



**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

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Order Instituting Rulemaking to Revisit
Net Energy Metering Tariffs Pursuant to
Decision 16-01-044, and to Address
Other Issues Related to Net Energy
Metering.

Rulemaking 20-08-020
(Filed August 27, 2020)

**COMMENTS OF IVY ENERGY ON THE PROPOSED DECISION REVISING NET ENERGY
METERING TARIFF AND SUBTARIFFS**

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Date: January 7, 2022

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I. Introduction

Pursuant to the California Public Utilities Commission (“Commission”) Rules of Practice and Procedure (“Rules”), Ivy Energy respectfully submits these comments on the Proposed Decision (PD) Revising Net Energy Metering Tariff and Sub-tariffs.

Ivy Energy was a grant recipient of the California Sustainable Energy Entrepreneur Development Initiative (CalSEED) and was awarded the California Energy Commission’s Visionary of the Year Award in 2020. Ivy’s mission is to expand access to onsite clean energy resources for those that do not own property and foster a win-win value proposition for multifamily building owners and tenant residents to share the benefits together. Ivy Energy was granted party status on February 17, 2021¹, submitted testimony that was admitted into the record on July 30, 2021,² made a good faith effort to include factual evidence and data in the record to support its arguments, and has consistently advocated for multifamily renters and the sub-tariff virtual net metering (VNEM) throughout this proceeding.

Our company was founded on the notion of equity and increasing access to clean energy to an underserved customer class. If the Commission’s intent with this Decision is to “reduce the cost shift”, then it should take a hard look at who the “non-participating customers” actually are and take demonstrative

¹ Email Ruling from Administrative Law Judge Granting Party Status to Ivy Energy; February 17, 2021

² R.20-08-020 Evidentiary Hearing *Reporters’ Transcript, Virtual Proceeding, July 30, 2021, Pages 737-905, Volume 5* <http://docs.cpuc.ca.gov/SearchRes.aspx?DocFormat=ALL&DocID=398052751> At pg. 901 Exhibits IVY-01, IVY-02, AND IVY-03 were all received into the record

steps to increase access to clean energy resources for those customers. In particular, the multifamily market segment requires more careful analysis by the Commission before changes are made to the tariff for that customer class (VNEM). Renting populations are overwhelmingly communities of concern, and those that do not own their property (renters) have been at a disadvantage in NEM program participation thus far.

Ivy strongly encourages the Commission to maintain VNEM for multifamily and make strategic enhancements to the tariff that will increase adoption of clean energy in renting populations. Additionally, the Commission should not foreclose the opportunity for any customers that have not yet adopted clean energy to do so in a cost-effective manner that is backed by rational customer economics. Climate change demands that California continue its aggressive clean energy and building decarbonization goals. We cannot afford to impose new economic barriers and stall the cleantech market or discourage customer adoption at this critical juncture in time.

II. Summary of Comments

1. VNEM Affirmations in PD
2. Equity and environmental justice
 - i. Renters must be acknowledged as a disadvantaged community within the NEM program
 - ii. SOMAH is only for deed-restricted housing and does not capture all low-income customers
 - iii. Lookback Study shortcomings
3. Discussion of Proposed Successor Tariff
 - i. Grid Participation Charge
 - ii. Netting and bill credits
 - iii. Suggestions for clarity
4. VNEM should be studied further before requiring multifamily buildings to transition to a successor tariff
5. Conclusion

III. VNEM Affirmations in the PD

Ivy Energy greatly appreciates the Commission affirming the grid benefits of VNEM systems, including the acknowledgement that onsite customer load is being served by these generating facilities. Ivy also appreciates that the Commission agreed with us, the Agricultural Parties, and others that VNEM and NEMA should continue to be separate and distinct tariffs.³ We agree with the description and

³ PD at pg. 139-140

characterization adopted in the PD and thank the Commission for recognizing the nuances of the differences between these sub-tariffs. We agree with CALSSA's suggestions to treat all VNEM arrays as a single generator and encourage the Commission to adopt the recommendations for optimizing the process for managing Benefitting Account List (BAL) updates.⁴

While we agree with the Commission's description of the benefits of VNEM systems being similar to NEM systems, Ivy has articulated the significant opportunity for multifamily buildings to provide *greater* benefits to the grid than single family homes or single facility customers. As Ivy discussed in testimony:

Multifamily buildings represent a tremendous opportunity for the Commission to get creative with dynamic and sophisticated energy optimization strategies that can support California's grid in real time. Multifamily buildings have many different customer loads that can be served with onsite DERs, and some may have multiple buildings on a single parcel. Many of these energy management functions can be automated with software and other advancing technologies to provide more flexible management of energy assets and loads to benefit occupants, owners, and the grid.⁵ They can optimize energy efficiency, demand response, onsite renewables, energy storage, electric vehicle charging, and resilience for an entire community all under one roof. Multifamily buildings can be the epicenter of equitable growth and advancement towards a high DER future in California. Automation, artificial intelligence, shared value ledger functionality and other new software-based technologies can enable multifamily residents to easily interact with the grid and respond to energy system needs in real-time all while reducing carbon and utility costs and increasing resilience.⁶

Ivy recommends that the Commission conduct further study of multifamily buildings as their own customer class in concert with the California Energy Commission (CEC), Energy Division, and consultants. It seems appropriate that a customer class representing nearly half of the population should be fairly analyzed with quantifiable evidence prior to making an economic decision, and not based on another customer class's data. As discussed further below, no analysis has been completed on the multifamily segment for the record in this proceeding. It is entirely possible that multifamily buildings, who may have anywhere from a dozen to several hundred meters behind a single service delivery point, are *paying more* than their cost of service. Commissioning a study of multifamily buildings and VNEM systems installed to-date and future commissioned VNEM systems would likely yield findings about the cost-effectiveness and grid benefits of these systems, the demographics of tenants being served by these systems, will result in innovative energy management strategies deployed in multifamily communities, and ensure that Commission decisions have appropriate data to support changes to customer programs in an equitable manner.

⁴ PD at pg. 140

⁵ *Grid-interactive Efficient Buildings: State Briefing Paper* National Association of State Energy Officials <https://naseo.org/data/sites/1/documents/publications/v3-Final-Updated-GEB-Doc-10-30.pdf>

⁶ IVY-002 at pg. 4

Until the Commission completes analysis on VNEM and multifamily dwellings as their own customer class, Ivy strongly recommends maintaining the existing VNEM tariff for *all* multifamily customers, not just “low-income” customers that happen to live in hard to access deed-restricted housing eligible for SOMAH.⁷

IV. Equity and environmental justice

Ivy Energy has consistently advocated for renting populations in multifamily dwellings throughout the course of this proceeding. More than 45% of Californians rent their homes, representing more than 16 million people, 60% of renters are of non-white ethnicity, and renters are more likely to have below average incomes, even if they are not officially deemed “low-income” according to homeowner census and rental population data.⁸ In California, low-income residents are more likely to rent than own their homes.⁹ No party disputed these facts or the sources of information.

Ivy has provided clear and compelling evidence for the record to demonstrate that renters are statistically likely to be low-income customers and/or communities of color.¹⁰ The communities of concern identified in the Commission’s Environmental & Social Justice (ESJ) Action plan are overwhelmingly likely to rent their homes and/or live in multifamily housing.¹¹ Therefore, the Commission can conclude that improving the VNEM 2.0 tariff for multifamily customers will help to achieve greater equity in onsite clean energy adoption and reach traditionally underserved customers. Reaching renters means reaching ESJ communities of concern. Expanding VNEM for the multifamily sector is a straightforward way to comply with the mandate to design specific policies that reach disadvantaged communities.¹²

The Final Decision should include some reference to the testimony and evidence on the record about the demographics of renting populations in California. Ivy included a variety of statistics from reputable sources in its testimony and in multiple separate filings, all of which were accepted into the record.¹³ Appendix A shows Exhibit IVY-003 with Tenant Demographics and Statistics. Not one party disputed the accuracy or source of this information:

⁷ PD at pg. 140; IVY-001 at pg. 6

⁸ IVY-001 at pg. 6

⁹ IVY-001 at pg. 6

¹⁰ Exhibit Ivy-003 shows the demographics and statistics behind California’s renting population, which coincides with the CPUC’s target communities outlined in the Environmental & Social Justice Action Plan

¹¹ California Public Utilities Commission Environmental & Social Justice Action Plan <https://www.cpuc.ca.gov/esjactionplan/>

¹² Public Utilities Code § 2827.1 *Ensure that the standard contract or tariff made available to eligible customer-generators ensures that customer-sited renewable distributed generation continues to grow sustainably and include specific alternatives designed for growth among residential customers in disadvantaged communities.*

¹³ See IVY-003 for Renter Statistics and Demographics in Appendix A

“It is critically important to understand the people who are benefitting from VNEM – renting households. There are approximately 16.9 million renters in the state of California.⁶ In particular, the demographics of the renting population should give the Commission greater perspective on the multifamily market. The median household income of California renters is \$42,000, compared to \$84,000 for California homeowners. More than 57% of Hispanics and Latinos are renters. 43% of Asian Americans are renters. More than 64% of African Americans are renters. 63% of Native American Indians are renters. Almost 48% of renters in California spend 35% or more of their income on rent, with another 21% of renters spending 25-34% of their income on rent.¹⁴

VNEM enables renters to participate and benefit from California’s clean energy transition. Renters are more likely to be people of color with low and moderate incomes. Renters are receiving tangible cost savings benefits every time solar is installed at a multifamily building. As the Commission considers how to correct systemic environmental injustices that have arisen in California, due in large part to the fossil fuel and electric utility industries, it should keep in mind the demographics of renters in multifamily buildings and design intentional policies that will allow these historically burdened populations to benefit from clean energy investments. This can be done by providing a longer runway for solar adoption at multifamily buildings under the existing program and enabling renters to reap the resulting financial benefits.”¹⁵

The data on renting populations being ESJ communities should be included in the Final Decision’s Findings of Fact. The Decision adopted should explicitly include a description of the equity benefits that would be realized with the extension of VNEM, such as reaching communities of color and low-income customers who are renters in general-market multifamily housing.

Finally, the PD’s characterization of Ivy Energy’s proposal should be amended, as it does not fully capture Ivy’s Equity Proposal.¹⁶ Ivy did not propose “additional incentives” but instead recommended that the VNEM tariff be maintained until 10,000 MW of installed capacity is reached, the Commission should make process improvements to the back-end administration of VNEM, and execute a marketing campaign specifically to accelerate VNEM adoption in multifamily dwellings.¹⁷ This was proposed as a low cost way for the Commission to maximize the impact of its decision to maintain VNEM 2.0 for this customer segment. It is a reasonable effort that should be made to help meet the stated goal to design specific alternatives for disadvantaged communities, as the law requires. It could be easily executed to inspire existing multifamily building owners to act on climate and help meet the state’s building decarbonization goals by installing clean energy under VNEM, which will also increase benefits for renters, the non-participating customers noted throughout the PD.

We request that the intent of our proposal – to improve equity and access for underserved renting populations – be clearly articulated in the Commission’s description of Ivy Energy’s contributions to this Decision in Section 6.10.

¹⁴ IVY-001 at pg. 6

¹⁵ IVY-001 at pg. 6

¹⁶ PD at pg. 22-23; Section 6.10 describes Ivy Energy’s VNEM Proposal

¹⁷ PD at pg. 22-23

SOMAH

The PD recommends that the “low-income” VNEM tariff for MASH and SOMAH remain intact until further analysis is completed in other proceedings.¹⁸ Ivy provided testimony on the SOMAH program and what qualifications are required for participation in that program. To qualify for SOMAH, the property must be designated as “Deed Restricted” housing, of which there are roughly 400,000 units in California.¹⁹ There are more than 16 million renting households in California.²⁰ SOMAH alone will not provide an equitable solution to onsite clean energy access for the millions of renting households in California who may not be lucky enough to live in eligible deed restricted affordable housing.

The Commission presumably agrees that because SOMAH was not studied in the Lookback Study, that the tariff serving those customers should not be changed.²¹ The logic would follow that all VNEM systems, not just those interconnecting a deed-restricted housing unit, should be left alone until further study is conducted. As multiple parties have explained, “income qualification” is only one determinant of need.²² Many low-income customers will be harmed if VNEM is changed without a fair analysis of the sub-tariff and its impacts. It would be legally sound to exempt all VNEM customers from transitioning to a successor tariff at this time because renters are a disadvantaged community and specific alternatives have not yet been developed for all renting households. SOMAH is not sufficient to address the inequities in solar adoption.

Lookback Study Shortcomings

The Commission puts a great deal of emphasis on the Lookback Study to justify various elements of the PD. As Ivy and GRID Alternatives both pointed out very early on, the Lookback Study omits any analysis of VNEM or the multifamily building sector as a distinct customer class.²³ Multifamily dwellings cannot be compared on an apples-to-apples basis with single family homes. As discussed above, there are very significant differences between these customer classes and their facilities’ grid impact and cost of service. Multifamily renting communities must be evaluated as their own distinct customer class. The

¹⁸ PD at pg. 139

¹⁹ IVY-001 at pg. 6

²⁰ IVY-003

²¹ PD at pg. 140: “information gathered in the affordability proceeding could be helpful in providing a more complete record with respect to the VNEM tariff. Further, there is a current evaluation of the SOMAH program being conducted, pursuant to D.17-12-022.393 A final report has been made public and we consider information from that evaluation could be useful in determining future changes to the tariff.³⁹⁴ However, at this time the report is not in the record of this proceeding. We find it prudent to delay any changes to these programs until review in this proceeding of additional findings from the affordability proceeding and the SOMAH evaluation.”

²² GRID Alternatives Proposal

²³ IVY-001 at pg. 6

Commission must acknowledge the substantial difference between the grid serving a single-family home and a multifamily dwelling in the residential customer segment.

As discussed in Ivy’s testimony, “over 20 MW of MASH and SOMAH project serving low-income families were left out of the NEM 2.0 Lookback Study, in addition to all general market VNEM projects that are providing the only means of onsite solar access to renting households.”²⁴ It is likely that the Lookback Study would have come to a different conclusion about low-income solar adoption trends in California if VNEM data were included to capture renting households. The NEM tariff has largely benefitted those that own property. VNEM enables customers that do not own property to realize the economic and environmental benefits of onsite clean energy. Those customers should be represented in a comprehensive analysis of the NEM program, otherwise the Commission cannot conclude the analysis is legally sound or justify changes to VNEM since there is no supporting data.

Renters should be acknowledged as a disadvantaged community within the NEM program

Renters have been at arguably the highest disadvantage when evaluating the impact of the NEM program. It does not matter their income, physical location, or proximity to a pollution source when renters have little ability to make a proactive decision about clean energy investments due to not owning their property; thus, the decision-making power is not in their control. The Commission finds that “renters have no ability to install storage and have less ability than homeowners to install load shifting smart devices”.²⁵ Renters actually have no way to install solar – or any other generation source or energy efficiency appliance, such as a heat pump – because they have no decision-making authority not being the property owner. Renters make up over 45% of California’s population – they make up the lion’s share of “non-participating ratepayers”. The Commission should find that renters are disadvantaged. Therefore, expanding clean energy access to renting communities is an equitable outcome in this proceeding, both from a legal and policy standpoint.

The Commission should maintain VNEM for all multifamily customers, not just low-income, at this time, and conduct an analysis of multifamily dwellings before requiring a transition to a successor tariff. This analysis would be useful in two major ways: 1) it should analyze the impact of multifamily buildings on the grid and their cost of service, 2) analyze the demographics of customers residing in multifamily buildings to better understand the potential benefits to ESJ communities.

²⁴ Ivy Energy Comments on NEM 2.0 Lookback Study, pg. 3, citation to GRID Alternatives comments on initial NEM 2.0 Lookback Study Analysis

²⁵ PD at pg. 172

V. Discussion of the Proposed Successor Tariff

It was described in the PD that the VNEM successor tariff would generally conform to the successor tariff described in Section 8.5.²⁶ Multifamily buildings are not the same as single-family homes and attempting to implement the tariff as if they were the same leaves several large and controversial gaps in the implementation details. Again, we urge the Commission to delineate between the shared resource construct of VNEM and the single-family residential NEM construct. The lack of detail and vague descriptions meant to connect VNEM to the net billing tariff in the PD creates confusion and uncertainty.

In order to legally comply with the statute's mandates to promote environmental and social justice with specific alternatives for disadvantaged communities, while ensuring sustainable growth of the solar market, clarity on the successor tariff is necessary for the renting populations and building owners that VNEM serves. Ivy has pinpointed some areas of the PD that require more detail and provided some assumptive options that can be interpreted in multiple ways based on the language of the PD or lack thereof.

Grid Participation Charge.

The PD does not adequately consider multifamily VNEM in its description of the Grid Participation Charge (GPC). The PD focuses on analysis of electric cost and the conclusion of a GPC strictly driven off of existing NEM data that does not appropriately articulate the differences of a multi-family community with solar. The successor tariff described seems to contemplate a Grid Participation Charge (GPC) sending a signal to customers that they are paying for their "use of the grid".²⁷ The PD is vague and does not fully articulate what these grid costs are. Is the GPC related to a meter, single point of interconnection, or have other correlation to specific electrical infrastructure?

Presumably, the GPC is meant to apply on a per-customer basis. If that is the case, it may be workable for single-family homes, but not multifamily dwellings. The PD does not clarify in a VNEM situation, where there are hundreds of separate residential customers under one roof, who would pay this Grid Participation Charge. Is it assumed that each customer meter would have the charge applied? Should renters be responsible for such a charge when they had no say in the decision to invest in the resource? Renters would now be taxed without proper data supporting the physical differences of a charge implied to them that was designed for larger homes.

The Commission finds that "renters have no ability to install storage and have less ability than homeowners to install load shifting smart devices".²⁸ Renters actually have no way to install solar – or any other major energy efficiency appliance, such as a heat pump – because they have no decision-making

²⁶ PD at pg. 141

²⁷ PD at pg. 123

²⁸ PD at pg. 172

authority not being the property owner. So why should they pay a GPC? An apartment is not the same as a single-family home, and so basing the GPC on a kW-size basis would also not be fair to customers. The GPC cannot be fairly levied on multifamily customers.

Or is the lack of detail surrounding the GPC for VNEM indicative of the Commission's intent not to levy a GPC on VNEM customers? In testimony, one IOU representative had stated that their virtual tariff proposal would not apply to these customers, but that intention is not clear within this PD.²⁹ The GPC would be very detrimental to renters and all tenants living in new Title 24 buildings, in addition to discouraging VNEM adoption on existing multifamily dwellings further. If the GPC is meant to apply to a generating meter account holder, it would remove any existing incentive for property owners to install clean energy for their tenants. No apartment owner would install solar under the vague terms of the tariff described in this PD. It is already difficult enough to install a VNEM system and levying a GPC on multifamily buildings would be the nail in the coffin for the existing multifamily market.

Ivy opposes the GPC construct until a concrete analysis of the multifamily customer segment is completed. The lack of detail surrounding the GPC for multifamily VNEM is concerning. If a GPC is adopted, one should be developed specifically for multifamily homes, not one based on a single-family homes analysis. The Commission seems to understand the GPC nuance and that there could be unintended consequences of levying this charge on multifamily customers by exempting low-income programs MASH and SOMAH from transitioning to the successor tariff at this time, citing further evaluation and study that is forthcoming. The Commission should exempt all VNEM customers, not just MASH and SOMAH customers, for these same reasons.

Netting and bill credits.

The PD describes netting as recording imports on one meter channel and exports on a different meter channel.³⁰ In a single-family home setting, the PD describes how instantaneous netting will work and it is more obvious how netting could work with a single bi-directional meter. VNEM systems are associated with a service delivery point and load for an entire property; they are not directly tied to a single meter. The successor tariff does not contemplate how netting will occur in a VNEM scenario where there are multiple customer meters and Net Generation Output Meters (NGOM) required for installation. The PD lacks clarity around this detail and invites open-ended interpretation of how netting should work for multifamily dwellings. The implementation of instantaneous netting in a multifamily community gets very messy very quickly.

²⁹ IOU-001 (Kerrigan)

³⁰ PD at pg. 107

In reading this PD, one would assume that netting could happen from a percentage interval of the generator account being applied and netted from a benefitting account meter's usage at the same time. The PD seems to imply that multifamily netting would happen virtually in the same manner, as if there were a small generator on a small home, but that is not the case with a multifamily property. As the Commission accurately found, VNEM systems offset the larger multifamily dwelling load because they sit on the same feeder as the load they serve.³¹ The netting proposal is conflicting and unworkable for multifamily as written. If there is another greater load in the building, other than a load of that specific benefitting account receiving some percentage of the VNEM system, then proper netting of the generator account would not be happening. In this assumptive scenario, this could happen often as someone may not be home and that generator kWh value would still be allocated as an export credit when other residential users are, in fact, using power at that time not met by their own VNEM kWh's allocated to them. This would be an inequitable measure for renters and building owners by not properly netting their property load when implementing the successor tariff yet netting in very precise terms for single-family homes. This is another reason that we believe that VNEM and multifamily dwellings should be weighted carefully on their own basis and not looped into single-family programs.

Alternatively, it could also be assumed from the lack of detail provided in the PD related to VNEM that netting would not happen at all, due to the utility's original claim that demand reduction is not occurring on VNEM systems and that all of their generation is considered export. This would also be conflicting with the findings of fact in the PD that VNEM generators do serve onsite load. Multifamily VNEM systems have to be considered on a parcel basis.

The successor tariff described in 8.5 does not discuss how credits will be converted into avoided energy cost and referenced on a benefitting meter's bill for VNEM. The IOUs proposed doing this by converting the generator account benefits into a dollar amount and then into a % allocation of those created benefits, but that proposal was based on the faulty "all export" premise. This also does not consider the impacts of low-income customers. What about those customers on CARE rates living in market rate apartments? As we have discussed previously, SOMAH only covers deed-restricted housing units. A large swath of low-income customers will have their bill credits slashed if the PD is adopted as written. There is no discussion of a Market Transition Credit for VNEM customers, and the PD provides no explanation for how this mechanism would work for multifamily dwellings.

³¹ PD at pg. 172

Suggestions for Clarity.

If the Commission is to require multifamily VNEM to transition to the successor tariff, it must provide clarity on the items discussed above. It should be clarified that the GPC should not apply to VNEM systems. Ivy suggests that the Commission ensure that parcel level netting is happening. This means that all benefitting account meters associated with a generator account are summed, and export rates listed in the successor tariff are only used for the net export difference at a total level. This would ensure that proper netting is done related to a generator account as available to single-family homes. This is assuming that in-line battery storage can be installed with the VNEM system to help optimize the export ratio. Ivy would be willing to provide specific suggestions on how to implement parcel-level netting and streamlined battery storage integration in the implementation phase of this proceeding.

VI. VNEM should be studied further before transitioning to a successor tariff

All of the suggestions above are predicated on the Commission conducting a more thorough analysis of multifamily buildings and renting populations as their own customer class. The Commission should consult with the California Energy Commission (CEC) and review findings from the proceedings identified in the PD before requiring any VNEM systems to transition to a successor tariff.

ESJ communities and renting populations are the “non-participating ratepayers” of the NEM program. To correct these systemic injustices, the benefits should be expanded for these communities, not taken away from everyone. An equity fund is nice, and we suggest the Commission conduct a marketing, education, and outreach campaign designed to reach ESJ communities with those funds, should it be adopted. This way, the Commission can maximize its decision to invest in these communities. Since the lookback study did not evaluate multifamily buildings as a customer class, or VNEM, it cannot legally conclude that the Lookback Study is a sound analysis for all customers. Perhaps it can draw those conclusions for customers that own property, but it cannot be done for renting populations that have no ability to make investment decisions. More renters and low-income households can be served by the maintaining VNEM tariff and taking specified actions to improve it for ESJ communities.

Other parties agreed that reaching renters was a concern and should be a focus. Both Protect Our Communities Foundation (PCF) and the California Solar & Storage Association (CALSSA) have proposed to expand and improve upon the VNEM program.³² Environmental Working Group (EWG) concurred with Ivy that VNEM was left out of the NEM 2.0 Lookback Study and that VNEM is needed to serve low-income customers and renters.³³ AARP noted in its testimony that the lack of homeownership is a significant

³² CALSSA Proposal at pg. 15; PCF Proposal at pg. 18

³³ EWG Opening Testimony at pg. 3, 21-22

barrier to low-income adoption of solar.³⁴ The California Low Income Consumer Coalition also endorsed Ivy's VNEM proposal, concurring that VNEM was "particularly important as it is one of few ways that low-income renters can gain access to the benefits of NEM".³⁵ Maintaining VNEM for multifamily renters is a sound legal and policy decision backed by significant data and evidence with support from multiple parties.

The Commission made the right decision with exempting low-income VNEM in this PD. The Final Decision should exempt all VNEM customers from transitioning to the successor tariff at this time and conduct further analysis on the multifamily sector to help inform future rate design for this customer class. Ivy Energy has offered suggestions and edits to the Findings of Fact, Conclusions of Law, and Ordering Paragraphs for Commission consideration in Appendix B.

VII. Conclusion

Ivy encourages the Commission to reconsider the manner in which it views customer-sited clean energy. Right now, it appears that customers making good faith investments in decarbonization technologies is a "cost" to the system. It may be true that customers should "pay their fair share" of grid and infrastructure costs, but "cost shifting" is inherent in many facets of retail rate design. It needs to be addressed with more systemic reforms. One could argue that multifamily VNEM customers are actually paying more than their fair share, since there are so many more customers behind a single service delivery point, but that has not been analyzed. California cannot afford to put up any more of its own roadblocks in the fight against climate change. We must uphold our leadership in cleantech innovation and embrace customer participation in the clean energy transition.

Without more careful consideration of the market realities, the Commission is poised to make solar unaffordable and inaccessible to many deserving communities that are finally within reach of clean energy benefits. The Commission has a tremendous opportunity to improve equity and serve environmental justice in this proceeding. VNEM is the key to achieving better equity outcomes in California's solar market. Ivy Energy strongly encourages the expansion of onsite clean energy to *more* underserved communities like the millions of renters in California. Customers must have viable, clear pathways to install and monetize DERs. We encourage the Commission to expand access, not foreclose opportunities, for more Californians to adopt clean energy resources so that, together, we can achieve the state's decarbonization and climate goals.

³⁴ AARP Opening Testimony at pg. 4

³⁵ CLICC Reply Brief at pg. 18

Respectfully Submitted,

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Appendix A

SNAPSHOT OF TENANTS IN CALIFORNIA 2019



16,906,728 Californians are tenants. That's **45%** of us!

High school graduate or higher: **81%**

Median age: **44**

Household with Children: **37%**

65 and older: **17%**

\$42,000

median household income of CA renters

\$84,000 median household income
of CA homeowners

\$1255 median rent in California

3-4 years median length of tenancy

Race/Ethnicity of Householders

40.5% White American

38.9% of White Americans
are tenants

36% Hispanic and Latino

57% of Hispanics and Latinos
are tenants

12.3% Asian American

43.7% of Asian Americans
are tenants

9.6% African American

64.4% of African Americans
are tenants

1.4% American Indian

63.8% of American Indians
are tenants

0.8% Native Hawaiian or
other Pacific Islander

55.1% of Native Hawaiian or
other Pacific Islanders are tenants

Educational Attainment

29.2% Bachelor's degree
or higher

24.7% High school diploma

21.4% Some college,
vocational training

Family Status

76% female-headed house-
holds with children are tenants

44% of all married house-
holds with children
are tenants.

35% of all married house-
holds are tenants.

Household Size

56% one-person households
are tenants

50% of all 6 and more
person households
are tenants

46% of all 4 to 5 person
households are tenants

43% of all 2 to 3 person
households are tenants

Rental cost

53% of households pay
a **\$1000 to \$1999** rent

26% of households pay
a **\$500 to \$999** rent

12.5% of households
pay a **\$2000**
to **\$2999** rent

Income and Rent

48% of households spend
35% or more of their
income on rent

23% of households spend
15% to **24.9%** of their
income on rent

21% of households spend
25% to **34.9%** of their
income on rent



TENANTS TOGETHER
California's Statewide Organization
for Renters' Rights
www.tenants-together.org

Updated and revised by Isaac Cohen

Sources: American Housing
Survey 2015, U.S. Bureau of Census

American community Survey,
2015, U.S. Bureau of Census

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Appendix B

Ivy Energy proposed revisions to the Order are made in RED, with additions to the text underlined and strikethrough text for deletions.

Findings of Fact

1. The evaluation of NEM 2.0 tells us whether the tariff is or is not performing as required.
2. The evaluation of NEM 2.0 establishes a foundation for creating a successor tariff.
3. The Lookback Study does not tell a complete story but informs the Commission on how the successor tariff should be revised.
4. A disagreement on an assumption in the Lookback Study does not equate to a flaw in that assumption.
5. The cost-effectiveness analyses in the Lookback Study have been conducted in accordance with prior Commission decisions.
6. The Lookback Study is an ~~an~~ sound-analysis of the NEM 2.0 tariff for customers that own property.
7. NEM 2.0 tariff customers bypass infrastructure and other service

13. Without changes to the current tariff structure, the financial burden on the shrinking pool of nonparticipants is unsustainable and could fall disproportionately on lower-income customers.

14. The Lookback Study finds that the commercial, industrial, and agricultural customer segments of the NEM 2.0 tariff generally pass the TRC test and pay rates that fully cover their costs of services.

15. No party disputes the cost-effectiveness results of the commercial, industrial, and agricultural segments of the NEM 2.0 tariff.

16. The Lookback Study followed the directives of prior Commission decisions regarding the methods for cost-effectiveness analysis.

17. While the Lookback Study found commercial, agricultural, and industrial sectors of the NEM 2.0 tariff had TRC and PCT results of 1.0 or better, the results of the RIM test showed a cost/benefit ratio of less than 1.0.

18. The Lookback Study indicates the nonresidential sectors of the NEM 2.0 tariff are not cost-effective.

19. The Lookback Study finds the NEM 2.0 tariff is not cost-effective for the residential customer segment.

XX. The Lookback Study omitted analysis of the VNEM tariff or any impacts on multifamily customers and renters.

XX. Multiple parties, including GRID and Ivy, identified the omission of VNEM from the Lookback Study.

XX. There are potentially different conclusions about low-income adoption that could be drawn if VNEM and multifamily buildings, and renters were included in the Lookback Study.

XX. Further study should be conducted on VNEM and its impact on solar adoption for low-income customers and disadvantaged communities.

20. Lower-income customers are burdened with the additional expense of a portion of the 82 to 91 percent of the cost of service bypassed by NEM 2.0

customers whose bill payments only cover nine to 18 percent of their cost of service.

21. The Lookback Study indicates that the NEM 2.0 tariff disproportionately harms low-income customers not participating in the tariff.

22. The Lookback Study indicates that the NEM 2.0 tariff disproportionately benefits non-CARE residential NEM 2.0 tariff customers while all other customers, including those with lower incomes, bear the addition of 82 to 91 percent of the cost of service bypassed by these tariff customers.

59. Disadvantaged communities, including renters who do not own property or live in multifamily dwellings, should not continue to be left behind with respect to clean energy options, including electrification and storage.

60. The record is sufficient to establish a different low-income eligibility definition.

XX. Renters are statistically likely to be communities or populations identified in the Commission's Environmental and Social Justice Action Plan.

XX The record is sufficient to justify maintaining VNEM for multifamily dwellings and increase access to clean energy for a significant portion of ESJ communities.

164. Installation of distributed generation is less frequent in low-income households ~~and~~, disadvantaged communities and multifamily dwellings.

170. It is reasonable to use the cost shift savings generated through the reform of the successor tariff to improve the low adoption rate of distributed generation in low-income households and renters who do not own property or live in multifamily dwellings.

171. A guiding principle in this proceeding is to ensure equity in the successor tariff.

172. We stated in the Order Instituting Rulemaking that this proceeding would coordinate with other relevant proceedings.

173. There is a current proceeding assessing the affordability of utility services (R.18-07-006) and information gathered in the affordability proceeding and the Energy Commission could be helpful in providing a more complete record with respect to the VNEM tariff.

174. An evaluation of the SOMAH program has been conducted, pursuant to D.17-12-022.

175. A report of the SOMAH evaluation has been made public and the information in the evaluation could be useful in determining future changes to the tariff.

176. The SOMAH evaluation is not in the record of this proceeding.

XXX. Further information from the California Energy Commission is needed on multifamily building electrification and Title 24.

177. It is prudent to delay any changes to ~~low-income subtariffs of~~ VNEM until review in this proceeding of additional findings from the affordability proceeding and the SOMAH evaluation and the Energy Commission.

178. One of our objectives in this proceeding is to ensure the successor tariff aligns with the costs and benefits of customer generation.

179. Basing export compensation on retail rates does not meet the objective of aligning costs and benefits of customer generation.

180. Renters and customers of multifamily dwellings have not realized comparable NEM benefits to homeowners and those that own property. Aligning the VNEM tariff with the successor tariff balances the multiple

~~and competing objectives in this proceeding.~~

181. Renters have no ability to install solar or storage and have less ability than homeowners to install load-shifting smart devices.

182. Ivy Energy has demonstrated there is onsite consumption of energy that is generated at multifamily buildings interconnected under VNEM; Joint Utilities do not dispute this claim in briefs.

183. It is reasonable to affirm that VNEM provides benefits to the grid similar or possibly more beneficial to that of the NEM 2.0 tariff.

184. VNEM is for multifamily buildings designed to facilitate a virtual metering billing arrangement.

185. NEMA is available to a single customer that has a generating facility or facilities on adjacent or contiguous properties and allows for aggregation as if on one site.

186. VNEM and NEMA serve separate purposes and generally have separate customer bases: VNEM for multi-family customers and NEMA for agricultural customers.

187. The current VNEM tariff allows multiple arrays but requires each array to serve a subset of customers on the property.

Conclusions of Law

1. The Commission should use the Lookback Study as a foundation to create a successor tariff that continues the elements that resulted in positive outcomes but corrects or replaces elements that resulted in negative outcomes.

X. The Commission should affirm the NEM 2.0 subtariff VNEM and the multifamily customer class was not evaluated in the Lookback Study.

6. The Commission should affirm the NEM 2.0 tariff disproportionately harms low-income customers and renters who do not own property or live in multifamily dwellings.

42. The Commission should establish an equity fund to address the low adoption rate of distributed generation in low-income households and renting households.

43. The Commission should maintain the current structure of the ~~low-income~~-VNEM tariffs until review of findings in the affordability proceeding, and the SOMAH evaluation is conducted in this proceeding, and further consultation with the Energy Commission about multifamily building electrification and Title 24.

44. The Commission should not require VNEM and NEMA customers to take service on highly differentiated time-of-use rates, but rather require these customers to take service on the time-of-use rates of their choice.

45. The Commission should not adopt the same net billing structure for VNEM and NEMA, at this time.

46. The Commission should affirm that VNEM provides benefits to the grid similar or possibly more beneficial to that of NEM 2.0.

47. The Commission should maintain separate VNEM and NEMA subtariffs.

48. The Commission should allow multiple solar arrays on one property to be treated as one generator in the VNEM subtariff.

IT IS ORDERED that:

1. The following findings from the Lookback Study are affirmed:
 - (a) the NEM 2.0 tariff negatively impacts non-participant ratepayers;
 - (b) the NEM 2.0 tariff is not cost-effective for the commercial, industrial, and agricultural customer segments;
 - (c) the NEM 2.0 tariff is not cost-effective for the residential customer segment; and
 - (d) the NEM 2.0 tariff disproportionately harms low-income customers and renters who do not own property or live in multifamily dwellings.
 - (e) the NEM 2.0 subtariff VNEM and multifamily renting customers as a class were not evaluated

2. For the purposes of this decision, a low-income household is defined as residential customers eligible for California Alternate Rates for Energy (CARE) and the Family Electric Rates Assistance (FERA) programs, resident-owners of single-family homes in disadvantaged communities (as defined in Decision (D.) 18-06-0127), or residential customers who live in California Indian Country (as defined in D.20-12-003) and take service on either the standard successor tariff or aggregated net energy metering subtariff or renters of multifamily dwellings.

5. Energy Division is authorized to conduct a five-year evaluation of the affordability and equity elements contained in the net billing tariff adopted in Ordering Paragraph 2 above and the multifamily VNEM tariff extension adopted in the Ordering Paragraphs below. A future decision will consider the results of the evaluation to determine if changes are needed.

6. An Equity Fund is established to address the low adoption rate of customer-sited distributed generation in low-income households, multifamily and renting households, and households in disadvantaged communities. We establish an annual cap of \$150 million, with funding provided through the cost shift savings generated by the reforms adopted in this proceeding. Additional details will be finalized in a future decision, following a workshop and party comment.

7. No later than April 30, 2022, Pacific Gas and Electric Company, San Diego Gas & Electric Company and Southern California Edison Company shall conduct one or more workshops to solicit stakeholder input on a) use of the Equity Fund adopted in Ordering Paragraph 6, including the potential expansion and improved alignment of existing low-income programs and new programs, a multifamily marketing, education, and outreach campaign; and
b) use of the Storage Evolution Fund, adopted in Ordering Paragraph 15.

8. The Virtual Net Energy Metering tariff for ~~low-income eligible households~~ all renters shall remain unchanged until review of additional findings in Rulemaking 18-07-006, ~~and~~ the evaluation of the Solar on Multifamily Affordable Housing program, and further consultation with the Energy Commission about multifamily building electrification and Title 24.

9. The Virtual Net Energy Metering (VNEM) ~~general tariff shall adhere to the same changes as the successor net energy metering tariff we adopt in Ordering Paragraph 2 above, with one distinction: VNEM~~ customers shall take service on the time-of-use rates of their choice. Further, the VNEM tariff is revised to allow

multiple solar arrays on one property to be treated as one generator, with credits allocated across the property. VNEM ~~for low-income customers~~ otherwise remains unchanged until further notice.

11. (d) Step 4. No later than 120 days after the adoption of this decision, the Commission will implement a tariff sunset on the prior net energy metering tariff, known as NEM 2.0, after which time, no additional customers will be permitted to take service under the NEM 2.0 tariff except those in multifamily dwellings taking service under the VNEM sub-tariff. Any delay in Step 3 above, will result in an equal, day-for-day, extension of time in the tariff sunset date. Customers signing contracts after this sunset date will take service and be billed on the NEM 2.0 tariff and transitioned to the net billing tariff, once it is operationalized.