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Attachment 2

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Virtual Net Energy Metering (VNEM) Ruling Questions

Current VNEM Tariff Data

This set of questions is focused on the current VNEM tariff. In responses to Question 1 and Question 2, parties should consider Public Utilities Code Section 2827.1(c)(1-4) and its multiple requirements, including supporting growth for residential customers in disadvantaged communities while also ensuring that the tariff's total benefits to all customers and the electrical system are "approximately equal" to the tariff's total costs.

1) Compared to a renewable electrical generation facility under the current net energy metering tariff, what are the unique quantifiable benefits, if any, of such a facility under the current VNEM tariff for the VNEM participant, the utility, and the electrical system?
2) Compared to a renewable electrical generation facility under the current net energy metering tariff, what are the unique quantifiable costs of such a facility under the current VNEM tariff for the VNEM participant, the utility, the electrical system, and all ratepayers?
3) For investor-owned utilities (Utilities) only: Describe the multi-tenant landscape in your service territory by answering the following:
   a) How many properties are currently interconnected under a VNEM tariff? How many total benefiting accounts are associated with those VNEM arrangements? What portion of these interconnected properties are 1) residential properties on a standard VNEM tariff, 2) properties on a Multifamily Affordable Solar Housing (MASH) VNEM tariff, 3) properties on a Solar on Multifamily Affordable Housing (SOMAH) VNEM tariff, 4) mixed residential and non-residential properties, and 5) non-residential properties. Within each of the previous categories, how many are located in a disadvantaged community, as defined in Decision (D.) 22-12-056)? What is the cumulative capacity of systems in each of these categories?
   b) How many properties on a VNEM tariff have solar and storage in front of the meter in a VNEM arrangement? What is the cumulative generation capacity of these systems?
   c) How many properties on a VNEM tariff have energy storage systems installed separately behind the meter for a common area or similar end-use? (In this case the energy storage system may not be providing bill credits to any tenant benefiting accounts.) What is the cumulative generation capacity of these systems?

Successor to the VNEM Tariff

VNEM was developed in 2008 and expanded in 2011 to enable tenant access to on-site solar. The Commission reasoned that "[VNEM] facilitates the flow of benefits to tenants from a solar energy system installed by a building owner...without master metering hardware or site-specific infrastructure upgrades, which may be cost prohibitive."[1] Since that time, other products, such as power control systems and other hardware technologies, have become available that may fulfill these same functions. In addition, the Commission determined in D.22-12-056 that basing the retail export compensation rate on retail import rates does not meet the statutory requirement to align the successor tariff with the costs and benefits of customer-sited renewable distributed generation.[2] Keeping these developments in mind, this set of questions asks parties for input on the successor to the current VNEM tariff.

4) Is a "virtual" billing arrangement the best way to comply with the guiding principles of this proceeding with regard to tenants of multi-meter properties? Describe the policy and/or technical reasons behind each of your answers to a) through e).
   a) If yes, how can the current VNEM tariff be modified to achieve consistency with the adopted net billing tariff?
   b) If yes, are there VNEM arrangement conditions that justify different treatment in the tariff, such as generating and benefiting accounts sharing a point of common coupling?
   c) If yes, should the successor tariff be differentiated by customer segment? If yes, what segmentation would you recommend and why?
   d) If no, are there rate schedules or other rate products that could be used instead of a VNEM successor tariff? What are the quantifiable costs and benefits of your proposed alternative? How do the quantifiable costs and benefits of your proposed alternative compare to those of the current VNEM tariff?
   e) If no, are there technology-based alternatives that could be used instead of a VNEM successor tariff, such as available hardware or software solutions? How do these quantifiable costs and benefits compare to those of the current VNEM tariff?

[1] D.08-10-036 at 38.

[2] D.22-12-056 at 185 and Finding of Fact 91.

5) How do your answers to question 4 comport with the guiding principles of this proceeding, including the requirements of statute and California's climate objectives as addressed in D.22-12-056? Are there other equity considerations to recommend beyond these?

VNEM Successor Tariff Components

Specify in your answers to the following questions whether any of your proposals should also be applied to the MASH and SOMAH VNEM tariffs. The Commission's determination in D.22-12-056 that the MASH and SOMAH VNEM tariffs should be maintained until review of findings form the affordability proceeding and the SOMAH evaluation was limited to their structure, and it may be appropriate to adjust details of these tariffs, such as bill credit estimation, information access, etc. Also, such changes may be necessary and beneficial for the low-income VNEM tariffs and customers as well. Responses should consider whether there is information from the affordability proceeding (Rulemaking 18-07-006), SOMAH Program evaluations (pursuant to D.17-12-022), MASH Program evaluation (pursuant to D.15-01-027), or other related proceedings that should be entered into the record of this proceeding.

6) If the successor to VNEM involves onsite energy generation, describe whether and, if applicable, how the compensation provided for exported energy should differ from that adopted in D.22-12-056 for the Net Billing tariff.
7) What rate schedules and rate components should be used in the successor to the VNEM tariff? Explain your reasoning.
8) Explain whether netting of imports and exports for the benefiting accounts by time-of-use period should continue. If not, describe your recommended alternative(s).
9) Parties discussed the proposed net billing tariff glide path in comments to the November 10, 2022, proposed decision. Should the Commission adopt a successor to the VNEM tariff that includes a glide path for all tariff participants or only income qualified participants? On what basis should the Commission make this determination?
10) Have projects under the current VNEM tariff experienced delays in receiving bill credits after permission to operate is granted?[3] If yes:

[3] The Commissioners received an informal complaint on May 4, 2022 from Sunrun, and others regarding billing delays between interconnection and a lack of bill credits within a reasonable timeframe. *See* letter here: Sunrun_letter_to_SCE_and_CPUC_Missing_Credits_2022.05.04.pdf

a) What changes, if any, to the arrangement initiation process[4] would reduce or eliminate delays?
b) What can be done to reduce the negative impacts of delays on generator/benefiting customers, *e.g.*, informational outreach or the provision of estimated bill credits to benefiting accounts until the actual credits become available?

11) After permission to operate is granted, property owners are able to verify that tenants are being properly credited as they receive information on the generated credits allocated but property owners lack access to the consumption data that would inform them of the net benefits of their systems.[5] What is a fair and timely process for generating account customers to access a *confidential* generator/benefiting account report to assess the net benefits of their systems, and if there are existing processes, is there any need for standardization across utilities?
12) What fees should be charged for interconnection, billing, and/or other costs associated with successor tariff arrangements? Resolution E-4881 adopted many key elements for VNEM tariff implementation, such as set-up fees, allocation of unused credits, changes to billing arrangements, etc. Specify in your response if any of these requirements should be modified or omitted.
13) What new or revised tariff elements would best enable a VNEM successor system with storage to provide grid benefits, bill benefits for tenant accounts, and/or resiliency in case of an outage? Should this apply to the MASH and SOMAH VNEM tariffs?
14) Should storage in a VNEM or a VNEM successor tariff arrangement be allowed to charge from the grid prior to Public Safety Power Shutoffs as articulated for NEM-related tariffs in D.20-06-017 Ordering Paragraph 5? Why or why not? If yes, what regulations, technical controls, or other provisions are needed? Should this apply to the MASH and SOMAH VNEM tariffs?

Net Energy Metering Aggregation (NEMA) Questions

General NEMA Questions

15) Compared to a renewable electrical generation facility under the current net energy metering tariff, what are the unique quantifiable benefits, if any, of

[4] For purposes of this Ruling and your responses, the initiation process is considered the time between interconnection and receipt of the first bill credit.

[5] Resolution E-4881 Ordering Paragraph 8.

such a facility under the current NEMA subtariff to the NEMA participant, the utility, and the electrical system and all ratepayers? What unique quantifiable non-participant benefits, if any: a) do customer-sited renewables in regions with low population density have relative to those in high population density areas and b) does allowing aggregation of customer generators provide?

16) Compared to a renewable electrical generation facility under the current net energy metering tariff, what are the unique quantifiable costs, if any, of such a facility, under a NEMA subtariff to the NEMA participant, the utility, and the electrical system and all ratepayers?

17) For Utilities: Describe the NEMA landscape in your territory by answering the following:
   a) How many properties are currently interconnected under a NEMA subtariff? What portion of these interconnected properties are 1) residential, 2) mixed residential and non-residential, 3) non-residential, and 4) located in a disadvantaged community? What is the cumulative capacity of systems in each of these categories?
   b) How many properties on a NEMA subtariff have solar and storage in front of the meter in a NEMA arrangement? What is the cumulative generation capacity of these systems?
   c) How many properties on a NEMA subtariff have batteries installed separately behind the meter? What is the cumulative generation capacity of these systems?

18) Are current import rates used by NEMA participants cost-based?

19) Should demand response or energy efficiency measures be added for NEMA service eligibility or as an alternative to NEMA?

Successor to the NEMA Subtariff

As in VNEM, excess energy from renewable electrical generation facilities in NEMA arrangements is exported to the electric grid, and benefiting accounts receive bill credits as a result. The benefiting accounts thus "virtually," but not literally, use the renewable electrical generation facility generated energy.

20) Is a "virtual" billing arrangement the best way to comply with the guiding principles of this proceeding with regard to properties eligible for NEMA? Describe the policy and/or technical reasons behind each of your answers to a) through e).

a) If yes, how can the current NEMA subtariff be modified to achieve consistency with the adopted net billing tariff?
b) If yes, are there NEMA arrangement conditions that justify different treatment in the subtariff, such as generating and benefiting accounts sharing a point of common coupling?
c) If yes, should the successor subtariff be differentiated by customer segment? If yes, what segmentation would you recommend and why? For example, should a subtariff be established specifically for agricultural customers (*e.g.*, customers eligible for PG&E AG-1)?
d) If no, are there rate schedules or other rate products that could be used instead? What are the quantifiable costs and benefits of this type of alternative? How do the quantifiable costs and benefits compare to those of the current NEMA subtariffs?
e) If no, are there technology-based alternatives that could be used instead of a NEMA successor subtariff, such as available hardware or software solutions? How do the quantifiable costs and benefits compare to those of the current NEMA subtariffs?

21) How do your answers to question 20 comport with the guiding principles of this proceeding, including the requirements of statute and California's climate objectives as addressed in D.22-12-056? Are there other equity considerations to recommend beyond these?

NEMA Successor Subtariff Components

22) How should netting be addressed in a NEMA successor subtariff (*e.g.*, no netting as articulated in D.22-12-056, 15-minute intervals, time of use-based intervals, etc.)?

23) Should NEMA customers be required to take service on specific cost-based import rates?

24) What fixed costs do NEMA customers currently avoid and how should these fixed costs be recovered from NEMA customers? What are the annual Utilities' administration costs of NEMA? If non-participating ratepayers should be responsible for these fixed and administrative costs, why?

25) How can a successor NEMA subtariff be devised to meet the requirements of the statute and California's climate objectives as addressed in D.22-12-056 without creating/perpetuating a cost shift to non-participants? Should a

successor subtariff to NEMA be approved if it does not pass the Standard Practice Manual Total Resource Cost test?

26) Given that a successor NEMA subtariff might be based on a new structure, potentially similar to the net billing tariff structure, is there a way for the bill credit allocation method to be simplified and still comply with Public Utilities Code Section 2827 (h)(4)(C)?

Net Energy Metering for Fuel Cells

Public Utilities Code Section 2827.10(b) requires the Commission to determine whether fuel cell technologies comply with greenhouse gas emissions reductions standards developed by the California Air Resources Board. On April 6, 2021, the Administrative Law Judge issued a ruling soliciting party responses to questions regarding a staff recommendation proposing a compliance solution. Since that time, the Commission has ruled on relevant topics in other proceedings, and it is possible that new fuel cell, monitoring, or other relevant technologies have become available that should affect the Commission's choice of a greenhouse gas emissions determination method.

27) Have any Commission decisions, resolutions, or dispositions been adopted since the ruling that should be considered? For example, D.21-06-005, D.21-07-011, and/or D.22-12-057 may have findings and direction relevant to net energy metering for fuel cells. Explain whether these determinations should be applied to net energy metering for fuel cells, and why.

28) Have any other legal, regulatory, or technical developments occurred since the ruling and comments that should be considered? Explain whether these developments should be applied to net energy metering for fuel cells, and why.

(END OF ATTACHMENT)