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PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

#14918
ENERGY DIVISION

Agenda ID
RESOLUTION E-4792
June 23, 2016

R E S O L U T I O N

Resolution E-4792. Adoption of PG&E's, SCE's and SDG&E's Net Energy Metering (NEM) successor tariffs as directed by Decision 16-01-044.

PROPOSED OUTCOME:

- Pacific Gas and Electric Company, Southern California Edison, and San Diego Gas and Electric Company's NEM successor tariffs and changes to related tariffs are approved with modification.

SAFETY CONSIDERATIONS:

- D.16-01-044 adopted provisions that generating systems interconnecting under the NEM successor tariff must have warranties of at least 10 years on all equipment and installation and that all major solar system components are on the verified equipment list maintained by the California Energy Commission. The proposed tariffs implement these requirements.

ESTIMATED COST:

- This resolution does not approve any additional costs by Pacific Gas & Electric Company (PG&E) AL 4802-E/A, Southern California Edison Company (SCE) AL 3371-E and San Diego Gas & Electric Company (SDG&E) AL 2860-E/A (collectively, NEM successor tariff ALs), filed on February 29, 2016.
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SUMMARY

Pacific Gas and Electric Company, Southern California Edison, and San Diego Gas and Electric Company's NEM Successor Tariffs are approved with modification.

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

The IOUs' proposed tariffs implement D.16-01-044 by proposing standard interconnection fees for systems under 1 MW, methodologies for assessing nonbypassable charges (NBCs) on each kWh consumed from the grid in each metered interval, application of residential time of use (TOU) rate requirements, application of warranty and equipment safety requirements and other provisions required by the Decision.

This resolution approves the IOUs' ALs with modification. These modifications include:

- Applicability of the TOU requirement to customers with no available TOU rate
- Applicability of the 20-year duration of service
- Assessment of NBCs on customers under a Multiple Tariff Generating Facility arrangement
- Methodology for calculating NBCs
- Applicability of the exemption to the Cost Responsibility Surcharge on departing load for systems over 1 MW in size.

We require PG&E, SCE and SDG&E to each to file a supplemental advice filing updating their respective NEM successor tariffs, and other relevant tariffs, in accordance with this Resolution no later than 10 days after the effective date of this Resolution.

BACKGROUND

The NEM program was established in 1995 by Senate Bill (SB) 656 (Alquist) and codified in Section 2827 of the Public Utilities Code. NEM allows customers with eligible renewable generation facilities installed behind their meters to serve all or a portion of customers onsite electricity needs to receive a financial credit on their electric bill for power generated by their system that is fed back to the utility. The legislature has modified the statute several times since 1995.

On October 7, 2013, Assembly Bill (AB) 327 (Perea) was signed into law and codified in Public Utilities Code Section 2827.1. AB 327 directed the Commission to, among other things, adopt a successor tariff program to the existing NEM program that would go into effect once each investor owned utility (IOU) reached its 5% NEM cap, or July 1, 2017, whichever occurred first.

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

The Commission opened Rulemaking (R.) 14-07-002 to design and implement the successor tariff. On January 28, 2016, pursuant to AB 327, the Commission adopted D.16-01-044, which created a NEM successor tariff program to the existing NEM program. That Decision directed the IOUs to file Tier 2 Advice Letters with their respective NEM successor tariffs, including net metering aggregation, and virtual net metering tariffs, in accordance with every requirement of the decision.¹

On February 29, 2016, PG&E filed AL 4802-E, SCE filed AL 3371-E and SDG&E filed AL 2860-E. On March 15, 2016 SDG&E filed supplemental AL 2860-E-A providing an illustrative example of its proposed methodology for calculating NBCs and clarifying that NEM successor tariff customers with systems up to 1 MW would be exempt from paying the Cost Responsibility Surcharge on departing load. On May 16, 2016, PG&E filed supplemental AL 4802-E-A confirming the amount of their proposed interconnection fee, making several modifications in response to protests and requests from the Governor's Office of Planning and Research, and adding other clarifying language.

NOTICE

PG&E, SCE and SDG&E state that copies of PG&E AL 4802-E and AL 4802-E-A, SCE AL 3371-E, and SDG&E AL 2860-E and AL 2860-E-A were mailed and distributed in accordance with Section 4 of General Order 96-B.

PROTESTS

Three parties filed timely protests to one or all of the IOUs' ALs. On March 2, 2016, Dennis Emberling filed a protest to SCE's AL 3371-E. On March 21, 2016, the Solar Energy Industries Association (SEIA), the California Solar Energy Industries Association (CALSEIA), The Alliance for Solar Choice (TASC) and Vote Solar (collectively the Joint Solar Parties) filed protests to each of the IOUs' ALs. On March 21, 2016, the California Farm Bureau Federation (Farm Bureau) filed one protest to all three IOU ALs. PG&E, SCE and SDG&E all replied to parties' protests on March 28, 2016.

DISCUSSION

¹ See D.16-01-44, Ordering Paragraph 1 at 119.

There were a number of elements of each IOUs' proposed tariffs implementing the Decision that were either protested or we deem require additional guidance. These topics include:

- Compliance with D.16-01-044
- Assessing Nonbypassable Charges (NBCs) under Virtual Net Energy Metering (VNM) and Net Energy Metering Aggregation (NEMA)
- PG&E's Proposed Applicability of VNM
- Interconnection Fee Invoicing
- Eligibility of Residential Customers with no Available TOU Rate
- Clarification of the Applicability of the 20 Year Duration of the NEM Successor Tariff
- Tariff Effective Date
- Assessment of NBCs in Multiple Tariff Generating Facility Arrangements
- Calculating and Billing NBCs
- Application of Exemptions from Cost Responsibility Surcharge (CRS) on Departing Load to NEM Successor Tariff Customers

Each topic is addressed in detail in this section.

Compliance with D.16-01-044

D.16-01-044 requires the IOUs to each file a Tier 2 Advice Letter with its respective NEM successor tariff, in accordance with all requirements of the Decision, not later than 30 days after the effective date of the Decision. The Decision requires the NEM successor tariffs to:

- Set an interconnection fee for systems less than 1 MW in size, based on the actual costs reported in their respective June 2015 ALs, filed in compliance with D.14-05-033 and Resolution E-4610.
- Take into account the special requirements for California Department of Corrections and Rehabilitation facilities and Armed Forces bases and facilities.
- Ensure that all residential customers take service on an available TOU rate, with a limited exception for certain SDG&E customers.

- Allow all residential customers taking service under the NEM successor tariff prior to the date that default residential TOU rates take effect to maintain their TOU rate at the time of interconnection for up to five years.
- Require all applicants to verify that their systems meet the warranty and equipment requirements of the Decision.

We find that the IOUs' ALs comply with the requirements of the Decision except for certain issues related to the applicability of the TOU requirement to customers with no available TOU rate, the applicability of the 20-year duration of service, assessment of NBCs on customers under a Multiple Tariff Generating Facility arrangement, methodology for calculating NBCs, and the applicability of the exemption to the Cost Responsibility Surcharge on departing load for systems over 1 MW in size. Each of these issues and required tariff modifications are addressed in detail below.

Adopting a New Methodology for Assessing Nonbypassable Charges (NBCs) under Virtual Net Energy Metering (VNM) and Net Energy Metering Aggregation (NEMA) is a Complex Issue that Requires Further Vetting

D.16-01-044 requires that NEM successor tariff customers pay NBCs on each kilowatt hour (kWh) consumed from the grid in each metered interval, but does not direct NBCs to be assessed on generation produced and consumed onsite.² The Decision recognizes that customers who take service under VNM or NEMA arrangements are in a unique situation with regard to this new requirement because benefiting accounts do not have the ability to offset their consumption of energy from the grid with onsite generation.³ On the other hand, when customers under the standard NEM successor tariff generate power contemporaneously with their consumption, they reduce the NBCs that they owe. The Decision directs the IOUs to "clearly explain the method for allocating generation to each benefiting account (for VNM) or aggregated account (under NEMA) in each interval for purposes of assessing NEM successor tariff nonbypassable charges under VNM and NEMA..." in their implementing Advice Letters.⁴

PG&E's, SCE's and SDG&E's tariffs all indicate that they will assess NBCs on each kWh consumed from the grid, with no specific modifications for VNM or NEMA customers. Both the Joint Solar Parties' and the Farm Bureau's protests contend that, in order for

² D.16-01-044 Conclusion of Law 4.

³ D.16-01-044 at page 91.

⁴ D.16-01-044 at page 91.

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

NEMA and VNM customers⁵ to be subject to the same requirements as systems under the standard successor tariff⁶, the methodology for billing NBCs must be adjusted to account for the unique structures of the arrangements. The Farm Bureau argues that, for the purposes of assessing NBCs, a methodology should be adopted that allows aggregated meters under NEMA to be treated as connected in some manner for the purposes of assessing NBCs on consumption from the grid. The Joint Solar Parties' agree, arguing that NBCs should be calculated based on net consumption across all aggregated meters in each metered interval for NEMA customers and that VNM customers should not be required to pay NBCs "for energy virtually consumed on site."⁷

PG&E, SCE and SDG&E each address the protests on this issue in their replies. The IOUs' contend that their proposed tariffs comply with the Decision by stating that they subject VNM and NEMA customers to the same requirements as other NEM successor tariff customers by assessing NBCs on all kWhs consumed from the grid. SCE and SDG&E argue that the Decision does not direct the IOUs to create a methodology that allows for virtual allocations of behind the meter consumption and that this would be inconsistent with the Decision's direction to treat VNM and NEMA customers the same as other NEM successor tariff customers with respect to NBCs.

We find that the IOUs' tariffs comply with the direction in the Decision on treatment of VNM and NEMA customers with respect to assessment of NBCs and approve the tariff language as written.

We also find that adopting a new methodology for assessing NBCs under VNM and NEMA arrangements is a complex issue that requires further vetting that is beyond the scope of this Advice Letter process.

We do, however, note that there are other procedural options including, but not limited to, filing a Petition for Modification of the Decision, available to parties that contend

⁵ The Farm Bureau focuses only on NEMA while the Joint Solar Parties' protest address both types of customers.

⁶ D.16-01-044 at page 88 states that "VNM systems should be subject to the same requirements regarding nonbypassable charges and interconnection costs as systems under the standard successor tariff." And on page 89 states that "NEMA systems should be subject to the same requirements regarding nonbypassable charges and interconnection costs as systems under the standard successor tariff."

⁷ Joint Solar Parties' Protests to PG&E AL 4802-E at page 3; to SCE AL-3371-E at page 3; to SDG&E AL 2860-E at page 3.

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

that the methodology for assessing NBCs on VNM and NEMA customers should be amended.

Applicability of VNM Tariffs

D.16-01-044 continues the VNM tariff under the NEM successor tariff and expands VNM to allow multiple service delivery points at a single site.⁸ This change aligns the VNM tariff with the MASH VNM tariff, which has allowed multiple service delivery points at a single multifamily affordable housing property since its adoption. Because participation in VNM is no longer restricted to a single service delivery point under the NEM successor tariff, all three IOUs incorporated a definition of “Property” or “Premises” in order to establish the physical limitations of a single VNM arrangement.

In their protest to PG&E’s AL, the Joint Solar Parties request that PG&E amend its definition of “Premises” used to determine applicability of its VNM successor tariff. PG&E’s original AL 4802-E limited eligibility for its VNM tariff to an installation on a single Premises as defined in Electric Rule 1.⁹ The Joint Solar Parties point out that the use of this definition would exclude residential complexes that are intersected by a street (or streets) but are located on a single property. In its reply to Protests, PG&E argued that its use of the Rule 1 definition of “Premises” complies with the Decision because it does not limit applicability of the tariff to a single service delivery point. PG&E also explained that its intent behind using an established definition of “Premises” was to avoid establishing a new definition or set of criteria. However, in its supplemental filing, AL 4802-E-A on May 16, 2016, PG&E amended the applicability of its VNM tariff to an installation on a single “Property,” using a definition consistent with SCE’s tariff.¹⁰

⁸ D.16-01-044 at page 99.

⁹ This definition of “Premises” is “All of the real property and apparatus employed in a single enterprise on an integral parcel of land undivided, excepting in the case of industrial, agricultural, oil field, resort enterprises, and public or quasi-public institutions, by a dedicated street, highway or public thoroughfare or railway. Automobile parking lots constituting a part of and adjacent to a single enterprise may be separated by an alley from the remainder of the Premises served.”

¹⁰ The definition of “Property” proposed in PG&E’s supplemental AL is: “A Property is defined as: A cluster of multi-tenant and multi-meter buildings, facilities or structures that are under the control of a single Owner or Operator built to serve a common function, such as a housing complex or a multi-tenant complex, on an integral parcel of land undivided, unless the division is a street, highway, or similar public thoroughfare, which is permissible provided no other unrelated Single Enterprises (defined as a separate business or other individual activity carried on by a customer but does not apply to associations or combinations of customers) break up the otherwise integral parcel and cluster of multi-tenant and multi-meter buildings, facilities or structures.”

Because PG&E has updated the applicability of its VNM tariff to include residential complexes that have streets running through them, we find that the Joint Solar Parties protest on the use of the term “premise” to establish the physical limitations of a single VNM arrangement is now moot.

Interconnection Fee Invoicing

D.16-01-044 requires NEM successor tariff customers with systems smaller than 1 MW to pay a one-time reasonable, standardized interconnection fee based on the IOUs' interconnection costs.¹¹ In their protests to all three IOU ALs, the Joint Solar Parties request confirmation that payment of the interconnection fee will be accepted from either the customer or contractor and that this be explicitly stated in the IOUs' tariffs. In their replies to protests, PG&E, SCE and SDG&E all confirm that they will accept payment of the interconnection fee from either the contractor or customer.

The Joint Solar Parties also contend that the IOUs should make electronic payment of the interconnection fee available, arguing that mailing paper checks will slow interconnection and is not a reasonable process. The Joint Solar Parties state that establishing an option to bill contractors monthly for all their interconnection fees or keeping a contractor credit card on file for automatic payment would be preferable but that, at minimum, an electronic payment method should be available. In their replies to protests, PG&E and SDG&E both state that they have begun exploring ways to accept electronic payments. SCE states that it is “working to determine the most efficient and cost-effective means of collecting the new interconnection fee...” and “will almost certainly offer some type of electronic payment.”¹² SCE opposes instituting a prescriptive requirement but is open to suggestions from the solar industry and other stakeholders.

While we note that while all three IOUs have confirmed that interconnection fee payment will be accepted from both contractors and customers, we do agree with SCE that it is unnecessary to include this implementation detail in the IOUs' tariffs.

In response to Energy Division data requests, PG&E estimates that it will make an electronic payment method available to customers in October 2016, SCE estimates a target date of April 2017 and SDG&E expects to begin accepting electronic payments by

¹¹ As reported in each IOUs' June 2015 Advice Letter, filed in accordance with D.14-05-033 and Res. E-4610.

¹² Reply of SCE to Parties' Protests of AL 3371-E at page 7.

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

the end of July 2016.¹³ Given that the target dates for each IOU roughly coincide with the time periods they are likely to reach their Section 2827 NEM program limits and begin offering the NEM Successor Tariff, we find the projected dates to be reasonable. We agree with the Joint Solar Parties that the IOUs should make electronic payment of the interconnection fee available to NEM applicants and find that the additional information the IOUs provided in their replies to protests is sufficient to address the request.

Residential Customers with no Available Time-of-Use (TOU) Rate Should be Granted a Limited Exemption to the NEM Successor Tariff's Requirement to Take Service on a TOU Rate

D.16-01-044 requires all residential NEM successor tariff customers to take service on any available TOU rate, with a limited exception for certain SDG&E residential customers.¹⁴ In their ALs, PG&E and SCE both raise the issue that a limited number of residential customers, primarily master-metered properties, do not currently have a TOU rate schedule available to them. PG&E proposes to allow for a limited exception to the TOU requirements for these customers. Conversely, SCE states in their AL that, because the Decision does not allow for an exception, customers who do not have a TOU rate option will not be eligible for the NEM successor tariff. SDG&E does not specifically address this issue.

In their protest to SCE's AL, the Joint Solar Parties request clarification that properties with sub-metered service behind a master meter that is on a TOU rate would satisfy the NEM successor tariff's TOU requirement, even though the individually sub-metered tenants are not on a utility TOU rate. In its reply to protests, SCE agrees that master-metered customers who are able to take service under a TOU rate would be eligible for the NEM successor tariff. That said, SCE points out that there are master-metered properties where the master-meter account does not have a TOU rate option available

¹³ All three IOUs state that these estimated dates are based on current project schedules and are subject to change.

¹⁴ D.16-01-044 allows SDG&E residential customers who complete their interconnection application prior to 120 days after the effective date of the new residential TOU rates adopted in Phase 2 of SDG&E's GRC, A.15-04-012, to take service under the NEM successor tariff while still on tiered rates, with the option to stay on the tiered rate for up to five years.

to it. SCE also clarifies that sub-metered tenants of a master-metered property are not utility customers and that its only relationship is with the master-meter account.

SCE is correct in stating that sub-metered tenants of a master-metered property are not utility customers and are therefore not eligible to individually participate in NEM. The question is not whether a property's sub-metered tenants must be on a TOU rate in order to be eligible for the NEM successor tariff. Rather, the question is whether customers (including master-metered accounts) that do not have a TOU rate available to them are eligible for the NEM successor tariff.

The Decision does not explicitly address how customers who do not have a TOU rate available to them should be treated.

We find that PG&E's proposal to allow residential customers who do not have the option to take service on a TOU rate to interconnect under the NEM successor tariff on their existing rate schedule is a reasonable approach to addressing this issue.

We therefore direct all three IOUs to allow residential customers who do not have the option to take service on a TOU rate to interconnect under the NEM successor tariff on their existing rate schedule, or another rate schedule available to them. This exemption to the TOU requirement is applicable only to the limited number of customers who do not have a TOU rate available to them. If a TOU rate becomes available to customers after they take service under the NEM successor tariff, they will be given the option to remain on their tiered rate for up to five years from the date of interconnection, after which time they will be required to take service on an available TOU rate. This approach is consistent with the Decision's directive to allow SDG&E residential customers who take service under the NEM successor tariff prior to 120 days after SDG&E's new residential TOU rates are effective to remain on a tiered rate for up to five years.¹⁵

20 Year Duration of Service

D.16-01-044 establishes that NEM successor tariff customers will be eligible to continue service under the tariff for 20 years from their date of interconnection, consistent with

¹⁵ D.16-01-044 at page 93.

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

the time period adopted in D.14-03-041,¹⁶ stating that “This decision should be applied to customers under the NEM successor tariff as well.”¹⁷

In their protest to PG&E’s and SDG&E’s ALs, the Joint Solar Parties request that both IOUs add language to their tariffs clarifying the 20-year duration of the NEM successor tariff and its applicability in the event of system modification, ownership transfer and paired energy storage. The Joint Solar Parties point to the language used in SCE’s proposed NEM successor tariff¹⁸ and request that this approach be incorporated into PG&E and SDG&E’s tariffs. In its response to protests, PG&E agreed to include the provisions for modification, ownership transfer and/or paired energy storage consistent with D.14-03-041 in its NEM2, NEM2V and NEM2VMASH tariffs. These additions were made via PG&E’s supplemental filing, AL 4802-E-A on May 16, 2016.

We find it reasonable and appropriate for all three IOUs to include language in their tariffs clarifying the 20-year duration of the NEM successor tariff and its applicability in the event of system modification, ownership transfer and paired energy storage.

Therefore, SDG&E shall also modify its relevant tariffs to specifically include the language from SCE’s tariff on the applicability of the 20-year duration in the event of system modification, ownership transfer and paired energy storage consistent with D.14-03-041.

Tariff Effective Date

PG&E and SCE both request that their ALs implementing the NEM Successor Tariffs become effective when the NEM program limit in each of their service territories is reached, or July 1, 2017, whichever is earlier. SDG&E requests that its AL become effective on March 30, 2016.

In their protests to PG&E and SCE’s ALs, the Joint Solar Parties request that the ALs take effect immediately after approval, arguing that this is consistent with a Tier 2 AL pursuant to General Order 96-B. The Joint Solar Parties contend that customers who are not eligible under the existing NEM tariff, but will be eligible to take service under the NEM successor tariff (such as systems larger than 1 MW), should be able to interconnect

¹⁶ D.14-03-041 establishes a transition period for customers enrolled in the Section 2827 NEM tariff.

¹⁷ D.16-04-044 at page 100.

¹⁸ SCE NEM-ST Sheets 26-27.

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

under the NEM successor tariff immediately and should not have to wait until the NEM program limit is reached in each IOU service territory.

In their replies to protests PG&E and SCE both argue that the effective date of their tariffs must be consistent with statute, which states that the tariffs should be made available when the utility has reached its NEM program limit, or July 1, 2017, whichever is earlier. Both PG&E and SCE point to the effective date of the NEM Successor Tariff identified in PU Code Section 2827.1(c) which states:

“Beginning July 1, 2017, or when ordered to do so by the commission because the large electrical corporation has reached its capacity limitation of subparagraph (B) of paragraph (4) of subdivision (c) of Section 2827, all new eligible customer-generators shall be subject to the standard contract or tariff developed by the commission and any rules, terms, and rates developed pursuant to subdivision (b).”

We find that PG&E and SCE’s NEM successor tariff effective dates are consistent with statutory directive and that each IOU’s NEM successor tariff shall take effect when the NEM program limit in each of their service territories is reached, or July 1, 2017, whichever is earlier.

Assessment of NBCs in Multiple Tariff Generating Facility Arrangements

The Multiple Tariff Generating Facility arrangement under both the existing NEM tariff and the NEM successor tariff allows a customer to interconnect multiple onsite generators that are served by different tariffs (i.e. standard NEM, NEM Fuel Cell, non-NEM eligible, etc) under one account. D.16-01-044 does not specifically address how the multiple tariff facilities should be treated under the NEM successor tariff. However, PG&E, SCE and SDG&E all propose to continue to offer this option.

In their protests to PG&E’s and SCE’s ALs, the Joint Solar Parties request that the utilities modify their tariffs to account for a customer who interconnects one or more generators under the existing NEM tariff and one or more generators under the NEM successor tariff. The Joint Solar Parties argue that, in order to ensure that generators that have interconnected under the existing NEM tariff are not charged NBCs on total consumption from the grid, the IOUs should modify their tariffs so that consumption from the grid is proportionally assigned to each type of generator under the arrangement.

In their replies to protests, PG&E and SCE state that allowing these customers to pay NBCs on a proportional allocation of imports is inconsistent with the Decision's directive to assess NBCs on a NEM successor tariff customer's total consumption from the grid in each metered interval. PG&E and SCE argue that a customer's usage is not directly linked to system generation and that customers with a generator that takes service under the NEM successor tariff under a Multiple Tariff Generating Facility arrangement should be assessed NBCs on their total consumption from the grid in each metered interval.

SDG&E responded to an Energy Division data request for clarification on its proposed methodology for assessing NBCs when a customer under a Multiple Tariff Generating Facility arrangement has generators taking service under both the existing NEM tariff and the NEM successor tariff. SDG&E proposes to prorate NBCs based on the generators' proportional nameplate capacity. This methodology allows customers to pay NBCs only on the proportion of total consumption in each metered interval associated with generators taking service under the NEM successor tariff.

We find that SDG&E's proposal for allocating NBCs proportionally, based on the generator's nameplate capacity, is a reasonable approach for assessing NBCs for Multiple Tariff Generating Facility arrangements. We therefore direct all three IOUs to prorate NBCs based on the generators' proportional nameplate capacity when a customer has one or more generators taking service under the existing NEM tariff and one or more generators taking service under the NEM successor tariff in a Multiple Tariff Generating Facility arrangement.

Calculating and Billing Nonbypassable Charges

D.16-01-044 requires NEM successor tariff customers to "pay all nonbypassable charges identified in this decision in each metered interval for each kWh they consume from the grid."¹⁹ The IOUs' ALs and parties' protests raised several important issues related to how NBCs will be calculated and billed under the NEM successor tariff. Each issue is discussed individually below.

¹⁹ D.16-01-044 Conclusion of Law 4.

Basis for NBC Calculation

The IOUs explain that NEM customers have meters capable of separately measuring imports from the grid (typically referred to as “Channel 1” or “Channel A” on the meter) and exports to the grid (typically referred to as “Channel 2” or “Channel B” on the meter). The IOUs propose to base the calculation of the NBCs on all Channel 1 metered imports. The IOUs’ proposed methodology would not allow for netting of “Channel 1” imports and “Channel 2” exports within each metered interval²⁰ for the purposes of calculating NBCs.

No parties protested this proposed methodology. However, in their protests to PG&E’s, SCE’s and SDG&E’s ALs, the Joint Solar Parties request that the IOUs’ tariffs specify that the metered interval used as the basis for assessing NBCs for all residential customers be no less than hourly. The Joint Solar Parties argue that it is necessary to have certainty that all residential customers will be assessed NBCs based on an hourly interval in order to ensure that solar providers can use the same interval to estimate project economics for all residential customers.

In their responses to protests, PG&E, SCE and SDG&E all argue that NEM successor tariff customers should be billed at the interval in which they are metered based on their applicable rate schedule and should not be modified to guarantee that all residential customers will be billed at an hourly interval. SDG&E specifically pointed out that if NBCs are based on the total “Channel 1” imports, the interval length does not affect the calculation of NBCs.

The IOUs’ interpretation of the Decision’s directive regarding calculation of NBCs focuses on the language stating that customers should “pay nonbypassable charges on each kWh of electricity they consume from the grid.” The full Decision directive, however, is “pay nonbypassable charges on each kWh of electricity they consume from the grid in each metered interval.”²¹ The length of a metered interval is only relevant if the NBC calculation is based on the kWh netted within each time interval. By basing the calculation of NBCs on “Channel 1” imports, the phrase “in each metered interval”

²⁰ The metered interval is the time period over which energy data is measured. Residential metered intervals are typically one hour; non-residential are typically 15 minutes.

²¹ D.16-01-044 at page 89.

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

is rendered meaningless. Under the existing NEM tariff, kWhs are netted on a monthly basis. The Decision directs NBCs to instead be assessed based on the metered interval.²²

We find that the IOUs' proposed calculation for assessing customer NBC charges is not consistent with the Decision.

We find that the Decision directive to base the calculation on the metered interval should be interpreted to mean that imports and exports to the grid shall be netted within the metered interval and NBCs should only be charged on the net import from the grid in the metered interval.

Therefore, the IOUs shall assess NBCs only on the kWhs consumed in each metered interval net of exports under the NEM successor tariff. An illustrative example of the basis for the NBC calculation is provided in Attachment A.

We also find that the IOUs' proposed approach to bill customers based on the metered interval of their otherwise applicable rate schedule is reasonable and reject the Joint Solar Parties' request to guarantee that all residential customers will be billed NBCs at an hourly interval. The IOUs shall assess NBCs on all NEM successor tariff customers based on the metered interval associated with their applicable rate schedule.

Applicability of NBC Credits

In its AL, SCE proposes to bill the total NBCs owed by a customer as a separate line item and remove NBCs from the retail rate used to calculate NEM charges when a customer is a net importer of energy and NEM credits when a customer is a net exporter of energy. In his protest to SCE's AL, Mr. Emberling contends that removing NBCs from the export credit is not consistent with Decision directive, arguing that the Decision directs NBCs to be assessed on kWhs consumed from the grid but does not direct changes to the export compensation rate. Mr. Emberling presents a suggested formula for calculating a customer's charges or credits under the NEM successor tariff²³ and also identifies rounding errors in SCE's illustrative example.

²² D.16-01-044 at page 3 states "Require customers on the NEM successor tariff to pay nonbypassable charges that are levied on each kilowatt-hour (kWh) of electricity the customer obtains from the IOU in each metered time interval, regardless of the monthly netting of the kWh obtained from the IOU and exported to the grid by the customers."

²³ Mr. Emberling's suggested formula is Charge/Credit = (Full Retail Rate * Net of Exports & Imports) - [NBC Rate * minimum (Imports, Exports)]; Dennis Emberling Protest to SCE AL 3371-E at page 3.

SCE responded to this issue in its reply, arguing that its proposed approach allows for collection of NBCs on the total amount of electricity a customer consumes from the grid and avoids both double counting and netting of NBCs. SCE states that Mr. Emberling's formula would allow customers to effectively offset a portion of the NBCs owed on energy imported from the grid and should be rejected. SCE also clarifies that the calculations shown in its AL were illustrative only, using only two decimal points, and asserts that its formula does not produce rounding errors when the rate is calculated at five decimal points as dictated by SCE's rate schedules.

We find that SCE's interpretation and implementation of D.16-01-044 directive with regard to applicability of NBCs is reasonable and complies with the Decision.

While D.16-01-044 does not explicitly direct changes to the export compensation rate, if NEM credits for exported energy were to be calculated at the full retail rate, inclusive of NBCs, this would effectively allow customers to offset a portion of the NBCs owed on their consumption of energy from the grid in each metered interval.

Because D.16-01-044's intent is to better align the responsibilities of NEM successor tariff customers with those of others in their customer class²⁴, NBCs for energy consumed from the grid cannot be offset by NBC credits for exports. We therefore reject Mr. Emberling's protest on this issue.

Billing Presentment of NBCs

In their protests to both PG&E's and SDG&E's ALs, the Joint Solar Parties request that the IOUs present NBCs on a customer's bill as an additional line item, "consistent with the position taken in their comments on the Proposed Decision in R.14-07-002."²⁵ In those comments, the Joint Solar Parties proposed that NEM successor tariff customers continue paying NBCs as part of their bundled rate on net consumption and that a separate line item charge with the additional NBCs owed by the customer (based on the difference between the customer's total metered consumption and net usage) be added to the bill.²⁶ The Joint Solar Parties argue that presenting NBCs in this manner will allow customers to continue being charged the same rate for net imports as they are

²⁴ D.16-01-044 Conclusion of Law 4.

²⁵ Joint Solar Parties' Protest to SDG&E AL 2860-E at page 4; Joint Solar Parties' Protest to PG&E AL 4802-E at page 4.

²⁶ Joint Solar Parties Comments in R.14-07-002 on the Proposed Decision Adopting Successor to NEM Tariff at page 10.

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

credited for net exports and is a transparent method of assessing the additional NBCs directed by the Decision.

The Joint Solar Parties specifically point to SCE's AL as supporting their position. However, it appears that what the Joint Solar Parties are apparently requesting is different from SCE's proposed bill presentment. According to its AL, SCE proposes to base its separate NBC line item on the total amount of NBCs owed for each billing period, calculated by multiplying the NBC components of the customer's rate by the total kWh imported, registered on Channel 1 of the customer's meter. In order to avoid double charging, under this proposal NBCs would be removed from the retail rate used to calculate net charges and credits.

In their responses to protests, both PG&E and SDG&E state that they intend to present NBCs as a separate line item, however they proposed different approaches. Similar to SCE, PG&E intends to present the total NBCs owed as a separate line item on a customer's bill. SDG&E proposes to continue billing the NBCs on monthly net consumption as part of the customer's bundled rate and present only the additional NBCs that a customer owes as a separate line item on the bill.

SCE and SDG&E responded to an Energy Division data request regarding timing and costs to implement standardized billing presentation of NBC charges. SDG&E estimates that it would cost \$2 million and cause an implementation delay of six months to a year if it were required to adjust its proposed billing presentment. SCE was not able to provide a specific number but estimates that the costs of adjusting its proposed billing presentment would be significant. SCE also states that the challenges of changing its billing system would delay its ability to implement the NEM successor tariff in its territory. Due to the time and cost constraints that would be required for the IOUs to adjust their billing systems for standardized presentation, we decline to mandate a specific bill presentment for the NEM successor tariff at this time. However, the Commission may want to address bill presentment when implementing marketing and outreach (M&O) issues as part of Phase 2 of R.14-07-002.

In his protest of SCE's AL, Mr. Emberling argues that SCE's proposal to charge the total amount of NBCs a NEM successor customer owes as a separate line item, payable monthly, is not consistent with the Decision and that NBCs should be included in a customer's annual aggregated charges and credits. In its reply to protests, SCE

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

contends that billing NBCs monthly is appropriate because these charges are no longer subject to the true ups of energy charges and credits at the end of the relevant billing period. Additionally, the Joint Solar Parties do generally support a separate line item separately identifying NBCs. Based on SCE's response, and our clarification earlier in this resolution that NBCs cannot be offset by NEM credits, we reject Mr. Emberling's protest on this issue.

Additional Billing Information Requested

In his protest to SCE's AL, Mr. Emberling identifies specific pieces of data for each metered interval that he requests be made available to NEM successor tariff customers including:

- kWh imported from the grid (Channel 1)
- kWh exported to the grid (Channel 2)
- Net kWh
- Applicable NBC rate
- NBC charge for each interval

In its response, SCE states that the information Mr. Emberling requests will be included on NEM successor tariff customers' bills and is currently included on existing NEM customers' bills. SCE also points out that NBCs are not time differentiated, so presenting the applicable NBC rate for each metered interval is unnecessary. SCE states that, if NBCs become time differentiated in the future, that information will be provided on a customer's bill.

We note that, because this Resolution clarifies that NBCs should be assessed on the netted kWh in each metered interval (and not on the Channel 1 imports as proposed by SCE), it is not necessary for NEM successor tariff customers to have access to their Channel 1 and Channel 2 data in order to verify that they are being billed correctly. We also note that a customer's netted imports or exports in each metered interval are available through the Green Button tool.

We agree with Mr. Emberling that NEM successor tariff customers' bills should be clear and provide all relevant data to help customers understand what they are being charged. We also acknowledge that there are limitations on the amount of data that can reasonably be presented on customers' bills. As stated previously, the Commission

PG&E AL 4802-E/A, SCE AL 3371-E, SDG&E AL 2860-E/A/EC

may want to address bill presentment, including any outreach necessary to ensure that NEM successor tariff customers understand how to read their bills, when implementing marketing and outreach (M&O) issues as part of Phase 2 of R.14-07-002.

Applying Exemptions from Cost Responsibility Surcharge (CRS) on Departing Load to NEM Successor Tariff Customers

NEM customers have been exempt from paying CRS²⁷ on departing load under D.03-04-030 which states, “Customer generation departing load that is under 1 MW in size and eligible for net metering pay DWR charges based on their net energy consumption and are not required to pay any of the other CRS components adopted in this decision.”²⁸ D.16-01-044 does not specifically address the applicability of this exemption to NEM successor tariff customers.

PG&E and SCE both propose to continue the CRS exemption on departing load for all NEM successor tariff customers. SDG&E proposes to continue the CRS exemption on departing load for NEM successor tariff customers with systems under 1 MW but would require NEM successor tariff customers with systems over 1 MW to pay the CRS on energy produced and consumed onsite. No parties commented on this issue in protests.

We find that, since D.16-01-044 does not make any changes to the applicability of the CRS on NEM-eligible customers’ departing load, the exemption for NEM systems under 1 MW in size adopted by D.03-04-030 remains in effect.

However, D.16-01-044 does not extend this existing exemption to systems over 1 MW that will be eligible to take service under the NEM successor tariff now that the 1 MW size cap has been removed.

Therefore, we approve SDG&E’s proposal to continue the CRS exemption on departing load for NEM successor tariff customers with systems under 1 MW but require NEM successor tariff customers with systems over 1 MW to pay the CRS on their departing load. PG&E and SCE shall file supplemental ALs to update their tariffs to match SDG&E’s treatment.

²⁷ The CRS includes the Department of Water Resources (DWR) Bond Charge, Competition Transition Charge (CTC) and the vintaged Power Charge Indifference Adjustment (PCIA).

²⁸ D.03-04-030 Ordering Paragraph 7.

SAFETY CONSIDERATIONS

This resolution approves the IOUs' NEM successor tariffs. Because this resolution only approves a set of tariffs, based on the information before us, no incremental safety implications associated with approval of this resolution are expected. We note that D.16-01-044 adopted provisions that generating systems interconnecting under the NEM successor tariff must have warranties of at least 10 years on all equipment and installation and that all major solar system components are on the verified equipment list maintained by the California Energy Commission. The proposed tariffs implement these requirements.

COMMENTS

Public Utilities Code section 311(g)(1) provides that this resolution must be served on all parties and subject to at least 30 days public review and comment prior to a vote of the Commission. Section 311(g)(2) provides that this 30-day period may be reduced or waived upon the stipulation of all parties in the proceeding.

The 30-day comment period for the draft of this resolution was neither waived or reduced. Accordingly, this draft resolution was mailed to parties for comments and will be placed on the Commission's agenda no earlier than 30 days from today.

FINDINGS

1. The IOUs' tariffs comply with the direction in D.16-01-044 on treatment of VNM and NEMA customers with respect to assessment of NBCs.
2. Adopting a new methodology for assessing NBCs under VNM and NEMA arrangements is a complex issue that requires further vetting that is beyond the scope of this Advice Letter process.
3. Because PG&E has updated the applicability of its VNM tariff to include residential complexes that have streets running through them, the Joint Solar Parties protest on PG&E's use of the term "premise" to establish the physical limitations of a single VNM arrangement is now moot.
4. The IOUs should make electronic payment of the interconnection fee available to NEM applicants. The additional information the IOUs provided in their replies to protests is sufficient to address the request.

5. The Decision does not explicitly address how customers who do not have a TOU rate available to them should be treated.
6. PG&E's proposal to allow residential customers who do not have the option to take service on a TOU rate to interconnect under the NEM successor tariff on their existing rate schedule is a reasonable approach to addressing this issue for all three IOUs.
7. It is reasonable and appropriate for all three IOUs to include language in their tariffs clarifying the 20-year duration of the NEM successor tariff and its applicability in the event of system modification, ownership transfer and paired energy storage.
8. PG&E's and SCE's proposed NEM successor tariff effective dates are consistent with statutory directive.
9. SDG&E's proposal for allocating NBCs proportionally, based on the generator's nameplate capacity, is a reasonable approach for assessing NBCs for Multiple Tariff Generating Facility arrangements.
10. The IOUs' proposed calculation for assessing customer NBC charges is not consistent with D.16-01-044.
11. The D.16-01-044 directive to base the NBC calculation on the metered interval should be interpreted to mean that imports and exports to the grid shall be netted within the metered interval and NBCs should only be charged on the net import from the grid in the metered interval.
12. The IOUs' proposed approach to bill customers based on the metered interval of their otherwise applicable rate schedule is reasonable, and the Joint Solar Parties' request to guarantee that all residential customers will be billed NBCs at an hourly interval should be rejected.
13. SCE's interpretation and implementation of the D.16-01-044 directive with regard to applicability of NBCs is reasonable and complies with the Decision.
14. Calculating NEM credits for exported energy at the full retail rate, inclusive of NBCs, would effectively allow customers to offset a portion of the NBCs owed on their consumption of energy from the grid in each metered interval.
15. Because the intent in D.16-01-044 is to better align the responsibilities of NEM successor tariff customers with those of others in their customer class²⁹, NBCs for

²⁹ D.16-01-044 Conclusion of Law 4.

energy consumed from the grid cannot be offset by NBC credits for exports. It is thus reasonable to reject Mr. Emberling's protest on this issue.

16. Since D.16-01-044 does not make any changes to the applicability of the CRS on NEM-eligible customers' departing load, the exemption for NEM systems under 1 MW in size adopted by D.03-04-030 remains in effect.
17. D.16-01-044 does not extend the existing CRS exemption for NEM systems under 1 MW in size to systems over 1 MW that will be eligible to take service under the NEM successor tariff now that the 1 MW size cap has been removed.

THEREFORE IT IS ORDERED THAT:

1. Pacific Gas and Electric Company (PG&E), Southern California Edison (SCE) and San Diego Gas and Electric Company (SDG&E) tariffs are approved with modifications.
2. PG&E, SCE and SDG&E shall each file a supplemental Advice Letter with the changes to their tariffs required by this Resolution no later than 10 days after the effective date of this Resolution.
3. PG&E, SCE and SDG&E shall allow residential customers who do not have the option to take service on a time-of-use (TOU) rate to interconnect under the Net Energy Metering (NEM) successor tariff on their existing rate schedule, or another rate schedule available to them. This exemption to the TOU requirement is applicable only to the limited number of customers who do not have a TOU rate available to them. If a TOU rate becomes available to customers after they take service under the NEM successor tariff, they will be given the option to remain on their tiered rate for up to five years from the date of interconnection, after which time they will be required to take service on an available TOU rate.
4. SDG&E shall modify its relevant tariffs to specifically include the language from SCE's tariff on the applicability of the 20-year duration in the event of system modification, ownership transfer and paired energy storage consistent with Decision (D.)14-03-041.
5. Each investor owned utility's (IOU's) NEM successor tariff shall take effect when the NEM program limit in each of their service territories is reached, or July 1, 2017, whichever is earlier.
6. All three IOUs shall prorate nonbypassable charges (NBCs) based on the generators' proportional nameplate capacity when a customer has one or more generators taking service under the existing NEM tariff and one or more

generators taking service under the NEM successor tariff in a Multiple Tariff Generating Facility arrangement.

7. The IOUs shall assess NBCs only on the kilowatt hours consumed in each metered interval net of exports under the NEM successor tariff.
8. The IOUs shall assess NBCs on all NEM successor tariff customers based on the metered interval associated with their applicable rate schedule.
9. PG&E and SCE shall modify their tariffs to match SDG&E's treatment of the cost responsibility surcharge (CRS) exemption on departing load for NEM successor tariff customers with systems under 1 megawatt.

This Resolution is effective today.

I certify that the foregoing resolution was duly introduced, passed and adopted at a conference of the Public Utilities Commission of the State of California held on June 23, 2016; the following Commissioners voting favorably thereon:

TIMOTHY J. SULLIVAN
Executive Director

ATTACHMENT A

Illustrative Example – Nonbypassable Charges Based on Net Imports in Each Metered Interval

Time Interval	Channel 1 Imports	Channel 2 Exports	kWh Basis for NBC Charge		
	(kWh)	(kWh)	(kWh)	(\$/kWh)	(\$)
8:00-9:00	5	–	5	0.02	0.10
9:00-10:00	4	–	4	0.02	0.08
10:00-11:00	4	1	3	0.02	0.06
11:00-12:00	4	2	2	0.02	0.04
12:00-1:00	3	3	–	0.02	–
1:00-2:00	3	4	–	0.02	–
2:00-3:00	1	4	–	0.02	–
3:00-4:00	2	–	2	0.02	0.04
4:00-5:00	3	–	3	0.02	0.06
5:00-6:00	4	–	4	0.02	0.08
2:00-3:03	5	–	5	0.02	0.10
3:00-4:03	5	–	5	0.02	0.10
1:00-2:04	5	–	5	0.02	0.10
Total			38		0.76

In Time Intervals 1:00 – 2:00 and 2:00 – 3:00 of the illustrative example above, the customer was a net exporter. Therefore, the customer is only able to zero out the NBC charge for those intervals and may not be credited for the NBC portion of exports.