

Decision PROPOSED DECISION OF ALJ STEVENS (Mailed 3/18/2022)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Application of Pacific Gas and Electric
Company for Approval of its 2020
Energy Storage Procurement Plan.
(U39E.)

Application 20-03-002

And Related Matters.

Application 20-03-003

Application 20-03-004

**DECISION ADOPTING REMAINING DIRECTION REGARDING
ASSEMBLY BILL 2514 ENERGY STORAGE PROCUREMENT
TARGETS AND APPROVING TWO ENERGY STORAGE
PROGRAMS PURSUANT TO ASSEMBLY BILL 2868**

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**DECISION ADOPTING REMAINING DIRECTION REGARDING
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TARGETS AND APPROVING TWO ENERGY STORAGE
PROGRAMS PURSUANT TO ASSEMBLY BILL 2868**

Summary

This decision reviews and approves the 2020 Assembly Bill (AB) 2514 energy storage plans for Pacific Gas and Electric Company, Southern California Edison Company (SCE), and San Diego Gas & Electric Company. It also approves two energy storage programs proposed by SCE pursuant to AB 2868.

Regarding AB 2514, this decision acknowledges that all three Applicants have completely or nearly completely met their entire, in total 1,325-megawatt, procurement obligation and provides a procedural pathway to count procurement in other venues towards their obligation or issue an additional solicitation if necessary. This decision acknowledges that although nearly all sufficient procurement has occurred pursuant to AB 2514, the Applicants must still bring the relevant energy storage projects online by the end of 2024.

Regarding AB 2868, this decision authorizes SCE to move forward with two proposed programs: a New Home Energy Storage Pilot and a Smart Heat Pump Water Heater Program. SCE is authorized cost recovery of \$5 million for the New Home Energy Storage Pilot and \$13.9 million for the Smart Heat Pump Water Heater Program.

1. Background

Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) filed their energy storage procurement and investment plans on March 2, 2020. In response to PG&E's Application, Green Power Institute filed a protest on April 1, 2020, California Energy Storage Alliance filed a response on April 3, 2020, and Public

Advocates Office of the California Public Utilities Commission (Cal Advocates) filed a protest on April 3, 2020. In response to SCE's and SDG&E's Applications, the Utility Reform Network (TURN) filed protests on April 3, 2020, and California Energy Storage Alliance and Coalition of California Utility Employees filed responses on April 3, 2020. All three Applicants filed replies on April 13, 2020. Small Business Utility Advocates (SBUA) and Cal Advocates filed prehearing conference statements on June 9, 2020 and June 10, 2020, respectively. The Commission held a telephonic prehearing conference on June 11, 2020. The Assigned Commissioner issued a scoping ruling on July 10, 2020 that set the scope and schedule of proceeding and consolidated the three Applications into one proceeding.

Opening testimony was served in the proceeding on September 2, 2020, and rebuttal testimony was served in this proceeding on September 15, 2020.

On November 16, 2020, PG&E, SCE, TURN, and Cal Advocates filed opening briefs. On April 7, 2022, SBUA late filed an opening brief. On November 20, 2020, Wild Tree Foundation (WTF) late filed an opening brief that addressed mostly issues that are tertiary to the issues centrally scoped into this proceeding. On November 30, 2020, Cal Advocates, SDG&E, SBUA, and SCE filed reply briefs.

On July 19, 2021, the assigned Administrative Law Judge (ALJ) issued a ruling seeking responses from the Applicants regarding updated progress towards the implementation of their Assembly Bill (AB) 2514 targets. On August 2, 2021, PG&E, SCE, and SDG&E served and filed responses. On August 16, 2021, PG&E filed a motion to supplement its update that was served on August 2, 2021. No party protested PG&E's August 16, 2021 motion, and this decision grants the motion.

The case was submitted as of August 16, 2021.

2. Issues before the Commission

This decision addresses the progress of the three Applicants towards meeting their respective AB 2514 energy storage procurement target goals and acts on two energy storage programs proposed by SCE pursuant to AB 2868.

The issues to be determined are:

1. Are the Applications compliant with the Public Utilities Code (Pub. Util. Code) and relevant Commission Decisions, including Decision (D.) 13-10-040?
2. What remaining obligations do the Applicants have regarding AB 2514? If none, are the Applicants discharged of their obligations under AB 2514?
3. Do the Applications provide benefits to disadvantaged communities?
4. Should the Applications be approved in their entirety or with modification?
5. Have the Applicants correctly counted existing eligible energy storage credits toward their 2020 energy storage procurement targets as directed in D.13-10-040 and D.16-01-032?
6. If relevant, do the proposed AB 2514 procurement plans comply with the multiple use-case application rules set forth in Appendix A of D.18-01-003 and Ordering Paragraph 2 of that Decision?
7. Are there any safety considerations in approval of the Applications?
8. Should SCE's proposed AB 2868 programs and investments be authorized, along with the proposed cost recovery of \$20 million associated with the program and investment approval?

3. AB 2514

On December 16, 2010, the Commission opened Rulemaking (R.) 10-12-007 to implement the provisions of AB 2514 (Stats. 2010, Ch. 469). AB 2514 directed the Commission to determine appropriate targets, if any, for each Load-Serving Entity as defined by Pub. Util. Code Section 380(j) to procure viable and cost-effective energy storage systems and set dates for any targets deemed appropriate to be achieved.

In response to this state mandate, the Commission adopted D.13-10-040, the "Decision Adopting Energy Storage Procurement Framework and Design Program." D.13-10-040 directs PG&E, SCE, and SDG&E to file on or before March 1, 2014, and biennially thereafter through 2020, an application for approval of a plan to procure energy storage resources to address the targets and policies of the Commission's Energy Storage Procurement Framework and Design Program. The instant Applications are seeking approval of the 2020 biennial period framework.

D.13-10-040 adopted the following energy storage procurement targets for the three Applicants.¹

¹ D.13-10-040 Attachment at 2.

Energy Storage Procurement Targets (in megawatts (MW))

Storage Grid Domain (Point of Interconnection)	2014	2016	2018	2020	Total
Southern California Edison					
Transmission	50	65	85	110	310
Distribution	30	40	50	65	185
Customer	10	15	25	35	85
Subtotal SCE	90	120	160	210	580
Pacific Gas and Electric					
Transmission	50	65	85	110	310
Distribution	30	40	50	65	185
Customer	10	15	25	35	85
Subtotal PG&E	90	120	160	210	580
San Diego Gas & Electric					
Transmission	10	15	22	33	80
Distribution	7	10	15	23	55
Customer	3	5	8	14	30
Subtotal SDG&E	20	30	45	70	165
Total - all 3 utilities	200	270	365	490	1,325

**3.1. Energy Storage Procurement in
Other Processes that May Count
Towards AB 2514 Procurement Targets**

As SDG&E notes in its August 2, 2021 update filing, the Commission has issued various procurement orders in other venues like the Integrated Resource Plan proceeding (R.20-05-003) and the Electric Reliability Proceeding (R.20-11-003).²

The original AB 2514 decision, D.13-10-040, authorized the use of energy storage projects approved in other Commission proceedings to count toward AB 2514 targets:

² SDG&E August 2 filing at 3.

... [Investor-owned utilities (IOUs)] may count storage projects authorized in other Commission proceedings towards meeting their interim procurement targets once the contract for that project is approved by the Commission ... Therefore, we will allow storage projects authorized in other Commission proceedings to count towards meeting the overall [AB 2514] procurement targets if they meet the [specified] requirements...³

The Commission has previously indicated that storage projects that meet the following requirements are eligible to count toward AB 2514 targets, “[t]he project demonstrates its ability to meet one or more of the following purposes: grid optimization, integration of renewable energy, or reduction of greenhouse gas emissions. The project is under contract or was installed after January 1, 2010. The project is operational by no later than the end of 2024.”⁴

We affirm that energy storage procurement that the Commission has approved in other proceedings, including the Integrated Resource Plan and Electric Reliability proceedings, shall count towards the Applicants’ AB 2514 targets, provided the procurement complies with relevant direction that the Commission has issued.

3.2. Pacific Gas and Electric Company

As noted in PG&E’s Application, PG&E requests that the Commission issue appropriate orders approving PG&E’s 2020 Energy Storage Procurement Plan as fully compliant with the Pub. Util. Code and Commission decisions, including AB 2514 and D.13-10-040, and granting such additional relief as the Commission may deem proper.⁵

³ D.13-10-040 at 34.

⁴ D.13-10-040 at 32.

⁵ PG&E Application at 8.

D.13-10-040 set a target for PG&E to procure 580 MW of energy storage by the end of 2020, to be online by 2024. PG&E has executed solicitations for energy storage projects through AB 2514 Requests for Offers (RFOs) in 2014 and 2016. PG&E notes that additional storage capacity has also been developed under alternative Commission approved channels such as the Local Sub-Area Energy Storage RFO, Self Generation Incentive Program (SGIP), Distributed Resources Plan (DRP)/Integrated Distributed Energy Resources (IDER) contracts, and Electric Program Investment Charge (EPIC) projects.

PG&E demonstrates that, at the time of the filing of its Application, with authorized shifting rules being utilized, it has procured 184.5 MW beyond the transmission domain target and 22.69 MW beyond the distribution domain target. PG&E notes that at the time of the filing of its Application, it had a remaining customer domain goal of 23.2 MW remaining.

PG&E notes in its Application that if SGIP projects are counted similarly to other storage projects listed in the transmission, distribution, and customer domains, and PG&E's total for SGIP projects include capacity from in-queue projects pending completion, PG&E would have 154.2 MW of pending and completed projects in the customer domain. This would place PG&E in compliance for the customer domain target of 85 MW.

Cal Advocates notes that it:

has reviewed PG&E's Supplemental Testimony and finds that PG&E has accurately accounted for its customer domain compliance progress, and has provided a sufficient plan to meet its remaining AB 2514 customer domain compliance target. Cal Advocates indicated that it believes PG&E's proposal to notify parties of any future procurement need through a Tier 1 advice letter is a reasonable way to inform the Commission and parties if any customer domain need arises.⁶

In PG&E's August 2, 2021 update, it reported a 10.5 MW deficit in meeting its distribution domain target due to project termination. On August 16, 2021, PG&E filed a motion to supplement its August 2, 2021 filing with the information that it had filed in an Advice Letter seeking approval of a project that it believes should qualify to meet its obligation for its distribution domain target – the Pomona Energy Storage 2 project, resulting in 10 MW of energy storage capacity.

PG&E notes in its unopposed August 16, 2021 motion,

With this supplemental filing, PG&E highlights the 10 MW Pomona Energy Storage 2 project in the distribution domain, which has a stated Commercial Operation Date (COD) of August 2, 2022. If approved and counted toward AB 2514's 2024 deadline for installed capacity of relevant energy storage projects under [D.13-10-040], PG&E's residual deficit in the distribution domain would be reduced to 0.5 MW.⁷

In PG&E's March 2, 2022 motion, the deficit was increased to 20.5 MW due to the termination of the 20 MW Llagas Energy Storage project.

Moreover, the Commission approved the Pomona Energy Storage 2 project through a non-standard disposition letter issued on August 26, 2021.

⁶ Exhibit CA-01 at 1-3 and 1-4.

⁷ PG&E August 16, 2021 Motion at 2.

Additionally, no party substantially opposed PG&E's positions related to its AB 2514 compliance.

We agree that PG&E has reasonably satisfied its responsibility for meeting its AB 2514 energy storage targets thus far, with a robust plan for meeting its remaining procurement target obligation. The relief PG&E requested in its Application is granted. In counting the customer domain procurement that has occurred, resulting from proceedings like the SGIP, and the approval of the Pomona Energy Storage 2 project by the Commission, PG&E has satisfied all but 20.5 MW of relevant energy storage procurement in the distribution domain pursuant to AB 2514. PG&E's apparent 20.5 MW shortfall is addressed later in this decision.

3.3. San Diego Gas & Electric Company

D.13-10-040 set the goal for SDG&E to procure 165 MW of energy storage by the end of 2020, to be installed no later than year-end 2024. SDG&E's most recent prior biennial application (A.18-02-016) reported that SDG&E had completed contracting for energy storage sufficient to meet SDG&E's AB 2514 target.

At the time of SDG&E filing its Application in 2020, there was a developer termination of a contract that resulted in SDG&E having a 6 MW deficit towards the fulfillment of its target. In its initial Application, SDG&E outlined how it proposed to substantially comply with meeting its energy storage procurement target goals: to use energy storage procurement in other venues to count towards its AB 2514 target goals, and if necessary, conduct a final solicitation.

SDG&E provided an update to the record on August 2, 2021 to inform the Commission and interested parties about progress towards meeting its AB 2514 target goals since the filing of the Application in this proceeding. In this filing,

SDG&E notes that project terminations could increase its deficit in meeting its AB 2514 targets up to 12.5 MW across the transmission and distribution domains.⁸

As discussed in other sections of this decision, since the filing of SDG&E's Application, the Commission has issued various procurement orders in the Integrated Resource Plan proceeding and the Electric Reliability Proceeding.

In its August 2, 2021 filing, SDG&E requests that the Commission approve SDG&E's Application in this proceeding, which will allow SDG&E to meet its AB 2514 storage target. Specifically, SDG&E requests that the Commission direct SDG&E to file a Tier 1 Advice Letter in this proceeding identifying storage projects authorized in other Commission proceedings that will satisfy its current AB 2514 procurement deficit. SDG&E requested authority to launch a solicitation for additional energy storage resources if it is not able to satisfy meeting its AB 2514 targets with procurement in alternative venues.

Cal Advocates addressed SDG&E's Application regarding the AB 2514 targets, and it generally concluded that SDG&E has appropriately described any remaining procurement that is necessary and has a reasonable plan to address the residual need.⁹

SDG&E requested the Commission approve its Application as filed. This approval request includes SDG&E's proposed plan to count energy storage procurement wherein the Commission provides cost recovery approval in other processes. It also includes SDG&E's request to hold an additional solicitation if it is not able to meet the full requirements of AB 2514 with existing procurement.

⁸ Exhibit SDGE-03 at 2.

⁹ Exhibit CA-01 at 1-2.

SDG&E's position regarding its progress towards meeting the procurement requirements of AB 2514 is reasonable at this juncture. We grant a pathway forward for SDG&E to count energy storage procurement that received Commission approval in other processes toward its AB 2514 targets. We also grant a pathway for SDG&E, and the other two Applicants, to hold an additional energy storage solicitation should it be needed to meet the AB 2514 targets. The specific direction to count other procurement or issue an additional solicitation, including how SDG&E may address its apparent 12.5 MW shortfall, is addressed later in this decision.

3.4. Southern California Edison

SCE's Application outlines its position on its progress towards fulfilling its AB 2514 targets.

Pursuant to D.13-10-040, SCE's target for the 2020 procurement cycle is 210 MW across the three grid domains, and its cumulative target (accounting for the 2014, 2016, and 2018 procurement cycles) is 580 MW across the three grid domains. After applying the counting rules established in D.13-10-040 as modified by D.16-01-032, SCE's total eligible procurement through the 2020 procurement cycle, at the time of filing the Application, is 609.08 MW, which is 29.08 MW above the 580 MW cumulative target. SCE indicated that because it has already exceeded the 580 MW procurement target set by D.13-10-040 pursuant to AB 2514, it did not submit a request to issue a stand-alone solicitation in this Application.

SCE provided an update regarding progress towards meeting its AB 2514 targets in a document filed with the Commission on August 2, 2021. In its August 2, 2021 update, SCE indicated its total eligible energy storage procurement at that point in time is 2,044 MW. SCE indicated it has procured 250

MW in the customer domain, 319 MW in the distribution domain, and 1,475 MW in the transmission domain.

We agree that SCE has exceeded its total AB 2514 procurement target, as well as the domain specific procurement targets, and therefore does not require any additional solicitations for the sole purpose of meeting the AB 2514 mandate.

3.5. Next Steps Regarding the Final Implementation of AB 2514

At this juncture, SCE has fully satisfied its procurement obligation pursuant to AB 2514 and PG&E and SDG&E have a relatively small proportion of their procurement obligations left to satisfy. At the point of evaluating the record in this proceeding, we are aware of 20.5 MW remaining for PG&E and up to 12.5 MW remaining for SDG&E. Based on the record, the entire deficit that remains has mainly resulted from project terminations that seem to have occurred in good faith. All three Applicants must bring sufficient energy storage online by the end of 2024 to meet the online date component of their AB 2514 obligations.

It is reasonable to enable the Applicants to have a pathway to certify that energy storage procurement that has occurred in other venues will count towards their AB 2514 targets. Further, in the unlikely event that the Applicants need to conduct a separate solicitation to procure additional resources to meet their AB 2514 targets, it is reasonable to enable a procedural pathway that does not require an Application to be filed with the Commission to grant authority to issue a solicitation.

The Applicants may seek approval for energy storage procurement that has occurred in other venues at the Commission to count towards their AB 2514 targets by filing a Tier 1 Advice Letter with the Commission's Energy Division

requesting such certification. In the Tier 1 filing, the Applicants must specify the project names and capacity size that they seek to count towards their AB 2514 targets, the alternative venue or proceeding where the Commission approved the procurement, and the rationale for counting the project towards its AB 2514 targets including an indication of the grid domain that should be assigned to the procurement. Furthermore, the Tier 1 filing must include an update on all progress towards fulfilling the AB 2514 targets, including information about any project terminations that may have occurred.

If the Applicants believe they may not be able to fully satisfy their obligations in terms of meeting the AB 2514 energy storage procurement and online date targets using procurement that has occurred in other venues at the Commission, they may seek approval to hold a solicitation by requesting the authority through a Tier 2 Advice Letter. The Tier 2 filing shall indicate the schedule for which the Applicant will hold the solicitation. The Applicants shall also provide a reasonable showing, in the Advice Letter, that the procurement plan comports with previous direction issued by the Commission regarding the holding of procurement solicitations to fulfil the specific obligations directed in AB 2514 relative to energy storage procurement.

Finally, we direct the Applicants to individually submit letters to the Director of the Commission's Energy Division on June 15 and December 15 each year until the end of 2024 that updates the Commission on (1) all total progress towards meeting each individual AB 2514 target obligation including progress toward bringing the qualified storage online to be operation by the end of 2024, (2) an indication of any project terminations that have occurred and how those project terminations will impact the fulfilment of the AB 2514 targets, (3) a summary of all project approvals that have occurred in other venues and

proceedings at the Commission that the Applicants individually sought approval to count towards the AB 2514 targets through a Tier 1 Advice Letter, and (4) a plan for how the Applicants will meet their obligation if any obligation remains at the point of submitting the letter. The letter shall be sent to the Commission's Energy Division Director and shall be served to the service list for this consolidated proceeding.

Should an Applicant fail to meet its AB 2514 procurement target by the end of 2024, this consolidated proceeding may be reopened on the Commission's own motion to investigate the matter and potentially issue an Order to Show Cause.

4. AB 2868

AB 2868 (Stats. 2016, Ch. 681), signed into law on September 26, 2016, adds Sections 2838.2 and 2838.3 to the Pub. Util. Code. It directs the Commission, in consultation with the California Air Resources Board and the California Energy Commission, to direct the three IOUs to file applications for programs and investments to accelerate widespread deployment of distributed energy storage systems to achieve ratepayer benefits, reduce dependence on petroleum, meet air quality standards, and reduce emissions of greenhouse gases.

The total capacity of the programs and investments in distributed energy storage systems approved by the Commission pursuant to AB 2868 is not to exceed 500 MW, divided equally among PG&E, SCE, and SDG&E.

In D.19-06-032, the Commission adopted a framework for the implementation of AB 2868. Of the proposed programs and investments considered in that decision, PG&E's behind the meter thermal storage program was the only proposal pursuant to AB 2868 to receive formal Commission approval, now termed the WatterSaver Program. PG&E's WatterSaver Program

remains the only program or investment pursuant to AB2868 to receive Commission approval thus far.

D.19-06-032 also signaled to SCE that it should explore opportunities related to the implementation of a heat pump hot water heater program, like the program approved for PG&E in that Application.¹⁰ D.19-06-032 envisioned a program that coincided with issues resolved in D.18-12-015, relating to San Joaquin Valley Pilot Projects.

In this consolidated proceeding, SCE has proposed two programs for Commission consideration, a New Home Energy Storage Pilot (NHESP) and a Smart Heat Pump Water Heater Program (Smart HPWH program). SCE requests cost recovery of \$5 million for the NHESP and \$13.9 million for the Smart HPWH program. No other utility proposed AB 2868 programs in this proceeding. We will first address two threshold issues that impact both of SCE's proposed programs and then focus on the specific merits of each proposal.

4.1. Cost Effectiveness Requirements for Customer Programs Authorized Pursuant to AB 2868

Cal Advocates argues in this proceeding that the statutory language of AB 2868 requires that proposed programs "minimize overall costs and maximize overall benefits"¹¹ and notes that this language is concurrently situated in a section of the Pub. Util. Code that requires "energy storage systems"¹² to be "cost effective." Cal Advocates also notes that the Commission determined, in D.19-06-032, that the requirement to minimize overall costs and maximize overall benefits

¹⁰ D.18-12-015 at 46.

¹¹ Pub. Util. Code § 2838.2(b).

¹² Pub. Util. Code § 2835(a)(3).

does not preclude the statutory requirement for energy storage systems to be cost effective.¹³ Cal Advocates uses this position to advocate that the Commission should reject the two behind the meter programs proposed by SCE.

Regarding cost effectiveness, SCE takes a very specific position that the relevant statutory authority for AB 2868 does not impose a cost effectiveness requirement on customer programs authorized pursuant to that bill. SCE further notes that even if a legal requirement for cost effectiveness of customer programs proposed pursuant to AB 2868 did exist, the Commission has yet to create a cost effectiveness test for the technologies at issue in this Application.

SCE notes regarding its two proposed programs that it has provided a robust record on the costs and benefits of its proposed pilots and utilized the Avoided Cost Calculator to demonstrate that the proposals meet a cost effectiveness standard should the Commission conclude that one applies.

SCE also notes that Cal Advocates points to persuasive authority in the IDER proceeding that indicates “the Total Resource Cost (TRC) test shall be considered the primary test of cost-effectiveness for all distributed energy resources applicable filings or advice letters submittals that require cost-effectiveness analyses.”¹⁴ SCE indicates that the Commission has not created a technology specific TRC test for the technologies, pursuant to authorization in AB 2868, that SCE is proposing.

Given that a TRC test has not been developed by the Commission for the specific technologies that SCE is proposing here, SCE attempted a cost-benefit ratio analysis that it indicates is based on the 2019 Avoided Cost Calculator.

¹³ D.19-06-032 at Finding of Fact 17 and 18 at 87.

¹⁴ D.19-05-019 at 2.

SCE's analysis indicates that the NHESP has a benefit/cost ratio of 2.36¹⁵ and the Smart HPWH program has a benefit/cost ratio of 1.7 to 1.03.¹⁶

TURN and SBUA point to the pilot nature of the two proposals by SCE, and TURN specifically points to the important lessons that can be learned through the data collection process of the NHESP to inform a potential expansion of the program and the program design of future proposals before the Commission.

Considering the weight of the evidence, we agree with SCE that its two AB 2868 proposals satisfy the statutory requirements of AB 2868 relative to minimizing costs and maximizing benefits and any relevant cost-effectiveness requirements, with SCE's proposed benefit/cost ratios providing substantial evidence. This conclusion follows the logic of D.19-06-032, which authorized PG&E to move forward with its proposed behind the meter thermal storage program which included smart control devices to shift load, pursuant to AB 2868, and authorized spending up to \$6.4 million to achieve a program cap of 5 MW without making a specific finding to the cost effectiveness of that proposal. Rather, D.19-06-032 balanced the cost and benefit of the program on its individual merits and determined it was worthy of Commission approval.

4.2. AB 2868 Statutory Limit on Behind the Meter Programs

Cal Advocates asserts that because the Commission has yet to approve in-front-of-the-meter energy storage projects pursuant to AB 2868, it statutorily may not approve any behind the meter programs. Cal Advocates asserts that the Legislature expressly limited the Commission's ability to approve behind the

¹⁵ Exhibit SCE-02-A at 12.

¹⁶ Exhibit SCE-02-A at 35.

meter programs and investments to “[n]o more than 25 percent of the capacity of distributed energy storage systems approved” pursuant to AB 2868.¹⁷

SCE responded to Cal Advocates’ assertion by arguing that Cal Advocates’ position results in an absurd outcome and should be disregarded. SCE notes that the California Supreme Court has instructed that “[t]he literal meaning of the words of a statute may be disregarded to avoid absurd results or to give effect to manifest purposes that, in the light of the statute’s legislative history, appear from its provisions considered as a whole.”¹⁸

SCE notes that “[t]o read the statute as prohibiting the Commission from approving [behind the meter] programs unless it first approves applications for 375 MW of [in-front-of-the-meter] energy storage systems would frustrate that express legislative intent.”¹⁹ SCE further argues that courts do not interpret statutes to have absurd consequences when there is a more logical interpretation²⁰ and they interpret statutes in a way that harmonizes the parts with one another and with the purpose of the statute as a whole.²¹

¹⁷ Pub. Util. Code § 2838.2(c)(2): “No more than 25 percent of the capacity of distributed energy storage systems approved for programs and investments pursuant to this section shall be provided by behind-the-meter systems.”

¹⁸ *Silver v. Brown* (1966) 63 Cal.2d 841, 845 (citations omitted).

¹⁹ Exhibit SCE-02-A at 15.

²⁰ *Warner v. Kenny* (1946) 27 Cal.2d 627, 629 (“The interpretation adopted must be reasonable, and where the language is fairly susceptible of two constructions, one which, in application, will render it reasonable, fair, and harmonious with its manifest purpose, and another which would be productive of absurd consequences, the former construction will be adopted.”) (quoting *Gage v. Jordan* (1944) 23 Cal.2d 794, 800).

²¹ *People v. Black* (1982) 32 Cal.3d 1, 5 (“When used in a statute, words must be construed in context, keeping in mind the nature and obvious purpose of the statute in which they appear. The various parts of a statutory enactment must be harmonized by considering the particular clause or section in the context of the statutory framework as a whole.”); *Wells v. Marina City Properties, Inc.* (1981) 29 Cal.3d 781, 788.

We agree with SCE that Cal Advocates' position on the limitation of the Commission to authorize behind the meter programs pursuant to AB 2868 without first authorizing in-front-of-the-meter procurement creates an absurd result and is irreconcilable with these rules of statutory construction, and thus is invalid.

4.3. SCE's Proposed New Home Energy Storage Pilot (NHESP)

SCE proposes the NHESP wherein it will pay rebate incentives to building developers that choose to add energy storage systems in new residential projects. SCE proposes two tiers of incentives rates: one for affordable housing projects and another for market-rate mixed use projects. Half of the rebate would be paid at the time of the installation of the energy storage system and then the other half would be paid upon the verification of a home-visit and battery programming. SCE proposes to provide an incentive that is 10% below the commensurate SGIP incentive level. SCE proposes a budget of \$5 million to achieve a target of 12.5 MW of installed capacity.

SCE indicated the goal of the NHESP is to "test market adoption of an equipment incentive for housing developers who build homes that are subject to the new 2019 Title 24 Building Energy Efficiency Standards' [photovoltaic] requirements, effective January 1, 2020." SCE argues that there is consistency with the objective of AB 2868 in that this program will accelerate widespread deployment of distributed energy storage systems.

Among the program requirements, SCE proposes that the storage systems must be programmed to provide customer bill minimization and greenhouse gas emissions reduction benefits (with a preference for bill minimization if both cannot be achieved in the case of affordable housing units).

SCE asserts that the NHESP complements SGIP rather than overlapping it. SCE notes that SGIP targets action and adoption by a homeowner or building owner in the existing building stock, and the proposed NHESP takes a different approach by targeting adoption by the housing developer in new construction.

SCE lays out its position its testimony served in this proceeding regarding how the proposed NHESP adheres to the obligations set forth in AB 2868. The major requirements for energy storage programs authorized pursuant to AB 2868 include,²²

- Minimizing overall costs and maximizing overall benefit;
- Reducing dependency on petroleum, meeting air quality standards, and reducing greenhouse gas emissions;
- Not unreasonably limit or impair the ability of non-utility enterprises to market and deploy energy storage systems;
- Prioritizing public sector and low-income customers; and
- Including energy storage management systems.

SCE asserts many elements of the NHESP minimize overall costs and maximize overall benefits, including the targeting of new construction which reduces the need for individual marketing and allows the energy storage systems to be integrated into new construction obviating the need to retrofit.

To reduce dependency on petroleum, meet air quality standards, and reduce greenhouse gas emissions, SCE asserts that pairing energy storage systems with Title 24 solar requirements will allow clean solar energy to be consumed when it is needed. Moreover, SCE notes that its proposal improves air

²² Exhibit SCE-01 at 32.

quality and reduces greenhouse emissions through its preference for all-electric housing developments and provides related estimates.

SCE addresses the non-utility enterprises requirement by indicating that “[t]he NHESP will enhance, rather than limit or impair, non-utility enterprise participation. The NHESP aims to test and, if successful, open new markets for energy storage adoption that are currently prohibited from participating in SGIP. In providing incentives to housing developers to install storage in new construction development, SCE will not restrict vendor choice and leaves negotiations and selection of energy storage installers to the housing developers.”²³

In prioritizing public sector and low-income customers, SCE indicates it will set aside 25% of the NHESP’s incentive funding for affordable housing developers to use at higher incentive rates.

Finally, in responding to the need for energy storage management systems, SCE outlines its management system strategy for this program. “The NHESP batteries will be subject to a combination of conditions that meet the requirement to include an energy management system for technologies deployed on the customer side of the meter. Single-family home customers in this pilot will be on [time-of-use] rates, which generally drive on site bill management and battery charge and discharge in alignment with [greenhouse gas (GHG)] emissions reductions. In addition, their batteries will be programmed to reinforce AB 2868 cost minimization and GHG reduction goals. Multifamily participants in NHESP will be required to install batteries that are electrically connected for

²³ Exhibit SCE-01 at 34.

individual household use and programmed for bill minimization and GHG reduction.”²⁴

Additionally, regarding cost recovery, SCE proposes “to recover the costs for both administration of the program as well as incentive payments made to customers recorded in SCE’s NHESP through the [Public Purpose Program Charge] Rate Component.” Further, regarding implementation, SCE proposes “the final decision include a requirement for SCE to file a Tier 2 Advice Letter within 120 days to propose a program implementation plan with pilot details, including any necessary new tariffs or tariff modifications. SCE also proposes the final decision require SCE, upon conclusion of the pilot effort and NHESP Adoption Report, file a Tier 3 advice letter seeking approval to extend the pilot effort, expand it into a program, or sunset it.”²⁵

4.3.1. Party Positions on the NHESP Proposal

TURN took a nuanced approach to its advocacy on this proposal, putting forth constructive ideas regarding how the NHESP could be designed to provide greater value to ratepayers.

TURN was supportive of the NHESP proposal because midstream incentives to contractors may prove to be a cost-effective method to overcome barriers against adoption and because a residential storage system can provide economic and environmental health benefits when paired with on-site solar. TURN’s concerns focused on the measurement and verification (M&V) plan, specifically that in TURN’s opinion it was not robust enough to fully evaluate the economic and environmental benefits of the program.

²⁴ Exhibit SCE-01 at 34.

²⁵ Exhibit SCE-01 at 36.

TURN and SCE served the *Joint Testimony of Eric Borden and Eduyng Castana*, identified as Exhibit TURN-SCE-01 in the record. This exhibit recommended an expanded data collection and evaluation plan,²⁶ and recommended shifting \$200,000 from the incentive budget to the M&V budget. The expanded plan would be included in the solicitation for a third-party M&V provider, and the final details of the M&V plan and the budget would be submitted in an implementation Advice Letter after consultation with the M&V provider.

TURN puts forth the argument that this program does not overlap with the current SGIP, citing that the delivery mechanism of this program targets new construction which is entirely novel in SGIP.

TURN also asserts that an increased M&V allocation is reasonable for a pilot program, as the information gained from this pilot can have significant value for ratepayers in more intelligently designing future programs that can provide increased value. TURN describes concerns about ratepayer subsidies for behind the meter storage, and TURN specifically “seeks to ensure that the pilot provides more granular data about 1) the potential to integrate [behind the meter] battery storage to provide system operational benefits, and 2) the nature of any customer overrides and subsequent resets of the battery settings.”²⁷

TURN also makes some compelling arguments about the value of wholesale energy storage versus behind the meter, wherein the opportunity to socialize the cost and benefit of a wholesale energy storage system is significantly greater than that of a behind the meter system. That said, TURN notes that the

²⁶ Exhibit TURN-SCE-01 at 3-4.

²⁷ TURN Opening Brief at 8.

ability of a behind the meter storage system to generate net benefits to ratepayers heavily depends on “1) the incentive subsidy level, and 2) the ability of the battery system to operate in multiple use cases so as to provide operational system benefits.”²⁸

TURN articulates its position on the concern that the economic and environmental benefits decline in specific circumstances, specifically when customers modify the pre-set timing of battery operations to differ from the arbitrage setting. TURN notes its “understanding that at least one of the two main manufacturers of residential battery systems includes certain pre-sets that can be controlled remotely, thus making it possible for the customer to switch between ‘reliability’ and ‘arbitrage’ modes without too much effort; and it was precisely the presence of these automated controls that led to the significant change from 2017 to 2018 causing residential systems to reduce [greenhouse gas] emissions.”²⁹ TURN strongly supports using actual consumption data in the NHESP pilot to determine whether and how often customers modified the battery settings, and to examine whether those settings were returned to the “arbitrage” mode.

TURN also notes that this program does not enable utility control of the customer sided energy storage systems, and thus the data collected will help inform the design of future programs that incent behind the meter storage as to actual customer behavior and what value streams may realistically be achieved.

Cal Advocates provided its position regarding the NHESP, specifically arguing that the Commission should issue a wholesale denial of the program

²⁸ TURN Opening Brief at 13.

²⁹ TURN Opening Brief at 14.

rather than providing more constructive expertise that would help design a program that better serves SCE's ratepayers.

Cal Advocates' criticisms of the NHESP include concerns that SCE did not substantiate that the program is cost-effective or that it minimizes costs and maximizes benefits, will clearly reduce greenhouse gas emissions, is duplicative of other programs, nor prioritizes low-income customers. Cal Advocates further raises an issue with TURN's proposal for the allocation of M&V funds to be increased from \$150,000 to \$350,000 for the purpose of gathering the appropriate data to inform future programs.

SBUA supports approval of the NHESP, and it proposes some modifications that it asserts are reasonable.

SBUA argues that any concerns about oversizing of the battery energy storage systems is unfounded given the significant need for energy storage to integrate renewable electric generation.

SBUA further suggests that the Commission direct increased outreach to low-income housing developers and further direct SCE to create a working group with relevant stakeholders to refine the outreach to low-income customers and housing developers.

4.3.2. Commission Direction Regarding the NHESP Proposal

Considering the totality of the evidence and arguments provided in the record of this proceeding, we authorize SCE to proceed with the NHESP program with a funding authorization of \$5 million.

We appreciate TURN's willingness to work with SCE to develop the program in a way that provides greater value to ratepayers while ensuring the program is designed in a way to answer critical questions about customer

behavior with installed in-home energy storage. For that reason, we adopt the proposal of TURN and SCE for the M&V component of this program to be funded at a level up to \$350,000 with a limitation in funding capped at the actual costs of the M&V activity, not to exceed \$350,000.

We agree that the NHESP proposal offers a unique delivery mechanism from SGIP, and we appreciate TURN's insight that there may be substantial value gained from the lessons learned in this program. These lessons may be used to modify the program design of existing and future customer-side energy storage offerings.

Further, we understand some of the critiques of Cal Advocates, including those regarding how this authorization should be structured when considering the guidance in AB 2868. However, SCE and TURN make a more compelling argument that this program should be approved and is consistent with the direction in AB 2868. In evaluating how the NHESP threads the needle of AB 2868, the program is consistent with the spirit of the bill to accelerate widespread deployment of distributed energy storage systems to achieve ratepayer benefits, reduce dependence on petroleum, meet air quality standards, and reduce emissions of greenhouse gases.

SCE shall recover the costs for administration of the program as well as incentive payments made to customers recorded in SCE's NHESP through the Public Purpose Program Charge (PPPC) Rate Component. SCE shall file a Tier 2 Advice Letter within 120 days to propose a program implementation plan with pilot details, including any necessary new tariffs or tariff modifications. Upon conclusion of the pilot effort and NHESP Adoption Report, SCE shall file a Tier 3 Advice Letter seeking approval to extend the pilot effort, expand it into a program, or sunset it.

4.4. SCE's Proposed Smart Heat Pump Water Heater Program (Smart HPWH)

SCE requested Commission approval of cost recovery of \$13.9 million to implement a Smart HPWH program that will reach 17,000 customers and target 5 MW of behind the meter thermal energy storage by 2027.

SCE describes the program as enabling “customers with existing electric water heaters to switch to smart water heaters by adding control and communications equipment and provide incentives for homeowners and small businesses to replace aging electric resistance, propane, natural gas water heaters with smart HPWHs.”³⁰ SCE describes the Smart HPWH program as being like PG&E's WatterSaver Program, adopted in D.19-06-032, with SCE noting that a key difference is that SCE's program includes the replacement of natural gas fueled water heaters with electric heat pump equipment.

SCE initially proposed two incentive structures for participating customers in the Smart HPWH program. Option 1: a financial “incentive for early replacement of aging electric resistance, propane or natural gas water heaters with smart HPWHs to provide thermal storage, combined with a pay-for performance incentive that rewards customers for their peak demand reduction.”³¹ Option 2: a “[p]ay-for-performance incentive to add control and communication equipment to existing electric water heaters to provide thermal storage, encourage customers to limit water heating to 20 off-peak hours, and reduce or eliminate water heating during peak hours.”³²

³⁰ Exhibit SCE-01 at 37.

³¹ Exhibit SCE-01 at 38.

³² Exhibit SCE-01 at 38.

SCE lays out its position in its testimony served in this proceeding regarding how the proposed Smart HPWH program adheres to the obligations set forth in AB 2868. The major requirements for energy storage programs authorized pursuant to AB 2868 include,³³

- Minimizing overall costs and maximizing overall benefit;
- Reducing dependency on petroleum, meeting air quality standards, and reducing greenhouse gas emissions;
- Not unreasonably limit or impair the ability of non-utility enterprises to market and deploy energy storage systems;
- Prioritizing public sector and low-income customers; and
- Including energy storage management systems.

In its June 18, 2020 testimony, SCE amended its original proposal and determined that additional equipment incentives were duplicative and unnecessary given the number of heat pump water heater (HPWH) incentives that would be available when the SHPWHP launches, such as the incentives offered through SGIP, TECH Initiative (SB1477), 2021-2026 SCE Energy Savings Assistance (ESA) Program, and Building Electrification Pilot. SCE amended the proposed smart HPWHP so that it would add value and complement, rather than duplicate other HPWH programs.³⁴ SCE will offer customer incentives for the installation of control and communication equipment to electric water heaters to provide thermal storage. SCE will also use pay-for-performance (P4P)

³³ Exhibit SCE-01 at 45.

³⁴ Exhibit SCE-02-A at 20.

incentives to encourage customers to limit water heating to off-peak hours and reduce or eliminate water heating during peak hours.³⁵

Regarding the minimization of costs and maximization of benefits, SCE outlines numerous benefit streams of this program and notes that “SCE proposes to optimize costs by leveraging funding of incentives from other sources to buy-down the base HPWH equipment costs. This approach reduces overall program costs and maximizes the number of customers that can benefit by electrifying their homes. It also simultaneously reduces the potential need for distribution system upgrades by shifting this new electric load to avoid peak hours.”³⁶

To reduce dependency on petroleum, meet air quality standards, and reduce greenhouse gas emissions, SCE notes that “[t]his program reduces customers’ dependence on combustion-based heating equipment in SCE’s service territory by offering incentives to switch from natural gas and propane water heaters to efficient electric heat pump water heaters.”³⁷

SCE also notes that by incenting thermal storage that charges mid-day, SCE is encouraging customers to use electricity at times when the production of the electricity is largely carbon emissions free.

SCE notes that because the program will be administered by a third-party implementer selected through a competitive bid process, the program does not impair non-utility participation.

Regarding customer targeting, SCE indicates it “will prioritize low-income, public sector, and both residential and small business customers in [disadvantaged communities]. Furthermore, SCE will seek to identify and target

³⁵ Exhibit SCE-02-A at 20.

³⁶ Exhibit SCE-01 at 46.

³⁷ Exhibit SCE-01 at 46.

customers with propane or natural gas water heaters within this population. SCE will consider customers with electric resistance water heaters across its entire service area.”³⁸ While SCE does not elaborate on how this program will coincide with the San Joaquin Valley Pilot, we do appreciate SCE’s focus on disadvantaged communities.

SCE notes that the smart element of the smart HPWH is essentially the energy storage management system, and as a matter of course this program complies with that element of AB 2868.

SCE sought authorization to “create a new balancing account called the Smart Heat Pump Water Heater Balancing Account (SHPWHBA), through a Tier 1 Advice Letter to record administrative costs up to the authorized program funding and actual financial incentives paid to customers who participate in the program to ensure that payments in total do not exceed authorized program funding limits over the program period.”³⁹

SCE requests authorization to seek “review of the costs recorded to the SHPWHBA in its annual April 1 [Energy Resource Recovery Account (ERRA)] Review proceeding to ensure that the entries made in the SHPWHBA are stated correctly and are consistent with Commission decisions. SCE requests authorization at the end of the program period to use the SHPWHBA for an extended program or request both a final review of the operation of the balancing account through SCE’s ERRA Review proceeding. Closure of the SHPWHBA with a final transfer to the Public Purpose Program Adjustment Mechanism (PPPAM) through a Tier 2 Advice Letter.”⁴⁰

³⁸ Exhibit SCE-01 at 39.

³⁹ Exhibit SCE-01 at 47.

⁴⁰ Exhibit SCE-01 at 47.

SCE proposes to recover the costs for both administration of the program as well as incentive payments made to customers recorded in SCE's SHPWHBA through the PPPC Rate Component.

4.4.1. Party Position on the Smart HPWH Program

Cal Advocates opposed the approval of the Smart HPWH program on multiple grounds, including concerns about minimization of costs and maximization of benefits, greenhouse gas emissions reductions benefits, duplication of other programs and pilots, and a prioritization for low-income customers. Cal Advocates also asserts that the Smart HPWH program is duplicative of programs that have been under consideration in SGIP-relevant proceedings.

SBUA advocated for approval of the Smart HPWH program.

4.4.2. Commission Direction on the Smart HPWH Program

We are compelled that the Smart HPWH program proposal included in SCE's Application is in the public interest and consistent with the objectives and spirit of AB 2868. SCE is authorized to move forward with the program as outlined in its Application and served testimony.

Even considering the critiques provided by Cal Advocates, we believe that SCE has proposed a thoughtful program that is consistent with the authority granted in AB 2868. The Smart HWHP program is consistent with the spirit of the bill to accelerate widespread deployment of distributed energy storage systems to achieve ratepayer benefits, reduce dependence on petroleum, meet air quality standards, and reduce emissions of greenhouse gases.

Further, D.19-06-032 encouraged SCE to address heat pump water heater programs in a future Application regarding AB 2868 approvals,⁴¹ and SCE has done so in this Application. Further, in that Decision we approved a similar program that shifted energy consumption to non-peak hours using thermal storage for implementation by PG&E.

SCE is authorized to create a new balancing account called the Smart Heat Pump Water Heater Balancing Account (SHPWHBA), through a Tier 1 Advice Letter to record administrative costs up to the authorized program funding and actual financial incentives paid to customers who participate in the program to ensure that payments in total do not exceed authorized program funding limits over the program period. SCE shall not recover more than \$13.9 million for all Smart HPWH program costs.

SCE is authorized to seek review of the costs recorded to the SHPWHBA in its annual April 1 ERRR Review proceeding to ensure that the entries made in the SHPWHBA are stated correctly and are consistent with Commission decisions. The Commission may grant authorization to SCE at the end of the program to use the SHPWHBA for an extended program. SCE may request both a final review of the operation of the balancing account through SCE's ERRR Review proceeding and closure of the SHPWHBA with a final transfer to the PPPAM through a Tier 2 Advice Letter. SCE shall recover the costs for both administration of the program as well as incentive payments made to customers recorded in SCE's SHPWHBA through the PPPC Rate Component.

5. Administrative Matters

This proceeding included the following exhibits:

⁴¹ D.19-06-032 at Ordering Paragraph 9.

SBUA-01: Direct Testimony of Paul Chernick on behalf of SBUA

SBUA-02: Rebuttal Testimony of Paul Chernick on behalf of SBUA

SCE-01: Testimony of SCE in Support of its 2020 Energy Storage Procurement and Investment Plan.

SCE-02-A: Amended and Corrected Supplemental Testimony of SCE in Support of its 2020 Energy Storage Procurement and Investment Plan.

TURN-SCE-01: Joint Testimony of Eric Borden and Eduyng Castano Addressing Data Collection and Evaluation of the New Homes Energy Storage Pilot Program.

SCE-03: Rebuttal Testimony of SCE in Support of Its 2020 Energy Storage Procurement and Investment Plan.

PGE-01: PG&E 2020 Energy Storage Procurement and Investment Plan Prepared Testimony

WTF-01: Direct Testimony of Robert Freehling on Behalf of Wild Tree Foundation

CA-01: Prepared Testimony on the Application of PG&E for approval of its 2020 Energy Storage Procurement Plan (U39E), the Application of SDG&E (U902M) for Approval of its 2020 Energy Storage Procurement Framework and Program, and the Application of SCE (U338E) for approval of its 2020 Energy Storage Procurement and Investment Plan

CA-02: Rebuttal Testimony on the Application of PG&E for approval of its 2020 Energy Storage Procurement Plan (U39E), the Application of SDG&E (U902M) for Approval of its 2020 Energy Storage Procurement Framework and Program, and the Application of SCE (U338E) for approval of its 2020 Energy Storage Procurement and Investment Plan

SDGE-01: Prepared Direct Testimony of Donald Balfour on Behalf of SDG&E

SDGE-02: Prepared Direct Testimony of Nuo Tang on Behalf of SDG&E

SDGE-03: Prepared Rebuttal Testimony of Nuo Tang on Behalf of SDG&E

All marked exhibits (SBUA-01, SBUA-02, SCE-01, SCE-02-A, TURN-SCE-01, SCE-03, PGE-01, WTF-01, SDGE-01, SDGE-02, SDGE-03, CA-01, and CA-02) are received into evidence as of the date of this decision.

The Commission affirms all rulings made by the assigned Commissioner and assigned ALJs.

On August 11, 2021, SDG&E moved to request that its confidential version of its August 2, 2021 response to the July 19, 2021 ruling be filed under seal. In accordance with the Rules of Practice and Procedure, the assigned ALJ has considered the motion of SDG&E for leave to file the confidential version of SDG&E's Response to Ruling Requiring Updates Regarding Progress Towards Meeting AB 2514 Energy Storage Targets under seal. The confidential material in question includes market sensitive renewable energy sales strategy information that could not be aggregated to prevent disclosure. The August 11, 2021 motion of SDG&E is granted. We also clarify that the referenced motion was filed on August 11, 2021, not August 16, 2021.

On August 16, 2021 and on March 2, 2022, PG&E filed motions to supplement its update that was served on August 2, 2021. No party contested either motion, and the motions are granted to the extent necessary to incorporate the information they contain into the record of this proceeding.

On April 7, 2022, SBUA moved to request the Commission accept its late filed opening brief. The assigned ALJ granted the April 7, 2022 motion on April 13, 2022.

6. Comments on Proposed Decision

The proposed decision of ALJ Brian Stevens in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and

comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on April 7, 2022 by California Energy Storage Alliance, SBUA, SCE, WTF, SDG&E, SCE, Cal Advocates, and PG&E. Reply comments were filed on April 12, 2022 by Cal Advocates, SCE, and PG&E. We considered all the comments and reply comments on the proposed decision; substantive revisions were made in response to comments, and non-substantive revisions were made to clarify the intent of the proposed decision.

Cal Advocates and SCE note in their comments that SCE had revised down its request for cost recovery for the NHESP to \$13.9 million from \$15 million. The lower request for recovery figure is reflected in this decision.

In response to PG&E's comments, we delete the sentence in finding of fact 3 that indicates procurement that counts towards the IOU's AB 2514 procurement targets should be "surplus" or "additional" to other procurement objectives. We also delete the text in the body of the decision that supported the findings.

PG&E notes in its comments on the proposed decision that it moved in the proceeding on March 2, 2022 to take notice of the termination of the Llagas Energy Storage Project with a capacity of 20 MW; this is a project that emerged from its 2016 energy storage solicitation and was approved by the Commission in D. 18-10-009. The proposed decision is amended to grant the motion in part. The requested relief is granted solely to the extent that the additional information provided regarding project terminations is incorporated into the record of this proceeding. The remaining relief requested in the motion is denied as moot. In adopting this motion, PG&E's AB 2514 procurement deficit is increased to 20.5 MW from 0.5 MW.

We acknowledge that Cal Advocates calls into question the cost effectiveness calculations provided by Southern California Edison on the record for the two behind the meter programs it proposed. Specifically, Cal Advocates calls into question the charge and discharge behavior indicated for the energy storage systems and the reliance on the 2019 Avoided Cost Calculator. Cal Advocates did not provide evidence that indicates that the programs are affirmatively not cost effective, rather it provided a rationale for why the projects may not be cost effective. Short of more convincing evidence, we continue to support the stronger evidence provided by Southern California Edison regarding the cost effectiveness of the two behind the meter programs it proposed.

We clarify that SDG&E's August 11, 2021 motion is granted.

We remove a portion of a quote from Southern California Edison in Section 4.3 that was confusing when read and did not specifically lead to a finding of fact, conclusion of law, nor ordering paragraph.

7. Assignment of Proceeding

Alice Reynolds is the assigned Commissioner and Brian Stevens is the assigned ALJ in this proceeding.

Findings of Fact

1. The Commission directed PG&E, SCE, and SDG&E to contract for 1,325 MW of energy storage (across the transmission, distribution, and customer side domains) by 2020 to be online by 2024, pursuant to AB 2514.
2. PG&E, SCE, and SDG&E have contracted for, in aggregate, more than 1,325 MW of energy storage by 2020, although some project terminations have occurred, and domain-specific sub-target deficits remain. Potential additional procurement or the counting of energy storage procurement that has been

approved in other proceedings at the Commission is necessary for these entities to meet their 2024 online targets.

3. Due to project terminations, PG&E has a remaining energy storage procurement target of 20.5 MW in the distribution domain and SDG&E has a remaining procurement target of 12.5 MW across the transmission and distribution domains to fully meet their AB 2514-mandated energy storage procurement targets. At this time, SCE has fully met its obligation for energy storage procurement pursuant to AB 2514.

4. Energy storage procurement has occurred in other proceedings at the Commission that meets the requirements for AB 2514 energy storage procurement.

5. The three Applicants may need to conduct an additional solicitation to meet their AB 2514 procurement target online dates.

6. The proposed 2020 Energy Storage Procurement Plans are compliant with AB 2514 and D.13-10-040.

7. SCE has proposed two energy storage programs, with authority pursuant to AB 2868, to implement a NHESP and a Smart HPWH program. SCE requests cost recovery of \$5 million for the NHESP and \$13.9 million for the Smart HPWH program.

8. The Commission previously approved the PG&E WaterSaver Program that is substantially similar to SCE's proposed Smart HPWH program.

9. SCE reasonably attempted a cost-benefit ratio analysis based on the 2019 Avoided Cost Calculator for the two proposed AB 2868 energy storage programs. SCE's analysis indicates that the NHESP has a benefit/cost ratio of 2.36 and the Smart HPWH program has a benefit/cost ratio of 1.7 to 1.03.

10. TURN proposed a modified measurement and verification funding level and process for the NHESP that would allow stakeholders to gain more insight about energy storage incentive programs that target new construction rather than the more traditional targeting of existing structures, with a funding level of \$350,000.

11. Both programs that SCE is proposing pursuant to AB 2868 minimize overall costs and maximize overall benefits, reduce dependency on petroleum, meet air quality standards, reduce greenhouse gas emissions, do not unreasonably limit or impair the ability of non-utility enterprises to market and deploy energy storage systems, prioritize public sector and low-income customers, and include energy storage management systems.

12. On August 11, 2021, SDG&E moved to request that the confidential version of its August 2, 2021 response to the July 19, 2021 ruling be filed under seal. The confidential material in question includes market sensitive renewable energy sales strategy information that could not be aggregated to prevent disclosure.

Conclusions of Law

1. PG&E, SCE, and SDG&E have substantially met their procurement targets pursuant to AB 2514, and due to project terminations, it may be necessary for the three Applicants to count energy storage procurement from other processes toward their AB 2514 targets or issue additional solicitations to meet the requirement that the energy storage systems be online by 2024.

2. Due to project terminations, PG&E has a residual AB 2514 procurement target of 20.5 MW and SDG&E has a residual AB 2514 procurement target of 12.5 MW. Unless project terminations occur, SCE does not have a residual procurement need.

3. For the Applicants to count energy storage procurement that has occurred in other processes at the Commission towards their AB 2514 targets, they may request this authority to do so through Tier 1 Advice Letters. If the Applicants believe they may not be able to fully satisfy their obligations in terms of meeting the AB 2514 energy storage procurement targets using procurement that has been approved in other processes at the Commission, they should seek approval to hold a solicitation by requesting the authority through a Tier 2 Advice Letter.

4. SCE's two proposed energy storage programs, the NHESP and the Smart HPWH program, meet the direction and spirit of AB 2868 and should be approved by the Commission. Cost recovery of \$5 million for the NHESP and \$13.9 million for the Smart HPWH program is reasonable and should be approved.

5. SCE should recover the costs for both administration of the program and incentive payments made to customers recorded in SCE's NHESP through the PPC Rate Component. SCE should file a Tier 2 Advice Letter within 120 days to propose a program implementation plan with NHESP pilot details, including any necessary new tariffs or tariff modifications. Upon conclusion of the pilot effort, SCE should file a NHESP Adoption Report through a Tier 3 Advice Letter seeking approval to extend the pilot effort, expand it into a program, or sunset it.

6. The Utility Reform Network's joint proposal with SCE for the allocation of NHESP measurement and verification funds to be increased from \$150,000 to \$350,000 for the purpose of gathering the appropriate data to inform future programs, as outlined in the joint testimony of these two entities, should be approved.

7. SCE should be authorized to create a new balancing account called the Smart Heat Pump Water Heater Balancing Account (SHPWHBA), through a Tier 1 Advice Letter, to record administrative costs and actual financial incentives paid to customers who participate in the Smart HPWH program to ensure that payments in total do not exceed authorized program funding limits over the program period. SCE should be authorized to seek review of the costs recorded to the SHPWHBA in its annual April 1 Energy Resource Recovery Account Review proceeding to ensure that the entries made in the SHPWHBA are stated correctly and are consistent with Commission decisions. The Commission may grant authorization to SCE at the end of the program to use the SHPWHBA for an extended program. SCE may request both a final review of the operation of the balancing account through SCE's ERRA Review proceeding and closure of the SHPWHBA with a final transfer to the PPPAM through a Tier 2 Advice Letter. SCE should recover the costs for both administration of the program as well as incentive payments made to customers recorded in SCE's SHPWHBA through the PPPC Rate Component.

8. The confidential version of SDG&E's Response to Ruling Requiring Updates Regarding Progress Towards Meeting AB 2514 Energy Storage Targets, should be filed under seal.

9. Exhibits SBUA-01, SBUA-02, SCE-01, SCE-02-A, TURN-SCE-01, SCE-03, PGE-01, WTF-01, SDGE-01, SDGE-02, SDGE-03, CA-01, and CA-02 are identified and should be received into evidence as of the date of this decision.

10. PG&E filed motions on August 16, 2021 and on March 2, 2022 requesting that the Commission consider additional information relating to its energy storage procurement progress. No party contested either motion, and the

motions should be granted to the extent necessary to incorporate the information they contain into the record of this proceeding.

O R D E R

IT IS ORDERED that:

1. Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) are each directed to either, as necessary and as described in Section 3.5 of this decision: 1) certify sufficient energy storage procurement that has been approved in other processes at the Commission by filing a Tier 1 Advice Letter requesting such certification or 2) file a Tier 2 Advice Letter with the Commission requesting the authority to hold an additional energy storage procurement solicitation to meet its prescribed targets. The directive for PG&E, SCE, and SDG&E to comply with Assembly Bill 2514 and Decision 13-10-040 to bring 1,325 megawatts of energy storage online, allocated as the Commission outlined in Decision 13-10-040, by the end of 2024 remains in place.

2. We direct Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company to individually submit letters to the Director of the Commission's Energy Division on June 15 and December 15 each year until the end of 2024 to inform the Commission on (1) all total progress towards meeting each individual Assembly Bill (AB) 2514 target obligation including the 2024 online date requirement, (2) an indication of any project terminations that have occurred and how those project terminations will impact the fulfilment of the AB 2514 targets, (3) a summary of all projects that have been approved in other venues and proceedings at the Commission that the entity individually sought approval to count towards the AB 2514 targets through a Tier 1 Advice Letter, and (4) a plan for how the entity will meet its obligation if

any obligation remains at the point of submitting the letter. Proper formatting for the data contained in the Advice Letter will be provided by Energy Division. The letter shall be sent to the Commission's Energy Division Director and shall be served to the service list for this consolidated proceeding.

3. Southern California Edison Company's two proposed energy storage programs, the New Home Energy Storage Pilot (NHESP) and the Smart Heat Pump Water Heater Program (Smart HPWH program), meet the direction and spirit of Assembly Bill 2868 and are approved by the Commission. Cost recovery of no more than \$5 million for the NHESP and \$13.9 million for the Smart HPWH program is reasonable and is approved.

4. Southern California Edison Company (SCE) shall recover the costs for both administration and incentive payments made to customers through the New Home Energy Storage Pilot (NHESP) through SCE's Public Purpose Program Charge Rate Component. SCE shall file a Tier 2 Advice Letter within 120 days of the effective date of this decision to propose a program implementation plan with pilot details, including any necessary new tariffs or tariff modifications. Upon conclusion of the pilot effort and an NHESP Adoption Report, SCE shall file a Tier 3 Advice Letter seeking approval to extend the pilot effort, expand it into a program, or sunset it.

5. The Utility Reform Network's joint proposal with Southern California Edison Company for the allocation of measurement and verification funds for the New Home Energy Storage Pilot (NHESP) to be increased from \$150,000 to \$350,000 for the purpose of gathering the appropriate data to inform future programs, as outlined in the joint testimony of these two entities, shall be adopted and incorporated to the program design of the NHESP.

6. Southern California Edison Company (SCE) is authorized to create a new balancing account called the Smart Heat Pump Water Heater Balancing Account (SHPWHBA), through a Tier 1 advice letter to record administrative costs up to the authorized program funding and actual financial incentives paid to customers who participate in the program. SCE must ensure that payments in total do not exceed authorized program funding limits over the program period. SCE is authorized to seek review of the costs recorded to the SHPWHBA in its annual April 1 Energy Resource Recovery Account (ERRA) Review proceeding to ensure that the entries made in the SHPWHBA are stated correctly and are consistent with Commission decisions. Through a Tier 2 Advice Letter, SCE may be granted authorization at the end of the program period to use the SHPWHBA for an extended program or it may request both a final review of the operation of the balancing account through SCE's ERRA Review proceeding and closure of the SHPWHBA with a final transfer to the Public Purpose Program Adjustment. SCE shall recover the costs for both administration of the program as well as incentive payments made to customers recorded in SCE's SHPWHBA through the Public Purpose Program Charge Rate Component.

7. Exhibits SBUA-01, SBUA-02, SCE-01, SCE-02-A, TURN-SCE-01, SCE-03, PGE-01, WTF-01, SDGE-01, SDGE-02, SDGE-03, CA-01, and CA-02 are identified and received into evidence as of the date of this decision.

8. The August 11, 2021 motion of San Diego Gas & Electric Company is granted. The confidential version of San Diego Gas & Electric Company's Response to Ruling Requiring Updates Regarding Progress Towards Meeting Assembly Bill 2514 Energy Storage Targets will be filed under seal.

9. Pacific Gas and Electric Company's August 16, 2021 motion is granted.

10. Pacific Gas and Electric Company's March 2, 2022 motion is granted in part. The requested relief is granted solely to the extent that the additional information provided regarding project terminations is incorporated into the record of this proceeding. The remaining relief requested in the motion is denied as moot.

11. Application 20-03-002, et al. is closed.

This order is effective today.

Dated _____, at San Francisco, California.