

## **NET ENERGY METERING 3.0 RECOMMENDATIONS**

*November 2021*

### **SDCTA Position:**

The Association recommends the California Public Utilities Commission (CPUC) change the “Net Energy Metering” (NEM) rate structure to satisfy these principles for San Diego County taxpayers:

1. Given that increases in poverty result in even higher costs to taxpayers in public support programs and that San Diego already experiences the highest electricity rates in the country, the rate structure should eliminate all cost shifting to low and middle income (LMI) households.
2. Because new technologies to decarbonize and stabilize the grid should not be disincentivized, incentives should not be recovered through volumetric rates; thus, those incentives should be managed outside of rate structures like NEM.
3. All future rooftop solar customers should not be compensated for excess energy at a greater value than the value of energy at true market rates and avoided costs. All solar customers should also be charged appropriate fixed cost fees to ensure shared infrastructure costs are fairly distributed amongst all customers.
4. Vintage NEM 1.0 and 2.0 customers should be transitioned to a rate structure where they are compensated at true market rates for excess energy over a period within five years, with exception to those customers who are enrolled in any low-income rate programs. For all low-income customers, bills should not change at a rate faster than the consumer price index.
5. For all new solar customers who are enrolled in low-income programs, the CPUC should consider a reasonable “payback” period to be ten years. For all other solar customers, rates need not consider a reasonable payback period, as it would be better to achieve “reasonable payback” through upfront subsidies as opposed to integration into volumetric usage rates.

### **Rationale for Decision:**

The Association assesses the following:

- The main public interests of taxpayers are to decarbonize the grid and to be assured of grid stability.
- Current “behind the meter” (BTM) solar capacity is over 8,500 MW, making California the national leader in customer-sited generation.<sup>1</sup> Additional residential rooftop solar will make a negligible impact on the state goals of decarbonizing the electric grid and in fact may take financing away from other renewable energy sources that will make appreciable impacts on decarbonization and grid stabilization.<sup>2</sup>

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<sup>1</sup> E3 6

<sup>2</sup> UC Berkeley Professor Dr. Severin Borenstein in an address to SDCTA

- Taxpayers already subsidize the rooftop solar industry through tax rebates and other programs, and the residential rooftop solar industry is well established and healthy. The new rate structure does not need separate incentives for continued adoption of solar; the high rates create enough of an incentive already to meet the statutory goal of keeping the solar industry sustainable.
- The current electricity rate structure is highly regressive, and numerous public policy goals (e.g., support to low-income households, grid stabilization, renewable portfolio development) have unintentionally resulted in significant cost shifting from solar to non-solar customers. In San Diego County, approximately 20 cents of each dollar non-solar customers spend on their electric bill are spent to subsidize costs avoided by solar customers.

**Title:** Net Energy Metering 3.0 Recommendation

**Jurisdiction:** State of California

**Type:** Energy Rate Legislation

**Vote:** California Public Utilities Commission vote

**Status:** Discussing Rebuttal arguments and Closing Briefs filing soon

**Issue:** Structure of NEM 3.0 tariff

**Description:** Provides the structure for how utilities throughout California bill their customers regarding solar and incentivizes present and future customers to put rooftop solar on their personal property.

**Fiscal Impact:** Dependent upon the structure of NEM 3.0; however, the current tariff pays back a \$35,000 solar installation in 10 years and offsets costs and incentives onto nonparticipating customers.

## **Background**

### *Net Energy Metering*

In 1996/97 Senate Bill (SB) 656 put into effect an electricity rate structure for solar customers called “Net Energy Metering” (NEM). The objective was to incentivize the installation of solar panels by giving solar customers compensatory credit for excess energy produced. The excess energy would be supplied to the grid, and solar customers would be compensated for the energy their solar supplied. The credit was set to equal the retail electricity rate in effect at the time the generation occurred.<sup>3</sup>

This initial iteration of the NEM program would come to be known as NEM 1.0. Over the years, the solar industry grew as a result of NEM 1.0. As the solar industry grew, solar

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<sup>3</sup> AB 1139 4.

installation became more affordable; thus, the solar customer base grew. This phenomenon coupled with NEM 1.0's incentives created problems of cost-shifting. Energy bills cover two kinds of costs: Fixed and volumetric. Fixed costs are those charged by the utility for expenses that do not change, such as environmental protection costs, infrastructure costs, labor costs, the costs of public policy programs like low-income programs, etc. Volumetric costs, on the other hand, are the costs charged to the customer based on the amount of energy the customer consumes. Solar customers were given the benefit of earning credit for energy produced, thereby being paid by the utility rather than paying the utility for services. The fixed costs of the utilities remained, but now fewer customers had to pay them. The result was non-solar customers paying more to cover those costs.

In 2013, the California Legislature passed AB 327 “requir[ing] the CPUC to reform the existing NEM program in a manner that better aligns compensation for customer-sited renewable generation with the net benefits that it provides to the electric system, while preserving sustainable growth of behind the meter (BTM) renewable generation in California.”<sup>4</sup> One of the primary objectives directed to the CPUC was that “[c]ustomer-sited renewable distributed generation ‘continues to grow sustainably and include specific alternatives designed for growth among residential customers in disadvantaged communities.’”<sup>5</sup> The CPUC reform created NEM 2.0.

NEM 2.0 would prove to be unsuccessful. “There are net benefits for participating NEM customers..., driven by the bill savings they receive being well in excess of their costs to install solar or solar [plus] storage. In contrast, there are net costs for nonparticipating customers... due to the bill reductions NEM customers receive being well in excess of the cost reductions the utility receives from the behind the meter systems’ generation. This discrepancy between the value provided to the utility and the value paid to NEM customers indicates a shifting of costs from NEM customers to nonparticipants.”<sup>6</sup>

In September 2020 the CPUC began proceedings on NEM 3.0 to address NEM 2.0's discrepancy between the value provided to the utility and the value paid to solar customers.

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<sup>4</sup> E3 3

<sup>5</sup> E3 9

<sup>6</sup> E3 12

## **Intent of the SDCTA's Review**

The current debate at the CPUC concerns the creation of a new NEM tariff that is more equitable to current and future customers under NEM.

The public has numerous policy objectives in this debate. Beside trying to achieve the best solution for Net Energy Metering to maintain the growth of rooftop solar, this reform effort affects the state's ability to become carbon free in future decades. Another desired result is improved financial stability for more households and an overall reduction in poverty throughout California.

The intent of the SDCTA's proposal, therefore, is to provide the CPUC with a set of principles the Association believes will guide NEM reform in achieving its various legislative purposes while also focusing on avoiding an increase to hardships placed on lower and middle income households.

## **Findings Informing SDCTA's Position**

The SDCTA's NEM working group used all of the following information to substantiate the Association's recommended principles. The working group included: Terry McKearney, Louis Blum, Haney Hong, Nicolas Cussen, Ismael Preciado, and Carla Farley.

### UC Berkeley Study

The Energy Institute at Haas School of Business, UC Berkeley conducted a third-party exploration of utility rates and identified the need for an equitable transition of retail electricity rates in California. They examined current issues in the state and assessed the factors creating such high rates while identifying serious issues of equity across customers with different levels of income.

### *Findings by UC Berkeley*

1. The study estimates the gap between social marginal cost<sup>7</sup> and average retail prices. It then breaks the gap into a set of factors that increase the utilities' revenue requirements. These include the above-market costs of past purchases of renewable electricity and other mandated technologies, the fixed costs of transmission and distribution (including wildfire prevention and compensation), and energy efficiency programs and other public purpose expenditures. In the end each plays a role in driving up residential electricity costs.<sup>8</sup>
2. The study states, "The current approach to raising revenues creates equity concerns because low-income consumers spend a larger share of income on energy consumption."<sup>9</sup>

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<sup>7</sup> Marginal cost is the combined height of the boxes representing the marginal costs of generation, transmission, distribution and greenhouse gas emissions that are associated with producing an additional unit of electricity. This is labeled here as the private marginal cost (PMC). Adding the unpriced portion of pollution damages resulting from electricity yields the social marginal cost (SMC). UC Berkeley 7

<sup>8</sup>UC Berkeley 24

<sup>9</sup> UC Berkeley 30

3. The study found that “fixed monthly charges that are the same for all residential customers are also highly regressive; they take a much larger share of household income from lower-income households than from wealthy customers.”<sup>10</sup>
4. The study found that rate reform can improve both efficiency and equity.
5. The study found that high electricity prices are not due to high marginal costs of electricity supply, but rather to the reliance on high volumetric rates to recover system costs from a variety of factors.
6. The study found that the “way of recovering costs, which amounts to a tax on electricity consumption, is not only inefficient, it is also inequitable.”<sup>11</sup>

### E3 Study

The CPUC engaged E3 to support and facilitate the development of proposals for a NEM successor tariff that will be compliant with California legislation.<sup>12</sup>

### *Findings by E3*

1. Due to the large \$/kWh value provided to solar customers under the current residential rate, the payback period is relatively short at 4.1 years.<sup>13</sup>
2. Cost shifting has resulted in non-solar customers subsidizing fixed costs vintage NEM customers are permitted to avoid. 20-30 cents of every dollar spent by non-solar customers makes up the deficit in fixed costs created by solar customers avoiding charges for those costs.
3. E3 posed five questions used as a framework for a majority of proposals:<sup>14</sup>
  1. What is a reasonable payback period for BTM generation?
  2. Over what period of time should more cost-based retail rates for customer-generators be implemented? How can this rate transition best support other policy goals such as promoting electrification as a key decarbonization strategy?
  3. How should a market transition credit (MTC) for customer-generators be structured?
  4. Should MTC vintages be based on time (e.g., annual), number of participants, or capacity (e.g., MW blocks)?
  5. From which groups should the MTC recovery surcharge be collected? From the same vintage of customer-generators, future vintages of customer-generators, all customer-generators, all ratepayers, or some other group?

### SDCTA Working Group Analysis

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<sup>10</sup> UC Berkeley 33

<sup>11</sup> UC Berkeley 43

<sup>12</sup> E3 3

<sup>13</sup> E3 27

<sup>14</sup> E3 33

## *Solar Incentives Beyond NEM*

NEM was created, in part, to achieve the policy objective of ensuring sustainable solar industry growth. However, NEM is not the only program that exists to incentivize the installation of solar. The following are a few of the state and federal programs that incentivize solar installation. From this list of programs, our association believes it is evident that further solar incentivization does not need to be a feature of NEM 3.0.

### Solar Investment Tax Credit (ITC) Federal

- This credit is mandated by the Federal government and is intended for homeowners, a tenant-stockholder, members of condominiums, or any owner of a solar system. The creation of this credit was in December 2020. Congress passed an extension of the ITC, which provides a 26% tax credit for systems installed in 2020-2022, and 22% for systems installed in 2023 and financed through tax revenue.

### CA Energy Storage Credit / The Self-Generation Incentive Program (SGIP)

- This credit is issued by the California Legislature, AB 970, and has been consistently maintained since 2000-01, with the CPUC and investor-owned electric utilities (IOUs) working together to maintain this program. There are also two categories of new, higher rebates for SGIP – “Equity” and “Equity Resiliency”. Both categories aim to ensure lower-income, medically vulnerable, and at-risk fire communities are prioritized to receive competitive incentives for battery storage.<sup>15</sup> This credit also provides businesses and homeowners in CA an upfront rebate for installing an energy storage system.<sup>16</sup> SGIP is a utility ratepayer-funded program. It is paid by and available to utility ratepayers of SDG&E, SoCal Gas, SCE and PG&E.<sup>17</sup>

### SOMAH (The Solar on Multifamily Affordable Housing) Program & MASH (Multifamily Affordable Solar Housing) Program

- This credit is mandated by the California Legislature in AB 693. These credits are intended for eligible building owners and tenants, as well as low-income renters, to receive solar credits through a virtual net energy metering (VNEM) system.<sup>18</sup> SOMAH’s goal is to assure equal access to solar and help reduce energy bills primarily for tenants,<sup>19</sup> whereas MASH’s goals are to increase the amount of solar power in the affordable housing sector, improve the quality of affordable housing facilities with energy efficient technology, decrease use and costs of electricity, increase awareness of the benefits of solar power, and give employment opportunities within the energy economy. Lastly, SOMAH is funded through GHG allowance auction proceeds and is administered by nonprofits and electric utilities, with MASH being funded by the state’s three largest utilities.

### SASH (Single-family Affordable Solar Homes) Program

- This credit is mandated by the California Legislature in AB 2723. This credit is intended for low-income households, with the purpose of enabling low-income

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<sup>15</sup> CPUC SGIP

<sup>16</sup> Energy Sage <https://www.energysage.com/local-data/storage-rebates-incentives/ca/>

<sup>17</sup> SGIP <https://sites.energycenter.org/sgip/faqs>

<sup>18</sup> Adaptation clearing house

<sup>19</sup> Energy Center, <https://energycenter.org/program/solar-multifamily-affordable-housing>

families to access money-saving solar technologies by providing up-front incentives. This credit is a ratepayer-funded program through the California Public Utilities Commission.

#### CVRP (Clean Vehicle Rebate Program)

- This credit is mandated by the California Legislature and California Clean Vehicle Rebate Project, with the administration being overseen by the Center for Sustainable Energy. This credit is intended to ensure applicants with low-to-moderate household incomes (less than or equal to 400 percent of the federal poverty level) are eligible for increased rebate amounts. The purpose of this program is “to promote the production and use of zero-emission vehicles, including electric, plug-in hybrid electric and fuel cell vehicles”.<sup>20</sup> Funding for this credit is provided by the California Air Resources Board (CARB)<sup>21</sup>.

#### Property Tax exclusion for Solar

- This credit is mandated by the State of California, with the intended recipient being homeowners. The purpose of this tax exclusion is to prevent property values from being reassessed based on the construction or addition of an active solar energy system. Providing an incentive to improve one's personal household while maintaining a current tax rate.

#### *Other Concerns on Predatory Market Practices*

The working group also discussed anecdotal evidence of predatory targeting of low income households by some solar companies and why the state had to institute informational disclosures to any household considering installing rooftop solar. We cannot ignore the possibility that there are likely NEM 2.0 customers who are low income and for whom a future transition to true market compensation rates and their share of actual costs ought not drive such households into poverty. As the Association knows from previous research on low income inclusionary housing policy, poverty and its concentration can be quite expensive for taxpayers in the delivery of municipal services.

Therefore any transition must separate out low income customers, who are already identifiable through existing rate programs in electricity.

#### NEM Proposals from Other Organizations

To ensure the SDCTA's position on NEM is as well-informed and as accurate as possible, every NEM proposal offered by other associations was reviewed and considered. Those organizations are: Public Advocate's Office; American Association of Retired Persons (AARP); National Defense Resource Council (NRDC); Sierra Club; The Utility Reform Network (TURN); Protect Our Communities (POC); and a joint proposal from Pacific Gas and Electric (PG&E), San Diego Gas and Electric (SDGE), and Southern California Edison (SCE). A chart illustrating each organization's positions on specific NEM topics and questions has been included with this document in Appendix A.

#### Supplemental Information

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<sup>20</sup> CVRP

<sup>21</sup> CVRP

To fully understand the scope of the NEM issue, the working group received supplemental information from the following: Katie Scanlan and Alec Ward from SDG&E, Dr. Severin Borenstein from UC Berkeley, and Mohit Chhabra from NRDC.

In particular, the testimony from Dr. Borenstein had a substantial impact on SDCTA's decision. From a blogpost written by Dr. Borenstein, he says that solar customers save more money per kilowatt-hour than the utility's costs go down. Because those utility costs are fixed and still need to be paid, rates increase for everyone else. "It has been well documented – and surprises no one – that households with solar are disproportionately wealthy (as well as disproportionately white). So, when a customer installs solar, their share of the fixed costs are shifted to other ratepayers who are poorer on average. *Net Energy Metering hurts the poor. It's that simple.*<sup>22</sup> [Emphasis added]

### **SDCTA Recommendations**

Rather than support a single proposal, SDCTA offers a list of principles which it believes the ideal NEM 3.0 policy should follow.

It is important to note the interests of the taxpayer are not always the same as those of the ratepayer. After meeting with various experts and reviewing the studies mentioned, the SDCTA found that taxpayers already subsidize the rooftop solar industry through tax rebates and other programs, and the residential rooftop solar industry is well established and healthy. For this reason, SDCTA's NEM working group has prioritized the taxpayers interests over those of the ratepayer. Therefore, the following principles should be viewed as supporting taxpayer considerations rather than those of ratepayers.

#### *SDCTA Evaluation/Principles*

##### *A. Transition/Payback time period of 10 years for new, lower income solar customers*

For all new solar customers who are enrolled in low income programs, the SDCTA recommends the CPUC consider a reasonable payback period to be ten years, the average length of homeownership. This will ensure new solar customers from lower income households are given sufficient time to recover the costs of solar installation along with a period of time to receive the benefits the program afforded vintage NEM customers. Such considerations will also help to prevent lower income households from slipping into poverty as a result of installing solar. For all other new solar customers, rates need not consider a reasonable payback period, as it would be better to achieve reasonable payback through upfront subsidies as opposed to integration into volumetric usage rates.

##### *B. Solar market maturity and revisitation of incentives*

The rooftop solar market has reached a maturity supported by incentives utilized since NEM 1.0 that provide large benefits to rooftop solar; however, this creates issues with nonparticipants paying these costs in their utility bills each month.

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<sup>22</sup> Borenstein, Severin. "Rooftop Solar Inequity" *Energy Institute Blog*, UC Berkeley, June 1, 2021, <https://energyathaas.wordpress.com/2021/06/01/rooftop-solar-inequity/>



SDCTA recommends the CPUC revisit the incentives provided by NEM and the solar industry. Revisiting these incentives would help to reduce the cost burden being placed upon nonparticipants. The reduction of these incentives would also allow for the utilities to reallocate these funds into other projects that would benefit energy customers.

Revisiting incentives and correcting over-compensation could also solve the issue of low-income communities having a more difficult time installing solar in their homes.

*C. Transition of NEM 1.0 & 2.0 customers to NEM 3.0*

In order to resolve the issues of cost-shifting observed in prior tariffs, SDCTA suggests that, with the creation of a new tariff, all vintage customers be provided a five-year period through which they would be expected to fully transition onto the new tariff. SDCTA bases this five-year period on findings by E3, except for low income households registered in low income rate programs. For these legacy customers, rates should not transition faster than the consumer price index.

In addition, with the transition of all vintage customers to the new tariff this would also unify all solar customers under one version of NEM that can easily correct new issues that arise after the transition of all customers.

*D. Grid Value and Energy Storage*

The SDCTA recommends the CPUC consider shifting focus away from residential rooftop solar and towards industrial solar. Taxpayers want to maximize grid reliability using differentiated time-of-use rates that reduce blackouts and brownouts throughout San Diego and California. Grid value being fully utilized would aid in the issue of electricity being wasted during off-peak periods so that during on-peak hours stored electricity can offset customers' use.

SDCTA found that the issue of energy storage could possibly become the next issue regarding renewable energy generation. The lack of current storage is causing the inability to maximize grid value. Additionally, it allows for ratepayers to go completely off the grid if enough energy is being produced and stored by a household's systems.



## Appendix A

### *Review of Various Proposals' Priorities and Responses to E3 Proposed Framework*

	<b>Public Advocates Office</b>	<b>AARP</b>	<b>NRDC</b>	<b>Sierra Club</b>	<b>TURN</b>	<b>POC</b>	<b>Joint PG&amp;E, SDG&amp;E, SCE</b>
Similarity to E3	The Public Advocate's Office is similar regarding the payback period from BTM generation, as well as period of time for cost-based retail rates; however, differs with the use of MTCs and instead proposes their own method.	The AARP proposal is very similar to the E3 white paper with the basing of their proposal majorly agreeing with E3.	The NRDC proposal is also very similar to the E3 White paper in that they choose to follow the recommendations by E3 in the effort to find a solution to NEM.	The Sierra Club proposal compared to the E3 White Paper has various similarities that align themselves to E3; however, at the same time there are also sharp differences. Revealing that the Sierra Club proposal is like E3 but still maintains differences.	The TURN proposal is like the E3 paper regarding some aspects; however, it also differs in some areas regarding MTCs and rates. Revealing that the TURN proposal aligns partially to E3.	The POC have very few similarities with the E3 White Paper and do not base their proposal off the questions	This proposal aligns with E3 in some regards; however, the joint IOUs maintained some similarities to the E3 white paper, but instead would diverge in some respects from E3 to create their own version of an MTC or other proposed solutions by E3.
Priority Policy Objective	The policy objective is "to reach California's climate and equity goals as quickly as possible, and to align with statute and the Commission's guiding principles, Cal Advocates proposes a successor tariff	The AARP "advocates for residential customers, including its 3.3 million members in California. AARP fights for fair and affordable rates as well as reliable service. We strongly support	The NRDC objective is that they have "developed a proposal that evolves NEM to reduce pressure on electric rates, deliver clean energy benefits to low-income Californians, and ensures the sustainable	To best ensure sustainable growth of rooftop solar in a manner that minimizes rate impacts to non-participants and encourages deeper decarbonization through adoption of electrification	The Commission now has an opportunity to restructure NEM tariffs to address the growing cost shift and fairly balance the interests of both participants and non-participants. TURN's tariff	Proposal A: NEM 3.0 Community Storage  Proposal B: NEM 3.0 Minimum Generation  Proposal C: NEM 2.0 Carve-Out for Low-Income Customers and Renters	The policy objective of the Joint IOUs is "as a package, reduces the inequitable cost shift and ensures that any remaining subsidies for new distributed generation customers go to those most

	that benefits participants, fairly values their systems' benefits, increases program equity, and supports electric service affordability for all customers."	sustainable energy policies but also ask about the cost, timing, and underlying assumptions. As well as sets to protect ratepayers from burdensome subsidy impacts."	growth of distributed generation, including rooftop solar".	and load-shifting technologies.	proposal is designed to accomplish this balance while providing the Commission with tools that can be used to boost participation rates amongst low-income customers and other underserved customer segments.	Proposal D: NEM 2.0 Community Solar, an Equitable Transition  Proposal E: NEM 3.0 Time of Use Rates	in need. The proposal also reverses an existing "low-income penalty" by ensuring that income-qualified customers receive the same compensation for exports and face a better value proposition for installing distributed generation than non-qualifying customers."
<b>E3 Issues/Ideas</b> <b>E3 Questions</b> <b>Proposer Issues</b>							
What is a reasonable payback period for BTM generation?	With these reforms, residential customers on the successor tariff would still receive meaningful subsidies with monthly bill savings allowing for the systems to pay for themselves in 13-15 years.	This payback period should be allowed to lengthen over time as conditions warrant, to protect ratepayers from overpaying BTM subsidies.	NRDC recommends that a reasonable payback period be set at approximately 10 years.	Sierra Club considers a payback period under 10 years to be reasonable for NEW customers.	Payback period of 10 years is proposed for CARE customers. If non-CARE customers are eligible (not TURN's recommendation), MTC should be calculated based on target payback period of 15 years.	N/A	There is no legislative requirement for a reasonable payback period for behind-the-meter renewable generation.

<p>Over what period of time should more cost-based retail rates for customer-generators be implemented? How can this rate transition best support other policy goals such as promoting electrification as a key decarbonization strategy?</p>	<p>The Cal Advocates further agrees that to reform NEM, “compensation to customer-generators will need to be reduced,” but in a way that aligns with statute.</p> <p>The Public Advocates state, The Legislature identified that widespread transportation electrification is needed to achieve the goals set forth in the Charge Ahead California Initiative, and to reduce emissions of GHG.</p>	<p>To reduce the existing and exorbitant subsidy of NEM customers by ratepayers, the transition to fully cost-based pricing of NEM output and usage should start as soon as practical.</p>	<p>NRDC recommends that the move toward cost-based tariff start immediately.</p> <p>A fully cost-based tariff will encourage electrification because the price of electricity consumption will be much lower than what it is today, and then will also be much lower than the price for alternative fuels.</p>	<p>Sierra Club proposes that existing NEM customers (i.e., NEM 1.0 and NEM 2.0 customers) be required to transition to an electrification-friendly rate at the eight-year point from interconnection, and that successor tariff customers be required to enroll under an electrification-friendly rate at their date of interconnection.</p>	<p>Immediately implemented as a rider to existing suite of utility tariff offerings.</p>	<p>N/A</p>	<p>The Joint IOUs do not support an additional transition credit to all customers given (i) the size of the existing cost shift and (ii) that it will have been nearly a decade since the passage of AB 327 by the time the new NEM tariff is implemented. The Joint IOUs support a transitional discount for income-qualified customers that install NEM during the first three years of the new DG-ST tariff, to be revisited in a CPUC workshop to be held one year prior to expiration.</p>
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<p>How should a MTC for customer-generators be structured?</p>	<p>N/A; However, the Public Advocates “specifically incense BTM generation adoption in disadvantaged communities”</p>	<p>The proposals of the White Paper should be used to structure a MTC for customer-generators.</p>	<p>NRDC recommends that the MTC be structured as a one-time incentive for adoption.</p>	<p>Sierra Club believes this structure will provide reasonable, sustainable growth for the industry while reducing cost impacts on non-participants and incentivizing optimal use of customer-generators’ systems.</p>	<p>One-time up-front payment to offset the present value difference between the 20-year costs of owning/operating a BTM generator and expected bill savings over a target payback period. Payback period of 10 years is proposed for CARE customers. If non-CARE customers are eligible (not TURN's recommendation), MTC should be calculated based on a target payback period of 15 years.</p>	<p>N/A</p>	<p>The Joint IOUs do not support a MTC for all customers. For income-qualified customers, the Joint IOUs support a transitional discount to the Grid Benefits Charge. The Joint IOUs believe an adjustment to a fixed component of the bill (though not to export compensation) , will provide more stability and predictability for these customers.</p>
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<p>Should MTC vintages be based on time (e.g., annual), number of participants, or capacity (e.g., MW blocks)?</p>	<p>Instead of utilize an MTC the Public Advocates appears to wish to propose a rebate to make up costs: the Commission should offer NEM 2.0 customers a \$3,200 rebate for the price of purchasing a paired storage system. The Commission should offer NEM 1.0 customers a \$2,880 rebate, which is 10% less than the rebate for NEM 2.0 customers. For CARE and FERA-eligible customers they would be compensated for their transition to the new successor tariff, these customers should receive the full \$3,200 rebate if they switch at any point over the 5-year window.</p>	<p>MTC vintages (the segregation of MTC levels based on the age of existing NEC contracts) should be based on impacts of the credit on the extent of subsidization of NEM customers by ratepayers generally.</p>	<p>NRDC recommends that MTC vintage be based on time. As recommended in Section III.D The MTC should be recalculated every two years to reflect decreasing solar system costs and California's evolving policy goals.</p>	<p>Sierra Club recommends MTC vintages be based primarily on installed capacity, with each step-down being assigned a date-certain as the capacity threshold approach.</p>	<p>Updates to MTC value based on material changes in system cost, tax benefits, avoided costs, and retail rates.</p>	<p>N/A</p>	<p>Any transition credit should avoid creating additional complexity by limiting the number of vintages to the extent possible. The Joint IOUs propose a transition period of three years for income-qualified customers. From an implementation and customer understanding perspective, triggers based on dates (instead of numbers of participants or installed capacity) are preferred.</p>
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<p>From which groups should the MTC recovery surcharge be collected? From the same vintage of customer-generators, future vintages of customer-generators, all customer-generators, all ratepayers, or some other group?</p>	<p>The funding for the Public Advocates Rebates could be collected through distribution charges over multiple years, ensuring participants are unable to bypass the charges and pay their fair share.</p>	<p>MTC recovery surcharges should be collected from all customer-generators. The MTC should not be collected from ratepayers generally.</p>	<p>NRDC is open to creative solutions that address this question.</p>	<p>Sierra Club proposes that the MTC be collected from all ratepayers.</p>	<p>Explore options for recovering some or all MTC costs from sources other than rate revenues (GGR F, state general fund). For costs that must be recovered in rates, assign a portion (25-50%) to existing NEM 1.0/2.0 customers with the remainder collected in PPP charges collected from all customers.</p>	<p>N/A</p>	<p>If an MTC is approved and applied to successor tariff customers, as outlined in the E3 White Paper, the MTC should be collected from some or all customer-generators. Given the significance of the cost shift and the fact that non-participants will continue to subsidize existing NEM customers for decades to come, the Joint IOUs do not believe it would be fair to continue to ask these non-participants to subsidize new NEM installations through a MTC.</p>
<p><b>Public Advocates Issues</b></p>							



<p>NEM is not cost effective and unreasonably burdens non-participants.</p>	<p>This cost burden also discourages sustainable growth in BTM generation adoption, because without a policy shift, the cost burden due to BTM generation will exacerbate electric service equity and affordability issues to the point where continued incentives for adoption will be impossible.</p>	<p>The AARP does not discuss this issue within their proposal.</p>	<p>The NRDC does mention how NEM is not cost effective. The solution proposed is that "[c]ustomers, utilities, and regulators then can design energy efficiency standards that prioritize load-shifting and energy savings when they are most valuable to the grid – as reflected in the export rate and TOU consumption charge – to further ensure our state’s decarbonization goals are met cost-effectively.</p>	<p>The Sierra Club does discuss how ineffective the costs were towards non-participants "To best ensure sustainable growth of rooftop solar in a manner that minimizes rate impacts to non-participants and encourages deeper decarbonization through adoption of electrification and load-shifting technologies, Sierra Club recommends that the Commission look at its NEM program holistically and proposes changes to underlying rate structures for existing residential NEM customers and a successor tariff with a declining market</p>	<p>"In combination, these elements are designed to ensure that the tariff compensates participating customers based on the benefits of their BTM resource, that shared costs are not shifted to non-participants, and that any subsidies are both transparent and efficiently deployed to achieve a desired payback period for eligible customers."</p>	<p>The P.O.C. does not discuss how NEM is unreasonably burdening non-participants.</p>	<p>The IOUs do discuss that NEM is not cost effective and burdens non-participants that is caused by the cost-shifting of NEM 2.0.</p>
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				transformatio n credit ("MTC") similar to what is contemplated in E3's Successor Tariff White Paper."			
The Current NEM Tariff Undermines Electric Vehicle Adoption and Building Electrification.	Reducing the existing subsidies to NEM customers and implementing more efficient pricing (lower average electric rates) is the best solution to improve equity, economic efficiency, and create benefits to all ratepayers while ensuring EV adoption and electrification is properly incentivized.	The AARP proposal does not discuss this issue of Electric Vehicle Adoption or Building Electrification.	The NRDC do discuss this issue by stating that building electrification should be supported through an "upfront incentive plus the fact that California's building codes require solar panels on new homes will help rooftop solar steadily grow for the foreseeable future."As well as mention regarding electric vehicles that "Flexible electricity use can help integrate even more	The Sierra Club does not discuss the undermining of Electric vehicles and building electrification, but instead discusses that through the use of TOU rates these applications could be incentivized. For example, "Transitioning these customers to more differentiated TOU rates provides over 1 million opportunities to market load-shifting and electrification technologies	The TURN does not discuss this issue within their proposal.	This proposal does not discuss this issue within their proposal.	"The existing NEM program jeopardizes California climate goals, including building and transportation electrification. The massive NEM program cost shift raises electricity rates for non-participants, creating a disincentive for electricity use. This makes adoption of technologies like heat pumps and electric vehicles less cost-effective and less attractive to customers."

			renewable power into the electric grid and can reduce the cost of meeting California's economy wide carbon reduction goals by tens of billions of dollars per year: [I]f flexible loads in buildings, flexible electric vehicle charging".	that can improve system value, provide increased environmental benefits needed for California to meet its decarbonization goals, and generate bill savings for NEM customers from fuel switching to electric vehicles and appliances."			
NEM is Less Cost-Effective Than Other Renewable Energy Procurement Strategies meaning customers' dollars could be better reinvested.	The cost of generating renewable energy through the current NEM tariff is much higher than the cost of Renewable Portfolio Standard (RPS) procurement contracts, meaning that customer dollars could be invested in more cost-effective ways to achieve the states' climate goals.	The AARP does not discuss how NEM is less Cost-Effective than other renewable energy strategies.	This issue is discussed with the solution being an equity in clean energy fund that "would yield approximately \$130 million annually to reinvest in communities that haven't yet reaped enough benefits from the clean energy transition."	These rates are not well aligned with system costs. As the Successor Tariff White Paper observes, "having all customer-generators enroll in TOU rates as part of NEM 2.0 helped move compensation for customer-sited renewable generation closer towards cost causation," but there is	The TURN proposal does not discuss the issue of NEM being less cost-effective than other renewable energy procurement.	This proposal briefly discusses that NEM is not being cost-effective and that there are larger societal costs to the climate.	The Joint IOUs does not discuss how customers' dollars could be better reinvested into other Renewable energy procurement strategies.

				<p>continued misalignment in part because "current residential TOU rates are not strictly reflective of the avoided (marginal) costs at different times of day." Sierra Club then describes the rates it recommends existing customers be moved to, the timeframe that Sierra Club recommends the transition occur, and the resulting non-participant and environmental benefits."</p>			
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<p>NEM growth lags in disadvantaged communities</p>	<p>Ratepayers are paying almost double to fund an incentive program that predominantly benefits more affluent customers than they are paying to fund a low-income assistance program.</p>	<p>The AARP very briefly discusses this issue by stating that by "Merely increasing budgets for the low- income assistance portions of the NEM effort is unlikely to compensate for the large rate pressure this subsidy causes for ratepayers generally."</p>	<p>NRDC identifies this as also another issue and would utilize the equity in a clean energy fund to help stimulate growth.</p>	<p>The Sierra Club does discuss this issue by describing how customers are utilizing non-renewable methods. For example, "Local capacity areas with significant amounts of gas generation in disadvantaged communities such as Western LA Basin are largely developed and therefore cannot accommodate utility scale renewables to serve as a local generation source to charge batteries in the event of an extended transmission contingency."</p>	<p>Ensure that customer DERs continue to grow sustainably / specific alternatives for disadvantaged communities - Achieves a target payback period of 10 years for CARE customers through an up-front Market Transition Credit and would allow the Commission to set a separate payback period for non-CARE customers and for customers located in Disadvantaged Communities.</p>	<p>The way that the P.O.C. strives to solve the issue of disadvantaged communities by implementing community solar.</p>	<p>The IOUs do discuss the issue of a lack of growth in disadvantaged communities. For example, "The existing NEM program jeopardizes California climate goals, including building and transportation electrification. The massive NEM program cost shift raises electricity rates for non-participants, creating a disincentive for electricity use. This makes adoption of technologies like heat pumps and electric vehicles less cost-effective and less attractive to customers."</p>
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<p>NEM is not maximizing grid value which conflicts with the principle that NEM should maximize value to all customers and the electrical system.</p>	<p>NEM currently conflicts with the proceeding's guiding principle that NEM should maximize value to all customers and the electrical system. As well as Section 3 of this Proposal discusses the various ways paired storage can mitigate this issue. Unfortunately, the Lookback Study demonstrates that few NEM participants are pairing their systems with energy storage. Since only 6% of NEM systems interconnected in 2019 were paired with energy storage,98 NEM policy is not currently calibrated to solve this problem.</p>	<p>The AARP does not discuss anything regarding the Grid or grid value.</p>	<p>This issue is identified and a solution is proposed by setting export credits at an hourly avoided cost. With "hourly export credit and a TOU consumption charge combine to give the customers the right signals to consume and export electricity in a manner that maximizes the value of distributed generation."</p>	<p>The Sierra Club does not discuss this issue in their proposal.</p>	<p>The TURN proposal does not discuss the grid maximization issue.</p>	<p>This proposal does not discuss this issue within their proposal.</p>	<p>The IOUs do not discuss the maximization of grid value within their proposal.</p>
AARP Issues							
The AARP follows all of the questions	N/A	N/A	N/A	N/A	N/A	N/A	N/A

of the E3 White Paper and does not contain any other side issues							
NRDC Issues							
Appropriately Differentiated Time of Use (TOU) Electric Consumption	The Public Advocates does discuss this issue and provides a solution that is proven to be similar to that of the NRDC. This is observed with export compensation rates "for each TOU period should be set equal to the weighted average avoided costs to ensure that the annual average compensation that customers receive (\$/kWh) equals the annual average time-varying avoided costs value of their (\$/kWh) exports. <sup>129</sup> This approach would align total costs of exports to	The AARP does discuss this issue and states that "the new NEM tariff is priced off of a time-of-use (TOU) rate that raises costs for other ratepayers, particularly those unable to adjust the time of their use to avoid the highest per kWh rates, consideration should be given to the timing of the transition to such rates (and to the policy issues involved in mandating any such rates)."	NRDC recommends that the distribution and generation consumption charges accurately reflect time of use variation in costs to deliver electricity.	The Sierra Club does discuss this issue by stating that "In continuing to put a high value on mid-day solar exports though tiered and poorly differentiated TOU rates, existing NEM customers do not have a significant economic incentive to load shift and minimize energy use during hours when grid emissions are highest or deploy electrification technologies."	"TURN recommends that the Commission authorize paired storage tariffs with at least 3 TOU periods in the summer and winter seasons and an optional Critical Peak Pricing component. These features will incentivize optimal dispatch and provide appropriate compensation for performance during periods of peak need."	This proposal follows a different approach to TOU rates. For example, Generally align with wholesale rates for electricity unit pricing, minimize retail prices during the highest renewable energy production hours, be consistent year-round to simplify the rate structure and increase rate transparency.	"The default rates will vary by utility due to differences in costs and rate design practices but will have common elements such as non-tiered TOU rates and customer charges. This structure will improve equity in cost recovery and encourage consumption during non-peak hours and exports during peak hours. Providing incentives to shift usage to non-peak hours or exports during peak hours will provide the greatest benefit to the grid and support the state's climate goals."

	ratepayers with total benefits."						
Equity in Clean Energy Fund	The Public Advocates does not discuss the issue of having an Equity in Clean Energy Fund within their proposal.	The AARP does not discuss equity in clean energy funds.	This equity fund is "to provide clean electricity benefits – rooftop solar, energy efficiency, electrification – directly to low-income Californians. This fund would be developed by levying a modest charge to rooftop solar owners on existing NEM rates who have already recouped their initial investment and stand to make a	The Sierra Club does not discuss this issue in their proposal.	The TURN proposal does not discuss the creation of a clean energy fund.	This proposal discusses a possible community storage fund; however, it is not similar to the Equity in Clean Energy Fund.	The IOUs do not discuss the issue of an Equity in Clean Energy Fund.



			substantial return on it.				
Sierra Club							
Sierra Club Recommends Step-Downs to Reach Avoided Cost Compensation After 10 GW of Additional Residential NEM Capacity.	The Public Advocates does discuss the issue of avoided cost compensation; however, their proposal does not recommend step-downs nor after 10 GW of additional Residential NEM capacity.	The AARP does not discuss this issue within their proposal.	The NRDC does not identify nor discuss this issue.	"A 10 GW glide path is a useful guidepost that strikes the appropriate balance between utility scale and distributed resource development. This balance furthers a variety of objectives, including the protection of open space and provision of generation in local capacity areas that can help enable the retirement of gas plants in disadvantaged communities."	The TURN proposal does not discuss step-downs to reach avoided cost compensation.	This proposal does not discuss this issue.	The IOUs do not discuss the issue of step-downs to avoid cost compensation.
TURN							
A one-time payment	The Public Advocates do	The AARP does not	The NRDC does not	The Sierra Club does not	"First, the participating	This issue is not discussed	The IOUs do not discuss the

<p>provided as a lump sum that represents a direct offset to purchase costs.</p>	<p>not discuss this issue of TURN within their proposal.</p>	<p>discuss this issue within their proposal.</p>	<p>discuss this type of issue but instead has a different approach such as the Equity in Clean Energy Fund.</p>	<p>discuss this within their proposal.</p>	<p>customer would be able to apply the entire amount to reduce the costs of new investment as a direct offset at the time of purchase. Second, apart from these one-time costs there would be no ongoing subsidies to be recovered from all customers and no continuing concern about the cost-shifting impacts of participating customers."</p>	<p>within their proposal.</p>	<p>idea of a lump-sum payment.</p>
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<p>Establishment of storage dispatch obligations during emergency conditions</p>	<p>The Public Advocates does discuss the idea of storage obligations; however, chooses to discuss a different idea regarding how this should be done and not only for emergency conditions. For example, "NEM predominately encourages standalone rooftop solar, 196 which does not maximize grid benefits. Only 6% of NEM systems interconnected in 2019 were paired with energy storage. The successor tariff should be designed to encourage paired storage systems. Without paired storage, increased renewable energy from solar will ultimately have minimal</p>	<p>The AARP does not discuss the obligation of energy storage.</p>	<p>The NRDC does discuss battery storage but in a different manner, such as "Setting export credit at ACC encourages customers to pair solar with storage through which they can store electricity when the export rate is low and export it when most needed by the grid."</p>	<p>The Sierra Club does not discuss how the establishment of a storage dispatch obligation be put into the tariff, but instead a strong economic incentive.</p>	<p>N/A</p>	<p>This proposal does discuss a community storage type of idea that creates a type of dispatch obligation between energy storage and the community.</p>	<p>The IOUs do discuss storage incentives and considerations ; however, do not discuss storage obligations.</p>
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	or negative value as the generation added does not align with system needs."						
Common inputs for calculating/up dating MTC incentive levels	The Public Advocates does not discuss the idea of updating MTC incentive levels; however, they argue that the way to calculate incentives should be through identifying the challenges of individuals. For example, "Low home ownership rates, Complex needs, ownership,	The AARP does not discuss the calculation/up dating MTC incentive levels.	The NRDC discusses that a common input and how to calculate this issue is that a "Market Transition Credit as UpfrontIncentive" to make sure a 10 year payback period is being calculated for an MTC incentive.	The Sierra Club does not discuss how the calculation or updating of MTC incentive levels be done.	"TURN's tariff proposal places primary focus on the deployment of BTM resources by CARE customers and offers an approach to prioritizing deployment in Disadvantaged Communities by calibrating the MTC incentive to achieve a reasonable payback period for specific customer subgroups."	This proposal does not discuss this issue within their proposal.	The IOUs do not believe an MTC is the best way to transition customers to a more reasonable rate.

	and financial arrangements for low-income multifamily housing, insufficient access to capital, building age, and remote or underserved communities".						
Potential clarifications/modifications to the NUS methodology (Nonbypassable, Unavoidable and Shared Costs)	The Public Advocates does try to clarify NUS methodology by discussing the various subtopics by touching on topics such as non-bypassable charges being utilized within their proposal when they state that "[t]his Proposal would ensure that such costs are truly non-bypassable."	The AARP does not discuss the NUS methodology.	Some of the clarifications that the NRDC offer is that they recommend "that these charges be determined by multiplying the non-bypassable rate component, which is volumetric and in \$/kWh, with an estimate of the NEM customers total energy consumption. This total consumption estimate should be calculated as the sum of the NEM customers' net metered consumption (total electric	The Sierra Club does not offer potential clarifications/modifications to the NUS methodology.	"TURN proposes a dynamically calculated charge tied to actual (or estimated) customer self-consumption in each month. The total charge would vary by month because the calculated cost responsibility is directly correlated with the amount of actual usage supplied by BTM resources."	The Protect our Communities does not discuss this within their proposals.	The IOUs clarify that NUS methodology is to be used to benefit NEM customers and help reinvest to reduce costs. "The non-bypassable charge is designed to recover all costs related to demand-side management and energy efficiency, storm cost recovery, and cyber security."

			imports less exports) and an estimate of the total electricity generated by their solar system". Which also in turn would make NEM customers have to pay their fair share of "non-bypassable and unavoidable charges – which include public purpose programs, nuclear decommissioning, wildfire mitigation costs and liability insurance, etc."				
Protect Our Communities Foundation							
NEM 3.0 Community Storage	The Public Advocate's Office does not discuss the issue of community storage.	The AARP does not discuss the issue of community storage.	The NRDC does not discuss community storage.	The Sierra Club does not discuss community storage.	The TURN proposal does not discuss the issue of community storage.	"The Community Storage fund will be used to build Community Storage within the local distribution grids no more than 5 miles away from the census tract	The IOUs do not discuss community storage in their proposal.

						where the NEM system is located." "Each utility shall make space available for Community Storage of up to 20 MWh at each substation within the distribution grid and substations connecting the transmission grid to the distribution grid."	
NEM 3.0 Minimum Generation	The Public Advocate's Office does not discuss the issue of minimum generation.	The AARP does not discuss the issue of minimum generation.	The NRDC mentions a similar idea to minimum generation by stating, "the CPUC can also levy this charge as a minimum bill that scales with installed solar capacity. This minimum bill can apply to all customers (whether they are NEM customers or not) that opt to sign-on to the TOU rate that accompanies the NEM 3.0 successor	The Sierra Club discusses this issue in a different manner by stating that the "Minimum charge of \$0.35 per day in the event that the bill, including the basic charge, is less than the minimum charge."	The TURN discusses a minimum bill; however, does not discuss the issue of minimum generation.	"All NEM 3.0 solar arrays must be sized for a transition of the building to 100% electric power (the array sizing calculation must assume zero gas appliances and zero gasoline vehicles)." "As well as after the first 5 years, the compensation rate paid for excess generation will be reduced to the current wholesale rate compensation	The IOUs discuss this issue in a different manner as that of the P.O.C. proposal. For example, "Under the existing NEM programs, residential and small commercial customers generally pay only minimum or fixed charges on a monthly basis."

			tariff; however, the minimum bill would only be triggered for NEM customers."			received by NEM 2.0 customers or a revised value the Commission determines more accurately reflects the value of excess BTM solar production."	
NEM 2.0 Carve-Out for Low-Income Customers and Renters	The Public Advocates addresses and issue similar to this by stating that "[t]o ensure CARE and FERA-eligible customers are equitably compensated for their transition to the new successor tariff, these customers should receive the full \$3,200 rebate if they switch at any point over the 5-year window."	The AARP does not discuss a NEM 2.0 carve-out for low-income customers.	Instead of low-income customers retaining NEM 2.0, they prefer for such individuals to join the Equity in Clean Energy Fund.	The Sierra Club discusses this issue and states that "Existing low-income NEM customers would not be required to move to a different rate."	The TURN proposal does not discuss a NEM 2.0 carve-out for low-income customers.	"As a minimum requirement, low-income customers and renters should retain access to NEM 2.0 until those customers reach 10,000 MW of installed solar capacity."	The IOUs do not discuss this issue within their proposal.



NEM 2.0 Community Solar, an Equitable Transition	The Public Advocates takes a different approach to this by offering a "Community Solar Green Tariff program, under which a utility partners with a local nonprofit or governmental organization to sign up CARE and non-CARE DAC residents for a 20% bill discount and subscription to the output of a local mid-size solar array, addresses each of the SB 350 barriers."	The AARP does not discuss the issue of community solar.	The NRDC does not discuss this issue that the Protect our Communities discusses.	The Sierra Club does not discuss community solar.	TURN does not discuss the issue of community solar.	"Shall serve only CARE customers and multi-unit dwelling residential customers/renters." As well as "the remaining 80% of funds that continue to flow to the PA shall be used to build additional community-based infrastructure to lower the communities' electricity costs."	The IOUs do not discuss the idea of community solar in the same manner as to how the P.O.C. discuss this issue.
NEM 3.0 Time of Use Rates	The issue of TOU rates differs compared to the P.O.C. proposal due to how the Public Advocates proposes to enact "A rate overlay will preserve customer choice and allow customers who own	The AARP does not discuss if there should be a set rate by IOUs regarding TOU rates.	This issue is discussed but the NRDC takes a different approach by proposing that "Each IOU should offer a TOU tariff with the greatest cost-reflective differential between on-peak and off-peak electricity rates along	The Sierra Club discusses how TOU rates should be proposed to "the Commission move existing NEM customers to existing more differentiated rates at eight years from interconnection." This sets apart from the P.O.C.	"NEM participants can take service under the same existing and future Time of Use (TOU)rate tariffs available to non-NEM customers."	"Generally align with wholesale rates for electricity unit pricing, and minimize retail prices during the highest renewable energy production hours" as well "There shall be only one TOU rate structure for all utilities." and	"Because the IOUs are proposing export compensation that is TOE differentiated, customers will only be allowed to offset within each TOU period. In other words, customers will not be able to offset kWh produced and

	additional clean technologies like EVs to choose among multiple TOU rate offerings. This choice will enable customers to select a rate that best aligns with their usage pattern, and their ability and willingness to respond to different time-based price signals." This differs from the P.O.C. by giving customers the option of multiple TOU rate options.		with the NEM 3.0 tariff to non-CARE customers. This will align customer incentives and behavior with the needs of the electric grid. CARE customers should be given the option of whether they want to be on this TOU tariff at a CARE discounted rate or being allowed to stay at their current tariff. IOUs should work with CARE customers to ensure that they are able to take advantage of a TOU tariff."	proposals regarding they all must be the same.		"Become mandatory for all customers to align TOU use with California clean energy policy across all customer classes."	exported during low-cost hours (during the mid-day off- or mid-peak hours) against grid consumption during high-cost on-peak hours."
Joint IOUs							
Grid Benefits Charge	The Public Advocates discuss this issue and state that "the successor tariff should include a GridBenefits Charge to accurately reflect the costs of	The Public Advocates does not discuss the idea of a grid benefits charge or any other type of charge.	The NRDC also agreed that there should be a grid benefits charge with the intention of being able to "for new NEM customers to recoup a fair	The Sierra Club does not discuss this issue in their proposal.	The TURN proposal discusses a Grid Access Charge. For example, "Separate customer-specific monthly charge to recover	The Protect our Communities proposal does not discuss a Grid Benefits Charge.	"based on their rooftop solar system's installed capacity (kW-DC). The Grid Benefits Charge will be designed to recover costs that would otherwise be

	providing distribution and transmission service to successor tariff customers and ensuring fair and equitable recovery of NBCs."		share of distribution charges. I.e., this charge will ensure that the costs to serve a NEM customer are recouped by the utility."		Nonbypassable, Unavoidable and Shared (NUS) costs for self-consumption by NEM participants. Customer has the option of installing a second meter or accepting estimated production to calculate self-consumption."		shifted due to solar customers' onsite consumption."
Virtual Net Metering/Aggregation	The Public Advocates does not discuss the issue of Virtual Net Metering/Aggregation within their proposal.	The AARP does not discuss this within their proposal.	The NRDC does not comment on this issue in their proposal.	"Sierra Club's proposal is directed at residential NEM customers. Sierra Club does not have a specific proposal for virtual net metering ("VNEM") customers and it is Sierra Club's understanding that net energy metering aggregation is not used by residential customers."	The TURN proposal does not discuss Virtual Net Metering.	The P.O.C. does not discuss this within their proposal.	"For some virtual tariffs, all the generation is exported to the grid and none of the generation directly serves the load of the aggregated accounts. Obviously exporting such a large volume of energy can increase the interconnection costs – partially because grid upgrades to accept the exported power are sometimes necessary. Some of these additional

							interconnection costs are subsidized by non-participants. In addition, billing costs are typically higher for these arrangements. " With "the Joint IOUs propose two virtual crediting tariffs: one for income-qualified customers(DG-ST-VSOM) and one for other customers (DG-ST-V)."
Ensuring Dispatchability of Devices	The Public Advocates briefly discusses the issue of the dispatchability of storage devices by stating that "If storage is dispatched to maximize grid benefits, it also has the potential to increase resiliency, support reliability during periods of system and local peak	The AARP does not discuss this within their proposal.	The NRDC do not discuss this issue within their proposal.	The Sierra Club does not discuss this issue in their proposal.	The TURN proposal does discuss the dispatchability of devices. For example, "The NEM tariff should be designed to incentivize optimal dispatch behavior by paired storage to support broader grid needs."	The P.O.C. does not discuss this within their proposal.	"Active cyber security, communications capabilities and information sharing are necessary components to ensure that DERs have the capabilities needed for California to realize its vision around these technologies, and that they are dispatchable in times of high

	demand, and improve customer bill savings."						grid stress. Standardizing these proposed requirements will improve simplicity, understandability, consistency among IOUs, and equity among customers."
Value of Distributed Energy (VODE) Optional Tariff	The Public Advocates does not discuss the issue of VODE optional tariff.	The AARP does not discuss this within their proposal.	This issue is not brought up within the NRDC proposal.	The Sierra Club does not discuss this issue in their proposal.	The TURN proposal does not discuss this issue.	The P.O.C. does not discuss this within their proposal.	"Therefore, the utilities have also developed a Value of Distributed Energy (VODE) optional tariff where onsite generation would be separately metered and credited at a predetermined rate. Participating customers would continue to be metered and billed based on their gross load like any other member

							<p>of their class. This structure has been recognized as being simpler and more transparent for participating customers than other behind-the-meter generation compensation mechanisms." As well as "The Joint IOUs do not propose that the VODE tariff would be available for customers on the same timeline as the core tariff. Rather, this option could be developed at a later date as needed."</p>
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