STATE OF CALIFORNIA GAVIN NEWSOM, *Governor*

PUBLIC UTILITIES COMMISSION
505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

FILED
08/02/23
01:24 PM
R2008020

August 2, 2023

Agenda ID #21780
Ratesetting

TO PARTIES OF RECORD IN RULEMAKING 20-08-020:

This is the proposed decision of Administrative Law Judge Kelly A. Hymes. 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 September 21, 2023 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 of record may file comments on the proposed decision as provided in Rule 14.3 of the Commission's Rules of Practice and Procedure.

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
Acting Chief Administrative Law Judge

MLC:jnf
Attachment

Decision **PROPOSED DECISION OF ALJ HYMES** **(Mailed 8/2/2023)**

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Revisit Net Energy Metering Tariffs Pursuant to Decision 16-01-044, and to Address Other Issues Related to Net Energy Metering.	Rulemaking 20-08-020

DECISION ADDRESSING REMAINING PROCEEDING ISSUES

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Appendix A – Virtual Net Metering Tariff Requirements Adopted in D.08-10-036
Appendix B – Adopted Staff Proposal for Implementation of CARB Standards

DECISION ADDRESSING REMAINING PROCEEDING ISSUES

Summary

This decision addresses the remaining six issues of this proceeding. This decision adopts a virtual net billing tariff that mirrors the net billing tariff adopted in Decision (D.) 22-12-056 and balances the competing requirements of the Guiding Principles adopted in D.21-02-007 and Public Utilities Code Section (Pub. Util. Code §) 2827.1. The virtual net billing tariff provides retail export compensation rates based on Avoided Cost Calculator values but recognizes the unique circumstances of customers taking service on this tariff and provides higher adders for residential customers than those offered in the net billing tariff.

This decision adopts an aggregation net billing subtariff that also mirrors the net billing tariff but maintains the credit and debit approach used in the existing net energy metering aggregation subtariff. The Commission determines that while there is no statutory requirement to continue the provisions of Pub. Util. Code §2827(h), the Commission has the discretion to maintain the credit and debit provisions as long as they comply with Pub. Util. Code §2827.1 requirements for a successor tariff.

The consideration of enhanced consumer protection issues is in the scope of this proceeding. This decision improves the Watch List process, previously adopted in D.21-06-026, and establishes a process for addressing customer bill format issues.

As directed by D.22-12-056, this decision establishes the process for an evaluation of the net billing tariff, virtual net billing tariff, and aggregation net billing subtariff. This decision provides a transparent process with opportunity for party feedback. While the Commission declines to adopt research questions prior to the engagement of a consultant, this decision adopts a set of objectives

for the research questions that focus on improving equity and affordability, reducing greenhouse gas emissions, encouraging electrification, protecting consumers, and considering the impact of the net billing tariff on the solar industry.

Following adoption of the California Air Resources Board Greenhouse Gas Emissions Reductions Standards, this decision reviewed comments on a Staff Proposal to Implement Net Energy Metering Fuel Cell Greenhouse Gas Emission Standards. This decision adopts a revised version of the Staff Proposal.

This decision adopts a plan to implement Pub. Util. Code §769.2, which requires certain contractors and projects to provide prevailing wages to construction workers and apprentices. This decision revises the interconnection application process and requires the creation of a disclosure form and an eligibility checklist. This decision also requires the investor-owned utilities to collaborate with the Department of Industrial Relations in sharing information. This proceeding is closed.

1. Background

On August 27, 2020, the Commission adopted the *Order Instituting Rulemaking to Revisit Net Energy Metering Tariffs Pursuant to Decision 16-01-044, and to Address Other Issues Related to Net Metering* (Order), with the focus of the proceeding to be the development of a successor tariff pursuant to the requirements of Assembly Bill (AB) 327 (Perea, Stats. 2013, ch. 611).[1] Through

[1] AB 327 added Section 2827.1 to the Public Utilities Code and mandated that the Commission adopt a successor to the existing net energy metering tariff with seven requirements: 1) ensure customer-sited renewable distribution generation continues to grow sustainably and include alternatives for growth in disadvantaged communities; 2) establish terms of service and billing rules; 3) ensure the tariff is based on the costs and benefits of the generation; 4) ensure costs and benefits are equal; 5) allow projects greater than one megawatt to be built to the size of the onsite load; 6) establish a transition period; and 7) make these determinations in a rulemaking.

the adoption of Decision (D.) 22-12-056, the Commission approved a successor to the Net Energy Meeting (NEM) 2.0 tariff,[2] referred to as the net billing tariff, which aligns price signals with the electric grid's conditions, optimizes tariff customers' grid use, and incentivizes adoption of combined solar and storage renewable electrical generation facilities (Generation Facilities).

While many issues in the *Joint Assigned Commissioner's Scoping Memo and Administrative Law Judge Ruling Directing Comments on Proposed Guiding Principles* (Scoping Memo) were addressed in D.22-12-056, the February 1, 2023 *Administrative Law Judge's Ruling Providing Details on February 8, 2023 Workshop and Soliciting Responses to Ruling Questions* (February 1 Ruling) recognized there are five outstanding issues that need to be considered in this proceeding, including: 1) the Virtual Net Energy Metering (VNEM) tariff; 2) the Net Energy Metering Aggregation (NEMA) subtariff; 3) consumer protections; 4) the evaluation of the recently adopted net billing tariff; and 5) fuel cell participation in net energy metering. The March 22, 2023 *Assigned Commissioner's Amended Scoping Memo and Statutory Deadline Extension* (Amended Scoping Memo) added a new item for the Commission to consider: the actions needed to implement AB 2143 and Public Utilities Code Section (Pub. Util. Code §) 769.2.[3]

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[2] NEM is the acronym for net energy metering. The Commission established the NEM 2.0 tariff in D.16-01-044, replacing the previous tariff, referred to as the NEM 1.0 tariff.

[3] "On September 29, 2022, California Governor Gavin Newsom approved [AB] 2143 (Carrillo), which beginning on January 1, 2024, requires large customer-sited renewable electrical generation facilities, and any associated battery storage, that enrolls in tariffs designed for these projects (*e.g.*, net energy metering or net billing tariffs) to provide, at a minimum, prevailing wages to all construction workers and apprentices, unless the project is '(1) a residential facility that will have a maximum generating capacity of 15 kilowatts (kW) or less of electricity that will be installed on a single-family home, (2) a project that is already a public work under existing law, or (3) a facility that serves only a modular home, a modular home community, or multiunit housing that has two or fewer stories.' The contractor is required to maintain and verify payroll

Footnote continued on next page.

This decision addresses all six issues. Below is a description of the activities in this proceeding leading to the adoption of this decision.

1.1. Procedural Activities

On January 25, 2023, a Chief Administrative Law Judge Notice was served by email to all persons on the service list, notifying them of a February 8, 2023 virtual workshop regarding the issues of the VNEM tariff and the NEMA subtariff (VNEM/NEMA Workshop).

As previously stated, the February 1 Ruling outlined the remaining issues of the proceeding, but also established a schedule for the remainder of the proceeding and provided greater details on the VNEM/NEMA Workshop. Additionally, the ruling described a need to complete the record on consumer protections and the evaluation of the newly adopted net billing tariff and instructed parties to file comments responding to several questions on these two topics. The following parties filed opening comments on February 24, 2023, responding to the evaluation and consumer protection questions: 350 Bay Area; California Solar and Storage Association (CALSSA); Ivy Energy; Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E), and Southern California Edison Company (SCE) (jointly, Utilities); Public Advocates Office of the California Public Utilities Commission (Cal Advocates); and Solar Energy Industries Association (SEIA). The following parties filed reply comments on March 3, 2023: 350 Bay Area; CALSSA; Cal Advocates; SEIA; and Utilities.

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records and biannually, on July 1st and December 31st of each year, submit to the Commission digital copies of the certified payroll records for projects subject to this statute. The statute states that if a willful wage violation has been enforced against a contractor of an eligible and interconnected project, then the project will lose service to its standard contract or tariff that is offered pursuant to Section 2827 or 2827.1." (Amended Scoping Memo at 3.)

On February 8, 2023, the Administrative Law Judge facilitated the VNEM/NEMA Workshop, which was followed by the issuance of a ruling on February 28, 2023 (February 28 Ruling) describing the workshop and soliciting responses to questions to complete the record on the VNEM tariff and NEMA subtariff. The following parties filed opening comments to the February 28 Ruling on March 21, 2023: Bloom Energy Corporation (Bloom Energy); California Farm Bureau Federation and Agricultural Energy Consumers Association (jointly, Agricultural Parties); California Hydrogen Business Council (CHBC); CALSSA; Center for Sustainable Energy (CSE); Cal Advocates; Clean Coalition; Doosan Fuel Cell American, Inc. (Doosan); FuelCell Energy, Inc. (FCE); GRID Alternatives (GRID); Ivy Energy; Small Business Utility Advocates (SBUA); SEIA; Sunrun, Inc. (Sunrun); and Utilities. Pursuant to a March 21, 2023 procedural email, the deadline for filing replies to the February 28 Ruling was extended to April 4, 2023. On April 4, 2023, the following parties filed reply comments to the February 28 Ruling: 350 Bay Area jointly with Center for Biological Diversity (350 Bay Area et al.); Agricultural Parties; Bloom Energy; Cal Advocates; CALSSA; California Building Industry Association (CBIA); CSE; Clean Coalition; GRID Alternatives; Ivy Energy; Silicon Valley Leadership Group (SVLG); SBUA; SEIA; Sunrun; Utilities; and Vote Solar jointly with Sierra Club (Vote Solar et al.).

As had been planned in the Amended Scoping Memo, the Administrative Law Judge issued a ruling on April 3, 2023 soliciting comments on questions regarding the implementation of Pub. Util. Code §769.2 (April 3 Ruling). On April 24, 2023, the following parties filed opening comments responding to the questions: Albion Power Company (Albion); CALSSA; Coalition of California Utility Employees (CUE); GRID; PowerFlex, Inc. (PowerFlex); SEIA; and Utilities.

On May 4, 2023, the following parties filed reply comments: CALSSA; CUE; GRID; SEIA; and Utilities.

1.2. Submission Date

This matter was submitted on May 4, 2023 upon the filing of reply comments to the April 3 Ruling.

2. Issues Before the Commission

As described above, the issues before the Commission are as follows:

1) consideration of changes to the VNEM tariff;[4]
2) consideration of changes to the NEMA subtariff;[5]
3) consideration of additional or enhanced consumer protections for customers taking service under net energy metering or net billing tariffs;[6]
4) adoption of the net billing tariff evaluation parameters and an evaluation implementation plan, and adoption of the amount of funding for the evaluation;[7]
5) consideration of fuel cell participation in net energy metering;[8] and
6) consideration of actions needed to implement Pub. Util. Code §769.2.[9]

[4] Amended Scoping Memo at 5. *See also* D.22-12-056 at 185, Ordering Paragraph 8, and Ordering Paragraph 9.

[5] Amended Scoping Memo at 5. *See also* D.22-12-056 at 185 and Ordering Paragraph 11.

[6] Amended Scoping Memo at 5.

[7] D.22-12-056 at 201.

[8] Amended Scoping Memo at 5.

[9] Amended Scoping Memo at 5.

3. Completing the Issues for Rulemaking (R.) 20-08-020

Below is a brief overview of the six remaining issues for R.20-08-020, the determinations for each issue, and the facts and conclusions upon which the determinations were made.

3.1. Adoption of a Successor VNEM Tariff

Below, this decision concludes that it is reasonable to replace the VNEM tariff with a revised VNEM tariff that aligns with the net billing tariff adopted in D.22-12-056. The current VNEM tariff will remain intact with no changes for enrolled customers until the end of their 20-year legacy period. This decision establishes a Sunset Period of three months for the current VNEM tariff. The Commission finds the costs and benefits of the new virtual net billing tariff closer to equal for all customers as compared to the costs and benefits of the current VNEM tariff.

3.1.1. History and Description of VNEM Tariff

AB 2723 (Stats. 2006, ch. 864) established additional requirements for the California Solar Initiative including codifying that not less than ten percent of the overall funds for the California Solar Initiative be used for installation of solar energy systems[10] on "low-income residential housing," as defined in the bill. The Commission began to explore such a tariff in R.08-03-008, the proceeding implementing the California Solar Initiative. In that proceeding, "the

[10] AB 2723 codified the definition of "solar energy system," in Pub. Util. Code §2852, as a "solar energy device that has the primary purpose of providing for the collection and distribution of solar energy for the generation of electricity, that produces at least one kilowatt, and except for a solar energy device for a nonprofit building, produces not more than five megawatts, alternating current rated peak electricity, and that meets or exceeds the eligibility criteria established by the [California Energy Commission]."

Commission opted to design a program for qualifying low-income family homeowners separately from a program for multifamily affordable housing."[11]

In D.08-10-036, the Commission adopted the Multifamily Affordable Solar Home program (MASH) using VNEM on the basis that "it facilitates the flow of benefits to tenants from a solar energy system installed by a building owner on an affordable housing complex…without master metering hardware or site-specific infrastructure upgrades, which may be cost prohibitive."[12] The Commission directed Utilities to file tariffs for a virtual net metering program to "allow the electricity produced by a single solar installation to be credited to the benefit of multiple tenants in the building without requiring the system to be physically connected to each tenant's meter."[13] A list of the VNEM tariff requirements adopted in D.08-10-036 can be found in Attachment 1 of this decision. The same decision stated that virtual net metering could be expanded to apply to any multitenant property that installs a Generation Facility, such as a shopping mall or apartment complex.[14] Hence, the Commission directed the proceeding to "explore expansion of the [VNEM] tariff to all multitenant properties that install solar energy systems,"[15] not just affordable housing.

Subsequently, in D.11-07-031, the Commission established several policies for the VNEM tariff including extending the applicability to any multi-tenant or multi-meter property, with the limitation that sharing of bill credits can only

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[11] D.08-10-036 at 4.

[12] D.08-10-036 at 38. In D.08-10-036, the Commission referred to VNEM as virtual net metering. For clarity, this decision will use the term VNEM.

[13] D.08-10-036 at 2-3.

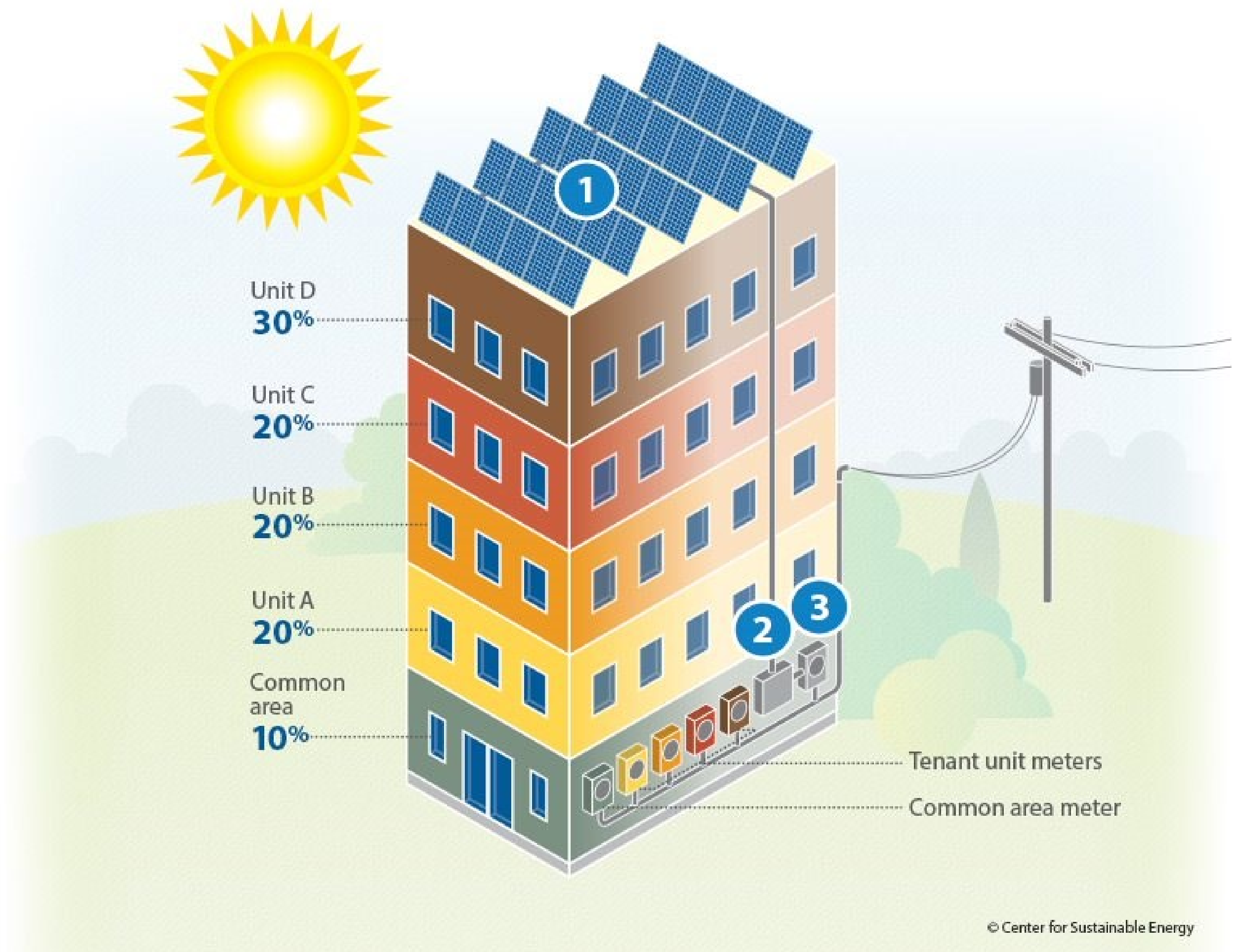
[14] D.08-10-036 at 39.

[15] D.08-10-036 at Ordering Paragraph 6.

occur for accounts served by a single service delivery point that receive a full retail rate credit, except for MASH participants. The Commission required that the VNEM tariff mirror MASH and allowed Utilities to propose a one-time account set up fee and a monthly administrative fee. Resolution E-4481 approved Utilities' tariff advice letters, directed in D.11-07-031, for the VNEM tariff and established additional tariff elements. Relatedly, D.17-12-022 directed Utilities to file advice letters designing a VNEM tariff for use by Solar on Multifamily Affordable Housing (SOMAH) participants, such as that used by MASH participants.

In a VNEM tariff system, the Generation Facility is installed on the building roof or nearby, often on a carport. Figure 1 depicts a simple system design, where there is: (1) one central Generation Facility, (2) multiple tenants, and (3) one service delivery point. As shown in Figure 1, the Generation Facility exports energy to the grid, while tenant and common area units import energy from the grid, and the utility allocates export credits virtually via monthly utility bills. Note that in some buildings, shared equipment to access the grid causes some solar generated onsite to be consumed onsite.

Figure 1



3.1.2. Current VNEM Tariff Participation

Utilities were asked to provide statistics regarding current VNEM tariff participation. As shown by Table 1 below, a review of these statewide statistics indicates that there is a low VNEM tariff participation rate, with most projects and capacity participating in the MASH and SOMAH programs.

Table 1[16]

VNEM Tariff Participation Statistics Statewide			
		Number (No.) Facilities	**Megawatt (MW) Capacity**
VNEM	Residential	217	4.86
VNEM	Mixed	513	19.99
VNEM	Nonresidential	225	35.09
MASH	MASH	1,626	61.69
SOMAH	SOMAH	253	16.72
	Total – All	2,834	138.35
	Total – VNEM General Market	955	59.94
	Total – VNEM for Low-Income	1879	78.41

According to individual utility VNEM tariff statistics (Tables 2 through 4), the general market VNEM tariff predominantly serves properties with mixed nonresidential and residential accounts. Projects deemed to be in disadvantaged communities (DAC) account for 20 percent to 50 percent of total VNEM tariff projects, depending upon the utility. The average size of a VNEM tariff project located in a disadvantaged community is smaller than the average size of all other VNEM tariff projects. Furthermore, only one utility, PG&E, reports any existence of the use of storage combined with solar in the VNEM tariff. PG&E states that one solar generator combined with storage is interconnected through the VNEM tariff with a capacity of 13 kilowatts (kW) of battery storage.[17]

[16] Utilities Reply Comments to February 28 Ruling at 4-5.

[17] Utilities Opening Comments to February 28 Ruling at 5.

Table 2

PG&E VNEM Tariff Participation Statistics							
PG&E		**Total No. Facilities**	**Total Capacity MW**	**DAC No. Facilities**	**DAC Capacity MW**	**DAC Facilities %**	**DAC MW %**
VNEM	Residential	178	3.52	34	0.4	19%	11%
VNEM	Mixed	191	6.99	20	0.93	10%	13%
VNEM	Nonresidential	89	17.55	14	1.73	16%	10%
MASH	MASH	857	25.08	191	5.7	22%	23%
SOMAH	SOMAH	85	4.83	7	0.35	8%	7%
	Total – All	**1400**	**57.97**	**266**	**9.11**	**19%**	**16%**
	Total – VNEM General Market	**458**	**28.06**	**68**	**3.06**	**15%**	**11%**
	Total – VNEM for Low Income	**942**	**29.91**	**198**	**6.05**	**21%**	**20%**

Table 3

SDG&E VNEM Tariff Participation Statistics							
SDG&E		**Total No. Facilities**	**Total Capacity MW**	**DAC No. Facilities**	**DAC Capacity MW**	**DAC Facilities %**	**DAC MW %**
VNEM	Residential	37	1.24	24	0.55	65%	44%
VNEM	Mixed	198	8.5	113	2.81	57%	33%
VNEM	Nonresidential	107	11.54	29	2.08	27%	18%
MASH	MASH	248	9.91	129	5.01	52%	51%
SOMAH	SOMAH	41	2.39	12	0.64	29%	27%
	Total – All	**631**	**33.58**	**307**	**11.09**	**49%**	**33%**
	Total – VNEM General Market	**342**	**21.28**	**166**	**5.44**	**49%**	**26%**
	Total – VNEM for Low Income	**289**	**12.3**	**141**	**5.65**	**49%**	**46%**

Table 4

SCE VNEM Tariff Participation Statistics							
SCE		**Total No. Facilities**	**Total Capacity MW**	**DAC No. Facilities**	**DAC Capacity MW**	**DAC Facilities %**	**DAC MW %**
VNEM	Residential	2	0.1	0	0	0%	0%

SCE VNEM Tariff Participation Statistics							
SCE		**Total No. Facilities**	**Total Capacity MW**	**DAC No. Facilities**	**DAC Capacity MW**	**DAC Facilities %**	**DAC MW %**
VNEM	Mixed	124	4.5	32	1.5	26%	33%
VNEM	Nonresidential	29	6	5	1.1	17%	18%
MASH	MASH	521	26.7	154	5.1	30%	19%
SOMAH	SOMAH	127	9.5	67	5.1	53%	54%
	Total – All	**803**	**46.8**	**258**	**12.8**	**32%**	**27%**
	Total – VNEM General Market	**155**	**10.6**	**37**	**2.6**	**24%**	**25%**
	Total – VNEM for Low Income	**648**	**36.2**	**221**	**10.2**	**34%**	**28%**

3.1.3. Party Proposals for VNEM Tariff

Ivy Energy and Utilities each offer proposals to modify the current VNEM tariff, with Utilities proposing separate residential and nonresidential options. CALSSA and SEIA recommend updating the current VNEM tariff, with each offering both similar and differing modifications. Cal Advocates recommends the Commission replace the VNEM tariff with a community solar tariff being considered in Application (A.) 22-05-022, et al. In this section, the Commission provides a brief overview of each party's proposal or modifications.

Ivy Energy proposes a Multi-Unit Shared DER[18] Tariff (Shared DER Tariff), recommending that the tariff be applicable to all multitenant properties where the property is treated like a single customer with all imports and exports netted within a 15-minute interval.[19] Ivy Energy proposes assigning the value of the kilowatt-hours generated based on whether the amount is greater or less than the property load. Generation up to the property load would be compensated at retail rates and additional generation in excess of the property load, *i.e.*, net

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[18] DER is the acronym for distributed energy resources.

[19] Ivy Energy Opening Comments to February 28 Ruling at 2-3 and Appendices A and B.

exports, would be compensated at a separate export rate. Ivy Energy proposes that net exports be credited at the Avoided Cost Calculator (ACC) value, with one adder to incentivize property load management and energy export and another to incentivize electric vehicle charging optimization and adaptive load management.[20]

Utilities propose two virtual net billing tariff options: one for residential and one for nonresidential customers.[21] Utilities propose an annual system-wide true-up process to comply with net surplus compensation rules. For residential customers, Utilities propose use of the net billing tariff ACC Plus mechanism and submit this could be used solely for low-income customers. Each residential benefiting account would receive their percentage of export compensation as a credit on their bill. For nonresidential customers, Utilities recommend aligning with the net billing tariff, which provides no ACC Plus adder. Utilities contend that with their proposal, benefiting accounts "should receive the allocated value of the [Generation Facility] without complicated offsetting calculations, while having their base rate as the guidance for energy consumption."[22] This results in bill credits being "divorced" from retail import rates. Thus, Utilities propose to allow benefiting accounts to take service on "any available rate schedule."[23]

SEIA recommends that a virtual billing arrangement be maintained along with the current definition of property and the current generation pooling.[24]

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[20] *See* Section 8.5.1 of D.22-12-056 describing the adopted retail export compensation rate based on values derived from the Avoided Cost Calculator.

[21] Utilities Opening Comments to February 28 Ruling at 5-12.

[22] Utilities Opening Comments to February 28 Ruling at 9.

[23] Utilities Opening Comments to February 28 Ruling at 8.

[24] SEIA Opening Comments to February 28 Ruling at 2-11.

SEIA's modification proposal would allow property-level netting and permit customers to take service under an applicable time-of-use rate. Further, SEIA recommends the inclusion of the same ACC Plus adders adopted in D.22-12-056 for low-income customers. Asserting roadblocks to deployment of batteries, SEIA's proposal includes a call to rectify incongruities between the Self-Generation Incentive Program and the VNEM tariff and allow the use of upstream configurations that permit multifamily properties to use existing equipment to serve tenants during outages.[25]

Similarly, CALSSA recommends the continuance of the VNEM tariff while offering several modifications. CALSSA proposes that the VNEM tariff allow property-wide netting with a higher ACC Plus adder than those provided for low-income customers in D.22-12-056.[26] In line with the Ivy Energy proposal, CALSSA recommends that the total property be treated as one unit. CALSSA also recommends adoption of two additional proposals regarding eligibility and process issues: (1) ensuring a customer who is eligible for the California Alternate Rates for Energy (CARE) program remains on the rate when a VNEM tariff property owner has taken over the account, and (2) allowing a new tenant moving into a prior VNEM tariff-enrolled unit to automatically receive the same credit as the previous VNEM tariff-enrolled tenant.[27] CALSSA's proposal aligns with SEIA's proposal in that CALSSA also proposes allowing VNEM tariff customers to take service on any eligible time-of-use rate.[28]

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[25] SEIA Opening Comments to February 28 Ruling at 14-16.

[26] CALSSA Opening Comments to February 28 Ruling at 6 and 9-11.

[27] CALSSA Opening Comments to February 28 Ruling at 7-8.

[28] CALSSA Opening Comments to February 28 Ruling at 11-12.

Clean Coalition recommends the continuation of a VNEM tariff structured around virtual billing but with the addition of an incentive to encourage solar generation paired with storage.[29] Clean Coalition also calls for these storage devices to be allowed to charge from the grid prior to announced outages and prior to Flex Alerts.[30]

Lastly, Cal Advocates recommends the Commission wait until a decision in the Green Access Tariff proceeding (A.22-05-022) has been adopted to make any determination on the VNEM tariff in this proceeding.[31]

3.1.4. VNEM Tariff Threshold Matters

Prior to considering the elements of the successor VNEM tariff, the Commission addresses several threshold matters where parties disagree: (1) whether to delay a decision in this proceeding on the VNEM tariff until consideration of the Green Access Tariff proposals in A.22-05-022; (2) the customer composition of the VNEM tariff; (3) the cost effectiveness of the VNEM tariff; (4) whether VNEM tariff customers create a cost shift; (5) customer billing practices; and (6) self-consumption.

3.1.4.1. VNEM Tariff Threshold Matters: Relationship between the VNEM tariff and Green Access Programs

Regarding the issue of delaying a decision on the VNEM tariff, Cal Advocates asserts that issues related to Green Access Programs and the VNEM tariff, as well as the NEMA subtariff are "closely intertwined" and notes that all three programs were created to expand access of renewable energy resources to

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[29] Clean Coalition Opening Comments to February 28 Ruling at 2-3.

[30] Clean Coalition Opening Comments to February 28 Ruling at 3.

[31] Cal Advocates Opening Comments to February 28 Ruling at 2-4.

ratepayers.[32] With respect to the VNEM tariff, Utilities contend the objective of expanding access is where the similarities between the tariffs end because the resources involved are very different. Utilities maintain Green Access Programs provide crediting mechanisms to customers receiving solar generation from wholesale resources while VNEM tariffs deal with resources that have some physical and geographic relationship to the customer.[33] Ivy Energy cautions the Commission not to depend on the Green Access Programs to successfully reach renters. Ivy Energy maintains both the VNEM tariff and Green Access Programs must be made available to customers as distinct options to renters, noting that the VNEM tariff provides access to onsite clean energy while Green Access Programs provide a solution to customers without access to onsite distributed energy resources.[34]

The Commission agrees that the VNEM tariff, as well as the NEMA subtariff, are distinct options from the Green Access Programs. The Commission finds no reason to delay a determination on the VNEM tariff. Accordingly, the Commission should move forward with a determination on the future of the VNEM tariff.

3.1.4.2. VNEM Tariff Threshold Matters: Current Customer Composition

With respect to the current customer composition of the VNEM tariff, Utilities point to participation data and assert that VNEM tariff enrollees are

[32] Cal Advocates Opening Comments to February 28 Ruling at 3.

[33] Utilities Reply Comments to February 28 Ruling at 2.

[34] Ivy Energy Reply Comments to February 28 Ruling at 15. *See also* 350 Bay Area and Center for Biological Diversity Reply Comments to February Ruling at 2-3, and SEIA Reply Comments to February 28 Ruling at 7-8.

predominantly nonresidential customers.[35] Based on the data provided by Utilities, this assertion is misleading. Looking at participation data in Table 2 through Table 4 above, Utilities have indicated three categories of customers: residential, mixed, and nonresidential. Utilities have provided no definition of the mixed category. It is quite possible that the mixed category contains multifamily properties or properties with residential accounts; the record has no indication of what percentage this would represent. Although Utilities have stated that "even assuming that all mixed residential and nonresidential arrangements predominantly provide benefits to residential accounts," only 24.85 MW of capacity are provided for the benefit of multifamily tenants.[36]

This decision does not accept Utilities' assertion that the VNEM tariff predominantly serves nonresidential customers. This decision also cannot make a clear finding that the VNEM tariff predominantly serves residential customers. Therefore, the Commission should require Utilities to improve data collection to better inform the Commission and stakeholders on the accurate customer composition of VNEM tariff and the successor tariff participation. Until that time, the Commission finds that the VNEM tariff serves both residential and nonresidential customers.

Accordingly, after conferring with Energy Division, Utilities shall submit a joint Tier 1 advice letter proposing improvements in defining the composition of VNEM tariff participants to ensure accuracy in statements and data request responses. This advice letter shall be submitted no later than January 31, 2024. As it is an objective of this proceeding to increase access to renewables to low-

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[35] Utilities Opening Comments to February 28 Ruling at 4-5 and Utilities Reply Comments to February 28 Ruling at 4-6.

[36] Utilities Reply Comments to February 28 Ruling at 5.

income households,[37] the Commission encourages developers to focus on increasing the number of projects serving multifamily rental properties. The adopted successor VNEM tariff will also focus on increasing the number of multifamily rental properties enrolling in the VNEM tariff.

3.1.4.3. VNEM Tariff Threshold Matters: Cost-Effectiveness

Moving on to the matter of benefits and costs, parties disagree on whether the VNEM tariff is cost effective. In response to the February 28 Ruling, parties were asked to describe the benefits and costs of the VNEM tariff that distinguish it from the NEM 2.0 tariff. This section discusses party comments on benefits and costs and overall cost-effectiveness of the VNEM tariff.

First, in looking at the benefits of the VNEM tariff, comments indicate three positions: (1) Ivy Energy, CALSSA, Vote Solar/Sierra Club, and SEIA assert that the VNEM tariff provides different quantifiable benefits as compared to the NEM 2.0 tariff; (2) Utilities concede that the VNEM tariff has slightly but not remarkably different quantifiable benefits from the NEM 2.0 tariff; and (3) Cal Advocates originally contended that the VNEM tariff has no different quantifiable benefits from the NEM 2.0 tariff, but has since changed its position to agree with Utilities.[38]

Parties submit that there are several VNEM tariff benefits distinguishable from the NEM 2.0 tariff including, for example, the reduction of customer demand from the grid, reduction of electricity system-wide costs, an increase of

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[37] *See* D.22-12-056 at 92.

[38] Cal Advocates Reply Comments to February 28 Ruling at 2.

resiliency, and an increased access to electric vehicle charging.[39] However, the Commission agrees with Utilities that no party presented quantifiable benefits, such that can be measured in a cost-effectiveness analysis.[40] Even SEIA recognizes that Ivy Energy's list of benefits is qualitative.[41] However, the Commission agrees that there are several unquantifiable benefits in addition to those listed above, including enabling renters to have access to solar; many renters are low-income households and small businesses.[42]

While unable to find any quantifiable evidence of distinguishable benefits, the Commission finds that Generation Facilities on a VNEM tariff that serve residential customers provide slightly higher grid benefits than solar-only net energy metering Generation Facilities on the NEM 2.0 tariff simply because the residential VNEM tariff Generation Facility serves multiple residential customers. The Commission agrees with Ivy Energy that a multitenant building on a VNEM tariff has multiple loads served by the same Generation Facility, as discussed further in section 3.1.4.6 below. Further, the Commission also finds that because the VNEM tariff provides renters and customers in disadvantaged communities improved access to customer generation, the tariff assists the Commission in meeting the objective of increasing equity, as required by Pub. Util. Code §2827.1.

Moving on to a discussion of the costs of the VNEM tariff, the Commission finds that parties provided potential distinguishable VNEM tariff costs as

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[39] *See*, for example, Ivy Energy Opening Comments to February 28 Ruling, Appendix D at 41. *See also* CALSSA Opening Comments to February 28 Ruling at 1-2.

[40] Utilities Reply Comments to February 28 Ruling at 3.

[41] SEIA Reply Comments to February 28 Ruling at 2-3.

[42] CALSSA Opening Comments to February 28 Ruling at 1 and 2.

compared to the NEM 2.0 tariff, but few cost differences that are quantifiable. Utilities contend bill savings for VNEM tariff customers "are *likely slightly* [emphasis added] lower" than for NEM 2.0 tariff customers, "but not by a *significant* margin."[43] Utilities also offer that the complex billing needs for benefiting customers in the VNEM tariff, in addition to customer turnover and the need for manual valuation, lead to VNEM tariff billing costs that are higher than the billing costs of the NEM 2.0 tariff, but with a minimal impact on the overall cost-effectiveness analysis.[44] Utilities provided no data to support these claims. Ivy Energy asserts that VNEM tariff systems **may** have greater interconnection costs than a typical net energy metering system, noting that VNEM tariff systems are similar in size to commercial net energy metering systems.[45] CALSSA asserts that VNEM tariff systems require more work to design and develop, need major additional equipment and labor to provide resiliency benefits, and are subject to a new public works law.[46] Neither Ivy Energy nor CALSSA provided data to support these claims.

The record contains two quantifiable cost differences of the VNEM tariff versus the NEM 2.0 tariff. First, customers on the current VNEM tariff pay non-bypassable charges based on their consumption from the grid, without any netting.[47] Second, based on data CALSSA obtained from PG&E, multiunit tenants sharing a single delivery point generally pay more than their fair share of

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[43] Utilities Opening Comments to February 28 Ruling at 3.

[44] Utilities Opening Comments to February 28 Ruling at 3.

[45] Ivy Energy Opening Comments to February 28 Ruling at 11-13.

[46] CALSSA Opening Comments to February 28 Ruling at 3-4.

[47] Utilities Opening Comments to February 28 Ruling at 2.

grid costs.[48] However, the record does not contain the specifics of this, *i.e.*, the number of benefiting accounts that pay more than their fair share. Based on the record, the Commission finds that the current VNEM tariff provides slightly more quantifiable benefits as compared to the NEM 2.0 tariff.

3.1.4.4. VNEM Tariff Threshold Matters: Cost Shift Per VNEM Customer

Moving on to an analysis of the cost shift of the current VNEM tariff versus the NEM 2.0 tariff, as discussed below the record shows that a cost shift exists for the VNEM tariff. For residential VNEM tariff customers it is less than the cost shift in the NEM 2.0 tariff but for nonresidential VNEM tariff customers it is greater than the cost shift in the NEM 2.0 tariff.

In response to the February 28 Ruling, parties disagreed on the extent of a cost shift caused by customers enrolled on the VNEM tariff. Utilities contend that while there are differences between the cost effectiveness assumptions of the VNEM tariff in comparison with the NEM 2.0 tariff, "none of these are sufficient to change the conclusions that [D.]22-12-056 reached regarding the standard tariff."[49] Similarly, Cal Advocates maintains that the "VNEM [tariff] creates a cost burden on non-adopting customers by compensating customers at retail rates."[50] Cal Advocates asserts that SCE and PG&E estimate that the 6,273 customers on the VNEM tariff caused a cost shift of $26 million for the year 2022.[51]

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[48] CALSSA Opening Comments to February 28 Ruling at 6.

[49] Utilities Opening Comments to February 28 Ruling at 1.

[50] Cal Advocates Opening Comments to February 28 Ruling at 6.

[51] Cal Advocates Opening Comments to February 28 Ruling at 6.

Ivy Energy argues that Utilities and, therefore, Cal Advocates' estimate is flawed and presents its own analysis concluding that there is no cost shift. Ivy Energy claims that the export price should be equal to the average avoided rate to make the VNEM tariff cost effective.[52] The Commission finds that Ivy Energy errs in its cost shift analysis. Ivy Energy's modification to set "avoided cost" equal to the "average avoided retail rate" is not correct; the "avoided cost" comes directly from the Avoided Cost Calculator, which cannot be changed in this proceeding.

In Table 5 through Table 7 below, this decision presents Utilities' cost shift analysis, Ivy Energy's analysis, and the Commission's analysis, which has been modified to account for the correct avoided cost from the Avoided Cost Calculator.[53] Table 5 uses the NEM 2.0 tariff cost shift values divided by system size used in the June 15, 2021 analysis: PG&E at 4.7 kW-DC for residential and 10.7 kW-DC for nonresidential customers, and SCE and SDG&E at 4.4 kW-DC for residential and 9.9 kW-DC for nonresidential customers.

After adjusting non-bypassable charges to a more appropriate average of $0.03/kilowatt-hour (kWh), the Commission determines an annual cost shift of $365/kW to $385/kW for the current VNEM tariff in PG&E territory, which is similar to the NEM 2.0 tariff capacity-based cost shifts. The Commission's

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[52] Ivy Energy Reply Comments to February 28 Ruling at Appendix A.

[53] The source for the NEM 2.0 tariff column for Tables 5 through 7 is E3 and Verdant's "Cost-effectiveness of NEM Successor Rate Proposals under Rulemaking 20-08-020, A Comparative Analysis" June 15, 2021, at Table 4 'Results for Residential Solar, 2023 Non-CARE' and Table 12 'Results for Commercial Solar, 2023 Non-CARE.' The source for the VNEM columns for Tables 5 through 7 is Ivy Energy, Amended Reply April 7th, Ivy Cost Shift Analysis Excel.xlsx - Google Sheets on page 20; retrieved from: https://docs.google.com/spreadsheets/d/1Ic5jr6YaWtoZ6mwJ0a0PsLKkwrXbaXRG/edit#gid=210927578 (last visited June 16, 2023).

analysis then divides the cost shift across the total number of benefiting accounts, which results in an annual cost shift of less than $500 per customer for residential customers and over $15,300 per customer for nonresidential customers in PG&E territory. For comparison, the estimated cost shift for all NEM 2.0 tariff customers across all three utilities is an average of $1,857 per customer for residential customers and $3,171 per customer for nonresidential customers.

Based on this analysis, the Commission finds that the VNEM tariff for residential customers causes a significantly smaller cost shift per customer than the NEM 2.0 tariff. In contrast, the VNEM tariff for nonresidential customers concentrates benefits to comparatively few customers, on average.

Table 5
Cost Shift Per kW (to non-participants)

	VNEM ($/kW)	**NEM 2.0 ($/kW)**
Residential Year 1 Cost Shift		
PG&E	$365.5/kW	$386/kW
SCE	-	$292.5/kW
SDG&E	-	$561/kW
Nonresidential Year 1 Cost Shift		
PG&E	$385/kW	$335/kW
SCE	-	$202/kW
SDG&E	-	$397/kW

Table 6
Cost Shift Per Enrollee (to non-participants)

	VNEM ($/Enrollee) [54]	**NEM 2.0 ($/Enrollee)**
Residential Year 1 Cost Shift		
PG&E	$497	$1,817
SCE	-	$1,287
SDG&E	-	$2,467

[54] The VNEM tariff cost shift per enrollee is an average. However, the actual renewable generation credit allocation per customer is not fixed and is set by the property owner.

	VNEM ($/Enrollee) [54]	NEM 2.0 ($/Enrollee)
Nonresidential Year 1 Cost Shift		
PG&E	$15,134	$3,586
SCE	-	$2,001
SDG&E	-	$3,927

Table 7
VNEM Tariff Cost Shift Data for PG&E Territory

	VNEM Residential	VNEM Nonresidential
Annual Cost Shift (nominal)	$8,490,826	$14,044,025
Capacity (kW)	23,230	36,530
Enrollees (Number of)	17,086	928
Cost Shift Per kW	$365.51	$384.45
Cost Shift Per Enrollee	$496.95	$15,133.65

3.1.4.5. VNEM Tariff Threshold Matters: Customer Billing Practices

In response to the February 28 Ruling, CALSSA discussed a proposed modification to the VNEM tariff, which would allow property owners to receive a discount on behalf of their tenants who are enrolled in the CARE program. The proposal, originally requested in testimony, noted that "it is common for property owners to take over customer accounts when installing VNEM [tariff] systems and to incorporate utility costs into rent. Currently, this results in CARE accounts losing their CARE status, causing property owners to charge customers discounted rates while the property owner is not actually getting a discount from the utility."[55]

Utilities responded, asserting that property owners taking over customer accounts is an unlawful business practice, specifically in that "[Pub. Util. Code

[55] CALSSA Opening Comments to February 28 Ruling at 7 citing CSA-01 at 26-27.

§]218(b)(1) does not authorize the sale of generation to tenants; it only authorizes 'use.'"[56] Utilities contend that because the tenant benefiting accounts also import electricity from the grid, "a building owner taking over tenant benefiting accounts would be reselling power delivered by the utility in violation of Electric Rules 1 and 18."[57]

CALSSA's comments bring to light what CALSSA perceives is a common practice whereby multifamily property owners, to consolidate electrical bills after a solar installation, are permanently switching their tenants' electrical accounts to make the property owner the customer of record. Property owners, or third-party services like Ivy Energy, are directly charging tenants for variable monthly electrical bills which may include their solar offsets and net export credits.

This practice does not comply with VNEM tariff requirements. As written in PG&E's current VNEM tariff, a property owner should only become the "customer of record" for a tenant account when the tenant unit is vacant. The current VNEM tariff specifies that a qualified customer is "a tenant/occupant in the Eligible VNEM Development with a separately metered account, which received credit from the [Generation Facility]." The Commission finds that if the tenant gives up their separately metered account for bill consolidation under the property owner, the customer is not in compliance with the VNEM tariff. Customer access to the VNEM tariff as well as the successor VNEM tariff is dependent on the tenant retaining account ownership. Relatedly, the

[56] Utilities Reply Comments to February 28 Ruling at 9-10 and also citing Pub. Util. Code §218(a).

[57] Utilities Reply Comments to February 28 Ruling at 9 citing PG&E Electric Rule 1 at Sheet 9 and PG&E Electric Rule 18.

Commission concludes that CALSSA's proposal to permit a customer's CARE discount to be used by the property manager also does not comply with the tariff and is denied. Finally, this decision adds that Pub. Util. Code §780.5 requires that after July 1, 1982, all electric and gas metering in multifamily buildings must be individually metered.

3.1.4.6. VNEM Tariff Threshold Matters: Self Consumption

As shown in Figure 1 above, for VNEM tariff customers, the renewable generation in multitenant properties has an export-only meter and, except in certain cases, it exports all generation produced to the grid. In comparison, in the net billing tariff, customers are encouraged to use generation produced onsite (self-consumption) and to export only the excess generation produced to the grid. In the net billing tariff, customers are compensated for net exports (production minus self-consumption), not all exports (all generation produced). In the net billing tariff, generation and self-consumption occur behind the meter and Utilities only have knowledge of what is exported to the grid. For multitenant properties on the VNEM tariff, Utilities have knowledge of both the system generation with an export meter and tenant consumption (or usage) with an import meter.

Utilities state that "the Avoided Cost Calculator implicitly assumes generation is intended to offset onsite consumption."[58] In response, CALSSA asserts that the Avoided Cost Calculator "assumes generation is located close to load rather than having to be transmitted significant distances over distribution and transmission infrastructure, but that is different from onsite consumption."[59]

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[58] Utilities Opening Comments to February Ruling at 2 and 13.

[59] CALSSA Reply Comments to February 28 Ruling at 2.

In this proceeding, Ivy Energy contends that in multitenant properties tenants "are likely to consume a much higher percentage of generation onsite compared to a single facility net energy metering system for several reasons."[60] Ivy Energy asserts that because a multitenant building on a VNEM tariff has dozens of unique loads onsite that can be served by the same generator onsite before exporting to the grid the tenants tend to consume a much higher percentage of generation onsite.[61] Ivy Energy does not have data to confirm this, instead looking to the Commission to collect this data. However, Ivy Energy provides a preliminary analysis of five representative properties, which Ivy Energy asserts "shows that the average load demanded from the grid can be reduced 30 percent to 70 percent on the properties with onsite solar under the VNEM tariff, and even greater demand reductions occur when battery storage systems are installed."[62]

Ivy Energy relies on Kirchhoff's Law, which Ivy Energy argues "shows that energy produced onsite is consumed onsite and only the production in excess of property load is exported to the grid."[63] The Commission acknowledges that when generation and customer meters share a physical connection to the grid, either at the meter bank through a shared bus bar or at the transformer, self-consumption can occur. In fact, based on PG&E data provided by CALSSA, the Commission finds that about half (48 percent) of VNEM tariff generation and load share a transformer, which indicates that onsite consumption can occur.[64]

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[60] Ivy Energy Opening Comments to February 28 Ruling at 5.

[61] Ivy Energy Opening Comments to February 28 Ruling at 5.

[62] Ivy energy Opening Comments to February 28 Ruling at 6.

[63] Ivy Energy Opening Comments to February 28 Ruling at 30.

[64] CALSSA Reply Comments to February 28 Ruling at 3.

However, due to the complexity and cost of installing generation at multitenant properties, the Commission established the policy that renewable generation installed on multitenant properties does not require onsite consumption.

Previously, the Commission established virtual self-consumption to approximate net energy metering self-consumption, enabling equal treatment without burdening multitenant properties from costly and resource-heavy installations. Further, in D.22-12-056, the Commission made it easier for multitenant properties to install renewable generation anywhere on a property, which decreases the likelihood of incidental self-consumption.[65] The Commission concludes that the design of the adopted successor VNEM tariff should not be based on a presumption of onsite self-consumption.

3.1.5. The Successor VNEM Tariff

Having addressed the threshold matters regarding the VNEM tariff, this decision turns to the specifics of the adopted VNEM tariff. As discussed below, the Commission finds that, as had been the case with the net billing tariff adopted in D.22-12-056, the adopted successor VNEM tariff should result in a balanced approach to meeting the requirements of Pub. Util. Code §2827.1 and this proceeding's adopted guiding principles.[66]

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[65] D.22-12-056 at Ordering Paragraph 9, which revised the VNEM tariff "to allow multiple solar arrays on one property to be treated as one generator, with credits allocated across the property."

[66] The Commission adopted eight guiding principles to assist in the development and evaluation of a successor to the current net energy metering tariff: (a) comply with Pub. Util. Code §2827.1; (b) ensure equity among customers; (c) enhance consumer protections for customer-generators; (d) fairly consider all Generation Facility technologies; € be coordinated with the Commission and California's energy policies; (f) be transparent and understandable to customers; (g) maximize the value of customer-sited renewable generation; and (h) consider competitive neutrality amongst load serving entities.

Previously, this decision found that there are distinguishable costs and benefits of the VNEM tariff in comparison to the NEM 2.0 tariff. However, a majority of these costs and benefits are not quantifiable, and therefore the Commission finds these distinguishable costs and benefits cannot be quantified in a cost-effectiveness analysis. Because the quantifiable costs and benefits of the VNEM tariff are not remarkably different from the quantifiable costs and benefits of the NEM 2.0 tariff, the Commission determines it reasonable to rely on the cost-effectiveness results of NEM 2.0 and find that the current VNEM tariff is not cost-effective.

As previously determined, the VNEM tariff can assist the Commission in meeting the objective of improving equity, as required by Pub. Util. Code §2827.1. However, the Commission must balance the objective of improving equity with other objectives required by the statute and the adopted guiding principles. For example, while the Commission finds it reasonable to offer a successor VNEM tariff option in addition to the net billing tariff, the successor must improve upon its cost-effectiveness. Further, as pointed out by Utilities, the Commission has already determined that basing export compensation rates on retail import rates does not comply with Pub. Util. Code §2827.1.[67] For these reasons, the Commission should not adopt any recommendation to maintain the status quo VNEM tariff.

3.1.5.1. Overview of Successor VNEM Tariff Proposals and General Party Positions

Parties offer two proposals for a VNEM tariff: Ivy Energy's DER Shared Tariff and Utilities' virtual net billing tariff. The benefits of and arguments against each of these are discussed below.

[67] Utilities Reply Comments to February 28 Ruling at 9.

The foundation of the DER Shared Tariff is property-level netting of imports and exports, versus calculating import charges and allocated export credits separately for each benefiting account in the current VNEM tariff. In the DER Shared Tariff, all exports and all imports are balanced in 15-minute intervals. Ivy Energy proposes that the generation at the property would be assigned a value for the kilowatt-hour generation based on whether that generation is greater than or less than the total property load. If the generation during that interval is less than or equal to the total property load during that interval, the value of the generation would be compensated on a retail basis for that interval on a single default residential time-of-use schedule. Should the generation exceed the total property load at that interval, the difference would be exported to the grid, and the value of the exported generation compensated on the export rate for that interval on a single default time-of-use schedule.

Ivy Energy contends property netting is the necessary precursor to optimizing solar, storage, demand response and electric vehicle charging on a multi-unit property and results in a "more predictable and smoother demand curve."[68] Benefiting accounts would receive bill credits based on the percentage allocation of the onsite Generation Facility. Ivy Energy also suggests the addition of: (1) adjustments to the export rate of certain intervals to incentivize property load management and energy export and (2) an adder to incentivize electric vehicle charging optimization and adaptive load management.

Many parties advocate for property-wide netting. SVLG argues that it is "not appropriate to dissociate all generation at the NGOM from other loads on

[68] Ivy Energy Opening Comments to February 28 Ruling at 30.

that property" and label that as an export.[69] Sierra Club and Vote Solar contend it would ensure benefiting accounts are able to retain the value of solar generation consumed onsite and would more accurately match how electricity generated is being physically consumed by loads throughout the property.[70] SBUA also supports property-level netting and agrees with SEIA that "onsite generation that serves customer load has a higher value to customers because it offsets the need to purchase as much energy from the utility at a retail basis."[71]

In opposition to the DER Shared Tariff, Utilities contend the netting proposals would be "overly complex to implement and administer, as dynamic allocations are not done on this level of granularity."[72] Focusing on costs, Utilities assert initial start-up costs and delays will be higher for property netting and note that all benefiting accounts would have to be on the same billing cycle creating more costs. With respect to customer concerns, Utilities assert property-level net billing will cause confusion and equity issues. For example, Utilities assert the proposed tariff would be confusing to customers, noting that "an individual benefiting customers' bill would become a function of every other customer's usage."[73] Utilities question whether it is fair to a customer who works outside of the house, if a customer who works from home receives a higher benefit because energy usage is netted against generation. Turning to the guiding principle of meeting California's energy policies, Utilities maintain that "there is

[69] NGOM is the acronym for Net Generation Output Meter. SVGL Reply Comments to February 28 Ruling at 2.

[70] Sierra Club and Vote Solar Reply Comments to February 28 Ruling at 4.

[71] SBUA Reply Comments to February 28 Ruling at 3 citing to SEIA Opening Comments to February 28 Ruling at 6.

[72] Utilities Reply Comments to February 28 Ruling at 6.

[73] Utilities Reply Comments to February 28 Ruling at 6.

less incentive for a tenant to conserve energy for their neighbors' potential credits or in general."[74]

Turning to the virtual net billing tariff, Utilities offer this proposal as an alignment with the net billing tariff. In their proposal, a Generation Facility is compensated for each kWh at the Avoided Cost Calculator value, with an ACC Plus adder as a glidepath for residential customers only and based on a nine-year payback. Each benefiting account would receive a percentage of the export compensation as a bill credit, which can offset any portion of the bill. Utilities propose that a benefiting account could take service on any currently available rate schedule and non-bypassable charges would be based on metered consumption from the grid. Utilities submit this proposal would be easy for customers to understand and easy for Utilities to administer, as there is no netting for monthly billing. Utilities would perform an annual true-up to determine whether the aggregate onsite generation exceeded the aggregated usage of the benefiting accounts, to comply with net surplus compensation rules.

SEIA opposes the virtual net billing tariff contending it would result in all benefiting accounts losing the entirety of the value of their behind-the-meter consumption.[75] SEIA asserts that even benefiting accounts receive compensation for the differential between what an individual tenant consumes minus the solar production allocated to that specific meter, the Utilities' proposal still denies the benefiting account some of the value of their behind-the-meter consumption.[76]

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[74] Utilities Reply Comments to February 28 Ruling at 7.

[75] SEIA Reply Comments to February 28 Ruling at 3-4.

[76] SEIA Reply Comments to February 28 Ruling at 4.

SEIA maintains that only the amount of energy actually exported should be valued at the Avoided Cost Calculator based export compensation rate.[77]

3.1.5.2. Consideration of the DER Shared Tariff

The Commission agrees that the DER Shared Tariff makes fair use of the VNEM tariff system imports and exports for the property owner. As discussed in Section 3.1.4.6, for properties with a shared transformer – where self-consumption can occur – this tariff proposal captures such consumption (but creates billing complexity). However, beyond this, the Commission finds that the DER Shared Tariff, and especially property netting, presents environmental, economic, equity, and legal conflicts or barriers.

With respect to environmental barriers, first and foremost, property netting would remove any price signal to individual benefiting account holders. As Ivy Energy describes in its proposal, netting is conducted on the property level, not the individual unit level. The Commission has already determined that only properties with a shared transformer can capture actual self-consumption. While Ivy Energy contends the DER Shared Tariff will allow benefiting accounts to avoid peak pricing and export to the grid when more valuable to do so, by compensating all benefiting accounts at the residential rate instead of the Avoided Cost Calculator value, the DER Shared Tariff does not send the proper price signals to benefiting accounts. Furthermore, as discussed by Utilities, because credits vary based on actual energy consumption of the entire property, it will be difficult to predict the cost of using energy during generation hours.[78] Benefiting accounts do not know the best times to use energy or abstain from

[77] SEIA Reply Comments to February 28 Ruling at 5.

[78] Utilities Reply Comments to February 28 Ruling at 7.

using energy. The variability of the DER Shared Tariff would create a barrier to the Commission and California meeting their environmental objectives.

Turning to economic conflicts and barriers, Utilities assert that the DER Shared Tariff will lead to increased costs due to more granular billing, *i.e.*, 15-minute interval allocations. As Utilities point out, the DER Shared Tariff would require dynamic allocations not currently conducted at this level of granularity. Utilities highlight that the current VNEM tariff costs are higher than the NEM 2.0 tariff costs "because of complexities that arise from alignment of the billing cycle for benefiting customers in VNEM [tariffs], customer turnover, and necessitation of manual validation."[79] For the DER Shared Tariff, all benefiting accounts would need to be on the same billing cycle, resulting in additional manual billing steps when benefiting accounts change owners and leading to higher costs.[80] Utilities also contend that the increased variability and complexity of the DER Shared Tariff could lead to increased calls at customer call centers, which would result in increased costs.[81] The Commission agrees with Utilities and finds that the DER Shared Tariff will lead to increased cost.

With respect to equity concerns, the Commission finds that the DER Shared Tariff could result in inequities for benefiting accounts. As parties have indicated, residential multitenant properties are predominantly lower-income households, and predictability and low bills are crucial. As the Commission has already determined, because credits in the DER Shared Tariff will vary based on actual energy consumption of the entire property, it will be difficult for an individual household to predict the cost of using energy during generation

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[79] Utilities Opening Comments to February 28 Ruling at 3.

[80] Utilities Reply Comments to February 28 Ruling at 7.

[81] Utilities Reply Comments to February 28 Ruling at 7.

hours. Benefiting accounts under the DER Shared Tariff would not know the best times to use energy or abstain from using energy. This lack of predictability and ability to ensure low bills limits equity, a requirement of this tariff. On a related matter, the Commission does not agree with Utilities that the DER Shared Tariff could create inequity between benefiting accounts. Utilities question whether it is fair that a benefiting account holder who uses more energy during the day would receive higher benefits from the DER Shared Tariff compared to a benefiting account holder who does not work from home. However, Ivy Energy explains that the proposal would allow a utility to add up all the bill credits gained through property-level netting and distribute them, with a pre-allocated percentage to each benefiting account, which is the current practice. Hence, if a participating tenant is using energy coincident with generation, the tenant is earning more bill credits for **all** participating tenants.[82]

Lastly, the Commission concludes that the property netting component of the DER Shared Tariff potentially conflicts with Pub. Util. Code §780.5, which requires "every residential unit in an apartment house or similar multiunit residential structure, condominium, and mobile home park for which a building permit has been obtained on or after July 1, 1982, other than a dormitory or other housing accommodation provided by any postsecondary educational institution for its students or employees and other than farmworker housing, to be individually metered for electrical and gas service." The Commission recognizes that, in the DER Shared Tariff, benefiting account holders would maintain an electric meter. However, this tariff proposal removes the price signal from customers resulting in treating the property like a master-metered property,

[82] *See* Ivy Energy Opening Comments to February 28 Ruling at 2 and 30 (Appendix A).

which conflicts with the intention of Section 780.5: to allow tenants to adjust their own behavior (*e.g.*, load shifting or conservation) based on price signals.

In addition to the conflicts and barriers described above, the Commission also finds that the DER Shared Tariff will cause a cost shift similar to that of the current VNEM tariff. The property netting and accounting of onsite consumption and exports could result in virtually all generation produced on a property earning credits equal in value to the retail import rate. Utilities reiterate that the Commission has already determined in D.22-12-056, that "retail rates do not reflect the actual cost of the exports or the benefits the exports provide to all customers and the grid" and, therefore, "continuing to base export compensation rates on retail import rates does not comply with Pub. Util. Code §2827.1."[83] Finally, because the DER Shared Tariff property netting does not accurately reflect each customers' usage, customers are not being assessed for their fair share of transmission, distribution, generation, and non-bypassable charges.

For all the reasons described above, the Commission should not adopt the DER Shared Tariff as proposed by Ivy Energy.

3.1.5.3. Adoption of the Virtual Net Billing Tariff

Returning to the virtual net billing tariff proposed by Utilities, this decision reviews several claims made by Utilities in support of the proposal as well as claims in opposition to the proposal. As described below, the Commission finds that the Utilities' proposal as modified herein presents the best option for a successor to the VNEM tariff that balances the competing requirements of the Guiding Principles and the statute. The Commission adopts a modified version of the virtual net billing tariff to be implemented by Utilities

[83] Utilities Reply Comments to February 28 Ruling at 9-10 citing D.22-12-056 at 104.

no later than six months from the adoption of this decision. The current VNEM tariff will sunset 90 days from the adoption of this decision. The smaller footprint of the tariff enables a shorter implementation time and sunset time period. As was the case with the NEM 2.0 tariff, completed applications received no later than the sunset day will be processed as a VNEM tariff application.

No later than 90 days from the adoption of this decision, Utilities shall submit a Tier 2 advice letter implementing the adopted virtual net billing tariff as described in this decision. Further, no later than 45 days from the adoption of this decision, Utilities shall submit a Tier 1 advice letter updating the current VNEM tariff as discussed herein.

As the Commission previously determined that basing export rates on values derived from the Avoided Cost Calculator "brings the cost of the successor tariff closer to its value," this decision finds that mirroring this in a VNEM tariff successor would be an appropriate step and would send the correct price signals to benefiting account holders. Sending correct price signals leads to tariff customers providing the greatest benefits to the grid, an objective of the successor tariff. Nothing presented in this proceeding leads the Commission to alter its prior determination to base retail export compensation rates on Avoided Cost Calculator values. Accordingly, the Commission should adopt use of the Avoided Cost Calculator to determine retail export compensation rates for the successor VNEM tariff.

CALSSA contends that if the Commission adopts the Utilities' proposal, *i.e.*, basing export compensation on Avoided Cost Calculator values, the Commission must include property-wide onsite netting with exports valued at the Avoided Cost Calculator with appropriate ACC Plus adders.[84] SEIA concurs with CALSSA, stating that property-wide netting reflects what is happening on the grid. SEIA asserts that the amount of generation measured by the NGOM should be compared to the combined consumption of all benefiting accounts for each billing interval to determine the amount of energy used onsite and the amount of energy imported, with only the energy actually exported to the grid compensated with Avoided Cost Calculator values.[85]

With respect to calls that property-wide netting is needed, the Commission disagrees. In D.22-12-056, the Commission created a tariff for customers with onsite generation that serves the customer load behind the same meter as the Generation Facility. These customers self-consume their own generation before exporting it to the grid. In the net billing tariff, customers are compensated for "net exports," not all exports. In the Utilities' virtual net billing tariff proposal, benefiting accounts would be compensated for their allocation of ***all*** exports. The Commission finds this to be a fair distribution of export compensation value, thus negating the need for netting.

Utilities propose that a utility would assign a percentage of the Generation Facility's export compensation to each benefiting account each month as a credit on the benefiting account holder's bill and that the credit can offset any portion of the bill. The current VNEM tariff assesses non-bypassable charges based on each benefiting account holders' monthly metered usage. The Utilities' proposal would create a new cost shift, in that non-bypassable charges could be offset. The

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[84] CALSSA Reply Comments to February 28 Ruling at 1-2. CALSSA continues to oppose use of the Avoided Cost Calculator values contending that the Avoided Cost Calculator underestimates the value of distributed energy resources.

[85] SEIA Reply Comments to February 28 Ruling at 4-5.

Commission finds this proposal would not comply with the statute's requirement to ensure the costs and benefits of the tariff are equal to all ratepayers. Utilities' proposal to allow the export compensation credit to offset any portion of the bill would increase the cost for nonparticipants, leading to higher bills for nonparticipants. Hence, the Commission should not allow the export compensation credit to reduce a benefiting account's non-bypassable or fixed charges. Utilities are directed to align this aspect of the successor virtual net billing tariff with the disposition of pending advice letters for the adopted net billing tariff.[86]

Utilities propose that eligibility, size to load, and metering requirements should all remain consistent with the current VNEM tariff. This decision finds nothing in the record to warrant a change to these elements. The Commission should maintain the existing eligibility, size to load, and metering requirements in the successor VNEM tariff. Relatedly, Utilities propose to maintain the annual true-up to determine whether the aggregate onsite generation exceeds the aggregated usage of the benefiting accounts. The Commission finds this to be reasonable as it complies with the net surplus compensation rules, which the Commission maintained in D.22-12-056.[87] Accordingly, the Commission should maintain the current annual true-up process.

Utilities assert that benefiting account holders should take service on any currently available rate schedule because "bill credits are divorced from the rate design on which they take service." This is not the current practice of the VNEM tariff. Requiring benefiting account holders to take service on electrification rates

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[86] *See* PG&E Advice Letter 6848-E, SCE Advice Letter 4961-E, and SDG&E Advice Letter 4155-E.

[87] D.22-12-056 at Ordering Paragraph 1(e) and Conclusion of Law No. 86. *See* also discussion of net surplus compensation in D.22-1-056 at 161-163.

would not make sense, as customers occupying multitenant properties do not have the opportunity to install storage in their individual units.[88] The Commission should allow benefiting account holders of the virtual net billing tariff to take service on any currently available rate schedule because, as the Commission has already determined, the benefiting account holder's retail import rate tariff is not impacted by the timing of the Generation Facility's energy production. While the Commission found in D.22-12-056 that time of use rates would incentivize customers to divert energy usage to lower-priced periods when the solar [system] is producing energy, that finding does not apply to the virtual net billing tariff.[89] A virtual net billing tariff benefiting account does not get more or less value from their Generating Facility as the account holder shifts their usage patterns.

Relatedly, SEIA requested that successor VNEM tariff customers be permitted to fully participate in demand response or emergency reliability programs with the caveat that incentives be based on an individual customer's load and do not include excess generation exported to the grid during a demand response event.[90] The Commission finds this a reasonable request, given that in the successor VNEM tariff, the load from the Generation Facility will not be applied to benefiting accounts. The Commission has encouraged increased participation in demand response programs to help meet the Commission's climate objectives. The Commission should allow virtual net benefiting tariff customers to participate in demand response or emergency reliability programs.

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[88] CALSSA Opening Comments to February 28 Ruling at 11 and SEIA Opening Comments to February 28 Ruling at 9-10.

[89] D.22-12-056 at Finding of Fact 11.

[90] SEIA Opening Comments to February 28 Ruling at 14.

Utilities propose that residential benefiting account holders should receive export compensation closer to that provided to residential customers on the net billing tariff. Utilities consider this higher compensation to be similar to the ACC Plus adder provided to residential customers in the net billing tariff. Noting that the primary purpose of the VNEM tariff is to enable solar installations for multifamily housing and the net billing tariff does not provide this adder to nonresidential customers, Utilities do not recommend an adder for nonresidential benefiting accounts.[91]

CALSSA offers an option for a glide path based on the ACC Plus. Although CALSSA contends D.22-12-056 "went too far in export rate granularity," CALSSA submits that "for the sake of consistency, the base export rates in the VNEM tariff successor should be the same as in the net billing tariff" with "export rate adders on top of the base export rates."[92] Asserting that the tariff "predominantly serves renters and small businesses," CALSSA recommends that "VNEM [tariff] systems that do not meet the [Low Middle Income and Disadvantaged Communities] eligibility criteria should still receive export compensation higher than the base Avoided Cost Calculator [-based export compensation retail] rates."[93] As presented in Table 8 below, CALSSA submits that adders for low- and medium-income and disadvantaged communities (LMI/DAC) should begin at a level that equates to current export value.

Table 8

[91] Utilities Opening Comments to February 28 Ruling at 6.

[92] CALSSA Opening Comments to February 28 Ruling at 10.

[93] CALSSA Opening Comments to February 28 Ruling at 10.

Current VNEM Tariff Export Value and Recommended Export Rate Adders[94]						
		Current Export Value	2024 Average ACC Value	Adder Needed for Equivalency	CALSSA Recommended 2024 Adder	
Residential CARE	PG&E	0.215	0.043	0.172	LMI/DAC	0.172
	SCE	0.189	0.044	0.145		0.145
	SDG&E	0.280	0.044	0.236		0.236
Non-CARE Residential	PG&E	0.307	0.043	0.264	Residential Non-LMI/DAC	0.264
	SCE	0.245	0.044	0.201		0.201
	SDG&E	0.407	0.044	0.363		0.363
Medium Commercial	PG&E	0.159	0.048	0.111	Non Residential	0.111
	SCE	0.120	0.046	0.074		0.074
	SDG&E	0.207	0.048	0.159		0.159

In D.22-12-056, the Commission determined that the purpose of the ACC Plus is to support the sustainable growth of distributed generation in California and the construct of the ACC Plus is to provide a targeted nine-year payback period to successor tariff customers.[95] The Commission maintains this purpose and construct here. Parties continue to coalesce around the ACC Plus, thus the Commission agrees the ACC Plus should continue to be used as a glide path for the successor VNEM tariff. The disagreement focuses on the amount of the adder and the eligibility criteria.

[94] CALSSA Opening Comments to February Ruling at 10. CALSSA offers a footnote stating that: Rate schedules used for medium commercial are Schedule B-19-R for PG&E, Schedule TOU-GS2-E for SCE, and Schedule DG-R for SDG&E. The 2024 average ACC values are slightly different between residential and commercial due to differences in typical load profiles and the resulting hours when energy is exported.

[95] D.22-12-056 at 157.

As an aside, SEIA states that the record of this proceeding does not contain an accurate estimate of the costs of VNEM tariff systems.[96] As discussed above, the Commission provided parties ample opportunity to put on the record the unique quantifiable costs of the current VNEM tariff, including claimed interconnection upgrades and sophisticated wiring costs. Parties provided little to no **quantifiable** cost differences between the NEM 2.0 and the VNEM tariffs. The Commission should move forward with its determinations on the VNEM tariff based on this record.

SEIA contends that "the Commission should apply the same adders to the VNEM tariffs as was done in D.22-12-056 for low-income customers, customers living in disadvantaged communities or on tribal land," which would be $0.087/kWh for customers in PG&E territory and $0.093/kWh for customers in SCE's territory.[97] SEIA underscores that the median household income for all California residential renters is only $42,000.[98] SEIA also recommends a stepped down approach over the course of five years, at 20 percent each year after implementation.[99]

Turning to eligibility, previously in this decision the Commission found that nonresidential benefiting accounts create a per VNEM tariff customer cost shift of approximately $15,300 for nonresidential benefiting account holders in PG&E territory. While adoption of the virtual net billing tariff will decrease the future per tariff customer cost shift, providing the additional adder would negate

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[96] SEIA Opening Comments to February 28 Ruling at 11.

[97] SEIA Opening Comments to February Ruling at 11 citing D.22-12-056. Note: Ordering Paragraph 1b of the decision adopted an adder of $.090/kWh for PG&E territory and $0.093/kWh for SCE territory.

[98] SEIA Opening Comments to February 28 Ruling at 11 citing IVY-003.

[99] SEIA Opening Comments to February 28 Ruling at 11-12.

some of these savings. Accordingly, the Commission should not adopt ACC Plus adders for nonresidential customers participating in the successor VNEM tariff.

Based upon the record of this proceeding, the Commission adopts the ACC Plus adders in Table 9 below for all residential virtual net billing tariff benefiting account holders, including those in the SDG&E territory. These adders will be provided to low-income participants in the virtual net billing tariff to assist them in achieving a simple payback period of nine years. The Commission finds these adders also meet the purpose of enabling sustainable growth in the industry and recognize the general characteristics of residential customers enrolled in the current VNEM tariff, *i.e.*, lower-income households.

Table 9

ACC Plus Adders For Residential Benefiting Account Holders Participating in the Virtual Net Billing Tariff	
Utility	**ACC Plus Adder**
PG&E	$0.163/kWh
SCE	$0.139/kWh
SDG&E	$0.141/kWh

As was the case with the ACC Plus in D.22-12-056, the adders in Table 9 above will be available to new residential enrollees in the virtual net billing tariff for the first five years of implementation but will step down by 20 percent each year to an adder equal to 20 percent of the values in Table 9 in year five and, ultimately, no adder beginning in year six. Further mirroring D.22-12-056, a new enrollee qualifying for the adder will maintain the adder at a fixed level for nine years, (*i.e.*, the anticipated simple payback period).

In D.22-12-056, the Commission determined that the nine-year legacy period for a customer participating in the net billing tariff should be tied to the original owner of the Generation Facility, not the facility itself. In this decision, the Commission takes a different approach for residential participants in the virtual net billing tariff. As has been discussed throughout Section 3.1.5, there are unique circumstances for customers participating in a virtual net energy or net billing tariff. First, residential multifamily tenants (in particular, renters) on the VNEM tariff are not the decisionmakers for adding Generation Facilities, do not set their credit allocation, and do not have control over the sale of the property. However, as pointed out by Ivy Energy, these tariff customers pay for the Generation Facility on the property.[100] Accordingly, the Commission should tie the nine-year legacy period to the Generation Facility associated with the property, rather than the original property owner. Hence, during the course of the nine years from interconnection date, if the system owner changes, the subsequent system owner continues the legacy period. Likewise, if a participating tariff customer leaves the property, the remaining years of the legacy period will transfer to the subsequent tariff customer. This includes benefiting account holders (*i.e.*, tenants) and generating account holders (*i.e.*, property owners). The Commission finds that the cost to ratepayers of allowing this treatment is outweighed by the potential harm to the residential benefiting account participants who would otherwise continue to bear their cost of the system without the benefit of the adder.

In D.22-12-056, the Commission adopted two new requirements that should be considered within the terms of the virtual net billing tariff. First, the Commission determined that a customer currently taking service under a net energy metering or net billing tariff could add a storage device to their existing

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[100] *See* Ivy Energy Presentation in February 28 Ruling at Attachment 1 stating, "[t]he split incentive problem being fixed is driving [VNEM] growth."

Generation Facility without altering their tariff status, including the legacy period. The Commission finds it consistent to adopt the same allowance for the current VNEM tariff and the newly adopted virtual net billing tariff. Utilities shall update all current VNEM tariffs to align with this directive, including SOMAH and MASH tariffs. A Tier 1 advice letter shall be submitted no later than 45 days after the adoption of this decision implementing the changes to the current VNEM tariff.

Relatedly, the Commission directed Utilities to identify all utility-approved pathways, to facilitate installation of storage for resiliency. Utilities have since amended the current VNEM tariffs (including the low-income VNEM tariffs) to permit operation in isolation of the Generation Facilities, including storage devices, to serve onsite loads during planned or emergency outages.[101] Utilities shall make this pathway available in the virtual net billing tariff. The Commission finds that because this pathway does not permit any load to register on either generating account or benefiting account meters, it does not impact the retail export compensation rate in the virtual net billing tariff. The Commission finds nothing prohibiting the continuation of this pathway in the virtual net billing tariff. Accordingly, the Commission should require the continuation of this pathway in the successor VNEM tariff.

3.1.5.4. Stand-Alone Requests for Changes Related to the VNEM Tariff

The Commission reviewed additional recommendations for the VNEM successor tariff.

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[101] *See* SDG&E Advice Letter 4119-E-A, disposed on May 9, 2023; PG&E Advice Letter 6792-E-A, disposed on May 5, 2023; and SCE Advice Letter 4917-E-A, disposed on May 5, 2023.

The Commission finds that there should be a more efficient process to update the holder of a benefiting account when a tenant moves in and out of a property unit. CALSSA makes three recommendations. First, CALSSA recommends that the VNEM successor tariff should automatically switch to a new tenant, *i.e.*, benefiting account holder.[102] CALSSA explains that currently when a new tenant moves into a unit that previously received VNEM tariff credits, the property owner would have to wait until the next annual allocation update to add the new tenant as the benefiting account holder; alternatively, the property owner could pay a fee to update the benefiting account holder outside of the annual update. Second, CALSSA also recommends that an option to facilitate the process for addressing the changeover of tenants is to allow vacant units to stay enrolled in the VNEM tariff at a zero percent allocation level.[103] The Commission finds these two requests should make the process more efficient for addressing the change of benefit account holders and should, therefore, be adopted.

Accordingly, the Commission adopts both the automatic changeover of tenants and the zero percent allocation on a unit benefiting account (either residential or nonresidential) for the current VNEM tariff and the adopted virtual net billing tariff, including the MASH and SOMAH low-income tariffs. As previously discussed, the new benefiting account holders will be eligible for all benefits in the current legacy period for that property. However, the Commission establishes a 90-day time limit for the zero percent allocation level to ensure the accounts designated as such become active.

[102] CALSSA Opening Comments to February 28 Ruling at 7-8.

[103] CALSSA Opening Comments to February 28 Ruling at 7-8.

With respect to CALSSA's third recommendation regarding a customer's CARE discount, this decision concluded in Section 3.1.4.5 above that the statute prohibits a property manager from taking over a customer account and therefore also prohibits taking over a customer's CARE benefits. The Commission should decline CALSSA's request to allow a generating account to "take over" a benefiting account and a customer's CARE benefits.

Parties were asked to propose new or revised tariff elements that would enable a VNEM successor tariff with storage to provide benefits. Utilities and CALSSA assert that setting export rates at Avoided Cost Calculator values or ACC Plus values should provide the appropriate price signal to encourage storage adoption.[104] Relatedly, SBUA recommends the Commission revise the tariff to permit grid charging of onsite batteries both to encourage the adoption of storage and to function as a microgrid during public safety shut-offs.[105] SBUA submits that, while not clear, the prohibition could be connected to California Energy Commission Renewable Energy Credits (REC) rules that only permit these credits be issued for power generation by eligible renewable energy system, not power drawn from the grid.[106] SBUA asserts there is no reason to distort system design to produce REC that the Lookback Study has confirmed are unfavorable.[107] The Commission finds two faults with the recommendations regarding grid charging. First, Pub. Util. Code §2827.1(a) states that Generation Facilities shall have the same meanings as defined in Pub. Util. Code §2827,

[104] Utilities Opening Comments to February 28 Ruling at 12 and CALSSA Opening Comments to February 28 Ruling at 14.

[105] SBUA Opening Comments to February 28 Ruling at 3-4.

[106] SBUA Opening Comments to February 28 Ruling at 3.

[107] SBUA Opening Comments to February 28 Ruling at 3.

which defines the term as a facility that generates electricity from a renewable source listed in paragraph (1) of subdivision (a) of Section 25741 of the Public Resources Code, which does not include stand-alone batteries. Second, beyond the legal conflict, this would be challenging to accurately measure and provide export credits. Accordingly, the Commission should deny these requests.

Relatedly, CALSSA and SBUA recommend that storage should be able to charge from the grid prior to a planned outage.[108] CALSSA highlights that some storage aggregators have integrated control systems with Public Safety Power Shutoff alert systems to maximize resiliency.[109] The current VNEM tariff limits storage device charging to solely from the Generation Facility. While Utilities prefer to maintain this limitation, Utilities express a willingness to support a technical solution.[110] Utilities assert that there are no current certifications for power control systems with the right capabilities and caution the importance of maintaining the integrity of the Generation Facility in a virtual arrangement.[111] Parties appear to agree that a technical solution could exist. The Commission should require Utilities to lead a process to find a consensus approach to allow a virtual net billing tariff customer to charge their storage device from the grid prior to a planned Public Safety Power Shutoff for the purpose of resiliency. Accordingly, within 90 days of adoption of this decision, Utilities shall host a public workshop to discuss this matter and no later than 90 days following the workshop, submit a Tier 2 advice letter proposing language to update both the

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[108] *See* SBUA Opening Comments to February 28 Ruling at 4 and CALSSA Opening Comments to February 28 Ruling at 13.

[109] CALSSA Opening Comments to February 28 Ruling at 13.

[110] Utilities Reply Comments to February 28 Ruling at 13.

[111] Utilities Reply Comments to February 28 Ruling at 17.

VNEM tariff and the virtual net billing tariff to permit grid charging prior to Public Safety Power Shutoffs or other planned outages.

The Commission asked parties to comment on whether customers on the current VNEM tariff experience delays in receiving bill credits after permission to operate is granted. CALSSA contends that delays of three to four months are the norm, which cause harm to property owners and tenants facing financing or leasing payments.[112] CALSSA recommends requiring Utilities to report on key factors, *e.g.*, number of calendar days between the permit to operate and completing the billing system integration for each project.[113] Utilities submit there are interconnection and internal process improvements that could be evaluated to make further progress but assert recent evaluations have led to improvements.[114] The Commission finds merit in the request to track progress in the processes causing the delays for virtual net energy metering and, potentially, virtual net billing customers. Utilities are directed to submit a bi-annual report on these processes to the Energy Division and the service list for this proceeding. No later than 90 days from the adoption of this decision, Utilities shall meet with the Energy Division to develop the contents of the report. The first report shall be submitted no later than 120 days from the effective date of this decision and every six months, thereafter.

Lastly, parties were asked about fees for the current VNEM tariff and if these fees should be modified for the successor tariff. Utilities request the Commission to allow a utility to update billing fees for virtual net energy metering or virtual net billing arrangements, contending that costs of billing

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[112] CALSSA Opening Comments to February 28 Ruling at 13.

[113] CALSSA Opening Comments to February Ruling at 13.

[114] Utilities Opening Comments to February Ruling at 10.

setup and maintenance for these arrangements change over time. Utilities note that the Commission provided for the ability to change interconnection fees using a Tier 2 advice letter and ask for a similar mechanism to update billing fees for virtual arrangements.[115] Noting that many fees related to the VNEM tariff (set up fees and account modifications) were established 10 years ago, SEIA submits it is reasonable to adjust these to account for inflation.[116] The Commission finds it reasonable to request such adjustments to fees, given the amount of time that has elapsed since the fees were first established. For regulatory efficiency, the Commission finds it reasonable to expand this request to all Utilities' administrative fees related to all VNEM tariffs and virtual net billing tariffs but requires that the adjustments be based solely on inflation, as suggested by SEIA. Further, inflation rates will be based on the California Department of Finance's California Consumer Price Index current weighted state average from the past 12 months. Utilities are authorized to individually submit on an annual basis one single Tier 2 advice letter requesting adjustments to the fees related to the VNEM tariff and virtual net billing tariff.

3.1.5.5. Implementation Plan for the Virtual Net Billing Tariff

This decision has discussed several aspects of the implementation of the virtual net billing tariff. A complete list of required steps is provided below.

Step 0: The Sunset Period of the current VNEM tariff begins with the adoption of this decision. Customers submitting a completed interconnection application prior to the end of the Sunset Period will be considered applicable for the current VNEM tariff.

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[115] Utilities Opening Comments to February 28 Ruling at 12.

[116] SEIA Opening Comments to February Ruling at 12-13.

Step 1a: Within 90 days of the adoption of this decision, Utilities shall each submit a Tier 2 advice letter to provide the details of the successor virtual net billing tariff, as adopted in this decision. Utilities shall coordinate before submitting the advice letters to ensure language uniformity, to the extent possible. The individual advice letters shall summarize Utilities' interpretation of how the successor virtual net billing tariff will be structured and include indicative levels of price components and rate factors based on the applicable revenue and associated tariff sheets. Utilities shall ensure language uniformity. Utilities shall separately submit a Tier 2 advice letter updating their current VNEM tariff to align with directives in this decision.

Step 1b: No later than 90 days after the adoption of this decision, Utilities will implement a tariff sunset on the current VNEM tariff, after which time, no additional customers will be permitted to take service under this tariff. Customers with an interconnection application date **after** this Sunset Date, will take service and be billed on the current VNEM tariff on an interim basis and transition to the virtual net billing tariff once it is operational. The VNEM tariff legacy period is not applicable in this case. The interconnection application date for residential customers is defined as the submission date of an application that is free of major deficiencies and includes a complete application, a signed contract, a single-line diagram, a complete California Contractors State License Board Solar Energy System Disclosure Document (if applicable), a signed California Solar Consumer Protection Guide (if applicable), Prevailing Wage Disclosure Form (if applicable, *see* Section 3.3) and an oversizing attestation (if applicable).

The interconnection application date for nonresidential customers is defined as the submission date of an application that is free of major deficiencies and includes a complete application, a signed Authorization to Act on a Customer's Behalf, the selection of a single-line diagram, Prevailing Wage Disclosure Form (if applicable) and an oversizing attestation (if applicable).

Utilities are granted the discretion to give VNEM tariff eligibility to a customer if a delay in meeting the Sunset Date is caused by the utility. Utilities shall work collaboratively to address challenging situations in deeming applications complete.

Step 2: Six months following adoption of this decision, Utilities shall complete alignment of related necessary billing systems and transition to full implementation of the virtual net billing tariff.

Step 3: No later than three years from the interconnection application submission date, all customers seeking to interconnect to the VNEM tariff shall submit final building permit sign off and electrical clearing by the authority having jurisdiction to the Utilities.

3.1.6. SOMAH and MASH Tariff

In D.08-10-036, the Commission created the MASH program, based on a virtual net energy metering approach. In D.17-12-022, the Commission directed the creation of the SOMAH tariff to provide incentives for the installation of solar distributed generation projects sited on existing multifamily affordable housing.[117] In D.22-12-056, the Commission determined that it should maintain the current structure of the low-income VNEM tariffs until review of findings from the affordability proceeding and the SOMAH evaluation is conducted.[118]

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[117] D.17-12-022 at Ordering Paragraph 3.

[118] D.22-12-056 at Conclusion of Law 42.

CSE, GRID, and Sunrun support the continuation of the SOMAH VNEM tariff in its current form to ensure solar access to the unique low-income customer segment. CSE asserts that the Commission has recently committed to the continuation of SOMAH through adoption of D.23-03-007, which increased the program's incentive levels and will likely bolster program participation.[119] CSE underscores that with SOMAH "set to sunset in 2030, instituting a new tariff at this point will cause disruption for the program and its participants."[120] Sunrun contends that a net billing approach would substantially diminish the incentive for property owners to participate in SOMAH.[121]

Sunrun submits that the VNEM tariff used in the SOMAH program is distinct from other VNEM tariffs in law and Commission precedent.[122] Sunrun points to several examples of this distinction: (1) bill savings are a statutory requirement;[123] (2) the VNEM tariff is historically intertwined with SOMAH given the VNEM tariff's genesis in MASH, the predecessor of SOMAH; (3) SOMAH is not a market transformation program but rather a subsidy to low-income housing; (4) SOMAH properties must be deed-restricted affordable housing;[124] (5) SOMAH is a capped, time-limited program;[125] (6) SOMAH will

119 CSE Reply Comments to February 28 Ruling at 2.

120 CSE Reply Comments to February 28 Ruling at 2.

121 Sunrun Reply Comments to February 28 Ruling at 11.

122 Sunrun Opening Comments to February 28 Ruling at 4.

123 Pub. Util. Code §2870(g)(1) states: "Low-income tenants who participate in the program shall receive credits on utility bills from the program. The commission shall ensure that utility bill reductions are achieved through tariffs that allow for the allocation of credits, such as virtual net metering tariffs designed for Multifamily Affordable Solar Housing Program participants, or other tariffs that may be adopted by the commission pursuant to Section 2827.1."

124 Pub. Util. Code §2870(a)(3).

125 Pub. Util. Code §2870.

impact a small number of ratepayers relative to all utility customers; and (7) the regulatory environment for deed-restricted housing imposes constraints to SOMAH which stifles changes.[126] The Commission agrees that SOMAH is distinct from the general VNEM tariff.

Sunrun asserts that maintaining the SOMAH tariff in its current form is important to its continuation, noting that the tariff is one of two elements of the SOMAH program; the second element is a rebate. Sunrun maintains the VNEM tariff-driven reduction in the property electricity cost is essential to motivate a property owner's participation because it is a precondition for accessing the rebates to pay for the solar; the owner receives zero financial benefit from providing solar to the property's residents.[127] Sunrun highlights that the SOMAH tariff helps achieve the clean energy equity goals reflected in Pub. Util. Code §2827.1. In replies, SEIA, concurring with Sunrun, recommends the Commission allow the SOMAH VNEM tariff "to continue under its current construct so as to achieve its statutory goal."[128]

The Commission agrees that it is beneficial to continue the SOMAH tariff as-is to maximize bill benefits so that property owners have the proper incentive to participate and so that tenants continue to receive lower monthly electricity bills through the SOMAH credits. The Commission finds that these benefits justify any cost shift this program may cause. Accordingly, the Commission should not make any changes to the SOMAH tariff.

The February 28 Ruling asked parties to comment on whether details of the SOMAH or MASH tariff should be adjusted, however, no party discussed the

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[126] Sunrun Opening Comments to February 28 Ruling at 4-7.

[127] Sunrun Opening Comments to February 28 Ruling at 8.

[128] SEIA Reply Comments to February 28 Ruling at 7.

MASH tariff. While the MASH program ended in December 2022, the MASH tariff remains open for new enrollees meeting the eligibility requirements; receiving an incentive from the MASH program is not a requirement. However, only affordable multifamily housing properties that comply with Pub. Util. Code §2852(a)(3)(A) may access the tariff.

Consistent with the finding above for the SOMAH tariff, the MASH tariff should remain open so that property owners have an incentive to participate, and tenants continue to receive lower monthly electricity bills. However, given that the MASH program has closed, and its tariff is similar to the SOMAH tariff, the Commission finds it reasonable to close the MASH tariff to new enrollees when the SOMAH tariff closes. The Commission may consider whether a low-income, affordable multifamily housing customer generation tariff should be continued during deliberations in the net billing tariff evaluation proceeding.

3.2. Adoption of an Aggregation Subtariff

Below, this decision concludes that it is reasonable to replace the NEMA subtariff with a new Aggregation subtariff that aligns with the net billing tariff adopted in D.22-12-056. Contrary to the arguments of the Agricultural Parties, the Commission concludes that it is not required to continue to provide the NEMA subtariff to new customers. The current NEMA subtariff will remain intact with no changes for currently enrolled customers until the end of their current legacy period. In Section 3.1.5.3 above, the Commission clarified that the addition of storage to an existing VNEM tariff system does not impact a customer's legacy period, and the Commission adopts the same policy for the NEMA subtariff. As is the case with the VNEM tariff above, this decision establishes a Sunset Period of three months for the current NEMA subtariff.

3.2.1. History and Description of NEMA Subtariff

California established the NEMA subtariff of the Net Energy Metering tariff through Senate Bill (SB) 594 (Wolk, Stats. 2012, ch. 610) to allow an eligible customer-generator with multiple meters to aggregate the electrical load of the meters located on the property where the Generation Facility is located or on property contiguous to that with the Generation Facility. The purpose of the legislation was to amend Pub. Util. Code §2827 to allow a customer to install one Generation Facility sized to serve the entire load of these meters (up to one megawatt) as opposed to separate facilities at each meter. This was predicated on the Commission making a determination that aggregating the load from multiple meters would not result in an increase in the costs for customers not participating in the net energy metering tariff. The Commission made such a finding in Resolution E-4610.[129] The statute prohibits an eligible customer-generator that chooses to aggregate from receiving net surplus electricity compensation.

In D.22-12-056, the Commission found the record for the NEMA subtariff insufficient to make any changes at that time. The Commission concluded it should conduct a more thorough analysis of the subtariff. D.22-12-056 retained the NEMA subtariff until such analysis could take place.

According to the current NEMA subtariff, a customer-generator with multiple meters may choose to aggregate the electrical load of the meters located on the property where the Generation Facility is located or on property

[129] Resolution E-4610, adopted by the Commission on September 19, 2013, found that based on key assumptions in the 2010 Net Energy Metering cost benefit study, allowing eligible customer-generators to aggregate their load from multiple meters will not result in an increase in the expected revenue obligations of customers who are not eligible customer-generators. (Res. E-4610 at Finding No. 9.)

contiguous to the Generation Facility. These customers can take service on any import rate for which they would otherwise be eligible; exports are valued at the retail import rate. NEMA subtariff customers have temporal netting on one-hour intervals for residential customers and 15-minute intervals for nonresidential customers. NEMA subtariff customers have a one-time setup charge of $25 per aggregated account and a $5 monthly charge for each aggregated account; these charges subsidize the additional billing needs required by Pub. Util. Code §2827(h).

Currently, Utilities have approximately 13,000 properties interconnected to the grid under a NEMA subtariff with a cumulative solar capacity of approximately 1,000 MW. PG&E provided a 2022 snapshot of the types of properties interconnected under the NEMA subtariff in its service territory, noting that participation is evenly distributed between residential (2,307 properties), nonresidential (2,357), and mixed residential and nonresidential properties (2,387).[130] However, the cumulative capacity of these three property types range from 25.95 MW for the residential properties to 557.9 MW for the nonresidential properties.[131] Of the 7,051 properties in PG&E territory, 1,839 were in disadvantaged communities with a solar capacity of 371.3 MW.[132]

Utilities note that the number of combined storage and solar installations currently participating in the NEMA subtariff is low: 181 of the 13,000 NEMA subtariff properties have solar and storage in front of the meter, accounting for 10.7 MW of solar capacity and 5.7 MW of storage capacity.[133] Behind-the-meter

[130] Utilities Opening Comments to February 28 Ruling at 14.

[131] Utilities Opening Comments to February 28 Ruling at 14.

[132] Utilities Opening Comments to February 28 Ruling at 14.

[133] Utilities Opening Comments to February 28 Ruling at 15.

storage accounts for less battery storage, with 90 properties having batteries installed. Thus, less than two percent (271) of the 13,000 NEMA subtariff properties have combined solar and storage systems.

3.2.2. Party Proposals for NEMA Subtariff

Five parties offer proposals for the NEMA subtariff. In this section, the Commission provides a brief overview of each party's proposal.

Agricultural Parties propose the Commission make no changes to the NEMA subtariff, contending "the Legislature did not bring NEMA under the NEM 2.0 framework when it subsequently enacted AB 327."[134] Notwithstanding this, Agricultural Parties assert that the Commission "has the discretion…to maintain the [Pub. Util. Code §]2827(h) credit and debit provisions, crediting methodology, and annual true-up in a successor NEMA program."[135]

Clean Coalition also proposes retaining the current NEMA subtariff with a modification that the export compensation be increased and demand charges be decreased. Clean Coalition asserts that the current tariff undervalues the benefits a NEMA subtariff system provides and contends reducing demand charges will incentivize the deployment of combined solar and storage systems while sending the correct signals for grid usage.[136]

CALSSA proposes allowing all customers with physically adjoining properties to participate in a modified NEMA subtariff based on the net billing tariff but with an ACC Plus adder that would initially keep NEMA subtariff export compensation at current levels but phase out in equal increments over ten

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[134] D.22-12-056 at 184 citing Agricultural Energy Consumers Association Opening Comments to February 28 Ruling at 7-9. *See also* Agricultural Parties Opening Comments to February 28 Ruling at 1-2.

[135] Agricultural Parties Opening Comments to February 28 Ruling at 17.

[136] Clean Coalition Opening Comments to February 28 Ruling at 3-4.

years.[137] CALSSA's proposal allows that an enrolling customer would lock in the ACC Plus value for nine years from interconnection. This modified ACC Plus adder would result in the same current payback periods but then increase over the course of ten years. CALSSA's Modified NEMA subtariff would include property-wide 15-minute netting intervals, which CALSSA contends is the single most important element of the NEMA subtariff successor.[138] CALSSA asserts any major change to the NEMA subtariff will lead to the inability to meet the statutory obligation that distributed generation continues to grow sustainably. CALSSA contends its proposed Modified NEMA subtariff, with gradual reductions in export rates, would create the same market dynamics in the short term as the current NEMA subtariff and, therefore, the same economics for prospective customers.[139]

Utilities propose the Commission replace the NEMA subtariff with a subtariff that aligns with the net billing tariff; they refer to this as net billing tariff aggregation. In the Utilities' proposal, the export rates are based on the Avoided Cost Calculator values, no netting is applied, and net billing tariff applicable import rates are required. Utilities contend that their proposal "would encourage participating generation accounts to export their generation at times that are most beneficial to the grid, thereby reducing emissions and increasing grid reliability."[140] The Utilities proposal does not change the bill credit allocation

[137] CALSSA Opening Comments to February 28 Ruling at 22-26.

[138] CALSSA Opening Comments to February 28 Ruling at 24.

[139] CALSSA Opening Comments to February 28 Ruling at 25.

[140] Utilities Opening Comments to February 28 Ruling at 20.

structure, stating that "compensating exports on a single set of export rates rather than various retail rates will inherently simplify the process."[141]

The final proposal for a NEMA successor subtariff is from Cal Advocates, who state that the current subtariff "allows participants to use generation from a single [Generation Facility] to receive credits on utility bill payments in geographically contiguous property accounts."[142] Cal Advocates asserts this can be similarly realized through the Green Access Program successor tariff, which is currently being reviewed and proposals are being considered in A.22-05-022, et al.[143] Cal Advocates proposes ending the NEMA subtariff, citing the Pub. Util. Code §2827(h)(4)net energy metering requirement that requires the NEMA subtariff only be made available if "load aggregation will not cause an incremental rate impact on the utility's customers that are not eligible customer-generators." Cal Advocates asserts that the current NEMA subtariff creates a cost shift and should not be permitted to continue.

3.2.3. Compliance with Pub. Util. Code §2827 and Pub. Util. Code §2827.1

Before turning to a discussion of the successor NEMA subtariff, it is important to first address two threshold legal issues of whether the Commission is legally bound to (1) offer an Aggregated subtariff of net energy metering and (2) maintain the NEMA subtariff credit and debit provisions in Pub. Util. Code §2827(h). This decision aligns with a prior Commission determination in Resolution E-4854 that, pursuant to Pub. Util. Code §2827, there is no obligation for Utilities (or the Commission) to offer the NEMA subtariff or maintain the

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141 Utilities Opening Comments to February 28 Ruling at 21.

142 Cal Advocates Opening Comments to February 28 Ruling at 14.

143 Cal Advocates Opening Comments to February 28 Ruling at 14.

current credit and debit provisions because the net energy metering caps described in Pub. Util. Code §2827(c)(1) have been reached. That being said, the Commission finds it reasonable to consider an Aggregation subtariff that aligns with the requirements of Pub. Util. Code §2827.1 and allows for similar crediting and debit provisions previously allowed in Pub. Util. Code §2827(c)(1). These determinations are further described below.

Agricultural Parties and Utilities disagree as to whether the Commission should continue to offer the current NEMA subtariff. Agricultural Parties contend that the NEMA subtariff is not the standard net energy metering tariff but rather an aggregation option available to customers with multiple meters and, therefore, despite the implementation of Pub. Util. Code §2827.1, the Commission is required to continue making this option available.

Utilities assert the opposite is true, that the Commission has no statutory obligation to continue to offer a version of any net energy metering tariff, including the NEMA subtariff.[144] Utilities maintain that Pub. Util. Code §2827 is inherently tied to NEM 1.0 and to capacity caps that have been reached.[145] Utilities contend the Commission previously recognized this in Resolution E-4854. This resolution found that as "NEMA is authorized as part of [Pub. Util. Code §2827] (the section authorizing [net energy metering]), the small [investor-owned utilities] are not obligated to continue offering NEMA once they reach their [net energy metering] caps."

Agricultural Parties maintain that "[Pub. Util. Code §]2827.1 does not purport to supplant non-standard arrangements like NEMA."[146] Agricultural

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[144] Utilities Opening Comments to February 28 Ruling at 16.

[145] Utilities Opening Comments to February 28 Ruling at 16.

[146] Agricultural Parties Opening Comments to February 28 Ruling at 16.

Parties assert that such an intention would have been conveyed in the enactment of AB 327 adding Pub. Util. Code §2827.1, which Agricultural Parties contend would have been "inefficient, illogical, and disruptive to customers and the market to effectively undo the aggregation authorized by SB 594 even before it was implemented."[147] Further, Agricultural Parties offer that, with the adoption of D.16-10-044, the Commission maintained Pub. Util. Code §2827(h) continuing the NEMA subtariff despite changing the method for standard net energy metering schedules.[148]

This decision looks to the statute itself to consider and resolve this legal dispute. Pub. Util. Code §2827(c)(1) requires every electric utility to develop, and make available to eligible customer-generators, a standard contract or tariff providing for net energy metering on a first-come first-served basis until the time that the total rated generating capacity used by the customer-generators exceeds five percent of the utility's aggregate peak demand. Pub. Util. Code §2827(c)(1) states that "once the generation limit is reached, only eligible customer-generators that had previously elected to receive service pursuant to the standard contract or tariff have a right to continue to receive service pursuant to the standard contract or tariff." While Agricultural Parties assert that Pub. Util. Code §2827.1 does not purport to supplant non-standard arrangements like the NEMA subtariff, it is clear that the directive in Pub. Util. Code §2827(c)(1), creating an end date for the applicability of the section, does apply to the NEMA subtariff. Pub. Util. Code §2827(c)(1) talks about the first-come first-served availability implying that there is not an expectation that availability of the tariff

147 Agricultural Parties Opening Comments to February 28 Ruling at 16.

148 Agricultural Parties Opening Comments to February 28 Ruling at 17.

will continue indefinitely. Furthermore, Pub. Util. Code §2827(c)(1) discusses the allowance for an additional meter or meters to monitor the flow of electricity for the purpose of providing "the information necessary to accurately bill or credit the eligible customer-generator pursuant to subdivision (h)," which describes the NEMA subtariff requirements. The Commission concludes that Pub. Util. Code §2827(c)(1) refers to all parts of the net energy metering tariff, including the NEMA subtariff.

As to the Agricultural Parties' assertion that the Commission chose to maintain Pub. Util. Code §2827(h) by continuing the NEMA subtariff despite changing the method for standard net energy metering schedules, this decision points to two issues with this assertion. First, the Commission did little to change the standard net energy metering tariff in D.16-01-044. In that decision, the Commission lamented the lack of "more information and improved analysis," described having to "make the determinations about the net energy metering successor tariff at a transitional moment," and decided to "choose to continue the basic [net energy metering] structure."[149] Second, while Agricultural Parties' assertion that the Commission chose to maintain Pub. Util. Code §2827(h) is correct, this decision highlights that, indeed, it was the Commission's **choice** in adopting D.16-01-044 to maintain the NEMA subtariff, not a requirement. The Commission finds this assertion by Agricultural Parties to be misleading.

The Commission previously determined in E-4854 that "the small [investor-owned utilities] are not obligated to continue offering the NEMA subtariff once they reach their [net energy metering] caps." Given the discussion of Pub. Util. Code §2827 above, this decision finds the Commission

[149] D.16-01-044 at 85-86.

determination in E-4854 to be applicable to all electric utilities. Accordingly, this decision concludes that offering a NEMA subtariff is not a legal requirement of the Commission nor Utilities. However, for the reasons discussed in Section 3.2.4 below, the Commission finds it reasonable to develop and provide a subtariff for eligible customer-generators with multiple meters that also aligns with the directives of Pub. Util. Code §2827.1.

Turning to the question of whether the statute requires the Commission and/or Utilities to maintain the NEMA subtariff credit and debit provisions of Pub. Util. Code §2827(h), CALSSA contends that "because it is an established practice" the Commission should leave the monthly reconciling in place for the NEMA subtariff successor, as described in Pub. Util. Code §2827(h)(4)(C).[150] Agricultural Parties assert that the Commission "has the discretion…to maintain the [Pub. Util. §]2827(h) credit and debit provisions, crediting methodology and annual true-up in a successor NEMA [subtariff] program."[151]

The Commission concludes that, as discussed above, there is no statutory requirement to continue the provisions of Pub. Util. Code §2827(h). However, this decision agrees that the Commission has the discretion to maintain the credit and debit provisions, as long as they comply with Pub. Util. Code §2827.1 requirements for a successor tariff. This is discussed in greater detail in Section 3.2.4 below.

3.2.4. Adopted Aggregation Subtariff

Having addressed the legal disputes of the NEMA subtariff, this decision turns to the policy and technical aspects of the proposals offered by the parties.

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150 CALSSA Opening Comments to February 28 Ruling at 26.

151 Agricultural Parties Opening Comments to February 28 Ruling at 17.

As described below, this decision finds that creating a net billing tariff option for customers with multiple meters allows these customers to optimize their use of land resources, including locating solar facilities on agriculturally underperforming land.[152] The new Aggregation subtariff will be based on the net billing tariff adopted by the Commission in D.22-12-056 with the following elements: an ACC Plus as a glide path, no netting, and continuance of the credit and debit approach used in the current NEMA subtariff. These elements are described in greater detail below.

As previously stated, in D.22-12-056, the Commission found the record for the NEMA subtariff to be insufficient, requiring a deeper review. The Commission determined it should conduct a more thorough analysis of the subtariff. Following a workshop where parties discussed the technical needs of the subtariff, the Commission issued a Ruling asking parties to comment on several aspects of the current NEMA subtariff in an effort to improve the record and analysis of the subtariff.

Following a review of these aspects, the Commission finds that it is reasonable to provide an Aggregation subtariff to customers with multiple meters. As discussed below, the review shows that the current NEMA subtariff provides no additional benefits to ratepayers and Utilities in comparison to the NEM 2.0 tariff. However, the subtariff does allow agricultural customers to optimize their use of land resources by being able to locate solar on land that is underperforming.[153]

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[152] *See* Agricultural Parties Opening Comments to February 28 Ruling at 3.

[153] *See* Agricultural Parties Opening Comments to February 28 Ruling at 3.

Cal Advocates argues that there are no benefits uniquely attributable to the NEMA subtariff in comparison to the current net energy metering tariff. Noting that the "NEMA subtariff allows participants to use generation from a single [Generation Facility] to receive credits on utility bill payments in geographically contiguous property accounts," Cal Advocates contends this could be realized through a Green Access Program successor tariff.[154]

Utilities concur with Cal Advocates that the NEMA subtariff provides no different or additional benefits than the benefits provided by the net energy metering and net billing tariffs. Stating that "to the extent any [net energy metering] system exports on the secondary, primary, or transmission systems," Utilities caution, "the benefits of avoiding losses and avoided [transmission and distribution] capacity could be reduced."[155] However, Utilities offer that, if a NEMA subtariff system "spans multiple service delivery points, it becomes more likely that generation will be exported."[156]

Agricultural Parties assert additional benefits and cost savings; however, the record of this proceeding does not support these assertions.

First, Agricultural Parties assert that Utilities and ratepayers benefit from a NEMA subtariff versus the NEM 2.0 or net billing tariffs because the statute prohibits NEMA subtariff customers from receiving net surplus compensation.[157] However, the Commission agrees with Utilities that the savings from net surplus compensation is insignificant and does not compensate for the additional

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[154] Cal Advocates Opening Comments to February 28 Ruling at 14.

[155] Agricultural Parties Opening Comments to February 28 Ruling at 13.

[156] Utilities Opening Comments to February 28 Ruling at 13.

[157] Agricultural Parties Opening Comments to February 28 Ruling at 5.

interconnection costs caused by NEMA subtariff customers.[158] Utilities have provided information indicating higher interconnection costs for NEMA subtariff systems versus net energy metering systems. These alleged higher costs are due to the need for multiple interconnections, the need for larger distribution upgrades because of larger customer-generators, and the need for new infrastructure in rural areas, which tend to have less pre-existing infrastructure.[159] While the Commission agrees that Electric Rule 21 requires all NEM 2.0 and net billing tariff customers (including NEMA subtariff customers) to pay an interconnection fee, this fee varies by utility, is currently between $94 and $145, and does not require payment for any distribution upgrades.[160] Only customer-generators with systems over one MW in capacity must pay for any transmission or distribution system upgrades and also pay an $800 interconnection fee. The Commission finds that savings from net surplus compensation do not compensate for higher utility costs caused by NEMA subtariff customers.

Second, Agricultural Parties allege that "agricultural customers on NEMA subtariffs pay nearly all of the costs of distribution, transmission, and non-bypassable charges due to the rate design of agricultural schedules and, therefore, there are no material cross subsidies from other ratepayers to NEMA

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158 Utilities Reply Comments to February Ruling at 18 stating that "any excess generation from NEMA that is ineligible for net surplus compensation should be very small in volume compared to the total generation from NEMA systems [because systems are required to be sized to current load] and therefore insignificant."

159 Utilities Opening Comments to February 28 Ruling at 13-14.

160 PG&E Rule 21 Tariff at Sheet 56: https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_21.pdf; SDG&E Rule 21 Tariff at Sheet 36: ELEC_ELEC-RULES_ERULE21.pdf (sdge.com) ; and SCE Rule 21 Tariff at Sheet 41: TM2 - ELECTRIC_RULES_21.pdf - All Documents (sharepoint.com)

subtariff customers."[161] Agricultural Parties neglect to account for the fact that not all NEMA subtariff customers are agricultural customers, thus not every NEMA subtariff customer pays for the costs of distribution, transmission, and non-bypassable charges. The record shows that residential customers on a net energy metering tariff, which account for approximately one-third of NEMA subtariff customers, do not cover their fair share of distribution, transmission, and non-bypassable charges because decreased grid imports lead to the bypassing of infrastructure and other service costs embedded in volumetric rates; this would also apply to residential customers on a NEMA subtariff.[162]

Third, Agricultural Parties also claim that the Lookback Study found that agricultural customers pay more than their cost of service.[163] Utilities argue that this is an incorrect statement because the Lookback Study only found that nonresidential net energy metering customers in general paid more than their cost of service. The Lookback Study did not analyze the cost of service for the agricultural sector. The Commission agrees there is no evidence in the record that agricultural customers pay more than their cost of service. However, this decision has shown that customers enrolled in the NEMA subtariff include a broader mix of customers than just agricultural customers. PG&E provided data showing that NEMA subtariff customers include residential customers, mixed residential and commercial customers, and commercial customers. The Lookback Study did not conduct a cost-of-service analysis on a mix of residential and commercial customers but, as Agricultural Parties note, did find that commercial customers pay their cost of service, but residential customers do not.

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161 Agricultural Parties Opening Comments to February 28 Ruling at 5.

162 D.22-12-056 at Finding of Fact 13.

163 Agricultural Parties Opening Comments to February 28 Ruling at 6.

While the statement Agricultural Parties rely on is based on an analysis of the NEM 2.0 tariff, not the NEMA subtariff, parties have offered little difference of costs and benefits between the NEM 2.0 tariff and the NEMA subtariff with the only difference being the nonpayment of net surplus compensation. This decision has already determined that the savings from nonpayment of net surplus compensation are insignificant. Hence, this decision finds it reasonable to rely on findings of Lookback Study's review of the NEM 2.0 tariff for a review of the NEMA subtariff.

Despite a finding of no additional benefits to ratepayers or the grid, the Commission disagrees with Cal Advocates that the NEMA subtariff should be replaced by a Green Access Tariff option. The Commission finds that an Aggregation option is the most affordable option for customers, with multiple meters on adjacent or contiguous properties, wanting to install onsite generation. Accordingly, the Commission should adopt an Aggregation subtariff, but one that mirrors the net billing tariff, including the five-year decreasing ACC Plus glide path, a nine-year ACC Plus and tariff eligibility lock-in period, and no netting.

The new Aggregation subtariff will provide a combination of high differential time-of-use import rates for residential customers and any available time-of-use rate for nonresidential customers and cost-based export compensation; which will be an improvement over the current NEMA subtariff that bases export compensation on retail rates. The record has also shown that basing export compensation on retail rates does not appropriately value export compensation because retail rates do not reflect the actual costs of the exports or the benefits the exports provide to all customers and the electrical system.[164]

The price signals of the new Aggregation subtariff encourage adoption of storage as compared to the current NEMA subtariff, which historically has experienced a low storage adoption rate. While a transition to the Aggregation subtariff will not completely eliminate the cost shift, providing export compensation at avoided cost values (after a temporary ACC Plus glide path) will eliminate the export compensation portion of the cost shift. This will help the Commission in meeting the requirement that the successor tariff benefits to all customers are approximately equal to its costs. With respect to net surplus compensation, Utilities recommend mirroring the same approach as was adopted for the net billing tariff. The Commission finds this to be an efficient approach.

The new Aggregation subtariff will have no netting. Hence all exports to the grid will receive avoided cost-based export compensation and all imports will be charged at the applicable import retail rate. However, the absence of netting will not prevent self-consumption at the generating account, *i.e.*, the meter located on the same property as the customer-generator.

The Commission allows for one set of differences from the net billing tariff; the credit and debit provisions, crediting methodology, and annual true-up will remain the same as the current NEMA subtariff. Again, while the Commission concludes that there is no statutory requirement to continue the provisions of Section 2827(h), the Commission has the discretion to maintain these provisions if they align with the requirements of Section 2827.1. The Commission should

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[164] D.22-12-056 at Finding of Fact 92.

maintain the provisions of Section 2827(h) in the new Aggregation subtariff, as these provisions help ensure that the benefits of the subtariff to all customers are approximately equal to its costs. Furthermore, as pointed out by Utilities, "the transition to compensating exports on a single set of export rates rather than various retail rates will inherently simplify the [allocation] process,"[165] thus allowing the continuance of the credit and debit provisions.

The Commission takes this time to correct a misstatement in D.22-12-056. Finding of Fact 20 states that the "Lookback Study finds that the commercial, industrial, and agricultural customer segments of the NEM 2.0 tariff generally pass the Total Resource Cost (TRC) test and pay rates that fully cover their costs of services." This statement is not completely accurate. While Table 5-7 of the Lookback Study shows that the three nonresidential sectors (commercial, industrial, and agricultural) of the NEM 2.0 tariff generally pass the TRC test, Table 1-7 indicates that the nonresidential sector pays bills that are slightly higher than their costs of services. However, Table 1-7 does not provide a comparison of the three nonresidential sectors. Hence, Finding of Fact 20 should be revised as follows: The Lookback Study finds that the commercial, industrial, and agricultural customer segments of the NEM 2.0 tariff generally pass the TRC test and nonresidential sector customers as a whole pay rates that fully cover their costs of services.

3.2.5. Implementation Plan for the Aggregation Subtariff

This decision has discussed several aspects of the implementation of the aggregation subtariff. A complete list of required steps is provided below.

[165] Utilities Opening Comments to February 28 Ruling at 21.

Step 0: The Sunset Period of the current NEMA subtariff begins with the adoption of this decision. Customers submitting a completed interconnection application prior to the end of the Sunset Period will be considered applicable for the current NEMA subtariff.

Step 1a: Within 45 days of the adoption of this decision, Utilities shall each submit a Tier 2 advice letter to provide the details of the new aggregation subtariff, as adopted in this decision. Utilities shall coordinate before submitting the advice letters to ensure language uniformity, to the extent possible. The individual advice letters shall summarize Utilities' interpretation of how the successor virtual net billing tariff will be structured and include indicative levels of price components and rate factors based on the applicable revenue and associated tariff sheets.

Step 1b : No later than 90 days after the adoption of this decision, Utilities will implement a tariff sunset on the current NEMA subtariff, after which time, no additional customers will be permitted to take service under this subtariff. Customers with an interconnection application date **after** this Sunset Date, will take service and be billed on the current NEMA subtariff on an interim basis and transition to the aggregation subtariff once it is operational. The NEMA subtariff legacy period is not applicable in this case. The interconnection application date for residential customers is defined as the submission date of an application that is free of major deficiencies and includes a complete application, a signed contract, a single-line diagram, a complete California Contractors State License Board Solar Energy System Disclosure Document, a signed California Solar Consumer Protection Guide, and an oversizing attestation (if applicable).

The interconnection application date for nonresidential customers is defined as the submission date of an application that is free of major deficiencies and includes a complete application, a signed Authorization to Act on a Customer's Behalf, the selection of a single-line diagram, and an oversizing attestation (if applicable.)

Joint Utilities are granted the discretion to give NEMA subtariff eligibility to a customer if a delay in meeting the Sunset Date is caused by the utility. Joint Utilities shall work collaboratively to address challenging situations in deeming applications complete.

Step 4: No later than six months following adoption of this decision, Utilities shall complete alignment of related necessary billing systems and transition to full implementation of the aggregation subtariff.

Step 5: No later than three years from the application submission, all customers seeking to interconnect to the NEMA subtariff shall submit final building permit sign off and electrical clearing by the authority having jurisdiction.

3.3. Enhanced Protections for Customers Enrolled in Net Energy Metering and Net Billing

With the recent adoption of the net billing tariff, the Commission explored opportunities to enhance consumer protections for customers enrolled in the net billing tariff as well as the NEM 1.0 and NEM 2.0 tariffs. In this decision, the Commission improves processes related to the Public List of Non-Compliant Providers (Watch List), establishes a billing reformation process to begin three months after implementation of the residential net billing tariff, and adopts other smaller improvements to protect customers while omitting unnecessary Utility reporting requirements. Each of these is addressed separately below.

3.3.1. Watch List Issues

Parties were asked to respond to questions regarding changes to the Watch List, including changes to the requirements, regulations, and rules with which providers must comply; the Watch List placement and removal process; and the role of Utilities. Below, this decision presents a current description of the Watch List followed by discussions of revisions to the Watch List processes, modifications to the list of Commission rules and regulations solar providers must comply with to remain off the Watch List, and changes to the roles and responsibilities of Utilities with respect to the Watch List.

As described below, this decision reforms Watch List-related processes to: (1) review current, active interconnection applications rather than approved applications; (2) authorize Energy Division to revise the Contractors State License Board (CSLB) Disclosure Document and create a "Commission Compliance Checklist" that defines a compliant interconnection application and includes references to customer protections adopted in D.20-08-001 and D.21-06-026; (3) require Utilities to use the updated Commission Compliance Checklist when performing the semi-annual spot audits and pre-approval reviews; (4) authorize Energy Division to update, when needed, the Commission Compliance Checklist through the resolution process; and (5) refine the Watch List placement time for non-compliant providers: for solar providers found non-compliant with consumer protection rules and regulations, with automatic removal at the end of the placement time.

3.3.1.1. Current Watch List Description

D.21-06-026 authorized Energy Division "to effectuate the establishment and maintenance of a public list of solar providers whose interconnection applications have been found in non-compliance with applicable state law or Commission requirements of D.18-09-044 and D.20-02-011; CSLB's regulations set forth in the California Business and Professions Code or California Code of Regulations, or Department of Financial Protection and Innovation (DFPI) regulations set forth in the California Financial Code, California Corporations Code or the California Code of Regulations."[166] The purpose of establishing this process was to deter providers from violating applicable consumer protection-related laws and regulations.

Utilities perform spot audits of interconnection applications, as directed by D.18-09-044 and modified by D.21-06-026. Pursuant to D.18-09-044, for each semi-annual audit, each utility shall spot check at least 100 interconnection applications and at a minimum: (1) confirm the provider has a valid CSLB license and entered the license on the application and (2) verify the customer signed forms attesting the customer received and read the information packet and Solar Energy Disclosure Document prior to signing a contract or agreement with the solar provider.

The names of providers found to be out of compliance are given to Energy Division, which verifies the application is noncompliant. Energy Division alerts the utility that the noncompliant provider will be placed on the Watch List.

Pursuant to D.21-06-026, Utilities must provide notification to each solar provider that has been placed on the Watch List. The utility must identify the requirements that the application did not comply with and inform the provider that a request for removal may be submitted via email to the utility with documentation that demonstrates the application did comply with the requirements.

Before approving applications from providers currently on the Watch List, Utilities must review with increased scrutiny the first 10 net energy metering interconnection applications submitted by these providers while on the list, and

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[166] D.21-06-026 at 9.

ten additional applications, for each successive quarters the provider has been on the Watch List.

Subsequently, pursuant to D.21-06-026, for each semi-annual spot audit, each utility must now audit a minimum of 384 randomly selected net energy metering interconnection applications received in the previous six months from solar providers not on the Watch List and 384 randomly selected net energy metering interconnection applications received in the previous six months from solar providers that were on the Watch List.

D.21-06-026 authorized Energy Division to ensure the Watch List is updated quarterly. Further, D.21-06-026 directed that solar providers that have been placed on the Watch List shall remain on the list until the end of the full quarter after which they were initially placed on the list. The decision allowed solar providers to request removal from the list by submitting documentation demonstrating the identified application is in fact in compliance.

3.3.1.2. Watch List Process Revisions

Parties were asked several questions with respect to Watch List processes. This decision begins with a threshold concern that the Watch List is not fulfilling its purpose of deterring providers from violating applicable consumer protection-related laws and regulations. Parties claim two perceived problems with the Watch List. First, SEIA contends that there is a lack of readily available means to align the Watch List with similar processes of CSLB and DFPI and, thus, the Watch List does not include providers who have violated CSLB and DFPI rules and regulations.[167] Utilities agree that the Watch List does not include

[167] SEIA Opening Comments to February 1 Ruling at 3-4.

CSLB and DFPI regulations violators.[168] Second, CALSSA and SEIA argue that providers are primarily on the Watch List for clerical errors, not technical errors.[169] Relatedly, maintaining that solar consumer protections are not designed to identify fraud, Utilities claim that "quarterly reports regarding solar consumer complaints and the audit process are largely clerical."[170] Supporting CALSSA and SEIA assertions, Utilities state that it "appears that vendors are placed on the Watch List largely for administrative errors."[171]

Parties make several suggestions to improve the Watch List to address these two problems.

To address both problems, Utilities recommend the establishment of an interagency (Commission with CSLB and DFPI) task force to: (1) evaluate suspicious provider activities and past selling practices and (2) make recommendations for legal investigation when evidence of fraud is found.[172]

CALSSA recommends modifications to the audit process whereby the reviewed applications are those that have not been processed as opposed to those that have been already approved; this would require a reduction in the number of applications randomly reviewed back to 100. The proposed modification would also allow a provider to remedy the errors, be given a warning, and be put on the Watch List for any subsequent violations. CALSSA asserts this would address clerical errors and not place providers with

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[168] Utilities Opening Comments to February 1 Ruling at 3.

[169] CALSSA Opening Comments to February 1 Ruling at 2 and SEIA Opening Comments to February 1 Ruling at 2-3 and 4-5.

[170] Utilities Opening Comments to February 1 Ruling at 3.

[171] Utilities Opening Comments to February 1 Ruling at 3.

[172] Utilities Opening Comments to February Ruling at 3-4.

technically correct applications on the Watch List.[173] CALSSA recommends a due process procedure before placing a provider on the public Watch List, enabling a provider to contest the placement.[174] SEIA recommends similar changes to the audit process.[175]

The Commission acknowledges that the Watch List cannot currently capture the violators of CSLB and DFPI regulations. D.21-06-026 Section 4 requires Utilities to issue notices to solar providers informing them that they have been placed on the Watch List; the notices are required to include the specific interconnection applications that were found non-compliant. Neither CSLB nor DFPI collect interconnection application numbers, making it difficult to align CSLB and DFPI complaints with the Watch List.

The Commission declines to adopt Utilities' proposal to establish an interagency task force. The Commission finds it unnecessary to create a new task force to resolve the problem that the Watch List does not capture violators of CSLB and DFPI regulations. The Commission, CSLB, and DFPI already coordinate through the Interagency Solar Consumer Protection Task Force.

Turning to the problem that the Watch List primarily identifies a list of providers committing administrative errors, the Commission again finds that establishing a task force, as recommended by Utilities, is unnecessary. Instead, the Commission finds it efficient and effective to revise the current Watch List process, based on CALSSA's proposed changes but with alterations, as described below.

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[173] CALSSA Opening Comments to February 1 Ruling at 2.

[174] CALSSA Opening Comments to February 1 Ruling at 3.

[175] SEIA Opening Comments to February Ruling at 5-6.

To begin, the Commission agrees that the Watch List should review current, active interconnection applications rather than post-approval applications. While the Commission acknowledges concerns of additional approval delays reviewing current applications could cause,[176] this could be balanced by other modifications, such as: (1) reducing the number of random interconnection applications Utilities must manually review every six months from 768 to 100; (2) eliminating the requirement that Utilities provide notice to solar providers of Watch List placement; and (3) eliminating the now obsolete removal process established in D.21-06-026. Utilities also support decreasing the number of spot audits to 100.[177]

Second, the Commission agrees with CALSSA that reviewing current applications and reducing the number of spot audits could decrease the number of providers placed on the Watch List for administrative errors. However, instead of placing the provider on the public Watch List, the provider will be placed by Commission staff on an internal Enhanced Review List. This is similar to CALSSA's recommendation of a warning and SEIA's proposal of a safe harbor.[178] Once placed on the Enhanced Review List, Utilities will be notified by Commission staff and will conduct pre-approval reviews of the next ten applications received from the identified provider with enhanced scrutiny and by comparing the application against the Commission Compliance Check List (described in Section 3.3.1.3. below). Enhanced scrutiny will include a manual

[176] CALSSA Opening Comments to February 1 Ruling at 2-3, SEIA Opening Comments to February 1 Ruling at 5-6, and Utilities Reply Comments to February 1 Ruling at 1-2.

[177] Utilities Reply Comments to February 1 Ruling at 2.

[178] CALSSA Opening Comments to February 1 Ruling at 6 and SEIA Opening Comments to February 1 Ruling at 11.

review of all documents submitted as part of the application.[179] If an additional application is found to be noncompliant during the pre-approval review, the Utility will return the application to the provider who will have an opportunity to remedy the application. The Utility shall also remind the solar provider that failure to remedy the application may result in placement on the public Watch List. This replaces the requirement in D.21-06-026 that Utilities shall provide notification to solar providers of placement on the Watch List. If unable to remedy the application, the Utility will alert Energy Division who will verify the application is noncompliant and place the provider on the public Watch List. However, as described in Section 3.3.1.4 below, no application will be denied for failure to comply with consumer protection regulations. This revised process will avoid unnecessary reputational harm and limit the potential weaponization of the Watch List by competitors, as alleged by CALSSA.[180] Also, the modifications adopted here make the removal process adopted in D.21-06-026 obsolete.

Third, parties discussed the length of time providers should remain on the Watch List. As described in Section 3.3.1.1. above, currently, a solar provider placed on the Watch List will remain listed until the end of the full quarter after which the solar provider was initially placed on the list, for a minimum of six months. CALSSA, SEIA, and Utilities all agree that violations of Commission regulations, which are clerical or administrative errors, should lead to a provider being on the Watch List for only one quarter; while SEIA and Utilities contend violators of CSLB and DFPI regulations should be on the list for two quarters as

[179] D.21-06-026 at 11.

[180] CALSSA Opening Comments to February 1 Ruling at 6.

these violations equate to fraudulent behaviors.[181] The Commission agrees that violations of Commission rules are more administrative and not as serious as violations of CSLB and DFPI regulations. Hence, the Commission should limit the amount of time that providers violating Commission rules are on the Watch List to three months and establish a limit of six months for violators of CSLB and DFPI regulations. Providers will automatically be removed from the Watch List after these adopted time frames.

3.3.1.3. Commission Consumer Protection Rules With Which Providers Must Comply To Remain Off Watch List

Parties were asked to review the list of regulations and rules with which solar providers must comply (in particular, the consumer protection requirements of D.20-08-001 and D.21-06-026) for purposes of determining placement on the Watch List and whether, and how, a standardized set of non-compliance criteria could be developed. Parties presented various arguments for changes.

D.20-08-001 requires contractors to provide a savings estimate to customers through the CSLB's Supplemental Disclosure Form and using the Commission's standardized inputs and assumptions. SEIA contends several aspects of this requirement are challenging considering the complexity of the net billing tariff, including estimating net electric bill savings for the first 20 years following interconnection and the directive to use the PV Watts tool to estimate one-hour interval generation.[182] CALSSA states that the Supplemental Disclosure

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[181] CALSSA Opening Comments to February 1 Ruling at 6; SEIA Opening Comments to February 1 Ruling at 10-11; and Utilities Opening Comments to February 1 Ruling at 5-6.

[182] SEIA Opening Comments to February 1 Ruling at 7-9.

Form is not finalized.[183] Both CALSSA and SEIA conclude that the inputs and assumptions need to be updated to align with the net billing tariff.[184] Utilities "do not believe that placement on the Watch List due to clerical errors on the Consumer Protection guide is effective in protecting customers" and assert that halting or even delaying approval of these applications only harms customers who have decided to install solar.[185]

Related to this decision, Ordering Paragraph 2 of D.21-06-026 requires Utilities to modify the interconnection portals to collect: (1) the Home Improvement Salesperson (HIS) registration number of solar providers, if applicable and (2) the address of any entity that finances the projects, including leases, through means other than Property Assessed Clean Energy financing, if applicable. Where applicable, providers are required to provide this data to Utilities.

SEIA supports compliance with these rules.[186] CALSSA recommends that failure to provide this data should not warrant inclusion on the Watch List. SEIA asserts that due to contracts not being standardized, "uncovering whether an HIS registration number was included would require customer attention for every contract reviewed."[187] With respect to the address of lessors, SEIA contends that enforcement of this requirement "faces similar challenges to an HIS registration number."[188]

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[183] CALSSA Opening Comments to February 1 Ruling at 4.

[184] CALSSA Opening Comments to February 1 Ruling at 4 and SEIA Opening Comments to February 1 Ruling at 8-9.

[185] Utilities Opening Comments to February 1 Ruling at 4-5.

[186] SEIA Opening Comments to February 1 Ruling at 9.

[187] CALSSA Opening Comments to February 1 Ruling at 5.

[188] CALSSA Opening Comments to February 1 Ruling at 5.

Parties also commented on the issue of creating a standardized set of non-compliance criteria and whether CSLB and DFPI should be involved. Utilities support re-evaluating the non-compliance criteria but recommend that changes be approved via ruling or decision rather than an advice letter authored by Utilities.[189] CALSSA recommends continuing to coordinate with the CSLB and DFPI but referring customers to their resources and limit the Watch List to Consumer Guide violations and Commission rules.[190] SEIA supports the creation of a standardized set of non-compliance criteria premised on violations that cause harm to the consumer such that the Watch List "would provide consumers useful information while not unjustifiably causing competitive harm and damage to the reputations of contractors who are placed on the list."[191]

This decision has already determined that the Watch List process requires refinements, which have been outlined in Section 3.3.1.2 above. These refinements address the concern of placement on the Watch List due to clerical errors and the resulting reputational damage. The refinements should limit these placements. The Commission considers it important to ensure that providers are complying with consumer protection rules. Hence, this decision finds it prudent to require compliance with the consumer protection directives of D.20-08-001, as modified below, and D.21-06-026, as discussed further below.

The Commission recognizes that the customer bill savings estimate method approved in D.20-08-001 is not compatible with the net billing tariff, especially due to the use of the ACC Plus. Therefore, the Commission concludes it should delay this requirement until the inputs and assumptions are updated.

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[189] Utilities Opening Comments to February 1 Ruling at 5.

[190] CALSSA Opening Comments to February 1 Ruling at 5.

[191] SEIA Opening Comments to February 1 Ruling at 10.

Accordingly, the Commission directs a review of the inputs and assumptions for the bill savings estimate. Energy Division is authorized to review the standardized inputs and assumptions following the full implementation of the net billing tariff. However, to ensure input from parties, Energy Division is required to present a draft of the inputs and assumptions in a public workshop to be held no later than December 15, 2023 (deadline for full implementation of the net billing tariff. Following the workshop, Energy Division is authorized to provide a full set of inputs and assumptions through a draft resolution to allow for public comment no later than March 15, 2024.

Adoption of a final revised set of inputs and assumptions will lead to other necessary steps. First, following Commission adoption of the inputs and assumptions resolution, Energy Division will finalize the CSLB Disclosure Document for publication by CSLB. Second, as parties agree there is benefit to the development of a standardized set of noncompliance criteria for the Watch List, the Commission should authorize Energy Division to develop a *Commission Compliance Checklist* that clearly identifies the requirements for an interconnection application to be compliant for purposes of the public Watch List. Once completed, this checklist shall be used by Utilities for conducting their pre-approval reviews as directed and described in Section 3.3.1.2 above.

With respect to compliance with D.21-06-026, the Commission is not persuaded by CALSSA's contention that there are barriers to comply with the requirement to include the Home Improvement Salesperson registration number and the address of the applicable financier. Accordingly, the Commission should require that solar providers failing to comply with these requirements should be added to the Enhanced Review List.

3.3.1.4. Utilities Roles and Responsibilities

Parties were asked whether Utilities should have a role in determining provider compliance with the Watch List, other than the semi-annual spot audits, and whether Utilities should publicly report the results of the audits or enhanced reviews.

Utilities request to be eliminated from the Watch List process completely.[192] However, Utilities contend that net billing tariff interconnection applications should not be denied for noncompliance with Commission consumer protection regulations.[193] Further, Utilities oppose a requirement to report on the results of the enhanced reviews "unless there is an appropriate outcome or action taken against offending providers as a result of the report results."[194] Utilities contend that additional reporting without any consequences does not meaningfully protect customers.[195]

CALSSA supports allowing Utilities to temporarily suspend applications that fail to comply with required consumer protection rules, but only to allow for correcting the noncompliance and "only for those applications selected for random audit and the review of applications of contractors on the Watch List."[196] CALSSA supports requiring the reporting of pre-approval enhanced review results.[197]

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[192] Utilities Opening Comments to February 1 Ruling at 1, 3 and 6.

[193] Utilities Opening Comments to February 1 Ruling at 6.

[194] Utilities Opening Comments to February 1 Ruling 7.

[195] Utilities Opening Comments to February 1 Ruling at 7.

[196] CALSSA Opening Comments to February 1 Ruling at 7.

[197] CALSSA Opening Comments to February 1 Ruling at 7.

SEIA opposes allowing Utilities to permanently deny a net billing tariff application because of noncompliance with consumer protection rules. SEIA contends that the Commission cannot delegate that authority to Utilities.[198] However, SEIA is not opposed to Utilities temporarily denying an application for incomplete answers and allowing the applicant to correct or complete the application.[199] While not objecting to the reporting of pre-approval enhanced review results, SEIA contends the use of an advice letter for such reporting is not appropriate. SEIA maintains the Commission "does not require Utilities to publicly submit the results of their semi-annual audits and the results of their pre-approval enhanced reviews should be treated no differently."[200]

This decision has reformed the Watch List process and, relatedly, required an update of documents that clarify the requirements for compliance to remain off the Watch List. The changes to the Watch List process minimize the role of Utilities in the Watch List process. Hence, this decision finds that additional directives such as requiring or authorizing Utilities to permanently deny an application for noncompliance with consumer protection rules or reporting the results of enhanced pre-approval reviews (other than to Commission staff as described in Section 3.3.1.2. above) would not reflect this change of role for the Utilities. Further, the Commission agrees that neither permanently denying an application for noncompliance with consumer protection rules nor publicly reporting a noncompliance list for clerical errors promotes consumer protection. The Commission concludes these requirements should not be adopted. Accordingly, the Commission prohibits Utilities from denying an application for

[198] SEIA Opening Comments to February 1 Ruling at 12.

[199] SEIA Opening Comments to February 1 Ruling at 12.

[200] SEIA Opening Comments to February 1 Ruling at 13.

noncompliance with consumer protections rules and from reporting the results of enhanced pre-approval reviews.

3.3.2. Customer Billing Issues

Recognizing historic customer challenges with understanding NEM 1.0 and NEM 2.0 tariff bills, the Commission asked parties whether the Commission should require the implementation of a process to review these challenges for customers of the net billing tariff, as well as NEM 1.0 and NEM 2.0 tariff customers, and whether the Commission should require the development of a uniform bill format through the use of a statewide vendor. As described below, this decision adopts a process to review these challenges for net billing tariff customers and revise net billing tariff customers' bills to improve customer understanding; this process will include public workshops.

As stated in the February 1 Ruling, historically, net energy metering bills have been complicated and difficult for customers to understand. No party rejects this statement. Both Utilities and SEIA point out that the timing of any change is challenging. SEIA notes that Utilities have already started the process of necessary changes to their billing systems to prepare for the implementation of the net billing tariff and recommends that any activity regarding bill presentation for this tariff be delayed until after each utility has begun billing customers under the tariff.[201] Similarly, Utilities contend that "findings that come at a later date could be duplicative of research already conducted, and it is unlikely that [Utilities] could implement additional findings until quite some time later." However, both Utilities and SEIA, as well as CALSSA, support the establishment of a process to improve customer understanding of net billing tariff bills.

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[201] SEIA Opening Comments to February 1 Ruling at 13-14.

First, the Commission acknowledges that the focus of any billing improvement effort should be on customers of the net billing tariff, given that Utilities are "currently working to meet the ambitious compliance deadline to implement the [net billing tariff] by December 15, 2023" and each of the utilities are "in varying stages of planned billing system upgrade initiatives."[202] Further, for these same reasons, the Commission recognizes that now is not the appropriate time to begin a process to review net billing tariff billing presentation. As suggested by SEIA, such activity regarding utility net billing tariff bill presentation should be delayed until after Utilities have begun billing customers under the tariff.[203] The Commission agrees and finds that such timing would provide the Commission with additional data to pinpoint challenges and recommend solutions to resolve those challenges. However, the Commission is concerned about the past challenges and should ensure that current endeavors by Utilities to implement the net billing tariff include efforts to improve customer understanding of bills without delaying implementation of the tariff.

Accordingly, this decision adopts a two-phase approach to ensuring that net billing tariff customers understand their bills. Phase One will address near-term needs. In Phase One, Utilities shall consult with Energy Division to identify and address cosmetic changes to the net billing tariff bills that improve customer understanding without delaying implementation of the tariff. Phase Two will address future, long-term needs.

In Phase Two, which will begin no later than three months after implementation of the residential net billing tariff, Utilities are directed to seek

[202] Utilities Opening Comments to February 1 Ruling at 8.

[203] SEIA Opening Comments to February 1 Ruling at 14.

the participation of parties to develop recommendations for long-term net billing tariff customer bill improvements. The Commission finds that engaging a statewide vendor for the purposes of developing a standardized bill is neither necessary nor cost effective. As pointed out by SEIA, engaging a statewide vendor "could result in considerable expense, which would be borne by ratepayers."[204] Utilities contend that these expenses should be funded through Utilities' net billing tariff memorandum accounts.[205]

Hence, as recommended by SEIA and CALSSA,[206] Utilities shall facilitate a series of regional public workshops targeted to include members of the public taking service on the net billing tariff as well as industry representatives. Utilities shall work with Energy Division staff to schedule these workshops and develop the agendas. No later than one year following implementation of the residential net billing tariff, Utilities shall send a letter to the Director of Energy Division, with a copy to the service list of this proceeding, reporting on the recommendations of these workshops. Utilities shall work with Energy Division staff to implement the proposed improvements to net billing tariff customer bills.

This decision clarifies that the proposed improvements developed through the workshops are not required to be standardized across Utilities. The Commission agrees with SEIA that Utilities "need to be able to work within any constraints of their own billing systems and not incur additional expense for the mere purpose of statewide uniformity."[207] Further, the Commission finds it

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[204] SEIA Opening Comments to February 1 Ruling at 14. *See also* Utilities Reply Comments to February 1 Ruling at 3.

[205] Utilities Opening Comments to February 1 Ruling at 8.

[206] CALSSA Opening Comments to February 1 Ruling at 7 and SEIA Opening Comments to February 1 Ruling at 14

[207] SEIA Opening Comments to February 1 Ruling at 15.

appropriate that expenses for changes to the customer bill be funded from Utilities Net Billing Tariff memorandum accounts established pursuant to D.22-12-056.

3.3.3. Other Customer Protection Issues

In this section, the Commission addresses two general consumer education issues and an existing Utility reporting requirement.

Parties agree that it is not necessary for either the Commission or Utilities to facilitate a workshop to address solar misinformation and false advertising. Utilities assert that the Commission has comprehensively considered consumer protections for fraud (or misinformation and false advertising) in the context of net energy metering and that the benefit of such a workshop would be minimal.[208] While not opposed to the idea, CALSSA states that the Consumer Guide already provides these protections.[209] SEIA concurs, asserting that the purpose of the Consumer Guide as stated by the Commission is to "enable consumers to make an informed decision about installing solar on their single-family homes and taking service under a net energy metering successor tariff, with particular attention to aggressive or unscrupulous sales tactics."[210] SEIA contends that providing consumers with this consumer protection information "is the extent of the Commission's jurisdiction over these matters" and maintains it "does not see what further outcomes could result from a Commission workshop."[211] The Commission finds such a workshop would be duplicative of

[208] Utilities Opening Comments to February 1 Ruling at 10.

[209] CALSSA Opening Comments to February Ruling at 8.

[210] SEIA Opening Comments to February 1 Ruling at 15.

[211] SEIA Opening Comments to February 1 Ruling at 16.

other efforts and hence, the Commission should not require a workshop on solar misinformation and false advertising.

The Commission asked parties to consider what outreach Utilities could perform to remind customers to regularly check the performance of their solar system and whether Utilities should be required to alert customers of a non- or under-functioning system.

First, SEIA, CALSSA, and Utilities all agree that it is not the responsibility of Utilities to monitor the performance of a solar customer's system. SEIA asserts monitoring a solar system's performance should be the responsibility of the customer.[212] Agreeing with this, CALSSA cautions that the likelihood for false alarms is too high.[213] CALSSA asserts that Utilities could not create an accurate warning system based only on data from the main service meter.[214] Utilities contend this is not an appropriate role for Utilities and agree they do not have the data to accurately assess a system's performance.[215] The Commission agrees that Utilities do not have the ability to accurately determine whether a customer's solar system is performing correctly nor is it an appropriate role for them. The Commission should not require Utilities to alert customers when solar systems are not performing correctly.

While the Commission does not require Utilities to alert customers of malfunctioning systems, this decision finds it appropriate to remind customers of the importance of self-monitoring of systems. Parties suggest including such reminders in the post approval communication, monthly bills, and utility web

[212] SEIA Opening Comments to February 1 Ruling at 16.

[213] CALSSA Opening Comments to February 1 Ruling at 8.

[214] CALSSA Opening Comments to February 1 Ruling at 8.

[215] Utilities Opening Comments to February 1 Ruling at 11.

pages.[216] Utilities offer that while it is the responsibility of the customer to self-monitor, Utilities could "periodically integrate messaging into existing rate education or similar program outreach" but caution that "a balance must be achieved…so there is not an unnecessary burden on the utilities or additional costs that are then passed on to all customers, including those that do not have solar." The Commission finds it efficient and cost-effective to require Utilities to use at least one existing monthly communication to add such a reminder.

The final consumer protection matter is whether to require Utilities to continue to submit quarterly advice letters reporting solar consumer complaints received. CALSSA, SEIA, and Utilities all agree that the Commission should remove this requirement. CALSSA asserts it is "unclear how tracking this data has better equipped the Commission to solve a particular problem."[217] SEIA questions the effectiveness of the quarterly reports in achieving the purpose which is to aid CSLB in its compliance with AB 1070.[218] AB 1070 requires CSLB to annually compile a report documenting consumer complaints relating to solar contractors. Utilities offer that they are unaware of any party actively using this information, including CSLB, which already has a robust process for managing solar installer complaints.[219] The Commission finds that the current requirement for Utilities to submit quarterly advice letters reporting solar consumer complaints received is not necessary and should be removed. Accordingly, this decision relieves Utilities of the required submission of the quarterly advice letter

[216] See CALSSA Opening Comments to February 1 Ruling at 8 and SEIA Opening Comments to February 1 Ruling at 16.

[217] CALSSA Opening Comments to February 1 Ruling at 9.

[218] SEIA Opening Comments to February 1 Ruling at 17.

[219] Utilities Opening Comments to February 1 Ruling at 12.

3.4. Net Billing Tariff Evaluation

This decision authorizes a budget of $2.5 million from public purpose program funds to conduct an evaluation of the net billing tariff. This decision directs Utilities to select one utility to be the lead utility on the net billing tariff evaluation. The lead utility shall work with Energy Division, as further described below, to develop and issue a Request for Proposal to hire a consultant expert in evaluation methods and processes. Based upon the record of this proceeding, this decision adopts a set of objectives for the hired evaluation consultant to develop the research plan (containing research questions, metrics to measure success, and data needed) for evaluating the net billing tariff. This decision adopts an implementation plan for the evaluation, which allows for party participation, as described below. Data collection shall begin on December 15, 2023 and shall be completed in three years, followed by a final report delivered through an Order Instituting Rulemaking to consider the evaluation and make changes necessary to the net billing tariff.

3.4.1. Net Billing Tariff Evaluation Background

In D.22-12-056, the Commission concluded it should conduct an evaluation of the successor tariff, *i.e.*, the net billing tariff. The Commission authorized the Energy Division to conduct the evaluation and "consider the contents of the evaluation and associated party comments in a future proceeding to determine whether changes to the successor tariff or any of its elements are necessary."[220] Hence, this decision will not consider recommendations to establish triggers to make changes to the net billing tariff, such as the proposal by 350 Bay Area to establish that a decline of the number of solar system installations of more than

[220] D.22-12-056 at 201.

25 percent would indicate a major deviation from state planning goals.[221] In D.22-12-056, the Commission stated that it intends to "collect three years of data after full implementation of the successor tariff and follow a similar process as conducted in the Lookback Study."[222] This decision declines to consider recommendations from Cal Advocates that propose annual evaluations, as this does not comply with the prior direction of the Commission.[223]

The Commission also stated in D.22-12-056 that while the entire successor tariff would be reviewed, the focus would be on affordability, equity, and grid benefits.[224] As explained in D.22-12-056, additional information is needed to better define the parameters of the evaluation, develop and adopt an implementation plan, and authorize the funding for the evaluation. The February 1 Ruling posed several questions to parties to develop the record on these elements.

3.4.2. Funding the Net Billing Tariff Evaluation

This decision begins with a discussion of the evaluation funding amount. Both SEIA and Utilities note that the budget for the Lookback Study was $2 million.[225] Utilities assert this should be the maximum budget for the evaluation.[226] SEIA contends that given the passage of time and the complexity of

[221] 350 Bay Area Opening Comments to February 1 Ruling at 2.

[222] D.22-12-056 at 200.

[223] Cal Advocates Opening Comments to February 1 Ruling at 5.

[224] D.22-12-056 at 200.

[225] *See* D.18-09-044 at Ordering Paragraph 13 authorizing Utilities $2 million to be set aside for the measurement and evaluation of the net energy metering successor tariff, *i.e.*, the NEM 2.0 tariff.

[226] Utilities Opening Comments to February 1 Ruling at 20.

the successor tariff, the budget should be enhanced in comparison.[227] The Commission agrees that a budget amount larger than the 2019 Lookback Study is necessary given the passage of time, *i.e.*, inflation, and recognizing not only the complexity of the net billing tariff but also the various competing objectives required of the tariff. This decision finds that a twenty-five percent increase is reasonable for the evaluation budget to address approximately five years of inflation and the increased complexity of the Net billing tariff compared to the NEM 2.0 tariff that was reviewed in the Lookback Study. Hence, the Commission should authorize a maximum budget of $2.5 million budget for the evaluation.

Turning to the source for this funding, when asked whether public purpose program surcharges should be the funding source for the evaluation, both Cal Advocates and SEIA support relying on public purpose program surcharges to fund the evaluation, as had been the case with the Lookback Study.[228] Utilities state that D.22-12-056 requires that all costs associated with the evaluation be recorded in memorandum accounts. Utilities further assert the costs were to be recovered in a general rate case.[229] In reply comments, Utilities state that such a mechanism needs to be determined and that they do not oppose recovery through the public purpose program surcharges.[230]

The Commission agrees the costs of the evaluation should be funded by the public purpose program surcharges, as had been the case for the Lookback

[227] SEIA Opening Comments to February 1 Ruling at 30 and Reply Comments to February 1 Ruling at 7.

[228] Cal Advocates Opening Comments to February 1 Ruling at 9 and SEIA Opening Comments to February 1 Ruling at 30.

[229] Utilities Opening Comments to February 1 Ruling at 21.

[230] Utilities Reply Comments to February 1 Ruling at 3.

Study, as indicated in D.18-09-044.[231] While it is true that the Commission directed Utilities to track evaluation costs in a memorandum account, the Commission did not specify in D.22-12-056 the rate recovery mechanism for the evaluation. Accordingly, the Commission identifies the source of funding as public purpose program surcharges. Utilities are directed to continue to track the evaluation costs in the memorandum account and shall collect their proportionate costs through the public purpose program: PG&E: 40 percent, SDG&E: 20 percent, and SCE: 40 percent.

3.4.3. Parameters of the Net Billing Tariff Evaluation

Turning to the parameters of the evaluation, parties were queried about the evaluation questions, metrics by which to answer the questions, and specifics on the data to be collected for the evaluation.

When asking parties to consider the evaluation questions to be answered, the February 1 Ruling reminded parties that the evaluation of the net billing tariff should focus on affordability, equity, grid benefits, and battery dispatch trends. The February 1 Ruling also noted the goals of the tariff, such as improving reliability of electricity in California, reducing greenhouse gas emissions, encouraging electrification of consumer end uses in transportation and buildings, and protecting consumers.

In response to the February 1 Ruling, CALSSA, Utilities, and SEIA acknowledged the eight areas of focus provided by the ruling and offered a diverse range of questions for the evaluation to consider while touching upon the

[231] *See* D.18-09-044 at Ordering Paragraph 13 authorizing Utilities to establish a balancing account to collect its proportionate share of the $2 million for the measurement and evaluation of the NEM 2.0 tariff and "collect those costs through their respective public purpose program surcharges."

tariff objectives and evaluation focus points. These proposed evaluation research questions are presented in Table 10 below.

Table 10

Proposed Evaluation Research Questions[232]		
Party	**Focus Area**	**Question**
Utilities	• Affordability • Equity	Has the net billing tariff reduced the impact of the cost shift, especially among low-income customers?
Utilities	• Affordability • Equity	Has the net billing tariff resulted in benefits that approximately equal costs considering the various perspectives of the total energy system, program participants, non-participating ratepayers and utilities administering the program? How have these answers changed from the NEM 1.0/2.0 tariffs to the net billing tariff?
Utilities	• Grid Benefits	Does the net billing tariff encourage customers to export their generated energy during times that are most beneficial to the grid?
Utilities	• Battery Dispatch	Has the net billing tariff successfully encouraged storage adoption?
Utilities	• Encouraging Electrification	Has the net billing tariff successfully encouraged electrification among adopting customers and do customers who use the oversizing attestation provision increase their load consistent with the attestation? How have these answers changed from the NEM 1.0/2.0 tariffs to the net billing tariff?

[232] 350 Bay Area Opening Comments to February 1 Ruling at 2; CALSSA Opening Comments to February 1 Ruling at 9-11; SEIA Opening Comments to February 1 Ruling at 18-19; and Utilities Opening Comments to February 1 Ruling at 18-19.

Proposed Evaluation Research Questions[232]		
Party	**Focus Area**	**Question**
Utilities	• Equity	What is the adoption rate of solar and storage systems and what are the characteristics of installed systems and customers taking service under the net billing tariff? Has the net billing tariff successfully encouraged solar and/or storage adoption among low-income customers and customers in Disadvantaged Communities?
Utilities	• Battery Dispatch	What are the primary drivers of solar and storage adoption among the net billing tariff customers?
CALSSA	• Grid Benefits • Reliability • Greenhouse Gas Emissions • Battery Dispatch	What are the net impacts of net billing tariff customers' systems on energy usage in hours of the year that approach constraints on distribution capacity?
CALSSA	• Grid Benefits • Reliability • Greenhouse Gas Emissions • Battery Dispatch	What are the net impacts of net billing tariff customers' systems on energy usage in the hours of the year when wholesale energy prices go above a threshold of $200/MWh or when the CAISO issues emergency alerts?
CALSSA	• Grid Benefits • Reliability • Greenhouse Gas Emissions • Battery Dispatch	To what extent does energy storage installed at individual customer locations act as a community asset during grid outages?
CALSSA	• Equity	What are the levels of solar and storage adoption by income level?
CALSSA and 350 Bay Area	• Affordability	What is the impact of systems installed under the net billing tariff in meeting the state's long-term greenhouse gas reduction targets? How does the trajectory of the net billing tariff adoption compare to a realistic alternative of fully meeting the targets with less net billing tariff adoption?

Proposed Evaluation Research Questions[232]		
Party	**Focus Area**	**Question**
CALSSA	• Encouraging Electrification	What portion of customers enrolling in the net billing tariff have installed other electrification technologies? What are the customer economics of installing electrification technologies with and without solar and storage under the net billing tariff?
CALSSA	• Protecting Customers	What are the trends in compliance with the requirements related to the Consumer Guide?
SEIA	• Affordability	Is the net billing tariff cost-effective?
SEIA	• Equity	Are low-income customers taking service under the net billing tariff? How many of these customers reside in disadvantaged communities?
SEIA	• Use of Solar Systems Paired with Storage	How many customers have installed solar versus solar paired with storage?
SEIA	• Encouraging Electrification	Have customers on the net billing tariff adopted electric vehicles, electric heat pumps, etc.
SEIA	• Battery Dispatch • Reliability	Are net billing tariff customers dispatching storage in a manner which enhances grid reliability.
SEIA	• Reducing Greenhouse Gas Emissions	Are net billing tariff customers dispatching storage in a manner which helps reduce greenhouse gas emissions?
SEIA	• Protecting Customers	Is the net billing tariff the subject of complaints to the utility, the Commission, or the California Solar Labor Board?

The Commission finds the diverse set of questions in Table 10 to be valuable and should be considered by the consultant hired to perform the evaluation. However, the Commission is concerned about adopting a specific set of questions for the evaluation and not having the flexibility to revise the questions if faced with one or more of the following conditions: (1) a reasonable question was not previously considered; (2) a question was asked in a way that is not sufficiently neutral or is not sufficiently encompassing; and/or, (3) a question did not include all available options. Additionally, the Commission finds that consultants working in the field of evaluation may have additional insight into evaluation research question development that the Commission or parties do not have. Hence, this decision determines that the specific questions to be asked in the evaluation should be developed by evaluation experts, *i.e.*, the consultants hired to perform the evaluation, with Commission and party input. However, the consultant hired to perform the evaluation is directed to consider the set of proposed research questions contained in Table 10, as well as others contained in the record of this proceeding, when developing their research plan for the evaluation of the net billing tariff.

In lieu of adopting a specific set of research questions, the Commission finds it is prudent to adopt a set of evaluation objectives to guide the evaluation question development. The objectives should align with the questions provided by parties, as well as the directives of D.22-12-056 (equity, affordability, grid benefits, and improving battery dispatch trends) and the goals of the net billing tariff.

With respect to the goals of the net billing tariffs, the February 1 Ruling was incomplete in describing the goals. The February 1 Ruling stated that in addition to the directives cited above, the goals included improving reliability, reducing greenhouse gas emissions, encouraging electrification, and protecting consumers. However, two other goals, not mentioned in the Ruling, were discussed throughout D.22-12-056. The first additional goal for the net billing tariff is that the tariff ensures sustainable growth of the industry. While

D.22-12-056 determined that parties "have varying interpretations of the phrase "grow sustainably," the decision clarified that because most customer-sited renewable distributed generation in California is from solar systems, the sustainable growth of the solar industry must also be considered to ensure the sustainable growth of customer-sited renewable distributed generation. Hence, the evaluation objectives should include reviewing trends in the rooftop solar industry. Additionally, to avoid a reoccurrence of an insufficient analysis of the multitenant properties, as had been the case in the 2019 Lookback Study[233], the evaluation should ensure a thorough analysis of the virtual net billing tariff and the Aggregation subtariff.

This decision finds the set of evaluation objectives, as presented in Table 11 below, to be reasonable as they address the directives of D.22-12-056 (focus on equity, affordability, grid benefits, and use of solar paired with storage) and the goals of the net billing tariff (considering impact on solar industry, improving reliability, reducing greenhouse gas emissions, encouraging electrification, and protecting consumers), while also aligning with party recommendations in Table 10 above. The Commission should adopt these objectives.

Table 11

Objectives for Evaluation Research Questions
a. The evaluation should determine whether customer generation tariffs are equitable and the extent to which tariff costs are shifted to non-participating customers. This objective addresses the directive of D.22-12-056 to focus on equity and affordability.

[233] *See* D.22-12-056 at 183.

Objectives for Evaluation Research Questions
b. The evaluation should quantify the customer generation tariffs' effects on greenhouse gas emissions and their impacts on California's greenhouse gas emissions reductions objectives. This objective addresses the net billing tariff goal of reducing greenhouse gas emissions.
c. The evaluation should quantify the customer generation tariffs' impacts on California's electrification goals. This objective addresses the net billing tariff goal of encouraging electrification.
d. The evaluation should quantify the customer generation tariffs' impacts on the electric grid, including but not limited to the timing of customers' grid energy use, battery dispatch trends, and electrification of consumer end uses. This objective addresses the directive of D.22-12-056 to focus on grid benefits and battery dispatch trends, but also addresses the net billing tariff goal of encouraging electrification.
e. The evaluation should assess trends in installation of distributed generation, including stand-alone solar, solar paired with storage, and wind systems, and assess market trends such as customer prices for such systems. This objective addresses the net billing tariff goal to consider the impact of the net billing tariff on the solar industry and customer-sited renewable distributed generation, as well as the directives of D.22-12-056 to focus on affordability and the use of solar systems paired with storage.
f. The evaluation should assess the effects of the Commission's consumer protection measures on customers enrolled in customer generation tariffs. This objective addresses the net billing tariff goal of protecting consumers.

For the same reasons discussed above, the metrics by which to measure success of the successor tariffs and the data needed should also be developed by the evaluation consultant in consultation with the Commission and parties. However, the Commission finds the party recommendations to be valuable and should be considered by the consultant hired to perform the evaluation, when developing the metrics and the data needs for the evaluation. Metrics proposed by parties are presented in Table 12 below and data needs proposed by parties are presented in Table 13 below. These tables do not represent comprehensive lists of metrics or data, but rather a starting point. Consultants hired to perform the evaluation are directed to consider the metrics and data needs contained in these two tables and in the record of this proceeding when developing their research plan.

Parties were also asked about differentiating among customer types, subtariffs, generation types, or electrification technologies when collecting and analyzing data for the evaluation. Generally, all parties filing comments responding to these questions state that data collection and analysis should consider differentiation between customer type (*e.g.*, residential) or customer location (*e.g.*, coastal).[234] The Commission concurs that such differentiation should occur, especially to address such objectives as equity and affordability. Hence, this decision finds that ensuring that such differentiation occurs should be adopted as an additional overall objective of the evaluation.

Table 12

Proposed Metrics[235]		
Party	**Focus Area**	**Question**
Cal Advocates	• Affordability	• Cost-effectiveness evaluations, including the Ratepayer Impact Measure score and an adapted equity Ratepayer Impact Measure score • Total Cost Shift ($)

[234] *See* 350 Bay Area Opening Comments to February 1 Ruling at 3, Utilities Opening Comments to February 1 Ruling at 18 and SEIA Opening Comments to February 1 Ruling at 26.

[235] 350 Bay Area Opening Comments to February 1 Ruling at 2-3; Cal Advocates Opening Comments to February 1 Ruling at 7-8; SEIA Opening Comments to February 1 Ruling at 19-20; and Utilities Opening Comments to February 1 Ruling at 13-15.

Proposed Metrics[235]		
Party	**Focus Area**	**Question**
Cal Advocates	• Impact on Solar Industry	• Installed capacity by key customer demographics (MW) • Relevant demographic information includes low-income program eligibility (*e.g.*, CARE) and geographic location.
Cal Advocates	• Use of Solar Systems Paired with Storage	• Information regarding customer system type (*i.e.*, solar-only, storage-only, or paired systems).
350 Bay Area	• Impact on Solar Industry	• Installed systems by customer class • Total megawatts installed
SEIA	• Affordability • Equity	• Results of the Total Resource Cost test and the Ratepayer Impact Measure test. • Percentage of low-income net billing tariff customers with stand-alone solar systems, and those with solar systems paired with storage
SEIA	• Encouraging Electrification	• Net billing tariff customers adopting electric vehicles, etc. with stand-alone solar systems, and those with solar systems paired with storage. • Customer usage
SEIA	• Reliability • Reducing Greenhouse Gas Emissions	• Net billing tariff customer Storage dispatch trends
SEIA	• Protecting Customers	• Number of net billing tariff customer complaints regarding sale or operation of their net billing tariff system.
Utilities	• Equity	• Total annual cost shift in dollars by utility service territory

Proposed Metrics[235]		
Party	**Focus Area**	**Question**
Utilities	• Affordability	• Total Resource Cost test results • Participant Cost Test results • Ratepayer Impact Measure test results • Program Administrator Cost test results
Utilities	• Grid Benefits	• Export load shape for net billing tariff customers • Net billing tariff customers enrolled in demand pilot or programs
Utilities	• Reducing Greenhouse Gas Emissions	• Net greenhouse gas emission reductions
Utilities	• Storage Adoption	• Number and percentage of solar systems paired with storage compared to total systems
Utilities	• Encouraging Electrification	• Number and percent of adoption of technologies that rely on electric, *e.g.*, heat pumps, etc. • Number and percentage of customers whose load has increased after net billing tariff enrollment

Table 13

Proposed Data To Be Collected[236]
• Utility billing data • Utility interconnection data • Low-and Medium-Income, Disadvantaged Communities, and high-fire threat district customer participation data • Customer/developer/manufacturer/installer surveys and interviews • Generation and storage charge/discharge data from developers/manufacturers • Meter data for electricity consumption and grid imports/exports

Proposed Data To Be Collected[236]
• WattTime greenhouse gas signal or Avoided Cost Calculator greenhouse gas marginal emissions rates to calculate greenhouse gas emissions • Annual avoided costs • Weather Data • Load Shape Selection • Performance Modeling • Bill savings / retail rate levels and design • Annual distributed energy resource costs, by system component • Tax Treatment • Incentives • Interconnection costs • Utility meter data on imports/exports • CARE/FERA customer participation data and customer ZIP codes • Data on distributed energy resource adoption: customer surveys and trends in the oversizing of Generating Facilities and the payment of net surplus compensation

3.4.4. Evaluation Implementation Plan

The February 1 Ruling summarized the implementation plan for the Lookback Study as one that:

> authorized Energy Division to select an independent evaluation consultant through a request for proposal (RFP) process managed by San Diego Gas & Electric Company (SDG&E) on behalf of the Commission for this evaluation work. Energy Division staff drafted the RFP and made the final decision on the winning bidder. After the effective date of the agreement with the selected consultant, SDG&E submitted a Tier 2 advice letter detailing key aspects of the evaluation, including the draft research plan developed by the selected consultant, on the Rulemaking (R.) 14-07-002 proceeding's service list for public review and comment. Stakeholder input was considered and acted on,

[236] 350 Bay Area Opening Comments to February 1 Ruling at 3-4; Cal Advocates Opening Comments to February 1 Ruling at 8; CALSSA Opening Comments to February 1 Ruling at 10-12; SEIA Opening Comments to February 1 Ruling at 20-26; and Utilities Opening Comments to February 1 Ruling at 16-18.

> where warranted. As authorized in D.18-09-044, the Commission's Energy Division Director approved the final research plan by letter. In coordination with Energy Division, the winning consultant hosted a public meeting to allow stakeholders and interested parties to comment and provide input on the draft study report. Finally, a final report was published as part of a ruling and comments were submitted.[237]

Parties were asked whether they supported this same process to evaluate the net billing tariff. Before addressing the evaluation implementation process, this decision discusses three overarching concerns.

First, the Commission clarifies that this decision only addresses the steps up to, but not including, consideration of the evaluation's results and recommendations. As described in D.22-12-056, the "Commission will consider the contents of the evaluation and associated party comments in a future proceeding to determine whether changes to the successor tariff or any of its elements are necessary."[238] Hence, contentions regarding the review of the previous Lookback Study and implications for the review of the net billing tariff evaluation will not be considered in this decision.[239] For the same reasons, this decision declines to adopt the Response to Recommendation (RTR) Process as described in the February 1 Ruling. Although some parties largely oppose adoption of the RTR Process,[240] it could be reconsidered in the future proceeding that reviews the evaluation of the net billing tariff. This determination is limited to the net billing tariff evaluation. While the Commission declines to formally

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[237] February 1 Ruling, Attachment 3 at 2.

[238] D.22-12-056 at 200.

[239] CALSSA Opening Comments to February 1 Ruling at 12; SEIA Opening Comments to February 1 Ruling at 28, and 350 Bay Area Reply Comments to February 1 Ruling at 2.

[240] CALSSSA Opening Comments to February 1 Ruling at 13; Utilities Opening Comments to February 1 Ruling at 20; and SEIA Opening Comments to February 1 Ruling at 29-30.

adopt the RTR process for the evaluation, there is nothing in the record of this proceeding that requires the Commission to prohibit Energy Division from using this tool on an informal basis in the evaluation process.

Second, CALSSA reiterated prior concerns with the evaluation process for the Lookback Study, stating that "at no point was there opportunity for data requests to Verdant, and the Commission issued no judgment on Verdant's response to parties' criticisms of the draft report."[241] The Commission discussed these and similar concerns in D.22-12-056, finding that "CALSSA's contention that the study 'assumptions are or appear flawed' is not persuasive; CALSSA and all stakeholders have been given several opportunities to weigh in on both the development and drafting of the study."[242] Furthermore, the Commission disagrees with CALSSA's assertion that "it was a significant problem in this proceeding that parties were not allowed to submit data requests to Verdant on the January 2021 Lookback Study," which "resulted in the Commission relying on information that some parties thought was erroneous and correctable."[243] As the Commission previously stated in D.22-12-056, "a disagreement on an assumption does not equate to a flaw in the assumption."[244]

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[241] CALSSA Opening Comments to February 1 Ruling at 12.

[242] D.22-12-056 at 42 and Lookback Study at Section 2.4, titled, *Stakeholder Engagement Process* that discusses three opportunities for input: i) in-person workshop; ii) informal comments on draft research plan; and iii) informal written comments on the draft study that were included in the final Lookback Study. Additionally, in a January 21, 2021 Ruling, parties were instructed to file comments responding to questions regarding how the Lookback Study should inform the successor.

[243] CALSSA Opening Comments to February 1 Ruling at 12.

[244] D.22-12-056 at Finding of Fact 8.

Third, this decision addresses Cal Advocates' comments advocating for annual evaluations. Cal Advocates proposes the net billing tariff and its predecessor tariffs should be annually evaluated by Energy Division "against legislative and Commission goals, starting one year from the NEM 2.0 sunset date."[245] Cal Advocates also recommends that "no modifications to the evaluation process directed by D.22-12-056 should be made."[246] Yet, annual reports or evaluations is clearly a modification of the direction of D.22-12-056, which states that "it is the intention of the Commission to collect data from the successor tariff for three years and then analyze the data and provide a draft evaluation within five years of implementation of the successor tariff."[247] The Commission concludes it should not revise its prior determination to conduct one evaluation of the net billing tariff within five years. Accordingly, this decision denies Cal Advocates requests to conduct annual reports or evaluations of the net billing tariff.

Moving to specific evaluation implementation steps, Utilities assert that the process described in the February 1 Ruling is not efficient since the utility "is used as Energy Division's conduit to procure a contract with a vendor."[248] Utilities recommend "an efficient and transparent process" where one utility "can take the lead in issuing a request for proposal (RFP) and share proposals with Energy Division and the other [Utilities]," with the vendor selection a collaboration between Energy Division and the Utilities, and the lead utility setting up the contract with the vendor and taking input from Energy Division

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[245] Cal Advocates Opening Comments to February 1 Ruling at 5-6.

[246] Cal Advocates Opening Comments to February 1 Ruling at 8.

[247] D.22-12-056 at 200.

[248] Utilities Opening Comments to February 1 Ruling at 19.

and the other utilities.[249] Utilities also recommend the formation of a working group, where Utilities and Energy Division review and approve the consultant's draft research plan, which can then be shared to parties for review and feedback.[250] Once the research plan is in place, Utilities recommend data collection "begin the 36th month that customers were able to be billed on the new tariff."[251]

SEIA largely agrees with the process outlined in the February 1 Ruling, with caveats.[252] However, as a threshold question, SEIA contends that the data collected in the next several years may be a limited sample, since it could take several months for these new systems to come online.[253] SEIA, therefore recommends postponing the decision of when to begin the evaluation to 2026 and questions whether the five-year deadline remains reasonable.[254] Returning to SEIA's previously requested caveats, SEIA suggests these caveats involve the steps for review of the draft evaluation report and the contents of the final evaluation report. SEIA requests that to improve transparency of the final evaluation report: (1) the draft evaluation report and workpapers be provided to all parties six weeks prior to the proposed workshop and (2) parties should be given the opportunity to submit written questions and receive written responses, with this information included in the final evaluation report.[255]

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[249] Utilities Opening Comments to February 1 Ruling at 19.

[250] Utilities Opening Comments to February 1 Ruling at 19.

[251] Utilities Opening Comments to February 1 Ruling at 20.

[252] SEIA Opening Comments to February 1 Ruling at 27.

[253] SEIA Opening Comments to February 1 Ruling at 28.

[254] SEIA Opening Comments to February 1 Ruling at 29.

[255] SEIA Opening Comments to February 1 Ruling at 27-28.

CALSSA also supports portions of the proposed evaluation implementation process. CALSSA does not object to a three-year period of analysis, but proposes that data collection should be delayed, rather than occur throughout the analysis period, until after April 15, 2026 to "enable the analysis of three years of installation and operation data under the net billing tariff."[256] With respect to the draft evaluation report, CALSSA asserts the study methodology and draft analysis should be subject to discovery, and the Commission should respond formally to party comments on the draft study.[257]

This decision adopts a modified version of the previous evaluation implementation process. The Commission finds that increased efficiency and transparency should lead to an improved process. Accordingly, the consultant selection step of the implementation process is revised to assign one utility to be responsible for drafting the RFP and the selection criteria, as recommended by Utilities, which should lead to a more efficient process. The selected utility shall work with Energy Division to develop the RFP and the selection criteria. The selected Utility shall issue the RFP within 120 days of the adoption of this decision.

Cal Advocates also recommends the Commission authorize Energy Division "to contract with an independent consultant, as outlined by D.22-12-056" and choose one of the investor-owned utilities to be "responsible for managing the request for proposal process," as "outlined in D.22-12-056."[258] The Commission finds that to ensure fairness and because Utilities are a party to this

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[256] CALSSA Opening Comments to February 1 Ruling at 12.

[257] CALSSA Opening Comments to February 1 Ruling at 12.

[258] Cal Advocates Opening Comments to February 1 Ruling at 8.

proceeding, the final selection of the consultant should be made by the Energy Division, with input from the utility selected to be responsible for the RFP.

Moving to the development of the Research Plan, parties were asked whether the final research plan should be submitted as a compliance filing, instead of submitting a Tier 2 advice letter detailing key aspects of the evaluation as had been done for the Lookback Study. CALSSA supports submission of the final research plan as a compliance filing, but only if the draft research plan is issued with a ruling asking questions.[259] Utilities recommend that instead of submitting the final research plan, Energy Division and Utilities "should form a working group, which will review and approve the research plan.[260] SEIA opposes this recommendation, asserting that involvement of a larger group of stakeholders, rather than just Energy Division and Utilities, will provide more transparency to the process and will result in a more balanced report.[261] Further, SEIA opposes submission of the final research plan as a compliance filing, since the final evaluation report will not be a compliance filing.[262]

The Commission agrees that transparency is important to the success of the evaluation. Hence, the Commission should not establish a working group to finalize the draft research plan. Instead, to promote improved transparency, the Commission should adopt the following steps: (1) the draft Research Plan will be provided to the service list within 90 days following the effective date of the contract or agreement with the selected consultant and at least 10 days prior to a public workshop at which time parties will discuss the draft Research Plan;

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[259] CALSSA Opening Comments to February 1 Ruling at 12.

[260] Utilities Opening Comments to February 1 Ruling at 19.

[261] SEIA Reply Comments to February 1 Ruling at 8.

[262] SEIA Opening Comments to February 1 Ruling at 28.

Energy Division and the consultant shall host the workshop; (2) written informal comments on the draft proposed Research Plan will be received by the consultant; and (3) the final proposed Research Plan will be provided to parties for an additional opportunity to comment. A final Research Plan with modifications based on party comment will be approved through a letter from the Director of Energy Division or their designee.

This decision confirms that as stated in D.22-12-056, the Commission will collect data during the first three years of the net billing tariff. Accordingly, data collection will begin on December 15, 2023, the net billing tariff implementation date. The Commission disagrees with SEIA that the data collected in the next several years may be limited, especially with regard to residential net billing tariff customers.

The next modification this decision makes is to the draft evaluation report step of this process. The Commission finds that additional transparency here will improve the overall process. Hence the Commission should adopt a transparent process that authorizes Energy Division to provide the draft evaluation report and workpapers to the service list of this proceeding no later than six weeks prior to an Evaluation Report Workshop, as requested by SEIA.[263] Providing the draft report and workpapers ahead of the workshop will allow parties to prepare questions to ask during the workshop. This, in addition to the workshop itself, should improve understanding of the draft report by parties. To provide additional transparency, written comments on the draft evaluation report following the workshop will also be allowed and will be addressed in the final report.

[263] SEIA Opening Comments to February 1 Ruling at 27.

The final evaluation process modification is to the final report issuance steps. The Lookback Study was published as part of a ruling and comments were submitted. As directed in D.22-12-056, the "Commission will consider the contents of the evaluation and associated party comments in a future proceeding to determine whether changes to the successor tariff or any of its elements are necessary."[264] Accordingly, because this decision closes the instant proceeding, the final net billing tariff evaluation report should be the basis for an Order Instituting Rulemaking (Order) to consider the findings of the evaluation and should be attached to the Order initiating the review.

3.5. Fuel Cell Participation in Net Energy Metering

This decision adopts a revised *Staff Proposal to Implement Net Energy Metering Fuel Cell Greenhouse Gas Emission Standards* (Staff Proposal), modifying the Staff Proposal originally issued through an April 6, 2021 *Email Ruling Directing Comments on Staff Proposal to Implement Net Energy Metering Fuel Cell Greenhouse Gas Emissions Standards*. Attached to this decision, as Appendix B, is the revised Staff Proposal with the modifications made in response to the party comments.

Below, this decision presents the background on this issue along with an overview of the original Staff Proposal, an overview of party comments on the Staff Proposal, and a discussion of the modifications to the Staff Proposal. No later than 60 days from the adoption of this decision, Utilities shall each file a Tier 2 advice letter modifying their individual net energy metering fuel cell (NEMFC) tariffs to align with the directives in this section.

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[264] D.22-12-056 at 200.

Following the discussion of the modifications is a brief discussion of party comments in response to questions asking parties to update the record. As discussed below, these comments ask the Commission to go beyond its jurisdiction and outside the scope of this proceeding in adopting new recommendations. For these reasons, the Commission declines to adopt these recommendations.

3.5.1. Background and Overview of Staff Proposal

In 2016, California Governor Edmund G. Brown Jr. signed into law Assembly Bill (AB) 1637, which extended the sunset date of the NEMFC tariff to December 31, 2021 and amended Pub. Util. Code §2827.10. As described in the aforementioned April 6, 2021 Ruling , the amended Pub. Util. Code §2827.10(b) "requires the California Air Resources Board (CARB) to 'establish a schedule of annual greenhouse gas emissions reduction standards' for NEMFC resources and 'update the schedule every three years with applicable standards for each intervening year.'" The ruling noted that CARB had completed its work in developing a schedule of greenhouse gas standards and the California Office of Administrative Law adopted a rulemaking action (File # 2020–0911–02) establishing CARB's Fuel Cell Net Energy Metering Greenhouse Gas Standards (CARB Standards). Explaining that the Commission is tasked with determining how to require the investor-owned utilities (Utilities) to verify NEMFC resources' compliance with the CARB Standards, the Ruling directed parties to comment on the Staff Proposal.

The Staff Proposal recommends procedures for implementing and enforcing the CARB Standards for NEMFC resources. The proposal makes the Utilities responsible for implementing and enforcing the framework for the standards. The proposed framework requires customer-generators with new and existing fuel cell systems to certify their system meets performance test code requirements and requires customer-generators to recertify on an annual basis based on interconnection date. As customer-generators are permitted to account for a system's use of waste heat utilization or renewable fuel blending in meeting the CARB Standards, the proposed framework presents the calculations for accounting for these savings.

With respect to renewable fuel blending, the proposal provides calculations for both onsite renewable fuel and directed renewable fuel blending. For directed renewable fuel, the renewable fuel is required to be delivered through a dedicated pipeline or injected into a pipeline system. Hence the Staff Proposal provides the required data on the transportation path and energy accounting and gas fuel consumption.

The Staff Proposal also provides instructions on demonstrating compliance with the CARB Standards through a voluntary tariff program that allows a customer-generator to offset fossil fuel natural gas consumption with renewable natural gas.

In a final section, the Staff Proposal describes the worksheet required to be annually submitted by the customer-generator for evaluation purposes to the utility.

3.5.2. Party Recommendations

The following parties filed opening comments to the April 6, 2021 Ruling: Bloom Energy; CALSSA; FCE; National Fuel Cell Research Center (NFCRC); PG&E; Protect Our Communities Foundation (PCF); Cal Advocates; SDG&E; Sierra Club; SCE; Southern California Gas Company (SoCalGas); and The Utility Reform Network (TURN). The following parties filed reply comments to the April 6, 2021 Ruling: Bloom Energy; FCE; NFCRC; PG&E; PCF; Sierra Club; and

SoCalGas. Additionally, in the February 28 Ruling, parties were asked to update the record on this matter. The following parties filed opening comments updating the record on this matter: Bloom Energy; CHBC; FCE; and Utilities. The following parties filed reply comments updating the record on this matter: Bloom Energy; FCE; and Utilities. Below is an overview of party comments on the Staff Proposal.

Bloom Energy asserts that the pathways to demonstrate compliance with the CARB Standard as laid out in the Staff Proposal are generally fair and reasonable and well-targeted towards achieving the goal of reducing greenhouse gas emissions. Bloom Energy offers additional compliance pathways: (1) the Self-Generation Incentive Program allowance for waste heat; (2) consider all available renewable fuels, including hydrogen, as eligible; (3) the capture of carbon; (4) recognize the verified methane reductions that stem from responsibly sourced gas; and (5) provide for equivalent credits to be applied to customer-generators when a fuel cell within California repurposes a waste source into energy that is then directed to the grid. Bloom Energy also recommends the creation of a dispute resolution process.

Cal Advocates recommends the Commission require customer-generators to annually recertify their fuel system's compliance with the CARB standards. For systems using renewable fuel blends, Cal Advocates recommends that the effective emissions rate should equal the actual emissions rate. Cal Advocates recommends that onsite inspection of fuel sources be required for directed biogas projects. Lastly, Cal Advocates recommends that the CARB Standards be applicable to all NEMFC resources, both existing and future installations.

CALSSA filed comments stating that they take no position on the Staff Proposal.

FCE states that it generally supports the components of the compliance regime described in the Staff Proposal and would support a final decision that mandates compliance mechanisms that are straightforward, proven effective, and that afford customer-generators a reasonable path to ensure greenhouse gas emissions decline according to standards and without being unduly costly or burdensome. FCE supports the inclusion of (1) biogas blending as a compliance mechanism; (2) recovered waste heat as a mechanism to reduce greenhouse gas emissions; and (3) a compliance regime focused on reducing greenhouse gas emissions. FCE recommends use of existing Self-Generation Incentive Program mechanisms to ensure compliance reporting. FCE cautions that monitoring systems like a Continuous Emission Monitoring System or Light Detection and Ranging would add significant unnecessary costs. Further, FCE asserts that fugitive emissions are accounted for in the gas procurement process and any additional requirements for testing would drive costs with little additional benefit.

PG&E considers the Staff Proposal thorough and comprehensive but makes several recommendations for a more nuanced approach. PG&E suggests less stringent documentation requirements for smaller fuel cell systems and opportunities to cure any delinquencies, which will lead to a more cost-effective and efficient process and perhaps less customer confusion. PG&E notes that it has not conducted field inspections to verify compliance with greenhouse gas emissions standards and thus will depend on the manufacturer of the fuel cell equipment to certify compliance at interconnection and at recertification.

PCF generally agrees with the Staff Proposal but recommends the inclusion of a citation and penalty procedure for failure to accurately or timely report emissions. PCF contends that the Commission should not require Utilities to conduct field inspections unless called for by the Commission but instead adopt an active monitoring system that includes daily and annual reporting. Other recommendations include a requirement to certify the percentage of captured waste heat used for heating needs, the adoption of a blending policy that aligns with clean energy policy, a requirement to reevaluate existing installations with revised CARB greenhouse gas emissions calculations, and establishment of a policy that, regardless of online date, each installation must emit fewer kilograms of carbon dioxide equivalent per megawatt-hour (kgCO2e/MWh) than the California electricity grid's average emissions. Also, as a threshold matter, PCF asserts that CARB appears to have used incorrect inputs for calculations regarding maximum fuel cell emissions allowed for the NEMFC tariff.

SDG&E recommends that CARB, which performs similar functions, be responsible for administering and tracking greenhouse gas emission verification for fuel cell generators. SDG&E contends that it would be administratively burdensome for Utilities to take on the compliance verification as described in the Staff Proposal. SDG&E asserts that it does not have the expertise and would need additional resources and expenses to perform the proposed functions. That being said, SDG&E recommends that any compliance regime be as simple and cost effective as possible and limit any cost burden to non-participating ratepayers.

Sierra Club asserts that the Staff Proposal does not present a robust compliance regime that avoids loopholes and the opportunity for gaming. Sierra Club opposes the proposal to allow use of biogas as a compliance mechanism due to serious verification and compliance issues identified in the Self-Generation Incentive Mechanism proceeding. Furthermore, Sierra Club contends the use of compliance through attestation does not provide adequate assurance of compliance and recommends onsite inspections by an independent third party retained by the Commission and funded by customer-generators.

SCE contends the Utilities lack the experience or expertise to implement and oversee the compliance actions proposed in the Staff Proposal. SCE asserts the Staff Proposal misinterprets AB 1637 regarding Utilities' responsibilities on this matter. SCE contends it is Utilities' responsibility to verify, prior to interconnection, that a project complies with Schedule NEMFC requirements to use Commission-approved technology that: (1) will achieve reductions in emissions of greenhouse gases in compliance with CARB's emissions reduction schedule; and (2) is certified under CARB's distributed generation certification program. SCE submits that if there must be ongoing, post-interconnection certification requirements, such certification should be implemented and administered by CARB.

SoCalGas recommends the Commission adopt simple and pragmatic policies and generally agrees with the Staff Proposal but recommends a few modifications. First, with respect to the first-year emissions of fuel cells, SoCalGas recommends the Commission use the ASME Performance Test Code (PTC) 50-2002 test results to calculate these emissions. While agreeing that recertification should occur, SoCalGas asserts that recertification is necessary only once after the triennial CARB greenhouse gas emission standard update and should not require a new ASME PTC 50-2002 performance test. SoCalGas supports the Staff Proposal method to account for the benefits of using renewable fuels.

TURN's comments were limited to the proposal to allow biomethane (or "renewable fuel") as a method of meeting the greenhouse gas emissions standards. TURN contends it is not appropriate to allow NEMFC resources to meet the CARB Standards through reliance on biomethane delivered via a common carrier pipeline.

3.5.3. Adopted Modifications to the Net Energy Metering for Fuel Cells Tariff

Based on the record of this proceeding, the Commission makes a clarification and several changes to the Staff Proposal. No later than 60 days from the adoption of this decision, Utilities shall each submit a Tier 2 advice letter updating the NEMFC tariff as directed below. Utilities shall make every effort to ensure language uniformity.

3.5.3.1. NEMFC Tariff: Applicability

First, as a threshold issue, Bloom Energy requests clarification regarding the applicability of the proposed compliance framework. Bloom Energy contends that only fuel cell customer-generators installed after the passage of AB 1637 are required to comply with the adopted compliance framework. Contending there is no express retroactivity clause, Bloom Energy asserts that the statute must be interpreted as prospective in the absence of clear, retroactive application.[265] Bloom Energy further provides a letter from the author of the legislation stating that the intention of the legislation was not to apply the standards to fuel cells installed prior to 2017.[266] NFCRC and PG&E note that the current approved PG&E NEMFC tariff allows customers taking service on or after January 1, 2017, to take service on the NEMFC tariff with the understanding that they will have to meet the CARB Standards.[267] FCE takes a more stringent interpretation of

[265] Bloom Energy Opening Comments to April 6, 2021 Ruling at 16-17.

[266] Bloom Energy Opening Comments to April 6, 2021 Ruling at 18 and Attachment B.

[267] NFCRC Reply Comments to April 6, 2021 Ruling at 3 and PG&E Opening Comments to April 6, 2021 Ruling at 6.

AB 1637, contending that only fuel cell systems installed after the adoption of this decision should be required to comply with AB 1637.[268] PCF disagrees with both FCE and Bloom Energy's interpretation of AB 1637 stating that AB 1637 reflects a blanket application to all fuel cell systems participating in net energy metering, which aligns with California energy policy.[269] PCF notes that the language of the statute states that: "greenhouse gas emissions reduction standards shall ensure that *each* fuel cell electrical generation resource… reduces greenhouse gas emissions compared to the electrical grid resources" [emphasis added].[270]

The Commission concludes that the adopted Staff Proposal should be applicable to all NEMFC resources installed after the enactment of AB 1637. For consistency, the Commission defines the installation date as the date on which a fuel cell system received permission to operate from the applicable utility. While the Commission agrees with PCF that the language of the statute states that the CARB Standards will be applicable to each fuel cell electrical generation resource, absent a retroactive clause, it would not be fair to apply the new standards to NEMFC resources installed prior to enactment of the legislation. The Staff Proposal is amended to include this clarification.

3.5.3.2. NEMFC Tariff: Compliance Regime Matters

The Staff Proposal places the responsibility to implement and enforce the standards as outlined in the proposed framework on the Utilities. SDG&E and SCE contend Utilities do not have the expertise to carry out these duties and

[268] FCE Opening Comments to April 6, 2021 Ruling at 14.

[269] PCF Reply Comments to April 6, 2021 Ruling at 9.

[270] PCF Reply Comments to April 6, 2021 Ruling at 9 citing Pub. Util. Code §2827.1(b)(2).

recommend that CARB be responsible for implementing the compliance regime. The Commission disagrees. The tariff is a Commission regulated tariff and such compliance should be conducted through the Commission. As Utilities are also regulated by the Commission and are responsible for ensuring safe and compliant interconnection, the Commission finds that Utilities are the appropriate entities to conduct this work and the Staff Proposal should reflect this. The Commission will maintain this responsibility in the modified Staff Proposal.

All Utilities agree that the compliance regime should be simple and cost effective and limit any shifting of costs to nonparticipating ratepayers.[271] The Commission agrees that ratepayers should not be responsible for the costs of this compliance. Pub. Util. Code §2827.10 (e)(2) authorizes the Commission to allow Utilities to charge a fee to a fuel cell customer-generator to recover the costs "associated with providing interconnection inspection services." The Commission finds such a fee will allow the Commission to meet the requirements of complying with the CARB Standards while protecting ratepayers from additional costs. Accordingly, the Staff Proposal should be updated to require: (1) a revised interconnection application fee to reflect the additional cost in ensuring initial compliance with the CARB Standards; and (2) an annual documentation fee reflecting the costs to administer the annual collection and processing of certifications.

In the required Tier 2 advice letter, due no later than 60 days following the adoption of this decision, Utilities shall propose an updated interconnection application fee and an annual documentation fee. Pursuant to D.16-01-044, the

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[271] PG&E Opening Comments to April 6, 2021 Ruling at 2.

interconnection fee shall be based solely on the following costs incurred for NEMFC resources less than one MW in size: NEM Processing and Administrative Costs, Distribution Engineering Costs, and Metering Installation/Inspection and Commissioning Costs. Utilities shall report NEMFC tariff interconnection and documentation costs in the annual "Net Energy Metering and Net Billing Tariff Annual Reporting Advice Letter," as established in D.22-12-056.[272] Utilities are authorized to propose any necessary changes to these fees through submission of a Tier 2 advice letter, as directed in D.16-10-044.[273]

3.5.3.3. NEMFC Tariff: Reporting Requirements

The Staff Proposal recommends that for both new and existing fuel cell systems, the customer-generator must use performance test code ASME PTC 50-2002[274] to determine the first-year emission rate but this must be adjusted by a model-specific performance degradation assumption to yield the system's emission rate. SoCalGas agrees but cautions that the performance test is not feasible for some sub-systems, *i.e.*, waste heat recovery.[275] Hence, SoCalGas

[272] D.22-12-056 at Ordering Paragraph 6.

[273] D.16-01-044 at 88.

[274] Performance Test Codes (PTC) are developed and published by the American Society of Mechanical Engineers (ASME). ASME is "a not-for-profit professional organization that enables collaboration, knowledge sharing and skill development across all engineering disciplines, while promoting the vital role of the engineer in society. ASME codes and standards, publications, conferences, continuing education, and professional development programs provide a foundation for advancing technical knowledge and a safer world." *See* www.asme.org.

[275] SoCalGas Opening Comments to April 6, 2021 Ruling at 3.

recommends the Commission allow alternative documentation, such as calculations from data found on manufacturer specification sheets.[276]

The Commission agrees that there are times when the performance test is not feasible and finds that an alternative calculation using equipment specification sheets with the fuel input rate and net electrical power output and the useful heat rate for Combined Heat and Power systems is a reasonable alternative. Thus, the Commission concludes it should allow for alternate calculations when the ASME calculation is not feasible. However, this decision stresses that the standard calculation should be the ASME PTC 50-2002 test results. Accordingly, the Staff Proposal is revised to allow for calculations based on equipment specification sheets, as an alternative only when the ASME PTC 50-2002 test is not feasible.

The Staff Proposal discusses certification timelines, recommending that initial certifications occur within three months of adoption of this decision. FCE opposes this timeline, asserting that three months would not provide enough time for customer-generators or Utilities. FCE contends customer-generators will need to inspect and potentially retrofit a fuel cell system in preparation for testing. FCE submits Utilities will need time to develop internal processes to manage the compliance regime. FCE proposes extending the timeline to six months.[277]

The Commission finds this request reasonable as it will provide sufficient time for customers and utilities to prepare for the initial certification. Hence, the Commission concludes that a six-month initial certification timeline is needed.

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[276] SoCalGas Opening Comments to April 6, 2021 Ruling at 2. *See also* SoCalGas Opening Comments to April 6, 2021 Ruling at 3 and 7.

[277] FCE Opening Comments to April 6, 2021 Ruling at 8-9.

Accordingly, the Staff Proposal is revised to extend the initial certification implementation timeline from three to six months.

Several parties commented on the proposed compliance regime in which the Staff Proposal recommends an initial certification and annual recertification with accompanying documentation on the generator's projected annual degradation rate. FCE proposes that, in lieu of utility inspections, the Commission should adopt the existing mechanisms used in the Self-Generation Incentive Program, which provides adequate compliance reporting without onsite activity or visual inspection.[278] FCE contends implementation of these existing mechanisms would be the most efficient and least costly way to ensure compliance.[279] Relatedly, Bloom Energy states that verifying efficiency and compliance with greenhouse gas emissions standards can be accomplished annually based on real-time data, which makes degradation assumptions unnecessary and potentially misleading.[280] Sierra Club and PCF support requiring the use of onsite monitoring systems rather than relying on customer-generator self-certification, with PCF asserting such monitoring can determine actual efficiency.[281] Supporting Bloom Energy and FCE's claims, PCF agrees that the use of real-time data are current and continuous monitoring tools the Commission should use but recommends that this data, as well as emissions calculations," should be attested to through sworn affidavits."[282] In contrast,

[278] FCE Opening Comments to April 6, 2021 Ruling at 5.

[279] FCE Opening Comments to April 6, 2021 Ruling at 5.

[280] Bloom Energy Opening Comments to April 6, 2021 Ruling at 11.

[281] Sierra Club Opening Comments to April 6, 2021 Ruling at 8 and PCF Opening Comments to April 6, 2021 Ruling at 6.

[282] PCF Reply Comments to April 6, 2021 Ruling at 5.

PG&E contends that having documents submitted and reviewed triennially on a common date would reduce tariff administrative costs.[283]

The Commission's intention is to provide an efficient framework that is successfully compliant with the statute. The Commission finds that relying on the Self-Generation Incentive Program's requirements, which order monthly reporting, provides that efficiency as compared to the daily reporting requested by PCF, which is excessive. Further, infrequent reporting as proposed by PG&E could lead to long periods of noncompliant greenhouse gas emissions. Hence, the Commission should adopt the use of the Self-Generation Incentive Program handbook requirements in its implementation of the CARB Standards in the NEMFC tariff.

Accordingly, the Staff Proposal is revised to reflect that documentation must comply with Self-Generation Incentive Program handbook requirements, including the requirement that customer-generators contract with a Performance Data Provider. The Self-Generation Incentive Program requirement to contract with a Performance Data Provider for a minimum of five years is revised for the purposes of the NEMFC; such a contract will only be required for the duration the customer-generator takes service on the tariff. Utilities shall propose acceptable documentation in the required Tier 2 advice letter.

The Staff Proposal provides guidance for accounting for Waste Heat Utilization. Citing a U.S. Department of Energy white paper on fuel cells, PCF highlights that fuel cell emissions can increase by 69 percent if waste heat is not used.[284] PCF urges the Commission to ensure that the customer-generator certify

[283] PG&E Opening Comments to April 6, 2021 Ruling at 2.

[284] PCF Opening Comments to April 6, 2021 Ruling at 6.

the percentage of the waste heat that will be captured and used onsite for heating needs that would otherwise be performed by a commercial boiler or heat pump.

The Staff Proposal recommends certification for greenhouse gas emission rates but does not specifically include waste heat usage as part of the certification. The Commission agrees that waste heat usage, when present, is a critical component of the emission rate. Hence, the Commission should clarify that waste heat usage should be included when calculating the greenhouse gas emission rate. Accordingly, the Staff Proposal is revised to require customer-generator certification of any waste heat usage provided in the calculation of the emission rate.

3.5.3.4. NEMFC Tariff: Verification and Penalties

This section discusses verification procedures for compliance with the NEMFC tariff requirements as well as penalties for noncompliance. The Staff Proposal includes a recommendation to permit Utilities to conduct field inspections to verify compliance with the CARB Standards. With respect to compliance verification, parties requested a citation and penalty procedure,[285] a dispute resolution process,[286] and the ability to cure deficiencies.[287] Bloom contends that a process for determining eligibility and dispute resolution will avoid disruption of existing contracts, which would harm customers and energy reliability.[288] PG&E maintains that an opportunity to cure would prove as effective as it would result in the use of less resources and less costs and the

[285] PCF Opening Comments to April 6, 2021 Ruling at 3.

[286] Bloom Opening Comments to April 6, 2021 Ruling at 7-8.

[287] PG&E Reply Comments to April 6, 2021 Ruling at 2-3.

[288] Bloom Opening Comments to April 6, 2021 Ruling at 7-8.

"onus to mitigate the situation [would lie] with the customer."[289] PG&E also proposes that customers have an opportunity to cure deficiencies in a subsequent review but be permanently removed from access to the NEMFC tariff after failing two reviews.[290] PG&E highlights that there is a procedure already in place to address concerns regarding failure of mitigation efforts or a customers' concern with the compliance process administration. SCE agrees that if a NEMFC resource fails to be recertified, its NEMFC tariff interconnection agreement should be terminated, and the associated utility should serve the resource under a new non-export agreement under Rule 21.[291] Sierra Club opposes PG&E's proposal, especially if the Commission would limit review to every three years. Sierra Club contends this is inconsistent with Pub. Util. Code §2827.10 which requires compliance with the CARB Standards for eligibility.

The Commission agrees that PG&E's proposal for a lengthy deficiency cure period does not comply with the statute. Above, the Commission focused on efficiency in its adoption of monthly reporting. Once again, efficiency is important and a six-month window to cure deficiencies is the most efficient and least resource intensive process available. The Commission concludes it should adopt the use of a six-month window for customers to cure deficiencies, following the discovery of a lack of compliance. Accordingly, the Staff Proposal is revised to include this six-month window in which customers can come into compliance, after which the interconnection agreement will be terminated, and the project will be served under a Rule 21 non-export agreement.

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[289] PG&E Reply Comments to April 6, 2021 Ruling at 2-3.

[290] PG&E Opening Comments to April 6, 2021 Ruling at 2.

[291] SCE Opening Comments to April 6, 2021 Ruling at 2.

Specific to the requirements for renewable fuel blending, discussed in Section 3.5.3.6 below, Sierra Club points to an absence in the Staff Proposal of a discussion of the consequences for noncompliance with accounting for the use of renewable fuels. The Commission agrees that there must be consequences for noncompliance. As such, the Commission finds that the practice of random no-warning spot-checks and 30-day warnings adopted by the Commission for the Self-Generation Incentive Program will apply to the renewable fuel blending requirements in the NEMFC tariff. If such compliance with renewable fuel blending requirements does not occur following the 30-day warning, and if recalculation of the fuel cell system's greenhouse gas emissions without the purported biofuel results in the system emitting more than the CARB Standards, automatic removal from the NEMFC tariff is warranted. The Staff Proposal is revised to reflect this penalty. Utilities shall conduct these monitoring activities. The Commission finds it reasonable to require customer-generators to fund these activities, which will eliminate any ratepayer burden. Utilities shall include the cost of these activities in the annual documentation fee.

3.5.3.5. NEMFC Tariff: Carbon Capture

Bloom Energy submits that fuel cells' non-combustion process makes carbon dioxide (CO_2), which has the potential for use in building materials, alternative fuels, chemicals, plastics, beverages, aquaculture, and other applications. Bloom Energy asserts that the Commission can enable these carbon reduction strategies through the NEMFC tariff and requests the Commission consider allowing for the capture of carbon to serve as one of the eligible pathways for compliance.[292] Relatedly, Bloom Energy encourages the

[292] Bloom Energy Opening Comments to April 6, 2021 Ruling at 6.

Commission allow multiple pathways to be used simultaneously to calculate the effective emission rate. Bloom asserts this would reduce emissions and serve multiple energy service purposes and proposes, as an example, utilizing waste heat and using renewable fuels.[293]

CARB regulates how to account for greenhouse gas emissions reductions from carbon capture and storage. However, CARB's Low Carbon Fuel Standard only allows sequestration underground.[294] In D.22-05-025, the Commission agreed that a more expansive requirement should be adopted that includes "use" in addition to capture and storage. The decision allowed that "permissible uses of CO_2 that effectively prevent it from entering the atmosphere include, but are not limited to, carbon mineralization, geologic storage, methanation, biofuel production, and industrial or manufacturing applications."[295] D.22-05-025 directed that the greenhouse gas emissions reductions and environmental benefits of carbon capture use and storage be added to the carbon intensity score to determine production facility life cycle carbon emissions and to create an incentive for these projects.[296] The Commission directed Utilities to address in their Standard Biomethane Procurement Methodology how priority would be given to a facility that commits to capturing, storing, or utilizing CO_2 that would otherwise be vented into the atmosphere.[297]

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[293] Bloom Energy Opening Comments to April 6, 2021 Ruling at 12.

[294] Senate Bill 905 Carbon Sequestration: Carbon Capture, Removal, Utilization, and Storage Program.

[295] D.22-02-025 at 44.

[296] D.22-02-025 at 44.

[297] D.22-02-025 at Ordering Paragraph 2, which required submission of a Tier 2 advice letter within three months of a workshop to be held 45 days from the adoption of the decision.

Currently, the Commission has no standards on carbon capture, use, and storage. The Commission finds it necessary to add a new section to the Staff Proposal called Carbon Capture, Use, and Storage. This section will provide a disclaimer stating that if a fuel cell customer notifies a utility that it wants to perform carbon capture, use, and storage, then, within 12 months of such notice, the relevant utility shall submit a Tier 2 advice letter proposing rules in compliance with CARB's carbon capture and storage protocol.

With respect to Bloom Energy's request to allow multiple pathways to be used simultaneously to calculate the effective emission rate, the Staff Proposal does not address whether fuel cell facilities are permitted to simultaneously use multiple methods to calculate their effective emission rate. The Commission concludes that the simultaneous use of multiple methods is reasonable. For the sake of clarification, this decision amends the Staff Proposal to explicitly allow fuel cell facilities to calculate the effective emission rate by simultaneously using multiple methods.

3.5.3.6. NEMFC Tariff: Renewable Fuel Blending

The following revisions involve the subject of Renewable Fuel Blending. Sierra Club, TURN, and, to an extent, Cal Advocates express opposition to including renewable fuel blending as a compliance mechanism. The Commission addresses these concerns through revisions to the Staff Proposal, as discussed below. With these revisions, the Commission maintains that it is reasonable to account for the use of renewable fuels in meeting greenhouse gas emission standards.

Cal Advocates contends there are significant disparities in lifecycle greenhouse gas emissions attributable to a biogas supply's production and use based on factors including "variations in feedstock types, origin, raw material production efficiencies, and transportation," as indicated in CARB's Low Carbon Fuel Standards Pathway Certified Carbon Intensities.[298] Sierra Club concurs, cautioning that "carbon intensity of biomethane varies considerably depending on its source, simply assuming zero emissions from directed biogas does not accurately reflect its carbon intensity."[299] The Staff Proposal does not ask for the reduction from a baseline as it assumes the carbon intensity of a renewable fuel is zero. Sierra Club asserts that the Low Carbon Fuel Standards program can be a starting point for determining reductions for biogas sources, but it applies to displacement of transportation fuel. Because NEMFC projects displace less carbon-intensive grid energy, Sierra Club recommends the diminished benefits of using biomethane for a behind-the-meter end use must be taken into account.[300]

As described in the Staff Proposal, the Commission adopted a Voluntary Renewable Natural Gas Tariff pilot in D.20-12-022 to allow residential, and small commercial and industrial customers to purchase renewable natural gas[301] that would become part of their regulated fossil-based natural gas services. In D.20-12-022, the Commission found that developing a modified methodology based on the model used for CARB's Low Carbon Fuel Standards program was a reasonable approach to calculate carbon intensity of eligible renewable natural

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[298] Cal Advocates Opening Comments to April 6, 2021 Ruling at 3 citing to CARB's Low Carbon Fuel Standards Pathway Certified Carbon Intensities which can be found on the CARB website at: https://ww3.arb.ca.gov/fuels/lcfs/fuelpathways/pathwaytable.htm.

[299] Sierra Club Opening Comments to April 6, 2021 Ruling at 10.

[300] Sierra Club Opening Comments to April 6, 2021 Ruling at 10.

[301] D.20-12-022 describes renewable natural gas, which is also known as biomethane, as a biogas emitted from agricultural and waste products and upgraded to a quality similar to fossil natural gas. D.20-12-022 at 2.

gas resources.[302] The model is called the Greenhouse Gases, Regulated Emissions, and Energy Use in Transportation Model (GREET) pathway.[303] In D.20-12-022, the Commission agreed that Low Carbon Fuel Standards carbon intensities show the greenhouse gas emissions reduction from a gasoline or diesel transportation fuel baseline and directed the creation of a revised model where the carbon intensities calculation methodology is "focused on fossil natural gas for specific renewable natural gas sources."[304] That decision also required the methodology be modified to include the energy inputs required for upgrading biogas for pipeline injection.[305] The Commission directed Utilities to hold a workshop to discuss both the criteria to be used in a modified GREET model and who should develop the model.[306]

Subsequently, the Commission adopted D.22-02-025, which implemented the SB 1440 Biomethane Procurement Program. In D.22-02-025, the Commission adopted use of the modified GREET model from D.20-12-022 to determine carbon intensity scores.[307] In the interim, the Commission directed Utilities to use a preliminary cost-effectiveness test that estimates the short-lived climate pollutant reduction and life cycle carbon emissions until the modified GREET model was completed and carbon intensity scores could be established.[308]

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[302] D.20-12-022 at 26.

[303] The CA-GREET model is a California-specific version of Argonne National Laboratory's GREET life cycle model which is used to calculate GHG emissions under the LCFS. *See*: https://ww2.arb.ca.gov/resources/documents/lcfs-life-cycle-analysis-models-anddocumentation.

[304] D.20-12-022 at 26-27.

[305] D.20-12-022 at 26-27.

[306] D.20-12-022 at 27.

[307] D.22-02-025 at 36.

[308] D.22-02-025 at 36.

To address parties' concerns, the Staff Proposal should be revised to include language providing additional instructions to Utilities on how to account for reduced emissions from biomethane using the preliminary method adopted in D.22-02-025. Within 90 days after a modified GREET model is approved, Utilities shall submit advice letters to revise the instructions in NEMFC tariffs based on the modified model.

The Staff Proposal presents distinct requirements for both onsite renewable fuel and directed renewable fuel. For directed renewable fuel, the Staff Proposal recommended that the renewable fuel be required to be delivered to the Generation Facility through a dedicated pipeline or injected into a common carrier pipeline system to align with Pub. Util. Code §651(b)(3)(B).

Sierra Club argues that the proposal fails to meaningfully address or remedy past verification and accounting issues where directed biogas has been allowed to participate. Sierra Club references D.20-01-012 that discusses "a concerning level of missing or inaccurate records that rendered it infeasible to determine the compliance status of 'numerous' onsite and directed biogas projects."[309] Cal Advocates shares Sierra Club's concern about missing or inaccurate records, alleging that issues related to noncompliant renewable generation projects have remained unresolved for years.[310]

Sierra Club objects to a utility review of invoices with no clear criteria or consequence for non-compliance. Further, Sierra Club submits the audit does not appear to require inspection of the project's fuel sources in contrast to CARB's

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[309] Sierra Club Opening Comments to April 6, 2021 Ruling at 4 citing D.20-01-012 Self-Generation Incentive Program Revisions Pursuant to Senate Bill 700 and Other Program Changes, at 66-67.

[310] Cal Advocates Opening Comments to April 6, 2021 Ruling at 6 citing D.20-01-021 at 67.

Low Carbon Fuel Standards for biomethane. Sierra Club contends that if the Commission does allow directed biogas contracts to enable compliance with greenhouse gas emissions eligibility standards, requirements should be no less stringent than those adopted in the Self-Generation Incentive Program proceeding.[311] Sierra Club references D.21-06-005, the *Proposed Decision Revising Self-Generation Incentive Program Renewable Generation Technology Program Requirements and Other Matters*, which institutes periodic no-warning spot checks of fuel sources and retention of environmental attributes by the host generator and review of commits during fuel source verification spot checks.[312] In support of onsite inspections, Cal Advocates points to CARB's rigorous verification protocols for its Low Carbon Fuel Standards, which Cal Advocates submits includes annual site visits to biofuel production locations by independent third-party verifiers.[313] Cal Advocates and Sierra Club underscore that CARB has classified biomethane as having a high potential for misreporting.[314]

The Commission has acknowledged the presence of verification issues in the Self-Generation Incentive Program. In D.20-01-021, the Commission noted that requirements for verification of source fuels had not kept pace with the Low Carbon Fuel Standard or Renewables Portfolio Standards.[315] In D.21-06-005, the

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311 Sierra Club Opening Comments to April 6, 2021 Ruling at 5.

312 Sierra Club Opening Comments to April 6, 2021 Ruling at 5 citing to what is now D.21-06-005 at 83-84.

313 Cal Advocates Opening Comments to April 6, 2021 Ruling at 4 citing California Code Regulations § 95501(b)(3).

314 Cal Advocates Opening Comments to Fe April 6, 2021 February Ruling at 4 citing *California Air Resources Board, Biomass-Derived Fuels Guidance for California's Mandatory [Greenhouse Gas] Reporting Program* at 7 (January 11, 2019), https://ww3.arb.ca.gov/cc/reporting/ghgrep/guidance/biomass.pdf .

315 D.20-01-021 at 62 and 69.

Commission updated the Self-Generation Incentive Program handbook to, among other things, limit eligible directed renewable fuels to those produced within California and strengthen renewable fuel documentation, verification, auditing, and enforcement requirements.[316] The Commission recognizes these requirements are more stringent than the Staff Proposal requiring compliance with Pub. Util. Code §651(b)(3)(B). The Commission should align the requirements in the Staff Proposal with those of the Self-Generation Incentive Program. It is the Commission's intention that these more stringent requirements will improve future compliance. The Commission finds it reasonable that customer-generators fund these requirements, which will eliminate any ratepayer burden. Accordingly, the Staff Proposal is revised to align the requirements for directed biogas eligibility with those of the Self-Generation Incentive Program. Some of the Self-Generation Incentive Program requirements are also applicable to general characteristics of renewable fuels, including those produced onsite. A renewable fuel's eligibility for use to diminish emissions counted toward the CARB Standards should not depend on whether that fuel is produced onsite. Hence, for consistent treatment of renewable fuels within the NEMFC tariff, the Commission should require the compliance of renewable fuels produced onsite or delivered through a dedicated pipeline with any applicable requirements of Pub. Util. Code §651(b)(3)(B) or the Self-Generation Incentive Program for directed biofuel. The Staff Proposal is revised to reflect this.

Also related to directed biogas, the Staff Proposal recommends requiring documentation from the source showing the amount moved into the pipeline and received. Sierra Club questions that the Staff Proposal does not require

[316] D.21-06-005 at 2.

demonstration that environmental attributes of procured biogas were both obtained and not used elsewhere. While "directed biogas contracting can require the seller to provide all environmental attributes to the buyer – with the buyer retiring those attributes," Sierra Club asserts "there is no assurance attributes will not be double counted because there is no nationwide tracking." [317]

The Commission acknowledges the adoption of a tracking system adopted in D.22-02-025. In that decision, the Commission directed Utilities to require "biomethane producers to track volumetric injections into pipelines through the Midwest Renewable Energy Tracking System (M-RETS)," a proprietary web-based platform that tracks Renewable Energy Certificates and Renewable Thermal Certificates, "or another platform identified in the Standard Biomethane Procurement Methodology workshop.[318] With respect to the use of M-RETS, in D.20-12-022, Wild Tree asserts that because "California does not participate in this system for compliance markets" California will not use M-RETS "to determine compliance nor verification for the voluntary [Renewable Natural Gas] Tariff program."[319] The Commission finds that use of a contractual obligation may provide the best assurance of compliance until the M-RETS or any tracking system is broadly used. Hence, the Commission concludes it should require documentation of contractual obligation. Accordingly, the Staff Proposal is revised to require documentation of the seller's contractual obligation to provide all environmental attributes to the buyer.

The Staff Proposal recommends an alternative compliance demonstration option through the voluntary renewable natural gas tariff pilot, which allows the

[317] Sierra Club Opening Comments to April 6, 2021 Ruling at 4-5.

[318] D.22-02-025 at 50.

[319] D.20-12-022 at 27.

customer-generator to offset fossil natural gas consumption with renewable natural gas through a special billing arrangement.

PCF recommends that all fuel cell systems with renewable fuel be credited at the average percentage of renewable fuel in the utility pipelines.[320] Bloom and SoCalGas contend that, since the overarching goal is to reduce emissions, it is irrelevant whether the customer procures gas from a third party or pays a premium to a utility for the gas.[321] FCE recommends the Commission require gas utilities to publish the carbon intensity or the renewable blend ratio of their pipeline gas in the NEMFC tariff so customers can calculate the amount of additional renewable natural gas they need.[322] PG&E claims that a fuel cell's emissions are calculated based on the consumption of fossil natural gas. Therefore, PG&E asserts, the customer-generator can offset the equivalent amount of natural gas with the carbon intensity of the renewable natural gas.[323] PG&E adds that a simple percentage reduction for emissions attributed to the fuel cell would also be straightforward to implement.[324] However, SoCalGas submits that because a renewable gas procurement goal is being explored in the Biomethane Rulemaking, it will be necessary to adjust the pipeline's carbon content to allow for renewable gas carbon intensity.[325]

The Commission should ensure that the amount of renewable natural gas the fuel cells are using is accurately taken into account. Such accuracy requires

[320] PCF Opening Comments to April 6, 2021 Ruling at 9.

[321] Bloom Opening Comments to April 6, 2021 Ruling at 15 and SoCalGas Reply Comments to April 6, 2021 Ruling at 1.

[322] FCE Opening Comments to April 6, 2021 Ruling at 13.

[323] PG&E Opening Comments to April 6, 2021 Ruling at 6.

[324] PG&E Opening Comments to April 6, 2021 Ruling at 6.

[325] SoCalGas Opening Comments to April 6, 2021 Ruling at 9-10.

utility-supplied renewable natural gas to be included in the calculation of the greenhouse gas emissions of fuel cell systems participating in the NEMFC tariff. However, this decision clarifies that both D.20-12-022 and D.22-02-025 determined that the rights to the renewable natural gas environmental attributes remain with the utility. This decision also finds that the renewable natural gas content amount should be easy for utilities to verify since it should already be contained in their records. Accordingly, the Staff Report is amended to confirm that utility-supplied renewable natural gas is eligible for emissions reduction, if compliant with Pub. Util. Code §651(b)(3)(B) and Self-Generation Incentive Program requirements for directed biofuel, but the environmental attributes remain with the utility. Further, the Staff Report is also amended to reflect that only bundled service customers are eligible to demonstrate compliance through use of eligible utility-supplied renewable natural gas and/or through participation in a voluntary tariff program.

Finally, on August 29, 2022, SoCalGas submitted Advice Letter 6025, proposing the final elements of the Voluntary Renewable Natural Gas Tariff pilot program for nonresidential customers. No other gas utility is currently proposing to create such a program. The modified Staff Proposal reflects this recent action.

3.5.3.7. NEMFC Tariff: Related Proposals

This decision turns to a discussion of party comments that address the need to update the record on the NEMFC. Because nearly two years had passed since the issuance of the April 6, 2021 Ruling asking for comments on the Staff Proposal, the Administrative Law Judge issued a ruling that asked parties to comment on whether there were recent: (1) Commission decisions, resolutions, or dispositions or (2) other legal, regulatory, or technical developments the Commission should consider in determining whether to adopt the Staff Proposal.

The Commission finds that, based on party comments, there are no other developments to consider with respect to consideration of the Staff Proposal. However, the Commission takes this opportunity to briefly address requests from parties in response to two questions that are not related to the Staff Proposal.

First, Bloom Energy asserts that the lapse of time has rendered the CARB Standards "error-ridden" and "inconsistent with Pub. Util. Code §2827.10(b)(2) and with California's policy objectives."[326] Bloom also maintains that reliance on CARB Standards may subject fuel cell systems to unrealistic standards and result in the Commission replacing the clean resources with higher-emitting resources.[327] Bloom Energy contends that AB 1637 provides the Commission with the choice to determine whether or not to use CARB Standards as part of its statutory obligations based on Pub. Util. Code §2827.10(a)(3)(A)(iii) and 2827.10(b).[328] Moreover, Bloom Energy recommends the Commission: (1) request CARB to reassess its greenhouse gas emissions standard calculation, (2) replace the current tariff with new tariffs; and (3) consistent with D.21-07-011, consider an interim requirement that fuel cell systems must have the ability to consume renewable fuels.[329] Bloom discusses this assertion in response to the question regarding other legal, regulatory, or technical developments that impact this matter.[330]

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[326] Bloom Energy Opening Comments to February 28 Ruling at 2.

[327] Bloom Energy Opening Comments to February 28 Ruling at 3.

[328] Bloom Energy Opening Comments to February 28, 2023 Ruling at 1.

[329] Bloom Energy Opening Comments to February 28 Ruling at 3.

[330] Bloom Energy Opening Comments to February 28 Ruling at 9-10, and 12-20.

The Commission disagrees with Bloom Energy's interpretation of the statute and declines to grant this request. Pursuant to Pub. Util. Code §2827.10, an eligible fuel cell customer-generator is required to use technology the Commission has determined will achieve reductions in emissions of greenhouse gas emissions pursuant to subdivision (b), which states that CARB, in consultation with the Energy Commission, shall establish a schedule of annual greenhouse gas emissions reductions standards for a fuel cell electrical generation resource. CARB Standards are a requirement. In Pub. Util. Code §2827.10, the Commission has a limited role in developing fuel cell technology standards, which does not include determining the greenhouse gas emissions standards. Furthermore, the appropriate venue to relitigate CARB Standards is at CARB, not this proceeding. Accordingly, the Commission declines to grant Bloom Energy's proposal to request CARB to reassess its greenhouse gas emissions standard calculations.

Second, Bloom Energy and FCE request the Commission create a new fuel cell tariff or, alternatively, a tariff for distributed energy resources. FCE also urges the Commission to take immediate, concrete actions to determine how to encourage, enable, and expedite the development and deployment of fuel cells to address the need for clean, reliable, and resilient distributed resources.

Pub. Util. Code §2827.10 does not allow the Commission to extend the tariff. In establishing the requirements for fuel cell participation in net energy metering, the Legislature expressly sunset the tariff at the end of 2023. This sunset language provides no alternative action for the Commission, only the legislature, *i.e.*, the tariff expires "unless a later enacted statute that is chaptered on or before December 31, 2023 extends this eligibility commencement date."

Accordingly, the Commission denies the parties' request to address questions regarding a new tariff for fuel cells.

Bloom Energy and FCE request a new tariff for fuel cells or, alternatively, a distributed energy resources tariff. Neither of these requests involve matters that are in the scope of this proceeding; both requests are denied. This decision notes, however, that with the adoption of D.21-01-018, the Commission approved a microgrid tariff designed for distributed energy resources. Furthermore, pursuant to Pub. Util. Code §2827(b)4A, fuel cells using renewable fuels are eligible customer-generators and therefore qualify for the net billing tariff.

Bloom Energy and CHBC request the Commission consider an action similar to that adopted in D.21-07-011, where the Commission suspended the capacity reservation charge for technologies meeting certain standards.[331] Bloom Energy contends in that proceeding the Commission determined greenhouse gas emissions could be reduced without the CARB Standards.[332] Bloom Energy requests the Commission to adopt an interim NEMFC tariff applicable to fuel cells that: (1) have the capability to operate using only renewable fuels and (2) commit to using only renewable fuels, as practicable, by December 31, 2030.[333] The Commission declines to grant this request. NEMFC tariffs must comply with Pub. Util. Code §2827.1, which clearly states that a NEMFC resource "uses technology the Commission has determined will achieve reductions in emissions of greenhouse gases" pursuant to CARB's "schedule of annual greenhouse gas emissions reduction standards." Granting Bloom Energy's request would conflict with the statute.

331 Bloom Energy Opening Comments to February 28 Ruling at 7.

332 Bloom Energy Opening Comments to February 28 Ruling at 7-8.

333 Bloom Energy Opening Comments to February 28 Ruling at 20.

FCE requests the Commission to facilitate a workshop to discuss post 2023 regulatory alternatives to the NEMFC tariff. The Commission should not grant this request for the same reasons as above, the creation of alternatives to the NEMFC tariff is not a matter in the scope of this proceeding. Further, NEMFC resources already have alternate pathways available to them.

The Commission recognizes that following the expiration of the current NEMFC tariff, new customers with a fuel cell that does not use renewable fuels continue to have the ability to offer energy and capacity to a Utility and pursuant to Public Utility Regulatory Policies Act of 1978(PURPA), must be appropriately compensated. As previously directed in D.20-05-006, Utilities shall compensate the affected customer-generator as prescribed by PURPA, including providing compensation to fuel cells that are Qualifying Facilities of 20 MW or less.[334] Hence, no further action is required in this proceeding to address fuel cells that do not use renewable fuels.

3.6. Implementation of Pub. Util. Code §769.2

AB 2143 (Carrillo) established Pub. Util. Code §769.2 requiring that, beginning on January 1, 2024, large customer-sited renewable electrical generation facilities, and any associated battery storage, that enrolls in tariffs designed for these projects (*e.g.*, net energy metering or net billing tariffs) shall provide, at a minimum, prevailing wages to all construction workers and apprentices, unless the project is: (1) a residential renewable electrical generation facility that is eligible to receive service pursuant to the standard contract or tariff developed pursuant to Pub. Util. Code §2827.1 and has a maximum generating capacity of 15 kilowatts or less of electricity; (2) a residential renewable electrical

[334] See D.20-05-006 at Ordering Paragraph 11.

generation facility that is eligible to receive service pursuant to the standard contract or tariff developed pursuant to Pub. Util. Code §2827.1 and that is installed on a single-family home; (3) a project that is a public work, as defined in Section 1720 of the Labor Code, and that is subject to Article 2 (commencing with Section 1770) of Chapter 1 of Part 7 of Division 2 of the Labor Code; or (4) a renewable electrical generation facility that serves only a modular home, a modular home community, or multiunit housing that has two or fewer stories.

The Commission is explicitly assigned two responsibilities in this statute. The Commission is designated as the recipient of the certified payroll records for projects subject to this statute, which are required to be maintained, verified, and then submitted biannually to the Commission, on July 1st and December 31st of each year by the contractor of eligible projects. The Commission is also required to retain these records as public records for five years.

Enforcement of the wage requirements is through one of three mechanisms: (1) by the Labor Commissioner of the Department of Industrial Relations (Department) through issuance of a civil wage and penalty assessment; (2) by an underpaid construction worker or apprentice through an administrative complaint or civil action; and (3) by a joint labor-management committee through a civil action. The statute states that if a willful wage violation has been enforced against a contractor of an eligible and interconnected project, then the Generation Facility will lose service to the standard contract or tariff offered pursuant to Pub. Util. Code §2827 or §2827.1.

In the April 3 Ruling, parties were asked to respond to questions regarding the implementation of this statute. This decision presents a discussion of the responses to each of the questions, followed by the details of the implementation plan.

3.6.1. Timeline Commencement

Pub. Util. Code §769.2 requires contractors of the specified customer-sited renewable generation facilities to provide prevailing wages. Parties were asked to propose a process and timeline for ensuring contractors are complying. Responses focused on the timeline commencement and proposed two options: either the contract start date or the interconnection application date.

Utilities maintain that until an interconnection application is submitted to a utility, no information is known about the project or the contractor.[335] Hence, Utilities contend the interconnection application date should be the starting point of ensuring compliance. Utilities explain that once an application is received, a utility begins the interconnection process at which time it confirms a contractor's license. Utilities suggest they could determine, at receipt of the interconnection application, whether the contractor is on a created list of prohibited contractors (those who have previously violated Pub. Util. Code §769.2.) CALSSA also supports the use of the interconnection application date as the starting point for determining compliance. CALSSA contends the interconnection application will provide the information needed to determine if a project is required to comply with Pub. Util. Code §769.2, and using the application submission date as the starting point will "avoid the challenges and dangers of applying the statute retroactively."[336] Also providing support are PowerFlex, who submits the starting point will save time and cost and reduce ambiguity, and GRID, who agrees with Utilities that this is the earliest touchpoint contractors have with

[335] Utilities Opening Comments to April 3 Ruling at 9.

[336] CALSSA Opening Comments to April 3 Ruling at 2-3.

utilities.[337] CUE contends that if construction work begins prior to submitting the application, the contractor should be required to attest that work performed after December 31, 2023 complies with the statute.[338]

Taking a different approach, SEIA argues that the statute does not require contractors to report contract start dates and that neither the Commission nor the Utilities have a role in ensuring the contractor has properly classified the project as falling under the statute's prevailing wage requirements.[339]

The Commission disagrees with SEIA regarding the role of the Commission and Utilities. The Commission has regulatory jurisdiction over Utilities as well as authority over the safe and reliable interconnection of customer-generators, and Utilities oversee interconnection application requests by customers to ensure safe and reliable interconnection. Further, the Commission has the responsibility to ensure that customers are protected. Because customers will be negatively affected by contractor noncompliance, the Commission finds that it has a role in contractors' compliance with Pub. Util. Code §769.2 – and should, therefore, know whether the statute applies to a given Generation Facility. Because the interconnection application submission is the first point of contact between the customer and Utility, the Commission finds that this is the appropriate starting point to determine applicability of the statute. Accordingly, the Commission should include a step during the interconnection application process to determine whether a Generation Facility must comply with Pub. Util. Code §769.2.

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[337] Grid Opening Comments to April 3 Ruling at 4 and PowerFlex Opening Comments to April 3 Ruling at 2.

[338] CUE Opening Comments to April 3 Ruling at 1-2.

[339] SEIA Opening Comments to April 3 Ruling at 2-3.

To implement this process, changes must be made to the interconnection application to confirm eligibility. As suggested by CALSSA, the Commission directs Utilities to create a Pub. Util. Code §769.2 Checklist to provide for an assessment of whether the requirements are applicable to a project.[340] Utilities shall conduct a review of this checklist to confirm a project's applicability. Additional details on this checklist are provided in Section 3.6.6. below.

Pub. Util. Code §769.2 is effective January 1, 2024. Noting that some projects may already be in process as of the effective date, parties were asked to comment on the treatment of such projects and how to document this.

CALSSA, GRID, PowerFlex, SEIA, and Utilities agree that the legislation should apply prospectively and that contracts signed before the effective date could not be reasonably expected to adjust wages to meet the new requirements. Utilities submit that for NEM 1.0 and NEM 2.0 tariff customers, this provision would apply if an interconnection application is submitted "to upgrade the existing system to increase its size or to pair an energy storage device."[341] Pointing to a June 27, 2022 bill analysis, SEIA contends the language is clear and unambiguous that this bill "only applies to projects beginning after December 31, 2023."[342] SEIA offers a second bill analysis that SEIA contends indicates the statute is forward looking, not intended to go back and address contracts

[340] CALSSA Opening Comments to April 3 Ruling at 3.

[341] Utilities Opening Comments to April 3 Ruling at 13-14.

[342] SEIA Opening Comments to April 3 Ruling at 4 citing Senate on Labor, Public Employment and Retirement Bill Analysis (June 27, 2022) available at https://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill_id=202120220AB2143.

executed prior to the statute going into effect.[343] In reply comments, SEIA highlights that both the U.S. Department of Labor and the Department follow the policy that wage rates incorporated into a contract at time of award are those that must be paid for duration of the contract.[344] Only CUE disagrees with this position asserting that any ongoing construction projects should transition immediately to the new wage rules regardless of their contract start dates or application start dates. CUE argues that "fair notice occurred the day AB 2143 was signed into law by the Governor, September 29, 2022."[345]

The Commission agrees that the statute is clear and concludes that Pub. Util. Code §769.2 is only applicable to projects with an interconnection application date (as determined above) after December 31, 2023. While the Commission agrees that fair notice was provided to contractors upon enactment, that notice was based on language stating the statute would be applicable to all eligible projects beginning after December 31, 2023. While this means the statute is generally not applicable to NEM 1.0 and NEM 2.0 tariffs, the Commission agrees with Utilities, finding that any customer-generator submitting an interconnection application for an upgrade to increase the size of the system or to pair an energy storage device, including those taking service under the NEM 1.0 and NEM 2.0 tariffs, after December 31, 2023 will be considered a new project required to comply with Pub. Util. Code §769.2.

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[343] SEIA Opening Comments to April 3 Ruling at 4 citing Office of Senate Floor Analysis AB 2143 (August 26, 2022), p. 3 available at https://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill_id=202120220AB2143.

[344] SEIA Reply Comments to April 3 Ruling at 2-3 citing CALSSA Opening Comments to April 3 Ruling at 4.

[345] CUE Reply Comments to April 3 Ruling at 6.

3.6.2. Customer Education

The Commission asked parties whether Utilities and Community Choice Aggregators (CCAs) should play any role in educating and informing contractors and customers about eligibility and wage requirements and noncompliance penalties of Pub. Util. Code §769.2. Parties have different opinions on this matter.

SEIA and Utilities assert that the Department and CSLB are responsible for contractor education.[346] Utilities oppose requirements to provide contractor or customer education "beyond advising customers of their rights and obligations, the ramifications of their economic decisions, and the requirements of this [statute]."[347] SEIA concurs with Utilities stating that Utilities and CCAs should use their existing methods for informing customers of tariff changes related to the new statute, but suggests creation of a Solar Protection Guide for those affected customers.[348] Utilities agree that the Solar Protection Guide should advise consumers of the impact of Pub. Util. Code §769.2.

CALSSA proposes an alternative method, to include language regarding Pub. Util. Code §769.2 in the interconnection application and interconnection agreement. CALSSA contends this will ensure contractors and customers have proper notice of the requirements. CALSSA opposes a standalone guide or bill inserts, asserting these are neither effective nor cost effective.[349]

GRID maintains both Utilities and CCAs have a crucial role and responsibility to provide education to contractors and impacted customers

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[346] SEIA Opening Comments to April 3 Ruling at 5 and Utilities Opening Comments to April 3 Ruling at 12-13. *See also* Utilities Reply Comments to April 3 Ruling at 2.

[347] Utilities Opening Comments to April 3 Ruling at 12.

[348] SEIA Opening Comments to April 3 Ruling at 5.

[349] CALSSA Opening Comments to April 3 Ruling at 6.

regarding this statute. GRID recommends the Commission provide technical assistance and consider hiring a prevailing wage consultant.[350]

The Commission agrees that the Labor Commission and the CLSB should be responsible for educating contractors. As discussed in Section 3.6.3. below, the affected tariffs will be updated by Utilities to provide a clear understanding of how Pub. Util. Code §769.2 changes the tariffs, which will provide transparency to contractors. However, the Commission and the Utilities have a responsibility to ensure that customers are aware of the potential impacts of Pub. Util. Code §769.2.

As Utilities point out, the Commission currently has a consumer guide for residential solar customers, as discussed in Section 3.3 of this decision. Residential customers are required to acknowledge receipt of the guide as part of their interconnection application. The Commission concludes that a similar process should be conducted where a contractor provides disclosure of the requirements of Pub. Util. Code §769.2 to the eligible customer, as well as the impacts of a willful violation of the wage requirements. Keeping this information separate from the larger residential consumer guide will limit confusion, as the requirements of Pub. Util. Code §769.2 are not applicable to a majority of residential customers. Therefore, the Commission directs Utilities to create a Prevailing Wage Disclosure Form (Disclosure Form) and requires the eligible customer acknowledge receipt of this disclosure as part of the interconnection application. Details on the disclosure form and its due date are provided in Section 3.6.6. below.

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[350] GRID Opening Comments to April 3 Ruling at 6.

3.6.3. Tariff Alignment

To ensure transparency regarding Pub. Util. Code §769.2, the tariffs should align with the requirements of the statute. Parties were asked to propose new language to ensure such alignment.

Calling for the Commission to create a Prohibited Contractors List, Utilities assert that the net energy metering, net billing, and related tariffs and subtariffs require updates to ensure that customers are aware that a utility will not interconnect a system installed by a contractor on this list and advise the customer to consult the list prior to signing a contract. (In Section 3.6.1, the Commission determined that the statute requirements are not applicable to the NEM 1.0 and NEM 2.0 tariffs, unless a customer taking service under these tariffs seeks to upgrade the system or add storage.) CUE recommends inserting the entirety of the new statute into the tariff and include a certification that the customer is aware of the new requirements.[351] Utilities recommend summary language versus the entire tariff for less complexity and less confusion.[352] Further, Utilities oppose the certification because the customer is likely not paying the contractor's employees, and has no knowledge of or control over, the wages paid to a contractor's employees.[353]

CALSSA proposes that the Solar Protection Guide and the tariff be updated to include less technical language describing the requirements of Pub. Util. Code §769.2 but also require that the interconnection agreement also be updated to provide more technical language, including punishable actions and

[351] CUE Opening Comments to April 3 Ruling at 2-3.

[352] Utilities Reply Comments to April 3 Ruling at 4.

[353] Utilities Reply Comments to April 3 Ruling at 4.

consequences.[354] Utilities oppose insertion of the additional language in the interconnection agreement stating that this is unnecessary, (noting the proposal to include this in the Solar Protection Guide), and complicates interconnection forms due to the variety and number of interconnection forms.[355]

The Commission's intention in implementing this statute is to adopt the most simple and cost-effective manner of implementation. As such, the Commission finds that adopting the current practice of a thorough description of statutory requirements in the tariff, but not in the interconnection agreement, is a simple and cost-effective manner of implementation. Further, in the previous section above, the Commission required the creation of a Disclosure Form and customer acknowledgement of receipt of the form on the interconnection application. These items will be discussed more thoroughly in the implementation details below in Section 3.6.6. No later than October 1, 2023, Utilities shall submit the updated tariff language, pursuant to this section and Section 3.6.6., in the required Tier 2 advice letter.

Pub. Util. Code §769.2(b)(3) requires contractors to submit biannually, to the Commission, digital copies of payroll records for eligible projects. Parties were asked whether the Commission should require biannual payroll record submission compliance as a condition for tariff access.

CALSSA and CUE both agree that tariff access should be dependent on compliance with this element of the statute. Agreeing that, if a contractor fails to submit timely payroll records for a Generation Facility the contractor should "lose the ability to be named as the contractor," CALSSA suggests that access

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[354] CALSSA Opening Comments to April 3 Ruling at 6.

[355] Utilities Reply Comments to April 3 Ruling at 2-3.

could be restored with an opportunity to correct if and when records are submitted.[356] CALSSA recommends the Commission create a dedicated mechanism for receiving payroll records and suggests the Commission host a workshop on this topic.[357]

Utilities propose the Commission create a contractor registration and impose a registration requirement for contract eligibility. Utilities recommend the Commission should not begin applying the statute until a deadline for payroll submission has been determined, the contractor registration system has been created, and the process to obtain prompt notice of willful violations of the statute has been established.[358] CUE, however, contends that the Commission does not have the authority to change statutory mandates and therefore cannot delay the application of the statute until processes are in place.[359]

SEIA maintains the statute does not provide "for the Commission to condition customer access to a Utility's standard contract or tariff on contractor compliance with the biannual payroll submission requirement."[360] Pointing to the statutory language, SEIA argues that "the only instance in which access to the tariff can be denied is when noncompliance of the prevailing wage requirement has been enforced against the contractor."[361] CUE disagrees with SEIA, arguing that the Commission is statutorily mandated to ensure that a utility's rates,

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[356] CALSSA Opening Comments to April 3 Ruling at 6-7.

[357] CALSSA Opening Comments to April 3 Ruling at 6-7.

[358] Utilities Opening Comments to April 3 Ruling at 14-15.

[359] CUE Reply Comments to April 3 Ruling at 8.

[360] SEIA Opening Comments to April 3 Ruling at 6.

[361] SEIA Opening Comments to April 3 Ruling at 6.

terms, and services are just and reasonable.[362] Further, CUE asserts it is the purview of the Commission to decide what rate a customer gets and what tariff applies.

Because the statute requires a contractor to submit to the Commission certified payroll records for projects pursuant to Pub. Util. Code §769.2, it is necessary to create a process to receive these records. Subject to budget appropriation, the Commission should authorize the Director of Energy Division to hire a consultant to devise a system to collect the payroll records required by the statute and review them for completeness.

As the Commission is responsible for collecting these records, the Commission agrees with CUE that it is within the Commission's jurisdiction to require submittal of the records by a contractor as a requirement of access to the tariffs created pursuant to Pub. Util. Code §2827 and Pub. Util. Code §2827.1. While the Commission concurs that Pub. Util. Code §769.2 does not contain a penalty for not submitting the payroll records, the statute does not prohibit the Commission from establishing such a penalty.

Again, Pub. Util. Code §769.2 establishes the penalty of eligibility to the tariff pursuant to Pub. Util. Code §2827 or Pub. Util. Code §2827.1 for willful violation by the contractor of the prevailing wage requirement. However, the penalty for noncompliance by the contractor is that the Generation Facility loses access to the tariff resulting in a negative impact on the customer. Hence, the Commission directs Utilities to establish a requirement in the tariff that a contractor shall comply with the payroll submission requirement in Section 769.2 and that noncompliance will result in the contractor losing access to being named

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[362] CUE Reply Comments to April 3 Ruling at 7 citing Pub. Util. Code §451.

as a contractor for a Generation Facility accessing the tariff, until the reporting requirement is met. The Commission finds that this requirement and penalty will protect future customers seeking access to the tariff. If applicable, (*i.e.*, the contractor has been a named contractor on a previous project) the interconnection application process will not be deemed complete until the contractor has completed the most recent payroll submittal requirement.

Utilities shall update the associated tariff language to reflect this requirement. Utilities shall also update the interconnection application process to include a check-in with the Energy Division, or its consultant, to determine whether the named contractor on a project is current with respect to the requirement to submit payroll records. Previously, this decision authorized the Energy Division to hire a consultant to devise a system to collect the payroll records. If such a consultant is retained, Energy Division is authorized to notify the service list. Utilities shall enter into a non-disclosure agreement with the consultant, no later than 30 days after the start of the consultant's contract. The agreement shall cover receiving and sharing data in support of all tasks described in Section 3.6.

3.6.4. Agency Coordination

Pub. Util. Code §769.2 establishes roles and responsibilities for several entities: contractors, Utilities, Department, and the Commission. Parties were asked if there were confidentiality agreements or communication protocols needed to ensure proper communication between these multiple entities.

Utilities maintain there are no confidentiality agreements needed. The payroll records required to be submitted by contractors to the Commission do not need to be public, this will protect the rights of employees and construction workers. Although, Utilities assert that "to the extent that payroll records are the subject of a Public Records Act request, the records should be redacted as set forth in Labor Code, § 1776the." Utilities contend "there is no need for the Commission or Utilities to share customer data with any regulator other than the Commission" as other agencies have subpoena powers.[363] Because of these powers, Utilities recommend against sharing confidential customer data, pursuant to a nondisclosure agreement (NDA).

Utilities caution that NDAs "do not agree to keep information confidential, but rather agree to give the party producing the data sufficient notice to obtain a court ordered injunction."[364] CUE disagrees with Utilities highlighting that Labor Code 1776(c) requires employee information to be marked or obliterated from submittals to the Commission, whereas contractor information is not required to be marked or obliterated.[365]

SEIA agrees with Utilities that no confidentiality agreements are necessary. SEIA also references Labor Code §1776(e), contending the information does not need to be in redacted form as the code requires that any copies of the records made available for public inspection must redact each individual's name, address, and social security number.[366]

CALSSA offers a different approach, recommending the Commission provide access to the Utilities' interconnection application search engines to the Department so that the Department can identify the applications required to comply with Pub. Util. Code §769.2. CALSSA points out that a similar process exists with CSLB and the California Department of Financial Protection and

[363] Utilities Opening Comments to April 6, 2021 Ruling at 15-16.

[364] Utilities Opening Comments to April 6, 2021 Ruling at 16.

[365] CUE Opening Comments to April 6, 2021 Ruling at 4.

[366] SEIA Opening Comments to April 6, 2021 Ruling at 7.

Innovation, where access to the interconnection applications was granted in D.21-06-026 through search engines built and maintained by Utilities.[367]

The statute requires contractors to submit copies of payroll records to the Commission. The statute provides enforcement of the statute to be conducted in three ways, one of which is "within 18 months after completing the [Generation Facility], by the Labor Commissioner, *i.e.*, the Department, through the issuance of a civil wage and penalty assessment." Utilities' interconnection application search engines contain the relevant information to ascertain the renewable electrical generation facilities eligible for this review. The Commission agrees with CALSSA that providing the Department access to the interconnection application search engines is the most efficient manner to implement this requirement. Further, similar access has been granted by the Commission in the past. Accordingly, this access should be granted to the Department. Utilities shall ensure such access is made available no later than November 15, 2023. D.20-08-001 previously delegated authority to the Director of Energy Division, or their designee, to adjust data access in response to changing needs.[368] The Commission continues this authorization; the Director of Energy Division or their designee may add or remove interagency staff and/or consultants, as needed, given that these specifics are not known at this time. Further details are discussed in Section 3.6.6 below.

3.6.5. Additional Customer Protections

As a result of responses to the April 3 Ruling, the Commission adopts additional customer protections to be included in the update of the affected

[367] CALSSA Opening Comments to April 6, 2021 Ruling at 7 citing D.21-06-026 at 6.

[368] D.20-08-001 at 13.

tariffs. Additionally, the comments, as discussed below, prompt the Commission to adopt the Department of Industrial Relation's (Department's) definition of "willful violation."

Parties were asked whether the Commission should take action to address split incentives between utility customers, generation operators, and contractors following the implementation of Pub. Util. Code §769.2. Utilities contend the statute penalizes the customer, which does not incentivize the contractor to comply with prevailing wage requirements, other than having a risk of lawsuit. Utilities maintain, if the contractor does not comply and the Generation Facility loses access to the tariff, "the customer is financially damaged" with no guarantee of financial recovery.[369] GRID suggests that the Commission offer a way to restore access by allowing time for contractors to "issue corrective back-pay and take any other restorative steps."[370] GRID and SBUA contend this restorative process would be a balanced approach and avoid inappropriately penalizing the customer.[371]

CALSSA submits that both customers and contractors will be motivated to comply.[372] Asserting that the Department could punish a contractor for violations through their own methods, CALSSA, as well as SBUA, recommend the Commission have its own parallel process and "use a very conservative definition of willful violation."[373] SEIA suggests the Commission rely on the

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369 Utilities Opening Comments to April 3 Ruling at 16.

370 GRID Opening Comments to April 3 Ruling at 6

371 SBUA Reply Comments to April 3 Ruling at 1 and 3.

372 CALSSA Opening Comments to April 3 Ruling at 7.

373 CALSSA Opening Comments to April 3 Ruling at 7-8 and SBUA Reply Comments to April 3 Ruling at 3.

Department determinations and that no removal of access to the tariff be taken by the Commission until the contractor has exhausted or waived all appeals in the Department civil wage and penalty assessment process.

The Commission is concerned about the imbalance of incentives for compliance with the statute. However, the statute restrains the Commission from adopting the approach suggested by GRID. The statute is explicit in stating that the prevailing wage requirement can only be enforced through the Labor Commissioner, an administrative complaint, or civil action. Hence, the Commission agrees with SEIA that no action should be taken by the Commission or Utilities until the Department, or other identified agent, completes their assessment and makes its determination. Since the Commission is not conducting the assessment, there is no need for a separate definition of willful violation. The Commission finds that adopting the Department's definition of willful violation will provide contractors with the same treatment between the two agencies. Accordingly, the Commission adopts the Department's definition of willful violation.

Relatedly, the Commission asked parties to comment on the notification process to ensure that all appropriate entities are aware of the Department's determinations of a willful violation of the prevailing wage requirement. Utilities contend that the Commission should be notified by the Department of enforcement actions, not Utilities.[374] However, for a Generation Facility deemed no longer eligible for the net billing or net energy metering tariff, Utilities recommend that the Commission permit Utilities to automatically transition the affected customer to a non-export or uncompensated export tariff so the

[374] Utilities Opening Comments to April 3 Ruling at 17.

customer can continue to offset their own load and realize bill savings. Utilities note that the non-export tariff requires a non-export relay, which will result in additional costs to the customer.[375]

While the Commission appreciates Utilities' attempt to protect customers, the statement regarding the non-export relay is incorrect. Pursuant to Electric Rule 21 (the Interconnection of distributed energy resources), there are customers with non-export interconnection agreements, but their tariffs are separate. Further, if a net billing tariff customer loses access to the tariff due to a contractor's incompliance with Pub. Util. Code §769.2, that does not change the safety of their system and the tariff change should not impact the interconnection agreement. A loss of any net billing tariff does not require further engineering review or new equipment to become a non-export facility. The Commission should prohibit Utilities from requiring this additional equipment of customers losing access to the net billing tariffs.

Because these facilities can remain interconnected to the grid and are exporting available energy, they may be considered a qualifying facility under PURPA. PURPA generally requires that a utility must take the energy of a qualifying facility and pay the avoided cost for that purchase, meaning the incremental cost to the utility of alternative electric energy. In D.20-05-006, the Commission set an avoided cost rate for as-available energy sold by a qualifying facility to a utility without a contract.

Returning to the subject of the notification process, once the Department begins to conduct a payroll assessment, the notification process needs to take place. Parties did not provide the specifics of this process, *i.e.*, notification

[375] Utilities Opening Comments to April 3 Ruling at 17.

responsibilities. However, contending that both the Department and CSLB will enforce the prevailing wage requirement, CALSSA points to Labor Code §98.8 that requires the Department to share with CSLB a finding of a violation of the Labor Code.[376]

Given a process of information sharing exists between the Department and CSLB, the Commission should establish a similar approach with these entities and Utilities. First, however, this decision points out that CALSSA is incorrect in its description of CSLB's role in enforcement. CSLB does not have the authority to investigate prevailing wage violations. Given there is no known rule in the Labor Code requiring the Department to share a finding of a prevailing wage violation with the Commission or Utilities, the Commission requires Utilities to enter into or amend existing confidentiality agreements with the Department and CSLB to receive notice of willful wage violations.

Utilities contend the Commission, not Utilities should receive notice of these willful violations. The Commission disagrees, as the Utilities will need the information to ensure customers (with Generation Facilities no longer eligible for the net energy metering or net billing tariffs) are placed on alternate tariffs and, beginning on January 1, 2025, contractors who have been found in violation of the prevailing wage rule will not have access to the tariff in the future. Utilities are expected to track and enforce prohibitions (of violating contractors) as part of the interconnection application process. Because Utilities are required to remove facilities with a violation from the tariff, notify affected customers of such a removal, and process new interconnection applications, Utilities are best positioned to collect and maintain relevant contractor information. Accordingly,

[376] CALSSA Opening Comments to April 3 Ruling at 8.

the Commission directs Utilities to deny interconnection applications submitted by a contractor previously found to have violated the prevailing wage requirement.

To ensure proper notification to a customer that the Department has found a willful violation and deemed the customer's Generation Facility no longer eligible for the net billing or net energy metering tariff, Utilities are directed to update the tariff to provide the affected customer advanced notification of the lost tariff access, as determined by the Department. The notification shall indicate the next monthly billing cycle, which must be at least 30-days from the issuance of the notice, when the tariff will be adjusted.

Additionally, it is fair to the customer to allow tariff access to be restored if a willful wage violation is reversed or nullified by the determining body and the generation account holder or customer/property owner provides documentation to the utility. In this case, the Commission will allow restoration of tariff access.

Finally, the Commission finds that a customer should continue to realize some compensation for their Generation Facility upon losing access to the net energy metering or net billing tariff and must have an option in compliance with PURPA. The Commission should require Utilities to compensate the affected customer in compliance with PURPA. Accordingly, the Commission directs Utilities to submit, no later than November 15, 2023, a Tier 2 advice letter proposing the specifics of a customer-generation export tariff using the pricing established by the Commission in D.20-05-006. The Utilities shall consider the different impact to customers on the VNEM and virtual net billing tariff, and alternatives to address this new tariff.[377] The final proposal shall address options

[377] For example, for customers with a NGOM, consider issues with a PURPA compliant export tariff benefiting account customers.

when one Generation Facility in an arrangement is found in violation of prevailing wage rules.[378]

3.6.6. Implementation Details

As previously described in the preceding subsections of Section 3.6, to implement Pub. Util. Code §769.2, changes are necessary to the associated tariffs and the interconnection application processes. This section provides a list of all required changes and documents adopted above and the due dates for these changes and documents.

A. Interconnection Application Process Changes

In Section 3.6.1 through 3.6.5, this decision describes several changes to the Interconnection Application Process the Commission adopts to implement AB 2143 and Pub. Util. Code §769.2. Utilities shall revise the Interconnection Application Process to include the completion of the Pub. Util. Code §769.2 Checklist and the Pub. Util. Code §769.2 Prevailing Wage Disclosure Form, which are described below.

The updated interconnection application process shall also be revised to include a step where the utility confirms with Energy Division or its consultant that the contractor is up to date with their required submittals of payroll records. Interconnection cannot be completed until the contractor has satisfied their most recent filing requirements.

(i) Pub. Util. Code §769.2 Checklist

In section 3.6.1 above, the Commission directed Utilities to develop a Pub. Util. Code §769.2 Checklist to determine whether a project is eligible and, if it is, whether all required forms have been submitted. Utilities shall be responsible for confirming whether a Generation Facility must meet the prevailing wage rules. This process mirrors the current functionality for validating and authenticating CSLB license

[378] For example, for customers with a NGOM, compensated PURPA compliant export tariff is necessary as there is no import rate tariff.

numbers and the CSLB Disclosure form as directed in Decision D.18-09-044.

The checklist may read:

1. Will this project export energy to the grid? Yes or No? If yes, it may be subject to Pub. Util. Code §769.2.
2. Is this a residential Generation Facility with a capacity that is over 15 kW of electricity? Yes or No? If yes, it is subject Pub. Util. Code §769.2.
3. Is this a single-family home? Yes or No? If yes, this project is *not* subject to Pub. Util. Code §769.2.
4. Is this a public works project (Section 1720 of the Labor Code, and that is subject to Article 2 (commencing with Section 1770) of Chapter 1 of Part 7 of Division 2 of the Labor Code)? Yes or No? If yes, this project is *not* subject to Pub. Util. Code §769.2.
5. Is this a modular home, a modular home community, or multiunit housing that has two or fewer stories? Yes or No? If yes, this project is *not* subject to Pub. Util. Code §769.2.
6. If you answered "no" to questions #3 to #5, then your project must follow Pub. Util. Code §769.2.

(ii) Pub. Util. Code §769.2 Prevailing Wage Disclosure Form (Disclosure Form)

The Interconnection Application process is revised to include submittal of the Disclosure Form. Utilities shall create and submit the Disclosure Form describing in plain language, for covered customers, how prevailing wages work and how failure to comply will impact them and their project. The Disclosure Form shall be written as an acknowledgement of risk related to the customer project's future tariff access and shall make clear that the customer is not responsible for a contractor's actions. The Disclosure Form must be provided to customers as part of the first pages of their solar contracts and will become part of the Interconnection Application.

Utilities shall submit the proposed Disclosure Form as part of a compliance advice letter, which is described at the end of this section.

These Interconnection Application Process updates shall be completed by November 15, 2023, in order to meet the statutory deadline of January 1, 2024. Utilities shall track and store the signed Disclosure Form and provide it to Energy Division upon request.

B. Pub. Util. Code §2827 and §2827.1 Tariffs Changes

Utilities shall propose revised and additional tariff language for impacted tariffs (those developed under Pub. Util. Code §2827 or §2827.1) in a Tier 2 advice letter, described at the end of this section. The proposed language additions and revisions shall reflect the changes discussed throughout Section 3.6 of this decision and include the following:

- A summary of Pub. Util. Code §769.2 in plain language;
- Exceptions, especially for systems with interconnection applications submitted prior to January 1, 2024;
- A requirement that the Generation Facility's contractor confirms that payroll record submittals from the most recent reporting period and deadline were submitted and deemed complete;
- An acknowledgement that the prevailing wage rules are tied to a given Generation Facility, not the customer, so in the case of a wage violation, a given customer may have a site or sites where some facilities lose tariff access and others do not;
- Language describing in detail that if a willful wage violation occurs, the customer will be notified when tariff eligibility will be automatically revoked;
- A provision that a Generation Facility deemed no longer eligible shall be shifted to a PURPA compliant

tariff and any existing benefiting accounts will lose their carry-over benefits (either export compensation and/or energy offsets) from their associated generating account(s);

- A disclaimer stating that if a willful wage violation occurs, the tariff will remain accessible until the Department completes their assessment and makes a final determination;
- A provision for a 30-day advance notice of a violation occurrence deeming the single account Generation Facility no longer eligible for the tariff, with no tariff change until the next billing cycle after the 30 days have passed. The notice shall include a reference to the Department or civil court decision and communicate when there will be an automatic transition to a PURPA compliant tariff;
- A provision for a 60-day advance notice to each account holder of a violation occurrence deeming the Generation Facility with a net-generating output meter and multiple benefiting accounts no longer eligible for the tariff, with no tariff change until the next billing cycle after the 60 days have passed. The notice shall include a reference to the Department or civil court decision and communicate when there will be an automatic transition to a PURPA compliant tariff; and
- Clarification that tariff access will be restored if a willful wage violation is reversed or nullified by the determining body and the generation account holder or customer/property owner provides documentation to the utility.

C. Interconnection Portal Data Sharing

As directed in Section 3.6.4 above, Utilities shall make their interconnection portals available to Department staff pursuant to the same method adopted in D.21-06-026 Section 3. The Director of Energy Division, or their designee, is authorized to add or remove interagency staff as needed in recognition that this requirement may benefit from further refinement to respond to changing implementation needs.

D. Confidential Disclosure Agreements

As directed in Section 3.5.5 above, Utilities shall enter into or amend existing confidential disclosure agreements with the Department and CSLB to receive notice of willful wage violations. To ensure implementation by January 1, 2024, Utilities shall begin discussions immediately to reach an agreement by November 15, 2023.

E. PURPA Compliant Tariff

As directed in Section 3.6.5 above, Utilities shall develop a PURPA compliant tariff for customer-generators who have lost access to their net energy metering or net billing tariff, including related tariffs or subtariffs, due to a willful violation of the prevailing wage requirement by the project's contractor. The tariff shall compensate the Generation Facilities at the avoided cost price for as-available energy as established in D.20-05-006, which is calculated using the hourly locational marginal prices from the CAISO day-ahead market for the node specific to a facility. Utilities shall submit a Tier 2 advice letter no later than November 15, 2023. Utilities shall coordinate before submission to ensure language uniformity to the extent possible.

F. Joint Utilities Pub. Util. Code §769.2 Compliance Advice Letter

To facilitate an expedient implementation of Pub. Util. Code §769.2, Utilities are directed to submit one, consolidated, compliance joint Tier 2 advice letter no later than October 1, 2023, and include:

1.) Pub. Util. Code §769.2 Prevailing Wage Disclosure Form.

2.) Common Pub. Util. Code §769.2 Tariff Language and updated Pub. Util. Code §2827 and 2827.1 tariff sheets.

Utilities are directed to host an informal workshop prior to submission of the consolidated advice letter to present a draft and receive stakeholder feedback and input. An October 1, 2023 submission date should ensure that the tariffs and forms are ready before Pub. Util. Code §769.2 goes into effect on January 1, 2024.

4. Summary of Public Comment

Rule 1.18 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. As this is the second decision in this proceeding, this decision only addresses public comments provided after the first decision, D.22-12-056, was adopted and only those comments related to the issues in this decision.

One member of the public commented in support of continuing a VNEM tariff for low-income customers.

5. Comments on Proposed Decision

The proposed decision of Administrative Law Judge Kelly A. Hymes in this matter was mailed to the parties in accordance with Section 311 of the Public Utilities Code and comments were allowed under Rule 14.3 of the Commission's Rules of Practice and Procedure. Comments were filed on __________, and reply comments were filed on _____________ by ________________.

6. Assignment of Proceeding

Alice Reynolds is the assigned Commissioner and Kelly A. Hymes is the assigned Administrative Law Judge in this proceeding.

Findings of Fact

1. The VNEM tariff and the NEMA subtariff are distinct options from the Green Access Programs.

2. There is no justification for delaying a determination on either the VNEM tariff or the NEMA subtariff while the Commission considers the Green Access Programs in another proceeding.

3. Utility data provided in this proceeding indicates three categories of customers: residential, mixed, and nonresidential, but there is no definition for the mixed category.

4. It is possible that the mixed category of VNEM tariff enrollees contains multifamily properties or properties with residential accounts, but the record has no indication of the percentage this would represent.

5. Based on Utility data, the assertion that VNEM tariff enrollees are predominantly nonresidential customers is misleading.

6. There is no clear finding of whether the current VNEM tariff predominantly serves residential customers or nonresidential customers.

7. The VNEM tariff serves both residential and nonresidential customers.

8. No party presented quantifiable benefits of the VNEM tariff that can be measured in a cost-effectiveness analysis.

9. There are several unquantifiable benefits of the VNEM tariff.

10. Generation Facilities on a VNEM tariff that serve residential customers provide slightly higher grid benefits than solar-only systems on the NEM 2.0 tariff because the residential VNEM tariff Generation Facility serves multiple residential customers.

11. A multitenant property on a VNEM tariff has multiple loads served by the same Generation Facility.

12. Because the VNEM tariff provides renters and customers in disadvantaged communities improved access to customer generation, the tariff assists the

Commission in meeting the objective of increasing equity, as required by Pub. Util. Code §2827.1.

13. Parties provided potential distinguishable VNEM tariff costs, as compared to the NEM 2.0 tariff, but few quantifiable cost differences.

14. Customers on the current VNEM tariff pay non-bypassable charges based on their consumption from the grid.

15. Tenants sharing a single delivery point of generation pay more than their fair share of grid costs.

16. The record does not contain the number of benefiting accounts that pay more than their fair share.

17. The current VNEM tariff provides slightly more quantifiable benefits as compared to the NEM 2.0 tariff.

18. The VNEM tariff for residential customers causes a significantly smaller cost shift per customer than the NEM 2.0 tariff.

19. The VNEM tariff for nonresidential customers concentrates benefits to comparatively few customers, on average.

20. It is a common practice for some multifamily property owners to permanently switch their tenants' electrical accounts to make the property owner the customer of record which does not comply with the VNEM tariff requirements.

21. Customer access to their benefiting account is required to retain access to the VNEM tariff.

22. CALSSA's proposal to permit a customer's CARE account to be used by the property manager does not comply with the VNEM tariff.

23. When generation and customer meters share a physical connection to the grid, self-consumption can occur.

24. In PG&E's territory, forty-eight percent of VNEM tariff generation and load share a transformer.

25. Complexity and cost of installing generation at multitenant properties led the Commission to establish the policy that renewable generation installed on multitenant properties does not require onsite consumption.

26. Because the quantifiable costs and benefits of the VNEM tariff are not remarkably different from the quantifiable costs and benefits of the NEM 2.0 tariff, it is reasonable to rely on the cost-effectiveness results of the NEM 2.0 tariff.

27. The current VNEM tariff is not cost-effective.

28. The DER Shared Tariff would make fair use of the Generation Facilities' imports and the customers' exports.

29. The DER Shared Tariff and property netting presents environmental, economic, equity, and legal conflicts or barriers.

30. Property netting would remove any price signal to individual benefiting account holders.

31. Compensating benefiting account holders at the residential rate, instead of the Avoided Cost Calculator value, does not send the proper price signal.

32. In the DER Shared Tariff, credits to benefiting account holders would vary based on actual energy consumption of the entire property, which would make it difficult to predict the cost of using energy during generation hours.

33. In the DER Shared Tariff, benefiting account holders would not know the best times to use energy or abstain from using energy.

34. The variability of the DER Shared Tariff would create a barrier to the Commission and California meeting their environmental objectives.

35. The DER Shared Tariff would lead to increased administrative costs.

36. The DER Shared Tariff could result in inequities for benefiting account holders.

37. Bill predictability and low bills are crucial to lower-income households, the predominant customers of residential multitenant properties.

38. A lack of predictability and ability to ensure low bills in the DER Shared Tariff would limit equity, which is a requirement of this tariff.

39. The DER Shared Tariff would remove the price signal from customers and results in treating a property like a master-metered property.

40. The property netting and accounting of onsite consumption and exports could result in all generation earning credits in value equal to the retail import rate.

41. The DER Shared Tariff property netting proposal would not accurately reflect each customer's usage.

42. The DER Shared Tariff would result in customers not being assessed for their fair share of transmission, distribution, generation, and non-bypassable charges.

43. The DER Shared Tariff would cause a cost shift similar to that of the VNEM tariff.

44. Mirroring the use of the Avoided Cost Calculator values to set export compensation rates would send the correct price signals to benefiting account holders.

45. Sending correct price signals to benefiting account holders leads to the tariff customers providing greater benefits to the grid, which is one of the objectives of the successor tariff.

46. Nothing presented in the record of this proceeding leads the Commission to alter its prior determination to base retail export compensation rates on Avoided Cost Calculator values.

47. Modification of the Utilities' proposal for a virtual net billing tariff balances the competing requirements of the Guiding Principle and statute and presents the best option for a successor to the VNEM tariff.

48. In the net billing tariff, customers are compensated for net exports but in the Utilities' virtual net billing tariff customers would be compensated for their allocation of all exports, which leads to a fair distribution of export compensation value and negates the need for netting.

49. Utilities' proposal to allow the monthly export compensation credit to offset any portion of the bill would not comply with the statute's requirement to ensure the costs and benefits of the tariff are equal to all ratepayers.

50. Utilities' proposal to allow export compensation credits to offset any portion of the customer's bill would increase the costs for nonparticipants, leading to higher bills for nonparticipants.

51. Nothing in the record of this proceeding warrants a change to the eligibility, size to load, or metering requirements as established in the current VNEM tariff.

52. In the Utilities' proposed virtual net billing tariff, bill credits are divorced from the rate design on which a customer takes service, which is the practice of the current VNEM tariff.

53. Requiring benefiting account holders to take service on electrification rates would not make sense because customers occupying multitenant properties do not have the opportunity to install storage in their individual units.

54. In the successor VNEM tariff, the load from the Generating Facility will not be applied to benefiting accounts.

55. The purpose of the ACC Plus is to support the sustainable growth of distributed generation in California.

56. Adoption of the virtual net bill tariff will greatly decrease the per VNEM tariff customer cost shift but providing an ACC Plus adder to nonresidential customers would negate some of those savings.

57. The proposed ACC Plus adders will assist in enabling sustainable growth in the industry while recognizing the general characteristics of residential customers participating in the current VNEM tariff, *i.e.*, lower-income households.

58. There are unique circumstances for customers participating in a virtual net energy or net billing tariff.

59. Residential multifamily tenants, and in particular renters participating in the VNEM tariff, are not the decisionmakers for adding Generation Facilities, do not set their credit allocation, and do not have control over the sale of the property but pay for the Generation Facility on the property.

60. The cost to ratepayers of tying the nine-year legacy period to the Generation Facility instead of the property owner is outweighed by the potential harm to the residential benefiting account participants who would otherwise continue to bear the cost of the system without the benefit of the adder.

61. In D.22-12-056, the Commission determined that a customer currently taking service under a net energy metering or net billing tariff could add a storage device to their existing Generation Facility without altering their tariff status, including the legacy period.

62. The VNEM tariff and the successor VNEM tariff should be consistent with the net energy metering and net billing tariffs in allowing a current customer to add storage without negatively affecting the current tariff status.

63. Pursuant to D.22-12-056, Utilities amended the current VNEM tariffs to permit operation in isolation of the Generation Facilities, including storage devices, to serve onsite loads.

64. Because operation in isolation of the Generation Facilities to serve onsite loads does not allow any load to register on meters, it does not impact the retail export compensation rate in the virtual net billing tariff.

65. The Commission finds nothing prohibiting the continuation in the virtual net billing tariff of allowing operation in isolation of the Generation Facility to serve onsite loads.

66. The requests of CALSSA to allow the VNEM tariff to (1) automatically switch to a new tenant, *i.e.*, benefiting account and (2) allow vacant units to stay enrolled in the VNEM tariff as a zero percent allocation level will make the process more efficient for addressing the change of benefit account holders.

67. Permitting grid-charging of onsite batteries would be challenging to accurately measure and provide export credits.

68. The current VNEM tariff limits the charging of storage devices to solely from the Generation Facility.

69. Parties appear to agree that a technical solution could exist to enable storage in a virtual arrangement to charge from the grid prior to planned outages.

70. There is merit in requiring Utilities to track progress in the key factors to delays in customers receiving bill credits after permission to operate is granted.

71. Given the amount of time that has elapsed since VNEM tariff fees were first established, it is reasonable to allow requests for adjustments for inflation.

72. It is beneficial to continue the SOMAH tariff as-is to maximize bill benefits so that property owners have the proper incentive to participate and so that tenants continue to receive lower monthly electricity bills through the SOMAH credits.

73. The benefits of continuing the SOMAH tariff as-is justify any cost shift this program may cause.

74. The MASH program ended in December 2022, but the MASH tariff remains open for new enrollees meeting the eligibility requirements.

75. Keeping the MASH tariff open will provide property owners an incentive to participate and low-income tenants the opportunity to continue to receive lower monthly electricity bills.

76. Section 2827(c)(1) talks about the first-come first-served availability, implying that there is not an expectation that availability of the tariff will continue indefinitely.

77. Section 2827(c)(1) discusses the allowance for an additional meter or meters to monitor the flow of electricity for the purpose of providing "the information necessary to accurately bill or credit the eligible customer-generator pursuant to subdivision (h)," which describes the NEMA subtariff requirements.

78. Section 2827(c)(1) refers to all parts of the net energy metering tariff, including the NEMA subtariff.

79. The Commission did little to change the standard net energy metering tariff in D.16-01-044.

80. The Commission chose to maintain Section 2827(h).

81. It was the Commission's choice to maintain the NEMA subtariff, even though it was not a requirement.

82. There is no statutory requirement to continue the provisions of Section 2827(h).

83. Electric Rule 21 requires all NEM 2.0 and net billing tariff customers (including NEMA subtariff customers) to pay an interconnection fee, this fee varies by utility, is currently between $94 and $145, and does not require payment for any distribution upgrades.

84. Only customer-generators with systems over one MW in capacity must pay for any transmission or distribution system upgrades and also pay an $800 interconnection fee.

85. The savings from Utilities not being required to provide net surplus compensation to customers in the NEMA subtariff is insignificant and does not compensate for the additional interconnection costs caused by NEMA subtariff customers.

86. Not all NEMA subtariff customers are agricultural customers, thus not every NEMA subtariff customer pays for the costs of distribution, transmission, and non-bypassable charges.

87. Residential customers on a net energy metering tariff, which account for approximately one-third of NEMA subtariff customers, do not cover their fair share of distribution, transmission, and non-bypassable charge because decreased grid imports lead to the bypassing of infrastructure and other service costs embedded in volumetric rates; this would also apply to residential customers on a NEMA subtariff.

88. The Lookback Study did not analyze the cost of service for the agricultural sector.

89. There is no evidence in the record that agricultural customers pay more than their cost of service.

90. NEMA subtariff customers include residential customers, mixed residential and commercial customers, and commercial customers.

91. The Lookback Study did not conduct a cost-of-service analysis on a mix of residential and commercial customers but found that commercial customers pay their cost of service, but residential customers do not.

92. Parties have offered little difference of costs and benefits between the NEM 2.0 tariff and the NEMA subtariff with the only difference being the nonpayment of net surplus compensation.

93. An Aggregation option is the most affordable option for customers, with multiple meters on adjacent or contiguous property, wanting to install onsite generation.

94. The new Aggregation subtariff will be an improvement over the current NEMA subtariff that bases export compensation on retail rates.

95. Basing export compensation on retail rates does not appropriately value export compensation because retail rates do not reflect the actual costs of the exports or the benefits the exports provide to all customers and the electrical system.

96. The Aggregation subtariff will not completely eliminate the cost shift but providing export compensation at avoided cost values (after a temporary ACC Plus glide) will eliminate the export compensation portion of the cost shift.

97. It is efficient to mirror the same approach to net surplus compensation in the Aggregation subtariff as has been adopted for use in the net billing tariff.

98. The transition to compensating exports on a single set of export rates rather than various retail rates will inherently simplify the allocation process and

allow the continuance of the credit and debit provisions in the Aggregation Subtariff.

99. Table 5-7 of the Lookback Study shows that the three nonresidential sectors of the NEM 2.0 tariff generally pass the TRC test.

100. Table 1-7 of the Lookback Study indicates that nonresidential sectors pay bills that are slightly higher than their costs of service, but Table 1-7 does not provide a separate comparison of the three nonresidential sectors.

101. The Watch List cannot currently capture the violators of CSLB and DFPI regulations.

102. D.21-06-026 Section 4 requires Utilities to issue notices to solar providers informing them that they have been placed on the Watch List; the notices are required to include the specific interconnection applications that were found non-compliant.

103. Neither CSLB nor DFPI collect interconnection application numbers, making it difficult to align CSLB and DFPI complaints with the Watch List.

104. The Commission, CSLB, and DFPI currently coordinate through the Interagency Solar Consumer Protection Task Force.

105. It is unnecessary to create a new task force to resolve the problem that the Watch List does not capture violators of CSLB and DFPI regulations.

106. The Watch List primarily identifies a list of providers committing administrative errors.

107. It is efficient and effective to revise the current Watch List process, based on CALSSA's proposed changes but with alterations.

108. There are concerns that reviewing current applications could cause additional approval delays, but these concerns could be balanced by reducing the number of random interconnection applications Utilities must manually

review; eliminating the requirement that Utilities provide notice to solar providers of Watch List placement; and eliminating the now obsolete removal process established in D.21-06-026.

109. Reviewing current applications and reducing the number of spot audits could decrease the number of providers placed on the Watch List for administrative errors.

110. The revised Watch List process will avoid unnecessary reputational harm and limit the weaponization of the Watch List by competitors.

111. Violations of Commission rules are more administrative and not as serious as violations of CSLB and DFPI regulations.

112. It is important to ensure that providers are complying with consumer protection rules.

113. The bill savings estimate method approved in D.20-08-001 is not compatible with the net billing tariff, due to the use of the ACC Plus.

114. There is benefit to the development of a standardized set of noncompliance criteria for the Watch List.

115. The Commission is not persuaded by CALSSA's contention of barriers to comply with the requirement to include the Home Improvement Salesperson registration number and the address of the applicable financier.

116. The changes to the Watch List process minimize the role of Utilities in the Watch List process.

117. Additional directives such as requiring or authorizing Utilities to permanently deny an application for noncompliance with consumer protection rules or report the results of enhanced pre-approval reviews would not reflect this change of role.

118. Neither permanently denying an application for noncompliance with consumer protection rules nor publicly reporting a noncompliance list for clerical errors promotes consumer protection.

119. The focus of any billing improvement effort should be on customers of the net billing tariff, given that Utilities are implementing the net billing tariff and billing system upgrade initiatives.

120. Now is not the appropriate time to begin a process to review net billing tariff billing.

121. Improving utility net billing tariff bill presentation should be delayed until after Utilities have begun billing customers under the tariff.

122. Engaging a statewide vendor for the purposes of developing a standardized bill is neither necessary nor cost effective.

123. Utilities need to work within the constraints of their own billing system and not incur additional expense for the purpose of statewide uniformity.

124. A workshop on solar misinformation would be duplicative of other existing efforts.

125. Utilities do not have the ability to accurately determine whether a customer's solar system is performing correctly nor is it an appropriate role for them; but monthly reminders to self-monitor are efficient, cost-effective, and appropriate.

126. The current requirement for Utilities to submit quarterly advice letters reporting solar consumer complaints received is not necessary.

127. In D.22-12-056, the Commission stated that it intends to collect three years of data after implementation of the successor tariff and follow a similar evaluation process as conducted in the Lookback Study.

128. With respect to the net billing tariff evaluation, a budget amount greater than that of the 2019 Lookback Study is necessary given the passage of time, *i.e.*, inflation, and recognizing not only the complexity of the net billing tariff but also the various competing objectives required of the tariff.

129. A twenty-five percent increase is reasonable for the evaluation budget to address approximately five years of inflation and the increased complexity of the net billing tariff compared to the NEM 2.0 tariff that was reviewed in the Lookback Study.

130. The costs of the evaluation should be funded by the public purpose program surcharges, as had been the case for the Lookback Study, as indicated in D.18-09-044.

131. The Commission did not specify in D.22-12-056 the rate recovery mechanism for the evaluation.

132. The diverse set of questions in Table 10 is valuable and should be considered by the consultant hired to perform the evaluation.

133. Adopting a specific set of questions for the evaluation could limit the flexibility to revise the questions if faced with one or more of the following conditions: a) a reasonable question was not previously considered; b) a question was asked in a way that is not sufficiently neutral or is not sufficiently encompassing; and/or, c) a question did not include all available options.

134. Consultants working in the field of evaluation may have additional insight into evaluation research question development that the Commission or parties do not have.

135. In lieu of adopting a specific set of research questions, it is prudent to adopt a set of evaluation objectives to guide the evaluation question development.

136. The set of evaluation objectives, as presented in Table 11, address the directives of D.22-12-056 (focus on equity, affordability, grid benefits, and use of solar paired with storage) and the goals of the net billing tariff (considering impact on solar industry, improving reliability, reducing greenhouse gas emissions, encouraging electrification, and protecting consumers), and also align with party recommendations in Table 10 of this decision.

137. The party recommendations for metrics and data sources are valuable.

138. Differentiation in data collection and analysis of the evaluation should occur, to address such objectives as equity and affordability.

139. Data collection and analysis should consider differentiation between customer type (*e.g.*, residential) or customer location (*e.g.*, coastal).

140. The Commission previously determined that the contents of the evaluation will be considered in a future proceeding.

141. Increased efficiency and transparency in the adopted evaluation implementation process should lead to an improved process.

142. Assigning one utility to be responsible for drafting the RFP and the selection criteria should lead to a more efficient process.

143. Authorizing Energy Division, with input from the responsible utility, to select the consultant will ensure fairness.

144. Transparency is important to the success of the evaluation.

145. Improved transparency for the evaluation of the net billing tariff is achieved if the following occur: (1) the draft Research Plan is provided to the service list at least 10 days prior to a public workshop; (2) written informal comments on the draft proposed Research Plan are accepted by the consultant; and 3) the final proposed Research Plan is provided again to parties for an additional opportunity to comment.

146. Additional transparency during the draft evaluation report of the net billing tariff evaluation will improve the overall process.

147. In D.22-12-056, the Commission stated that it will consider the contents of the evaluation and associated party comments in a future proceeding.

148. There are no remaining issues to address within the scope of this proceeding.

149. Pub. Util. Code §2827.10 states that the CARB Standards will be applicable to each fuel cell electrical generation resource.

150. Absent a retroactive clause in Pub. Util. Code §2827.10, it would not be fair to apply the new standards to NEMFC resources installed prior to enactment of the legislation.

151. The NEMFC tariff is a Commission regulated tariff and such compliance should be conducted through the Commission.

152. As Utilities are also regulated by the Commission and are responsible for ensuring safe and compliant interconnection, Utilities are the appropriate entities to conduct compliance of the CARB Standards.

153. Ratepayers should not be responsible for the costs of compliance with CARB Standards.

154. Pub. Util. Code §2827.10(e)(2) authorizes the Commission to allow Utilities to charge a fee to a fuel cell customer-generator to recover the costs "associated with providing interconnection inspection services."

155. Approval of a fee to recover the costs associated with providing NEMFC resource interconnection inspection services will allow the Commission to meet the requirements of complying with the CARB Standards while protecting ratepayers from additional costs.

156. D.16-01-044 requires that the NEMFC tariff interconnection fee be based solely on the following costs incurred for NEMFC resources less than one MW in size: NEM Processing and Administrative Costs, Distribution Engineering Costs, and Metering Installation/Inspection and Commissioning Costs.

157. There are times when the ASME PTC 50-2002 performance test is not feasible.

158. An alternative calculation to the ASME PTC 50-2002 performance test would be using equipment specification sheets with the fuel input rate and net electrical power output and the useful heat rate for Combined Heat and Power systems.

159. The standard calculation should be the ASME PTC 50-2002 test results.

160. The request to extend the timeline for initial certification from three to six months will provide sufficient time for customers and utilities to prepare for the initial certification.

161. The Commission's intention in adopting a compliance regime is to provide an efficient framework that is successfully compliant with the statute.

162. Relying on the Self-Generation Incentive Program's requirements, which order monthly reporting, provides efficiency as compared to the daily reporting requested by PCF, which is excessive.

163. Infrequent reporting as proposed by PG&E could lead to long periods of noncompliant greenhouse gas emissions.

164. PG&E's proposal for a lengthy deficiency cure period does not comply with the statute.

165. It is efficient and effective to require monthly reporting via a process similar to the reporting adopted for the Self-Generation Incentive Program.

166. Use of a six-month window to cure deficiencies, following the discovery of a lack of compliance, is the most efficient and least resource intensive process available.

167. Waste heat usage, when present, is a critical component of the emission rate.

168. CARB regulates how to account for greenhouse gas emissions reductions from carbon capture and storage.

169. CARB's Low Carbon Fuel Standard only allows sequestration underground.

170. In D.22-05-025, the Commission agreed that a more expansive requirement should be adopted that includes "use" in addition to capture and storage.

171. The Commission has no standards on carbon capture, use, and storage.

172. It is necessary to implement Carbon Capture, Use, and Storage through a new process added to the Staff Proposal.

173. The Staff Proposal does not address whether simultaneous multiple practices to calculate the effective emission rate is permitted.

174. In D.20-12-022, the Commission found that developing a modified methodology based on the Greenhouse Gases, Regulated Emissions and Energy Use in Transportation Model (GREET) pathway model used for CARB's Low Carbon Fuel Standards program is a reasonable approach to calculate carbon intensity of eligible renewable natural gas resources.

175. The Commission adopted use of a modified GREET model to determine carbon intensity scores.

176. In the interim, the Commission directed Utilities to use a preliminary cost-effectiveness test that estimates the short-lived climate pollutant reduction and

life cycle carbon emissions until the modified GREET model is completed and carbon intensity scores can be established.

177. In D.20-01-021, the Commission acknowledged that requirements for verification of source fuels had not kept pace with the Low Carbon Fuel Standard of Renewables Portfolio Standards.

178. The Commission updated the Self-Generation Incentive Program handbook to: (1) limit eligible directed renewable fuels to those produced within California and (2) strengthen renewable fuel documentation, verification, auditing, and enforcement requirements.

179. Self-Generation Incentive Program requirements are more stringent than the Staff Proposal requiring compliance with Pub. Util. Code §651(b)(3)(B).

180. Aligning the requirements for fuel cell customer generators with the more stringent requirements of the Self-Generation Incentive Program will improve future compliance.

181. Requiring customer-generators to fund fuel cell customer generators requirements will eliminate any ratepayer burden.

182. The Staff Proposal does not currently include consequences for noncompliance of the CARB Standards.

183. There must be consequences for noncompliance of the CARB Standards.

184. Requiring customer-generators to pay the costs to implement the monitoring activities will eliminate any ratepayer burden.

185. Use of the Midwest Renewable Energy Tracking System (MRETS) was adopted in D.22-02-025.

186. Utilities were directed to require biomethane producers to track volumetric injections into pipelines through the MRETS or another platform identified in the Standard Biomethane Procurement Methodology workshop.

187. California does not participate in the MRETS for compliance markets.

188. Use of a contractual obligation may provide the best assurance of compliance until a tracking system is broadly used.

189. The amount of renewable natural gas the fuel cells are using should be accurately assessed.

190. Accurate assessment of the amount of renewable natural gas used by fuel cells requires utility-supplied renewable natural gas to be included in the calculation of the greenhouse gas emissions of fuel cell systems participating in the NEMFC tariff.

191. D.20-12-022 and D.22-02-025 determined that the rights to the renewable natural gas environmental attributes remain with the utility.

192. The renewable natural gas content amount injected into their pipeline should be easy for Utilities to verify since it should already be contained in their records.

193. SoCalGas submitted Advice Letter 6025, proposing the final elements of the Voluntary Renewable Natural Gas Tariff pilot program for nonresidential customers; no other gas utility is currently proposing to create such a program.

194. Based on party comments, there are no other developments to consider with respect to consideration of the Staff Proposal.

195. Pursuant to Pub. Util. Code §2827.10, an eligible fuel cell customer-generator is required to use technology the Commission has determined will achieve reductions of greenhouse gas emissions pursuant to subdivision (b), which states that CARB, in consultation with the Energy Commission, shall establish a schedule of annual greenhouse gas emissions reductions standards for a fuel cell electrical generation resource.

196. In Pub. Util. Code §2827.10, the Commission has a limited role, which does not include determining the greenhouse gas emissions standards.

197. The appropriate venue to relitigate CARB Standards is at CARB, not this proceeding.

198. Pub. Util. Code §2827.10, which created the current fuel cell tariff, does not allow the Commission to extend the tariff.

199. In establishing the requirements for fuel cell participation in net energy metering, the Legislature expressly sunset the NEMFC tariff at the end of 2023; this sunset language provides no alternative action for the Commission.

200. Neither the request for a new tariff for fuel cells nor the request for a distributed energy resources tariff involve matters that are in the scope of this proceeding.

201. NEMFC tariffs must comply with Pub. Util. Code §2827.10, which clearly states that a NEMFC resource "uses technology the Commission has determined will achieve reductions in emissions of greenhouse gases" pursuant to [CARB's] "schedule of annual greenhouse gas emissions reduction standards."

202. Granting Bloom Energy's request to allow fuel cells that are able to operate using only renewable fuels and commit to using only renewable fuels would conflict with the statute.

203. The Commission has regulatory jurisdiction over Utilities as well as authority over the safe and reliable interconnection of customer-generators, and Utilities oversee interconnection application requests by customers to ensure safe and reliable interconnection.

204. The Commission has the responsibility to ensure that customers are protected.

205. Because customers will be negatively affected by contractor noncompliance, the Commission finds that it has a role in contractors' compliance with Pub. Util. Code §739.2 and should, therefore, know whether the statute applies to a given Generation Facility.

206. Because the interconnection application submission is the first point of contact between the customer and Utility, this is the appropriate starting point to determining whether a Generation Facility must comply with Pub. Util. Code §739.2.

207. To implement the statute, changes must be made to the interconnection application to confirm eligibility.

208. Fair notice was provided to contractors upon enactment of AB 2143, based on language stating the statute would be applicable to all eligible projects beginning after December 31, 2023.

209. If a customer-generator submits an interconnection application for an upgrade to increase the size of the system or to pair an energy storage device, this is considered a new project and is required to comply with Pub. Util. Code §769.2.

210. Labor Commission and the CSLB should be responsible for educating contractors.

211. Requiring the Utilities update Pub. Util. Code §2827 tariffs will provide a clear understanding of how Pub. Util. Code §769.2 changes these tariffs, which will provide transparency to contractors.

212. The Commission and the Utilities have a responsibility to ensure that customers are aware of the potential impacts of Pub. Util. Code §769.2.

213. The Commission currently has a consumer guide for residential solar customers; residential customers are required to acknowledge receipt of the guide as part of their interconnection application.

214. Keeping the requirements of Pub. Util. Code §769.2 separate from the larger residential consumer guide will limit confusion, as the requirements of Pub. Util. Code §769.2 are not applicable to a majority of residential customers.

215. Transparency requires that the net billing tariffs align with the requirements of Pub. Util. Code §769.2.

216. The Commission's intention in implementing Pub. Util. Code §769.2 is to adopt the most simple and cost-effective manner of implementation.

217. Adopting the current practice of including a thorough description of statutory requirements in the tariff, but not in the interconnection agreement, is a simple and cost-effective manner of implementation.

218. Pub. Util. Code §769.2 requires a contractor to submit to the Commission certified payroll records for projects.

219. The Commission requires a process to receive the payroll records for implementation of Pub. Util. Code §769.2.

220. It is within Commission jurisdiction to require submittal of the records by a contractor to be a requirement of access to the tariffs created pursuant to Pub. Util. Code §2827 and Pub. Util. Code §2827.1.

221. Pub. Util. Code §769.2 does not contain a penalty for not submitting the payroll records; the statute also does not prohibit the Commission from establishing such a penalty.

222. The penalty for noncompliance by the contractor is that the Generation Facility loses access to the tariff, resulting in a negative impact on the customer.

223. Requiring compliance with Pub. Util. Code § 769.2 in the net billing tariffs and establishing loss of access to the tariff as a penalty for noncompliance will protect future customers seeking access to the tariff.

224. Pub. Util. Code §769.2 requires contractors to submit copies of payroll records to the Commission.

225. Pub. Util. Code §769.2 provides enforcement of the statute by the Labor Commissioner, *i.e.*, the Department, through the issuance of a civil wage and penalty assessment.

226. Utilities' interconnection application search engines contain the relevant information to ascertain the renewable electrical generation facilities eligible for this review.

227. Providing the Department access to the interconnection application search engines is the most efficient manner to implement the enforcement of the payroll record submission requirement; similar access has been granted by the Commission in the past.

228. There is an imbalance of incentives for compliance with the statute.

229. Pub. Util. Code §769.2 limits the Commission from adopting the approach suggested by GRID.

230. The prevailing wage requirement can only be enforced through the Labor Commissioner or an administrative complaint or civil action; no action should be taken by the Commission or Utilities until the Department, or other identified agent, completes their assessment and makes its determination.

231. Because the Commission is not conducting the assessment, there is no need for a separate definition of willful violation of the prevailing wage requirement.

232. Adopting the Department's definition of willful violation provides contractors with the same treatment between the two agencies.

233. There are customers with non-export interconnection agreements, but their tariffs are separate.

234. If a net billing tariff customer loses access to the tariff due to a contractor's noncompliance with Pub. Util. Code §769.2, that does not change the safety of their system and the tariff change should not impact the interconnection agreement; a loss of any net billing tariff does not require further engineering review or new equipment to become a non-export facility.

235. There is a process of information sharing that exists between the Department and CSLB.

236. There is no known rule in the Labor Code requiring the Department to share a finding of a prevailing wage violation with the Commission or Utilities.

237. Utilities will need to know about prevailing wage violations to ensure customers (with Generation Facilities no longer eligible for the net energy metering or net billing tariffs) are placed on alternate tariffs and, beginning on January 1, 2025, ensure contractors who have been found in violation of the prevailing wage rules will not have access to the tariff in the future.

238. It is reasonable to allow tariff access to be restored if a willful wage violation is reversed or nullified by the determining body and the generation account holder or customer/property owner provides documentation to the utility.

239. A customer should continue to realize some bill savings for their Generation Facility upon losing access to the net energy metering or net billing tariff.

240. The Commission established an avoided cost price for as-available deliveries of energy in D.20-05-006.

Conclusions of Law

1. The Commission should not delay a determination on the VNEM tariff or the NEMA subtariff in this proceeding.
2. The Commission should require Utilities to improve data collection on the customer composition of the VNEM tariff and its successor tariff to ensure accuracy.
3. The Commission should not grant the request by CALSSA to allow a generating account to take over a benefitting account holder's CARE benefit.
4. Pub. Util. Code §780.5 requires that after July 1, 1982, all electric and gas metering in buildings must be individually metered.
5. The Commission should adopt a VNEM successor tariff that does not presume onsite self-consumption.
6. The Commission should not retain the current VNEM tariff.
7. The Commission should rely on findings from the Lookback Study review of the NEM 2.0 tariff in its review of the VNEM tariff.
8. The DER Shared Tariff conflicts with the intention of Pub. Util. Code §780.5
9. The Commission should not adopt the proposed DER Shared Tariff as a successor to the VNEM tariff.
10. The Commission should adopt the use of the Avoided Cost Calculator values to determine retail export compensation rates for the successor VNEM tariff.

11. The Commission should not adopt Utilities' recommendation in its virtual net billing tariff proposal to allow the export compensation credit to offset any portion of the bill.

12. The Commission should retain the eligibility, size to load, or metering requirements as established in the current VNEM tariff for adoption in the successor VNEM tariff.

13. The Commission should allow benefiting account holders in the successor VNEM tariff to take service on any currently available time-of-use rate schedule.

14. The Commission should allow benefiting account holders in the successor VNEM tariff to participate in demand response or emergency reliability programs, with the caveat that incentives are based on the individual customer's load and do not include excess generation exported to the grid during a demand response event.

15. The Commission should use the ACC Plus as a glide path in the successor VNEM tariff.

16. The Commission should not adopt an ACC Plus adder for nonresidential customers participating in the successor VNEM tariff.

17. The Commission should tie the nine-year legacy period of the successor VNEM tariff to the Generation Facility associated with the property, rather than the original property owner.

18. The Commission should allow a customer currently taking service under a VNEM tariff or its successor to add a storage device without altering a customer's tariff status.

19. The Commission should adopt the requests of CALSSA to allow the VNEM tariff to: (1) automatically switch to a new tenant, *i.e.*, benefiting account

and (2) allow vacant units to stay enrolled in the VNEM tariff as a zero percent allocation level.

20. Pub. Util. Code §2827.1(a) states that Generation Facilities shall have the same meanings as defined in Pub. Util. Code §2827, which defines the term as a facility that generates electricity from a renewable source listed in paragraph (1) of subdivision (a) of Section 25741 of the Public Resources Code, which does not include stand-alone batteries.

21. The Commission should not allow grid charging of batteries in the successor VNEM tariff.

22. The Commission should require Utilities to lead a process to find a consensus approach to allow a virtual net billing tariff customer to charge their storage device from the grid prior to a planned Public Safety Power Shutoff for the purpose of resiliency.

23. The Commission should require Utilities to provide the Energy Division and the service list a bi-annual report on tracking the progress of improvements to the processes causing delays in VNEM tariff customers receiving bill credits after permission to operate is granted.

24. The Commission should allow Utilities to submit an annual advice letter requesting inflation-related adjustments to fees for the VNEM tariff and its successor.

25. The Commission should continue the SOMAH tariff as is until its sunset date as provided in Pub. Util. Code §2870.

26. The Commission should continue the MASH tariff as is but sunset it alongside SOMAH.

27. The directive in Section 2827(c)(1), creating an end date for the applicability of the section, applies to the NEMA subtariff.

28. The Commission determined in Resolution E-4854 that small investor-owned utilities are not obligated to continue offering the NEMA subtariff once they reach their net energy metering caps.

29. The Commission should expand the directive that the small investor-owned utilities are not obligated to continue offering the NEMA subtariff once they reach their [net energy metering] caps to all electric utilities.

30. The Commission should rely on the findings of the Lookback Study's review of the NEM 2.0 tariff in its review of the NEMA subtariff.

31. The Commission should adopt an Aggregation subtariff that mirrors the net billing tariff.

32. Offering a NEMA subtariff is not a legal requirement of the Commission nor Utilities.

33. The Commission should maintain Section 2827(h) in the new Aggregation subtariff as these provisions help ensure that the benefits of the tariff to all customers are approximately equal to its costs.

34. Decision 22-12-056, Finding of Fact 20 should be revised as follows: The Lookback Study finds that the commercial, industrial, and agricultural customer segments of the NEM 2.0 tariff generally pass the TRC test and nonresidential customers pay rates that fully cover their costs of services.

35. The Commission should not adopt Utilities' proposal to establish an interagency task force to resolve the problem that the Watch List does not capture violators of CSLB and DFPI regulations.

36. The Commission should not adopt Utilities' recommendation to establish a task force to resolve the fact that the Watch List primarily identifies a list of providers committing administrative errors.

37. The Commission should adopt the revisions to the Watch List process.

38. The Commission should limit the amount of time that providers spend on the Watch List for violating the Commission consumer protection rules.

39. The Commission should delay inclusion of the bill savings estimate method approved in D.20-08-001 and authorize Energy Division to perform a review of inputs and assumptions.

40. The Commission should authorize Energy Division to develop a Commission Compliance Checklist that identifies the requirements for an interconnection application to be compliant for purposes of the Watch List.

41. The Commission should require compliance with directives of D.20-08-001, as modified herein, and D.21-06-026.

42. The Commission should not adopt proposals to require or authorize Utilities to deny an application for noncompliance or report the results of enhanced pre-approval reviews.

43. The Commission should ensure that current endeavors to implement the net billing tariff should include efforts to improve customer understanding of bills.

44. The Commission should not require uniformity of bills improvements.

45. The Commission should authorize Utilities to track expenses for changes to customers' bill on the Utilities Net Billing Tariff memorandum accounts.

46. The Commission should not require Utilities to alert customers when solar systems are not performing correctly but, instead, provide a reminder for customers to monitor their systems.

47. The Commission should relieve the Utilities of the current requirement to submit quarterly advice letters reporting solar consumer complaints.

48. The Commission should not consider the Cal Advocates' proposal for annual evaluations.

49. The Commission should authorize a maximum budget of $2.5 million budget for the evaluation of the net billing tariff and the related tariffs and subtariffs.

50. The Commission should identify a source of funding for the net billing tariff evaluation and identify that source as the public purpose program surcharges.

51. The Commission should direct the consultants hired to perform the evaluation to develop the specific questions to be asked in the evaluation, but with consideration of the set of proposed research questions contained in Table 10, as well as others contained in the record of this proceeding, and with the input of Energy Division and parties.

52. The Commission should direct the consultants hired to perform the evaluation to consider the metrics and data needs contained in Table 12 and Table 13 and elsewhere in the record of this proceeding when developing their research plan.

53. The Commission should direct that the party recommendations for metrics and data sources be considered by the consultant hired to perform the evaluation, when developing the metrics and the data needs for the evaluation.

54. The Commission should include differentiation in the evaluation data collection and analysis as an objective of the evaluation.

55. The Commission should adopt the set of evaluation objectives in Table 11 to guide the evaluation question development.

56. The Commission should not consider in this decision contentions regarding the review of the previous Lookback Study and implications for the review of the net billing tariff evaluation.

57. The Commission should not consider, at this time, the adoption of the Response to Recommendation Process.

58. The Commission should adopt the previous evaluation implementation process, as modified herein.

59. The Commission should not establish a working group to finalize the draft research plan for the net billing tariff evaluation but adopt a transparent process allowing for multiple opportunities for public comment and a public workshop.

60. The Commission should adopt a draft evaluation report step for the net billing tariff evaluation that allows for public review and written comment, as well as a public workshop.

61. The Commission should initiate an Order Instituting Rulemaking (Order) to consider the findings of the net billing tariff evaluation and the final evaluation report should be attached to the Order.

62. The Commission should amend the Staff Proposal to clarify that the CARB Standards will be applicable only to those NEMFC resources that received permission to operate after the enactment of AB 1637.

63. The Commission should amend the Staff Proposal to require: (1) a revised interconnection application fee to reflect the additional cost in ensuring initial compliance with the CARB Standards and (2) an annual documentation fee reflecting the costs to administer the annual collection and processing of certifications.

64. The Commission should amend the Staff Proposal to allow for calculations based on equipment specification sheets, as an alternative only when the ASME PTC 50-2002 test is not feasible.

65. The Commission should amend the Staff Proposal to extend the initial certification implementation timeline from three months to six months.

66. The Commission should amend the Staff Proposal to reflect that documentation must comply with Self-Generation Incentive Program handbook requirements, including the requirement that customer-generators contract with a Performance Data Provider.

67. The Commission should amend the Staff Proposal to include a six-month window in which to come into compliance, after which the interconnection agreement will be terminated, and the project will be served under a Rule 21 non-export agreement.

68. The Commission should amend the Staff Proposal to align the verification requirements with those of the Self-Generation Incentive Program.

69. The Commission should amend the Staff Proposal to require customer-generator certification of any waste heat usage provided in the calculation of the emission rate.

70. The Commission should amend the Staff Proposal to add a new section called Carbon Capture, Use, and Storage, which will provide a disclaimer stating that if a fuel cell customer notifies a utility that it wants to perform carbon capture, use, and storage, then within 12 months of such notice, the relevant utility shall propose rules in compliance with CARB's carbon capture and storage protocol.

71. The Commission should amend the Staff Proposal to explicitly allow for simultaneous multiple practices to calculate the effective emission rate.

72. The Commission should amend the Staff Proposal to instruct Utilities on how to account for reduced emissions from biomethane using the preliminary method adopted in D.22-02-025, until the modified GREET model is approved.

73. The Commission should amend the Staff Proposal to align the requirements for directed biogas eligibility with those of the Self-Generation Incentive Program.

74. The Commission should amend the Staff Proposal to require random no-warning spot-checks and 30-day warnings of directed renewable fuel sources, as practiced in the Self-Generation Incentive Program, with cost recovery by customer-generators through the annual documentation fee.

75. The Commission should amend the Staff Proposal to require documentation of the seller's contractual obligation to provide all environmental attributes to the buyer, until a tracking system is broadly used.

76. The Commission should amend the Staff Proposal to confirm that utility-supplied renewable natural gas is eligible for emissions reduction, if compliant with Pub. Util. Code §651(b)(3)(B) and Self-Generation Incentive Program requirements for directed biofuel, but the environmental attributes remain with the utility.

77. The Commission should amend the Staff Proposal to reflect that SoCalGas has proposed the final elements of the Voluntary Renewable Natural Gas Tariff pilot and that no other gas utility is proposing to create such a pilot or program.

78. The Commission should not grant the request of Bloom Energy to request CARB to reassess its greenhouse gas emissions standard calculation, to replace the current tariff with a new tariff, or consider an interim requirement that fuel cell systems must have the ability to consume fuels.

79. The Commission should include a step during the interconnection application process to determine whether a Generation Facility must comply with Pub. Util. Code §769.2.

80. Pub. Util. Code §769.2 is only applicable to projects with an interconnection application date (as determined above) after December 31, 2023.

81. The Commission should require Utilities to create a Prevailing Wage Disclosure Form and that the eligible customer acknowledge receipt of this disclosure as part of the interconnection application.

82. The Commission should direct Utilities to establish a requirement in the net billing tariffs that a contractor shall comply with the payroll submission requirement in Pub. Util. Code §769.2 and that noncompliance will result in the contractor losing access to being named as a contractor on the interconnection application for a Generation Facility accessing the tariff, until the reporting requirement is met.

83. The Commission should require Utilities to provide the Department of Industrial Relations (Department) with access to the interconnection application search engines.

84. The Commission should adopt the Department's definition of willful violation.

85. The Commission should prohibit Utilities from requiring the addition of a non-export relay or further engineering review in order to become a non-export facility upon loss of access to the net billing tariffs.

86. The Commission should require Utilities to enter into or amend existing confidentiality agreements with the Department to receive notice of willful wage violations.

87. PURPA generally requires that a utility must take the energy of a qualifying facility and pay the avoided cost (as defined by PURPA) for that purchase, meaning the incremental cost to the utility of alternative electric energy.

88. The Commission should require Utilities to develop a PURPA compliant compensated export tariff.

O R D E R

IT IS ORDERED that:

1. A virtual net billing tariff is adopted. Imports and exports will be calculated based on no netting of consumption and production will be trued-up on an annual basis for the connected generating and benefiting accounts. Bill credits will be allocated to benefiting accounts in the proportion specified in the credit allocation form. Bill credits will be applicable toward import charges from any time period. Virtual net billing generating account holders shall comply with Electric Rule No.21 Sections L.2 – L4 and Section L.7 for interconnecting to the electrical grid. Interconnection fees apply and remain as identified in Electric Rule 21. Virtual net billing customers must pay all incurred charges monthly. The virtual net bill tariff shall contain the following elements:

   (a) Retail Export Compensation Rates based on hourly Avoided Cost Calculator values averaged across days in a month, differentiated by weekdays and weekends/holidays. For the first five years of the successor tariff, *i.e.*, the glide path transition time, retail export compensation rates for residential and nonresidential virtual net billing tariff customers will be based on a nine-year schedule of values for each hour from the most recent Avoided Cost Calculator, adopted as of January 1 of the calendar year of the renewable electrical generation facility interconnection date. Following the locked in period, retail export compensation rates will be based on averaged hourly avoided cost values from the most recent Avoided Cost

Calculator, adopted as of January 1. Tariff customers enrolling after the five-year glide path will not receive a lock-in period for Avoided Cost Calculator values.

(b) An Avoided Cost Calculator Plus (ACC Plus) adder, based on a cents per kilowatt-hour exported. The ACC Plus will be available to virtual net billing tariff residential benefiting account customers during the first five years of the successor tariff, as a glide path. The adopted ACC Plus adders, as indicated in the table below, will remain constant for a customer for nine years from the renewable electrical generation facility's interconnection date. The adder is specific to each qualifying benefitting account.

ACC Plus Adders for Residential Benefiting Account Holders Participating in the Virtual Net Billing Tariff	
Utility	**ACC Plus Adder**
PG&E	$0.163/kWh
SDG&E	$0.141/kWh
SCE	$0.139/kWh

The adder will decrease by 20 percent annually for newly enrolled tariff customers, as measured by the first-year adder rate until the adder reaches zero. The adder will be a discrete line on the customer's utility bill, will apply to all charges, and will apply to future bills until the credit is used. Funding for the adder will be provided by all ratepayers through the Public Purpose Program charge.

(c) For customers enrolled in the California Alternate Rates for Energy (CARE) or Family Electric Rates Assistance (FERA) programs, the CARE and FERA discount shall not be applied to the retail export compensation rate including the ACC Plus Adder.

(d) Non-bypassable charges. The four charges are the public purpose program charge, nuclear decommissioning charge, competition transition charge, and the Wildfire Fund Non-Bypassable Charge.

(e) Minimum bill or fixed charges. Virtual net billing tariff customers are subject to any minimum bill or fixed charge that is contained in a customer's applicable rate.

(f) True-up Dates. Each generating account customer or renewable electrical generation facility owner taking service under the virtual net billing tariff may make a one-time request that their annual true-up date be changed going forward.

(g) Legacy Period. The terms of the virtual net billing tariff will be available to virtual net billing tariff customers for a period of nine years. The legacy period is linked to the system. If the renewable electrical generation facility owner changes, the subsequent renewable electrical generation facility owner continues the current legacy period. Likewise, if tenancy changes at a participating property, the new benefiting account holder continues the legacy period.

(h) Change in Tenancy. When a change in tenancy occurs, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall automatically add the new utility customer as a benefiting account customer.

(i) Vacant Units. Residential or nonresidential vacant units may have a zero percent allocation from the renewable electrical generation facility (Generation Facility), up to 90 days, when the vacant unit is between tenancies and at the request of the generating account customer or the Generation Facility owner.

(j) Storage Devices. If a current virtual net billing renewable electrical generation facility (Generation Facility) owner adds a storage device, there is no impact to the Generation Facility's current tariff status, including the legacy period.

(k) Planned or Emergency Outages. Operation in isolation of the renewable electrical generation facility, including storage, is permitted to serve onsite loads during planned or emergency outages. Pending advice letter approval, storage may charge from the grid in advance of a planned or emergency outage.

(l) Participation in Demand Response Programs. Benefiting account customers are permitted to participate in demand response or emergency reliability programs for which the customer is otherwise eligible.

2. No later than January 31, 2024, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (Utilities) shall submit a joint Tier 1 advice letter proposing improvements in defining the composition of customers on the virtual net billing tariff and virtual net energy metering tariff. Utilities shall confer with the Commission's Energy Division on the Utilities' proposed improvements.

3. No later than 90 days after adoption of this decision, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California

Edison Company (Utilities) shall host a public workshop to discuss technical solutions to allowing storage in a virtual net billing or virtual net energy metering arrangement to charge from the grid prior to a Public Safety Power Shutoff or other planned outage. No later than 90 days after the public workshop, Utilities shall submit a Tier 2 advice letter proposing language to update both the virtual net billing tariff and the virtual net energy metering tariff to permit grid charging prior to planned outages.

4. No later than 120 days from the adoption of this decision, and every six months thereafter, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (Utilities) shall submit a report to track progress on the improvements to processes causing delays to customers on the virtual net energy metering tariff or virtual net billing tariff receiving bill credits after permission to operate is granted. Utilities shall meet with the Commission's Energy Division to develop the contents of the report.

5. Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company are each authorized to individually submit, on an annual basis, one single Tier 2 advice letter requesting inflation adjustments to fees related to the virtual net energy metering tariff and the virtual net billing tariff. Inflation rates will be based on the California Department of Finance's California Consumer Price Index current weighted average from the past 12 months.

6. The Multifamily Affordable Solar Housing and Solar on Multifamily Affordable Housing tariffs will remain open with no changes and continue accepting applications for new eligible enrollees until the sunset date pursuant to Public Utilities Code Section 2870.

7. Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall modify the Multifamily Affordable Solar Housing and Solar on Multifamily Affordable Housing tariffs as follows:

(a) Change in Tenancy. When a change in tenancy occurs, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall automatically add the new utility customer as a benefiting account customer.

(b) Vacant Units. Residential or nonresidential vacant units may have a zero percent allocation from the renewable electrical generation facility (Generation Facility), up to 90 days, when the vacant unit is between tenancies and at the request of the generating account customer or the Generation Facility owner.

(c) Storage Devices. If a current virtual net billing renewable electrical generation facility (Generation Facility) owner adds a storage device, there is no impact to the Generation Facility's current tariff status, including the legacy period.

(d) Planned or Emergency Outages. Operation in isolation of the renewable electrical generation facility, including storage, is permitted to serve onsite loads during planned or emergency outages. Pending advice letter approval, storage may charge from the grid in advance of a planned or emergency outage.

(e) Participation in Demand Response Programs. Benefiting account customers are permitted to participate in demand response or emergency reliability programs for which the customer is otherwise eligible.

8. The existing virtual net energy metering tariff is revised as follows:
   (a) Change in Tenancy. When a change in tenancy occurs, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall automatically add the new utility customer as a benefiting account customer.
   (b) Vacant Units. Residential or nonresidential vacant units may have a zero percent allocation from the renewable electrical generation facility (Generation Facility), up to 90 days, when the vacant unit is between tenancies and at the request of the generating account customer or the Generation Facility owner.
   (c) Storage Devices. If a current virtual net billing renewable electrical generation facility (Generation Facility) owner adds a storage device, there is no impact to the Generation Facility's current tariff status, including the legacy period.
   (d) Planned or Emergency Outages. Operation in isolation of the renewable electrical generation facility, including storage, is permitted to serve onsite loads during planned or emergency outages. Pending advice letter approval, storage may charge from the grid in advance of a planned or emergency outage.
   (e) Participation in Demand Response Programs. Benefiting account customers are permitted to participate in demand response or emergency reliability programs for which the customer is otherwise eligible.

9. No later than 45 days from the adoption of this decision, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall each submit a Tier 1 advice letter updating the following

existing tariffs to align with this decision: Virtual Net Energy Metering, Multifamily Affordable Solar Housing and Solar on Multifamily Affordable Housing tariffs.

10. An aggregation net billing subtariff is adopted. Imports and exports will be calculated based on no netting of consumption. Bill credits will be applicable toward import charges from any time-of-use time period. Aggregation net billing customers shall comply with Electric Rule No.21 Sections L.2 – L4 and Section L.7 for interconnecting to the electrical grid. Interconnection fees apply and remain as identified in Electric Rule 21. Aggregation net billing customers must pay all incurred charges monthly. The aggregation net billing subtariff shall contain the following elements:

(a) Retail Export Compensation Rates based on hourly Avoided Cost Calculator values averaged across days in a month, differentiated by weekdays and weekends/holidays. For the first five years of the successor tariff, *i.e.*, the glide path transition time, retail export compensation rates for residential and nonresidential net billing tariff customers will be based on a nine-year schedule of values for each hour from the most recent Avoided Cost Calculator, adopted as of January 1 of the calendar year of the customer's interconnection date. Following the locked in period, retail export compensation rates will be based on averaged hourly avoided cost values from the most recent Avoided Cost Calculator, adopted as of January 1. Subtariff customers enrolling after the five-year glide path will not receive a lock-in period for Avoided Cost Calculator values.

(b) An Avoided Cost Calculator Plus (ACC Plus) adder, based on a cents per kilowatt-hour exported. The ACC Plus will be available to residential aggregation net billing subtariff customers during the first five years of the successor tariff, as a glide path. The adopted ACC Plus adders, as indicated in the table below, will remain constant for a customer for nine years from the customer's interconnection date.

Adopted Avoided Cost Calculator Plus Adders for Aggregation Net Billing Subtariff Customers			
Customer Segment	**PG&E**	**SDG&E**	**SCE**
Residential	$0.022/kWh	$0/kWh	$0.040 kWh
Low-Income	$0.090/kWh	$0/kWh	$0.093/kWh
Nonresidential	$0/kWh	$0/kWh	$0/kWh

(c) The adder will decrease by 20 percent annually, for newly enrolled tariff customers, as measured by the first-year (2023) adder rate until the adder reaches zero. The adder will be a discrete line on the customer's utility bill, will apply to all charges, and will apply to future bills until the credit is used. Funding for the adder will be provided by all ratepayers through the Public Purpose Program charge.

(d) Highly differentiated time-of-use rates are currently eligible in the net billing tariff. Additional eligible rates may be added by utility request through submittal of a Tier 3 advice letter or through its general rate case Phase 2 or rate design window. All aggregation net billing subtariff residential customers are required to enroll in these eligible rates, or they may choose to enroll in critical peak pricing or peak day pricing rates.

(e) For customers enrolled in the California Alternate Rates for Energy (CARE) and Family Electric Rates Assistance (FERA) programs, the CARE and FERA discount shall not be applied to the retail export compensation rate.

(f) Non-bypassable charges. The four charges are the public purpose program charge, nuclear decommissioning charge, competition transition charge, and the Wildfire Fund Non-Bypassable Charge.

(g) Minimum bill or fixed charges. Virtual net billing tariff customers are subject to any minimum bill or fixed charge that is contained in a customer's applicable rate.

(h) Credit and Debit Provisions, Crediting Methodology, and Annual True-Up will remain the same as the Net Energy Metering Aggregation subtariff.

(i) Legacy Period. The terms of the aggregation net billing subtariff will be available to aggregation net billing subtariff customers for a period of nine years. The legacy period is linked to the renewable electrical generation facility (Generation Facility) owner. If the Generation Facility owner changes, the subsequent Generation Facility owner does not have a legacy period. The exception is when the subsequent Generation Facility owner is or was the legal partner (*e.g.*, spouse or domestic partner in the case of residential customers or, in the case of nonresidential customers, the account-holding entity continues to be majority controlled by the same underlying individuals or entities from the time the legacy system was installed) of the original Generation Facility owner. For this latter group, the legacy period maintains its original interconnection date and length of nine years.

(j) If a current aggregation net billing customer adds a storage device, there will be no impact to the customer's current subtariff status, including the legacy period onsite.

11. Implementation of the virtual net billing tariff and the aggregation subtariff adopted in this decision shall occur in the following steps:

(a) Step 0: The Sunset Period begins with adoption of this decision. Customers submitting a completed interconnection application prior to the end of the Sunset Period will be considered applicable for the current Virtual Net Energy Metering tariff or Net Energy Metering Aggregation tariff.

(b) Step 1a: Within 90 days of the adoption of this decision, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (Utilities) shall each submit Tier 2 advice letter to provide the details of the virtual net billing tariff and the aggregation net billing subtariff , as adopted in this decision. Utilities shall coordinate before submitting the advice letters to ensure language uniformity to the extent possible. The individual advice letters shall summarize Utilities' interpretation of how the successor tariffs will be structured and include indicative levels of price components and containing rate factors based on the applicable revenue and associated tariff sheets. Utilities shall ensure language uniformity.

(c) Step 1b. No later than 90 days after the effective date of this decision, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company will implement a tariff sunset on the VNEM tariff and the NEMA subtariff, after which time, no additional customers will be permitted to take service under the VNEM tariff or the NEMA subtariff. Customers with an interconnection application date after this Sunset Date will take service and be billed on the VNEM tariff or NEMA subtariff on an interim basis and transition to the virtual net billing tariff or aggregation virtual net billing subtariff , once these are operational. Neither the VNEM tariff nor the NEMA subtariff legacy period are applicable in this case. The interconnection application date for residential customers is defined as the submission date of an application that is free of major deficiencies and includes a complete application, a signed contract, a single-line diagram, a complete California Contractors State License Board Solar Energy System Disclosure Document (if applicable), a signed California Solar Consumer Protection Guide (if applicable), a Public Utilities Code Section 739.2 Prevailing Wage Disclosure Form (if applicable), and an oversizing attestation (if applicable). The interconnection application date for nonresidential customers is defined as the submission date of an application that is free of major deficiencies and includes a complete application, a signed Authorization to Act on a Customer's Behalf, the selection of a single-line diagram, a Public Utilities Code Section 739.2 Prevailing Wage Disclosure Form (if applicable), and an oversizing attestation (if applicable.) Joint Utilities are granted the discretion to give VNEM tariff or NEMA subtariff eligibility to a customer if a delay in meeting the Sunset Date is caused by the utility. Joint Utilities shall work collaboratively to address challenging situations in deeming applications complete.

(d) Step 2: Six months following adoption of this decision, San Diego Gas & Electric Company and Southern California Edison Company shall complete alignment of related necessary billing systems and transition to full implementation of the virtual net billing tariff and aggregation net billing tariff.

(e) Step 3: Three years from the application submission, all customers seeking to interconnect to the VNEM tariff or NEMA subtariff shall submit final building permit sign off and electrical clearing by the authority having jurisdiction. Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company have the discretion to apply VNEM tariff or NEMA subtariff eligibility to customers who fail to meet this deadline due to utility-caused delays.

12. A revised Watch List process is adopted with the following changes: Pacific Gas and Electric Company, San Diego Gas & Electric Company,

and Southern California Edison Company should review current, active interconnection applications.

(b) Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company shall each manually review a total of 100 randomly selected approved interconnection applications every six months.

(c) The removal process from Decision 21-06-026 is deemed obsolete.

(d) Providers with deficient applications will be placed on an internal Enhanced Review List.

(e) The Commission's Energy Division will notify Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company of providers placement on the Enhanced Review List.

(f) Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company will conduct pre-approval reviews of the next ten applications received from providers on the Enhanced Review List using the Commission Compliance Checklist.

(g) If an additional application from a provider on the Enhanced Review List is found to be deficient, the utility will return the application to the provider who will have an opportunity to remedy the application. The utility shall inform the solar provider that failure to remedy the application will result in placement on the Watch List; this replaces the notice requirement in Decision 21-06-026. Failure to remedy the application will result in placement on the Watch List. Placement on the Watch List will be a maximum of three months for violation of the Commission's regulations and six months for violation of the Contractors State License Board or Department of Financial Protection and Innovation regulations.

(h) Providers must comply with the items on the Commission Compliance Checklist to be developed by the Commission's Energy Division but will include compliance with Decision 20-08-001 and Decision 21-06-026 and, when prepared by the Energy Division, a customer bill savings estimate.

13. The Energy Division is authorized to redraft the standardized inputs and assumptions for the required savings estimate (as provided in the Contractors State License Board Supplemental Disclosure Form) and present a draft in a public workshop no later than December 15, 2023. The final set of inputs and assumptions will be provided through a draft resolution no later than March 15, 2024. Following Commission adoption of the inputs and assumptions resolution, Energy Division is authorized to finalize the Contractors State License Board Disclosure Document for publication by the Contractors State License Board.

14. The Energy Division is authorized to develop a Commission Compliance Checklist to identify the requirements for an interconnection application to be compliant for purposes of the Watch List.

15. Within 30 days of the adoption of this decision, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall consult with the Commission's Energy Division to identify and address cosmetic changes to the net billing tariff bills that can improve customer understanding and not delay implementation of the net billing tariff.

16. No later than 90 days after implementation of the residential net billing tariff, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company, with the participation of parties, shall begin to develop recommendations for long-term improvements to net billing tariff customer bill improvements. Utilities are directed to host a series of workshops and, no later than one year from the implementation of the net billing tariff, report on the recommendations from these workshop through a letter to the Director of Energy Division. The recommendations are not required to be standardized across all utilities. Utilities are authorized to recovery costs for these improvements through Utilities' net billing memorandum accounts.

17. Beginning no later than 90 days after the adoption of this decision, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall remind net billing tariff and related subtariffs customers the importance of self-monitoring of renewable energy generation facilities. Utilities shall use at least one existing monthly communication to provide this reminder.

18. Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company are relieved of the requirement in Ordering Paragraph 7 of Decision 18-09-044 to submit quarterly advice letters reporting solar consumer complaints received.

19. Pacific Gas and Electric Company (PG&E), San Diego Gas & Electric Company (SDG&E) and Southern California Edison Company (SCE) (together, Utilities) are authorized a budget not to exceed $2.5 million for measurement and evaluation of the net billing tariff, virtual net billing tariff and aggregation subtariff. Utilities shall distribute funding as follows: PG&E, 40 percent; SDG&E, 20 percent, and SCE, 40 percent. Utilities shall continue to track the costs through

the previously authorized memorandum account and recover those costs through the public purpose program surcharges.

20. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (Utilities) shall select one utility to work with the Commission's Energy Division to develop and issue a Request for Proposal to hire a consultant expert in evaluation methods and processes to conduct an evaluation of the net billing tariff. No later than 30 days from the adoption of this decision, Utilities shall notify the Director of the Energy Division of the selected utility. No later than 120 days from the adoption of this decision, the selected utility shall issue the Request for proposal.

21. No later than 60 days after the effective date of the contractor or agreement with the selected expert evaluation consultant, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall complete non-disclosure agreements with the consultant.

22. The following objectives for the net billing tariff evaluation research questions are adopted:

(a) The evaluation should determine whether customer generation tariffs are equitable and the extent to which tariff costs are shifted to non-participating customers.

(b) The evaluation should quantify the customer generation tariffs' effects on greenhouse gas emissions and their impacts on California's greenhouse gas emissions reductions objectives.

(c) The evaluation should quantify the customer generation tariffs' impacts on California's electrification goals.

(d) The evaluation should quantify the customer generation tariffs' impacts on the electric grid, including but not limited to the timing of customers' grid energy use, battery dispatch trends, and electrification of consumer end uses.

(e) The evaluation should assess trends in installation of distributed generation, including stand-alone solar, solar paired with storage, and wind systems, and assess market trends such as customer prices for such systems.

(f) The evaluation should assess the effects of the Commission's consumer protection measures on customers enrolled in customer generation tariffs.

23. The consultant hired to conduct the evaluation of the net billing tariff and all subtariffs shall follow the objectives of the evaluation and shall consider the set of proposed evaluation questions in Table 10 of this decision, the proposed metrics in Table 12 of this decision, the proposed data to be collected in Table 13 of this decision, and other relevant information contained in the record of this proceeding. The consultant should recognize this information is a starting point.

24. The net billing tariff evaluation shall include the following steps:

(a) Development of the Research Plan: A draft research plan shall be provided to the service list within 90 days after the effective date of the contract or agreement with the evaluation consultant and at least 10 days prior to a public workshop. Written informal comments on the draft Research Plan will be received by the consultant. The final Research Plan will be provided to parties with one additional opportunity to comment. A final Research Plan will be approved by the Director of the Energy Division or their designee.

(b) Evaluation Report: Energy Division is authorized to provide a draft report and workpapers no later than six weeks prior to a workshop. Written informal comments will be received and addressed in the final report.

(c) Final Evaluation Report: The final evaluation report will be provided as an attachment to an order instituting rulemaking to determine whether changes to the net billing tariff, virtual net billing tariff or aggregation subtariff are necessary.

25. The Staff Proposal to Implement Net Energy Metering Fuel Cell Greenhouse Gas Emissions Standards (CARB Standards), as modified by this decision and attached as Appendix B, is adopted. The CARB Standards are applicable to all Net Energy Metering Fuel Cell resources that received permission to operate after the enactment of Assembly Bill 1637.

26. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company are authorized to charge an annual documentation fee to reflect the cost to administer the annual collection and processing of certifications as approved in the Staff Proposal adopted above in Ordering Paragraph 25.

27. No later than 60 days following the adoption of this decision, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company (Utilities) shall submit a Tier 2 advice letter updating the Net Energy Metering Fuel Cell (NEMFC) tariff as directed in this decision, including proposing an updated interconnection application fee and an annual documentation fee. Utilities shall make every effort to ensure language uniformity. The interconnection fee shall be based on the following costs incurred for NEMFC resources less than one megawatt in size: NEM Processing

and Administrative Costs, Distribution Engineering Costs, and Metering Installation/Inspection and Commissioning Costs. Utilities shall report NEMFC interconnection and documentation costs in the annual "Net Energy Metering and Net Billing Tariff Annual Reporting Advice Letter." Utilities are authorized to propose any necessary changes to these fees through submission of a Tier 2 advice letter.

28. In the Tier 2 advice letter directed above in Ordering Paragraph 27, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company shall propose documentation to comply with current Self-Generation Incentive Program handbook requirements.

29. Within 90 days after a modified Greenhouse Gases, Regulated Emissions an Energy Use in Transportation model is approved; Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall each submit Tier 2 advice letters to revise the instructions for calculating carbon intensities in each of their Net Energy Metering Fuel Cell tariffs based on the modified model.

30. No later than November 15, 2023, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company shall revise the Interconnection Application process to implement Public Utilities (Pub. Util.) Code §769.2. as described in Section 3.6 of this decision. The revisions shall include review and completion, by the utility, of a Public Utilities (Pub. Util.) Code §769.2 Checklist, the submittal by the applicant of the Pub. Util. Code §769.2 Prevailing Wage Disclosure Form, and confirmation by the utility that the contractor is up to date with their required submittals of payroll records.

31. No later than October 1, 2023, Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company

shall create a uniform Public Utilities (Pub. Util.) Code §769.2 Checklist and a downloadable Pub. Util. Code §769.2 Prevailing Wage Disclosure Form, as described in Section 3.6 of this decision.

32. No later than October 1, 2023, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall submit a Tier 2 advice letter revising language for tariffs implemented under Public Utilities (Pub. Util.) Code §2827 and Pub. Util. Code §2827.1 to reflect the changes adopted in Section 3.6 of this decision and listed under subsection B of section 3.6.6. This advice letter shall include submittal of the Pub. Util. Code §769.2 Checklist and a Pub. Util. Code §769.2 Prevailing Wage Disclosure Form to be developed, as required above in Ordering Paragraph 31.

33. No later than September 1, 2023, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall host a workshop, inviting the service list of this proceeding, to discuss the contents of the advice letters required by Ordering Paragraph 32 above.

34. No later than November 15, 2023, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall provide access to their interconnection portals to the Department of Industrial Relations. The Director of Energy Division or their designee is authorized to add or remove interagency staff and the evaluation consultant(s) as needed.

35. No later than November 15, 2023, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall enter into or amend existing confidential disclosure agreements with the Department of Industrial Relations to implement Public Utilities Code Section 769.2.

36. The Commission's Energy Division is authorized to hire a consultant to create and implement a system to collect the payroll records required by Public Utilities Code Section 769.2.

37. No later than November 15, 2023, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall submit a Tier 2 advice letter for approval of a compensated non-export tariff, compliant with the Public Utility Regulatory Policies Act of 1978 (PURPA),for renewable electrical generation facilities (Generation Facilities) who have lost access to their net energy metering or net billing tariff (under Public Utilities Code Section 2827) due to a willful violation of Public Utilities Code Section 769.2 prevailing wage requirement by the Generation Facilities' contractor.

38. Beginning January 1, 2025, contractors who have willful wage violation determination of the prevailing wage requirement in Public Utilities Code Section 769.2, will no longer be able to build facilities seeking to utilize tariffs pursuant to Public Utilities Code Sections 2827 and 2827.1. Pacific Gas and Electric Company, San Diego Gas & Electric Company, and Southern California Edison Company shall ensure future tariff access is prohibited for contractors with violations.

39. Rulemaking 20-08-020 is closed.

This order is effective today.

Dated _____________________________, at Sacramento, California.

APPENDIX A

Virtual Net Metering Tariff Requirements
Adopted in D.08-10-036

APPENDIX A

Virtual Net Metering Tariff Requirements Adopted in D.08-10-036

- Each utility's Virtual Net Metering[1] (VNEM) tariff must comply with Public Utilities Code Section (Pub. Util. Code §) 2827 and at a minimum:
- Allow for the allocation of net energy metering benefits from a single solar energy system to all meters on an individually metered multifamily affordable housing property, without adversely impacting building tenants.
- Allow the building owner/manager to determine the percentage of solar energy credits allocated to common area meters versus individual tenant meters, and this allocation shall remain fixed for at least five years.1
- The annual solar energy credits allocated to common area and to each of the tenant meters may not exceed the associated estimated load (in kilowatt hours) for the coming year.
- The percentage of solar energy credits (in kilowatt hours) allocated to individual tenant meters should be credited across all individual meters based on the relative size of the tenant's unit. Credits (in dollars) should be applied at the otherwise applicable rate for each meter.
- The building owner/manager shall be responsible for, and shall bear all costs associated with, installing a generator output meter capable of recording solar energy system output in 15-minute increments, if required, to insure appropriate customer credits.

[1] D.08-10-036 used the term virtual net metering and the acronym VNM. For consistency throughout this decision, this Appendix uses the term virtual net energy metering and the acronym VNEM.

- Excess credits should be carried forward monthly according to standard net energy metering rules, as set forth in Pub. Util. Code §2827.
- The VNEM tariff may not apply any additional charges or administration fees on tenants who benefit from the VNEM tariff.

(END OF APPENDIX A)

APPENDIX B

Adopted Staff Proposal for
Implementation of CARB Standards

MODIFIED STAFF PROPOSAL TO IMPLEMENT NEMFC GHG EMISSION STANDARDS

BACKGROUND

Assembly Bill (AB) 1637 (Low, 2016) extended the sunset date of the net energy metering fuel cell (NEMFC) tariff from January 1, 2017, to December 31, 2021, and required the California Air Resources Board (ARB) to develop annual greenhouse gas (GHG) emission standards that all fuel cell systems taking service under the tariff must meet. The NEMFC GHG emission standards developed by ARB became effective on October 26, 2020.[1] ARB has developed standards for the years 2017 through 2025, that are shown in Table 1.[2]

Table 1: NEMFC GHG Emission Standards

Year	Average Annual GHG Emission Standards ($kgCO_2e/MWh$)
2017	409
2018	399
2019	389
2020	379
2021	365.6
2022	352.2
2023	338.8
2024	325.4
2025	312

Per the regulation, ARB will calculate annual GHG emission standards and publish them on the ARB website every three years until 2047.

Pursuant to AB 1637, the California Public Utilities Commission (CPUC) must direct the three large investor-owned utilities (i.e., Pacific Gas and Electric Company, Southern California Edison Company, and San Diego Gas & Electric Company) to implement and enforce the standards.[3]

In order for a fuel cell system to qualify for the NEMFC tariff, the statute requires that the customer-generator use a "technology the [CPUC] has determined will achieve reductions in

[1] "Fuel Cell Net Energy Metering Greenhouse Gas Emission Standards Regulation" (https://ww2.arb.ca.gov/rulemaking/2019/fuelcellnem19)

[2] Final Regulation Order:

Fuel Cell Net Energy Metering Greenhouse Gas Emission Standards Regulation (https://ww3.arb.ca.gov/regact/2019/fcnem19/fro.pdf)

[3] Pub. Util. Code § 2827.10.

emissions of greenhouse gases pursuant to [ARB's NEMFC GHG emission standards]."[4] The August 31, 2016 Assembly Floor Analysis of AB 1637 provides more context for the requirements:

For NEMFC, this bill establishes more stringent GHG standards to assure eligible projects remain cleaner than the grid each year of operation. The bill establishes a new GHG standard, established by ARB, rather than the existing [CPUC Self-Generation Incentive Program] standard, which is expected to be lower than the existing standard at the outset, and get progressively lower each year as the overall GHG emissions from the grid decrease due to implementation of [California's] Renewables Portfolio Standard, reduction of coal imports, and other factors.[5]

This staff proposal addresses Issue 5 in the Sixth Amended Scoping Memo for Rulemaking (R.)14-07-002: "Implementation of AB 1637, 2015-2016 Reg. Sess. (Ca. 2016), which requires the Commission to implement an emissions performance standard for NEM fuel cell customers, once a standard is adopted by the State Air Resources Board."[6]

The requirements of this Staff Proposal shall apply to fuel cell systems that received permission to operate from the host utility after the enactment of AB 1637 on September 26, 2016. Fuel cell systems that received permission to operate prior to that date shall not be subject to the NEMFC GHG emission standards, conduct the reporting described in this Staff Proposal, or pay the annual documentation fee introduced in this Staff Proposal.

STAFF PROPOSAL

NEMFC systems must satisfy ARB's annual GHG emission standards each year. The three large investor-owned utilities are responsible for implementing and enforcing the standards according to the framework outlined below.

Fees, Certification, and Reporting

For new systems, prior to receiving interconnection approval from the host utility, the customer-generator must pay an interconnection application fee. For new and existing systems, the customer-generator must pay an annual documentation fee.

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[4] Pub. Util. Code § 2827.10(a)(3)(A)(iii). ARB's mandate to develop of the NEMFC GHG emission standards can be found in Pub. Util. Code § 2827.10(b):

(1) Not later than March 31, 2017, the State Air Resources Board, in consultation with the Energy Commission, shall establish a schedule of annual greenhouse gas emissions reduction standards for a fuel cell electrical generation resource for purposes of clause (iii) of subparagraph (A) of paragraph (3) of subdivision (a) and shall update the schedule every three years with applicable standards for each intervening year. (2) The greenhouse gas emissions reduction standards shall ensure that each fuel cell electrical generation resource, for purposes of clause (iii) of subparagraph (A) of paragraph (3) of subdivision (a), reduces greenhouse gas emissions compared to the electrical grid resources, including renewable resources, that the fuel cell electrical generation resource displaces, accounting for both procurement and operation of the electrical grid.

[5] http://leginfo.legislature.ca.gov/faces/billAnalysisClient.xhtml?bill_id=201520160AB1637#/.

[6] http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M304/K863/304863863.PDF/.

For new systems, prior to receiving interconnection approval from the host utility, the customer-generator must certify that the NEMFC system will meet the GHG emission standard in the year that it commences operation. The customer-generator must use performance test code ASME PTC 50-2002 to determine the first-year emission rate.[7] An exception is made for NEMFC systems utilizing waste heat whose emission rate cannot feasibly be calculated using only test code ASME PTC 50-2002. A customer-generator with such a system may use equipment specification sheets to demonstrate the system's fuel input rate and net electrical power output; and for a CHP system, the useful heat rate, in the calculation of its emission rate. A customer-generator with a NEMFC system utilizing waste heat must certify any waste heat usage included in the calculation of the emission rate.

For existing NEMFC systems seeking to remain eligible for the NEMFC tariff, the customer-generator must certify with the host utility that the generator meets the then-current GHG emission standard within six months of the CPUC issuing a decision that implements the standards. The customer-generator must use performance test code ASME PTC 50-2002 or, as allowed under the circumstances described above, equipment specification sheets, to determine the first-year emission rate, which must then be adjusted by a model-specific performance degradation assumption to yield the system's emission rate in that year. The customer-generator must submit documentation on the generator's projected annual degradation rate.

Each year after the initial certification, before the anniversary of the NEMFC interconnection agreement's execution date, the customer-generator must recertify compliance with the current year's GHG emission standard according to the procedures described in the then-current Self-Generation Incentive Program (SGIP) handbook.[8] The customer-generator must submit documentation on the fuel cell system's GHG emissions based on its real-time monitoring data, using metering and monitoring equipment that complies with SGIP handbook requirements and measures net electrical output from the system, fuel input metering into the system, and for combined heat and power (CHP) technologies, and useful thermal energy delivered to the site from the CHP system. All SGIP requirements must be followed, including that system owners must install and maintain metering and monitoring equipment at their own cost, all AC electric meters must be listed on the California Energy Commission's list of Eligible System Performance and Revenue Grade Meters, and it is the responsibility of the System Owners to contract with a performance data provider. For the purpose of NEMFC compliance, the customer-generator must contract with a performance data provider for the duration the customer-generator takes service on the NEMFC tariff. Performance data providers will be tasked with recording performance data from the installed metering and monitoring equipment and submitting it to the relevant utility on a monthly basis.

As part of the annual recertification, the customer-generator must annually submit a Minimum Operating Efficiency Worksheet along with any necessary supporting documentation.[9]

<u>Optional Compliance Pathways</u>

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[7] https://www.asme.org/codes-standards/find-codes-standards/ptc-50-fuel-cell-power-systems-performance/.

[8] https://www.selfgenca.com/home/resources/#handbook

[9] An example Minimum Operating Efficiency Worksheet from the Self-Generation Incentive Program can be found at: https://www.selfgenca.com/home/resources/.

The next three sections propose methods for calculating the GHG emissions of fuel cell systems that use CHP; renewable fuels; and/or carbon capture, use, and storage (CCUS). The renewable fuel blending section also provides information on eligibility and reporting requirements for renewable fuels to qualify for use with the NEMFC tariff. A customer-generator may use multiple pathways simultaneously to calculate their fuel cell system's effective GHG emission rate for the purpose of compliance with the NEMFC GHG emission standards.

Waste Heat Utilization

Customer-generators may account for NEMFC systems' use of CHP in meeting the GHG emission standards.[10] The GHG savings from waste heat recovery are calculated by dividing the annual waste heat recovered in MMBtu by 80 percent, which represents nominal boiler efficiency, and then multiplying by the 53.07 kg CO_2e/MMBtu emission factor for the conversion of natural gas to CO_2. The net GHG output of the generator is calculated by subtracting the GHG savings due to waste heat recovery from the gross GHG output. The GHG emission rate for the generator is found by dividing the net annual GHG emission by the annual electrical output of the generator in MWh.

Renewable Fuel Blending

Customer-generators may account for NEMFC systems' use of renewable fuels in meeting the GHG emission standards. The generator's effective emission rate may be decreased to account for NEMFC-eligible (as described below) renewable fuel utilized. A customer-generator or performance data provider shall calculate the carbon intensity of renewable fuel utilized using the simplified carbon intensity calculators of the current California Greenhouse Gases, Regulated Emissions and Energy Use in Transportation (GREET) model. The NEMFC tariffs shall include a uniform set of more detailed instructions aligned with the method adopted in D.22-02-025 and approved via PG&E AL 4626-G.[11] The carbon intensity calculation basis will be changed to the modified GREET model whose use was directed in D.20-12-022, once that model is approved.

All environmental attributes associated with renewable fuels used in a NEMFC system, including Renewable Energy Credits, if any, must be obtained and exclusively owned and retained by the NEMFC customer-generator. The customer-generator must not sell, trade, or transfer any environmental attributes of the contracted fuel sources. For directed renewable fuel, the customer-generator or performance provider must provide documentation of the renewable fuel seller's contractual obligation to provide all environmental attributes to the NEMFC customer-generator, except if using renewable fuel purchased from a utility as allowed below.

For onsite renewable fuel, which includes fuel delivered to the generating facility through a dedicated pipeline, all customer-generators must install a fuel metering system that reports use of both renewable and non-renewable fuel. The customer-generator must provide the utility with the make, model, specifications, and serial numbers of installed revenue grade gas meters. The customer-generator must contract with a performance data provider, and the performance data

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[10] As part of ARB's Distributed Generation (DG) Certification Program, CHP fuel cells must meet a minimum efficiency of 60 percent at 100 percent load. More information can be found at: https://ww2.arb.ca.gov/our-work/programs/distributed-generation-certification-program/.

[11] https://www.pge.com/tariffs/assets/pdf/adviceletter/GAS_4626-G.pdf

provider must submit both renewable and non-renewable fuel data to the utility on a monthly basis. NEMFC systems using onsite renewable fuels must comply with any applicable requirements of Pub. Util. Code § 651 (b)(3)(B) and the SGIP for directed renewable fuel.

For directed renewable fuel, the renewable fuel must be injected into a common carrier pipeline system in alignment with the requirements in Pub. Util. Code § 651 (b)(3)(B) and the SGIP.[12] The customer-generator or performance data provider must provide the utility with monthly data on the amount of directed renewable fuel consumed on a monthly basis. The customer-generator or performance data provider must provide the source, path, and destination of the renewable fuel. Data reporting will commence one month after directed renewable fuel use begins. The customer-generator or performance data provider must provide the following information and documentation to the utility on a monthly basis:

1) Transportation Path and Energy Accounting: The customer-generator or performance data provider must upload invoices reporting the amount of renewable fuel that appears on the Directed Renewable Fuel Verification Form. Invoices and other supporting documentation must include:
    - Documentation from the source showing the amount of directed biogas moved into the pipeline. The documentation must identify any non-renewable gas added at the source.
    - Documentation from the gas transmission system showing:
        - Receipt of directed biogas from source, storage, or other pipelines;
        - Pipeline losses or fees paid in gas not carried over;
        - Positive or negative imbalances carried over; and
        - Delivery of directed biogas to either another pipeline, storage facility, or California utility receipt point.

2) Gas Fuel Consumption: The customer-generator or performance data provider must provide gas fuel consumption documentation from the gas utility matching the directed renewable fuel receipts reporting the metered total energy input to the generator. The customer-generator or performance data provider must report utility gas fuel consumption receipts on a monthly basis. It is the responsibility of the customer-generator or performance data provider to supply the renewable fuel use documentation and to ensure that the renewable fuel is reported to the utility on a monthly basis.

Alternatively, a bundled core customer-generator can demonstrate compliance through use of eligible utility-supplied renewable natural gas (RNG) supplied to all bundled core gas customers and/or through participation in a voluntary tariff program that allows the customer-generator to offset fossil natural gas consumption with RNG through a special billing arrangement. Utility-supplied RNG will be considered eligible for GHG emissions reductions in NEMFC if it complies with all requirements in Pub. Util. Code § 651 (b)(3)(B) and the SGIP, but the environmental attributes of this RNG will remain with the utility. While no voluntary RNG tariff currently exists, Southern California Gas Company (SoCalGas) has proposed a voluntary RNG tariff pilot program

[12] This requirement applies to all renewable fuels although PU Code § 651 (b)(3)(B) applies only to biomethane.

for nonresidential customers.[13] No other gas utility is currently proposing the creation of such a program. On December 17, 2020, the CPUC voted to adopt D.20-12-022 and allow SoCalGas and SDG&E to offer a modified voluntary pilot RNG tariff program that incorporates biomethane procurement targets that are in line with SB 1440. Under the terms of the adopted pilot program, a non-residential customer-generator in the participating IOUs' service territories could pay extra to purchase 100 percent RNG in a manner akin to the Green Tariff/Shared Renewables Program (GTSR) for electricity. Participation in the pilot RNG tariff program would qualify a customer-generator for NEMFC eligibility and shift the onus for RNG verification onto the IOU responsible for ensuring RNG procurement on behalf of the customer-generator.

Carbon Capture, Use, and Storage

CCUS is not currently allowed for compliance with the NEMFC GHG emission standards. A customer-generator may notify the relevant utility if desiring to perform CCUS in compliance with ARB's carbon capture and storage protocol. Then, within 12 months of such notice, the utility shall submit an advice letter to the CPUC proposing rules for the use of CCUS in NEMFC GHG emissions calculations.

Verification and Penalties

The utility will use the Minimum Operating Efficiency Worksheet, Directed Renewable Fuel Verification Form, supporting documentation, and monthly data to evaluate a generator's technical ability to meet the NEMFC GHG emission standards. The worksheet will also allow the utility to verify any adjustments made for CHP, renewable fuel utilization, and/or CCUS. Also, the utility will conduct an annual audit of the renewable fuel invoices for the life of any renewable fuel contract to verify renewable fuel consumption. Finally, the utilities may reserve the right to conduct field inspections to verify compliance with the standard.

Following any utility discovery of a lack of system compliance with either the NEMFC GHG emission standards, the utility will allow a six-month window in which to come into compliance. If the customer-generator fails to bring the NEMFC system into compliance within six months, the interconnection agreement will be terminated and the system will be served under a Rule 21 non-export agreement.

The utilities will conduct random no-warning spot-checks of directed renewable fuel sources and 30-day warnings in the case of noncompliance with the requirements described above, similarly to these practices in SGIP. If NEMFC compliance does not occur within 30 days, and if recalculation of the fuel cell system's greenhouse gas emissions without the purported renewable fuel results in the system emitting more than ARB's GHG emission standards, the interconnection agreement will be terminated and the system will be served under a Rule 21 non-export agreement.

[13] https://tariff.socalgas.com/regulatory/tariffs/tm2/pdf/submittals/GAS_6025.pdf

(END OF APPENDIX B)