Diablo Canyon could plausibly be expected to satisfy. SB 846's unprecedented imposition of Diablo Canyon costs on load-serving entities in the SCE and SDG&E service territories accentuates the relevance of PG&E's earlier point: "Without this additional information, new resources [i.e., a relicensed Diablo Canyon] **will likely be added at the wrong locations and will fail to help achieve the intended grid reliability goal."** (emphasis added)

3. Where will/should 2026 – 2030 new capacity be installed?

A4NR is mindful of the fact that both the CAISO and CPUC Public Advocates Office have recently recommended that the CPUC authorize immediate procurement to address system needs from 2026 thru 2030.[4] CAISO attributed bottlenecks in its interconnection process to the compressed time frame between past procurement authorization and expected online dates:

> Although the procurement was necessary, the time between authorizations and capacity online dates was about two years or less and included the largest single procurement ever approved by the Commission. [footnote omitted] The sudden and very large increase in procurement authorizations has negatively impacted downstream functions. For example, the CAISO's interconnection study cluster 14 was beset by a sudden and dramatic surge in generator requests, leading to longer than usual study times. This likely will be the outcome for interconnection study cluster 15 as well. Forward procurement occurring well ahead of the need would help reduce these bottlenecks. This advance planning will provide a natural buffer to changing system conditions whether the conditions are within the LSE's control or not.
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> LSEs should make every effort to procure resources in locations the CAISO has identified as needing few if any upgrades or where transmission is under development.[5]

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[4] R.20-05-003, CAISO Reply Comments on Administrative Law Judge's Ruling Seeking Comments on Staff Paper on Procurement Program and Potential Near-Term Actions to Encourage Additional Procurement, p. 3, citing Cal Advocates Opening Comments on Ruling, pp. 1-3.
[5] R.20-05-003, CAISO Reply Comments, p. 4.

Where are such locations? CAISO pointed to its May 31, 2022 briefing document,[6] with projections overwhelmingly weighted to south of Path 26:

Incremental Capacity needing no transmission except interconnection	MW	FCDS* MW
PG&E	1,254	730
SCE-SDG&E-GLW	4,074	2,779
Incremental Capacity enabled by Remedial Action Scheme		
PG&E	434	100
SCE-SDG&E-GLW	21,206	15,909
Incremental Capacity based on transmission under development		
PG&E	1,009	2,970
SCE-SDG&E-GLW	708	2,956
PG&E TOTAL	2,697	1,538
SCE-SDG&E-GLW TOTAL	28,250	21,644
CUMULATIVE TOTAL	30,947	23,182

* Full Capacity Deliverability Status

The CAISO compilations, depending on whether FCDS is considered, indicated that 91 – 93% of the near-term capacity opportunities are located south of Path 26.

The combination of such explicit guidance from CAISO with a potential Path 26 constraint during grid-stressed conditions argues – quite strongly, in A4NR's judgment – for bifurcating CEC statewide reliability assessments into North-of-Path-26 and South-of-Path-26 subsets. Emphasis on statewide averages may obscure material issues and undermine public transparency, as well as – to paraphrase PG&E's 2021 warning – add resources at the wrong locations and fail to achieve the intended grid reliability goal.

4. What are realistic availability factors for relicensed Diablo Canyon reactors?

A4NR also recommends focused scrutiny of the prospect for increased outages, both unplanned and planned, at a relicensed Diablo Canyon in the 2025 – 2030 period. SB

[6] http://www.caiso.com/Documents/Briefing-ResourcesAvailable-NearTermInterconnection.pdf , pp. 4 – 5.

846 acknowledges "the greater risk of outages in an older plant that the operator could be held liable for" – see newly enacted Pub. Util. Code § 712.8(f) – and establishes a ratepayer-funded, replenishable liquidated damages balancing account of $300 million to absorb liability for replacement power costs when an unplanned outage is the result of PG&E's failure to meet the reasonable manager standard. Providing PG&E with such a large buffer against its own mistakes will create a financial rationale for relaxed operating practices, increasing the probabilistic likelihood of unplanned outages.[7] Alternatively, a "reasonable manager" may find it prudent to increase scheduled maintenance outages "in an older plant" and thereby reduce such plant's availability for reliability purposes.

In determining the appropriate derate from nameplate capacity to apply to each Diablo Canyon reactor as a 2025 – 2030 reliability resource, the CEC staff should take heed of PG&E's recent experience with Unit 2, whose Main Generator Stator Replacement Project remains the most recent installation of major equipment at Diablo Canyon. The $79.7 million replacement project led to five forced outages and $150.5 million in replacement power costs. Unrelated problems with heat exchanger tube failure in a feedwater heater triggered a sixth forced outage. Altogether, during a 475-day period from July 2020 thru November 2021, Unit 2 was forced offline for 149.2 days and incurred $178.6 million in replacement power costs. PG&E's root cause evaluations of the six outages identify various PG&E and contractor performance deficiencies, including admissions of nonconformity with PG&E's own management standards, not dissimilar to well-publicized previous shortcomings in PG&E's inspection and maintenance of its gas distribution, electric distribution, and electric transmission systems. A4NR is attaching its testimony in the CPUC ERRA compliance proceeding, A.22-02-015, but it is heavily redacted due to PG&E assertions of confidentiality. A4NR encourages the CEC staff to seek access to the root cause evaluations themselves, and form its own judgment about the likelihood of reduced availability of the Diablo Canyon reactors during a 2025 – 2030 extended operations period.

A4NR appreciates the opportunity to comment on this early stage of the Energy

[7] Newly enacted Pub. Util. Code § 712.8(f)(6) adds to this buffer and perverse incentive, allowing PG&E's retention of each unit's annual $50 million fixed payment during unplanned outages of nine months or less during the first year of extended operations; eight months or less during the second year of extended operations; seven months or less during the third year of extended operations; six months or less during the fourth year of extended operations; and five months or less during the fifth year of extended operations. In each instance, PG&E is allowed to retain 50% of the fixed payment when an unscheduled outage exceeds the prescribed time limit.

Commission's implementation of SB 846, and looks forward to engaged participation in the process in the months ahead.

Sincerely,

/s/ John L. Geesman

DICKSON GEESMAN LLP
Attorney for ALLIANCE FOR NUCLEAR RESPONSIBILITY

Attachment: A4NR testimony in A.22-02-015 (A4NR-1-PUBLIC_Redacted.pdf)