

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

ENERGY DIVISION

RESOLUTION E-5377

April 24, 2025

R E S O L U T I O N

Resolution E-5377. Pacific Gas & Electric Company Request for Approval of Mid-term Reliability Procurement Pursuant to Decision 21-06-035 and 23-02-040.

PROPOSED OUTCOME:

- This Resolution approves two Pacific Gas & Electric Company mid-term reliability contracts and related costs for 500 MW of nameplate battery energy storage capacity.

SAFETY CONSIDERATIONS:

- The projects will be owned, constructed, and operated by a third party. The sellers of the projects are responsible for the safe construction and operation of their facilities in compliance with standards for electrical practices and all applicable laws, including safety regulations.
- Seller is required to have a project safety plan that demonstrates responsible safety management during all lifecycle phases, referencing applicable safety-related codes and standards and its own safety programs and policies, and describing the project design and key safety-related systems, including potential hazards and risk mitigations/safeguards. The seller is required to demonstrate and enforce its contractors' and subcontractors' compliance with the safety requirements.

ESTIMATED COST:

- Contract costs are confidential at this time.

By Advice Letter 7420-E, Filed on November 4, 2024.

SUMMARY

This Resolution approves two mid-term reliability (“MTR”) long term resource adequacy agreement with energy settlement (LTRAA w/ ES) storage contracts (“MTR Contracts”) with Aypa Power Development (owner of Marici and San Gabriel LLCs) for a total of 500 megawatts (MW) of nameplate capacity expected to begin deliveries on September 1, 2027. The contract terms for each project are 15 years. Pacific Gas and Electric Company (“PG&E”) procured these resources to satisfy a portion of its MTR requirements. The MTR Contracts for which PG&E seeks approval in Advice Letter (“AL”) 7420-E are summarized in the table below:

Counterparty (Project Name)	Resource Type	Contract Type	Capacity	Term	Initial Delivery Date
Marici Project, LLC (Marici Battery Energy Storage Project)	4-hour duration, Lithium-ion energy storage	Long-term Resource Adequacy Agreement with Energy Settlement (LTRAA w/ ES)	400 MW	15 years	9/1/2027
San Gabriel Project IV, LLC (Gabriel Battery Energy Storage Project)	4-hour duration, Lithium-ion energy storage	(LTRAA w/ ES)	100 MW	15 years	9/1/2027

BACKGROUND

Overview of Mid-Term Reliability Requirements

On June 30, 2021, the Commission issued Decision (“D.”) 21-06-035 (“MTR Decision”) to address the mid-term reliability needs of the electricity system within the California Independent System Operator’s (“CAISO”) operating system by requiring at least 11,500 MW of incremental September net qualifying capacity (“NQC”) to be procured by load-serving entities (“LSEs”) subject to the Commission’s integrated resource planning (“IRP”) authority. The capacity requirements were specified by year,

beginning with 2,000 MW by 2023, an additional 6,000 MW by 2024, an additional 1,500 MW by 2025, and an additional 2,000 MW by 2026.¹

On February 28, 2023, the Commission adopted D.23-02-040, which ordered supplemental MTR procurement of 2,000 MW for 2026 and 2,000 MW for 2027, and changed the online date for long lead time resources from June 1, 2026 to June 1, 2028. PG&E's annual share of the MTR procurement requirements ordered in both D.21-06-035 and D.23-02-040 are as follows:

Table 1: PG&E Annual MTR Procurement Requirements (MW NQC)							
	2023	2024	2025	2026	2027	2028	Total
General MTR Capacity	400	1201	300	388	388		2677
Minimum firm Zero-Emitting Capacity²	500 total						
Long-Duration Storage (8+ hours)³						200	200
Firm Zero-Emitting Generation Paired with Storage, or Demand Response Resources²						200	200
Total Need	400	1,201	300	388	388	400	3,077

On February 15, 2024, the CPUC adopted D.24-02-047, modifying the procurement deadlines outlined in the two MTR Decisions. Specifically, D.24-02-047 allows for an extension of the D.23-02-040 2028 deadline to procure LLT resources, when certain conditions are met by an LSE.⁴ Under this decision, LSEs that require an extension to the June 1, 2028 LLT resource deadline must procure generic capacity to cover the shortfall, and still bring online LLT resources by no later than June 1, 2031.

¹ D. 21-06-035, Ordering Paragraph ("OP") 1.

² The amount in this row is a subset of the 2023, 2024, and 2025 columns, and is therefore not also added to the total.

³ The Long Lead Time (LLT) resource requirements are divided into half from long-duration storage and half from firm, zero-emitting generation resources.

⁴ D.24-02-047, Ordering Paragraph ("OP") 16 and OP 19.

Solicitation of the MTR Contracts

PG&E issued an MTR Request for Offers (RFO) – Phase 1 on June 18, 2021 to procure resources for incremental NQC with an expected online date of August 1, 2023 and June 1, 2024, under which PG&E executed contracts for 1,598.7 MW of nameplate capacity. The Commission approved these contracts on April 21, 2022 in Resolution E-5202.⁵ PG&E further issued its MTR RFO – Phase 2 on April 15, 2022, under which PG&E executed contracts for more than 300 MW of nameplate capacity. The Commission approved these contracts in Resolutions E-5262, E-5263, and E-5297.⁶

On February 7, 2023, PG&E issued its MTR RFO – Phase 3 to solicit offers to fulfill its MTR procurement requirements. The agreements for the Marici Project (400 MW) and San Gabriel Project (100 MW) are a result of this RFO. Prior to this submittal, PG&E submitted seven agreements from the MTR RFO – Phase 3 in advice letters 7177-E, 7299-E, and 7356-E.

Under the MTR RFO – Phase 3 solicitation, PG&E sought offers for zero-emitting, firm zero-emitting, long duration storage, and any other type of non-fossil-fueled resources. Participants were required to demonstrate site control, evidence that the project was on track to receive Full Capacity Deliverability Status (FCDS), and that the project was incremental to the 2019-2020 IRP RESOLVE/SERVM baseline used in need determination.⁷

PG&E announced the issuance of the MTR RFO – Phase 3 by email to approximately 2,500 potential participants with information on the location of the solicitation documents, participant webinar information, and important action items. On February 15, 2023, PG&E conducted a participants' conference via webinar to explain the MTR RFO – Phase 3 solicitation protocol, form agreements, and the offer submittal process. PG&E requested that offers be submitted by March 16, 2023, and notified participants via email on May 10, 2023 whether PG&E had selected their offers for the shortlist. PG&E states that due to changing market conditions, PG&E notified market participants that it had reopened the RFO on August 1, 2023, and accepted offers

⁵ PG&E AL 7420-E at 2.

⁶ PG&E AL 7420-E at 3.

⁷ PG&E AL 7420-E at 4-5.

through December 15, 2023. Additional shortlisted participants were notified on a rolling basis.⁸

After receiving offers, PG&E provided participants an opportunity to revise offers that were missing information or required clarification by sending deficiency notices requesting further information by a specified date. If an offer did not satisfy the solicitation's requirements and subsequent modification by the participant did not result in a conforming offer, or PG&E determined that an offer was in violation of the terms of the MTR RFO – Phase 3, PG&E considered these offers non-conforming and eliminated them from further evaluation.⁹

To evaluate the offers submitted under the solicitation, PG&E used Least Cost Best Fit methodology where both quantitative and qualitative criteria were evaluated to achieve a shortlisted portfolio that could provide incremental NQC MW consistent with D.21-06-035. Quantitative evaluation criteria consisted of the net market value ("NMV") based on benefits (energy, ancillary services, capacity, renewable energy credit value) and costs (fixed, variable, metered contract, and transmission network upgrade costs). Qualitative evaluation criteria consisted of financing, environmental characteristics, development plan, safety, prior experience, impact on disadvantaged communities, location, agreement or term sheet modification, supply chain responsibility status, technology diversity, and diversity of counterparties.¹⁰

PG&E initiated negotiations with each participant with a shortlisted offer and presented a solicitation overview, offer summary, and shortlist materials to the Procurement Review Group ("PRG"). The PRG was notified of PG&E's intent to execute the contract approved herein on July 17, 2024. Further, PG&E engaged an Independent Evaluator ("IE"), Merrimack Energy, which reviewed and provided feedback on the MTR RFO – Phase 3 documentation, reviewed and evaluated offers received and assisted in shortlist development, discussed with PG&E the reasons the offers were considered non-conforming, participated in feedback calls with participants that were not selected to be on the shortlist, and participated in contract negotiations that were held for each shortlisted participant.¹¹

⁸ PG&E AL 7420-E at 5-6.

⁹ PG&E AL 7420-E at 6.

¹⁰ PG&E AL 7420-E Appendix E at E-1.

¹¹ PG&E AL 7420-E at 7.

On November 4, 2024, PG&E filed Tier 3 Advice Letter (AL) 7420-E with the Commission requesting approval of two LTRAA w/ ES contracts with Marici Project, LLC for the Marici Battery Energy Storage Project and San Gabriel Project IV, LLC for the Gabriel Battery Energy Storage Project. Both Projects are four-hour duration transmission-connected standalone lithium-ion battery storage resources. The Marici project is located in City of Industry, California and the Gabriel project is located in Irwindale, California; both projects are within the California Independent System Operator (CAISO) control area.

PG&E proposes the costs associated with the MTR Contracts presented in this AL are Power Charge Indifference Adjustment (PCIA) -eligible with an assigned vintage of 2021 for purposes of D.21-06-035 procurement requirements and vintage of 2023 for purposes of D.23-02-040 procurement requirements for the duration of their term and the costs recovered shall be net of any CAISO charges and market revenues, and net of any retained resource adequacy capacity value for bundled service customers.¹²

NOTICE

Notice of AL 7420-E was made by publication in the Commission's Daily Calendar. PG&E states that a copy of the Advice Letter was mailed and distributed in accordance with Section 4 of General Order 96-B.

PROTESTS

Advice Letter 7420-E was not protested.

DISCUSSION

The Commission has reviewed PG&E AL 7420-E and finds that PG&E's request for approval of the MTR contracts presented in AL 7420-E are reasonable, as discussed below.

¹² PG&E AL 7420-E at 10.

Consistency with D.21-06-035 and D.23-02-040

We find that PG&E AL 7420-E is consistent with D.21-06-035. As directed in the decision, PG&E filed a Tier 3 AL seeking approval for cost recovery for the MTR Contracts described herein.

D.21-06-035 requires PG&E to procure at least 2,302 MWs of incremental September marginal ELCC NQC. Of this total requirement 500 MW must come from firm zero-emitting generation resources paired with storage or demand response resources.

The MTR Contracts are for storage-only resources that are expected to help PG&E meet its general MTR requirements. The MTR Contracts may be also used to satisfy the Diablo Canyon Replacement requirement, adopted in D.21-06-035, if PG&E is able to pair the energy storage resources with eligible generation.

The MTR Contracts also appear to meet the general capacity requirements of D.21-06-035 and D.23-02-040, which dictate that all resources used for compliance with the decisions must be associated with a new resource, or an expansion of an existing resource, and that they are under a long-term contract of at least ten years. Final verification of specific resource eligibility for specific procurement categories is done via the IRP compliance process.

Procurement Methodology, Evaluation, and Cost Reasonableness

PG&E issued its MTR RFO Phases 1, 2, and 3 on June 18, 2021, April 15, 2022, and February 7, 2023, respectively, to solicit offers for incremental resources to meet its MTR procurement requirements. To evaluate solicitation offers PG&E used a least cost best fit methodology where quantitative and qualitative criteria were used to rank projects and create a shortlist. In accordance with D.04-12-048 PG&E's Procurement Review Group ("PRG") was consulted on the design, administration, and evaluation of the RFO.

Additionally, PG&E retained Merrimack Energy as the Independent Evaluator (IE) for its MTR solicitation efforts, which participated in and undertook a number of activities in connection with the solicitation process.¹³ In the IE Report attached to AL 7420-E,

¹³ PG&E AL 7420-E Appendix B at 18. "For this Mid-Term Reliability RFO – Phase 3 process, in performing its oversight and evaluation role, the IE participated in and undertook a number of activities in connection with the solicitation process including reviewing the protocol documents, monitoring

Merrimack Energy provides an evaluation of the MTR RFO – Phase 3’s outreach activities and solicitation robustness, PG&E’s bid evaluation and selection methodology, administration of the solicitation process, and fairness of the solicitation administration. Overall, Merrimack Energy states that the solicitation process was undertaken in a “fair and equitable manner” and that the evaluation methodologies applied to the different types of products were fair, reasonable and consistent and did not unduly bias any technologies or product types. The IE recommends approving both MTR contracts herein.

We have reviewed PG&E’s MTR RFO – Phase 3 evaluation methodology and the IE Report. We agree with Merrimack Energy’s general findings that the solicitation and resulting selection of the Projects were conducted fairly.

Further, the contract costs of the MTR Contracts are competitive with other stand-alone energy storage contracts.

Safety

PG&E states that as a condition of remaining on its shortlist for negotiations, PG&E required all shortlisted participants to provide information about their technology as well as the safety history of the participant and/or contractors, if known. PG&E used enhanced safety provisions within the proposed agreements similar to those previously included in PG&E’s RFOs with storage contracts, requiring sellers to practice “responsible safety management enforced by contractual terms and conditions” based on standards for Prudent Electrical Practices and all applicable laws and regulations. Under these provisions, the seller is required to have a project safety plan that demonstrates responsible safety management during all phases of the project lifecycle—including project design, construction, operation, and maintenance.

Further, the seller must describe potential hazards and include risk mitigations and safeguards, such as operating procedures, incident response, and recovery plans. PG&E states that as additional project details become available during project development, it

communications between PG&E and the Participants, reviewing and commenting on internal RFO Evaluation Protocol documents, organizing and summarizing the offers received, reviewing, questioning and commenting on the evaluation results, shortlisting and final selection, monitoring the status of short-listed offers, participating in meetings with Participants after receipt of offers and during contract negotiations, regular communications with PG&E’s Project Manager, project team, and transactors on a regular basis to discuss RFO and contract issues, participation in meetings with the PRG, and monitoring the contract negotiation process with shortlisted Participants.”

will continue to monitor and perform additional safety checks of the seller's project safety plans for consistency with the safety requirements of the agreement. The agreement terms provide PG&E the ability to enforce those requirements or, in certain cases, terminate the agreement in the case of non-compliance.¹⁴

In addition to the safety considerations included above, Resolution ESRB-13 was approved on March 13th, 2025. Resolution ESRB-13 modifies GO 167-C to: implement the Senate Bill (SB) 1383 (Hueso, 2022) mandate to establish standards for the maintenance and operation of Energy Storage Systems; apply SB 38 (Laird, 2023) requirements for Emergency Response and Emergency Action Plans to Energy Storage System Owners; establish Logbook Standards for ESSs and other actions. These standards aim to improve the safety and reliability of electric generation and energy storage facilities located in California.

Cost Recovery

Ordering Paragraph 12 of D.21-06-035 authorized PG&E authorized cost recovery of the MTR procurement via the Power Charge Indifference Adjustment (PCIA):

To the extent that any resources procured in response to this order are subject to allocation using the [PCIA], the date of that adjustment shall be vintaged by the date of this order. Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company shall each file Tier 2 advice letters to update their balancing accounts to address the PCIA treatment as a result of this order.

In AL 7420-E, PG&E proposes to apply a 2021 vintage to the costs associated with D.21-06-035 procurement requirements and a 2023 vintage for D.23-02-040 procurement requirements. Through this cost recovery methodology, the costs and benefits associated with this procurement complying with the Decisions will be recovered from applicable customers, which includes bundled customers and departing load customers with 2021 or 2023 vintage cost responsibilities. We find PG&E's proposed cost recovery to be consistent with OP 12 of D.21-06-035 and OP 4 of D.23-02-040.

¹⁴ PG&E AL 7420-E at 9-10.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this Resolution must be served on all parties and subject to at least 30 days public review. Any comments are due within 20 days of the date of its mailing and publication on the Commission's website and in accordance with any instructions accompanying the notice. Section 311(g)(2) provides that this 30-day review period and 20-day comment period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day review and 20-day comment period for the draft of this resolution was neither waived nor reduced. Accordingly, this draft resolution was mailed to parties for comments on March 20, 2025. No party submitted comments on the draft resolution.

FINDINGS AND CONCLUSIONS

1. D.21-06-035 Order Paragraph 13 directed PG&E to file Tier 3 Advice Letters for procurement approval and cost recovery for MTR Contracts, except for utility-owned resources and pumped storage projects, where full applications are required.
2. PG&E's share of the MTR procurement requirements under D.21-06-035 and D.23-02-040 is 400 MW online by August 1, 2023; 1,201 MW online by June 1, 2024; 300 MW online by June 1, 2025; 388 MW online by June 1, 2026; 388 MW online by June 1, 2027; and 400 MW of long lead time resources by June 1, 2028.
3. On November 4, 2024, PG&E filed AL 7420-E seeking approval of two 15-year MTR Contracts to help PG&E meet its MTR requirements.
4. The MTR Contracts are long term resource adequacy agreements with energy settlement for 400 MW of capacity from the Marici Battery Energy Storage Project and 100 MW of capacity from the San Gabriel IV Battery Energy Storage Project.
5. PG&E's methodology used to evaluate the bids in the competitive solicitation that resulted in the MTR Contracts presented in PG&E AL 7420-E is reasonable.
6. The MTR Contracts presented in PG&E AL 7420-E are reasonable based on the robust competitive solicitation and bid evaluation methodology.
7. PG&E's request in AL 7420-E to allocate the benefits and costs of the MTR Contract to applicable customers via the Power Charge Indifference Adjustment (PCIA) 2021 and 2023 vintage balancing accounts is reasonable.

THEREFORE IT IS ORDERED THAT:

1. The request of Pacific Gas and Electric Company for approval of the Marici Battery Energy Storage Project and San Gabriel Battery Energy Storage Project mid-term reliability contracts and related costs, as requested in Advice Letter 7420-E, is approved.

This Resolution is effective today.

The foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on April 24, 2025, the following Commissioners voting favorably thereon:

ALICE REYNOLDS
President

DARCIE HOUCK
JOHN REYNOLDS
KAREN DOUGLAS
MATTHEW BAKER
Commissioners

Dated April 24, 2025, at Coastal Hearing Room, 1001 I Street, Sacramento, California