PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Agenda ID# 23906
ENERGY DIVISION **RESOLUTION E-5437**
January 15, 2026

REDACTED RESOLUTION

Resolution E-5437 Pacific Gas and Electric Company's Mid-Term Reliability Energy Storage Contracts

PROPOSED OUTCOME:

- This resolution approves one Pacific Gas and Electric Company Mid-Term Reliability 8-hour energy storage contract for a total of 225 MW nameplate capacity, expected to come online May 20, 2028.

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:

- This Resolution's contract costs are confidential at this time.

By Advice Letter 7648-E, Filed on July 16, 2025.

SUMMARY

This Resolution approves one mid-term reliability ("MTR") long term resource adequacy agreement with energy settlement ("LTRAA w/ ES") storage contract ("MTR Contract") between Pacific Gas and Electric Company ("PG&E") and the Balsam Project, LLC (Balsam Project contract), for the Dirac Battery Energy Storage System (Dirac Project). The Dirac Project will be developed by Aypa Power Development (Aypa) through their subsidiary, Balsam Project. The Balsam Project contract is for a total of 225 megawatts ("MW") of nameplate capacity and is expected to be commercially online by May 20, 2028, and deliver for a term of fifteen years beginning August 1, 2028. PG&E procured this lithium-ion battery resource to satisfy a portion of its MTR requirements. The MTR Contract for which PG&E seeks approval in Advice Letter ("AL") 7648-E is summarized in the table below:

Counterparty (Project Name)	Resource Type	Contract Type	Capacity	Term	Initial Delivery Date[1]	Commercial Operation Date
Balsam Project contract (Dirac Project)	8-hour duration, Lithium-ion battery energy storage	LTRAA w/ ES	225 MW	15 years	8/1/2028	5/20/2028

BACKGROUND

Overview of MTR Requirements

On June 24, 2021, the California Public Utilities Commission ("the Commission") adopted Decision ("D.") 21-06-035, which requires load-serving entities ("LSEs") to procure their allocated share of 11,500 MW of Net Qualifying Capacity ("NQC") by specified online dates[2]. D.21-06-035 specified the following MTR capacity requirements: 2,000 MW NQC online by August 1, 2023; an additional 6,000 MW online by June 1, 2024; an additional 1,500 MW online by June 1, 2025; and an additional 2,000 MW from Long Lead Time (LLT) resources online by June 1, 2026. D.21-06-035 required at least 2,500 MW NQC of the cumulative capacity procured by 2025 to be from zero-emitting (ZE) resources intended to replace the capacity originally planned for retirement at Diablo Canyon Power Plant (Diablo Canyon).[3] D.21-06-035 further required 2,000 MW

[1] IDD is a contractually defined term. Per the Agreement, facilities are required to be commercially operational prior to the IDD.
[2] D. 21-06-035, at 67, "Compliance would be measured based on September NQC calculations using marginal Effective Load Carrying Capability (ELCCs) calculated by the Commission for each resource type for each future online year".
[3] D. 21-06-035, OP 1 and 6.

NQC of LLT resources procured by 2026 to be half from long-duration energy storage and half from firm, ZE generation resources.[4]

Table 6 of D.21-06-035 assigned PG&E 2,302 MW NQC for its bundled service customer portion: 400 MW online by August 1, 2023; 1,201 MW online by June 1, 2024; 300 MW online by June 1, 2025; and 400 MW of LLT resources online by 2026.

D.21-06-035 also requires that all contracts with resources (including imports), used to satisfy the MTR requirements, have a minimum duration of 10 years, and provides that the Investor-Owned Utilities (IOUs) are authorized to seek cost recovery for MTR procurement capacity (excluding pumped storage or utility-owned resources) through Tier 3 ALs.[5]

On February 23, 2023, the Commission adopted D.23-02-040, requiring supplemental MTR procurement of 4,000 MW of NQC: an incremental 2,000 MW online by June 1, 2026, and an additional 2,000 MW online by June 1, 2027.[6] PG&E's share of this procurement for bundled customers is 388 MW for 2026 and 388 MW for 2027. The Commission also extended the online date for LLT resource procurement from June 1, 2026, to June 1, 2028, and introduced a bridging option for LSEs to comply with non-ZE and non-LLT procurement through firm imports.[7]

Table 1 below reflects the total ordered MTR procurement requirement and PG&E's bundled share of that procurement requirement per D.21-06-035 and D.23-02-040. The table accounts for the extension of LLT procurement timelines granted in D.23-02-040.

Table 1: Total and PG&E Bundled Annual MTR Procurement Requirements (MW NQC)

MW September NQC	8/1/2023	6/1/2024	6/1/2025	6/1/2026	6/1/2027	LLT 6/1/2028	Total	Minimum ZE capacity by 2025
All LSEs	2,000	6,000	1,500	2,000	2,000	2,000	15,500	2,500
PG&E's Share	400	1,201	300	388	388	400	3,079	500

[4] D. 21-06-035, OP 2.
[5] D.21-06-035, OP 9; D.21-06-035, OP 13.
[6] D.23-02-040, OP 2.
[7] D.23-02-040 at 87; and D.23-02-040, OP 8 ("[A] load serving entity may contract for imported energy as a bridge until the online date of a new compliance resource, from any resource and with any counterparty, for a period of not more than three years.")

On February 15, 2024, the CPUC adopted D.24-02-047, allowing for an extension of the D.23-02-040 2028 deadline to procure LLT resources, when certain conditions are met by an LSE.[8] Under this decision, LSEs that require an extension past June 1, 2028, LLT deadline must procure generic capacity to cover the shortfall and still bring online LLT resources by no later than June 1, 2031.

D.25-06-005 was adopted on June 12, 2025, by the Commission, which granted, with modifications, the LDES Council's Petition for Modification (PFM) of D.21-06-035. This decision reclarified qualifying LDES resources shall be defined as "able to deliver at maximum capacity (i.e., the highest power output that can be dispatched continuously at the full installed or guaranteed capacity in the contract), for a least eight hours."[9] Specifically, the decision aimed to prevent the use of short-duration resources (e.g., four-hour lithium-ion batteries) from counting towards MTR LDES compliance by requiring resources to be capable of dispatching full power output for eight continuous hours at maximum capacity.

Solicitation of the MTR Contracts

PG&E issued 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.[10]

PG&E further issued Phase 2 MTR RFO 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.[11]

On February 7, 2023, PG&E issued its MTR RFO Phase 3 to solicit offers to fulfill its MTR procurement requirements. Prior to this submittal, PG&E submitted ten agreements from the MTR RFO Phase 3 in advice letters 7177-E, 7299-E, 7356-E, 7420-E, and 7602-E.[12]

PG&E's MTR LLT RFO issued on October 15, 2024, sought offers specifically for firm ZE and LDES contracts with a minimum 10-year term; desired size of at least 10 MW; and

[8] D.24-02-047, OP 16 and OP 17..
[9] D.25-06-005, OP 2.
[10] PG&E AL 7648-E at 2.
[11] PG&E AL 7648-E at 2.
[12] PG&E AL 7648-E at 3.

an Initial Delivery Date (IDD) by June 1, 2031, with preference for delivery by June 1, 2028. Participants were required to demonstrate site control and 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.[13] The Balsam Project contract (225 MW) was a result of this MTR LLT RFO.

NOTICE

Notice of AL 7648-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

AL 7648-E was not protested.

DISCUSSION

The Commission has reviewed AL 7648-E and finds that PG&E's request for approval and cost recovery of the MTR Contract and the form and substance of the MTR Contract to be reasonable.

Procurement Methodology, Evaluation, and Cost Reasonableness

To evaluate the MTR LLT RFO offers, PG&E used the Least Cost Best Fit (LCBF) methodology where both quantitative and qualitative criteria were evaluated to achieve a shortlist of resources that could provide incremental NQC MW consistent with D.21-06-035 and D.23-02-040. 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.[14]

[13] PG&E AL 7648-E at 3.
[14] PG&E AL 7648-E, Appendix B2.

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 Balsam Project contract, on May 1, 2025. Further, PG&E retained the Merrimack Energy Group, Inc. (Merrimack) as the Independent Evaluator (IE) in its MTR solicitation efforts pursuant to D.04-12-048, OP 28 and D.06-05-039, OP 8.[15] In the IE Report, attached to AL 7648-E, Merrimack provided an evaluation of PG&E's outreach efforts, LCBF methodology design, shortlist, and project negotiations. In the IE Report, Merrimack's professional opinion about these components of the MTR LLT RFO concurred with PG&E's. Merrimack describes PG&E's methodology, evaluation, and cost of the projects as consistent, and fair.[16]

The Commission has reviewed PG&E's bid evaluation analysis and the IE Report. We agree with the IE findings that PG&E procured the best option for addressing its MTR LLT needs. We find that PG&E has conducted a robust and competitive solicitation with reasonable bid evaluation methodology and appropriately consulted the PRG and the IE throughout the MTR LLT RFO process. The Commission finds the costs to be reasonable based on the competitive solicitation and bid evaluation methodology. For an in-depth solicitation and cost reasonableness review, see Confidential Appendix A.

Consistency with D.21-06-035 and D.23-02-040 and D.25-06-005
We find that PG&E AL 7648-E filing is consistent with the Commission's MTR, D.21-06-035. As directed PG&E filed a Tier 3 AL seeking approval and cost recovery for the MTR Contract described herein.

The MTR Contract also appears to meet the long duration energy storage capacity requirements of D.21-06-035, D.23-02-040 and D.25-06-005, 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 and able to deliver at maximum capacity for a duration of at least eight hours.

The MTR Contract is for a storage-only resource that is expected to help PG&E meet its LLT LDES MTR requirement. PG&E AL 7648-E provided operational characteristics

[15] PG&E AL 7420-E at 7.
[16] PG&E AL 7648-E Appendix B1 at 56-57

including but not limited to facility description, interconnection capacity, and discharge and charge rates per D.25-06-005.[17]

The Commission note final verification of specific resource eligibility for specific procurement categories is done via the IRP compliance process.

Cost Recovery
PG&E proposes to allocate the costs associated with the Balsam Project contract to applicable customers using the Portfolio Allocation Balancing Account (PABA).[18]

We find the herein MTR Contract is entered into to meet the procurement requirements of D.21-06-035 and D.23-02-040, and the cost associated with the MTR Contract are Power Charge Indifference Adjustment (PCIA) eligible with an assigned vintage of 2021 for purposes of D.21-06-035 procurement requirements for the duration of the term.[19] The Commission thus find PG&E's proposed cost recovery of the MTR contract to be consistent with OP 12 of D.21-06-035. Thus, any payments to be made by PG&E pursuant to the Balsam Project contract are recoverable by PG&E through the PABA, subject to PG&E's prudent administration of the MTR Contract.

Safety
PG&E states that as a condition of remaining on its RFO 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 also required enhanced safety provisions within the MTR Contract 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 references the following: safety-related codes and standards, current safety programs and policies, potential hazards and risk mitigation safeguards. The contract terms also provide PG&E with the ability to enforce safety requirements throughout project development, or the ability to terminate in the case of non-compliance.

In addition to the safety considerations above, Resolution ESRB-13, approved on March 13th, 2025, modified General Order 167-C in response to Senate Bill (SB) 1383 (Hueso,

[17] D.25-06-005, OP 5.
[18] Includes bundled service customers and departing load customers with 2021 and/or 2023 vintage cost responsibility.
[19] Such costs include, but are not limited to, Independent Evaluator costs.

2022). Resolution ESRB-13 modified GO 167-C to establish standards for the maintenance and operation of Energy Storage Systems (ESS); apply SB 38 (Laird, 2023) requirements for Emergency Response and Emergency Action Plans to ESS 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.

Disadvantaged Community Designations

Senate Bill (SB) 350 (de León, 2015) describes disadvantaged community (DAC) goals that are cross-cutting and therefore will be integrated into all policy areas. Thus, in evaluating PG&E's MTR Contracts, the Commission analyzes the impacts of procurement activities on such communities.

The California Environmental Protection Agency (CalEPA) is responsible for identifying DACs for purposes of Cap-and-Trade program funding. CalEPA has defined DACs as:

- Census tracts receiving the highest 25% of overall scores in CalEnviroScreen 4.0.
- Census tracts lacking overall scores in CalEnviroScreen 4.0 due to data gaps but receiving the highest 5% of CalEnviroScreen 4.0 cumulative pollution burden score; and
- Census tracts identified under the 2017 DAC designation (i.e., tracts qualifying as DAC under CalEnviroScreen 3.0) areas under the control of federally recognized Tribes.

The CalEnviroScreen tool combines twenty indicators in "population" and "pollution burden" categories.[20] SB 350 directs the Commission to also use CalEPA's tool to identify disadvantaged communities.

PG&E notes that consistent with Public Utilities Code Section 454.52(a)(1)(I)'s requirement to minimize localized air pollutants and other GHG emissions, with early priority on DACs, it expressed a preference in its MTR RFO for resources located in DACs.

The Commission note the Dirac Project, contracted under the Balsam Project contract, located in Chino, CA does not fall under a DAC. The project location is recognized in the CalEnviroScreen 4.0 tool as being fairly burdened by environmental and

[20] https://oehha.ca.gov/sites/default/files/media/downloads/calenviroscreen/document/ces3newinces3.pdf

socioeconomic factors due to exposures from particulate matter 2.5 and drinking water contaminants, as well as affects from hazardous waste.[21]

Confidential Information

The Commission, through the implementation of Pub. Util. Code § 454.5(g), has determined in D.06-06-066, as modified by D.07-05-032 and D.21-11-029, that certain material submitted to the Commission as confidential should be kept confidential to ensure that market sensitive data does not influence the behavior of bidders in future solicitations. D.08-04-023, Appendix C, established a Model Protective Order for those reviewing confidential information.

The confidential appendix marked "REDACTED" in the public copy of this resolution, as well as the confidential portions of the advice letter, should remain confidential at this time.

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 and will be placed on the Commission's agenda no earlier than 30 days from today.

FINDINGS AND CONCLUSIONS

1. D.21-06-035 directed LSEs to procure 11,500 MW of incremental September NQC under the Commission's Integrated Resource Planning purview over the course of four years, with 2,000 MW to be online by August 1, 2023; an additional 6,000 MW online by June 1, 2024; an additional 1,500 MW online by June 1, 2025; and an additional 2,000 MW online by June 1, 2026.

[21] Chino, California is in the overall CalEnviroScreen 4.0 percentile of 59 out of 100 (a mid-range score) retrieved by the tool on October 2, 2025, from: https://experience.arcgis.com/experience/11d2f52282a54ceebcac7428e6184203/page/CalEnviroScreen-4_0

2. D.21-06-035 ordered the three large IOUs to file Tier 3 ALs to request cost recovery for any procurement conducted because of that decision, except if the procurement is associated with a pumped storage resource or a utility-owned resource, for which full applications are required.
3. D.23-02-040 directed LSEs to procure an additional combined total of 4,000 MW of September NQC from non-emitting, storage, and/or renewable resources in 2026 and 2027, with resources required to be online by June 1 of each year.
4. D.21-06-035 originally directed LSEs to procure 2,000 MW of LLT resources (which include long duration storage resources) by June 1,2026. D.23-02-040 extended the LLT resource online deadline to June 1, 2028.
5. 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.
6. On July 16, 2025, PG&E filed AL 7648-E seeking approval of one MTR Contract intended to partially meet PG&E's portion of the MTR requirements established by D.21-06-035 and D.23-02-040.
7. The Balsam Project contract, which is for 225 MW of nameplate capacity, 8-hour energy storage duration, a 15-year term, expected to come online May 20, 2028, and start delivery August 1, 2028, is intended to help PG&E meet its LLT resource MTR requirement.
8. PG&E's methodology used to evaluate the bids in the competitive solicitation that resulted in the MTR Contract presented in PG&E AL 7648-E is reasonable.
9. The MTR Contract presented in PG&E AL 7648-E is reasonable based on a robust competitive solicitation and bid evaluation methodology.
10. PG&E's request in AL 7648-E to allocate the benefits and costs of the MTR Contract to applicable customers via the PCIA 2021 vintage balancing account is reasonable.
11. The confidential appendix marked "REDACTED" in the public copy of this Resolution, as well as the confidential portions of Advice Letter 7648-E, should remain confidential at this time.

THEREFORE, IT IS ORDERED THAT:

1. Pacific Gas & Electric Company's request in PG&E AL 7648-E for approval of the MTR Contract and related costs for a total of 225 MW nameplate capacity, expected to come online May 20, 2028, is approved.
2. Pacific Gas & Electric Company's request in PG&E AL 7648-E, to allocate the benefits and costs of the MTR Contract to all applicable customers via the 2021 vintage

sub-account of PG&E's Portfolio Allocation Balancing Account, including incremental administrative costs, 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 January 15, 2026; the following Commissioners voting favorably thereon:

Commissioner Signature blocks to be added upon adoption of the resolution

Dated January 15, 2026, at San Francesco, California.