

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA
ENERGY DIVISION

Agenda ID #15737
RESOLUTION E-4854
June 15, 2017

RESOLUTION

Resolution E-4854. Commission determination authorizing small investor owned utilities to implement net energy metering aggregation pursuant to Senate Bill 594 (Wolk, 2012).

PROPOSED OUTCOME:

- The Commission finds that allowing eligible customer-generators to aggregate their load from multiple meters, pursuant to Senate Bill 594 (Wolk, 2012) will not result in an increase in the expected revenue obligations of customers who are not eligible customer-generators.
- Within 30 days of the issuance of this resolution, Golden State Water Company (dba Bear Valley Electric Service), Liberty Utilities, and PacifiCorp shall each file a Tier 2 Advice Letter revising their Net Energy Metering tariffs to enable meter aggregation pursuant to Senate Bill 594, unless they have already reached the NEM Cap by the issuance of this resolution.

SAFETY CONSIDERATIONS:

- No safety impacts identified.

ESTIMATED COST:

- No additional cost is associated with this resolution.
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SUMMARY

This resolution authorizes Net Energy Metering Aggregation (NEM Aggregation or NEMA) for the small investor owned utilities Golden State Water Company (dba Bear Valley Electric Service), Liberty Utilities and PacifiCorp (the small IOUs).

Specifically, this resolution finds that allowing eligible NEM customer-generators to aggregate their load from multiple meters, pursuant to Senate Bill (SB) 594 (Wolk, 2012), will not result in an increase in the expected revenue obligations of customers of the small IOUs who are not eligible customer-generators. In making this determination, the California Public Utilities Commission (Commission) authorizes the small IOUs to modify their NEM tariffs to implement the meter aggregation provision of SB 594 to comply with Public Utilities Code Section 2827(h)(4)(D),¹ which requires aggregation to apply to any NEM tariffs that are in place pursuant to Section 2827. This resolution also provides guidance to the small IOUs on several issues associated with NEMA implementation, and orders the small IOUs who continue to have NEM tariffs in place pursuant to Section 2827 (i.e. have not yet met their NEM caps) to file Tier 2 advice letters with their updated NEM tariffs within 30 days of the issuance date of this resolution.

BACKGROUND

Public Utilities (PU) Code Section 2827 requires electric utilities² to make available to an eligible customer-generator a standard contract or tariff for NEM on a first-come-first-served basis until the time that the total rated generating capacity used by eligible customer-generators exceeds 5 percent of the electric utility's aggregate customer peak demand.

Section 2827 allows an eligible customer-generator to use renewable distributed generation (DG) to offset the electricity consumed behind a single onsite meter. SB 594 authorized an eligible customer-generator who has *multiple* meters to aggregate the electrical load of the meters located on the property where the generation facility is located, and on all property adjacent or contiguous to the property on which the generation facility is located, if those properties are solely

¹ Herein after all references to code sections are to sections of the Public Utilities Code.

² Section 2827 defines electric utilities as: "'Electric utility' means an electrical corporation, a local publicly owned electric utility, or an electrical cooperative, or any other entity, except an electric service provider, that offers electrical service. This section shall not apply to a local publicly owned electric utility that serves more than 750,000 customers and that also conveys water to its customers."

owned, leased, or rented by the eligible customer-generator. This arrangement is known as “NEM Aggregation” or “NEMA.”

SB 594, as codified in Section 2827(h)(4)(D), conditioned the authorization of NEMA for electrical corporations upon the Commission making a determination that allowing eligible customer-generators to aggregate their load from multiple meters (NEMA) will not result in an increase in the expected revenue obligations of customers who are not eligible customer-generators. SB 594 required the Commission to make such a determination by September 30, 2013.

Pursuant to SB 594, Section 2827(h)(4)(D) reads:

This paragraph shall not become operative for an electrical corporation unless the commission determines that 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. The commission shall make this determination by September 30, 2013. In making this determination, the commission shall determine if there are any public purpose or other noncommodity charges that the eligible customer-generators would pay pursuant to the net energy metering program as it exists prior to aggregation, that the eligible customer-generator would not pay if permitted to aggregate the electrical load of multiple meters pursuant to this paragraph.

In Resolution E-4610, adopted on September 19, 2013, the Commission made a determination that in the large electrical corporation³ (large IOU) service territories, NEMA did not result in an increase in revenue obligations for customers who are not eligible customer-generators. Resolution E-4610 did not address whether NEMA resulted in an increase in revenue obligations for non-eligible customers in the service territories of small electrical corporations (small IOUs). Resolution E-4610 directed the large IOUs to submit advice letters implementing their revised NEM tariffs pursuant to that resolution.

In the Energy Division Disposition Letter and Commission Resolution approving the large IOUs’ advice letters with their revised NEM tariffs, the Commission also provided guidance on several issues related to NEMA implementation in the large IOU service territories. The Energy Division Disposition Letter was issued on February 20, 2014, which approved PG&E advice letter 4305-E/E-A.

³ The large electrical corporations are Pacific Gas and Electric Company, Southern California Edison, and San Diego Gas & Electric.

The Commission Resolution E-4665 was adopted on July 10, 2014, which approved SCE advice letter 2952-E/E-A and SDG&E advice letter 2529-E/E-A.

The Commission takes the opportunity today to make the same assessment and address similar implementation issues for the small IOUs.

DISCUSSION

The following questions were considered in making the determination of whether allowing eligible customer-generators to aggregate their load from multiple meters (NEMA) will result in an increase in the expected revenue obligations of customers who are not eligible customer-generators in the small IOU service territories:

Question 1: Would authorizing NEMA result in additional capacity or more costly per kilowatt hour (kWh) capacity than under the NEM base case?

Question 2: What are the public purpose program and other non-commodity charges that eligible NEMA customer-generators would avoid if permitted to aggregate the electrical load of multiple meters pursuant to SB 594? Will the associated revenue loss be greater in the SB 594 case compared to the NEM base case?

Question 3: Will meter aggregation impact other NEM cost categories?

Question 1: Analysis of whether NEMA would result in additional capacity or more costly per kWh capacity

One criteria for evaluating whether NEMA would result in increased revenue obligations for non-participating customers in the small IOU service territories is to assess whether NEMA would result in additional NEM capacity being installed beyond that which would have already been installed under NEM alone. If so, it could be argued that the additional capacity creates additional costs for non-participating customers.

The 2013 NEM Ratepayer Impacts Evaluation⁴ estimated that a complete build out of systems up to the 5 percent NEM cap would cost large IOU ratepayers approximately \$1.1 billion per year in 2020.⁵ Although the findings in the report are specific to the large IOU service territories, the full retail rate NEM compensation structure is identical in the large and small IOU service territories and therefore the results of this report can be instructive for cost impacts for the small IOU service territories.

The legislature has authorized a specific amount of NEM capacity to be installed in the small IOU service territories. The NEM cap is set at 5 percent of their aggregate customer peak demand.⁶ SB 594 did not change or raise the NEM cap for small IOUs. As a result of SB 594 implementation, some of the capacity from renewable DG systems installed under the NEM cap would be developed using NEMA, but NEMA would not result in capacity installed beyond the 5 percent NEM cap. So, while NEMA would augment the types of projects installed under the NEM cap, it would not increase the amount of capacity that could be installed under the NEM cap.

Another criteria for evaluating whether NEMA would result in increased costs for non-participating customers is to assess whether systems installed under NEMA would be more costly to non-participating ratepayers on a per kWh basis than the NEM base case.

NEMA will likely be utilized in the small IOU service territories primarily to offset electric load at non-residential meters. Non-residential customers typically have several meters located on a property or properties under a single ownership. Therefore, NEMA is likely to increase the proportion of larger non-residential NEM projects relative to smaller residential projects under standard NEM.

⁴ Net Energy Metering Ratepayer Impacts Evaluation (October 2013).
<http://www.cpuc.ca.gov/WorkArea/DownloadAsset.aspx?id=4292>.

⁵ Ibid, page 7.

⁶ The statutory definition of the NEM cap is the point where “total rated generating capacity used by eligible customer-generators exceeds 5 percent of the electric utility's aggregate customer peak demand.” Public Utilities Code Section 2827(c)(1).

The 2013 NEM Ratepayer Impacts Evaluation found that due to lower non-residential volumetric retail rates, non-residential NEM projects cost non-participating customers comparatively less per kWh of exported generation than residential customers. The report found that the levelized net total cost of non-residential NEM facilities averaged \$0.08 per kWh-exported, compared to an average \$0.20 per kWh-exported for residential facilities.⁷

The report also found that through 2011, NEM solar non-residential generators supplied approximately 59 percent of the capacity enrolled in the NEM program, but accounted for just 9 percent of the total cost of the solar NEM program.⁸

While the report found that the NEM program overall represented a net cost to ratepayers, through NEMA, the NEM program is likely to be more frequently subscribed by customers installing larger renewable DG systems with a lower cost per kWh exported, which would result in a lower cost to non-participating customers.

A NEMA arrangement could also be exclusively utilized by residential customer-generators, but these situations are less likely. An example of such an arrangement could be a compound with several separately metered residences all under the ownership of a single customer.

Question 2: Analysis of whether the expected revenue loss from avoided public purpose program charges and other non-commodity charges would be greater under NEMA than the NEM base case

Customer-generators under the NEM base case and the SB 594 case only pay public purpose program (PPP) and other non-commodity charges on their energy usage after NEM credits are applied. PPP charges are largely the same for residential and commercial customers. Many PPP charges are applied as “equal cents per kWh” charges to all customer classes. For those charges, there would be no difference in revenue loss from having a higher proportion of non-residential to residential NEM systems under NEMA, since the same capacity of NEM systems can reasonably be expected to generate the same total kWh, regardless of whether it is serving non-residential or residential customers.

⁷ Net Energy Metering Ratepayer Impacts Evaluation (October 2013), page 7.

⁸ Ibid, page 25.

Other PPP charges are applied using a variety of allocation methods, which tend to allocate a greater proportionate burden of PPP charges to the residential class. For these PPP charges, the fact that non-residential customers in general pay lower average rates than residential customers would indicate that increasing the proportion of non-residential NEM systems under NEMA would decrease the PPP revenue loss associated with NEM compared to the PPP revenue loss without NEMA (i.e. with a higher percent of residential NEM participants). Thus, when considering both methodologies for assessing PPP charges, it is more likely that NEMA would actually decrease the PPP revenue loss associated with NEM.

With regard to other non-commodity charges, such as charges for utility distribution services, based on the fact that non-residential customers in general pay lower average volumetric rates than do residential customers, we expect that a higher proportion of non-residential NEM systems under NEMA would decrease the distribution revenue loss associated with NEM.

Finally, NEMA does not necessarily increase an individual customer's potential for cost shifting. A NEM customer with multiple meters on a single site may install multiple systems of different sizes appropriate to the energy usage at each individual meter under standard NEM. By allowing a single system to serve aggregated meters, NEMA makes it more convenient and less costly for the customer to install a system, but it does not increase the potential for reductions in revenues collected from PPPs and other non-commodity charges from NEM.

Therefore, avoided public purpose program charges and other non-commodity charges would likely decrease through the implementation of NEMA.

Question 3: Analysis of whether NEMA would impact other NEM cost categories

Another NEM cost category that should be considered in assessing whether NEMA would result in increased revenue obligations for customers who are not eligible customer-generators is interconnection costs. Under NEM, utilities may not charge customers for interconnection costs associated with interconnecting their systems; therefore, these non-recovered interconnection costs are a cost associated with NEM in both the NEM base case and the NEMA case.

There is the possibility that under NEMA some systems could be sized larger than they otherwise would have been under the NEM base case. Nevertheless, it

is not clear that interconnecting a single large system under NEMA, rather than multiple small systems of equivalent total capacity under standard NEM, would result in increased total interconnection costs. Since NEMA projects will result in more electrons being exported to the grid due to the system being sized larger than the electric load at the meter it is associated with, there is a possibility that these larger projects could trigger some additional transmission and distribution grid upgrade costs. However, because NEM interconnection costs can be dependent upon locational factors, there is not sufficient information on projects at this time to determine whether a single large NEMA installation would result in more distribution upgrade costs than would multiple small systems located in close proximity under standard NEM.

Therefore, NEMA is not expected to increase other NEM cost categories compared to potential costs associated with NEM.

The following is a summary of conclusions regarding the impacts of NEMA pursuant to SB 594:

- While NEMA would augment the types of projects installed under the NEM cap, it would not increase the amount of capacity that could be installed under the NEM cap.
- Through NEMA, the NEM program is likely to be more frequently subscribed by customers installing larger DG systems with a lower cost per kWh exported, which would result in a lower cost to non-participating customers.
- Avoided public purpose program charges and other non-commodity charges would likely decrease through the implementation of NEM.
- NEMA is not expected to increase other NEM cost categories compared to potential costs associated with NEM.

Based on these conclusions, we find that NEMA will not result in an increase in the expected revenue obligations of customers who are not eligible customer-generators.

NEMA Implementation Issues

In the Disposition Letter approving PG&E's revised NEM Tariff, and in Resolution E-4665 approving SCE's and SDG&E's revised NEM Tariffs, the Commission addressed a number of issues specific to NEMA implementation that were identified in the process of reviewing and approving the large IOUs'

advice letters. For the sake of consistency and efficiency, today we address those NEMA implementation issues that are also applicable to the small IOUs.

As a general principle, we believe that consistency in application of NEMA rules across the large and small IOU service territories is desirable as it provides equal treatment to electrical corporation customers regardless of service territory, and provides a consistent set of NEMA rules for developers who likely operate across multiple service territories. In our consideration of the following NEMA implementation issues, unless there are characteristics specific to small IOUs that would prevent them from implementing the same rules that we previously required for the large IOUs, we find it is appropriate to direct the small IOUs to adopt the same rules as the large IOUs. We also find that it is appropriate to provide guidance on these NEMA implementation issues now, for the sake of efficiency, so as to minimize the number of issues that could create a prolonged review process once the small IOUs submit their revised NEM tariffs.

NEMA implementation issues addressed today include:

- 1) Interpretation of “Adjacent and Contiguous” Definition;
- 2) Bill Credit Allocation Method;
- 3) Billing Service Charges;
- 4) Clarification with Respect to the Permanent Prohibition on Net Surplus Compensation (NSC) for Aggregated Facilities;
- 5) Non-NEM Eligible Generator with NEMA Arrangement;
- 6) Whether Existing NEM Customers Electing NEMA who also have Executed Interconnection Agreements Should be Required to Complete New Interconnection Agreements

Issue 1: Interpretation of “Adjacent and Contiguous” Definition

SB 594 amended Section 2827(h)(4)(A) and (h)(4)(F)(2) to state as follows:

An eligible customer-generator with multiple meters may elect to aggregate the electrical load of the meters located on the property where the renewable electrical generation facility is located and on all property adjacent or contiguous to the property on which the renewable electrical generation

facility is located if those properties are solely owned, leased, or rented by the eligible customer-generator.

For the purposes of this paragraph, parcels that are divided by a street, highway, or public thoroughfare are considered contiguous, provided they are otherwise contiguous and under the same ownership.

In the Commission's review of the large IOUs' advice letters implementing their NEMA programs, parties raised concern with how the IOUs may interpret the phrase "adjacent or contiguous" and requested clarification as to the application of the phrase to NEMA eligible accounts. In Resolution E-4665 the Commission found that SCE's proposed tariff language demonstrated an appropriate interpretation of "adjacent and contiguous." SCE's language is included here:

For the purposes of NEM Aggregation only, parcels that are divided by a street, highway, or public thoroughfare are considered contiguous, provided they are within an unbroken chain of otherwise contiguous parcels and are all solely owned, leased or rented by the Customer, as verified in Form 14-937. Customers are also eligible to participate in NEM Aggregation where all meters in an NEM Aggregation arrangement are located within an unbroken chain of contiguous parcels that are all solely owned, leased, or rented by the Customer. For example, if there are three parcels (A, B and C), all of which are solely owned, leased or rented by the Customer, where A contains the Renewable Electrical Generating Facility and A abuts B, B abuts C, but A and C are separated by B, then the loads of all three parcels shall be eligible to participate in NEM Aggregation. Refer to Diagram 1 (for illustrative purposes only). In addition, if there are five parcels (A, B, C, D and E) that form a cluster of contiguous parcels, where A contains the Renewable Electrical Generating Facility, and D and E are separated from A, B, and C by a street, highway or public thoroughfare, for the purposes of participating in NEM Aggregation only, all five parcels are considered contiguous, provided they are otherwise contiguous and all solely owned, leased or rented by the Customer. Refer to Diagram 2 (for illustrative purposes only).

Diagram 1

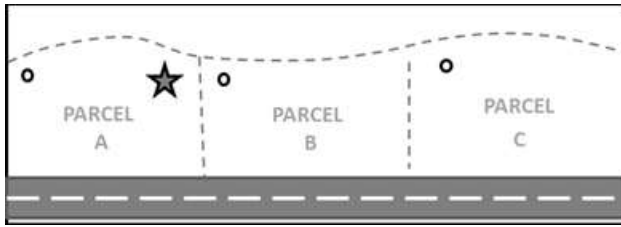
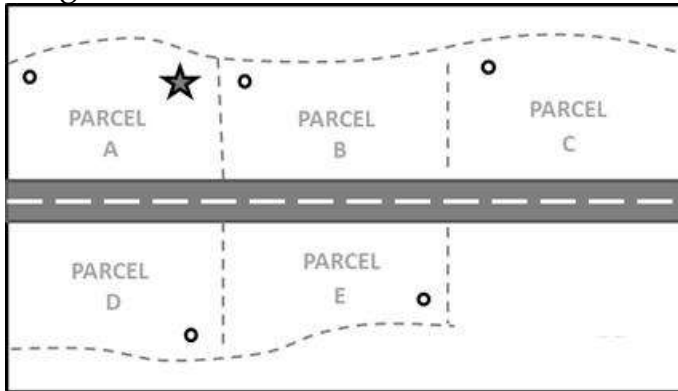


Diagram 2



- ★ = RENEWABLE ELECTRICAL GENERATING FACILITY
- = METER
- = ELIGIBLE

The Commission found SCE’s revised tariff language and accompanying diagrams to be consistent with legislative intent, as it allows parcels in a contiguous and unbroken chain under common ownership or lease to participate in a NEMA arrangement. This language removes ambiguity, avoids arbitrary disqualification of parcels from NEMA eligibility, and is consistent with the plain meaning of “adjacent or contiguous.”

In order to ensure that there is consistency across the small IOUs and large IOUs in how they interpret and apply eligibility requirements related to “adjacent or contiguous,” we order the small IOUs to include language in their revised NEM tariffs that replicates SCE’s tariff language, with changes to the language made only to accommodate IOU-specific tariff terminology and related forms.

Issue 2: Bill Credit Allocation Method

In the Commission’s review of the large IOUs’ advice letters implementing their NEMA programs, parties raised concern that the IOUs’ proposed methodologies

for allocating NEMA bill credits were inconsistent with Section 2827(h)(4)(B) on Net Surplus Compensation.

One party, Récolte Energy (Récolte) proposed a revised method of bill credit allocation, which would allocate current period generation in proportion to the meters' current period loads, after adjusting for the cumulative allocations that were made in prior billing periods in order to avoid a problem of under-allocation to certain aggregated meters at annual true-up.

In Resolution E-4665 the Commission found that SCE's proposed tariff language implementing Récolte's methodology was consistent with statute. SCE's language is included here:

The electrical consumption (kWh) registered on each account's meter will be reduced, for NEM billing purposes, by a proportional allocation, at the 15-minute interval level, of the electricity generated by the Renewable Electrical Generating Facility that is exported to SCE's grid. The proportional allocation is determined per billing period based on the cumulative consumption of each aggregated account compared to the cumulative consumption of the NEM Aggregation arrangement since the start of the Relevant Period, and the cumulative generation exported from the Renewable Electrical Generating Facility since the start of the Relevant Period. The Customer is required to designate one account in the NEM Aggregation arrangement to receive any remaining kWh not allocated due to rounding after the proportional allocation methodology described above is completed.

In Resolution E-4665, the Commission found SCE's language implementing Récolte's methodology was more likely than the IOUs' original methodologies to fairly credit the customer generator without leading to unintended consequences or distortions.

In order to ensure that there is consistency across the small IOUs and large IOUs in how they calculate and allocate NEMA generation credits, we order the small IOUs to include language in their revised NEM tariffs that replicates SCE's billing methodology tariff language, with changes to the language made only to accommodate IOU-specific tariff terminology and related forms.

Issue 3: Billing Service Charges

SB 594 directed that NEMA customer-generators should pay the utility for the cost of providing them with billing services. Section 2827(4)(H) states:

Notwithstanding subdivision (g), an eligible customer-generator electing to aggregate the electrical load of multiple meters pursuant to this subdivision shall remit service charges for the cost of providing billing services to the electric utility that provides service to the meters.

In the Disposition Letter approving PG&E advice letter 4305-E/E-A and in Resolution E-4665, the Commission approved the following billing service fee structure for NEMA customers:

- Account Set-up Fee: Not to exceed \$25 per account (capped at \$500 per NEMA arrangement), and
- Monthly Billing fee: Not to exceed \$5 per account

The Commission also provided the following additional guidance to the large IOUs:

- Track costs for NEMA billing via a memorandum account for one year from the effective date of the NEMA tariff, including the costs of automating the NEMA billing system if such automation is more cost-effective for NEMA customers than manual billing.
- After one year from the effective date of the NEMA tariff, each IOU may file a Tier 3 advice letter proposing modifications to the billing service fees and must include detailed justification for the proposed fees. Should the fee structure change, existing customers shall not be retroactively charged or debited and the new fees shall apply to all NEMA customers (new and existing) on a going forward basis.
- If the costs are significantly higher, each IOU should consider spreading cost recovery of any fees over a reasonable period of time to ensure that customers do not face an upfront cost hurdle that acts as a barrier to participation in NEMA.
- In the event of over-collection, each IOU may provide a refund to NEMA customers for the amount of over-collection.

The Commission found this to be a prudent and reasonable approach, which addressed most of the concerns raised by parties with regard to billing fees. As billing costs are utility-specific, it is difficult to assess a cost projection for a program that has not yet been implemented. We therefore find that it is appropriate to adopt the same interim fee structure and additional guidance for the small IOUs as was adopted for the large IOUs.

Issue 4: Clarification with Respect to the Permanent Prohibition on Net Surplus Compensation (NSC) for Aggregated Facilities

As part of SB 594, Section 2827(h)(4)(G) provided that:

If an eligible customer-generator chooses to aggregate pursuant to subparagraph (A), the eligible customer-generator shall be permanently ineligible to receive net surplus electricity compensation, and the electric utility shall retain any kilowatt hours in excess of the eligible customer generator's aggregated electrical load generated during the 12-month period.

In the Commission's review of the large IOUs' advice letters implementing their NEMA programs, parties requested clarification that the permanent prohibition on NSC only applied to the Generator Account, and not to an Aggregated Account that subsequently separates from a Load Aggregation Arrangement.

In Resolution E-4665, the Commission determined that if an account participating in NEMA is removed from the NEMA arrangement and then qualifies for service under the non-NEMA provisions of the NEM tariff, the account is eligible to receive NSC from the IOU on a going-forward basis, provided it meets all other eligibility criteria. As such, the Commission directed the large IOUs to include the following language in their NEM tariffs:

If an Aggregated Account that is not a Generating Account is separated from the NEMA Arrangement, and subsequently qualifies for NEM, it is also eligible to receive NSC on a going-forward basis, provided it meets all other applicable NEM eligibility criteria.

In order to ensure that there is consistency in how NSC eligibility is applied across the small IOUs and large IOUs, we direct the small IOUs to include the following language in their revised NEM tariffs: If an Aggregated Account that is not a Generating Account is separated from the NEMA Arrangement, and

subsequently qualifies for NEM, it is also eligible to receive NSC on a going-forward basis, provided it meets all other applicable NEM eligibility criteria.

Issue 5: Non-NEM Eligible Generator with NEMA Arrangement

In the Commission's review of the large IOUs' advice letters implementing their NEMA programs, parties raised a concern that one of the IOUs' proposed changes would prohibit the combination of a non-NEM eligible generator with a NEMA arrangement.

In Resolution E-4665, the Commission clarified that NEMA accounts are allowed to have non-NEM eligible generating facilities directly interconnected to them, and directed the IOUs to modify their NEM tariffs to reflect this.

In order to ensure consistency in how NEMA arrangements are treated across the small IOUs and large IOUs, we direct the small IOUs to ensure their tariffs include language that clarifies that NEMA accounts are permitted to have non-NEM eligible generating facilities interconnected to them.

Issue 6: Whether Existing NEM Customers Electing NEMA who also have Executed Interconnection Agreements Should be Required to Complete New Interconnection Agreements

In the Commission's review of the large IOUs' advice letters implementing their NEMA programs, parties requested that if a customer has an effective, executed NEM Interconnection Agreement, and is making no other changes except electing NEM Aggregation, the IOU would not require new Interconnection Agreements to participate in NEMA.

In Resolution E-4665, the Commission found this to be a reasonable request and further found that though it is implied that no new interconnection studies should be required where an existing Interconnection Agreement is in place, the Commission also made the additional clarification and directed the IOUs to modify their tariffs to state:

Existing NEM customers electing NEM Aggregation who also have executed interconnection agreements will not be required to complete new interconnection agreements, nor conduct new interconnection studies.

In order to ensure consistency in how NEMA arrangements are treated across the small IOUs and large IOUs, we direct the small IOUs to ensure their tariffs

include language that clarifies that NEMA accounts are permitted to have non-NEM eligible generating facilities interconnected to them and to include the following clarification language: Existing NEM customers electing NEM Aggregation who also have executed interconnection agreements will not be required to complete new interconnection agreements, nor conduct new interconnection studies.

Interaction of NEMA Authorization with Small IOU NEM Cap

As stated earlier in this document, the legislature, in Section 2827, authorized a specific amount of NEM capacity to be installed in the small IOU service territories. The NEM cap for installed capacity for each small IOU is set at 5 percent of its aggregate customer peak demand. Section 2827 does not obligate the small IOUs to continue offering NEM after they reach their NEM caps. SB 594 modified Section 2827 to provide customers the ability to aggregate their loads across multiple meters under the IOUs' existing NEM programs. As NEMA is authorized as part of Section 2827 (the section authorizing NEM), the small IOUs are not obligated to offer NEMA once they reach their NEM caps. Therefore, it is reasonable to require only the small IOUs that have active NEM tariffs in place (i.e. have not yet reached their NEM caps) at the time of the issuance of this resolution to file advice letters with the Commission revising their NEM tariffs to enable meter aggregation pursuant to Senate Bill 594 and as directed in this resolution. At the time of the drafting of this resolution, only Golden State Water Company (dba Bear Valley Electric Service) has stated that it has reached its 5 percent NEM cap. On March 21, 2017, Golden State Water Company (dba Bear Valley Electric Service) submitted Tier 1 advice letter 325-E with the Commission stating that it has reached its NEM cap and has closed its NEM program to additional customers. As such, Liberty Utilities and PacifiCorp shall, and Golden State Water Company (dba Bear Valley Electric Service) may at its discretion, each file a Tier 2 advice letter within 30 days of the issuance of this resolution with the Commission revising their NEM tariffs to enable meter aggregation pursuant to Senate Bill 594 and as directed in this resolution.

Although the small IOUs are currently under no statutory obligation to continue offering NEMA after they have reached their NEM caps, the Commission did authorize the continuation of NEMA for the large IOU service territories as part of the large IOUs' NEM Successor Tariffs in Decision 16-01-044. We therefore take the opportunity today to encourage the small IOUs to consider offering

NEMA to their customers should they decide to continue offering a NEM tariff, or a modified version of a NEM tariff, after they have reached their NEM caps.

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 nor reduced. Accordingly, this draft resolution was mailed to parties for comments, and will be placed on the Commission's agenda no earlier than 30 days from today.

FINDINGS

1. Senate Bill 594 (Wolk, 2012) authorized an eligible customer-generator with multiple meters to elect to aggregate the electrical load of the meters located on the property where the generation facility is located and on all property adjacent or contiguous to the property on which the generation facility is located, if those properties are solely owned, leased, or rented by the eligible customer-generator.
2. Senate Bill 594 conditioned authorization of meter aggregation for electrical corporations upon the Commission making a determination by September 30, 2013, that permitting 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.
3. Senate Bill 594 does not change or raise the net energy metering cap, which is presently set at 5 percent of an electric utility's aggregate customer peak demand. The same amount of net energy metering capacity will be installed regardless of implementation of Senate Bill 594, assuming that the net energy metering program cap will be fully subscribed.
4. Net energy metering aggregation (NEMA) pursuant to Senate Bill 594 will likely be utilized primarily to offset the load of non-residential meters, and will increase the proportion of larger net energy metering projects relative to smaller residential projects.

5. While NEMA would augment the types of projects installed under the NEM cap, it would not increase the amount of capacity that could be installed under the NEM cap.
6. As of 2011, net energy metered solar non-residential generators supplied about 59% of the capacity enrolled in the net energy metering program, but were responsible for just 9% of the total cost of the program.
7. The 2013 Net Energy Metering Ratepayer Impacts Evaluation found that, because of lower non-residential rates, non-residential projects cost non-participating ratepayers substantially less than residential projects per kWh exported to the grid.
8. Through NEMA, the NEM program is likely to be more frequently subscribed by customers installing larger DG systems with a lower cost per kWh exported, which would result in a lower cost to non-participating customers.
9. Avoided public purpose program charges and other non-commodity charges would likely decrease through implementation of meter aggregation.
10. Because NEM interconnection costs can be dependent upon locational factors, there is not sufficient information on projects at this time to determine whether a single large NEMA installation would result in more distribution upgrade costs than would multiple small systems located in close proximity under standard NEM.
11. NEMA is not expected to increase other NEM cost categories compared to potential costs associated with NEM.
12. NEMA will not result in an increase in the expected revenue obligations of customers who are not eligible customer-generators.
13. Consistency in application of NEMA rules across the large and small IOU service territories is desirable as it provides equal treatment to electrical corporation customers regardless of service territory, and provides a consistent set of NEMA rules for developers who likely operate across multiple service territories.
14. It is appropriate to direct the small IOUs to adopt the same NEMA rules as the Commission required for the large IOUs.
15. It is appropriate to provide guidance on these NEMA implementation issues now, for the sake of efficiency, so as to minimize the number of issues that

could create a prolonged review process once the small IOUs submit their revised NEM tariffs.

16. In order to ensure that there is consistency across the small IOUs and large IOUs in how they interpret and apply eligibility requirements related to “adjacent or contiguous,” we order the small IOUs to include language in their revised NEM tariffs that replicates SCE’s tariff language, with changes to the language made only to accommodate IOU tariff-specific terminology and forms.
17. In order to ensure that there is consistency across the small IOUs and large IOUs in how they calculate and allocate NEMA generation credits, we order the small IOUs to include language in their revised NEM tariffs that replicates SCE’s billing methodology tariff language, with changes to the language made only to accommodate IOU tariff-specific terminology and forms.
18. As billing costs are utility-specific, it is difficult to assess a cost projection for a program that has not yet been implemented. We therefore find that it is appropriate to adopt the same interim fee structure and additional guidance for the small IOUs as was adopted for the large IOUs.
19. In order to ensure that there is consistency in how net surplus compensation eligibility is applied across the small IOUs and large IOUs, we direct the small IOUs to include the following language in their revised NEM tariffs: If an Aggregated Account that is not a Generating Account is separated from the NEMA Arrangement, and subsequently qualifies for NEM, it is also eligible to receive net surplus compensation on a going-forward basis, provided it meets all other applicable NEM eligibility criteria.
20. In order to ensure consistency in how NEMA arrangements are treated across the small IOUs and large IOUs, we direct the small IOUs to ensure their tariffs include language that clarifies that NEMA accounts are permitted to have non-NEM eligible generating facilities interconnected to them.
21. In order to ensure consistency in how NEMA arrangements are treated across the small IOUs and large IOUs, we direct the small IOUs to ensure their tariffs include language that clarifies that NEMA accounts are permitted to have non-NEM eligible generating facilities interconnected to them and to include the following clarification language: Existing NEM customers electing NEM Aggregation who also have executed interconnection agreements will not be required to complete new interconnection agreements, nor conduct new interconnection studies.

22. As NEMA is authorized as part of Public Utilities Code Section 2827 (the section authorizing NEM), the small IOUs are not obligated to continue offering NEMA once they reach their NEM caps.
23. It is reasonable to require only small IOUs that have active NEM tariffs in place (i.e. have not yet reached their NEM caps) at the time of the issuance of this resolution to file Tier 2 advice letters with the Commission revising their NEM tariffs to enable meter aggregation pursuant to Senate Bill 594 and as directed in this resolution.

THEREFORE IT IS ORDERED THAT:

1. Liberty Utilities and PacifiCorp shall, and Golden State Water Company (dba Bear Valley Electric Service) may at its discretion, each file a Tier 2 Advice Letter within 30 days of the issuance of this resolution revising their Net Energy Metering (NEM) tariffs to enable meter aggregation pursuant to Senate Bill 594 and as directed in this resolution.
2. The advice letters and revised NEM tariffs must comply with all provisions of Senate Bill 594 pertaining to meter aggregation, including the provisions that were conditioned on the Commission making the determination contained in this resolution as well as the provisions that were not conditioned on the determination contained in this resolution.
3. The advice letters must be served on all parties to the Rulemaking for the Net Energy Metering Successor Tariff (Rulemaking 14-07-002).
4. Liberty Utilities and PacifiCorp shall, and Golden State Water Company (dba Bear Valley Electric Service) may at its discretion, each modify their NEM tariffs to include the following language, with changes to the language made only to accommodate IOU-specific tariff terminology and related forms: For the purposes of NEM Aggregation only, parcels that are divided by a street, highway, or public thoroughfare are considered contiguous, provided they are within an unbroken chain of otherwise contiguous parcels and are all solely owned, leased or rented by the Customer, as verified in Form 14-937. Customers are also eligible to participate in NEM Aggregation where all meters in an NEM Aggregation arrangement are located within an unbroken chain of contiguous parcels that are all solely owned, leased, or rented by the Customer. For example, if there are three parcels (A, B and C), all of which are solely owned, leased or rented by the Customer, where A contains the Renewable Electrical Generating Facility and A abuts B, B abuts C, but A and

C are separated by B, then the loads of all three parcels shall be eligible to participate in NEM Aggregation. Refer to Diagram 1 (for illustrative purposes only). In addition, if there are five parcels (A, B, C, D and E) that form a cluster of contiguous parcels, where A contains the Renewable Electrical Generating Facility, and D and E are separated from A, B, and C by a street, highway or public thoroughfare, for the purposes of participating in NEM Aggregation only, all five parcels are considered contiguous, provided they are otherwise contiguous and all solely owned, leased or rented by the Customer. Refer to Diagram 2 (for illustrative purposes only).

Diagram 1

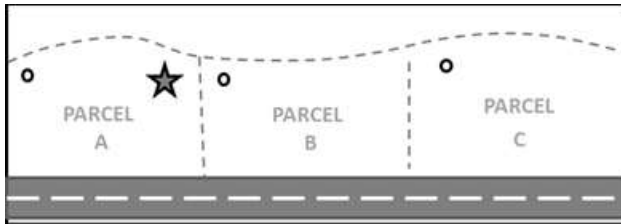
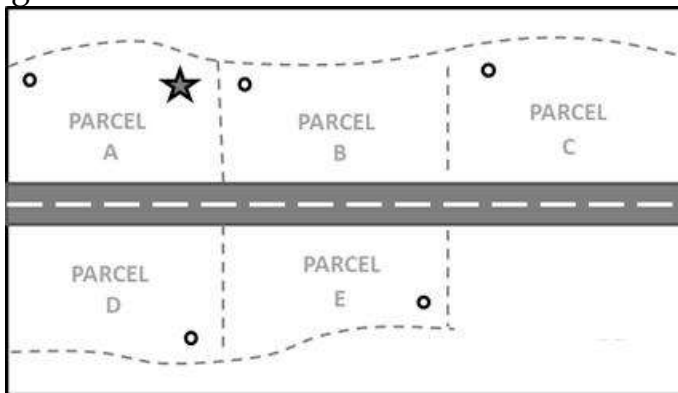


Diagram 2



- ★ = RENEWABLE ELECTRICAL GENERATING FACILITY
- = METER
- = ELIGIBLE

5. Liberty Utilities and PacifiCorp shall, and Golden State Water Company (dba Bear Valley Electric Service) may at its discretion, each modify their NEM tariffs to include the following language, with changes to the language made only to accommodate IOU-specific tariff terminology and related forms: The electrical consumption (kWh) registered on each account's meter will be reduced, for NEM billing purposes, by a proportional allocation, at the

15-minute interval level, of the electricity generated by the Renewable Electrical Generating Facility that is exported to SCE's grid. The proportional allocation is determined per billing period based on the cumulative consumption of each aggregated account compared to the cumulative consumption of the NEM Aggregation arrangement since the start of the Relevant Period, and the cumulative generation exported from the Renewable Electrical Generating Facility since the start of the Relevant Period. The Customer is required to designate one account in the NEM Aggregation arrangement to receive any remaining kWh not allocated due to rounding after the proportional allocation methodology described above is completed.

6. Liberty Utilities and PacifiCorp shall, and Golden State Water Company (dba Bear Valley Electric Service) may at its discretion, each establish billing fees that charge up to \$25 per account as a one-time set-up fee, capped at \$500 per NEMA arrangement, and a monthly billing fee not to exceed \$5 per account.
7. Liberty Utilities and PacifiCorp are directed to, and Golden State Water Company (dba Bear Valley Electric Service) may at its discretion, establish a memorandum account to track costs for net energy metering aggregation (NEMA) billing for one year from the effective date of their NEMA tariffs, including the costs of automating the NEMA billing system if such automation is more cost effective for NEMA customers than manual billing.
8. One year from the effective date of their NEMA tariffs, Liberty Utilities, PacifiCorp, and Golden State Water Company (dba Bear Valley Electric Service) may each file, if necessary, a Tier 3 Advice Letter proposing modifications to the billing service fees. The filing must include detailed justification for any proposed fees. Should the fee structure change, existing NEMA customers shall not be retroactively charged and the new fees shall apply to all NEMA customers (new and existing) on a going forward basis. If the costs of NEMA billing are significantly higher than the fee structure recovers Liberty Utilities, PacifiCorp, and Golden State Water Company (dba Bear Valley) should consider spreading cost recovery of any fees over a reasonable period of time to ensure that customers do not face an up-front cost hurdle that could act as a barrier to participation in NEMA. In the event of over collection Liberty Utilities, PacifiCorp, and Golden State Water Company (dba Bear Valley) may provide a refund to NEMA customers for the amount of over collection.
9. Liberty Utilities and PacifiCorp shall, and Golden State Water Company (dba Bear Valley Electric Service) may at its discretion, each modify their NEM

tariffs to include the following language: If an Aggregated Account that is not a Generating Account is separated from the NEMA Arrangement, and subsequently qualifies for NEM, it is also eligible to receive NSC on a going-forward basis, provided it meets all other applicable NEM eligibility criteria.

10. Liberty Utilities and PacifiCorp shall, and Golden State Water Company (dba Bear Valley Electric Service) may at its discretion, each modify their NEM tariffs to include language that clarifies that NEMA accounts are permitted to have non-NEM eligible generating facilities interconnected to them.
11. Liberty Utilities and PacifiCorp shall, and Golden State Water Company (dba Bear Valley Electric Service) may at its discretion, each modify their NEM tariffs to include the following language: Existing NEM customers electing NEM Aggregation who also have executed interconnection agreements will not be required to complete new interconnection agreements, nor conduct new interconnection studies.
12. If Golden State Water Company (dba Bear Valley Electric Service) modifies its NEM tariff to implement NEMA, it shall comply with all of the ordering paragraphs in this resolution.

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 15, 2017; the following Commissioners voting favorably thereon:

TIMOTHY J. SULLIVAN
Executive Director