R.20-08-020 VNEM & NEMA Workshop

Staff is conducting an audio and technical check currently

Workshop will begin at 1p.m.

California Public
Utilities Commission

R.20-08-020 VNEM & NEMA Workshop

Kelly Hymes, Administrative Law Judge

February 8, 2023

This workshop will be recorded and will be available for future viewing

Workshop Objectives

1) Better understand the current subtariffs for Virtual Net Energy Metering (VNEM) and Net Energy Metering Aggregation (NEMA)

2) Discuss how successor subtariffs can be structured to:
   - Ensure statutory requirements are met
   - Ensure California climate policy objectives are met
   - The mechanics of the subtariff will perform as needed

Opening Remarks

Alice Reynolds

President of the California Public Utilities Commission

Background

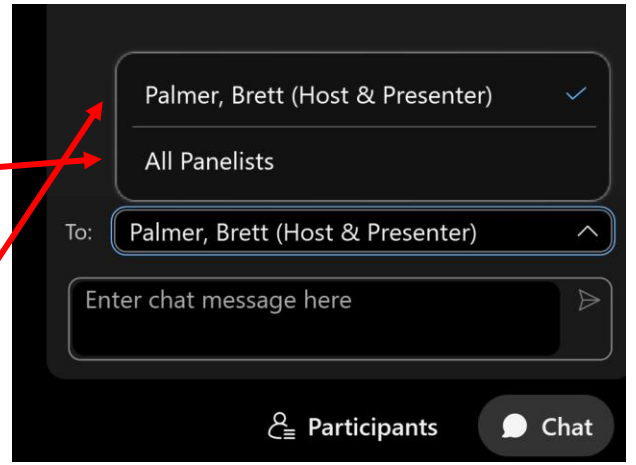
- Decision (D.)22-12-056
- Commission found the record for VNEM and NEMA insufficient
- Commission directed a workshop for early 2023 to develop the record

Agenda

1:00 p.m.	Welcome & introductions
1:05 p.m.	Opening remarks from President Alice Reynolds
1:10 p.m.	Overview of agenda and workshop rules
1:15 p.m.	Overview of current VNEM subtariff mechanics
2:00 p.m.	Panel: Successor subtariff to VNEM subtariff
3:00 p.m.	BREAK
3:15 p.m.	Overview of current NEMA subtariff mechanics
3:45 p.m.	Panel: Successor subtariff to NEMA subtariff
4:30 p.m.	Wrap up and next steps
4:45 p.m.	Adjournment

How to Use Webex

- **All Participants**
  - Ask **questions to panelists** using the chat function in the lower right-hand corner
    - Select "**All Panelists**" option
    - Include the name of your organization
    - For follow up questions, please indicate in the chat that it is a follow up



  - For **IT issues**, use the chat function to message "**Palmer, Brett (Host & Presenter)**"
    - Or email brett.palmer@cpuc.ca.gov
  - To **Join by Phone**: 855-282-6330 (Toll Free)
    - Access Code: 249 789 10960

- **Panelists & Presenters**
  - Mute microphone when not speaking
  - Turn on camera when speaking
  - ED staff will control slides; let us know when to move forward
  - ALJ Hymes will provide all questions to panelists and presenters

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Rulemaking 20-08-020 (Net Energy Metering Tariffs Revisit)

Workshop to Discuss Successors to the Virtual NEM and NEM Aggregation Subtariffs

February 8, 2023

Virtual NEM Regulatory Background

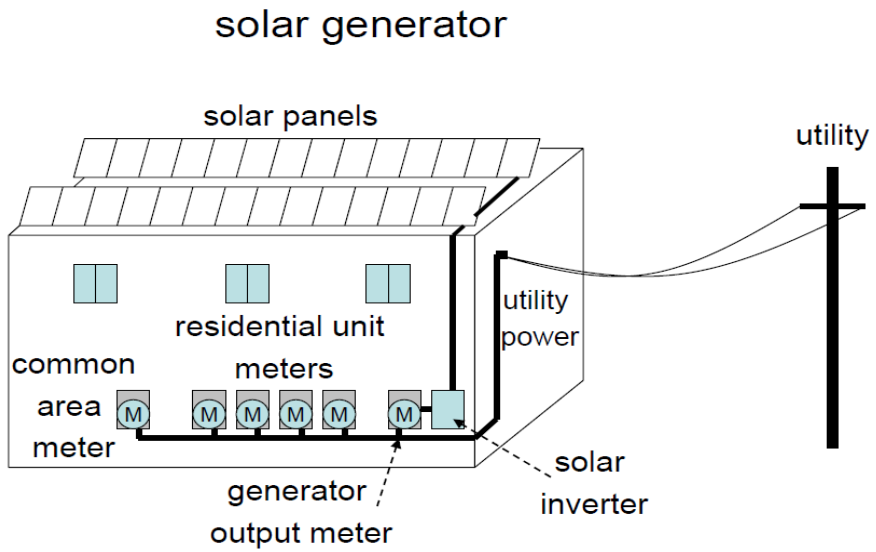
- Pursuant to D.08-10-036 (issued October 20, 2008), SCE established Virtual Net Metering (MASH-VNM) as one component of the California Solar Initiative (CSI) Multifamily Affordable Solar Housing (MASH) program to allow the output of a separately metered solar energy system to be shared with the individually metered tenants in a qualified multifamily housing complex, without requiring the solar energy system to be physically interconnected to each tenant's meter.
- D.11-07-031 (issued July 20, 2011) expanded the types of customers eligible for Virtual Net Metering (NEM-V), which was first established for MASH. NEM-V (and its successor NEM-V-ST) allows any multi-tenant or multi-meter property to utilize Virtual NEM, not just affordable housing properties.
- In D.17-12-022 (issued December 18, 2017), the Commission created the Solar On Multifamily Affordable Housing (SOMAH) program, and its companion SOMAH-VNM which was mirrored from the MASH-VNM schedule with almost identical provisions.
  - PUC Section 2870(g)(1) requires that the utility bill reductions in the SOMAH Program must be:

    ". . .achieved through tariffs that allow for the allocation of credits, such as virtual net metering tariffs designed for Multifamily Affordable Solar Housing Program participants, or other tariffs that may be adopted by the commission pursuant to Section 2827.1."

Note: the names of the schedules listed above may differ slightly by utility

Virtual NEM System – Simplified

- Solar system production is fed back into the grid through a Net Generator Output Meter (bidirectional), which measures the kilowatt-hours produced by the system
  - The NGOM is physically connected to the grid and has no load behind NGOM other than auxiliary load
  - The NGOM is required to meter output in 15-minute increments
- Solar system owner provides the utility an allocation (in %) listing all tenants and common areas accounts or meter numbers (benefitting accounts)
- On a monthly basis, the total output of the system measured by the NGOM is allocated to tenant and common area accounts based on the allocation % provided by system owner.
  - Allocation is done in kWh by TOU (not metered intervals)

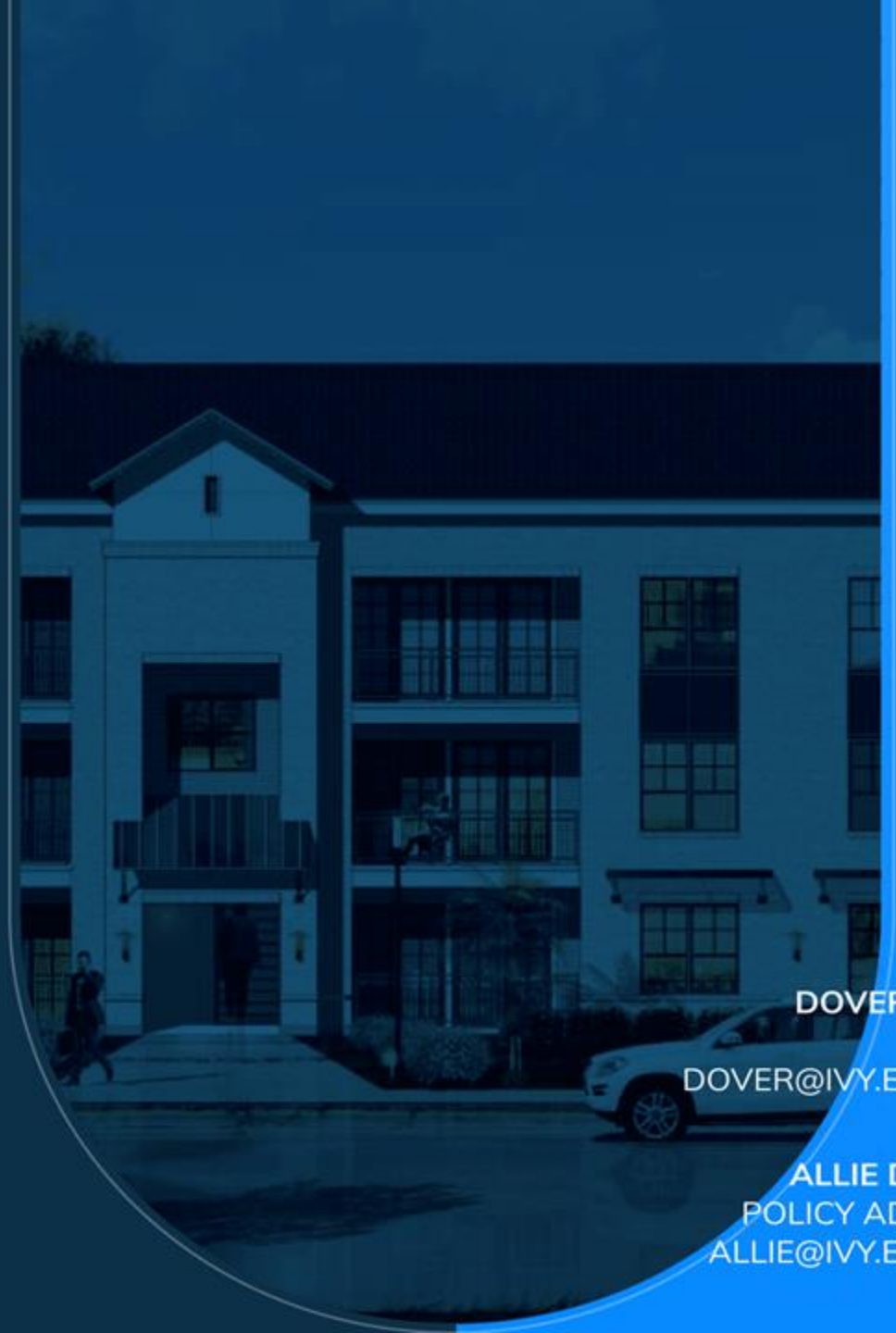


Billing Details Common to the Virtual NEM Tariffs

- MASH-VNM-ST and NEM-V-ST benefitting accounts are required to be on TOU. SOMAH-VNM benefitting customers are initially set in TOU rates, but a residential customer has the option to opt out to an eligible non-TOU rate.
- Each month, allocated credits (in kWh), are subtracted from the benefitting account's metered usage (in kWh) by TOU period (**not** in metered intervals).
- After this calculation, the account would have a "net usage" (which will then be used to calculate **charges** per the customer's rate), or a "net generation" (which will then be used to calculate **credits**, per the customer's rate) for each TOU period.
- Unused credits will be rolled forward and will be subject to "annual settlement" rules.
- The allocated kWh is tracked by benefitting account, and at the end of the relevant period, any "net allocated surplus energy" is subject to the Net Surplus Compensation rules.
- Generator accounts receive a monthly statement from the utility showing the allocated kWh for each of the benefitting accounts. The gen account is not subject to energy credits or NSC.
- NBCs for all Virtual NEM 2.0 tariffs are applied to total usage (not *net* energy).

Note: there may be some minor billing terms or processes by utility.

Virtual Net Metering (VNEM) for Multi-unit Buildings



R.20-08-020
CPUC Workshop
February 8, 2023

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Overview of VNEM for Multifamily Buildings

- **"Virtual Net Energy Metering (VNM or VNEM)** is a tariff arrangement that enables a multi-meter property owner to allocate the property's solar system's energy credits to tenants… ***The intent of VNEM is to help tenants receive the direct benefits of the building's solar system, rather than all of the benefits going to the building owner."*** – CPUC Website

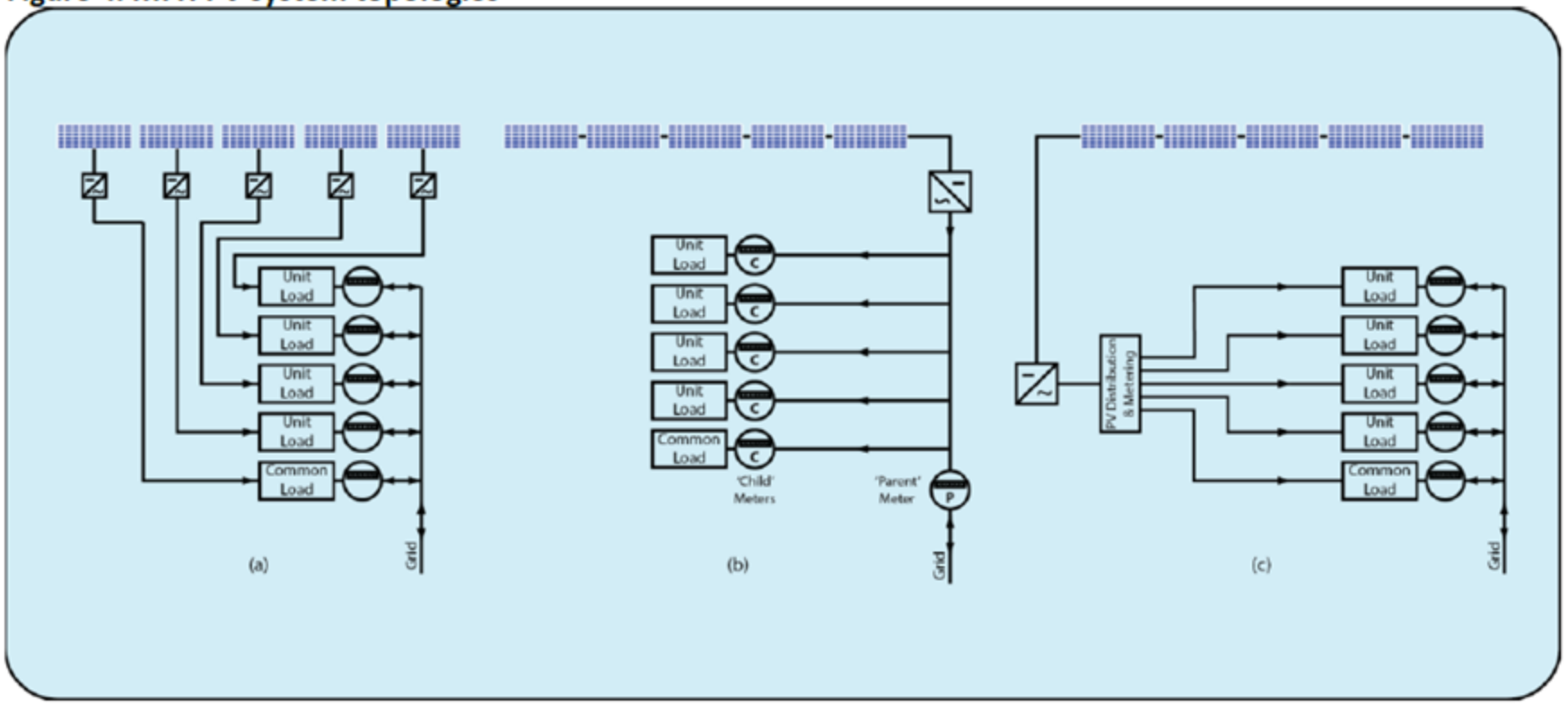
- **There has been significant growth in multifamily solar in the past 3 years**
  - Over 87 MW installed today; In 2019 non-MASH VNEM was under 30 MW
  - Title 24 compliance: onsite DER more cost-effective and better for grid than community solar
  - VNEM represents less than 1% of the installed capacity of the overall NEM program

- **The split incentive problem being fixed is driving growth**
  - Ivy is working on over 160+ VNEM projects right now. Majority of the projects are privately funded largely due to overcoming the split incentive problem for residents and owners.
  - This is could be a sign that if it would have been easier to navigate, VNEM could have been as successful as NEM.

- **VNEM is helping apartment owners install clean energy to the benefit of tenants**
  - VNEM primarily serves renting populations - more than 45% of Californians are renters
  - Renters are overwhelmingly ESJ communities - most low-income live in "general market" housing
  - Equity and environmental justice goals are being achieved with the VNEM program

Illustrative Multifamily Solar Designs

Figure 4. MFH PV system topologies[45]



VNEM Systems Serve Onsite Load

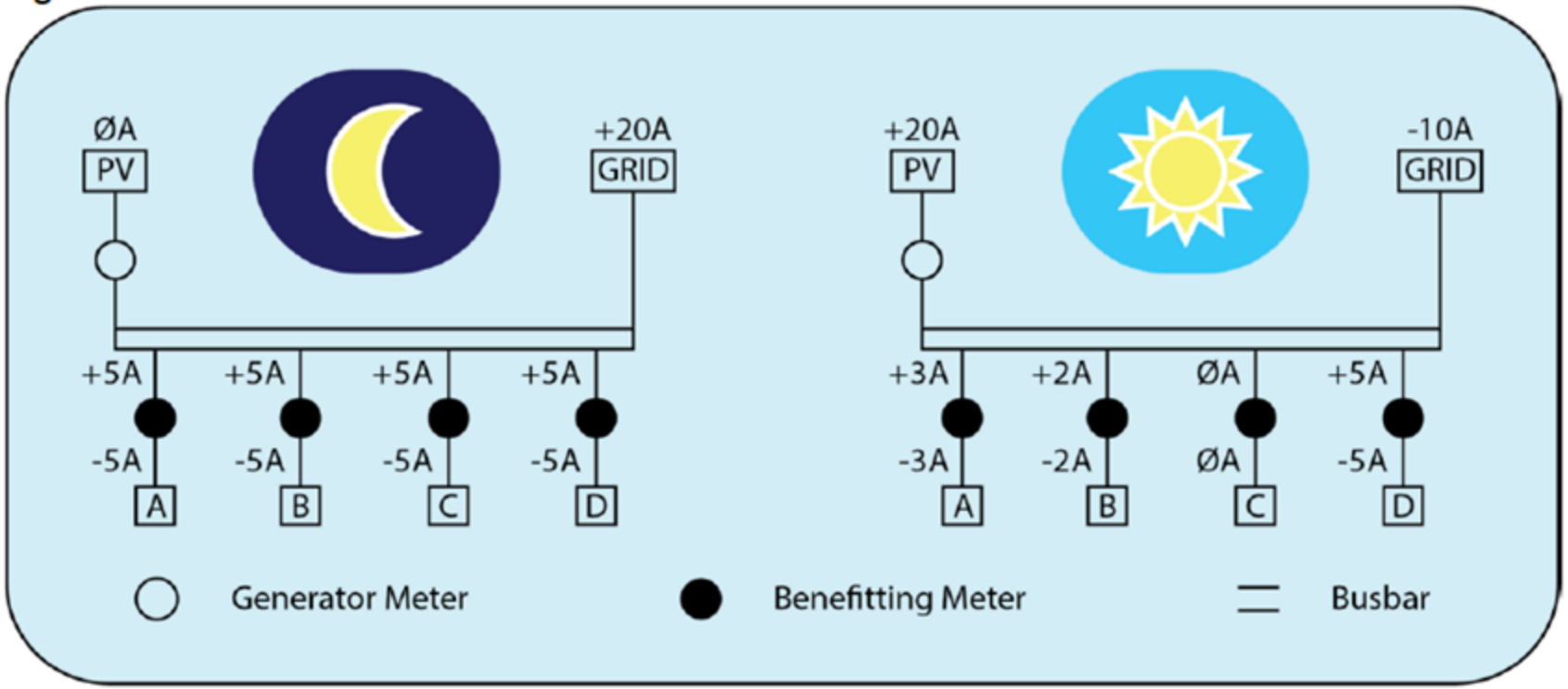
- **Kirchhoff's Current Law**
  - Power flows in a MF building under VNEM follow the same laws of conservation of energy as single facility NEM. KCL governs how current flows through a circuit and how voltage varies around a loop in a circuit.
  - If the energy generated onsite is greater than or equal to the energy required by the loads, then all the loads will be served by the onsite generation. If the energy generated on site is less than the energy required by the loads, then the difference is served by the utility grid.
  - Kirchhoff's law essentially states that current would flow first to wherever there is least resistance. In a VNEM arrangement for multifamily buildings, the current from the generating facility would first flow to the onsite load because it is less resistant than exporting directly to the grid.

- **Line side and Load side taps both serve onsite load in multifamily**
  - Most new projects under Title 24 are using the load side tap and making space directly on the bus bar for solar. This design allows the onsite loads to be served as the generation flows through the bus bar to the service disconnect

- VNEM tariff *meters* generation as "all export" for *accounting purposes only*

Kirchhoff's Law Illustrated in Multifamily Design

Figure 5. Kirchhoff's Current Law for Load Side Connection in MFH



VNEM Billing and Account Management

- **Generating Accounts vs Benefitting Accounts**
  - **Generating Account(s)**
    - Measures solar production to calculate NEM credits
    - Generating account is not permitted to have load under current tariff
  - **Benefitting Accounts**
    - Allocate a share of the NEM credits to each meter that has opted in
    - Benefitting accounts have load
  - **Net Generation Output Meter (NGOM)** measures net output to the grid
  - Netting occurs in 15-minute intervals - netting must be maintained in the VNEM tariff in order to properly measure onsite consumption vs. grid imports at multifamily properties

- **Benefitting Account Lists (BAL)**
  - Apartment owner designates individual meters in Benefitting Account List (BAL)
  - Utilities charge fees for the initial establishment and updates to BALs
  - When tenant moves out, NEM credits go to backup account instead of staying with that meter (Unless under continuous account ownership)
  - Utility timelines for updating BALs and responding to customer requests for changes are uncertain and often very slow (6-9+ months)
  - Customers report that utilities sometimes needed to retroactively credit accounts or fix mistakes or long delays in crediting
  - If account is in owners name, no way for tenants to get discounted rates for that unit even if they are income qualified

VNEM Interconnection Challenges

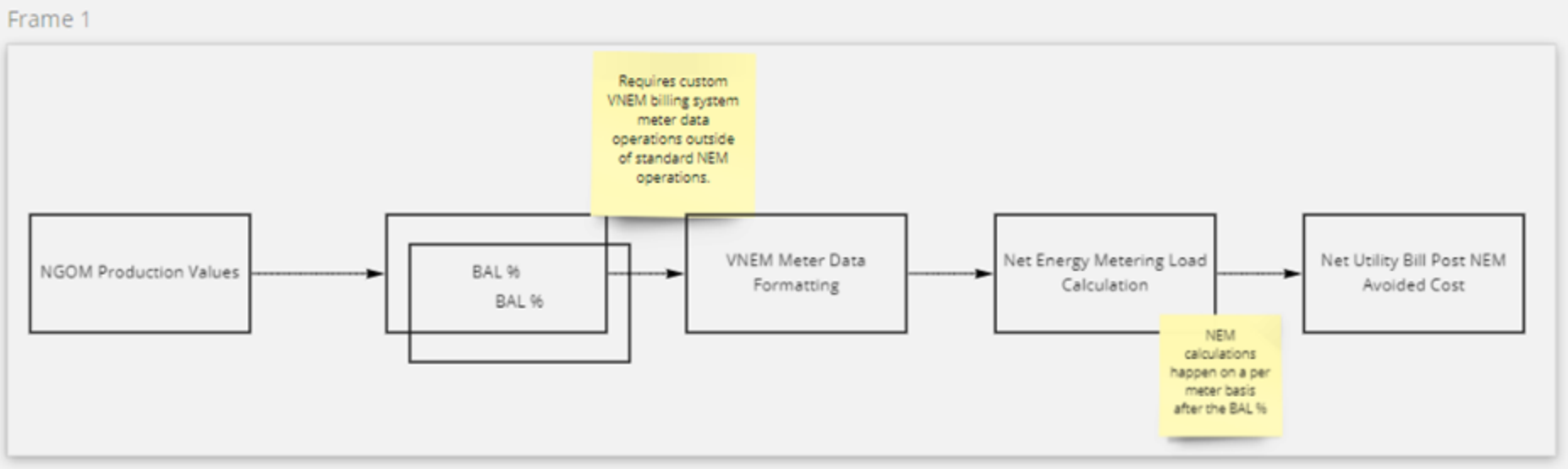
- **Multifamily Retrofits**
  - Utilities require each interconnection to submit its own VNEM application even though the facilities are all one project at one customer property
  - Some utilities require a site visit at different points in the process before deeming application compete
    - Utilities control the scheduling of these site visits, which can impact the ability of customers to complete interconnection applications in a timely manner, there has been known delays of 4+ weeks.
  - Some utilities are not deeming interconnection applications complete without complete BAL information, which is not always possible to obtain at early stages due to:
    - Variable participation from residents.
    - Pending meter placements.
  - Requests for basic info like meter numbers and customer data are not given responses in a timely manner so that interconnection applications can be submitted with the required info

- **Multifamily Under Construction With Solar**
  - Meter numbers are required for submitting interconnection applications, but property owners cannot get meter numbers for new construction due to utility backlog
  - Utilities not being receptive to load submissions for grandfathering NEM 2.0 for new construction - important for multifamily development. Some developers are factoring VNEM financial value into their project underwriting to get a development site to pencil. These developers have often increased their PV size above T24 minimums and should not be penalized for helping our ESJ goals.

- **Changes in project scope, such as number of interconnections due to construction/site issues or reducing system size, can result in significant timeline delays**

VNEM Current Outlook

How VNEM currently works in other use cases and what many of the pain points are.



- Requires custom VNEM meter data and billing IT infrastructure outside of standard NEM billing system requirements.
- Does not incorporate the end user load variance that may be different based on each user profile.
  - This also makes split incentive sharing models difficult between landlord and short term resident which therefore limits adoption.
  - Fixed allocation without time variance being included does not incentivize optimization of DG Asset. There is a larger opportunity to optimize the NET aggregate load profile in a multi-family building versus a SFH due to a larger targeted load profile, the properties are located in higher density areas, and these properties have more users and devices within the engagement target.
- **Lots of room for improvement in successor tariff design to better optimize DERs at multifamily properties to maximize opportunities for increased grid benefits and equity outcomes !!**

Thank you

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SOMAH

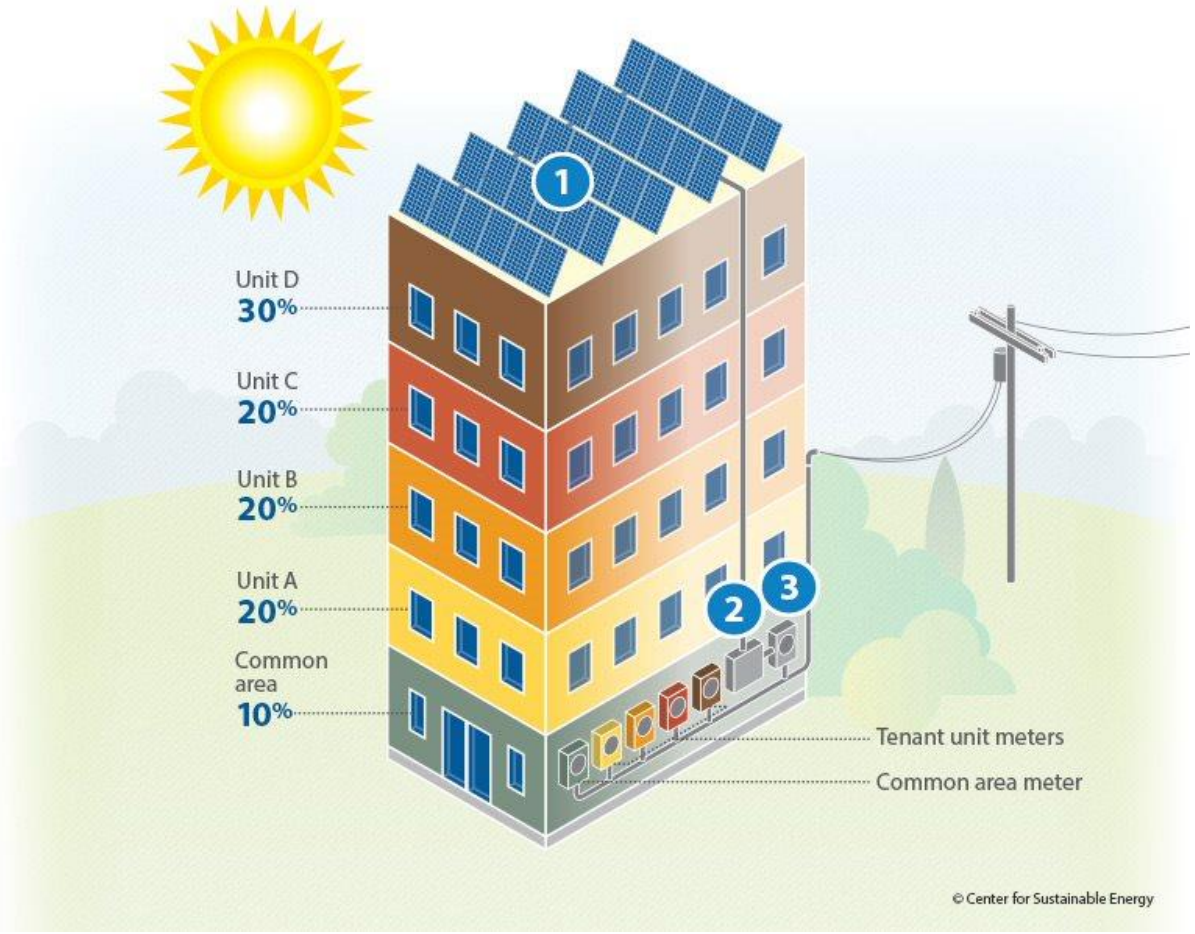
Solar on Multifamily Affordable Housing

February 8, 2023

Hannah Keenan, SOMAH Program Manager

About SOMAH

- Participating IOUs: **Pacific Gas & Electric, Southern California Edison, San Diego Gas & Electric, PacifiCorp, and Liberty**
- SOMAH uses VNEM tariff to provide benefits to tenants through allocation of credits
- Units must be separately metered and eligible for a VNEM tariff, minimum of 5 units on property
- AB 693 and D.17-12-022 provide guidance and mandates



Assembly Bill 693 (Eggman, 2015)

Primary benefit to low-income tenants

Provide a direct economic benefit

Receive credits on utility bills

Third-party ownership restrictions

CPUC Decision 17-12-022

- Use of Virtual Net Metering
- Tenant & Common Area Load Allocation
- Exclusion from Mandatory Time of Use Tariffs
- Tenants must receive full benefit of VNEM credits
- Benefit for Tenants in Federally Subsidized Affordable Housing
- Third-Party ownership requirements

SOMAH Tariff

- Tariff Summary Sheets: calsomah.org/resources/5-interconnection-vnem-steps
  - PG&E: NEM2VSOM, SCE: SOMAH–VNM, SDG&E: SOMAH-VNEM, PacifiCorp: NEMVS-139, and Liberty: MASH-VNEM
- Similar SOMAH tariff content:
  - System should not be oversized when compared to the most recent 12-month consumption data
  - Common area accounts must take service on a TOU rate, but no mandatory TOU for tenants (if default, can opt out)
  - Monthly billing with excess energy credits carried over to the next month. Slight variation in language for terms of net surplus calculations.
  - Customers must pay NBCs for each kWh of electricity that is consumed in each metered interval
  - Interconnection costs align with Rule 21
  - Qualified customers who participate in direct access (DA) or community choice aggregation (CCA) are eligible for service

SOMAH Tariff

- Variance in tariff language around the allocated credit terms
  - **SDG&E:** Common area/tenant split will remain in effect for a minimum of 20 years. The individual tenant unit allocations will remain in effect for a minimum of one year. Owner can revise the tenant allocations after one year, which will also remain in effect for at least one year.
  - **SCE:** Common area/tenant split will remain in effect for a minimum of 20 years. Individual common and tenant area account allocations will remain in effect for a minimum of one year.
  - **PG&E:** Common area/tenant split will remain in effect for a minimum of 20 years and must match the percentage used to determine the SOMAH incentive. After the initial 20-year period, the owner may only modify this allocation once in any 12-month period
  - **PacifiCorp:** Common area/tenant split will remain in effect for a minimum of five years
  - **Liberty:** Allocated credits will be credited to the eligible service accounts located at the eligible property, but does not specify allocation term
- Retention of credits during unit vacancy is included for SDG&E, PG&E and PacifiCorp

Thank you!

hannah.keenan@calsomah.org

Q&A: VNEM Presentations

- **Southern California Edison**
  - Eduyng Castano
- **San Diego Gas & Electric**
  - Gwen Morien
- **Ivy Energy**
  - Allie Detrio
  - Dover Janis
- **Center for Sustainable Energy**
  - Hannah Keenan

VNEM Panel Discussion

- **Southern California Edison**
  - Eduyng Castano
- **San Diego Gas & Electric**
  - Gwen Morien
- **Cal Advocates**
  - Justin Ong
  - Lauren Schenck
- **Ivy Energy**
  - Allie Detrio
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  - Allie Detrio
  - Dover Janis
- **Center for Sustainable Energy**
  - Hannah Keenan

Break

Workshop will resume at 3:15 pm

Net Energy Metering Aggregation

History, Eligibility, Billing, and Participants

Rulemaking 20-08-020 (Net Energy Metering Tariffs Revisit)

February 8, 2023 VNEM/NEMA Workshop

Together, Building
a Better California

NEM2A vs. NEM2V

	NEM2A	NEM2V
Eligibility	Properties are **solely** owned, leased, or rented by the eligible customer-generator (all accounts; i.e., generating and benefiting account must be under the name of one customer of record)	The Buildings, facilities and structures must be under the control of a single owner or operator, but benefiting accounts can remain under the tenant's name
	Benefiting accounts can be on multiple parcels, if they are contiguous or adjacent.	All benefiting and generating accounts must be on the eligible "property" (All of the real property and apparatus employed in **a single multitenant or multi-meter facility** on **contiguous parcels of land**)
	Not eligible for Net Surplus Compensation	Eligible for Net Surplus Compensation
	Generator account can have load	No Load on Generator account
Credit Allocation	Dynamic allocation of kWh credits	Fixed allocation of kWh credits
Billing True-up	If one account is removed/added, a True-Up is required	If one account is removed/added, only that specific account has a True-Up (i.e., not the entire arrangement)

Note: the names of the schedules listed above may differ slightly by utility

NEM2 Aggregation (NEM2A) History

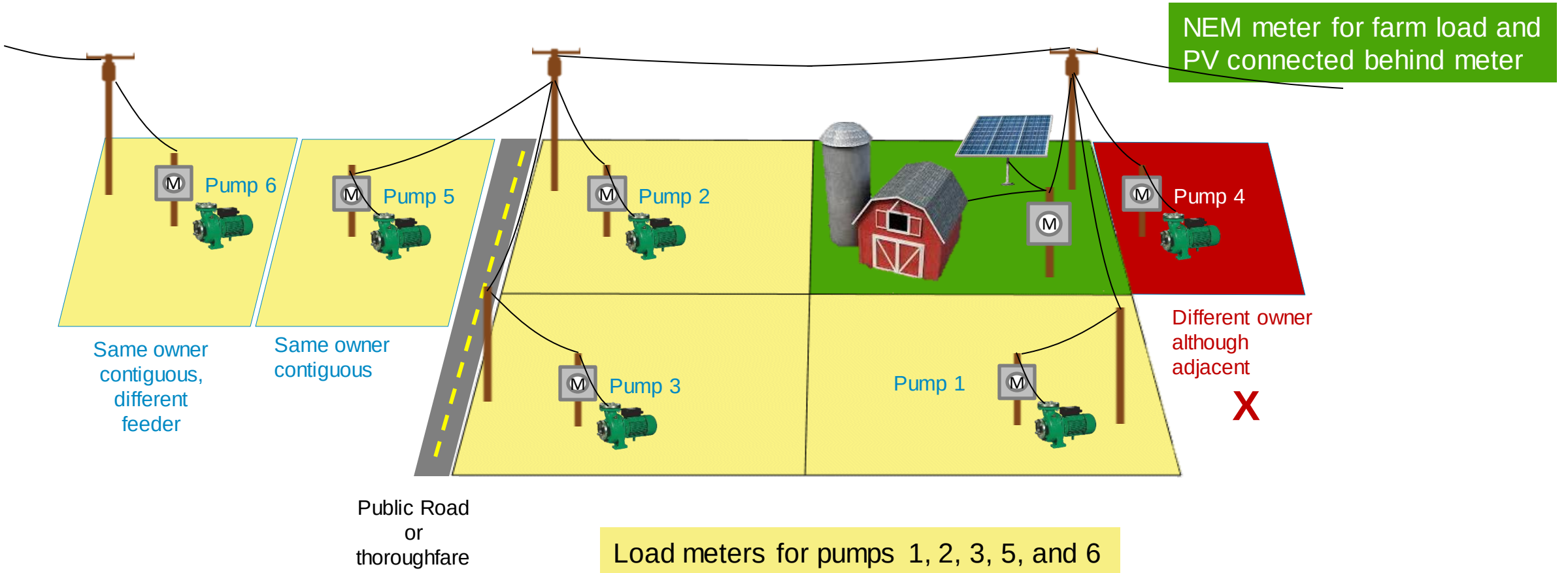
- In 1995 Public Utilities Code (PUC) § 2827 was codified based on Senate Bill (SB) 656 to established net energy metering (NEM) in California.
- SB 594 became effective January 1, 2013, effectively expanding Schedule NEM to include Net Energy Metering load aggregation (NEMA). Additionally, SB 594 also provided that:

  > "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."

- On September 19, 2013, the California Public Utilities Commission (CPUC or Commission) made a determination in Resolution E-4610 that NEM load aggregation would not result in an increased cost shift to non-NEM customers. This finding was primarily due to the existence of the cap of NEM under PUC § 2827.
- In October of 2013, Assembly Bill (AB) 327 added Section 2827.1 to the Public Utilities Code and mandated that the Commission adopt a successor to the existing net energy metering tariff. Subsequently, the Commission approved Decision (D.) 16-01-044, which adopted a revised net energy metering tariff, now referred to as NEM2.
- In June 2016, the CPUC adopted Resolution E-4792 approving all three utilities' NEM 2.0 tariffs, and determined VNEM/NEM-A NBC obligations should be based on metered usage from the grid.
- On August 27, 2020, the Commission initiated a rulemaking to revisit the NEM tariffs adopted by D.16-01-044.
- Subsequently, on December 15, 2022, the Commission adopted D.22-12-056, which reformed Net Energy Metering, adopting a new billing structure called the Net Billing Tariff (NBT).
- D.22-12-056 found "It is reasonable to affirm that VNEM provides benefits to the grid similar to that of the NEM 2.0 tariff" (FOF 218) and "The NEM 2.0 tariff negatively impacts non-participant ratepayers" (FOF 4).

NEM2 Aggregation (NEM2A) Overview

Load served by multiple meters ("Benefiting Accounts") located on the property where the "Generating Account" is located and on property adjacent or contiguous to the property on which the "Generator Account" is located, **only if those properties are solely owned, leased, or rented** by the eligible customer-generator. Different rate classes are eligible to be aggregated in one arrangement.



NEM2 Aggregation (NEM2A) Billing: Dynamic Allocation

- Unlike virtual net energy metering where the generation is applied to benefiting accounts each month based on a pre-defined allocation, net energy metering aggregation uses “Dynamic Allocation”
- Dynamic Allocation simply means the more kWhs a benefiting meter uses in a month, the more generation (in kWhs) that benefiting meter receives. The allocation is based on **cumulative usage**, which is **assessed** and **recalculated** each month.
- The allocated credits (in kWh) are applied to the cumulative usage (in kWh), reducing the billed usage
- Benefits and Drawbacks of Dynamic allocation
  - **Benefits**: at the end of 12 months, the generation would have been allocated to the benefiting accounts that had the most cumulative usage, ensuring maximum utilization of the credits
  - **Drawbacks**: It requires a complex billing methodology that is difficult for all customers to understand

Note: there may be some minor variations in billing terms and processes by utility.

NEM2 Aggregation (NEM2A) Billing: Simple Example

		Benefiting Account #1 (e.g., solar system on the house)		Benefiting Account #2 (e.g., agricultural pump)	
		Monthly (kWh)	Cumulative Allocation	Monthly (kWh)	Cumulative Allocation
Month 1	Monthly Usage: *700 kWh	400	400/700 = 57%	300	300/700 = 43%
	Monthly Generation: *-500 kWh	-285	0.57*-500 = -285	-215	0.43*-500 = -215
	Result	Billed for 115 kWh in usage		Billed for 85 kWh in usage	
Month 2	Monthly Usage: *650 kWh Cumulative Monthly Usage: *1350 kWh	50	450/1350 = 33%	600	900/1350 = 67%
	Monthly Generation: *-300 kWh Cumulative Generation *-800 kWh	21	0.33*-800 = -264	-321	0.67*-800 = -536
	Result	Billed for 71 kWh in usage[1]		Billed for 279 kWh in usage	

[1]Cumulative allocation can result in counter-intuitive results due to re-allocation of past generation credits in current month totals. This is shown in the Month 2 bill of 71 kWh for benefiting account #1, despite actual usage for that account at only 50 kWh.

NEM Aggregation Participation Statistics

NEMA is used by a diverse set of customer types, not just agricultural customers

Customer Class	PG&E		
	Installation Count (#)	Installed Capacity (MW-AC)	Benefitting Meter Count (#)
Residential	3,597	44.3	8,036
Commercial/Industrial	2,650	471.0	7,160
Agricultural	1,585	337.0	6,942
Total	**7,832**	**852.3**	**22,138**

PG&E Notes:

1. Installation and MW data current as of 12/31/22. Installations counted as number of unique Service Points (SPIDs). MW Capacity includes PV and Wind capacity. Generators with load considered as a generator only and not included in benefitting meter count. NEMA Conversions not included. Benefiting meters current as of 2/3/23.
2. Customer class based on the class of the customer applying for interconnection. Benefiting accounts may be in other customer classes. For example, some commercial/industrial NEMA applications may be for an installation behind the meter of a facility not eligible for agricultural rates, while benefiting meters are eligible for agricultural rates.

The NEMA Subtariff Works for Agricultural Customers

Richard McCann, Partner, M.Cubed

For Agricultural Energy Consumers Association (AECA)

and California Farm Bureau Federation (CFBF)

February 8, 2023

Introduction

- How NEMA works and why it's different from other NEM tariffs
- Why NEMA is beneficial to agricultural customers
- Why NEMA is beneficial to California
- What the impacts of NEMA are on rates and the distribution system
- Any revised NEMA subtariff must continue to comply with the law

M.CUBED

How NEMA works and why it's different from other NEM tariffs

- NEMA established to allow agricultural customers to aggregate loads across parcels and roads, and across multiple meters
  - In agriculture, typically each load, e.g., pumps, is metered separately
  - Commercial and industrial customers usually have one or two meters with multiple loads behind those meters
  - Allows growers to aggregate generation in one location and keep other fields in production
- All NEMA customers pay demand charges on the benefitting accounts
  - Demand charges contain the vast majority of distribution costs
- Unlike other customers, NEMA customers are not compensated for excess generation—other customers receive this power for free.
- Annual true up reflects highly daily, monthly and seasonal load variations for farming
  - Other customers have relatively constant and predictable loads to match to solar
- NEMA construct is only means for agricultural customers to install DERs

M.CUBED

Why NEMA is beneficial to agricultural customers

- NEMA allows agricultural customers to optimize land resources for solar generation by locating facilities on land that may be underperforming in agricultural commodity production or retired to comply with water use restrictions
  - This is especially important with potential land fallowing and retirement under SGMA
  - *The Commission should be cognizant of its partnership role with other state agencies in facilitating this transition in managing the state's most important natural resource – water*
- NEMA allows agricultural customers to hedge bills against rapidly escalating utility rates in California's most globally competitive industry
  - No provision for a "glide path" for agricultural customers in NEM decision

M.CUBED

Why NEMA is beneficial to California

- NEMA induces substantial renewables installation in locations with exceptional solar insolation
  - Reduces new generation and transmission capacity installation
    - State's peak load is more than 6,000 MW less than forecasted when NEM was authorized
  - Reduces local distribution investment at substations and to feeder transformers
- California agriculture faces a separate challenge in reducing groundwater pumping to meet SGMA requirements
  - State water management and agricultural agencies are looking to installation of solar on retired farmland as a means of benefitting local communities
    - Growers will not be developing separate wholesale generation projects
- Provides distributed renewable power across the rural grid without paying for renewable energy credits
  - Shift generation investment risks from ratepayers to individual customers

M.CUBED

What the impacts of NEMA are on rates and the distribution system

- NEMA customers uniquely among most NEM customers pay demand charges that cover most distribution costs
  - As acknowledged in the NEM decision, the Lookback Study did not look at NEMA or at agricultural customers in general
    - Finding of fact 20 found agricultural NEMA rates cover costs of service
  - A previous CPUC resolution declared that NEMA was cost-effective
- All NEMA benefitting loads must be contiguous, meaning all must be on a single circuit or feeder in almost all cases
  - Only the lowest voltage secondary circuits are used to convey generation
  - Transmission, substations and higher voltage distribution are not used
- Agriculture is less than 5% of statewide loads
- Combined with few NEMA customers, the overall bill impact must be trivial

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Any revised NEMA subtariff must continue to comply with the law

- A revised subtariff must comply with state law requiring netting of physical quantities before calculating a bill
  - PUC Section 2827(h): *For eligible customer-generators, the net energy metering calculation shall be made by measuring the difference **between the electricity supplied** to the eligible customer-generator and the **electricity generated** by the eligible customer-generator and fed back to the electrical grid over a 12-month period.*
  - Currently NEMA customers pay a monthly net bill, with any monetary and physical credits carried over to the next month, with any kilowatt-hour credits or debits zeroed out at the true up date
- Due to the separately metered nature of NEMA customers, separately crediting the generating account monetarily and then transferring the credit to benefitting accounts turns these customers into ReMAT generators
  - Other NEM customers offset generation and use internally behind the meter—this is physical energy aggregation and NEMA is meant to be equivalent
  - This could be a violation of PURPA in rate setting and contracting terms

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Commission should respect investments made by agricultural customers

- The Commission should respect the substantial investment these customers have made through continuation of the terms of the NEM 1.0 and 2.0 tariffs that they are currently on
- Customers are not speculators in energy markets—contract and pricing terms should reflect both mitigated risk and the full long term benefits created for other customers and citizens of California
  - For NEM 3.0, NEMA customers should receive compensation that reflects the cost of acquiring new generation resources as authorized by the CPUC, not short-run market prices, to reflect the investment burden and risk taken by these customers

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Q&A: NEMA Presentations

- **Pacific Gas & Electric**
  - Justin Starks
  - Colin Kerrigan
- **San Diego Gas & Electric**
  - Gwen Morien
- **Agricultural Energy Consumers Association**
  - Richard McCann

NEMA Panel Discussion

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- **Cal Advocates**
  - Justin Ong
  - Lauren Schenck
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Next Steps

- Debrief with Energy Division to develop questions to complete the record for VNEM and NEMA
- Issue a ruling in early March 2023 with ruling questions
- Proposed decision later in 2023
- **Please type any questions on next steps in the Q&A**

Thank you!

For VNEM questions, contact Sarah Lerhaupt (sarah.lerhaupt@cpuc.ca.gov)

For NEMA Questions, contact Chris Westling (christopher.westling@cpuc.ca.go)

This slide deck will be available here: cpuc.ca.gov/industries-and-topics/electrical-energy/demand-side-management/net-energy-metering/nem-revisit

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