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| AUSTIN ENERGY 2022 BASE RATE REVIEW | §<br>§<br>§ | BEFORE THE CITY OF AUSTIN HEARING EXAMINER |

**Closing Brief of Solar and Storage Coalition (SSC)**
**Submitted July 28, 2022**

## Overview

The Solar and Storage Coalition (SSC) is composed of solar and storage installers and a real estate development that is interested in developing a microgrid. SSC member companies operate, maintain, and install batteries throughout the United States, including within the Austin Energy Area. SSC shares the goal to expand the ability to use storage in addition to solar to provide flexibility to customers. This benefits Austin Energy, Austin residents, and the fight against climate change. While this proposal does not propose exact rates for storage, SSC would like for Austin Energy to commit to including storage in any ongoing Value of Solar discussions or concurrently with those discussions.

More details of SSC's proposals can be found within this document, but as a summary, here are the items that SSC is proposing:

- Expansion of the Value of Solar Tariff to include solar + storage
- Expansion of Value of Solar Tariff for microgrids and multifamily
- Consider new rebates for storage and targeted rebates for low-income customers
- Proactively allow service leases for solar.
- Standard offer for Community Solar/Storage
- Billing system updates
- 24X7 Carbon free rates
- Value of Solar guardrails
- Consider automatic enrollment for CAP in certain geographic areas

## Rate Design

B. Proposed Residential Rates

1. CAP Program Benefits

There may be some customers that qualify for the Customer Assistance Program, but have not enrolled in the program due to access challenges. Austin Energy should consider a program that expands access to these customers. This could be designed, for example, in a way that identifies census tracts that have a percentage of CAP customers that is over a certain high threshold, and then enroll all customers in that census tract in the Customer Assistance Program. This would help remove the barriers that some customers may have in accessing the CAP program. On page 8 of Mr. Galvan's rebuttal testimony, he suggested that this approach would "likely result in a large increase of customers in the CAP, many of whom have incomes in excess of the current threshold and would otherwise not be eligible for CAP discount". Mr. Robbin's RFI to SSC also included a few questions with similar concerns. A program such as this would have to be carefully designed, use targeted geographic areas, and be re-assessed frequently. With a careful program design, the concerns noted above could be minimized.

## Value of Solar

A. Background and Approach

**Solar Plus Storage:** Austin Energy's Value of Solar Tariff should be expanded to include solar plus storage. Enabling customers to store power produced from their solar systems onto battery systems can provide a variety of benefits to both the consumer and Austin Energy. Storage can have benefits for the customer during outages by providing backup in an outage and providing power to the home at a time with load shed is beneficial (or required). Residential storage devices can also put downward pressure on the price of energy the utility pays if use of storage is deployed in response to high prices. There are even more benefits if residential storage is aggregated. Other utilities have incorporated a variety of rates intended to encourage and benefit from storage. Aggregated storage can work in concert in order to help "roll" responses between customers or respond all at once in response to a high price, 4CP event, or ancillary service response.

In the paper, How Solar and Storage Can Reduce Coincident Peak Loads and Payments: A Case Study in Austin[1] The researchers developed a tool to forecast the change of 4CP loads and payments based on varying amounts of solar, storage capacity, and population estimates over a 10 year period for utilities within ERCOT.

Community-owned utilities have greater flexibility to design lucrative programs which reward residents for supporting the utility's reduced reliance on the grid for buying peak energy, avoiding power plant costs, and avoiding transmission/distribution infrastructure costs + valuing contribution towards City/Region-Specific climate goals.

As an example, Sacramento Municipal Utility District (SMUD) developed a tariff that pays for excess power injected into the grid at any time of the day and also has battery incentives that includes a lower base incentive with larger incentives if the customer enrolls at a critical peak pricing rate or the virtual power plant.

Austin Energy should develop a rebate for storage installation and develop a rate to pay customers when energy from a battery is fed to the grid in response to price signals or other needs.

**Microgrids:** Austin Energy's Value of Solar Tariff should be expanded in a way that allows and benefits microgrids and multifamily developments.

A microgrid is a local energy grid that can disconnect from the traditional grid and operate independently. It is generally connected to the grid, but in some situations, like in times of power outages, it can operate on its own using local energy generation. Microgrids have the ability to operate as flexible resources and the capacity to operate independently which can provide local resiliency. Microgrids can provide community back up in an outage, utility system load reduction, and can absorb excess solar.

[1] How Solar and Storage Can Reduce Coincident Peak Loads and Payments: A Case Study in Austin, TX. https://asmedigitalcollection.asme.org/IMECE/proceedings-abstract/IMECE2018/V06BT08A023/27540

A microgrid where solar and storage are installed for the benefit of the entire neighborhood or development on common property, rooftops, etc in order to reduce their carbon footprint and add local resiliency should be rewarded in a similar manner to an individual homeowner making the same set of decisions. In addition, a microgrid established in this manner should be able to share payments for excess solar and storage across invoices. For example, instead of paying the battery in a microgrid $10,000 for excess energy in a billing period and charging customers within the microgrid $10,000 for energy consumed from the microgrid, each invoice could reflect the net amount of zero dollars paid or charged. This microgrid rate could apply to new multifamily development or to a microgrid in a new development across multiple properties.

In addition to these modifications, with proper planning, these microgrids could assist Austin Energy if ERCOT directs additional rolling outages in the future. Rolling outages can cause enormous harm to Austin Energy residents, and the ability to shift some curtailment to a microgrid where the microgrid can temporarily "self-power" and island is very beneficial to the emergency operations response to insufficient capacity.

B. Avoided Costs

1. Calculation Methodology

**Value of Solar over Time:** Currently the Value of Solar rate is higher than any of the proposed tier rates. But as noted on page 143 of the Base Rate Review, the proposed VoS calculation methods can lead to volatility in the Value of Solar Rate year to year. These shifts in the calculation methods with more variability will make it harder for consumers to make the choice to invest in solar with appropriate certainty. We propose Austin Energy sets some guardrails to ensure that the Value of Solar does not drop below a certain floor.

E. Policy Driven Incentives

1. Background

**Rebates:** The rebates should look to reach people that would not otherwise be able to add solar under the current system

a) Include Rebates for installing battery systems - In the Austin Energy Base Rate Review filing package, Austin Energy lays out a plan to retire the current Residential Solar Education Program and replace it with a new rebate program. But the document does not mention any contemplation of rebate related to solar + storage. As part of any new rebate program, a storage component should be incentivized.

b) Include a rebate program for low-income customers - As Austin Energy designs any new rebate program for solar, AE should consider an additional generous rebate program solar or solar + storage that is designed specifically for lower income customers. This additional rebate can be funded from energy efficiency fees or by a capital from a reduced general fund transfer.

**Solar Leasing:** Austin Energy should provide certainty around solar leasing. AE should explicitly allow service leases to allow more options for consumers to install solar.

**Standard Solar Offer Program for Community Solar/Storage:** Austin Energy should have a standardized method of purchasing solar and storage from third party developers that build new capacity within the Austin Energy service territory. The price paid should consider the all-in benefits of the development, including tax value, 4CP, and the time of production of energy. It could include either a fixed price offer or an offer that is based on ERCOT real-time prices.

F. Impacts to Customers

**Predictable Permitting:** The policy driven incentives pillar should include assessment of the program needs that allow efficient processing of solar installation permits. Once a customer has made the decision to invest in solar, Austin Energy should make efforts to make the installation path efficient so that the power generation can be added to the grid as soon as possible.

An interconnection request below 15 kW should have a guarantee to not exceed 6 weeks, and make every effort to be sooner. Austin Energy has stated that this is outside of its control; another department issues permits. Which department is responsible shouldn't matter - the City of Austin can and should set policies to set reasonable times for solar permitting, regardless of internecine bureaucratic disputes. In the experience of members of the Solar + Storage Coalition, permitting timelines can be as long as nine months.

To speed up the process, Austin Energy should allow for the use of third-party inspectors and electricians, as well as using the Department of Energy's SolarAPP+ online permitting tools, and prioritize projects that provide additional resiliency to the city - like solar and storage.

H. Other Programmatic Recommendations

**Billing System Updates:** In order to incorporate storage and other potential changes, the Austin Energy billing system needs significant updates. Austin Energy should consider an updated billing system that is more nimble and can more easily incorporate updates. Per the answer to SSC 1-5 (g), the annual budget for operations and maintenance of the billing system is approximately $8.2 million annually. We anticipate that Austin Energy will object to many of SSC's proposed changes because the billing system cannot accommodate these policy recommendations, or said another way, that "the billing system is complex and uncertain." This shouldn't be an acceptable outcome. Many off-the-shelf utility billing systems can accomplish these program designs, even if the current system may be unable to. Therefore, Austin Energy should commit to issuing an RFP to replace the billing system with a modern one. This can result in a better customer experience as well as supporting the addition of solar and storage systems.

**24X7 Carbon Free Rate:** In addition to Green Choice and Value of Solar, Austin Energy should offer a new rate for customers to opt in to that matches their energy consumption in an hour with actual carbon free energy that was produced in that hour, or was produced in a different hour, stored, and then discharged from a battery in that hour. There are substantial benefits to this program; because it will force the utility's investments to meet their actual needs for carbon-free energy[2]. To the extent possible, the kWh in this program should come from new sources rather than existing ones. Large consumers may choose to opt in to this rate as part of negotiations over economic development agreements, the City's own uses of electricity could switch from Green Choice to this program, and some customers on Green Choice may see this as a higher quality alternative to mitigate climate change. This will certainly require Austin Energy to do more detailed carbon accounting to support this rate structure.

**Relevance:** In the rebuttal testimony of Mr. Maenius and Mr. Genece, both stated that programmatic changes are outside the scope of this rate case. And they both categorized many of the SSC proposals as programmatic. SSC disagrees with this assessment. The procedural guidelines state that "Value of Solar Rider rates, methodology, and inputs will be reassessed during the 2022 Austin Energy Base Rate Reviews". Several of our proposals ask for the expansion of the Value of Solar Tariff to include additional rates, which is clearly within the scope of "rates, methodology, and inputs". Austin Energy's own rate package includes proposed updates to rebate programs and a change to the funding source for Value of Solar. We request that our proposals be considered as a part of this proceeding.

[2] https://www.volts.wtf/p/247-carbon-free-energy-everything#details