Austin Energy 2022 Base Rate Review

SOLAR AND STORAGE COALITION'S (SSC) POSITION STATEMENT

Solar and Storage Coalition (SSC) respectfully offers this position statement consistent with the updated Procedural Schedule filed on June 2, 2022

Solar and Storage Coalition (SSC) includes both Austin Energy Customers and service providers to Austin Energy customers across multiple classes. It also includes real estate developers that have installed or wish to install solar and storage. SSC's member companies operate, maintain, and install solar batteries throughout the United States, including within the Austin Energy Territory.

SSC's goal is to expand the ability to use storage in addition to solar to increase grid resilience and offer flexibility for customers. This benefits Austin Energy, Austin residents, and the fight against climate change.

Austin has a variety of plans and goals around resilience. And clearly, solar and storage plays a role in that. If Austin does not continue to expand their ability to more effectively use solar and storage benefits, Austin is missing an important opportunity.

Austin's Climate Equity Plan proposes the goal of reaching net-zero community wide greenhouse gas emissions by 2040. The plan cites that the largest sources of emissions are on road transportation and electricity use in buildings. But despite a 20% population growth, building emissions have fallen 20%. The plan notes that this is largely due to investment by Austin Energy in renewable generation. Under the Austin Energy Resource, Generation and Climate Protection Plan, AE plans for additional renewable generation facilities, including energy storage opportunities. The plan also states the commitment to continue to study storage.

The City of Austin and Austin Energy has long understood the value in solar resources and has provided incentives and a rate structure to encourage rooftop solar. But Austin must also incorporate storage to provide additional benefits to the consumer and to Austin Energy. When effectively combining solar and storage, consumers can store solar energy for self-consumption to offset utility costs and could continue to use solar with storage in an outage to offset the risk of power loss. Solar plus storage can also respond to critical peak pricing - payment can be added for reducing grid load in peak conditions (4CP).

The Solar and Storage coalition provides the following suggestions.

1) **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 provide whole home backup in an outage, can provide 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.

Austin Energy has electric service area "boundary metering" which can accurately measure aggregated customers' consumption shifting behavior and measure power flow in and out of its territory on the electric grid: this allows Austin Energy to assign value to demand reduction for transmission cost of service cost (TCOS) allocations (4CP). By reducing load during the four summer months on peak, Austin Energy can and does reduce the cost of transmission for the city. But it could provide additional incentives to reduce its total demand by instructing or encouraging battery owners to inject power onto the grid, and these TCOS savings could be shared by Austin Energy and the individual battery owner.

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

[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

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.

To explain 4CP - When ERCOT peaks between June and September, the peak loads of individual Distribution Service Providers (DSP) are recorded and averaged to calculate their four coincident peaks (4CP). This is used to calculate obligations that must be paid, based on their relative share. If consumers can reduce consumption during each of the four coincident peak events, it can help significantly reduce transmission charges the following year. Many utilities attempt to do this by deploying demand response strategies. Demand response strategies can be helpful, but there are some barriers for consumers to use them. Combining demand response with solar and energy storage systems is more effective. Using tools to forecast the reduction in 4CP loads and payments over a period of years as a result of increased solar and storage capacity helps show the long term benefits of local generation and storage

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.

Sacramento Municipal Utility District and Green Mountain Power are examples of utilities that own and operate generation and procure electricity to serve their customers, similar to utilities in the non-competitive retail areas in Texas (munis and coops).

Sacramento Municipal Utility District (SMUD) adopted a rate that took effect in March of 2022 that intended to transform the market from solar only to solar and storage. Effective March 1, 2022, excess electricity generated by customers on the Solar and Storage Rate for power they do not use or store in their battery can be sold back to SMUD at a rate of 7.4¢/kWh, no matter the time of day or season. SMUD will provide incentives and programs to encourage adoption of solar with energy storage.

Customers can use stored energy when power is most expensive which helps reduce SMUD's peak load.

Green Mountain Power has two storage tariffs. One provides an upfront incentive for sharing stored energy during peaks and the other is an Energy Storage System lease.

Austin could have a fixed rate that it pays for battery exports like SMUD, or it could have a time of use rate that includes seasonal, daily, and superpeak components based on actual wholesale high prices. For example, in the summer, the battery export price could encourage onpeak exports, or also share wholesale price payments with the customer. Austin Energy is able to decrease a real time market short position or increase a real time market long position. It could also include a large portion of 4CP savings, so that perhaps 80% of the benefit of these wholesale and TCOS responses accrue to the customer and 20% accrue to the utility. While some portion of this time of use payment should be based on wholesale prices, Austin Energy should have the flexibility to regularly update other portions of this time of use rate based on current market conditions.

Some may be reflexively concerned about time of use pricing that includes wholesale price components after the experience that some customers in the retail competition areas of Texas had with providers like Griddy, where they were charged very high prices that resulted in bills of thousands of dollars. However, to be abundantly clear, the suggestions here are to use wholesale prices as a component of *payments to customers,* and never results in wholesale charges. If high prices emerge again in ERCOT, Austin Energy could potentially pay customers thousands of dollars, and Austin's source of funds for the payments would be actual wholesale payments from ERCOT.

<u>The Value of Solar Tariff should provide both a rebate for the installation of solar plus storage systems and incorporate a rate that pays consumers for the energy stored.</u>

Alternatively, instead of these ongoing payments described above based on incentive based responses, Austin Energy could also pay an upfront rebate of 75% of the expected value of those responses in exchange for Austin Energy taking control of the device on their own accord and accruing all of the benefits to the utility. This up-front battery rebate may be preferable for customers that want a "plug and play" rebate and still hope to benefit the utility. Terms and conditions would need to be developed for this program of course; the primary reason a homeowner purchases a home battery is to protect themselves. This could include "buyback provisions" where the customer opts out of utility control or a guarantee that a minimum amount of state of charge will be available for the homeowner for resiliency purposes. The value of this rebate should be determined annually for new projects installed that year or the following year.

An upfront solar rebate and storage rebate provides different incentives to homeowners than a variable performance based incentive (PBI) does. Customers should be able to choose whether they want an upfront rebate or a PBI. While a PBI *might* result in higher payments over a 20 year period, the upfront rebate is a backstop against poor PBI offers from Austin Energy.

Austin Energy should also engage in pilot efforts so that customers can provide additional ancillary services to Austin Energy. Discussions are ongoing at the Public Utility Commission about pilot programs for DER aggregations, and Austin Energy mentioned using DERs for a new Reliability-as-a-Service program in comments to the Public Utility. These programs can be committed to in the course of this rate case.

2) **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.

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.

3) **As Austin Energy updates the rebates under the Policy Driven Incentives Pillar, the following updates to rebate programs should be considered:**

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.

c) Include a solar leasing program - develop a program that allows solar installers to partner with AE so that billing can be a sum of AE charges and financial arrangements (leases) with their solar installers. This allows customers to participate in a PPA with solar installers to avoid large upfront costs.

4) Value of Solar Tariff should account for program related needs to provide a predictable timeline for solar permit processing.

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.

5) **Standard 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.

6) **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 our 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.

7) **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.

8) **24x7 Carbon Free Rate**

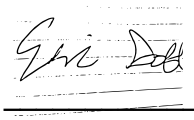
In addition to Green Choice and Value of Solar, Austin Energy should offer a new rate for customers to opt in to that matches their energy consumption in an hour with actual carbon free energy that was produced in that hour, or was produced in a different hour, stored, and then discharged from a battery 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.

9) Consider Expanding Automatic CAP enrollment to certain census tracts

There may be some customers that qualify for the Customer Assistance Program, but are unable to access the program due to immigration status or other issues. Austin Energy should consider a program that identifies census tracts that have a percentage of CAP customers that is over a certain 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.

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

Respectfully submitted,



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Documents for reference:

Sacramento Municipal Utility District Value of Solar and Solar + Storage Study, September 2020 https://www.smud.org/-/media/Rate-Information/NEM/VOSstudy.ashx

Green Power Energy https://greenpowerenergy.com/why-solar-plus-storage/

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