

VALLEY CLEAN ENERGY ALLIANCE**Staff Report – Item 9**

TO: Community Advisory Committee

FROM: Edward Burnham, Director of Finance and Administration

SUBJECT: Net Energy Metering (NEM) Policy Update Draft

DATE: October 26, 2023

RECOMMENDATIONS

1. Consider analysis;
2. Continue discussion of the draft policy update at a subsequent CEC meeting or recommend that the Board approve an update to the VCE Net Energy Metering Policy.

PURPOSE

The purpose of this report is to provide background information and seek CAC feedback/recommendation on VCE's approach to an updated NEM Policy in consideration of upcoming Net Billing Tariff or Solar Billing Plan (SBP) changes adopted by the California Public Utilities Commission.

BACKGROUND

Net Energy Metering (NEM) is a billing system where customers with eligible renewable projects, whether homes or businesses, get credit for the excess electricity they generate and send back to the grid. At the end of the billing period, they're charged only for the net amount of electricity used, which is electricity consumed minus electricity generated. If they produce more electricity than they use, they generally receive a credit towards future bills. Net Energy Metering has undergone several changes in its policy and tariff structures, largely driven by the growth of solar adoption, changing grid needs, and the desire to reflect the value of solar energy more accurately on the grid.

Only about 40-50% of electricity produced by Northern California residential solar installations is used on-site; the remainder is exported to the grid.¹ During the early 2000's, initial compensation for these exports was set relatively high as limited solar production coincided with peak periods of strain on the grid, and customers were encouraged to install rooftop solar to offset peak demand and to increase utilization of renewable energy.

The solar industry has grown to provide an estimated 27% of California's total electricity production, a significant contribution towards renewable energy goals. However, this success

¹ U.S. Energy Information Administration. (2023, April 20). California State Energy Profile and Energy Estimates. <https://www.eia.gov/state/analysis.php?sid=CA>

also brought new supply-and-demand challenges for the industry: the abundance of solar electricity during daytime hours significantly reduces its value during the day and shifts a supply reliability gap into the evening hours when solar stops producing. When electricity exceeds regional demand during the day, it may in some cases have zero, or even negative value, unless it can be stored or utilized elsewhere.

At the October 2019 VCE board meeting, the Board approved changes to the Net energy Metering (NEM) policy that allows existing VCE customers (customers that installed solar systems after VCE's start-up in June 2018) to request annual billing. Prior to this change, the only option for existing VCE NEM customers was monthly billing. The policy became effective January 1, 2020. The policy states "The request must coincide with their existing PG&E true-up period." The purpose for this statement was to protect available solar credits and to keep customers' annual billing date consistent between VCE and PG&E. The SMUD billing system was designed to automatically true-up a customer account when the billing cycle changes, so a request to move from monthly billing to annual billing triggers a true-up. VCE modified the Policy, based on customer feedback, to allow customers to switch to an annual billing cycle at any time during the year. When customers make this request, VCE and call center staff will inform them that 1) their off-cycle requests may result in two true-up bills in the first year and 2) their accounts will be trued-up when they switch. It was expected that a small number of customers will use this option, but the proposed change will provide VCE staff with the flexibility to accommodate these requests.

Net Energy Metering Update – Solar Billing Plan (SBP)

In December 2022, the California Public Utilities Commission (CPUC) initiated a pivotal transition from the conventional Net Energy Metering (NEM) program to a successor program known as the Net Billing Tariff or Solar Billing Plan (SBP). The SBP is designed to realign compensation for customer-sited electricity exported to the grid to be based on the overall value of that electricity, rather than prevailing retail electric rates. These new price signals are designed to enhance the value created by battery storage.

ANALYSIS

To align and update VCE's current NEM policy with PG&E's SBP to establish a billing mechanism and export rates for customers who apply for interconnection of an eligible renewable generating system, such as solar or wind, after April 14, 2023. Customer projects with interconnection before April 14, 2023 would remain enrolled in NEM service until 20 years from their PG&E interconnection dates.

Legacy NEM Customers (Pre-April 14, 2023)

Customers with a PG&E interconnection agreement accepted by the April 14, 2023, deadline are generally allowed to remain on PG&E's NEM program for up to 20 years from their permission-to-operate date; over 99% of pre-April installations meet this criterion. This legacy period is granted even if the system is transferred to a new homeowner/operator and is only forfeit at the customer's discretion or if the system is significantly modified from its original capacity. No action is required to extend these same protections, as VCE's NEM Policy remains in effect for accounts that comply with all PG&E NEM requirements.

Solar Billing Plan (SBP) - Opportunities for Battery Storage

The proposed SBP underscores the critical necessity of energy storage. The value of load shifting through energy storage and discharge has been somewhat constrained under NEM due to competing generous NEM export values. The proposed SBC seeks to increase the value of battery storage with hourly export rates that incentivize evening peak discharge. Recent surveys of solar installers indicate a foreseeable surge in battery installations, rising from the current 19% of installations to 71% post SBP adoption. Additionally, 69% indicated that they would respond to the changes by investing more in storage sales.²

VCE Alignment with Proposed Export Rates

The CPUC has required that PG&E Export Rates be valued based on the hourly avoided cost of energy, as developed biannually by the CPUC. The initial export rates will be determined based on the current avoided cost values, which currently average \$0.04/kWh during typical solar export hours. Customers are allowed to lock-in their export rates for 9 years from interconnection, based on the expected payback period for a solar installation. This is designed to provide reliable financing expectations for solar installations.

Staff notes that these prices are influenced by supply and demand, therefore, exporting during the day when clean energy is abundant results in the limited values above. Export rates can be significantly higher during system peak hours. This also adds to the value proposition for battery storage moving daytime exports into peak evening hours.

When energy is consumed as it is generated, the Generation value of solar production under SBP is equivalent to NEM. Only when electricity is exported to the grid during low-value hours is the value reduced. Battery storage systems can be utilized to significantly increase this value.

Additional Considerations

Staff has been working with our billing and customer support partner, SMUD, on improving our current NEM processes and the distribution of net billing credits to customers. Staff and SMUD are recommending transitioning to an electronic “on bill credit” to the customer that will be appear on the VCE portion of the combined billing provided by PG&E. VCE will discontinue the manual distribution of checks to customers starting January 1, 2024. This will provide more seamless and timely application/distribution of net billing credits to VCE customers. The electronic distribution of on bill credits as part of the normal billing process allows VCE to distribute net billing credit to amounts less than \$100 and no longer roll over balances until the next true-up cycle. To automate this process, VCE and SMUD identified the limitations in supporting our current donations option. Staff agreed with recommends discontinuing this option due current participation. VCE has received ~15 customer donations to date.

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²Fields, S. (2023, March 10) What do California solar installers think about NEM 3? We asked them! Energy Sage. <https://news.energysage.com/what-california-solar-installers-think-about-nem-3/>

RECOMMENDATION

1. Maintain existing NEM rates for VCE Legacy NEM Customers (Pre-April 14, 2023)
2. Adopt NBT/SBP for new VCE solar customers with an adder of \$0.01/kWh for excess generation
3. Modify existing policy for distribution of net billing credits to customers

CONCLUSION

Based on actions taken by the CPUC to structurally modify California's existing NEM program, VCE is placed in a position to consider modification of its NEM program. Maintaining general consistency with PG&E's modifications may not be ideal but it does begin a necessary shift in focus to considering the value of energy storage for small scale distributed systems and help avoid customer confusion. Further, staff acknowledges that low-income households as a critical segment to support in installation of distributed energy resource and recognizes the gap in solar adoption between regular and low-income households. If this policy update is adopted, staff will monitor the activity related to our existing and new NEM customers and evaluate potential program approaches to making resources available, such as solar shares or virtual power plants that may partially address access to this type of resource for lower-income customers and renters.

Attachments:

NEM Policy Update Draft

NET ENERGY METERING POLICY (DRAFT UPDATE)

Amended and Adopted February 13, 2020

1. Residential and Business NEM customers with solar systems installed prior to June 2018 will be placed on their existing PG&E billing cycle, either annual or monthly.
2. Residential and Business NEM customers on monthly billing cycles will have a true-up date in February.
3. NEM customers may choose a monthly billing cycle with February true-up in lieu of annual billing.
4. NEM customers on monthly billing cycles may choose to adopt an annual billing cycle. It is recommended but not required that the request coincide with their existing PG&E true up period.
5. NEM customers with solar systems installed prior to June 2018 that are on annual billing cycles will retain their current true-up month.
6. The transition from PG&E to VCE will occur on the customer's true-up month in 2020.
- ~~7. NEM customers with less than \$100 in wholesale credits will have the credit balance roll over to the next billing cycle (with no loss of credits). NEM customers with a wholesale credit balance exceeding \$100 on their annual true-up date will be cashed-out, unless they choose to roll-over the balance or donate the funds.~~
8. NEM customers that generate excess energy on a monthly basis will receive the retail value plus a \$0.01/kWh credit for the excess generation, without additional compensation for participation in renewable programs.
9. Customers on time-of-use (TOU) rate schedules will receive a \$0.01/kWh credit for net excess generation on a monthly basis.
10. NEM customers that generate excess energy on an annual basis will receive the wholesale value of net surplus generation, plus a \$0.01/kWh adder.
11. NEM customers may opt-out of VCE's NEM program and return to PG&E at their discretion. Departing customers will be true-up with VCE upon return to PG&E.
12. Residential customers adding solar systems beginning June 1, 2018 will be placed on monthly billing with an annual true-up date in February.
13. Non-residential customers adding solar systems beginning June 1, 2018 may be placed on monthly billing with an annual true-up in February.