



STATE OF CALIFORNIA

GAVIN NEWSOM, Governor

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

FILED

06/26/24

02:37 PM

R2211013

June 26, 2024

Agenda ID #22724
Ratesetting

TO PARTIES OF RECORD IN RULEMAKING 22-11-013:

This is the proposed decision of Administrative Law Judge Elaine Lau. Until and unless the Commission hears the item and votes to approve it, the proposed decision has no legal effect. This item may be heard, at the earliest, at the Commission's August 1, 2024 Business Meeting. To confirm when the item will be heard, please see the Business Meeting agenda, which is posted on the Commission's website 10 days before each Business Meeting.

Parties to the proceeding may file comments on the proposed decision as provided in Rule 14.3 of the Commission's Rules of Practice and Procedure (Rules).

The Commission may hold a Ratesetting Deliberative Meeting to consider this item in closed session in advance of the Business Meeting at which the item will be heard. In such event, notice of the Ratesetting Deliberative Meeting will appear in the Daily Calendar, which is posted on the Commission's website. If a Ratesetting Deliberative Meeting is scheduled, *ex parte* communications are prohibited pursuant to Rule 8.2(c)(4).

/s/ MICHELLE COOKE

Michelle Cooke

Chief Administrative Law Judge

MLC:nd3

Attachment

Decision PROPOSED DECISION OF ALJ LAU (Mailed 6/26/2024)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to
Consider Distributed Energy Resource
Program Cost-Effectiveness Issues,
Data Access and Use, and Equipment
Performance Standards.

Rulemaking 22-11-013

DECISION ADOPTING CHANGES TO THE AVOIDED COST CALCULATOR

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DECISION ADOPTING CHANGES TO THE AVOIDED COST CALCULATOR

Summary

This decision approves updates to the Avoided Cost Calculator (ACC), beginning with the 2024 ACC. The updates to the ACC will better align the modelling of the ACC with the most recent outputs of the Integrated Resource Planning proceeding (Rulemaking 20-05-003) and enable the Commission to better evaluate the cost effectiveness of demand-side resources alongside supply-side resources.

This decision adopts the following significant updates to the ACC:

- (1) Uses the latest adopted system plan approved in the Integrated Resource Planning proceeding as the base model for the ACC; and
- (2) Adopts an integrated calculation approach which recognizes the interdependence and interactive effects between the generation capacity avoided costs and greenhouse gas avoided costs and models these costs in an integrated manner.

Further, the decision adopts an alternative storage dispatch modelling approach to more accurately capture storage reliability value, and a refined method for calibrating and benchmarking strategic energy risk valuation prices.

The Commission's Energy Division plans to lead one or more workshops to continue to consider ACC-related policy issues, including guiding principles for ACC updates, potential modifications to the biennial ACC update process, and the consideration of equity issues in the evaluation of the cost-effectiveness of distributed energy resources. A subsequent ruling will be issued with additional information as to development of the record and timing for such workshops.

This proceeding remains open.

1. Background

1.1. Avoided Cost Calculator

The Commission uses the Avoided Cost Calculator (ACC) to provide guidance across a wide variety of proceedings on the value of distributed energy resources (DERs) as part of the overall portfolio mix with supply-side resources.¹ The ACC calculates the avoided costs related to the provision of electric and natural gas service. These avoided costs can be categorized into following types of avoided costs: generation capacity, energy, transmission and distribution capacity, ancillary services, greenhouse gas (GHG) emissions, and high global warming potential gases. The outputs of the ACC are used in the cost-effectiveness analysis for DERs.

In Decision (D.) 16-06-007, *Decision to Update Portions of the Commission's Current Cost-Effectiveness Framework*, the Commission directed that a single avoided cost model should apply to all DER proceedings.² In D.19-05-019, the Commission approved a formal biennial process, to be conducted in Rulemaking (R.) 14-10-003 or a successor proceeding, to ensure that major changes to the ACC are addressed on a regular basis. The adopted biennial process begins with a workshop facilitated by the Commission's Energy Division on August 1 of the previous year, where Energy Division staff presents an initial staff proposal. The biennial schedule includes the service of opening and rebuttal testimony with an evidentiary hearing held in November and culminates with a proposed decision in Spring of even-numbered years. After a decision adopts changes to the ACC, the ACC is then updated through a subsequent resolution process.

¹ D.22-05-002 at Finding of Fact 1.

² D.16-06-007 at 1, 5-6, Finding of Fact 4, Conclusion of Law 2, and Ordering Paragraph 1.

1.2. Relationship between the Avoided Cost Calculator and the Integrated Resource Planning Proceeding

Beginning in 2019, the Commission adopted a process whereby the ACC is aligned with the Integrated Resource Planning (IRP) proceeding, R.20-05-003, by using modelling outputs from the IRP as inputs in the ACC. It is therefore important to understand the relationship between the two primary IRP models, RESOLVE and Strategic Energy Risk Valuation Model (SERVM), and the ACC.

The IRP proceeding serves multiple purposes: (1) it considers all electric procurement policies and programs to ensure California has a safe, reliable, and cost-effective electricity supply, and (2) it implements requirements in Senate Bill (SB) 350 for integrated resource planning, which, among other things, ensures that load serving entities meet GHG reductions goals. In the IRP proceeding, the Commission runs a process to develop and adopt a system plan to meet the requirements of SB 350 and an electric sector GHG target. The resource planning portfolios generated in this process serve as the basis for system-level planning for the load-serving entities³ and the California Independent System Operator's (CAISO) transmission planning process. Load serving entities use information from this process to develop individual integrated resource plans, which are submitted into the IRP proceeding, tested and amended as needed. Based on this planning information, the Commission develops and adopts a final portfolio, which is also called the Preferred System Portfolio (PSP).

The PSP is derived from two models: (1) the RESOLVE model, which is a capacity expansion model that identifies a least-cost portfolio of resources to meet the electricity sector GHG emissions target, as well as other goals such as

³ The load-serving entities referenced in this decision refer to the load-serving entities that are under the jurisdiction of the California Public Utilities Commission.

reliability, and (2) SERVVM, which provides reliability and production cost modelling of portfolios generated by RESOLVE. SERVVM is a probabilistic reliability planning model that evaluates the expected loss of load probability for portfolios of generation and transmission resources generated by RESOLVE.

In R.20-05-003, the Commission issued D.24-02-047 to adopt the 2023 PSP portfolio.

1.3. 2022 Avoided Cost Calculator Decision

In R.14-10-003,⁴ the Commission issued D.22-05-002 (2022 ACC Decision) to adopt changes to the ACC during the 2022 ACC Update Cycle. Among other things, the 2022 ACC Decision established new procedures for the ACC biennial review process. These new procedures set future ACC updates to begin on approximately July 15 of odd-numbered years with the issuance of a staff proposal through an Administrative Law Judge's (ALJ) ruling. The 2022 ACC Decision also set a two-part process to review the ACC, with the formal proceeding addressing policies for the ACC and proposals for revisions to the modelling and the informal resolution process addressing the technical aspects of the calculator and approving the ACC.

The 2022 ACC Decision concluded that the ACC should align with the IRP proceeding, and that this alignment will ensure an accurate reflection of current demand-side and supply-side resource planning objectives.⁵ The 2022 ACC Decision also provided that the Commission should use the Integrated Energy Policy Report (IEPR) natural gas forecast to be consistent with IRP modelling and

⁴ R.14-10-003 was opened to create a consistent regulatory framework for the guidance, planning, and evaluation of Integrated Distributed Energy Resources (IDER proceeding) and was the predecessor to this rulemaking.

⁵ 2022 ACC Decision at Conclusions of Law 28 and 29.

to ensure distributed energy resources are treated evenly with supply-side resources.⁶

1.4. Staff Proposal

The Commission's Energy Division produced a staff proposal in which staff proposes six major updates for the 2024 ACC (Staff Proposal). The Staff Proposal was issued for party comments in an assigned ALJ ruling. The proposed updates are:

- (1) Baseline Change from No New DER to IRP's Latest Adopted System Plan: Staff recommends using IRP's adopted system plan as the Baseline Portfolio of the ACC;
- (2) Integrated Calculation of Generation Capacity and GHG Avoided Costs: Staff recommends using a new modelling approach, the Integration Calculation, which models the generation capacity avoided costs and GHG avoided costs in an integrated manner;
- (3) Allocation of Generation Capacity Value: Staff recommends using an alternative storage dispatch logic in SERVVM to calculate the hourly generation capacity allocation;
- (4) Calibrating and Benchmarking SERVVM Prices: Staff proposes to perform additional calibration and benchmarking of SERVVM model outcomes for the PSP to actual CAISO market outcomes prior to producing the energy and ancillary service price forecasts that are used in the ACC;
- (5) Refrigerant Calculator: Staff proposes to move the consideration of the Refrigerant Avoided Cost Calculator (RACC) to the energy efficiency proceeding, R.13-11-005; and

⁶ 2022 ACC Decision at Conclusion of Law 32.

- (6) Gas GHG Adder: Staff recommends that updated methodology and value of the permanent gas GHG adder be developed in the 2026 ACC update cycle.

The Staff Proposal was later updated with an addendum that addresses issues related to the calculation of avoided transmission and distribution costs. Because the transmission and distribution avoided cost study will not be completed in time for the results of the study to be incorporated into the 2024 ACC update, the Staff Proposal recommends using the current methodology for calculating avoided transmission and distribution costs in the ACC but with the most current transmission and distribution cost data.

1.5. Proceeding History

On November 23, 2022, the Commission issued Order Instituting Rulemaking 22-11-013 to achieve consistency of cost effectiveness assessments, improve data access and use, and consider equipment performance standards for DER customer programs.⁷ R.22-11-013, the successor to R.14-10-003, provides the procedural framework for advancing the vision articulated in the Customer Programs Track of the Commission's DER Action Plan 2.0, which states:

The DER Action Plan's Customer Programs Track focuses on improving coordination, planning, and developing consistent metrics across DER proceedings related to customer programs

⁷ DER customer programs are programs offered to ratepayers by utilities, or other load-serving entities, that enable participants to manage their energy use by purchasing energy efficient or electric generation technologies, making behavioral changes, or engaging in other activities that occur on the customer's premises (often called "behind-the-meter"). They are sometimes referred to as "demand-side management" programs because they allow customers to manage their own demand for electricity or natural gas. They are also referred to as "distributed energy resource" programs since the technologies used may be small, modular devices that can be distributed throughout the electric grid or natural gas system, rather than centrally-stationed like most utility-scale generation (*e.g.*, power plants). This proceeding will use the terms DER or customer programs to refer only to behind-the-meter activities. The term "distributed energy resources" as used elsewhere sometimes includes small, distributed generation or energy storage resources owned or procured by load serving entities.

to maximize their contributions to [greenhouse gas (GHG)] reductions and other state energy goals. The goal is to enable all customers to effectively manage their energy usage in a manner that ensures equitable participation and distribution of benefits, alignment with evolving rate design and load flexibility, alignment with distribution planning objectives, and alignment with integrated resource planning objectives.⁸

On May 31, 2023, the assigned Commissioner issued the Scoping Memo and Ruling and bifurcated this proceeding into two phases. Phase One focuses on issues related to cost-effectiveness of customer DER programs, including updating the ACC, and policies on improving data usage and access to help customers make informed decisions about adoption, evaluation, and utilization of DERs. Phase Two focuses on developing equipment performance standards.

Phase One has two tracks. Track One examines how to make cost-effectiveness assessments more accurate and consistent across DER programs. Track Two examines the rules and requirements to improve data access to facilitate adoption, evaluation, and utilization of DERs by customers and other entities and to improve DER integration with the grid.

As part of considering cost-effectiveness assessments of DER programs, the Commission addresses issues related to the ACC in Track One of Phase One. In Track One of Phase One, the Commission, among other things, reviews the appropriate updates to the ACC in a biennial review process.

On August 8, 2023, the assigned ALJ issued a ruling seeking party comments on the Staff Proposal. The Staff Proposal recommended updates to the ACC for the 2024 ACC biennial review process. On August 16, 2023, Energy

⁸ The DER Action Plan 2.0 is currently available at: <https://www.cpuc.ca.gov/about-cpuc/divisions/energy-division/der-action-plan>.

Division held a workshop to discuss the updates recommended in the Staff Proposal.

The following parties timely served opening testimony by October 30, 2023: Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE), and San Diego Gas & Electric Company (SDG&E) (collectively, the Joint Utilities), the Public Advocates Office at the California Public Utilities Commission (Cal Advocates), Clean Coalition, California Large Energy Consumers Association (CLECA), Coalition of California Utility Employees (CUE), Google LLC (Google Nest), Protect Our Communities Foundation (PCF), Center for Biological Diversity (Center), Natural Resources Defense Council (NRDC), Small Business Utility Advocates (SBUA), Southern California Gas Company (SoCalGas), The Utility Reform Network (TURN), and Solar Energy Industries Association (SEIA).

The following parties timely served rebuttal testimony by November 20, 2023: Cal Advocates, Clean Coalition, CLECA, CUE, Joint Utilities, PCF, SBUA, SoCalGas, SEIA, and TURN.

Evidentiary hearings were held on January 23 through 25, 2024.

On February 21, 2024, the following parties filed opening briefs (Opening Briefs): CLECA, Joint Utilities, Google Nest, TURN, CUE, PearlX Infrastructure LLC (PearlX), NRDC, SBUA, PCF, Center, Cal Advocates, SoCalGas, SEIA, and Clean Coalition.

On March 13, 2024, the following parties filed reply briefs (Reply Briefs): SEIA, SBUA, CLECA, SoCalGas, TURN, PCF, Center, CUE, Cal Advocates, Joint Utilities, PearlX, and Google Nest.

On June 17, 2024, the Commission held oral arguments.

The record of this proceeding was submitted upon the completion of oral arguments on June 17, 2024.

2. Issues Before the Commission

The issues considered in this decision include:

- a. What ACC updates should the Commission adopt, beginning with the 2024 ACC?
- b. What modifications, if any, to the biennial ACC update process are appropriate?
- c. Should the Commission adopt guiding principles for the ACC, including principles that ensure alignment with R.20-05-003 (IRP) and other DER-related proceedings?
- d. How should equity issues be considered in evaluating DER cost effectiveness?

This decision adopts ACC updates, beginning with the 2024 ACC. For the reasons discussed in Sections 10-11 below, the Commission will continue to consider issues (b)-(d) in Track One of Phase One of this proceeding.

3. Using the Integrated Resource Planning Adopted System Plan as the Baseline Portfolio

The Staff Proposal recommends using the latest adopted system plan approved in the IRP as the baseline model in the ACC.⁹

Currently, the ACC uses the “No New DER” scenario as the baseline model. The “No New DER” scenario evaluates the value of DERs by comparing the value of an additional DER with a hypothetical alternative scenario with no future additions of DER to the system. The 2020, 2021, and 2022 ACCs used the “No New DER” as the baseline model.

The Staff Proposal explains that there are several issues with using the “No New DER” scenario as the baseline model. The “No New DER” scenario was

⁹ Staff Proposal at 2-5.

initially conceived to calculate the amount of avoided costs if DERs were not available, under the assumption that removing the load reducing DERs and increasing total load would more accurately represent the value of DERs. However, modelling under the “No New DER scenario” often produced counter-intuitive results because of system balancing dynamics. A scenario without the forecasted DER would cause RESOLVE, the capacity expansion model, to select generation resources that were more expensive or had lower marginal Effective Load Carrying Capacity (ELCC) values. However, when the DER resources were removed under the “No New DER scenario,” RESOLVE reoptimizes the portfolio of resources such that it selects a very different mix (utility-scale solar, wind, and storage) than the IRP plan. These system rebalancing and optimization dynamics often led to counter-intuitive results.

Additionally, using the “No New DER” scenario as the baseline model was resource intensive and required more staff effort than originally anticipated. The “No New DER” scenario also cannot be benchmarked to historical market data or other production simulation models such as PLEXOS used by the CEC and CAISO.

Lastly, the “No New DER” scenario also does not allow the modelling of a single, technology-agnostic set of avoided costs to inform decision-making on DER investment. DER includes a range of technology types and can be either load reducing such as energy efficiency programs or demand response programs, load shifting such as behind-the-meter energy storage, or load increasing such as transportation and electrification with the potential for load management. In the 2022 ACC, the “No New DER” scenario removed both load-decreasing and load-increasing DER programs, producing mixed results with unpredictable and interactive effects that are not representative of any DER

type.¹⁰ Because of the issues described above, the Staff Proposal recommends not using the “No New DER” scenario.

Instead, the Staff Proposal recommends using the latest system plan adopted in the IRP proceeding as the baseline portfolio. According to the Staff Proposal, the IRP’s adopted system plan reflects the most recent and most comprehensive view of California’s plans to meet state clean energy goals and reliability needs and is a good baseline for deriving DER avoided costs for several reasons. First, IRP’s adopted system plan reflects modelling that evaluates all types of DERs on a technology-agnostic level playing field, regardless of technology, including load reducing, load increasing, and load shifting DERs. In comparison, the “No New DER” scenario excludes load increasing and load shifting DERs from being modelled. Second, using IRP’s adopted system plan allows the ACC to better align with the IRP proceeding and enables the evaluation of demand-side resources alongside supply-side resources.

Parties generally support the Staff Proposal’s recommendation to use the IRP’s adopted system plan as the baseline portfolio for the ACC. The Joint Utilities, Cal Advocates, NRDC, SBUA, TURN, and SEIA support staff’s recommendation.¹¹ Only PCF and Center oppose staff’s recommendation.¹²

Several parties agree that the current approach produces inaccurate results, and that using the IRP’s adopted system plan as the baseline portfolio for the ACC would improve the accuracy of results. SEIA agrees with staff’s

¹⁰ Staff Proposal at 2.

¹¹ SBUA Opening Brief at 2-3; Joint Utilities Opening Brief at 2-3; SEIA Opening Brief at 4-6; Cal Advocates Opening Brief at 5-6; TURN Opening Brief at 1-4; NRDC Opening Brief at 2-3.

¹² PCF/Center Opening Brief at 3-8.

assessment that the “No New DER” scenario produced “counter-intuitive” and “unpredictable” effects.¹³ Cal Advocates also agrees that the “No New DER” scenario produced inaccurate results due to the re-optimization system balancing dynamics and supports using IRP’s adopted system plan in the ACC until a more accurate methodology is developed.¹⁴ NRDC agrees with the Staff Proposal that using IRP’s adopted system plan rather than the “No New DER” scenario improves the accuracy of the modelling of avoided costs.¹⁵

We agree that using IRP’s adopted system plan as the baseline portfolio for the ACC improves the accuracy of results. Using the “No New DER” scenario produces counter-intuitive results because of system rebalancing and optimization dynamics that were not anticipated at the time the Commission adopted this as the baseline model. Additionally, the “No New DER” scenario cannot be benchmarked to historical market data or other production simulation models.

Several parties also support using the IRP adopted system plan as the baseline portfolio because this approach allows the ACC to evaluate all types of DERs equally, regardless of technology, and enables the ACC to better align with the IRP so that demand-side resources can be evaluated alongside supply-side resources. The Joint Utilities support using the IRP adopted system plan to set a level playing field to evaluate all types of DERs, including load increasing, load decreasing, and load shifting DERs, and to allow consistency between the IRP and the ACC.¹⁶ NRDC agrees that using an IRP system plan base portfolio

¹³ SEIA Opening Brief at 4-6.

¹⁴ Cal Advocates Opening Brief at 5-6.

¹⁵ NRDC Opening Brief at 2-3.

¹⁶ Joint Utilities Opening Brief at 2-3.

ensures better alignment of the evaluation of supply-side and demand-side resources.¹⁷ SEIA believes that using the IRP adopted system plan produces a more equitable evaluation of all types of DERs.¹⁸ TURN agrees that the “No New DER” scenario is problematic because it removes load decreasing, load shifting and load increasing DERs from the calculation of the avoided costs. While TURN is uncertain whether staff’s proposed IRP system plan resolves the issues with the modelling, TURN supports staff’s recommendation if the IRP adopted system plan includes load decreasing or load shifting DERs, such as forecasted electric vehicle load.¹⁹

We agree that using the IRP adopted system plan, rather than the “No New DER” scenario, would support the Commission’s goal of modelling a set of technology-agnostic avoided costs.²⁰ We also agree that using the IRP’s adopted system plan as the baseline portfolio would have the added benefit of allowing demand-side resources to be evaluated alongside supply-side resources.

PCF and the Center oppose staff’s recommendations, arguing that the Commission should continue using the “No New DER” scenario because RESOLVE, which produces IRP’s adopted system plan, is flawed in that it diminishes the value of local resources.²¹ The Joint Utilities argue that the appropriate venue for recommending changes to the IRP process should be in

¹⁷ NRDC Opening Brief at 2-3.

¹⁸ SEIA Opening Brief at 4-6.

¹⁹ TURN Opening Brief at 1-4.

²⁰ R.14-10-003 established a goal of modelling demand resources in a manner that is agnostic to the different demand-side technologies. (See Order Instituting Rulemaking to Create a Consistent Regulatory Framework for the Guidance, Planning, and Evaluation of Integrated Demand-Side Resource Programs (R.14-10-003) at 10.)

²¹ PCF/Center Opening Brief at 3-8.

the IRP proceeding, and that PCF and Center's concerns should not prevent the Commission from adopting IRP's system plan as the ACC baseline portfolio.²² The IRP's adopted system plan is the most recent and most comprehensive view of California's plan to meet state clean energy goals and reliability needs.²³ Issues with RESOLVE are more appropriately addressed in the IRP proceeding.

For the reasons discussed above, it is reasonable for the ACC model to use IRP's latest adopted system plan as the baseline portfolio.

4. Adopting the Integrated Calculation of Generation Capacity and Greenhouse Gas Avoided Costs

For the 2024 ACC update, the Staff Proposal recommends a new Integrated Calculation methodology (Integrated Calculation) to estimate generation capacity and GHG avoided costs. The Integration Calculation recognizes that these two variables are highly interdependent and models these variables in an integrated manner rather than independently, whereas the 2022 ACC model treats them as independent variables.²⁴ Many of the supply-side resources supporting the state's decarbonization efforts provide both generation capacity and GHG reduction value. For example, because storage simultaneously provides generation capacity and contributes to the state's GHG reduction goals, the compensation required to pay storage for providing generation capacity and GHG reduction value are interlinked.

As part of the Integrated Calculation approach, staff will run an optimization model to find the minimal generation capacity and GHG avoided

²² Joint Utilities Reply Brief at 2.

²³ Staff Proposal at 3.

²⁴ Staff Proposal at 6-10.

costs that are sufficient to allow each resource to fully recover its costs while minimizing the cost to ratepayers.²⁵

According to the Staff Proposal, there are three main benefits of the Integrated Calculation. First, the Integrated Calculation better aligns the ACC with IRP modelling, both in RESOLVE and SERVVM, because the proposed approach integrates multiple fundamental value streams that structure resource portfolios in the IRP: generation capacity, GHG, energy and ancillary services. Second, it creates a flexible, technology-agnostic approach to calculate avoided costs. Third, it calculates avoided costs based on a portfolio of resources developed through the IRP process rather than for a single, pre-specified resource.

Cal Advocates, Joint Utilities, SBUA, and NRDC support adoption of the Integration Calculation, but SEIA, CLECA, and PearlX oppose it.

Parties supporting the Integrated Calculation generally agree that the generation capacity avoided costs and GHG avoided costs are interdependent, and that modelling these two values in an integrated manner generates more accurate ACC results. According to Cal Advocates, the Integrated Calculation is an improvement to the methodology used in the 2022 ACC because it recognizes that long term planning resources are selected for reliability and emissions reduction and that the GHG and capacity avoided costs are interdependent.²⁶ The Joint Utilities agree that the Integrated Calculation is an improvement to the methodology used in the 2022 ACC because it better aligns avoided costs with the results from IRP's RESOLVE and SERVVM models.²⁷ SBUA supports the

²⁵ *Ibid.*

²⁶ Cal Advocates Opening Brief at 11-12.

²⁷ Joint Utilities Opening Brief at 3-4.

Integrated Calculation because the new method recognizes the interdependence of the GHG and generation capacity avoided costs.²⁸ By evaluating them together, SBUA asserts that the new method provides a more accurate and comprehensive assessment of the benefits of DERs. NRDC supports the Integrated Calculation because it ensures that DER benefits are accurately captured and will not double-count or under-value the revenue streams from the DER resources.²⁹

We find that the Integrated Calculation allows the ACC to more accurately calculate avoided costs. The generation capacity avoided costs and GHG avoided costs are interdependent and have interactive effects because a resource can provide both generation capacity and GHG value. Unlike the methodologies used in previous ACCs that model these variables independently, the Integrated Calculation recognizes their interdependence and interactive effect by modelling these variables in an integrated manner in an optimization model. As a result, the Integrated Calculation more accurately calculates avoided costs than methodologies used in previous ACCs which modelled them as independent variables.

Some parties also agree the Integrated Calculation better aligns the ACC results with the IRP results. The Joint Utilities assert that the Integrated Calculation better aligns avoided costs with the results from IRP's RESOLVE and SERVVM models.³⁰ Cal Advocates states that the Integrated Calculation uses

²⁸ SBUA Opening Brief at 3.

²⁹ NRDC Opening Brief at 5.

³⁰ Joint Utilities Opening Brief at 3-4.

IRP's selected resources to calculate avoided costs in the ACC and allows the ACC to align better with climate policy goals.³¹

We agree that a significant benefit of the Integrated Calculation is that it allows the ACC to better align with the IRP adopted system plans by calculating avoided costs based on the portfolio of resources determined in the IRP adopted system plans. Aligning the ACC with the IRP allows demand-side resources to be evaluated alongside supply-side resources.

Parties opposing the Integrated Calculation argue that the new modelling framework is complicated, opaque, and difficult for stakeholders to review. CLECA argues that this new method is complex and untested, which decreases transparency and understandability by stakeholders.³² PearlX recommends rejecting the Integrated Calculation, arguing that the complexity of the modelling decreases transparency and usability by stakeholders and decisionmakers.³³

We are not persuaded by this argument. The new methodology may be more complicated; however, the Integrated Calculation more accurately calculates avoided costs, which improves the accuracy of the Commission's cost effectiveness tests. We are committed to documenting the modelling processes and making the interactive effects as transparent as possible to parties.

SEIA, CLECA, and PearlX argue that the Integrated Calculation needs more review and party vetting before the Commission adopts it. CLECA and PearlX argue that the Commission should not adopt the Integrated Calculation model until parties are able to review how the new model performs using the

³¹ Cal Advocates Opening Brief at 11-12.

³² CLECA Opening Brief at 3-4.

³³ PearlX Opening Brief at 5-6.

actual PSP data for 2024.³⁴ The Joint Utilities, even though they support adopting the Integrated Calculation, also request for an opportunity to review and comment on the actual ACC results using the new Integrated Calculation model with actual PSP data for 2024. Parties requesting to review the 2024 ACC results argue that it is difficult for them to provide technical recommendations without seeing the impact the new model has on the 2024 ACC results.

SEIA is concerned that any further review and process, such as the additional comment period, will take significant time that may delay the release of the 2024 ACC until 2025. SEIA acknowledges that the 2024 ACC must be issued in a timely fashion to support new uses of the ACC such as for the Net Billing Tariff, which needs to have updated ACC values in place by January 1 of each year.³⁵ While SEIA supports allowing parties to conduct discovery on ACC model runs with updated IRP portfolio data, SEIA recommends that those proposed changes go into effect for the next 2026 ACC update to allow the Commission time to complete the current ACC process and not delay the release of the ACC.³⁶ Because the parties may not have an opportunity to review how the Integrated Calculation impacts the actual ACC results, SEIA recommends that the Commission not adopt the Integrated Calculation at this time.

We agree with SEIA that the Commission should not delay the issuance of the 2024 ACC. However, we are not persuaded that it is necessary to wait to adopt the Integrated Calculation until after the parties have reviewed how it impacts the 2024 ACC. The Staff Proposal includes the results of testing the implementation of the Integrated Calculation in the ACC using the inputs from

³⁴ SEIA Opening Brief at 6-7; CLECA Opening Brief at 3-4; PearlX Reply Brief at 2-3.

³⁵ SEIA Opening Brief at 6-7 and 39.

³⁶ SEIA Opening Brief at 39.

the 2022 ACC.³⁷ The testing that staff conducted using 2022 ACC inputs allows staff to compare results with and without using the Integrated Calculation framework to understand how the new modelling framework affects the ACC and to observe that the new Integrated Calculation framework does not produce counter-intuitive results. The results of this testing give the Commission sufficient information to conclude that adopting the Integrated Calculation framework in the 2024 ACC update is reasonable.

For the reasons discussed above, it is reasonable for the Commission to adopt the Integrated Calculation for the ACC model.

As discussed in Section 10.6 of this decision, there will be opportunities for parties to comment on how to improve the ACC biennial update process for future update cycles, such as allowing parties to review and comment on actual ACC results prior to issuing a proposed decision approving updates to the ACC. Energy Division plans to hold a workshop to facilitate these discussions.

In the subsections below, we will discuss specific technical components of the Integration Calculation.

4.1. Resources to Include in the Integrated Calculation

The Staff Proposal recommends only including in the Integrated Calculation model utility solar and lithium-ion energy storage resources because these are the dominant resource additions from the IRP.³⁸ Staff also propose that the resources that are procured only to satisfy the Mid-term Reliability Procurement Orders adopted in the IRP proceeding, R.20-05-003, are not

³⁷ Staff Proposal at 9.

³⁸ Staff Proposal at 12.

considered avoidable and recommend that these resources be excluded from being considered in this new Integrated Calculation framework.³⁹

Parties, including Joint Utilities, SEIA, CLECA, SBUA, and PearlX, oppose modelling only utility solar and energy storage as the representative resource in the Integration Calculation model and recommend expanding the model to include all resources selected in the IRP.

The Joint Utilities recommend that the Integrated Calculation framework considers all economically selected resources from RESOLVE and argue that other resource types such as wind, which represents over 15 percent of the 2021 IRP PSP in 2030 and materially impacts the results of the calculation, should be included in the model.⁴⁰

SEIA also recommends that all resources selected in the IRP portfolio be included in the Integrated Calculation.⁴¹ SEIA asserts that all selected IRP resources should be included because each of the selected resources contributes to meeting the capacity and GHG constraints of the approved IRP plan, and that excluding any resource undervalues the GHG and generation capacity avoided costs of the selected IRP resources.

CLECA argues that the Integrated Calculation should include all resources to economically justify that the resources are needed to meet the state's energy demand.⁴² CLECA and PearlX oppose limiting the selection of resources and assert that doing so may replace the holistic approach taken in IRP to select

³⁹ *Ibid.*

⁴⁰ Joint Utilities Opening Brief at 4-6.

⁴¹ SEIA Opening Brief at 7-10.

⁴² CLECA Opening Brief at 5-8.

resources with an Integrated Calculation model that arbitrarily selects resources.⁴³

We agree with parties that the Integrated Calculation should include all resources selected in the IRP that are reasonably expected to provide marginal GHG and capacity value. We also recognize that in practice adding resources to models can add complexity and effort and that it may not be possible to add additional resources, vet the results, and still meet the planned timeline for issuing and approving the 2024 ACC. Energy Division staff may consider developing an approach for including additional resources in the calculation of GHG and generation capacity values for the 2026 ACC.

SEIA, CLECA, and SBUA oppose staff's recommendation to exclude from the Integrated Calculation modelling resources that are selected to meet the Mid-term Reliability Procurement Order requirements. SEIA argues that, because those resources are long-lead-time resources that could be adjusted based on demand, they are considered avoidable resources and should be included in the Integrated Calculation model.⁴⁴ CLECA argues that excluding these resources risks a cyclical pattern where these resources are not considered for being labeled uneconomical.⁴⁵ SBUA agrees with SEIA and CLECA.⁴⁶

The Joint Utilities, however, agree with staff's recommendation to exclude these resources because they are not economically selected by RESOLVE. The Joint Utilities argue that the long-lead-time resources are not avoidable. Even if the Commission previously had to allow extension for the procurement of

⁴³ CLECA Opening Brief at 5-8; PearlX Opening Brief at 5-6.

⁴⁴ SEIA Opening Brief at 9-10; CLECA Opening Brief at 5-8.

⁴⁵ CLECA Opening Brief at 5-8.

⁴⁶ SBUA Reply Brief at 5.

long-lead-time resources because of insufficient long-lead-time resources, the Joint Utilities argue that these resources are not avoidable because load-serving entities had to procure generic resource adequacy capacity to replace the unmet long-lead-time resources.

We are not persuaded by SEIA and CLECA's arguments that the resources selected only to meet the Mid-term Reliability Procurement Order, or long-lead-time resources, are avoidable and should be included in the Integrated Calculation model. As the Joint Utilities point out, the energy needs provided by these long-lead-time resources must be met. Even when the Commission allowed extensions given insufficient resources and timing uncertainties, there was a requirement to procure additional resources to bridge the gap of unmet need. For these reasons, it is reasonable to adopt staff's recommendation to exclude resources that are procured to satisfy the Mid-Term Reliability Procurement Orders adopted in R.20-05-003 from the Integrated Calculation of the ACC model.

4.2. Optimization Constraint to Recover Financing

The Integrated Calculation model uses an optimization model that finds the optimal set of avoided cost streams that can fully finance the resources selected in the IRP at the lowest costs to ratepayers over the 30-year time horizon of the ACC.⁴⁷ The optimization model addresses marginal load changes by focusing on minimizing the total costs borne by ratepayers and identifying cost-saving opportunities and revenue streams that can offset expenses associated with deploying and maintaining the necessary resources.

⁴⁷ Staff Proposal at 7-8.

SEIA proposes to add a constraint in the optimization model such that, at a minimum, new resources are required to be able to recover their operating and financing costs every year through the expected term of their financing.⁴⁸ SEIA asserts that results from running a similar model shows that the forecasted recovery of resources varies widely from year to year, with some resources initially under-covering their costs substantially for many years before over-recovering in later years.⁴⁹ Based on the resources' fluctuating cost recovery patterns shown in SEIA's model, SEIA argues that some resources are unlikely to obtain financing and will unlikely be built. As such, SEIA argues that its recommended financing constraint is necessary.

The Joint Utilities oppose SEIA's proposal, arguing that SEIA's assertion that the resources' cost recovery pattern would allow them to secure financing is speculative and does not justify implementing SEIA's recommended constraint. SEIA's recommended constraint, the Joint Utilities argue, would disconnect the results of the Integrated Calculation from the IRP.⁵⁰ The Joint Utilities argue that even though resources under-recover in some years and over-recover in others, the optimization model is designed to ensure that resources recover their entire costs over the life of the resource.

We are not persuaded by SEIA of the need for an additional financing constraint on the optimization model. While some DER resources have a tendency to under-recover their costs in initial years and over-recover their costs in later years, there is no record supporting the argument that this pattern of cost recovery prevents DER resources from receiving adequate financing. Rather, the

⁴⁸ Exhibit SEIA-1 at 15.

⁴⁹ Exhibit SEIA-1 at 14.

⁵⁰ Exhibit IOU-2 at 8-9.

Integrated Calculation's optimization model ensures that costs for each resource are fully recovered at minimal costs to ratepayers over the 30-year horizon of the ACC. For these reasons, this decision does not modify the ACC to include SEIA's recommended financing constraint.

4.3. Levelization Approach for Greenhouse Gas Adder

SEIA recommends levelizing the GHG avoided cost values over the 30-year period of the ACC forecast.⁵¹ SEIA's recommendations would equate the 30-year net present value of the GHG adder, which would be discounted and escalated at the utility's weighted average cost of capital, to the 30-year net present value of the GHG shadow prices from RESOLVE.⁵²

The Joint Utilities oppose SEIA's recommendations, arguing that levelizing the GHG avoided costs disconnects the ACC from the IRP.⁵³ The Joint Utilities also argue that SEIA's method artificially smooths out the avoided GHG costs and these artificially-smoothed out avoided costs do not reflect the needs of the system. This method, the Joint Utilities further argues, smooths out the GHG component but not the capacity component of the Integrated Calculation, which could cause resources to recover more than their total costs and increase costs to ratepayers.

We are not persuaded by SEIA that levelizing the optimized GHG avoided cost results is needed. Levelizing the optimized GHG avoided costs will disrupt the alignment of the ACC results with the selected IRP resources and will modify

⁵¹ Exhibit SEIA-1 at 17.

⁵² *Ibid.*

⁵³ Joint Utilities Opening Brief at 7.

the ACC results to no longer reflect the needs of the system. For these reasons, we will not modify the ACC to levelize GHG avoided cost results.

4.4. Bounds on Greenhouse Gas and Generation Capacity Avoided Cost Values

The Staff Proposal recommends imposing additional constraints on the optimization model to ensure the accuracy of the avoided cost results calculated from the Integrated Calculation framework. The constraints recommended in the Staff Proposal include setting minimum generation capacity avoided costs at the ongoing fixed operations and maintenance costs of the existing gas generators and setting the minimum GHG avoided costs to follow the cap-and-trade price forecast. The staff recommended constraints are set to represent the expected minimum value of GHG and generation capacity avoided costs.⁵⁴

Parties refer to these minimum level constraints as “lower bounds” imposed on the values of the Integrated Calculation model. TURN does not agree with staff’s proposed lower bounds, arguing that these are artificial lower bounds that may generate artificially high avoided costs and cause cost shifts among customer classes.⁵⁵ NRDC opposes applying any bounds to the generation capacity and GHG values, asserting that doing so compromises the accuracy of the ACC and requires unnecessary guesswork on setting these bounds.⁵⁶

The minimum level constraints the Staff Proposal recommends on the GHG avoided cost and generation capacity avoided cost values are set based on

⁵⁴ Staff Proposal at 9.

⁵⁵ TURN Opening Brief at 4.

⁵⁶ NRDC Opening Brief at 5.

the expected minimum value for GHG and generation capacity and are not set arbitrarily. In terms of generation capacity costs, it is reasonable to set a minimum level of avoided generation capacity costs at the fixed operations and maintenance costs of existing gas generation, because existing gas generation will still need to be maintained to provide capacity to the system during times when no new generation capacity resources are needed. In terms of GHG costs, which consists of the cap-and-trade allowance costs and the GHG adder, it is reasonable to set a minimum level of total GHG avoided costs at the cap-and-trade price forecast, similar to previous ACC cycles, because these are the expected compliance costs of the cap-and-trade program. The GHG adder represents the cost of further reducing carbon emissions from the electricity supply in order to reach state targets, beyond what is expected based on the cap-and-trade program.

Cal Advocates proposes an exception to the lower bounds recommended by staff. Cal Advocates argues that generation capacity should be evaluated on a local area basis, and that the lower bound should be removed for areas where the local gas capacity is retained for reliability purposes.⁵⁷ According to Cal Advocates, local gas capacity that is retained for reliability purposes will not be avoided by DERs and will not be able to avoid generation capacity costs and the full GHG emission associated with those local gas generating units. As such, Cal Advocates argues that DERs that cannot displace reliability resources should not be included in the calculation of contributing to avoided capacity value.

Cal Advocates ran a capacity price sensitivity analysis of the ACC planning scenarios provided in the Staff Proposal, using the same optimization

⁵⁷ Cal Advocates Opening Brief at 14-16.

tool and spreadsheets used in the Staff Proposal. But Cal Advocates adjusted the model to assume that local gas resources corresponding to the IRP planning constraint cannot be displaced by DERs and that energy storage has already displaced the maximum amount of gas. According to Cal Advocates, the results of its sensitivity analysis show that avoided capacity costs of DERs decrease by a range of 0.1 percent to 1.9 percent, depending on the DER program.⁵⁸

Based on these results, Cal Advocates recommends that the calculation of the avoided capacity costs exclude any locally sited DERs that cannot displace gas or energy storage in local capacity areas because these DERs would not result in avoided capacity costs.⁵⁹ Including them in the calculation, according to Cal Advocates, would overvalue the avoided capacity value of these locally sited DERs. Cal Advocates recommends using the ACC's in-built climate-zone function and the local areas identified in CAISO's Local Capacity Technical Study to identify areas where DERs cannot displace gas or energy storage capacity.

CLECA contests Cal Advocates' position, asserting that these gas resources should be factored into the derivation of avoided costs. Cal Advocates' assumption that the minimum resources of existing gas generation are unavoidable, particularly in areas reliant on them, results in inadequate avoided cost calculations, CLECA argues. This, according to CLECA, effectively hinders the development of alternative resources in those areas. Rather, CLECA argues, it is prudent to apply the reasonable minimum capacity value as a guardrail to ensure that the avoided capacity costs fall within a reasonable range.⁶⁰

⁵⁸ Cal Advocates Opening Brief at 15-16.

⁵⁹ Cal Advocates Opening Brief at 14-16.

⁶⁰ Exhibit CLECA-1 at 6-7.

Energy Division staff may explore Cal Advocates' proposal further, specifically whether the ACC should be adjusted to account for local gas capacity that is retained for reliability purposes, in the 2026 ACC update cycle.

In addition to its recommendations on the minimum constraints imposed on the model, Cal Advocates also proposes setting "upper bounds" on the avoided GHG costs and the avoided generation capacity costs. Imposing upper bounds, Cal Advocates argues, will prevent the ACC values from excessively increasing from year to year and protects ratepayers. Cal Advocates asserts that the ACC is subject to fluctuations because the interdependence between the ACC, the IEPR, and IRP causes "feedback" between the models which result in unintended fluctuations in the ACC values. Cal Advocates argues that its proposed upper bounds will mitigate the resulting fluctuations in ACC results.⁶¹

For the generation capacity avoided costs, Cal Advocates recommends setting the upper bound based on current capacity price forecasts during each ACC update cycle. For the GHG avoided costs, Cal Advocates recommends setting the upper bound at the California Energy Demand (CED) allowance price forecast under the mid carbon forecast scenario (Mid CED forecast) from the IEPR forecast to correspond to cap-and-trade forecasts. Setting these values based on the cap-and-trade forecasts, Cal Advocates argues, would allow the GHG avoided costs to reasonably represent actual GHG costs the utilities would incur.⁶²

Cal Advocates ran a sensitivity analysis of the 2022 ACC planning scenarios provided in the Staff Proposal using the same optimization tool and

⁶¹ Cal Advocates Opening Brief at 12-14.

⁶² *Ibid.*

spreadsheets as used in the Staff Proposal, but used the 2019 IEPR GHG price forecasts to set the lower and upper bounds for the GHG prices to the low carbon and Mid CED forecast scenarios. According to Cal Advocates, the results of its modelling runs are similar to modelling results provided in the Staff Report that was conducted without a GHG price upper bound. These results, Cal Advocates argues, show that their recommendations would bound the GHG prices selected in the optimization model to fall within the Low and Mid cap-and-trade scenarios.⁶³

SEIA opposes Cal Advocates' recommendation to set an upper bound for the avoided GHG costs at the GHG allowance forecast in the cap-and-trade market, arguing that doing so is inconsistent with the practice of aligning the ACC with the IRP and would undervalue demand-side resources. SEIA argues that the IRP's RESOLVE model calculates marginal costs to meet GHG emission targets in the electric sector and that these marginal costs have consistently exceeded forecasted cap-and-trade allowance prices. Setting an upper bound on the avoided GHG costs at the Mid CED cap-and-trade prices, SEIA argues, would undervalue the marginal cost of reducing GHG emissions and would undervalue demand-side resources.⁶⁴

TURN supports Cal Advocates' position of implementing an upper bound and agrees that an upper bound, such as those that prevent year-to-year fluctuations, will protect ratepayers.⁶⁵

⁶³ *Ibid.*

⁶⁴ SEIA Opening Brief at 13-14.

⁶⁵ TURN Opening Brief at 4.

NRDC opposes applying any bounds on the generation capacity and GHG values.⁶⁶

We are not yet persuaded that imposing upper bounds based on current GHG price forecasts or current generation capacity is reasonable at this time. Imposing the parties' proposed upper bound on current price forecasts may artificially set avoided costs below a price ceiling such that the resulting avoided costs do not accurately reflect the valuation of DER resources.

However, the Commission recognizes that the values produced by the Integration Calculation could, in some circumstances, imprecisely value DER resources relative to the costs of the supply-side resources they are avoiding. In such cases, imposing an upper bound based on the costs of the supply-side resources avoided by DER could be a reasonable approach and could be considered in the 2024 ACC Resolution.

5. Allocation of Generation Capacity Value

The Staff Proposal recommends using the following alternative storage dispatch logic in SERVVM to calculate the hourly generation capacity allocation.⁶⁷ This modification would be specific to the ACC process and would not affect the IRP process.

- If a storage unit is scheduled to generate, it will generate at its scheduled value regardless of available thermal resources.
- If a storage unit is scheduled to be offline, it will stay offline but will be available to provide spinning reserves.

⁶⁶ NRDC Opening Brief at 5.

⁶⁷ Staff Proposal at 15-16.

- If a storage unit is scheduled to charge, it will charge at its scheduled value unless there is no available generation to charge (due to a change in thermal resource availability).

Staff explains that this change will more accurately capture the reliability value that resources can provide by generating energy in non-loss-of-load hours and preserving energy that can be used to reduce loss of load in later hours.

The Joint Utilities generally support the staff's proposed change and agrees that the proposed method will more accurately assign capacity value to all hours in which load reductions would help alleviate daily capacity shortfalls.⁶⁸

Staff's proposed dispatch logic more accurately captures the reliability value that resources can provide and allows the ACC to more accurately calculate avoided costs. No party opposed the Staff Proposal's recommended change to calculating hourly generation capacity allocation.

It is reasonable for the ACC model to use SERVVM outputs that used the following alternative storage dispatch logic to calculate the hourly generation capacity allocation:

- a. If a storage unit is scheduled to generate, it will generate at its scheduled value regardless of available thermal resources;
- b. If a storage unit is scheduled to be offline, it will stay offline but will be available to provide spinning reserves; and
- c. If a storage unit is scheduled to charge, it will charge at its scheduled value unless there is no available generation to charge (due to a change in thermal resource availability).

⁶⁸ Joint Utilities Opening Brief at 9.

6. Calibrating and Benchmarking Strategic Energy Risk Valuation Model Prices

In the Staff Proposal, Energy Division explains that they plan to calibrate and benchmark SERVM model outcomes produced for the 2023 PSP to historical CAISO market outcomes for recent years prior to producing the energy and ancillary service price forecasts. This may involve identifying input parameters in SERVM that were contributing to the differences between SERVM results and actual CAISO prices.⁶⁹ The Staff Proposal explains that this approach helps ensure the ACC calculates avoided costs that are aligned with CAISO market prices. The 2023 PSP will then be run through SERVM to forecast avoidable energy and operating reserve prices for the 2024 ACC.

The Joint Utilities support staff's plan to align the forecasted electric demand conditions to CAISO market outcomes for prices, heat rates, and dispatch patterns.⁷⁰ Cal Advocates also supports benchmarking SERVM energy and ancillary price forecasts to actual CAISO market prices.⁷¹ No party opposed the proposed change.

Staff's proposed benchmarking and calibrating process would modify the parameters used in SERVM to align SERVM outcomes with historical CAISO market outcomes prior to inputting the SERVM outputs into the ACC model. Benchmarking and calibrating energy and ancillary service pricing patterns derived from SERVM model outcomes of the 2023 PSP to actual recently observed CAISO market outcomes ensures the ACC price forecasts accurately reflect the avoided costs of new DER capacity development. This fine tuning of

⁶⁹ Staff Proposal at 17.

⁷⁰ Joint Utilities Opening Brief at 9.

⁷¹ Cal Advocates Opening Brief at 21.

the parameters used in SERVVM prior to inputting SERVVM outputs into the ACC model improves forecast accuracy but does not modify the ACC model in structure.

It is reasonable to benchmark and calibrate the SERVVM model, based on historical CAISO market outcomes, prior to inputting the SERVVM outputs into the ACC model.

7. Refrigerant Calculator

The Staff Proposal recommends moving the consideration of the Refrigerant Avoided Cost Calculator (RACC) to R.13-11-005 (EE Rulemaking).⁷² Staff explains that the RACC is mostly used in the energy efficiency proceedings and can be modified through the staff resolution process addressing the Database for Energy Efficiency Resources (DEER).⁷³ Staff also proposes to adopt the modified version of the Deemed Refrigerant Avoided Cost Calculator (DRACC) as the RACC.

Parties are supportive of the recommendation in the Staff Proposal to move the consideration of the RACC to the EE Rulemaking. The Joint Utilities assert that the energy efficiency programs are ahead of other programs in addressing issues related to refrigerant leakage, have the most robust technical expertise in this area, and are best suited to maintain the RACC components.⁷⁴ NRDC is also supportive of staff's proposal, arguing that refrigerant leakage results from the RACC are not utility avoided costs, since no utility cost is incurred or avoided from mitigating refrigerant leakage and that treating

⁷² R.13-11-005, Order Instituting Rulemaking Concerning Energy Efficiency Rolling Portfolios, Policies, Programs, Evaluation, and Related Issues.

⁷³ Staff Proposal at 18.

⁷⁴ Joint Utilities Opening Brief at 10-12.

refrigerant leakage as utility avoided costs causes distortions.⁷⁵ The costs and mitigation of refrigerant leakage, NRDC asserts, should be appropriately addressed in the EE Rulemaking through energy efficiency and electrification measures. SoCalGas supports the Staff Proposal because the currently implemented RACC is similar to the Cost Effectiveness Tool used in the EE Rulemaking. The RACC, according to SoCalGas, is more accurately a refrigerant leakage tool that does not determine avoided costs.⁷⁶ Cal Advocates also support moving the consideration of the RACC to R.13-11-005.⁷⁷

We agree with the Staff Proposal's recommendation to move the consideration of the RACC to R.13-11-005 or its successor. In R.13-11-005, the Commission thoroughly examined the costs of refrigerant leakage and explored the technical aspects of evaluating refrigerant leakage issues. R.13-11-005 is best suited to address issues related to the RACC. The Commission may address the RACC in R.13-11-005 or a successor proceeding going forward.

SoCalGas requests a clarification that the consideration of avoided costs associated with refrigerant leakage remain in this proceeding. This decision clarifies that this proceeding will continue to review avoided costs that may be associated with but are not specific to refrigerant leakage, even if these avoided costs also serve as inputs to the RACC.

8. Gas Greenhouse Gas Adder

The gas GHG adder estimates the value of gas GHG emissions that can be avoided with DERs. The gas GHG adder can help the Commission evaluate the cost-effectiveness of gas DER programs. D.22-05-022 adopted an interim gas

⁷⁵ NRDC Opening Brief at 6.

⁷⁶ SoCalGas Opening Brief at 1-3.

⁷⁷ Cal Advocates Opening Brief at 27-30.

GHG adder for the ACC based on the cost of electrification. The Staff Proposal explains that the interim adder is only a very rough estimate of the likely value of reducing fossil gas sector GHG emissions and recommends that a permanent gas GHG adder be developed in the next 2026 ACC update cycle.⁷⁸

Parties, including Cal Advocates and the Joint Utilities, support developing a permanent gas GHG adder but disagree on how the gas GHG adder should be derived. Cal Advocates supports the current method of using the costs of electrification to derive the gas GHG adder.⁷⁹ But the Joint Utilities and NRDC state that the current method yields inaccurate estimates and argue that the adder should instead be derived using actual costs of decarbonizing gas.⁸⁰ SoCalGas recommends that the 2024 ACC update include specifications for a permanent GHG adder or project work plans to ensure that a permanent gas GHG adder is developed in the 2026 ACC update.⁸¹

The Commission's Energy Division staff plans to develop a methodology for estimating the gas GHG adder for use in the 2026 ACC update. Energy Division staff may consider the party comments provided in this proceeding when developing the methodology. Parties will be given the opportunity to provide comments after staff completes development of the proposed methodology.

Until the Commission adopts a methodology for calculating a permanent gas GHG adder, the Commission will continue to use the interim gas GHG adder adopted in the 2022 ACC Decision.

⁷⁸ Staff Proposal at 18.

⁷⁹ Cal Advocates Opening Brief at 21-27.

⁸⁰ Joint Utilities Opening Brief at 12; NRDC Opening Brief at 10-11.

⁸¹ SoCalGas Opening Brief at 4-6.

9. **Avoided Transmission and Distribution Costs**

The addendum to the Staff Proposal indicates that the current timeline for completing the study on avoided transmission and distribution (T&D) costs (Avoided T&D Costs Study) does not allow the study results to be incorporated into the 2024 ACC update. The Joint Utilities and SEIA support using the current methodology for calculating avoided T&D costs with the most current T&D cost data for the 2024 ACC.⁸²

On the other hand, PCF and the Center request that the Commission expedite the Avoided T&D Costs Study to ensure that the study results get incorporated into the 2024 ACC.⁸³ PearlX insists that the Commission not adopt the 2024 ACC if it doesn't include the study results.⁸⁴

The Commission's Decision approving the funding for the Avoided T&D Costs Study, or D.24-04-010, finds:

The results of the Study will not be completed in time to be reflected in the current 2024 ACC update. The current 2024 ACC update is projected to be finalized by mid-2024 according to the proceeding schedule set forth in the Assigned Commissioner's Scoping Memo and Ruling, but the Study will still be in progress at that point. The results of the Study, however, should be completed in time to be incorporated into the 2026 ACC Update, which most likely will also be reviewed in this instant proceeding.⁸⁵

Because the Avoided T&D Costs Study will not be completed in time for the results to be incorporated into the 2024 ACC, and the timely issuance of the

⁸² Joint Utilities Reply Brief at 12-13; SEIA Opening Brief at 15.

⁸³ PCF/Center Opening Brief at 13-16.

⁸⁴ PearlX Opening Brief at 4-5.

⁸⁵ D.24-04-010 at 12.

2024 ACC will impact other programs and application such as the Net Billing Tariff, we will not delay the 2024 ACC to wait for the results of the Avoided T&D Costs Study. Therefore, it is reasonable to continue to use the current methodology and the most current T&D cost data to calculate avoided T&D costs in the ACC.

10. Party Proposals Related to the Avoided Cost Calculator

Outside of the updates staff recommended in the Staff Proposal, parties also presented recommendations to modify the ACC for the Commission to consider. We discuss the parties' proposals below.

10.1 Non-Energy Benefits and Societal Costs in the Avoided Cost Calculator

PCF, the Center, and Google recommend including NEBs and societal costs of DERs in the ACC. From the perspectives of PCF and the Center, NEBs and societal costs of DERs are the impacts of energy programs on society beyond utility generation, conservation, and transportation costs.⁸⁶ Examples of NEBs and societal costs provided by PCF and the Center include improved health, safety and comfort to individuals, local job creation, increased community resilience, improved air quality, and other environmental benefits such as reduced water use and water quality improvements.⁸⁷

PCF and the Center assert that the Commission is statutorily mandated to include NEBs and societal costs in the ACC under Public Utilities (Pub. Util.) Code Section 701.1.⁸⁸ PCF and the Center further argue that including NEBs in the ACC would advance equity by allowing many additional programs that

⁸⁶ PCF/Center Opening Brief at 23-24.

⁸⁷ *Ibid.*

⁸⁸ PCF/Center Opening Brief at 33.

would serve disadvantaged and low-income communities to be deemed cost-effective.

Google, with the support of several other parties, recommend that the ACCs include the value of resiliency benefits in the ACC so that demand response programs are not undervalued.

SEIA supports including NEBs in cost-effectiveness evaluations but recommends using the Societal Cost Test, not the ACC, to measure societal costs and benefits in evaluating the cost effectiveness of DER programs.

The Joint Utilities, joined by Cal Advocates, TURN, and CUE, oppose including NEBs and societal costs in the ACC. Because the ACC calculates utility avoided costs, and NEBs and societal costs are not utility avoided costs, the parties argue that including NEBs and societal costs in the ACC is not appropriate and would distort the ACC's calculation of avoided costs. They also argue that there is no accepted or reliable method of calculating the economic value of these benefits and incorporating them into the ACC. The parties also contest the PCF and the Center's arguments that the Commission is statutory mandated to include NEBs and societal costs into the ACC.

On May 24, 2024, the assigned ALJ mailed a proposed decision to adopt a Societal Cost Test to help the Commission consider whether DER programs are cost-effective. It may not be necessary to include NEBs or societal costs in the ACC if the Societal Cost Test is adopted to serve as an additional tool for assessing the cost-effectiveness of DERs. The Commission may explore this issue further in future ACC updates.

10.2 Demand Response Outputs

The Joint Utilities request that the Commission consider whether the ACC needs to be adjusted for modifications approved in D.23-06-029 in the Resource

Adequacy proceeding, R.21-10-002, which removed the application of the transmission loss factor and the planning reserve margin for demand response resources.⁸⁹ The Joint Utilities recommend that the ACC be aligned with D.23-06-029 to not include the planning reserve margin but retain the transmission loss factor when calculating avoided costs. Failing to retain the transmission loss factor, according to the Joint Utilities, would undervalue the avoided costs of demand response resources compared to supply-side resources and other DERs.⁹⁰

Currently, avoided costs are not grossed-up to the planning reserve margin, so the ACC already does not include planning reserve margin in the calculation of avoided costs. As for the transmission loss factor, we agree with the Joint Utilities that it is appropriate to retain the transmission loss factor in the ACC to ensure that the avoided costs of demand response resources are not undervalued. D.23-06-029 removed the transmission loss factor for demand response resources because the administrative burden on Commission staff of manually grossing up individual demand response resources outweighs the potential value of the “relatively small amount of MW (megawatts)” from including the transmission loss factor.⁹¹

As such, the modifications approved in the Resource Adequacy proceeding do not impact the methodology used in the ACC in calculating avoided costs. No adjustments or changes will be made to the ACC in response to those Resource Adequacy modifications.

⁸⁹ Joint Utilities Opening Brief at 29; Joint Utilities Opening Testimony at 31.

⁹⁰ *Ibid.*

⁹¹ D.23-06-029 at 101-102.

10.3 Methane Leakage Adder

The Joint Utilities request that the Commission review the policy rationale for including a methane leakage adder in the ACC and the underlying assumptions for leakage rates used in the calculation of methane leakage adders.⁹²

The 2022 ACC Decision considered party proposals for removing the methane leakage adder from the ACC and determined that it is appropriate to include the methane leakage adder in the ACC.⁹³ No party raised a sufficient justification for relitigating the issue of whether to include a methane leakage adder in the ACC.

Accordingly, this decision does not modify the 2022 ACC Decision with respect to including the methane leakage adder. Energy Division staff may review the methodology for calculating the methane leakage adder in the future, but this decision does not modify the calculation of the methane leakage adder.

10.4 Portfolio Rebalancing

SEIA proposed to remove the portfolio rebalancing step for solar and load-reducing DERs in the ACC. The ACC performs portfolio rebalancing to account for the interactive effort between increased or decreased load caused by DERs.⁹⁴ The portfolio rebalancing is done by multiplying the GHG adder by the average emissions intensity target of the electric sector for each year.

⁹² Joint Utilities Opening Brief at 29-36.

⁹³ The 2022 ACC Decision states, "In D.20-04-010, the Commission found that methane leakage is in the CARB carbon inventory and, therefore, its reduction contributes to ratepayer-funded greenhouse gas emissions reduction efforts, which leads to avoided costs. This remains true today."

⁹⁴ SEIA Opening Brief at 28-29.

SEIA argues that portfolio rebalancing is not needed for distributed solar or load-reducing DERs, and that rebalancing would penalize these demand-side resources in comparison to the supply-side resources they would replace.⁹⁵ Distributed solar and storage, according to SEIA, substitute for utility-scale solar and storage. This substitution, SEIA argues, does not change the GHG intensity of the overall electric sector and does not necessitate a rebalancing adjustment. The rebalancing adjustment, SEIA asserts, reduces avoided GHG value of distributed solar and storage by more than 50 percent compared to functionally identical utility-scale solar and storage. As such, the rebalancing adjustment, SEIA argues, does not allow demand-side resources and supply-side resources to be treated equitably. NRDC agrees with SEIA that portfolio rebalancing isn't needed for load-reducing DERs.⁹⁶ The Joint Utilities agree that the Commission may need to reassess the logic of the rebalancing adjustment.⁹⁷

This decision retains the current method of portfolio rebalancing for load-modifying DERs in the ACC.

The 2022 ACC Decision found that the portfolio rebalancing step is necessary, and that SEIA's arguments against rebalancing were not persuasive. The 2022 ACC Decision explained that if system load decreases due to the increase of rooftop solar, reaching GHG goals is easier for utilities. The rebalancing step takes this into account. The 2022 ACC Decision noted that broader policy questions that require additional study should be addressed before revising the rebalancing method.⁹⁸

⁹⁵ SEIA Opening Brief at 23-28.

⁹⁶ NRDC Opening Brief at 3-4.

⁹⁷ Joint Utilities Opening Brief at 36.

⁹⁸ 2022 ACC Decision at 91-92.

The Commission's Energy Division may, in a future ACC update cycle, study whether the method of portfolio rebalancing needs to be adjusted to improve accuracy and, if so, the appropriate modifications needed to improve the accuracy of the rebalancing method.

10.5 Use of Sensitivity Analyses

SEIA and Cal Advocates propose that the Commission adopt a process for the Commission's staff to conduct a sensitivity analysis of the ACC results.

SEIA recommends that the Commission conduct a sensitivity analysis that calculates a range of avoided costs for specific key inputs, such as future natural gas prices which have volatile fluctuations.⁹⁹ Similarly, Cal Advocates proposes that the Commission conduct a sensitivity analysis of the ACC to quantify any deviations in avoided costs that could occur as a result of the potential feedback effects between the IEPR, IRP, and ACC affecting each other.¹⁰⁰

This decision does not adopt a new process for a sensitivity analysis of ACC results. The Commission's staff need additional time to study whether and how to conduct effective sensitivity analyses. Energy Division staff may, in a future ACC biennial update cycle, make recommendations on whether and how to conduct a sensitivity analysis.

10.6 Modifications to the Avoided Cost Calculator Biennial Update Process

Currently, as ordered in the 2022 ACC Decision, Energy Division staff will release SERVVM files within 60 days after the adoption of a PSP in the IRP.¹⁰¹ The ACC draft calculator, derived using recent IRP data as inputs, are typically

⁹⁹ SEIA Opening Brief at 31-35.

¹⁰⁰ Cal Advocates Opening Brief at 21.

¹⁰¹ D.22-05-002, Ordering Paragraph 1.

released after the approval of a Commission decision adopting proposed updates to the ACC, and are then adopted through a Commission resolution.

Parties propose to modify the current biennial ACC update process to allow them to review and provide comments on the actual 2024 ACC results and for the Commission to consider these comments prior to adopting changes to the ACC methodology. Currently, the Commission adopts biennial updates to the ACC methodology through a decision, and then the Commission's staff releases the actual ACC results for review by parties prior to adopting the ACC through a Commission resolution.

Parties argue that the current ACC update process hinders their ability to provide informed comments on the ACC methodology because, without seeing the actual ACC results, they cannot evaluate the impact of the staff's proposed methodology changes.

The Joint Utilities propose allowing parties to review ACC results prior to submitting testimony to give parties visibility on the impact a new IRP portfolio would have on the ACC and to allow parties to provide better-informed comment and feedback on the ACC.¹⁰² The Joint Utilities also argue that this process helps to avoid re-litigation of issues in the resolution phase of the ACC update process.

Similarly, SoCalGas recommends that ACC update activities begin after the IRP releases a final PSP, as opposed to the current proceeding framework in which parties submit testimony prior to the adoption of a PSP.¹⁰³ CLECA supports SoCalGas' proposal.¹⁰⁴

¹⁰² Joint Utilities Opening Brief at 37-42.

¹⁰³ Exhibit SoCalGas-01 at 1-2

¹⁰⁴ CLECA Opening Brief at 11-12.

CUE proposes that parties should be able to conduct discovery on the ACC model runs with the updated IRP data, but recommends that this change begin in the next ACC update cycle and not the current 2024 update cycle to allow time for the Commission to establish a process that yields a more accurate ACC while not delaying the release of the current 2024 ACC.¹⁰⁵ SEIA supports CUE's proposal, noting that the timely issuance of the ACC is important because the ACC values impact the Net Billing Tariff which needs to have updated ACC values in place by January 1 of each year.¹⁰⁶

PCF, Center, and PearlX support an additional comment period after parties have an opportunity to review results of modelling the staff's proposed changes with the IRP data and argue that this additional comment period would improve transparency in the Commission's decision-making process.¹⁰⁷

This decision does not modify the process for updating the ACC methodology. We agree that the current process for the ACC update should be reviewed. However, the Commission's staff need additional time to assess the proposed changes to the ACC update process. Further, as SEIA noted, the timely issuance of the ACC is important because the ACC values impact many applications and programs, including the Net Billing Tariff which needs to incorporate updated ACC values by January 1 of each year. We agree with SEIA that the current ACC update process should not be changed to avoid risking a delayed release of the 2024 ACC.

Energy Division staff plans to hold a workshop to facilitate discussions on how to improve the process for future biennial ACC updates, including whether

¹⁰⁵ CUE Reply Brief at 17-18.

¹⁰⁶ SEIA Opening Brief at 38-40.

¹⁰⁷ PCF/Center Opening Brief at 41, and PearlX Reply Brief at 2-3.

and how to publish ACC results of model runs reflecting staff's proposed changes and using finalized PSP data from the IRP. The Commission's staff may prepare a staff proposal after the workshop to address stakeholder feedback and recommend any procedural changes. This process enables the Commission to consider parties' concerns while not risking delaying the issuance of a timely 2024 ACC.

10.7 Guiding Principles for the Avoided Cost Calculator

Many parties, including Cal Advocates, PCF, Center, CLECA, CUE, Google Nest, the Joint Utilities, NRDC, PearlX, SBUA, SoCalGas, SEIA, and TURN, request that the Commission adopt a set of guiding principles for the ACC. For the reasons discussed below, we will continue to consider the issues related to the guiding principles for the ACC in this proceeding after Energy Division staff conducts a workshop and prepares a staff proposal.

PCF, Center, CUE, the Joint Utilities, and SoCalGas support adopting principles to ensure that the ACC is aligned with the IRP.¹⁰⁸ Cal Advocates states that, with the lack of guiding principles, the Commission has adopted piecemeal directives for the ACC across multiple decisions.¹⁰⁹ CLECA recommends adopting guiding principles to promote an accurate, transparent, predictable and consistent ACC update process.¹¹⁰ NRDC supports adopting guiding principles to streamline the ACC process.¹¹¹ PearlX recommends adopting guiding principles to provide accurate data and full information to

¹⁰⁸ PCF/Center Opening Brief at 42; CUE at 16-17; Joint Utilities Opening Brief at 42-43; SoCalGas Opening Brief at 7.

¹⁰⁹ Cal Advocates Opening Brief at 31.

¹¹⁰ CLECA Opening Brief at 14.

¹¹¹ NRDC Opening Brief at 11.

stakeholders.¹¹² SBUA recommends adopting guiding principles that addresses equity for both residential and nonresidential customers.¹¹³

The parties' recommendations share some common themes, which include ensuring transparency of the process,¹¹⁴ ensuring that ACC is neutral to different forms of DER technology,¹¹⁵ aligning the ACC with the IRP,¹¹⁶ ensuring consistent and predictable ACC results,¹¹⁷ ensuring accurate ACC results,¹¹⁸ defining avoided costs,¹¹⁹ and addressing equity issues.¹²⁰ While there are some commonalities shared by the different proposals offered by the parties, the specific guiding principles parties recommend are generally different and vary significantly in terms of specifics.

The Commission needs additional time to consider the specific guiding principles that should be adopted. In the 2022 ACC Decision, the Commission determined that at least one workshop should be conducted to further develop the record on the issues of guiding principles and for the parties to discuss

¹¹² PearlX Reply Brief at 6.

¹¹³ SBUA Opening Brief at 4.

¹¹⁴ Cal Advocates, Google Nest, NRDC, the Joint Utilities, SEIA, PearlX, and TURN support guiding principles that increase transparency of the ACC update process.

¹¹⁵ Cal Advocates, Google Nest, SoCalGas and NRDC support specifying the ACC to be agnostic to technology.

¹¹⁶ CUE, SEIA, PCF, and the Center support guiding principles that align the ACC with the IRP.

¹¹⁷ CLECA, SoCalGas, and TURN support consistent and predictable ACC results that do not vary between updates.

¹¹⁸ SEIA, SoCalGas, and TURN support guiding principles that focus on the accuracy of the ACC.

¹¹⁹ Cal Advocates and the Joint Utilities support having the guiding principles define what constitutes avoided costs.

¹²⁰ SBUA, Joint Utilities, PCF, and the Center support guiding principles to address equity issues.

proposals for the guiding principles.¹²¹ Energy Division staff plans to hold a workshop to facilitate discussions on the issues related to guiding principles, as well as the specific definitions to use and appropriate interpretations needed to achieve a common understanding of these principles. After the workshop, Energy Division staff may produce a staff proposal to propose a set of guiding principles.

10.8 Equity Issues in the Evaluation of Distributed Energy Resource Cost Effectiveness

Parties disagree about whether and how equity issues should be considered in evaluating DER cost-effectiveness, including how and whether to use a distributional equity analysis to evaluate impacts of DER programs on different classes of ratepayers. For the reasons below, we will continue to consider equity issues related to the evaluation of DER cost-effectiveness in this proceeding after Energy Division staff conducts a workshop and prepares a staff proposal.

Cal Advocates asserts that, while increasing equitable access to DER programs for low-income and disadvantaged customers is an important issue, it is distinctly different from the issue of using the ACC and calculating the cost-effectiveness for DER programs. According to Cal Advocates, cost-effectiveness is a formulaic evaluation that compares a DER program's costs with the program's benefits and is not dependent on the customers who pay or benefit from the DER program. Cal Advocates recommends that all DER programs, regardless of whether they serve low-income and disadvantaged customers, should be evaluated using the same cost-effectiveness tests. Equity-related issues, Cal Advocates recommends, should be evaluated outside

¹²¹ D.22-05-002 at 25, Ordering Paragraph 8.

of DER cost effectiveness, and considered alongside the cost-effectiveness tests. To better understand and analyze equity issues in the context of DER evaluations, Cal Advocates supports using a distributional equity analysis to measure customer participation from low-income and disadvantaged customers and to quantify the impacts of DER programs across all socioeconomic classes of ratepayers. Cal Advocates recommends that DER programs are evaluated based on whether the program provides equitable access to all customers, whereby equitable access means that the DER program is available and accessible to all customers, including non-low-income customers and low-income customers.¹²²

NRDC agrees that as the Commission considers equity issues, evaluating the cost-effectiveness of DER programs, except for programs targeting equity such as the Energy Savings Assistance Program, is necessary to ensure that non-participating customers are not subsidizing participating customers. Equitable outcomes, NRDC argues, can be achieved by ensuring that ratepayer funded DER programs meet cost-effectiveness standards and that DER program benefits and costs are equitably distributed. NRDC strongly urges using distributional impact analysis to improve evaluation of equity impacts in DER programs.¹²³

The Joint Utilities recommend retaining the Total Resource Cost to measure cost-effectiveness of DER programs and not subjecting equity programs to cost-effectiveness tests. The Joint Utilities also support using distributional equity analyses, specifically to measure whether a DER program will

¹²² Cal Advocates Opening Brief at 41-51.

¹²³ NRDC Opening Brief at 12-14.

disproportionately burden one segment of ratepayers over others, but recommends to first test any use of a distributional equity analysis in a pilot.¹²⁴

SoCalGas recommends conducting equity analyses alongside traditional cost effectiveness tests across all DER programs. These equity analyses include a distributional equity analysis to address gaps in equity not addressed by the traditional cost-effectiveness tests, as well as metrics to measure equity impacts, including bill impacts of participants and non-participants and participation rate of disadvantaged and vulnerable customers.¹²⁵

CUE argues that the ACC should not be modified to include factors related to equity or social benefits, because the purpose of the ACC is to assign a market value for DERs so that they can be measured with supply-side resources using similar standards. CUE argues that adding equity or social benefits to the ACC inflates the value of DERs, undermines the purpose of the ACC, and risks funding cost ineffective programs with ratepayer funds.¹²⁶

TURN proposes that, when considering equity in the context of evaluating DER cost-effectiveness, the Commission measures the extent of equitable adoption by different customer groups, consider how to decrease disparities in DER adoption rates, and avoid any cost shifts caused by potential disparities in DER adoption.¹²⁷

SBUA requests that the Commission, when considering equity issues in cost-effectiveness tests, also consider nonresidential ratepayers, such as small

¹²⁴ Joint IOU Opening Brief at 50; Exhibit Joint Utilities-1 at 49.

¹²⁵ SoCalGas Opening Brief at 8-10.

¹²⁶ CUE Opening Brief at 8.

¹²⁷ TURN Opening Brief at 9-11.

and diverse businesses located in disadvantaged and low-income communities.¹²⁸

PCF, the Center, and PearlX support considering equity issues when evaluating DER cost effectiveness.¹²⁹

The record of this proceeding is not sufficient to determine how to consider equity in the evaluation of DER cost-effectiveness. The foundational issue is how to define equity in the context of DER cost-effectiveness. While the Commission has adopted cost-effectiveness tests to perform cost-benefit analyses of DER programs, the Commission has not determined how to define equity in the context of DER cost-effectiveness analysis. Energy Division plans to conduct a workshop and may prepare a staff proposal to address these issues, including issues related to the use of a distributional equity analysis.

11. Timeline of 2024 Avoided Cost Calculator Update

The updates to the ACC methodology, as described in the Conclusions of Law in this decision, are adopted.

Energy Division will release a draft 2024 ACC after the proposed decision is issued. Energy Division will then hold a workshop on the draft 2024 ACC and establish a schedule for data requests and the submission of informal comments on the draft calculator and the data sets. The workshop discussions and the party comments will be considered in a Commission resolution approving the 2024 ACC. The 2024 ACC will be effective upon approval of the resolution approving the 2024 ACC.

¹²⁸ SBUA Opening Brief at 5-6.

¹²⁹ PCF/Center Reply Brief at 32-33; PearlX Opening Brief at 7.

12. Summary of Public Comment

Rule 1.18 of the Commission's Rules of Practice and Procedure (Rules) allows any member of the public to submit written comment in any Commission proceeding using the "Public Comment" tab of the online Docket Card for that proceeding on the Commission's website. Rule 1.18(b) requires that relevant written comment submitted in a proceeding be summarized in the final decision issued in that proceeding. No public comments were provided for the issues considered in this decision.

13. Procedural Matters

This decision affirms all rulings made by the assigned ALJ and assigned Commissioner related to the issues considered in this decision. All motions related to the issues considered in this decision that were not ruled on are deemed denied.

14. Comments on Proposed Decision

The proposed decision of ALJ Elaine Lau was mailed to the parties in accordance with Pub. Util. Code Section 311 and comments were allowed under Rule 14.3. Comments were filed on _____, by _____ and reply comments were filed on _____ by _____.

15. Assignment of Proceeding

Darcie L. Houck is the assigned Commissioner and Elaine Lau is the assigned ALJ and presiding officer in this proceeding.

Findings of Fact

1. Modelling using the "No New DER" scenario led to counter-intuitive results because of system balancing and optimization dynamics.
2. The "No New DER" scenario cannot be benchmarked to historical market data or other production simulation models.

3. The “No New DER” scenario does not allow the modelling of a single, technology-agnostic set of avoided costs which can be applied equally to all types of DERs, including load reducing DERs such as energy efficiency programs and load increasing programs such as building electrification.

4. Using the latest system plan adopted in the IRP proceeding as the baseline portfolio allows all types of DER technologies (load reducing, load shifting, and load increasing) to be modelled and evaluated equally.

5. Using the IRP’s adopted system plan as the baseline portfolio allows demand-side resources to be evaluated alongside supply-side resources.

6. Using IRP’s adopted system plan as the baseline portfolio allows the ACC to model a single and technology-agnostic set of avoided costs.

7. The generation capacity avoided costs and GHG avoided costs are interdependent and have interactive effects because many supply-side resources supporting the state’s decarbonization efforts provide both generation capacity and GHG reduction value.

8. The Integrated Calculation recognizes the interdependence and interactive effect between the generation capacity avoided costs and GHG avoided costs by modelling these variables as interdependent variables in an optimization model.

9. The Integrated Calculation more accurately calculates avoided costs than methodologies used in previous ACCs which modelled them as independent variables.

10. The Commission staff’s testing of the Integrated Calculation framework using 2022 ACC inputs gives the Commission sufficient information to determine whether to adopt the Integrated Calculation.

11. Resources that are procured to satisfy the Mid-Term Reliability Procurement Orders, or long-lead-time resources, as adopted in R.20-05-003, are not avoidable.

12. A minimum level of avoided generation capacity costs is set to reflect the existing gas generation that will need to be maintained to provide capacity to the system during times when no new generation capacity resources are needed.

13. A minimum level of GHG avoided costs is set to reflect the expected compliance costs of the cap-and-trade programs.

14. Using the alternative storage dispatch logic, as described in this decision, to calculate the hourly generation capacity allocation more accurately captures the reliability value that resources can provide and allows the ACC to more accurately calculate avoided costs.

15. Calibrating and benchmarking the SERVVM model to align with historical CAISO market outcomes prior to inputting the SERVVM outputs into the ACC model ensures that the ACC price forecasts accurately reflect the avoided costs of new DER capacity development.

16. The Avoided T&D Costs Study will not be completed in time for the results to be incorporated into the 2024 ACC.

Conclusions of Law

1. The ACC should use the IRP's latest adopted system plan as the baseline portfolio.

2. The Integrated Calculation should be adopted for the ACC to model the generation capacity avoided costs and GHG avoided costs.

3. It is reasonable to include only utility solar and lithium-ion energy storage resources in the Integrated Calculation.

4. It is reasonable to exclude resources that are procured to satisfy the Mid-Term Reliability Procurement Orders adopted in R.20-05-003 from the Integrated Calculation model.

5. A minimum level of avoided generation capacity costs for the ACC model should be set at the fixed operations and maintenance costs of existing gas generation.

6. A minimum level of avoided GHG costs for the ACC model should be set at the cap-and-trade price forecasts.

7. The following alternative storage dispatch logic should be used in SERVM to calculate the hourly generation capacity allocation prior to input in the ACC model:

- (a) If a storage unit is scheduled to generate, it will generate at its scheduled value regardless of available thermal resources;
- (b) If a storage unit is scheduled to be offline, it will stay offline but will be available to provide spinning reserves; and
- (c) If a storage unit is scheduled to charge, it will charge at its scheduled value unless there is no available generation to charge (due to a change in thermal resource availability).

8. It is reasonable to benchmark and calibrate the SERVM model, based on historical CAISO market outcomes, prior to inputting the SERVM outputs into the ACC model.

9. It is reasonable to continue to use the current methodology and the most current T&D cost data to calculate avoided T&D costs in the ACC.

10. Except as explicitly provided in the Conclusions of Law of this decision, it is reasonable to apply the methodologies approved in the 2022 ACC Decision to the 2024 ACC.

11. It is reasonable to affirm all rulings made by the assigned ALJ or the assigned Commissioner related to the issues considered in this decision.

12. It is reasonable to deny all motions related to the issues considered in this decision that were not ruled on.

O R D E R

IT IS ORDERED that:

1. The updates to the Avoided Cost Calculator methodology described in the Conclusions of Law of this decision are adopted.

2. All rulings made by the assigned Administrative Law Judge or the assigned Commissioner related to the issues considered in this decision are affirmed.

3. All motions related to the issues considered in this decision that were not ruled on are denied.

4. Rulemaking 22-11-013 remains open.

This order is effective today.

Dated _____, at San Francisco, California.