

Docket: Rulemaking 20-11-003

Exhibit No. _____

Date: September 1, 2021

Witness: Scott Murtishaw

**PREPARED TESTIMONY OF SCOTT MURTISHAW ON SUMMER 2022 AND 2023
RELIABILITY ENHANCEMENTS ON BEHALF OF THE INDEPENDENT ENERGY
PRODUCERS ASSOCIATION**

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2 **PREPARED TESTIMONY OF SCOTT MURTISHAW ON SUMMER 2022 AND 2023**
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7 I am Scott Murtishaw, Policy Director for the Independent Energy Producers Association
8 (IEP), which is a trade association representing the interests of non-utility wholesale electric
9 generators who develop and operate a wide range of utility-scale resources, including biomass,
10 gas-fired, geothermal, solar, and wind generation facilities, battery and pumped-hydro energy
11 storage, and transmission assets. I have 20 years of professional energy experience, having held
12 various positions at the Lawrence Berkeley National Laboratory, the California Public Utilities
13 Commission, and the California Solar & Storage Association.

14 **I. BACKGROUND/OVERVIEW**

15 On August 16, 2021, ALJ Stevens issued a ruling with the “Energy Division Staff
16 Concept Paper: Proposals for Summer 2022 and 2023 Reliability Enhancements” (“Concept
17 Paper”) attached. The Concept Paper describes numerous demand-side and supply-side measures
18 that the Commission could approve to improve reliability conditions for the summers of 2022
19 and 2023. I address only the proposals in Section C of the Concept Paper, which proposes
20 several measures to increase capacity from in-front-of-meter resource. In this testimony, I refer
21 to each proposal using the section and subsection numbering found in the Concept Paper.

22 **II. UTILITY-SCALE STORAGE, IMPORT, AND GENERATION**

23 Section C of the Concept Paper proposes various measures to incentivize the acceleration
24 of previously-approved new capacity or the installation of new incremental capacity by the
25 summer of either 2022 or 2023. At the outset, IEP observes that unless new capacity projects
26 have already been approved and are in the permitting, interconnection, and construction pipeline

1 with a target operational date in 2022, it is simply not feasible for them to achieve commercial
2 operation by next summer. It may be possible to squeeze additional MW from existing thermal
3 facilities through various efficiency improvements. At the California Energy Commission’s
4 (CEC’s) August 30 workshop in the Electric System Reliability docket, CEC staff noted that
5 approximately 200 MW of additional capacity may be available by next summer from software
6 and equipment upgrades at existing gas-fired units.¹ Apart from these upgrades, the only measure
7 that can add appreciable level of new capacity by next summer is the addition of temporary
8 generators to existing facilities, which we discuss in more detail below.

9 With more lead time, there is a higher likelihood of bringing new capacity online for the
10 summer of 2023. However, since the Commission has already ordered 11.5 GW of new
11 qualifying capacity to come online from 2023 to 2028 in D.20-06-035, it would be more efficient
12 for the Commission to order the acceleration of procurement it has already approved in that
13 decision, *if* the Commission is certain a shortfall in qualifying capacity will persist into 2023,
14 than to order procurement of still more capacity in a rushed process that lacks firm analytical
15 support. None of the Commission’s recent procurement orders have presented a refreshed loss-
16 of-load-expectation analysis, and in fact, the stack analysis data presented in D.20-06-035 shows
17 that without additional resource adequacy (RA) procurement, shortfalls will not occur until 2024
18 at the earliest. Additionally, none of the scenarios modeled by the CEC that were presented at the
19 August 30 workshop produced a loss of load expectation greater than 0.05 in 2023, well below
20 the 0.1 reliability standard.²

¹ CEC. “Presentation for August 30 Lead Commissioner Workshop on Midterm Reliability Analysis,” slide 82.
<https://efiling.energy.ca.gov/GetDocument.aspx?tn=239554&DocumentContentId=72991>

² CEC. “Presentation for August 30 Lead Commissioner Workshop on Midterm Reliability Analysis,” slide 32.
<https://efiling.energy.ca.gov/GetDocument.aspx?tn=239554&DocumentContentId=72991>

1 **A. Proposal C1. Introduce Penalties for Delays to Decision (D.) 19-11-016**
2 **Procurement**

3 Staff proposal C1 suggests that the Commission consider instituting penalties for load
4 serving entities (LSEs) that do not bring the Tranche 2 and 3 procurements from D.19-11-016
5 online by their respective deadlines. IEP opposes this proposal because it is both inequitable and
6 ineffective. It is inequitable because it would punish LSEs for delays that are almost entirely out
7 of their control. Given the timing of the procurement ordered by D.19-11-016, contracts should
8 have already been executed for the capacity ordered therein. LSEs have little, if any, influence on
9 the permitting, construction, and interconnection steps that enable achievement of timely
10 commercial operations. This is especially true for non-investor owned utility (IOU) LSEs, who
11 have no control over the interconnection process. As a general matter, the CPUC should only
12 base penalties related to bringing incremental capacity online on whether LSEs have executed
13 contracts by a date certain since this is the part of the process under their operational control. In
14 addition to punishing LSEs for factors beyond their control, it would be poor practice for the
15 Commission to adopt penalties retroactively for measures that the Commission ordered two years
16 prior.

17 Aside from being inequitable, new penalties are likely to have little effect. LSEs and their
18 developer counterparties are already sufficiently motivated to bring projects online in a timely
19 manner. New generation or storage projects cannot begin to earn revenues until the plants are
20 operational, and contracts generally include penalty provisions for delays in achieving
21 commercial operation. These financial incentives ensure that developers strive to bring their
22 projects online by the contracted date. Moreover, as the Concept Paper notes, the Commission is

1 already considering whether to order backstop procurement for LSEs that fail to execute
2 contracts in a timely manner.

3 **B. Proposal C2. Increase Resource Adequacy Penalties**

4 In D.21-06-029, the Commission adopted system RA penalty multipliers that double or
5 triple the penalty price once an LSE has accumulated a certain number of points for previous
6 deficiencies.³ The penalty multipliers should suffice to motivate LSEs to procure the system RA
7 needed to meet their obligations, even if RA resources on the margin are fairly expensive.
8 However, because the point system will not go into effect until next year, LSEs are unlikely to
9 have enough points, if any, assessed against them by August or September to place them in the
10 penalty tiers with multipliers. Increasing RA penalties temporarily for next August and
11 September may be justified by the confluence of the facts that supplies are likely to be
12 exceptionally tight by late summer and that 2022 will be the first year of the point system. IEP
13 does not necessarily endorse this proposal in our opening testimony and would like to consider
14 the arguments in the testimony of other parties representing suppliers and LSEs.

15 **C. Proposal C3. Accelerate Procurement Ordered in IRP Mid-Term Reliability**
16 **Decisions**

17 IEP doubts that any new capacity procured pursuant to D.21-06-035 can be brought
18 online by 2022. Using Pacific Gas and Electric Company (PG&E) as an example, bids for the
19 first phase of the Mid-Term Reliability (MTR) request for offers (RFO) have already closed.⁴
20 Bidders participating in the RFO did so with the expectation that the earliest online date would
21 be August 1, 2023. Moreover, PG&E does not anticipate filing advice letters from the Phase 1

³ D.21-06-029, p. 79 (Ordering Paragraph 16).

⁴ PG&E. "Mid-Term Reliability RFO – Phase 1." https://www.pge.com/en_US/for-our-business-partners/energy-supply/electric-rfo/wholesale-electric-power-procurement/midtermrfo-phaseone.page?WT.mc_id=Vanity_rfo-midtermrfo-phaseone

1 RFO until early November. There is simply insufficient time remaining for PG&E to modify the
2 RFO and for bidders to identify earlier opportunities and bring projects online in less than a year.

3 Since the Concept Paper refers to reliability needs in 2022 *and* 2023, the Commission
4 could consider accelerating some of the capacity ordered in D.21-06-035 to 2023 from
5 subsequent years. As IEP stated in comments on the MTR Ruling and proposed decisions, IEP is
6 concerned that capacity targeted for 2023 may be more expensive due to higher costs associated
7 with expediting procurement of components and construction of the facilities. Projects slated for
8 2023 also run a higher risk of failing to meet the August 1, 2023 COD deadline than capacity
9 slated for subsequent years. The Commission should only accelerate procurement to 2023 if
10 analysis indicates that the capacity and load reduction measures ordered in D.19-11-016, D.21-
11 02-028, D.21-03-056, and D.21-06-035 will not suffice to ensure a reasonable level of reliability.

12 **D. Proposal C4. Emergency Procurement and Cost Recovery via a Non-**
13 **Bypassable Charge**

14 Proposal C4 puts forward the option of establishing a new non-bypassable charge (NBC)
15 mechanism similar to the Cost Allocation Mechanism to support procurement of additional
16 emergency capacity that would contribute to reserve margins in the summer of 2022. The
17 concept paper then provides seven distinct examples of emergency procurement that could be
18 financed by the NBC. IEP does not take a position on whether the Commission should support
19 procurement of additional capacity via a new NBC, but we provide our perspective on the
20 specific procurement concepts described on pages 19 – 21 of the Concept Paper.

21 As an overarching comment on the individual resource proposals, if the Commission
22 determines that it needs to order procurement of additional capacity, it should do so in a
23 resource-agnostic manner. Capacity that can come online by next summer is likely to consist of

1 either minor capacity expansions at existing gas-fired facilities or the installation of temporary
2 generation. Some additional import capacity may also be available. With uncertainty regarding
3 the types of resources that will be available by next summer, the Commission should only
4 establish a total net qualifying capacity target and allow LSEs (or IOUs on behalf of all LSEs) to
5 seek the most cost-effective capacity in the market rather than setting specific procurement goals
6 by resource type.

7 a. Proposal C4a. Resources That Could Achieve Accelerated Online Dates

8 IEP is unsure what types of resources the staff is referring to. In stating that the resource
9 could achieve an accelerated online date, does staff mean to suggest that this category consists of
10 capacity already ordered in previous decisions? If so, see IEP's responses to proposals C1 and
11 C3 above. If instead this is meant to refer to new capacity, this proposal seems to be duplicative
12 of proposal C4b, although staff seems to suggest in C4a that non-IOU LSEs would also be
13 authorized to engage in emergency procurement.

14 Whichever interpretation is correct, neither the acceleration of 2023 capacity to 2022 nor
15 the commercial operation by 2022 of new capacity ordered in a subsequent decision in this
16 proceeding is viable. To the extent new capacity is needed in 2023 above the amounts ordered in
17 previous decisions, accelerating post-2023 capacity from D.21-06-035 to 2023 is a preferable
18 means of procuring the capacity and successfully bringing it online by the summer of 2023.

19 b. Proposal C4b. Resources IOUs Could Procure in Excess of Bundled RA

20 Obligations

21 See response to Proposal C4a above.

1 c. Proposal C4c. New Storage at IOU Properties

2 Proposal C4c suggests that IOUs could develop IOU-owned storage at substations by
3 summer of 2022 due to several advantages these locations enjoy that facilitate construction and
4 operation. These advantages include site control, easier interconnection, and more certainty
5 regarding deliverability. These advantages offer a promising pathway to bringing additional
6 capacity online by the summer of 2022, although August 1 is a more realistic deadline than June.
7 However, IEP objects to the proposition that new storage capacity be limited utility-owned
8 assets. There are no inherent advantages to utility ownership that should lead the Commission to
9 prefer utility ownership of storage assets over independent ownership. Although constructing
10 independently-owned equipment within a substation footprint may raise security and access
11 concerns, the Commission should broaden consideration to other sites that share similar
12 attributes with substations regarding site control, ease of interconnection, and deliverability. For
13 example, existing generation and storage facilities that have headroom in their interconnection
14 agreements for additional capacity and recently retired facilities that have maintained their
15 interconnection rights should also qualify.

16 IEP notes that such procurement would be consistent with Orders 11 and 13 of the
17 Governor’s “Proclamation of a State of Emergency” (“Proclamation”) issued on July 30, 2021.⁵
18 Order 11 suspends California Environmental Quality Act (CEQA) review requirements for
19 storage projects of 20 MW or greater capacity that the CEC determines should be licensed. Order
20 13 requests that the Commission expedite actions to increase clean energy capacity by October
21 31, 2022, and enumerates several sections of the Public Utilities Code and the Commission’s

⁵ Governor Gavin Newsom, Proclamation of a State of Emergency, issued July 30, 2021.
<https://www.gov.ca.gov/wp-content/uploads/2021/07/Energy-Emergency-Proc-7-30-21.pdf>

1 Rules of Practice and Procedure that are suspended due to the urgent need to reduce demand and
2 increase capacity to ensure reliability.

3 d. Proposal C4d. New Resources That Can Be Depended upon to Provide
4 Energy Dispatch in Response to Alerts, Warnings, and Emergencies

5 IEP is unsure how the resources described in Proposal C4d differ from resources
6 described in the preceding subsections.

7 e. Proposal C43. Re-Contracting with Existing Resources that May Retire in
8 2022

9 IEP strongly endorses supporting existing resources. The proposal’s use of the term “may
10 retire” suggests that this procurement obligation may only apply to facilities that have notified
11 the Commission and the California Independent System Operator of intent to change the long-
12 term operational status of the plant. Rather than limit support of existing facilities to those that
13 have provided such notice, the Commission should order the IOUs to offer to procure capacity
14 from any facility in the CAISO control area whose existing contracts expire before the end of the
15 summer 2022 or summer 2023 seasons, or that currently have a Reliability Must Run
16 designation. The Commission cannot allow existing facilities to retire for lack of an off-taker
17 until the State has resolved the shortfall in qualifying capacity. Executing multi-year contracts
18 with existing facilities is preferable to the one-year agreements that CAISO offers under the
19 Capacity Procurement Mechanism and Reliability Must Run programs because multi-year
20 contracts provide more certainty for plant operators and allow them to make investments
21 necessary to keep plants running reliably. The Commission should require a minimum three-year
22 contract with a maximum contract term of up to five years.

1 f. Proposal C4f. Additional Firm Imports Above Resource Adequacy Limits

2 To the extent additional firm import capacity is available, securing incremental import
3 capacity may be an efficient mechanism for California LSEs to resolve a near-term shortfall in
4 effective capacity until new resources have come online. That said, consistent with our
5 comments above, the Commission should not create a carve-outs for firm imports.

6 g. Proposal C4g. IOUs Could Be Authorized to Procure Temporary
7 Generation

8 In our comments on the Amended Scoping Memo and Ruling, IEP suggested that the
9 Commission consider ordering the procurement of temporary generation as one possible solution
10 to bringing new capacity online quickly.⁶ Similar to our response to Proposal C4c, IEP suggests
11 that temporary generators not be limited to those under the operational control of the IOUs or
12 located at substations.

13 Pursuant to Order 8 of the Proclamation, the Department of Water Resources (DWR)
14 recently procured five 30-MW generators that will be installed at various existing power plants
15 across the state.⁷ The Commission could authorize additional temporary generation capacity
16 modeled on the agreements executed by DWR. The temporary generators would be installed at
17 existing facilities that have headroom in their interconnection agreements for additional capacity,
18 with a preferred online date of June 1, 2022 and a maximum online date of August 1, 2022. Like
19 the generators procured by DWR, contracts would be limited to a term of no more than five
20 years.

⁶ Comments of the Independent Energy Producers Association on the E-Mail Ruling Regarding Proposed Amended Scope and Schedule, pp 1-2.

⁷ Krause, David. "Natural Gas Generators Headed to California for Summer Emergency Use." California Energy Markets. August 20, 2021. https://www.newsdata.com/california_energy_markets/regulation_status/natural-gas-generators-headed-to-california-for-summer-emergency-use/article_696f42aa-01ff-11ec-a5d2-4fc7d95749de.html

1 To meet these online dates the Commission must order the procurement immediately, and
2 the Governor or Legislature would need to extend the dates of the emergency CEQA and
3 permitting measures in the Proclamation to cover temporary generation installed by August 1,
4 2022. Without the extension of these exemptions and expedited processes, installation of
5 additional temporary generation capacity by the summer of 2022 will not be feasible. To the
6 extent a continued shortfall of capacity is anticipated for 2023, these measures to support
7 procurement of temporary generation would need to be further extended to cover projects
8 coming online by the summer of 2023.

9 h. Proposal C4h. IOUs Could Be Directed to Pursue Long-Term Contracts
10 for Gas Generation Resources

11 IEP assumes that Proposal C4h refers to incremental capacity since opportunities for
12 recontracting with existing facilities are covered by Proposal C4e. Additionally, since the
13 Commission has prohibited contracts with gas generation at new locations,⁸ IEP further assumes
14 that Proposal C4h applies only to expansions of capacity at existing facilities. Ordering
15 procurement of additional non-temporary gas-fired generation to come online in 2022 or 2023
16 would comport with the intent of Order 9 of the Proclamation, although the exemptions to
17 various code requirements may need to be extended beyond October 31, 2021 to render capacity
18 expansions feasible before the end of summer of 2023.

19 It is extremely unlikely that additional non-temporary fossil-fired capacity can achieve
20 operational status by next summer, and even bringing new capacity online by the summer of
21 2023 would be challenging. As noted above, CEC staff stated that up to 200 MW of additional
22 capacity from software and equipment upgrades at existing facilities may be feasible by next

⁸ D.19-11-016, p. 83.

1 summer. These 200 MW of capacity are scattered across 20 different power plants, which is an
2 average of 10 MW per facility. The scale of these investments do not warrant the imposition of
3 burdensome and expensive greenhouse gas (GHG) and/or criteria pollutant mitigation measures,
4 which would only deter the offering of any such capacity.

5 IEP reminds the Commission that all emissions from in-state power plants are subject to
6 the limitations of the Air Resources Board’s Cap-and-Trade Program. Requiring power plants to
7 capture or offset GHG emissions does not reduce the total GHG emissions that are allowed in
8 each compliance period under the cap, which means that carbon capture or hydrogen blending
9 requirements are not likely to reduce emissions overall. IEP notes that in the most recent auction,
10 current vintage allowance cleared at \$23.30, well above the auction reserve price of \$17.71.⁹
11 This demonstrates that compliance entities and traders anticipate that the cap will be binding by
12 the end of the program’s current end date in 2030.

13 If, however, the Commission believes that other GHG mitigation measures are necessary
14 for any expansion of natural gas capacity with contract durations of five years or more, the
15 Commission should provide flexibility regarding the mitigation measures undertaken. Rather
16 than predetermine how emissions must be mitigated, the Commission should establish a GHG
17 emission rate target to be achieved and maintained after the fifth year of operations. For
18 example, the least-cost alternative may be for facilities to procure and retire ARB-approved
19 offsets without submitting them for compliance. Some facilities may choose to employ carbon
20 capture and utilization/storage or use blends of biogas and/or hydrogen in their fuel mix, but as
21 discussed in our comments in the Integrated Resources Planning (IRP) proceeding (Rulemaking

⁹ ARB. California Cap-and-Trade Program, and Québec Cap-and-Trade System August 2021 Joint Auction #28: Summary Results Report. https://ww2.arb.ca.gov/sites/default/files/2021-08/nc-aug_2021_summary_results_report_0.pdf

1 20-05-003), IEP believes it is premature to require hydrogen blending requirements.^{10, 11}
2 Hydrogen is an expensive GHG mitigation measure, and, as noted in a recent IRP ruling, many
3 questions remain regarding the definition of “green hydrogen,” hydrogen injection standards to
4 enable directed hydrogen, and tracking the use of directed hydrogen.¹²

5 i. Firm Supply Resources that Do Not Otherwise Meet Resource Adequacy
6 Capacity Obligations

7 IEP is not certain what, if any, firm supply options have not been addressed by the
8 preceding proposals. During tight supply conditions wholesale energy prices will rise, and
9 operational facilities that do not meet RA obligations will be incentivized to bid into the
10 wholesale market.

11 **III. CONCLUSIONS**

12 In light of the tight timeframe to bring incremental supply online by the summer of 2022
13 or 2023, IEP encourages the Commission to focus on measures with the highest likelihood of
14 success. These measures correspond to Proposals C4e, C4g, and C4h (assuming solicitations are
15 for capacity upgrades to existing units). Efforts to bring additional qualifying capacity online in
16 2023 from new non-temporary resources should be effected by accelerating the procurement
17 recently approved in D.21-06-035.

18

19 2970/003/X229277.v1

¹⁰ Comments of the Independent Energy Producers Association on the Administrative Law Judge’s Ruling Regarding Mid-Term Reliability, pp. 9-10.

¹¹ Comments of the Independent Energy Producers Association on the Administrative Law Judge’s and Alternate Proposed Decisions Requiring Procurement to Address Mid-Term Reliability, p. 10.

¹² Administrative Law Judge’s Ruling Seeking Comment on the Preferred System Plan, pp. 39-40.

VERIFICATION

I, Scott Murtishaw, prepared the attached “Prepared Testimony of Scott Murtishaw on Summer 2022 and 2023 Reliability Enhancements on Behalf of the Independent Energy Producers Association.” The factual material in this testimony is true and correct to the best of my knowledge, and statements of opinion or judgment express my expert opinion and best judgment.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 1st day of September, 2021, at Berkeley, California.

/s/ Scott Murtishaw
Scott Murtishaw