

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

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

R.20-05-003

**CALIFORNIA COMMUNITY CHOICE ASSOCIATION'S REPLY COMMENTS  
ON EMAIL RULING INVITING COMMENTS ON NATURAL GAS ISSUES**

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## **SUMMARY OF RECOMMENDATIONS**

- The California Public Utilities Commission (Commission) should not mandate the procurement of natural gas capacity;
  - The cost and market value assumptions utilized in Commission Staff’s Renewable Energy Solutions Model (RESOLVE) analysis are unexplained and have not been justified; and
  - The Net Qualifying Capacity (NQC) of resources analyzed in Commission Staff’s RESOLVE analysis must be reconciled with more recent assessments.
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The California Community Choice Association<sup>1</sup> (CalCCA) submits these Reply Comments in response to the Email Ruling Inviting Comments on Natural Gas Issues (Ruling), issued October 13, 2021. The Ruling requests comments on the California Energy Commission's (CEC's) *Staff Report, Mid-Term Reliability Analysis*,<sup>2</sup> the Commission's staff paper entitled *Considering Gas Capacity Upgrades to Address Reliability Risk in Integrated Resource Planning*,<sup>3</sup> and questions set forth in the Ruling.

**I. INTRODUCTION**

Parties faced a variety of challenges in responding to the Ruling, including an extremely compressed comment timeline and an abbreviated analysis performed outside of the normal Integrated Resource Planning (IRP) modeling process, using unexplained and unjustified assumptions.<sup>4</sup> CalCCA appreciates the comments provided by parties and offers the following conclusions:

- The Commission should not mandate the procurement of natural gas capacity;

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<sup>1</sup> California Community Choice Association represents the interests of 23 community choice electricity providers in California: Apple Valley Choice Energy, Baldwin Park Resident Owned Utility District, Central Coast Community Energy, Clean Energy Alliance, Clean Power Alliance, CleanPowerSF, Desert Community Energy, East Bay Community Energy, Lancaster Choice Energy, Marin Clean Energy, Peninsula Clean Energy, Pico Rivera Innovative Municipal Energy, Pioneer Community Energy, Pomona Choice Energy, Rancho Mirage Energy Authority, Redwood Coast Energy Authority, San Diego Community Power, San Jacinto Power, San José Clean Energy, Santa Barbara Clean Energy, Silicon Valley Clean Energy, Sonoma Clean Power, and Valley Clean Energy.

<sup>2</sup> *California Energy Commission Staff Report, Midterm Reliability Analysis*, Docket No. 21-ESR-01, CEC-200-2021-009 (Sept. 30, 2021) (CEC Staff Report).

<sup>3</sup> *Considering Gas Capacity Upgrades to Address Reliability Risk in Integrated Resource Planning, CPUC Staff Paper* (Oct. 2021) (CPUC Staff Paper).

<sup>4</sup> CalCCA did not file Opening Comments due to these challenges.

- The cost and market value assumptions utilized in Commission Staff’s RESOLVE analysis are unexplained and have not been justified; and
- The NQC of resources analyzed in Commission Staff’s RESOLVE analysis must be reconciled with more recent assessments.

## II. REPLY TO VARIOUS PARTY COMMENTS

### A. The Commission Should Not Mandate the Procurement of Natural Gas Capacity

The Commission should not mandate that load-serving entities (LSEs), including community choice aggregator (CCAs), procure natural gas resources as part of the procurement order for the Mid-Term Reliability (MTR) Decision<sup>5</sup> or any other procurement order. With respect to CCAs, Public Utilities Code section 366.2(a)(5) allows CCA governing authorities to fulfill procurement requirements in a way that best addresses the needs and preferences of their communities.<sup>6</sup> In addition and as discussed below, the analysis underlying the conclusion that natural gas resources are needed is flawed by unexplained and unjustified inputs.

Parties argue that mandating the procurement of natural gas resources: (1) is unnecessary for reliability as set forth in the CEC’s MTR analysis; (2) could undermine long-term decarbonization goals and grid reliability; and (3) could result in the assigning of market power to one resource type over another, increasing customer costs.

First, several parties comment that the CEC’s MTR Analysis demonstrates that a mandate for natural gas capacity is not only unnecessary for reliability purposes, but would also result in a less reliable system than the portfolio of zero-emitting resources already ordered in the MTR Decision.<sup>7</sup> As pointed out by AEE, many of the qualitative concerns over the performance of battery storage and potential early retirement of existing gas plants raised in the CPUC Staff Paper are “speculative in nature.”<sup>8</sup> AEE and EDF state that such concerns are not supported by the Commission’s and CEC’s analysis that clean energy resources have the ability to provide

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<sup>5</sup> *Decision Regarding Procurement to Address Mid-Term Reliability (2023-2026)* (MTR Decision), D.21-06-035 (June 24, 2021).

<sup>6</sup> Cal. Pub. Util. Code § 366.2(a)(5).

<sup>7</sup> CEC Staff Report at 13 (“[t]he scenarios with a thermal capacity NQC equivalent to replace the new zero-emitting resources, resulted in a slightly higher LOLE”); *see Peninsula Clean Energy, City and County of San Francisco, Marin Clean Energy, and Redwood Coast Energy Authority (Joint CCA Parties) Opening Comments* at 4-5; *Environmental Defense Fund (EDF) Opening Comments* at 9; *The Union of Concerned Scientists (UCS) and the Natural Resources Defense Council (NRDC) Opening Comments* at 2; *Advanced Energy Economy (AEE) Opening Comments* at 3-6.

<sup>8</sup> *AEE Opening Comments* at 5.

reliable capacity during peak periods in the midterm.<sup>9</sup> Importantly, the CEC MTR Analysis specifically concludes that (1) “[t]he ordered resource procurement for 2023 through 2026 appears to be sufficient to meet a one in ten-year loss of load expectation target, indicating system reliability,” and (2) “[t]he reliance on zero-emitting resources does not appear to diminish reliability compared to procuring thermal resources.”<sup>10</sup> The parties therefore conclude that a fossil fuel procurement mandate on LSEs is not justified.

Importantly, a fossil fuel mandate could also undermine long-term decarbonization policy goals. The Joint CCA Parties, EDF and AEE point out that by mandating the substitution of natural gas resources for renewable build including battery storage and other renewables, the Commission would be backtracking on the trajectory toward decarbonization supported by the zero-emitting resources ordered in the MTR Decision.<sup>11</sup>

Public Advocates Office (Cal Advocates) also urges the Commission should avoid setting rules that assign market power to specific resource types such as natural gas resources, which could inadvertently increase costs for customers.<sup>12</sup> Cal Advocates concludes that any natural gas capacity mandate could assign residual demand and pricing power to suppliers/counterparties.<sup>13</sup> In other words, by mandating that LSEs procure natural gas capacity, the Commission effectively assigns market power to a limited pool of resources (i.e., identified CAISO natural gas plant efficiency improvements and equipment upgrades in the range of 200 MW – 1,200 MW, depending on permitting and procurement/contracting issues).<sup>14</sup> The limited pool of available resources will limit the competition among entities to provide such resources, with the corresponding possibility of higher prices.

Parties show that evidence does not support a natural gas mandate and as discussed below, certain inputs into the analysis contained in the CPUC Staff Paper may not be justified. The Commission should thus not mandate that LSEs procure natural gas capacity.

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<sup>9</sup> *Id.* at 5; *EDF Opening Comments* at 8.

<sup>10</sup> CEC Staff Report at 2.

<sup>11</sup> *Joint CCA Parties Opening Comments* at 12; *EDF Opening Comments* at 9-10; *see also AEE Opening Comments* at 4 (“incremental gas plant upgrades that displace zero-emission resources would increase greenhouse gas emissions within CAISO and fundamentally run counter to California’s fast-approaching power sector and economy-wide decarbonization goals”).

<sup>12</sup> *Cal Advocates Opening Comments* at 9-10 (citing *Cal Advocates Comments on Administrative Law Judge’s Proposed Preferred System Plan Ruling* (Sept. 27, 2021) at 16-18).

<sup>13</sup> *Id.* at 9.

<sup>14</sup> CPUC Staff Paper at 8.

## **B. Key Inputs to the RESOLVE Analysis Merit Further Refinement and Analysis**

Parties express concerns over the RESOLVE analysis described in the CPUC Staff Paper. In particular, they question: (1) the cost inputs regarding natural gas capacity utilized in the RESOLVE analysis; and (2) the NQC values of resources utilized by the RESOLVE analysis. Each of these issues merits further refinement and analysis.

### **1. The Cost and Value Assumptions in the RESOLVE Modeling Are Not Explained or Justified**

The Joint CCA Parties observe that the cost inputs to the RESOLVE analysis require further consideration.<sup>15</sup> In particular, the assumptions underlying the resource cost inputs should be explained, and the market value assumptions should be justified.

First, Commission Staff should publish more detail on the derivation of its resource cost assumptions. For example, it is unclear what types of costs are included (such as construction, permitting, and engineering). This information is critical in understanding the reasonableness of the RESOLVE outputs.

Second, as it stands, the upgrade costs used in the RESOLVE analysis are not sufficiently justified. The “High Cost” scenario in the analysis (i.e., the “high end” of the CEC data range (presumably the maximum value)) is \$43/kW-year.<sup>16</sup> This value is lower than the current estimate of the cost of System Resource Adequacy (RA), which traded at approximately \$62.40/kW-year in 2020 (as measured by RA-only market transactions).<sup>17</sup> If \$43/kW-year were the true upper bound for the costs of upgrading gas generators, all or most of the generators in CAISO would presumably already have planned, or are planning, upgrades to capture RA revenue streams in the current and future RA market (in addition to the energy revenue). Indeed, the “Low Cost” figures used in the CPUC Staff Paper are likely due to the data being based on “low-hanging fruit” gas plants that already have upgrades “completed or in-progress.”<sup>18</sup> It is likely that most generators not currently planning to upgrade are not doing so because the true cost of upgrading gas plants is higher than \$43/kW-year. Therefore, the Commission should

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<sup>15</sup> *Joint CCA Comments* at 7-8.

<sup>16</sup> CPUC Staff Paper at 9.

<sup>17</sup> *Calculation of the Market Price Benchmarks for the Power Charge Indifference Adjustment Forecast and True Up*, issued November 2, 2020 by ED staff pursuant to D.19-10-001, Table 1. System RA is \$5.20/kw-mo, or \$62.40/kW-year.

<sup>18</sup> CPUC Staff Paper at 9.

revisit its cost assumptions and confirm or deny that \$43/kW-year is a fair upper estimate of cost, based on data from a larger and more representative set of generators.

If the cost values set forth in the CPUC Staff Paper are due to the expected length of a contract for RA, then the length of the contract to arrive at the “High Cost” estimate should be evaluated, and it should be determined if that contract length meets with the ten-year requirement for compliance with the MTR Decision.<sup>19</sup> Alternatively, if the basis for the “High Cost” \$43/kW-year is the expected life of the asset, the generator will likely only offer such low pricing if a longer-term contract is signed. If the contract length is only for ten years, then it is likely that the cost per kW-year will increase significantly to avoid stranding the cost of the asset.

Third, Table 3 of the CPUC Staff Paper implies a 25-year financing lifetime for the gas resources.<sup>20</sup> The assumed financing lifetime is likely too long given the length of a typical gas contract, which tends to be substantially less than 25 years. For example, the data below shows contracts for CCGT2 resources from Southern California Edison’s (SCE’s) public 38 MMT IRP filing<sup>21</sup> -- all contracts listed are for ten years or less. In addition, a developer is likely to want to recover its costs more quickly than 25 years in the face of California’s strong climate goals and demonstrated caution for further fossil resource reliance. CalCCA recommends that Commission Staff adjust the length of the gas financing assumptions based on what is reported for CCGT2 resources in the IRP filings.

Resource	Resource/Contract/Note	Contract Execution Date	Contract Start	Contract End	Contract Length (years)	Resource Type
BUCKBL_2_PL1X3	BUCKBL_2_PL1X3_11262-1003_none	10/29/2019	1/1/2020	12/31/2020	1.0	CAISO_CCGT2
BUCKBL_2_PL1X3	BUCKBL_2_PL1X3_11251-1002_none	10/29/2019	1/1/2020	12/31/2021	2.0	CAISO_CCGT2
BUCKBL_2_PL1X3	BUCKBL_2_PL1X3_11020_none	2/15/2007	8/1/2010	7/31/2020	10.0	CAISO_CCGT2
BUCKBL_2_PL1X3	BUCKBL_2_PL1X3_10109_none	6/28/2019	8/1/2020	12/31/2023	3.4	CAISO_CCGT2
ELSEGN_2_UN1011	ELSEGN_2_UN1011_11080_none	8/24/2010	8/1/2013	7/31/2023	10.0	CAISO_CCGT2
HARBGN_7_UNITS	HARBGN_7_UNITS_11088-1015_none	10/30/2019	1/1/2021	12/31/2021	1.0	CAISO_CCGT2
HARBGN_7_UNITS	HARBGN_7_UNITS_11088-1013_none	10/30/2019	1/1/2020	12/31/2020	1.0	CAISO_CCGT2
HARBGN_7_UNITS	HARBGN_7_UNITS_11088-1016_none	10/30/2019	1/1/2021	12/31/2021	1.0	CAISO_CCGT2
VERNON_6_MALBRG	VERNON_6_MALBRG_11251-1003_none	10/29/2019	1/1/2020	12/31/2021	2.0	CAISO_CCGT2

A financing lifetime for any natural gas expansion should not be modeled at more than ten years and, more realistically, should be modeled for a much shorter payback period.

<sup>19</sup> MTR Decision, Ordering Paragraph 9 at 97.

<sup>20</sup> CPUC Staff Paper at 10, Table 3.

<sup>21</sup> Appendix E.1 Resource Data Template – SCE 38 MMT Preferred Conforming Portfolio [PUBLIC], available at <https://www.sce.com/regulatory/CPUC-Open-Proceedings> (R.20-05-003).

## 2. The NQC Values Utilized in the RESOLVE Model Must Be Reconciled

The Commission should reconcile the NQC values for all resources used in the RESOLVE model with the NQC values used in determining the MTR need, especially for gas resources and batteries. Specifically, two values warrant realignment.

First, the Commission should use Effective Load Carrying Capacity (ELCC) values for energy storage from the recent Astrape/E3 ELCC Study,<sup>22</sup> not the current values used in the CPUC Staff Paper (which, although not stated explicitly, presumably match what was used in the Preferred System Plan (PSP)).<sup>23</sup> As PG&E points out, there is a mismatch between the Astrape/E3 incremental ELCC values (91 percent and 69 percent in 2024 and 2026, respectively) and the current values in the CPUC Staff Paper (73 percent and 60 percent in 2024 and 2026, respectively).<sup>24</sup> The values used in the CPUC Staff Paper predate the MTR Decision and are thus outdated.<sup>25</sup> They likely understate the reliability contribution of storage resources.

Second, the Commission should clarify why the NQC of gas is held at 99 percent throughout the lifetime of the asset.<sup>26</sup> NQC should degrade over time as the asset ages and forced outages increase. Even new resources can be subject to events such as thermal derates during high temperature, high load days. It is not clear how, if at all, RESOLVE handles this characteristic.<sup>27</sup> If the Commission assumes that NQC is maintained at a constant level, it should justify this assumption, explaining how the analysis handles forced outages.

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<sup>22</sup> *Incremental ELCC Study for Mid-Term Reliability Procurement*, Energy + Environmental Economics (E3) and Astrape Consulting (Aug. 31, 2021) (Astrape/E3 ELCC Study), located at [https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/20210831\\_irp\\_e3\\_astrape\\_incremental\\_elcc\\_study.pdf](https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/integrated-resource-plan-and-long-term-procurement-plan-irp-ltpp/20210831_irp_e3_astrape_incremental_elcc_study.pdf)

<sup>23</sup> CPUC Staff Paper at 9 (“[a]ll inputs to RESOLVE except for the gas capacity upgrade cost and potential are consistent with the proposed [PSP]”).

<sup>24</sup> *PG&E Opening Comments* at 8.

<sup>25</sup> RESOLVE Preferred System Plan (PSP) Modeling Results at Slide 29: “Data source remains as per Inputs and Assumptions, available at: <ftp://ftp.cpuc.ca.gov/energy/modeling/Inputs%20%20Assumptions%202019-2020%20CPUC%20IRP%202020-02-27.pdf>”. The Inputs and Assumptions are from February 2020, thus making them outdated relative to the Astrape/E3 ELCC Study values.

<sup>26</sup> See CPUC Staff Paper at 10, Table 3.

<sup>27</sup> SoCalGas flags this issue with the modeling in their opening Comments. *Southern California Gas Company Opening Comments* at 2 (“SoCalGas recommends the CPUC re-examine their RA program rules and use a consistent assumption about the performance of each resource type . . . if estimated outages are to be considered, they should be considered both in the scenario construction and in the modeling assumptions in a consistent manner. For example, if assuming a 7.5% outage factor for modeling, then the natural gas resources in the scenario should have an NQC of 92.5% of nameplate capacity”).

For the reasons set forth above and in party comments, Commission Staff's RESOLVE modeling which includes natural gas as a candidate resource cannot be relied upon by the Commission without further refinement and justification.

### **III. CONCLUSION**

For all the foregoing reasons, CalCCA respectfully requests consideration of the reply comments specified herein.

Respectfully submitted,

A handwritten signature in blue ink that reads "Evelyn Kahl". The signature is written in a cursive, flowing style.

Evelyn Kahl  
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CALIFORNIA COMMUNITY CHOICE  
ASSOCIATION

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