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)

COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON THE ADMINISTRATIVE LAW JUDGE'S RULING SETTING ASIDE SUBMISSION OF THE RECORD TO TAKE COMMENT ON A LIMITED BASIS

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In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission"), the California Energy Storage Alliance ("CESA") hereby submits these comments on the *Administrative Law Judge's Ruling Setting Aside Submission of the Record to Take Comment on a Limited Basis* ("Ruling"), issued by Administrative Law Judge ("ALJ") Kelly A. Hymes on May 9, 2022.

I. INTRODUCTION.

CESA appreciates the opportunity to provide our perspective on potential modifications to the *Proposed Decision Revising Net Energy Metering Tariff and Subtariffs* ("PD") outlining the successor to the Net Energy Metering ("NEM") 2.0 tariff: the Net Billing Tariff ("NBT"). In the next phase of behind-the-meter ("BTM") distributed energy resource ("DER") deployment, it will be important to encourage the installation of BTM energy storage paired with BTM solar and other NEM-eligible renewables. As highlighted by the Solar Energy Industries Association ("SEIA") and the PD, there is "party agreement that the solar industry in California must transition to paired storage"[1] since, "the addition of storage provides greater benefits to both the customer and the grid."[2] This is primarily because energy storage captures excess BTM renewable production during off-peak hours and shifts it to high-value time-of-use ("TOU") periods, which have been

[1] PD at 83.

[2] PD at 84.

designed to coincide with evening net peak demand.[3] As with all energy storage arbitrage, BTM storage capturing renewable energy and dispatching it during the net peak period helps to reduce the need for fossil fuel resources.[4] For these reasons, all parties and the Commission agree that "The Successor [Tariff] Should Transition the Solar Market to a Solar Paired with Storage Market."[5] In these comments, CESA provides our responses on how to shape the NBT in order to encourage storage adoption, focusing on the three elements in the Ruling – *i.e.*, glidepaths, application of non-bypassable charges ("NBC") on BTM consumption, and community DER tariffs and programs – and offers the following general recommendations:

- The Market Transition Credit ("MTC") glidepath incentive will better help encourage energy storage adoption compared to other proposed glidepath models.
- NBCs should not be assessed on BTM consumption given that this would be a discriminatory charge on NBT customers; instead, larger rate reform should consider incorporating NBCs into fixed charges applied to general rates.
- Community DER tariffs should be explored.

II. GLIDEPATH.

During the transition to including storage with all new BTM solar installations, glidepaths will be essential for ensuring that the BTM solar and storage industry grows sustainably and in ways that maintain our industry workforce, who are essential to meeting our climate and reliability goals. As highlighted in the PD, the cost of energy storage is still a barrier to adoption,[6] and recent energy storage supply shortages and price increases have only worsened since the PD was issued in December 2021, leading to a higher probability of energy storage sustaining higher prices in the coming years due to inflation. Therefore, CESA continues to support glidepath approaches of all kinds. We believe, however, that the fixed MTC approach will better minimize market/customer

[3] PD at 84.
[4] PD at 84.
[5] PD at 83.
[6] PD at 85.

disruption and encourage greater adoption of energy storage, which has been shown to be beneficial to the grid and ratepayers.[7]

A. Explain why you would or would not support the ACC Plus residential customer glide path approach as an alternative to the current MTC approach.

CESA prefers the current proposed MTC approach, instead of the ACC Plus glide path, to encourage energy storage adoption. As elaborated above, the Commission has identified that the NBT should help transition the existing BTM solar market to a solar + storage market. However, installing solar + storage systems is both: (1) more expensive upfront than just installing solar; and (2) leads to more BTM self-consumption and fewer exports compared to solar-only NEM systems. Given this, CESA prefers an MTC approach of a fixed incentive.

Firstly, an MTC is easier to understand and will allow all customers to easily see how much incentive they will receive to assess the economics of installing any system. To this end, CESA sees the potential merit of providing an MTC as an upfront incentive, as proposed by The Utility Reform Network ("TURN"),[8] to reduce the barriers to upfront adoption of energy storage. However, a monthly bill credit for a defined period of time (*e.g.,* 20 years or the term of a customer's grandfathering on the NBT) can also be an appropriate disbursement method, as it still allows the customer to easily calculate the incentive being provided. Both methodologies of incentive disbursement are used in the Self-Generation Incentive Program ("SGIP") energy storage budget categories, with residential customers receiving their total incentive upfront while non-residential customers receive 50% of their incentive upfront and 50% in annual disbursements designed to be paid over five years based on minimal cycling requirements. Both disbursement methods have seen success in SGIP.

Solar + storage customers also export less than solar-only customers since solar generation is used to charge storage systems instead of being exported. This stored energy

[7] *See* TRN-03 at 71, lines 18-20 discussing the results of the Ratepayer Impact Measurement ("RIM") test, "avoided costs are over three times higher for paired storage ($0.19/kWh) versus standalone PV ($0.06/kWh)."

[8] TURN Opening Comments on PD at 3. CESA does not support TURN's proposed methodology for calculating an MTC but does agree with TURN's rationale for disbursing the MTC upfront.

is then largely used to offset onsite load during peak time-of-use ("TOU") periods in the evening. Particularly for systems in "PV self-consumption mode", with deeper charge/discharge cycles, significant solar generation is used for storage charging, with storage serving the majority of evening load.[9] Given this increase in BTM consumption of self-generation, including a glidepath or incentive embedded in export rates does little to encourage storage adoption, since a primary function of adding storage is to reduce grid exports. While varying the export rate by sharply by hour could help encourage storage for customers with sufficient capacity to export, CESA believes that the MTC approach is a simpler way to aid the adoption solar-paired energy storage systems that have been shown to improve ratepayers grid benefits compared with standalone solar.[10]

B. All else equal, do you consider the ACC Plus glide path to be a more effective approach in ensuring that customer-sited renewable distributed generation continues to grow sustainably, compared to a glide path approach that sets export compensation rates at a declining percentage of the retail per-kWh rates, and/or is based on an MTC? Elaborate in your response.

No, CESA does not believe that the ACC Plus glidepath will be more effective in ensuring that solar + storage systems, which have been shown to be more cost effective for ratepayers,[11] continue to grow sustainably compared to the MTC approach. CESA agrees that the ACC Plus approach may help solar-only systems have more reasonable payback periods, and we feel that there is merit to ensuring our solar workforce is robust given the time it will take for solar + storage installations to become more common.[12] As highlighted by the California Solar and Storage Association ("CALSSA"), "The solar industry's network of contractors, engineers, suppliers, and related participants provides the workforce that will install [energy storage]."[13] Ongoing commodity price increases, general inflation, and other supply chain disruptions have raised prices and made securing battery energy storage supply harder for installers, likely increasing the amount of time it will take to fully transition most installations from solar-only to solar + storage.

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[9] *See* Verdant, *Net Energy Metering 2.0 Lookback Study* published January 21, 2021 at Figure 4-3.

[10] *See* TRN-03 at 71, lines 18-20.

[11] Ibid.

[12] *See* CESA Opening Comments on PD at 12.

[13] CSA-01 at p.6, lines 10-12.

Because of this, CESA believes there should be some glidepath for the solar-only market as well. However, solar-only customers could be indifferent between an MTC approach and an ACC-plus approach, as long as the two credits were set at equal value. Because solar-only customers could be indifferent between the two types of credits, but solar + storage customers who do not export much would get commensurately greater benefit from the MTC approach, CESA feels the MTC approach is more effective at facilitating the transition to solar + storage. Furthermore, CESA prefers that the MTC incentive be adjusted to accommodate acceptable payback periods for solar-only systems, instead of embedding this incentive in export rates via the ACC glidepath or percentage of the retail per-kWh rates.

C. If the Commission adopts the ACC Plus, would Tariff customers be more likely to provide higher value to the electric grid than under a glide path approach that is based on a percentage of retail rates, since price signals for exports would reflect the hourly differences in export value to the system based on ACC values?

CESA agrees that a more granular, hourly, export rate can help provide better price signals for exports compared to export rates that are the same across a five-hour peak TOU period. To be able to regularly respond to these price signals, however, customers need to have a paired energy storage system. Solar-only customers may be able to minimally adjust exports by shifting load to times where export compensation is lower. Given that solar output is not controllable, it could be complex for customers to optimize given shifting solar generation throughout the year and load needs. Energy storage discharge can be much more targeted and automated for a seamless customer experience. Therefore, while ACC Plus provides more granular signals compared to percentages of retail rates, the MTC approach will encourage adoption of the energy storage that would be able to respond to granular price signals.

D. If the Commission adopts the ACC Plus, should a single adder apply to both solar-only and solar + storage systems, or should separate adders apply to solar-only systems and solar + storage systems? If a single adder is used, should the focus of the design be the customer economics of solar only systems or solar + storage systems? If separate adders are used by technology, how would the investor-owned utilities (Utilities) distinguish between solar-only systems and solar + storage systems in their interconnection portals, and how would Utilities verify the technology associated with the Tariff applications to ensure the correct adder is being used?

For any glidepath incentive, there should be differentiation in the amount for solar customers versus for solar + storage customers, where the latter should be receiving higher incentives in recognition of the higher relative costs of a combined system. More than just the cost of the battery equipment, solar paired with battery systems are more expensive due to a number of factors, including the increased cost of skilled labor, increased soft costs from longer permitting and interconnection timelines, and additional scope of work costs like required main panel upgrades which have likely increased significantly in recent months due to broader market conditions and inflation.

For ACC Plus, separating incentives for adders is even more important. Given that solar + storage customers export less than solar-only customers, the ACC Plus glidepath will need a much higher incentive to install storage. Otherwise, customers will continue to prefer solar-only systems.

Additionally, the record in this case has data focused on solar-only costs. However, when setting any glidepath incentive, it would be prudent for the Commission to also factor in, and request further data on, the incremental increase in costs of adding storage to a behind-the-meter solar system. We recommend the Commission request additional information to gather industry data on these increased costs before determining how much a solar + storage MTC or other glidepath incentive should be.

E. If the Commission adopts the ACC Plus, are there any potential impacts to how customers would dispatch battery systems that should be taken into consideration? For example, would the ACC Plus impact how solar + storage customers decide when to export versus consume behind-the-meter?

Unless the export rate is equal or higher than the import rate, customers will always choose to serve onsite load before exporting. However, the ACC Plus glidepath, or higher

export rates generally, can encourage customers to export additional power, instead of saving it for potential future load or backup power needs. For example, PG&E conducted a pilot with Tesla through their Demand Response Emerging Technology ("DRET") that showed residential battery customers exporting an average of 3.27 kW over the 6-8pm period during events, compared with baselines where batteries did not export at all because they were discharged more modestly for BTM consumption.[14] It is worth noting that the compensation offered to customers for incremental load reduction and exports was significant, at $1/kWh, but the pilot generally showed that exports can be incentivized with the right economic signals. The ACC values on their own will not likely provide enough incentive for this discharge, but the ACC Plus may help to incentivize this behavior.

However, ACC Plus or the NBT is not the only way to incentivize dispatch. Other pathways to encourage targeted discharge and exports, including demand response ("DR") programs or DER market integration can help customers receive more targeted dispatch schedules so that their contributions are made when the grid needs it most.

F. Some parties expressed concerns that the proposed decision would lead to an abrupt change in bill savings for customer-generators and would not provide a smooth transition for the solar industry

a. If the Commission adopts the ACC Plus, explain what the basis should be for determining the ACC Plus adder amount in Year 1 of the glide path and why. For example, should the ACC Plus amount target a certain payback period, or a certain level of bill savings, an approximate a percentage of retail rate, or some other metric? Provide any recommendations for what the ACC Plus amount should be in Year 1.

CESA has no proposal at this time.

b. If the Commission adopts the ACC Plus, describe your proposed timeframe over which the ACC Plus is offered to prospective Tariff customers, the rate of step-down so the glide path ends at ACC-based values, and your rationale.

CESA has no proposal at this time.

[14] DR Emerging technology (DRET) Tesla Battery Study Results published by PG&E at 23.

G. The proposed decision recommends giving low-income customers, as defined in the proposed decision, a higher MTC than non-low-income customers so these customers can achieve similar customer economics. This is reflected in the MTC amounts proposed in the proposed decision's Table 5.2. If the Commission adopts the ACC Plus, should the ACC Plus be a different amount in Year 1 of the glidepath for low-income customers compared to non-low-income customers? Should the ACC Plus be stepped down on a different timeframe or rate of change for low-income customers compared to non-low-income customers? Describe your rationale, including the basis for your proposed glide path for low-income customers (higher bill savings, lower payback period, etc.).

Overall, CESA supports giving low-income customers higher incentives to overcome known barriers to adoption. There is significant evidence in this proceeding that low-income customers have longer payback periods for NEM systems given that CARE and FERA rates are lower than other rates.[15] There are also a variety of other barriers to DER adoption because low-income customers are more likely to be renters, live in multi-family homes, or lack access to financing options for DERs.[16]

CESA has no proposal for a specific ACC Plus glidepath for low-income customers at this time. However, we believe that any glidepath may need to be stepped down over a longer period of time in order to overcome the current gap in adoption. Additionally, to ensure access to NEM for Californians living in multifamily units, Virtual Net Energy Metering ("VNEM") should continue to be an economic tariff for customers, which will likely involve an extension of the current VNEM tariff at this stage.[17]

H. If the Commission adopts the ACC Plus, describe whether and why it should (or should not) apply to nonresidential customers. If you believe it should apply to nonresidential customers, should the ACC Plus be a different amount in Year 1 of the glide path compared to residential customers? Should the ACC Plus be stepped down on a different timeframe or rate of change for nonresidential customers compared to residential customers? Describe your rationale, including the basis for your proposed glide path for nonresidential customers.

For any adopted glidepath (MTC or ACC Plus), CESA believes that this glidepath should extend to non-residential customers. The non-residential customer

[15] PAO-01 at p.2-32, lines 1-3.

[16] *See* GRD-01 at p.14. *See also*, Ivy Energy Opening Brief at 9.

[17] *See* Ivy Energy Opening Brief at 10.

sector has seen lower adoption of NEM systems. In the NEM 2.0 Lookback Study, Verdant highlighted how 98% of NEM systems being installed are residential systems, a proportion that has remained consistent over time.[18] The non-residential sector has not seen as significant amounts of growth, since non-residential rates, with significant demand charges and lower volumetric rates, are less advantageous for the installation of BTM solar systems. Energy storage can help to manage demand charges, but high costs have posed barriers to adoption. At the same time, due to this rate structure, non-residential NEM customers pay more than their cost of service.[19] However, there are benefits to encouraging DER adoption at non-residential sites in order to achieve goals such as, enabling and encouraging electrification (particularly transportation electrification), reducing or deferring the need for distribution system upgrades, and providing backup power during outage events, particularly at critical facilities.

Given the community and ratepayer benefits that can be provided by non-residential BTM systems, CESA believes that this sector of the industry should also receive a glidepath to ensure sustainable growth. CESA does not have any specific glidepath proposal at this time; however, there is merit to having different incentive amounts and stepdown periods for residential and non-residential customers. For example, deployment target stepdown triggers in the glidepath should be separated so that deployment of residential systems does not trigger stepdowns for the non-residential market if that market has not seen commensurate growth.

III. NON-BYPASSABLE CHARGES ON GROSS CONSUMPTION.

Throughout this proceeding, CESA has fundamentally opposed the treatment of BTM self-consumption differently from other load-reducing measures, such as energy efficiency. As highlighted by many parties, customers have a right to self-consumption of the energy that they produce BTM or self-supply. These customers should not face fees and charges on their electric bill that are not placed on other customers. Such treatment is discriminatory and would likely be

[18] Verdant, *Net Energy Metering 2.0 Lookback Study* published January 21, 2021 at Figure 3-2.
[19] Ibid at Figure 1-2.

illegal under the Public Utility Regulatory Policies Act ("PURPA"), which protects self-generating customers from discriminatory treatment by utilities.[20]

When discussing the PD's proposed Grid Participation Charge ("GPC"), many parties provided arguments in opposition. One example was discussed in comments by Sierra Club: with a GPC of $40 per month for a 5-kW solar system, customers would pay this fixed charge regardless of onsite usage, even if, for example, a customer goes on vacation all month and consumes minimal electricity in their home. Compared to a non-NBT customer that left their home for a month, an NBT customer would be forced to pay more for electric service even though both the NBT and non-NBT customers have similar load.

As argued by Sierra Club, assessing NBCs on self-consumption is not discriminatory since they "are based on per-kWh energy use."[21] However, Sierra Club then goes to recommend "the option of using methodologies that avoid the added cost of separate metering and minimize administrative complexity, such as a per-kW charge based on average system performance."[22] CESA appreciates consideration for the expense of installing additional meters to measure gross BTM consumption, but these methodologies re-create the fixed charge that violated PURPA in the first place, albeit at a lower value than the $8/kW GPC. For this reason, CESA opposes the assessment of NBCs on BTM self-consumption.

However, CESA is not opposed to a revision of rates for Californians at large, and as highlighted by the most recent affordability *en banc*, there are good reasons to consider fundamental rate reform and the movement of public program funding to the general fund. CESA has been a strong advocate for many of the programs funded by the Public Purpose Program charge, as they help California move towards our equity and climate goals. However, while funded by ratepayers, these charges are not for electric service but are instead "taxes used to support programs,"[23] which could be more appropriately funded by the state's General Fund and taxpayer dollars. At the same time, given the difficulty of moving all funding to taxpayer dollars, CESA supports the inclusion of NBCs in a fixed monthly charge in electrification rates and other rate

[20] 18 C.F.R. § 292.305(a)(1)(ii)

[21] Sierra Club Opening Comments on PD at 13.

[22] Ibid.

[23] Ibid at 12.

schedules for residential and non-residential customers. Moving NBCs to fixed charges for all customers on any given rate is a generally a prudent method of ensuring all customers pay their fair share in a non-discriminatory fashion and can help to lower volumetric rates to support electrification goals. This item should be taken up in each utility's General Rate Case ("GRC") for consideration and development.

A. If the Commission adopts the approach of collecting NBCs on gross consumption from Tariff customers, should the Commission consider collecting from all Tariff customers or only a subset of Tariff customers? For example, should the Commission consider collecting from all nonresidential and residential customers; only residential customers; only non-low-income residential customers; or all residential customers plus non-residential customers on certain rates? Explain your rationale.

Given that CESA opposes the assessment of NBCs on NBT customers, we have no further comments at this time.

B. If NBCs on gross consumption are collected from Tariff customers, which of the following list of electric program and securitization charges should be considered as NBCs for Tariff customers, and why? If there are any additional existing electric program or securitization charges that parties believe should be collected as NBCs that are not on this list, please include them and explain your rationale. Utilities are instructed to clarify which of these charges do and do not apply to their customers.

Given that CESA opposes the assessment of NBCs on NBT customers, we have no further comments at this time.

C. If the Commission imposes additional electric program or securitization charges in the future through other proceedings, what is the process by which the Commission should determine whether and how those charges should apply to Tariff customers as NBCs?

CESA has no comment at this time.

IV. COMMUNITY DISTRIBUTED ENERGY RESOURCES.

CESA is highly supportive of community DERs to provide access to the financial benefits of DERs to customers that are unable to install BTM.[24] CESA encourages the Commission to

[24] *See* CESA Reply Comments on PD at 6-8.

include options for community energy storage in any community DER program or tariff, in order to provide additional grid benefits and bill savings for customers.

D. Would low-income customers and/or renters benefit from a community solar tariff program modeled on the Tariff structure compared to participation in the CSGT program? Please describe advantages and disadvantages between the two community solar models.

CESA sees the potential benefit of a tariff model as opposed to a programmatic approach given its greater flexibility. Programs with specified bill savings guarantees are beneficial in that customers can easily understand the benefits they will be receiving, but they can be difficult to implement when customers are shifting between different load-serving entities ("LSE") or when the guarantees savings rate is not economically sustainable for the LSE. Tariffs provide more flexibility by compensating only for community DER production, helping to keep the tariff viable.

E. The CSGT program guarantees participants 20 percent bill savings, in addition to the California Alternate Rates for Energy (CARE) and Family Electric Rate Assistance (FERA) discounts. Should the Commission adopt a policy that any community solar program or tariff guarantee a certain level of bill savings for low-income participants and/or renters to increase participation and ensure consumer protections? If yes, how would a bill savings guarantee be monitored and enforced? Parties may wish to provide examples of how other states have incorporated a bill savings guarantee, as well as the level of guaranteed savings, into their community solar tariff programs, and lessons learned.

CESA does not have a proposal at this time.

V. CONCLUSION.

CESA appreciates the opportunity to submit these comments on the Ruling and looks forward to working with the Commission and other stakeholders in this proceeding.

Respectfully submitted,

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