

## VALLEY CLEAN ENERGY ALLIANCE

### Staff Report – Item 12

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**TO:** Board of Directors

**FROM:** Edward Burnham, Director of Finance and Administration

**SUBJECT:** Net Energy Metering (NEM) Policy Update Draft

**DATE:** November 9, 2023

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#### RECOMMENDATION

Approve the draft update of the VCE Net Energy Metering Policy including:

1. Maintain existing NEM rates for VCE Legacy NEM Customers (Pre-April 14, 2023)
2. Adopt Net Billing Tariff/Solar Billing Plan 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

#### PURPOSE

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

#### 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 are charged only for the net amount of electricity used, which is the 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 over the past decade, 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.

Roughly 40-50% of electricity produced by Northern California residential solar installations is used on-site; the remainder is exported to the grid.<sup>1</sup> 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 (i.e. middle of the day), 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

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

production, a significant contribution towards renewable energy goals. However, this success 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 of this statement was to protect available solar credits and to keep customers' annual billing dates 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.

#### **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 intended 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 that is matched with rooftop solar.

#### **ANALYSIS**

The recommended update would align VCE's current NEM policy with PG&E's SBP. The updated policy would 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)**

VCE has approximately 11,500 NEM customers. These 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 forfeited 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. Below is a summary of key factors associated with VCE's legacy NEM customers.

- The CPUC's decision does not impact existing rooftop solar customers.
- VCE will maintain your current compensation rates.

- You will continue to remain on your current NEM tariff for 20 years after your system was connected to the electric grid.
- You can expand your system by 10% or 1kW without affecting your NEM legacy status.
- You can replace your panels with like-for-like equipment (same size/rating or less) without affecting your NEM legacy status.
- You can add a battery to your system anytime without affecting your NEM legacy status.

### **Nem Customers under Solar Billing Plan (SBP) - Opportunities for Battery Storage**

The proposed SBP focuses on the growing need for energy storage where higher levels of intermittent renewables (e.g. solar) are added to California's grid. The value of load shifting through energy storage and discharge has been somewhat constrained under NEM 1.0 and 2.0 due in part to competing generous NEM export values and the cost of residential scale batteries. The proposed SBC is designed to increase the value of battery storage with hourly export rates that incentivize evening peak discharge. Recent surveys of solar installers indicate a likely 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.<sup>2</sup>

### **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. Note: VCE's \$0.01/kWh additional export credit that would apply to new NEM customers represents a ~20% increase in the current average export rate.

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 appear on the VCE portion of the combined billing provided by PG&E.

<sup>2</sup>Fields, 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/>

VCE will discontinue the manual distribution of checks to customers starting January 1, 2024. This will provide a more seamless and timely application/distribution of net billing credits to VCE customers and streamline the administrative process. 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 also identified the value to effort in supporting VCE's current NEM donations option. Due to current participation levels (total of 15 donations to date), and the associated level of administrative effort required, staff is recommending that VCE discontinue this donation option.

#### Community Advisory Committee Recommendation

The CAC unanimously recommended approval of the recommended NEM Policy draft update.

#### **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 can reduce customer confusion related to an already complex rate and does begin a necessary shift in focus to considering the value of energy to the grid. Further, staff acknowledges that low-income households are a critical segment in need of support in the installation of distributed energy resources and recognizes the gap between solar adoption in low-income and higher 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.

#### **Attachment**

Draft NEM Policy Update

**NET ENERGY METERING POLICY (DRAFT UPDATE)**  
**Adopted February 13, 2020; Amended November 9, 2023**

1. Residential and Business NEM customers with solar systems with a PG&E interconnection agreement accepted on or before April 14, 2023, will maintain their existing billing and true-up cycles as established when customers transitioned to VCE in 2020, either annual or monthly, and maintain the following incentives:
  - a. 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.
  - b. Customers on time-of-use (TOU) rate schedules will receive a \$0.01/kWh credit for net excess generation on a monthly basis.
  - c. 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.
2. NEM customers enrolled on the solar billing plan after April 14, 2023, that generate excess energy on an annual basis will receive the export rates based on the hourly avoided cost of energy, as developed biannually by the CPUC for net surplus compensation, plus a \$0.01/kWh adder.
3. NEM customers with excess generation credits will be cashed-out in the form of an on-bill credit or check for closed accounts.
4. NEM customers may opt out of VCE's NEM program and return to PG&E at their discretion. Departing customers will be trued up with VCE upon return to PG&E.