

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

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

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

**OPENING BRIEF OF THE CALIFORNIA ENERGY STORAGE ALLIANCE**

Jin Noh  
Policy Director

Grace Pratt  
Policy Analyst

**CALIFORNIA ENERGY STORAGE ALLIANCE**  
2150 Allston Way, Suite 400  
Berkeley, California 94704  
Telephone: (510) 665-7811  
Email: [cesa\\_regulatory@storagealliance.org](mailto:cesa_regulatory@storagealliance.org)

August 31, 2021

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

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

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

**OPENING BRIEF OF THE CALIFORNIA ENERGY STORAGE ALLIANCE**

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) hereby submits this opening brief in the *Order Instituting Rulemaking 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* (“OIR”), pursuant to the *E-Mail Ruling Noticing April 22, 2021 Workshop and Revising Procedural Schedule* (“Ruling”) issued by Administrative Law Judge (“ALJ”) Kelly A. Hymes on April 8, 2021 and as modified during the evidentiary hearings.

**I. INTRODUCTION.**

CESA appreciates the various perspectives and proposals submitted by parties in this proceeding, as well as the opportunity to submit this brief to inform the Commission on how to best address the Net Energy Metering (“NEM”) Successor Tariff, referred to henceforth also as NEM 3. Overall, CESA is encouraged to see that many parties recognize the value that distributed energy storage can provide to the grid. Parties with very different NEM successor tariff proposals agree that energy storage should be encouraged because of its ability to provide grid services and meet evolving grid needs. As laid out by the Joint Investor-Owned Utilities (“IOUs”), the benefits of behind-the-meter (“BTM”) energy storage include curtailing excess BTM NEM generation,

since unlike for in front of the meter (“IFOM”) systems, “when BTM solar generation peaks during the midday hours, there is no mechanism in place to curtail excess energy flowing into the grid, as exists for utility- scale power plants. Paired storage systems can help to mitigate this issue, when coupled with the right price signals.”<sup>1</sup>

Due to the grid value and services that storage can provide, paired solar-plus-storage systems are also more cost effective than solar-only systems. In its rebuttal testimony, for example, The Utility Reform Network (“TURN”) provides results from the Commission’s Standard Practice Manual (“SPM”) Tests and finds “materially better cost effectiveness” for the Total Resource Cost (“TRC”), Participant Cost Test (“PCT”), and Ratepayer Impact Measure (“RIM”) scores for solar-plus-storage resources.<sup>2</sup> While differences in the PCT may be due to the structure of TURN’s specific proposal, TURN also explains that higher TRC and RIM scores are likely due to the fact that “avoided costs are over three times higher for paired storage (\$0.19/kWh) versus standalone PV (\$0.06/kWh).”<sup>3</sup> In E3’s cost effectiveness study, party proposals show a variety of SPM test results for the RIM due to differences in incentives given to energy storage, bill savings, and more.<sup>4</sup> However, these results of higher system avoided costs are true regardless of party proposal. Therefore, storage should be encouraged as better grid investments for ratepayers as a whole, and adjustments could therefore be made to incentives in the NEM 3 tariff to achieve appropriate cost effectiveness results determined by the Commission.

Recognizing that energy storage is an important asset that complements NEM generators to increase reliability and resiliency within the grid, it should be encouraged within the NEM

---

<sup>1</sup> IOU-01 at p. 103, lines 20-23.

<sup>2</sup> TRN-03 at 71, line 17 and Table 11.

<sup>3</sup> TRN-03 at 71, lines 18-20

<sup>4</sup> See CSA-32 [E3, *Cost-effectiveness of NEM Successor Rate Proposals under Rulemaking 20-08-020: A Comparative Analysis* (2021)] at Appendix D.

Successor Tariff. In this brief, we address specific issues raised in parties' testimonies related to energy storage as well as on broader policy and market transformation considerations, which can be summarized as follows:

- Approaches to incentivize storage attachments to NEM systems should not be prescriptive or tied to mandatory transitions.
- NEM sizing limitations should be increased or removed to support resiliency needs and accommodate future electrification.
- Retroactive policy changes and mandatory transitions for NEM 1 and 2 customers should be avoided, and instead, approaches to encourage them to voluntarily move to NEM 3 should be pursued.
- Proposed fixed charges put an unfair burden on NEM systems compared to other load-reducing measures and infringe on a consumer's right to self-supply electricity.

**II. APPROACHES TO INCENTIVIZE ADDITIONAL STORAGE ATTACHMENTS TO NEM SYSTEMS SHOULD NOT BE PRESCRIPTIVE OR TIED TO MANDATORY TRANSITIONS.**

CESA is pleased to see parties considering how to best encourage storage adoption within NEM and generally supports the creation of additional programs or incentives to encourage storage adoption. Below, CESA comments on proposals that include new storage incentive programs: Cal Advocates proposal and the Joint IOUs STORE proposal.

**A. Cal Advocates Storage Rebate Proposal**

CESA appreciates the Public Advocates Office of the California Public Utilities Commission's ("Cal Advocates") proposal to create a storage incentive to encourage storage adoption among NEM 1 and 2 customers. The Cal Advocates proposal includes a \$3,200 rebate for NEM 2 customers to purchase and install a storage device and a \$2,880 rebate for NEM 1

customers.<sup>5</sup> The proposed rebate would stay the same for two years and then decrease 10% per year for the next two years, capped at \$1,000 and \$900, respectively, for NEM 1 and 2 customers during the last year of the program.<sup>6</sup> At the end of the five-year program, all NEM 1 and 2 customers would be moved to the successor tariff automatically. Finally, Cal Advocates proposes to offer lower transition incentives to customers that switch to the successor tariff early without adopting storage.<sup>7</sup>

Considering how solar-plus-storage systems provide more value to the grid compared to solar-only systems, storage adoption should be encouraged among existing solar customers. As proposed by Cal Advocates, an incentive program with declining incentives over time can spur customer adoption of paired storage systems, especially if faced with the prospect of being moved onto NEM 3. While Cal Advocate’s proposal to offer a voluntary incentive has appeal as a “carrot” to adopt storage, CESA has concerns with Cal Advocate’s proposal to automatically transition NEM 1 and 2 customers to the successor tariff after five years. The use of a “stick” to force NEM 1 and 2 customers onto the successor tariff is contrary to Commission determinations made in Decision (“D.”) 16-01-044<sup>8</sup> to promote consistency and fairness in the treatment of customers under the predecessor tariff and sets poor precedent of retroactive policy changes when customers invested in NEM systems under a particular tariff expecting one set of terms and conditions but would be forced to be subject to a new set of terms and conditions under the successor tariff.

---

<sup>5</sup> PAO-01 at p.4-4, lines 4-22.

<sup>6</sup> *Ibid.*

<sup>7</sup> *Ibid.*

<sup>8</sup> D.16-01-044 at Conclusions of Law 14-15.

As such, CESA believes that voluntary storage incentives are appropriate but cautions against any mandated transitions that would amount to a retroactive policy change. CESA understands that the calculated costs and benefits of Cal Advocates’ proposal may require the carrot-and-stick approach to be part of a combined package, where taking only the component involving voluntary storage incentives may not be workable. If so, CESA does not support Cal Advocates’ Storage Rebate Proposal. CESA elaborates on issues around retroactive policy changes in Section IV below.

## **B. Joint IOU STORE Program Proposal**

In testimony, the Joint IOUs outline a new storage incentive program, the Savings Through Ongoing Renewable Energy (“STORE”) Pilot, that would be made available to 25,000 income-qualified customers (*i.e.*, CARE/FERA enrolled).<sup>9</sup> The STORE Program would provide a free battery to eligible customers, in addition to some customers also being eligible to receive additional funding for electrical upgrades needed to install the storage.<sup>10</sup> Income-qualified NEM customers on any NEM tariff (1, 2, or 3) would be eligible for this program, conditioned on NEM 1 and 2 customers having to switch to the NEM 3 tariff if they participate in the program.<sup>11</sup> Energy storage systems installed through STORE will also be required to allow utility dispatch rights over the resource, though details are missing from the proposal surrounding dispatch obligations or specific programs customers will be required to

---

<sup>9</sup> IOU-01 at p. 165, lines 1-3.

<sup>10</sup> IOU-01 at p. 173, line 18, p. 174, lines 1-2.

<sup>11</sup> IOU-01 at 176, lines 25-26.

enroll in.<sup>12</sup> However, the Joint IOUs state that customers will have the option to participate through third-party aggregators.<sup>13</sup>

CESA is supportive of providing additional incentives to low-income customers to encourage storage adoption. According to the NEM 2.0 Lookback Study, NEM solar customers are disproportionately high-income.<sup>14</sup> To this end, it is important to ensure that energy storage and its bill savings and resiliency benefits are accessible to customers of all income levels. However, CESA does not believe that providing a free battery to customers is the best way to ensure that a storage system is optimally chosen and sized to a customer's load and needs. The IOUs explain that one difference between the proposed STORE Program and the existing Self-Generation Incentive Program ("SGIP") is that the utilities will buy batteries for customers,<sup>15</sup> instead of providing specified incentive levels for equipment. However, the IOUs overlook the benefit of SGIP's more flexible approach. Looking at applications submitted to the SGIP Residential Equity Budget, system sizes have varied from under 5 kW to over 200 kW,<sup>16</sup> suggesting that a uniform or standard free battery for all eligible customers under the IOUs' proposed program will prescribe a solution that does not fit the specific customer's load profile or other needs. It is unclear how the Joint IOUs will decide how many batteries and of what size they will give to each customer and whether multi-family or Virtual Net Energy Metering ("VNEM") customers may or may not qualify for the program. Even if such details were

---

<sup>12</sup> IOU-01 at 174, lines 7-15.

<sup>13</sup> IOU-01 at 174, line 8.

<sup>14</sup> PCF-15 [Verdant Associates, *Net-Energy Metering 2.0 Lookback Study* (2021)], at p. 33, Figures 3-6 and 3-7 .

<sup>15</sup> IOU-01 at p. 173, line 18.

<sup>16</sup> Data based on the "SGIP Weekly Statewide Report" released on 8/23/21 available at [selfgenca.com](http://selfgenca.com).

provided, CESA has general concerns with a uniform approach to encourage storage adoption for NEM customers.

Also, CESA does not believe that customers participating in this program should be obligated to be enroll in a utility dispatch program or a third-party aggregator. The Joint IOUs state that they would like to target the program to customers with resiliency needs;<sup>17</sup> however, requiring customers to be enrolled in external dispatch programs means that customers will not be able to control their own systems to ensure they are prepared for Public Safety Power Shutoff (“PSPS”) events or other outages. As the California Solar and Storage Association (“CALSSA”) states in testimony, medical baseline customers are particularly vulnerable to outages, and “giving the utilities dispatch privileges will mean that battery capacity could be partially or fully depleted before an outage or system emergency during which customers with medical- or disability-related needs would be most vulnerable.”<sup>18</sup> Additionally, GRID Alternatives, Vote Solar, and Sierra Club argue that utility dispatch of storage systems may reduce bill savings that these customers would have otherwise seen from their solar-plus-storage systems.<sup>19</sup> NEM 1 and 2 have been criticized for not providing lower-income CARE/FERA customers the ability to achieve equal savings since compensation was tied to lower retail rates.<sup>20</sup> Requiring low-income customers participating in this STORE Program to participate in utility dispatch programs perpetuates unfair differences in bill savings. Instead, customers should be given the option to enroll in demand response (“DR”) programs that are good fits for them and allow these customers to be compensated for their specific grid services.

---

<sup>17</sup> IOU-01 at p. 165, line 2-3.

<sup>18</sup> CSA-02 at p. 33, lines 19-21.

<sup>19</sup> GRD-02 at p. 19, lines 25-26 and p. 20, lines 1-3.

<sup>20</sup> GRD-01 at p. 3, lines 13-14.



CESA also agrees with CALSSA that issues surrounding remote dispatch, including cybersecurity, are being addressed in other proceedings, such as R.17-07-007, and that these issues should be fully resolved before any customers are required to enroll in remote dispatch programs.<sup>21</sup>

**III. NEM SIZING LIMITATIONS SHOULD BE INCREASED OR REMOVED TO SUPPORT RESILIENCY NEEDS AND ACCOMMODATE FUTURE ELECTRIFICATION.**

In our original proposal on March 15, 2021, CESA proposed that sizing limitations on energy storage systems be permanently removed.<sup>22</sup> This has already been granted temporarily by D.20-06-017 in R.19-09-009, and could be extended indefinitely to all storage systems, instead of only those larger than 10 kW. CESA explained in our original proposal how these systems can provide resiliency benefits, particularly during wildfire-related outages.<sup>23</sup> Additionally, BTM energy storage systems can provide value to the grid by contributing to grid reliability.

Another benefit to increasing or removing system size limitations is to encourage electrification, which will help the state meet decarbonization goals. Sierra Club cites the California Energy Commission (“CEC”) in its IEPR proceeding, which identifies transportation and buildings as the two largest sources of carbon emissions in the state.<sup>24</sup> Electrifying both vehicles and building appliances can reduce greenhouse gas (“GHG”) emissions, particularly when the electricity used to power vehicles and appliances comes from onsite, non-emitting, clean energy sources, such as NEM solar and storage.<sup>25</sup> Sierra Club also outlines in testimony how

---

<sup>21</sup> CSA-01 at p. 77, lines 1-7.

<sup>22</sup> CESA proposal at p. 13.

<sup>23</sup> CESA proposal at p. 17-18.

<sup>24</sup> SCL-02 (Camp) at p. 5, lines 10-18.

<sup>25</sup> *Ibid.*

increasing sizing limitations of NEM systems to expected load will encourage transportation and building electrification by increasing bill savings.<sup>26</sup> Whereas Sierra Club recommended increasing sizing limitations to the NEM generator to support these ends, CESA recommended increasing or removing sizing limitations to the energy storage component of the NEM generator due to our focus on the state's resiliency priorities and the potential to leverage storage for incremental grid services. However, since paired energy storage has system sizing limits based on the size of the NEM generator, a generally similar outcome is achieved to position NEM system to facilitate electrification needs whether system sizing limits are increased for the NEM generator or the energy storage addition/enhancement to the NEM generator.

Regardless, given current Net Surplus Compensation rules and lower export compensation rates being contemplated in this proceeding, additional NEM system electricity production will likely become relatively more valuable when used to serve onsite load, rather than be exported to the grid, which will encourage customers to adopt electric appliances and vehicles to take advantage of NEM generation for self-consumption purposes. Although netting and true-up proposals vary widely between parties, energy storage provides value in all proposals by shifting energy from non-peak production periods to peak usage periods. This helps to decarbonize building electricity during these non-solar producing periods but also helps to reduce system wide load during peak hours and may even increase electric supply through exports. Essentially, CESA believes that NEM should evolve away from the current focus on the customer's immediate self-generation needs to one that supports the state's broader decarbonization and reliability goals. The ideal combination would be to approve Sierra Club's proposal to increase sizing limitations of NEM generators to expected load to support end-use electrification goals in addition to CESA's

---

<sup>26</sup> SCL-02 (Camp) at p. 24, Table 12.

increasing or removing sizing limits to paired energy storage to enable their use for customer resiliency and system-wide grid service needs.

**IV. RETROACTIVE POLICY CHANGES AND MANDATORY TRANSITIONS FOR NEM 1 AND 2 CUSTOMERS SHOULD BE AVOIDED, AND INSTEAD, APPROACHES TO ENCOURAGE THEM TO VOLUNTARILY MOVE TO NEM 3 SHOULD BE PURSUED.**

While CESA supports programs that encourage NEM 1 and 2 customers to adopt storage and incentivize them to *voluntary* move to the successor tariff, CESA does not support retroactive policy changes that would *require* NEM 1 and 2 customers to move to the successor tariff before the end of their grandfathering term.

In D.14-03-041 for NEM 1 customers and D.16-01-044 for NEM 2 customers, the Commission decided to allow customers taking service on either of these tariffs to do so for a 20-year period.<sup>27</sup> Changing this rule only five to six years after D.16-01-044 and the adoption of NEM 2 will be very disruptive to existing NEM customers and can cause consumers to lose trust in the NEM program overall. As mentioned by Solar Energy Industries Association and Vote Solar (“SEIA/VS”), when the Public Utilities Commission of Nevada (“PUCN”) released a change to their NEM program impacting existing customers, the PUCN faced backlash from existing customers who submitted lawsuits protesting the changes.<sup>28</sup> The Commission should avoid committing the same error and implementing retroactive policy changes that affect consumers. Additionally, as mentioned by CALSSA in testimony, changes to the grandfathering conditions of NEM 1 and 2 customers were not included in the list of issues within scope for this proceeding.<sup>29</sup>

---

<sup>27</sup> See D.14-03-041 at Order 1-3, 5-6 and D.16-01-044 at Conclusions of Law 14-15.

<sup>28</sup> SVS-01 (Gallagher) at p. 12, lines 1-3.

<sup>29</sup> CSA-01 at p. 125, lines 4-7.

However, CESA does agree with other parties, including SEIA/VS and the Sierra Club,<sup>30</sup> that encouraging NEM 1 and 2 customers to switch to the successor tariff before the end of their grandfathering period, and providing incentives to do so, is appropriate. We discuss storage incentives that encourage NEM 1 and 2 customers to move to NEM 3 above, but overall CESA recommends creating incentives for customers to voluntarily move to the successor tariff but does not recommend removing grandfathering terms for all NEM 1 and 2 customers.

V. **PROPOSED FIXED CHARGES PUT AN UNFAIR BURDEN ON NEM SYSTEMS COMPARED TO OTHER LOAD-REDUCING MEASURES AND INFRINGE ON A CONSUMER'S RIGHT TO SELF-SUPPLY ELECTRICITY.**

Many of the party NEM 3 proposals for the successor NEM tariff include Grid Benefits Charges (“GBCs”). For most parties, this charge would be implemented on a \$/kW basis based on the size of the installed generation system; however, TURN proposes including these charges on a \$/kWh of production of the system. Parties state that these charges are designed to eliminate or reduce the cost shift between solar and non-solar customers.

Although it is not explicitly stated in statute, it has been inferred at a national level that privately-owned electric generation assets have a right to self-supply their own electricity to use on-site. As highlighted by parties, NEM generators can be viewed as Qualifying Facilities (“QF”) within the Public Utility Regulatory Policies Act (“PURPA”).<sup>31</sup> PURPA regulation allows qualifying facilities to supply their own “station power” or the electricity used to operate the

---

<sup>30</sup> SVS-03 (Beach) at p. 42, lines 10-11 and SCL-03 at p. 4, lines 25-33 and p. 5, lines 1-7.

<sup>31</sup> *Small Power Production and Cogeneration Facilities; Regulations Implementing Section 210 of the Public Utility Regulatory Policies Act of 1978*, Order No. 69, FERC Stats. & Regs. ¶ 30,128, at 30,888, order on reh’g sub nom. Order No. 69-A, FERC Stats. & Regs. ¶ 30,160 (1980), *aff’d in part & vacated in part sub nom. Am. Elec. Power Serv. Corp. v. FERC*, 675 F.2d 1226 (D.C. Cir. 1982), *rev’d in part sub nom. Am. Paper Inst. v. Am. Elec. Power Serv. Corp.*, 461 U.S. 402 (1983).

generating facility and site.<sup>32</sup> This right to self-generate electricity can be extended to NEM generators, who should not have to pay additional costs just for being self-generators. PURPA outlines how rates for QFs should be “based on accurate data”, use “consistent system wide costing principles” and be applied to “the utility’s other customers with similar load or other cost-related characteristics.”<sup>33</sup>

The proposed GBCs from parties would not apply the same charges to customers with similar load profiles but without BTM generation assets. As CALSSA mentions in rebuttal testimony, this proceeding has not included Commission-approved cost of service studies for each utility that show how NEM customers have completely unique load characteristics.<sup>34</sup> The utilities may need to recover the cost of service from customers through appropriate rates and charges, but they should discuss recovering appropriate costs from all customers with low load or other load profiles that do not pay for their cost of service in the General Rate Cases (“GRCs”). CESA acknowledges that, last year, D.20-03-003 did not allow utilities to add additional fixed charges to residential customer rates outside of existing minimum bills.<sup>35</sup> However, this was largely due to findings that “far more detail regarding fixed charge [Marketing, Education, and Outreach] ME&O is required for the Commission to approve the ME&O plans offered by the IOUs.”<sup>36</sup> These ME&O barriers are issues that the Joint IOUs could overcome with additional planning on the rollout of any fixed charges. Therefore, it is more appropriate for fixed costs and their rollouts to be assessed in the GRCs, where the Commission can evaluate the recovery of costs from all residential

---

<sup>32</sup> *Calpine Corp. v. F.E.R.C.*, 702 F.3d 41, 43 (D.C. Cir. 2012); *California Indep. Sys. Operator Corp.*, 125 F.E.R.C. ¶ 61,072 (2008) (citing *PJM Interconnection, L.L.C.*, 94 F.E.R.C. ¶ 61,251 (2001); order denying rehearing and providing clarification, 95 F.E.R.C. ¶ 61,333 (2001)).

<sup>33</sup> 18 C.F.R. § 292.305(a)(2).

<sup>34</sup> CSA-02 at p. 56, lines 4-10, p.57, lines 1-3.

<sup>35</sup> D.20-03-003 at Conclusions of Law 1.

<sup>36</sup> D.20-03-003 at Findings of Fact 4.

customers and particular residential customer sub-classes. Additionally, existing fixed charges for non-residential customers can be re-evaluated in the GRC, where the wide variety of non-residential customers can be studied to determine where changes to fixed charges or other charges (e.g., demand charges) can be evaluated.

**VI. CONCLUSION.**

CESA appreciates the opportunity to submit this brief and looks forward to working with the Commission and other stakeholders in this proceeding.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jin Noh', is positioned above the printed name and title.

Jin Noh  
Policy Director  
**CALIFORNIA ENERGY STORAGE ALLIANCE**

Date: August 31, 2021