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PROJECT NO. 54224

COST RECOVERY FOR SERVICE TO § PUBLIC UTILITY COMMISSION
DISTRIBUTED ENERGY RESOURCES §
§ OF TEXAS

NEW LEAF ENERGY, INC.'S INITIAL COMMENTS
ON COMMISSION STAFF'S QUESTIONS

New Leaf Energy, Inc. ("New Leaf"), hereby timely submits these initial comments on Commission Staff's Questions filed on September 9, 2024, in the above-referenced project.

I. Introduction

New Leaf develops utility-scale and distributed energy and energy storage projects across the country, with a development pipeline of more than 8.5 GW of solar and 7 GW of energy storage projects. Within the Electric Reliability Council of Texas ("ERCOT") system, New Leaf has a robust pipeline of stand-alone distributed energy storage resource ("DESR") assets in various stages of development and in various Texas utility territories.

Regulatory uncertainty and excessive cost burdens threaten the economic viability of future DESR development. Project No. 54224 presents opportunities to refine Texas policies that will likely be determinative in guiding the future investment decisions of New Leaf and other private sector DESR developers in ERCOT. As such, we appreciate this opportunity to comment on the questions provided by Commission Staff in this proceeding, and to elaborate on the proactive vision for distributed energy resources that Commissioner Glotfelty laid out in his memo filed on August 28, 2024.¹

II. Responses to Staff's Questions

Question 1: Can the Commission implement the proposed standard distribution resource interconnection allowance without explicit statutory language authorizing such an allowance?

New Leaf has no initial comment in response to this question but respectfully reserves the right to comment in reply.

¹ Commissioner Glotfelty Memorandum (Aug. 28, 2024).

Question 2: What are the advantages and disadvantages of the proposed standard distribution resource interconnection allowance? Is a standard distribution resource interconnection allowance a viable option to move forward? If not, why?

On August 28, 2024, Commissioner Glotfelty filed a memo suggesting that the Commission establish a standard distribution resource interconnection allowance. Commissioner Glotfelty's proposal would remove a barrier to entry for DESRs participating in the ERCOT competitive market by aligning the standards and procedures of distribution-level interconnection with transmission-level interconnection for otherwise similar product types. DESRs are fully qualified by ERCOT to provide both energy and ancillary services. Additionally, DESRs meet the same qualifications and provide the same ancillary service and systemwide energy benefits as all other resources qualified to provide energy and ancillary services, including storage resources interconnected at transmission voltage. In fact, as decentralized resources located close to load, DESRs provide additional grid services beyond those provided by transmission-connected resources, including the following: (1) improved distribution system resiliency; (2) increased local supply during high-cost peak hours; and (3) a reduced need for costly long-term infrastructure upgrades.

A primary reason that the Commission adopted a transmission interconnection allowance was to reduce costs to consumers.² Distribution-connected storage resources have that same potential to reduce costs to Texas consumers and ERCOT ratepayers, and the current practice of providing a standard allowance only for transmission interconnection creates an uneven playing field that acts as a disincentive to DESR development. By providing the standard distribution allowance suggesting by Commissioner Glotfelty, the Commission would create parity between otherwise similar resources and encourage the development of new DESRs that strengthen reliability and lower system costs.

Question 3: At what amount should a standard distribution resource interconnection allowance be set? Should the applicability or amount of the allowance vary based on the size of the resource?

² *Generation Interconnection Allowance*, Project No. 55566, Order at 4 (Feb. 15, 2024) (considering "costs for consumers" as well as "other benefits").



New Leaf supports Commissioner Glotfelty's recommendation to set the distribution interconnection allowance at \$1.5 million for all resources connected below 69 kV. This is a reasonable starting point and could be adjusted over time based on more current interconnection cost information. Alternatively, New Leaf would also support the Commission should it endeavor to gather historical data and design a model that identifies an appropriate distribution resource interconnection allowance amount, similar to the model that Commission Staff developed with regard to the transmission allowance in Project No. 55566.

Question 4: How should the interconnection costs covered by such an allowance be reallocated? What effects would this have on other customers?

New Leaf has no initial comments in response to this question but respectfully reserves the right to comment in reply.

Question 5: Should a standard distribution resource interconnection allowance also apply in areas served by municipally owned utilities and electric cooperatives?

Yes, New Leaf believes that a standard distribution resource interconnection allowance should also apply across ERCOT, including in areas served by municipally owned utilities and electric cooperatives. The reliability and cost benefits that DESR's provide to the ERCOT grid are not limited to competitive areas. In Project No. 54233, ERCOT advocated for making interconnection standards and processes applicable for interconnections to any distribution utility in Texas, including interconnections to municipally owned utilities ("MOUs") and electric cooperatives, reasoning:

Pursuant to subsection (a), Proposed Substantive Rule § 25.212 would apply to all DERs that are interconnected to a Distribution Service Provider (DSP) in Texas. The term DSP includes electric utilities, municipally owned utilities (MOUs), or electric cooperatives that own or operate distribution facilities. And Proposed Substantive Rule § 25.212 establishes technical and operational requirements for DERs that are essential for maintaining reliability. It is important for reliability purposes that all DERs comply with the operational requirements of § 25.212 regardless of whether they are located in competitive, MOU, or electric cooperative areas. In 2019, ERCOT studied the impacts of DER ride-through and found that adopting the IEEE-1547 requirements improved reliability. The study showed a lower likelihood of load shed under grid disturbances and improved stability limits when the DERs implemented the IEEE1547 ride-through. As a result, *ERCOT strongly supports the application of Proposed Substantive Rule*



§ 25.212 to all DERs, including those located in MOU or electric cooperative areas, to ensure the reliability of the regional electrical network.³

New Leaf agrees with ERCOT and encourages the Commission to adopt consistent technical *and cost* standards uniformly across as much of ERCOT as possible, without exceptions for areas served by MOUs or electric cooperatives. From a DESR developer's perspective, if an allowance is established in some areas of ERCOT but not others, interconnection will be incentivized in some areas and disincentivized in others, potentially depriving some parts of the ERCOT system of the benefits of greater DESR engagement.

Question 6: If a standard distribution resource interconnection allowance should apply in areas served by municipally owned utilities and electric cooperatives, does the Commission need to develop a wholesale cost recovery mechanism to address the costs associated with this allowance? What factors should the Commission consider in developing such a mechanism?

New Leaf has no comment in response to this question but reserves the right to comment in reply.

Question 7: What disparities exist between distributed generation and energy storage resources interconnecting at transmission and distribution voltages?

In addition to possible interconnection allowance differences, there are fundamental differences in system charges and charging limitations for DESRs as opposed to transmission-connected storage facilities. In an era of high interest rates and increasing construction costs, distribution charges and charging limitations often make the difference regarding whether DESR projects can be developed profitably. Put simply, the status quo threatens the economic viability of DESRs and may limit DESRs' ability to meaningfully contribute to Texas's reliability and resiliency goals.

A. Distribution System Charge

The key disparity that exists between storage resources interconnected at transmission and distribution voltages is the distribution system charge. DESRs are charged monthly rates for transmission service at distribution voltage. No other power generation company, including energy

³ *Technical Requirements and Interconnection Processes for Distributed Energy Resources (DERs)*, Project No. 54233, Comments of Electric Reliability Council of Texas, Inc. on July 7, 2023 Discussion Draft at 2 (Jul. 28, 2023) (emphasis added) (citations omitted)



storage connected at transmission voltage, pays a similar utility rate. These monthly rates for transmission service at distribution voltage are assessed to DESRs on a flat \$/kw-mo basis for their highest monthly non-coincident peak demand—regardless of when that demand occurs.

The goal of the distribution system charge is to recoup the costs incurred on the system caused by the incremental load from a DESR charging. With a flat monthly rate, this goal is not met for the following reasons:

1. The distribution charge system overstates system costs by failing to account for the times of day when DESR charging demand occurs.
2. It neglects the considerable system benefits that accrue to the utility and ratepayers from DESR dispatching during peak hours.
3. It uniquely disadvantages DESRs compared to other resource types in ERCOT, including transmission-connected energy storage.

In fact, DESRs, like all other storage resources in ERCOT, are inherently incented by market signals to charge and discharge the battery in a manner that supports congestion relief (meaning, to charge when prices are low and congestion is not occurring, and to discharge at high prices when congestion is occurring). This creates a net benefit to ratepayers. Any costs incurred on the system due to the incremental load added by DESRs that charge off-peak are minimal and are more than offset by the incremental benefits when DESRs discharge and serve local demand on-peak. A flat distribution system charge based on non-coincident peak demand ignores these time-of-day differences that drive cost causation and penalizes DESRs for operating in a manner that lowers overall system costs.

In contrast, the PUCT has treated transmission-connected charging batteries as wholesale load since 2012, which is exempt from demand-related charges typically imposed when a customer consumes electricity. Transmission-connected batteries and distribution-connected batteries are both wholesale market participants and provide the same energy and ancillary services. Each respond to the same set of price signals to charge and discharge. Therefore, it is unfair and discriminatory to treat only transmission-connected battery charging as wholesale load that is exempt from demand-related charges.

Correcting this disparity by allowing both sets of resources to uplift their transmission cost of service (“TCOS”) would go a long way toward removing a financial roadblock from DESRs that prevents their full participation in the ERCOT market.

B. Artificial Charging Limitations

Another key disparity, and thus an impediment to DESR development, is improper charging limitations. Charging limitations may be set during the interconnection process if the DSP finds that there is not enough available capacity at the point-of-interconnection for the battery to charge the full capacity. For example, if a 10 MW battery gets a 5 MW charging limitation, it is then prohibited from charging more than 5 MW in any hour, meaning that it would take two hours to charge that battery to full power. That same battery with a 2.5 MW charging limitation would require 4 hours to charge to full power. This severely undercuts that battery operator's ability to take advantage of the low-priced charging opportunities that drive battery economics.

Charging limitations are not inherently problematic and can be a necessary tool to maintain the safety and resilience of the system. The problem occurs when they are set at artificial levels. Currently, some Texas utilities set charging limits based on a worst-case scenario assessment, assuming the batteries are charging at peak hours. By setting the charging limits based on anticipated capacity during peak times, high limitations that significantly restrict the battery's ability to charge quickly are applied. But as noted above, DESRs are fully incentivized to do the opposite. The fundamental business case for batteries operating in a wholesale market is to charge during off-peak hours (when the utility's capacity concerns are minimized) and discharge during on-peak hours. The worst-case scenario assessment methodology is an unintuitive counter-factual that fails to account for how batteries operate in the real world. This results in unnecessarily high charging limitations that undercut the economic viability for DESRs across many locations that might otherwise be able to support unrestricted off-peak charging.

Question 8: What, if any, action should the Commission take to address these disparities in a uniform fashion?

A. Actions to Address Distribution System Charges

New Leaf supports uplifting DESR costs to the TCOS, consistent with the Commission's treatment for transmission-connected storage. Such action would be reasonable and would support Texas's reliability and resiliency goals for the following reasons:

1. DESRs are fully qualified by ERCOT to provide both energy and ancillary services, and they meet the same qualifications and provide the same ancillary service and systemwide energy benefits as all other resources qualified to provide energy and

ancillary services, including storage resources interconnected at transmission voltage.

2. As a decentralized resource located close to load, DESRs can come online quickly and provide a much-needed source of capacity and congestion relief across a wider geographic footprint than an equivalent amount of capacity from centralized utility-scale resources.
3. Unlike traditional sources of load, DESRs discharge to the grid as much energy as they store. This is a net benefit to ratepayers because DESRs are incented by market signals to charge and discharge the battery in a manner that supports congestion relief.

If the Commission finds that DESRs must bear some of the interconnection costs, New Leaf supports the compromise proposal made by Hunt Energy Network, L.L.C., Jupiter Power LLC, and Broad Reach Power LCC (collectively, “Joint Storage Commenters”), in their collective filing in Project No. 54224, on November 17, 2022.⁴ Specifically, the Joint Storage Commenters proposed that interconnection costs be recovered in part through TCOS and in part through a contribution in aid of construction (“CIAC”). Under this proposal, interconnection costs for DESRs would be treated like transmission energy storage resources (i.e., recovered through TCOS) when the required interconnection facilities are located within the utility substation, and any costs for utility interconnection equipment located outside the substation fence to the Point of Interconnection would be paid by the DESR’s CIAC.

Alternatively, should the Commission find that DESRs need to pay some monthly charges for wholesale transmission service at distribution voltage, New Leaf could also support structuring the charges to exclude off-peak charging from the calculation of monthly demand subject to the distribution charge. As explained above, batteries that charge off-peak do not contribute to congestion or the peak demand events that drive the need for distribution system upgrades. DESRs are already economically incentivized through wholesale prices to charge off-peak when energy prices are lowest. Calculating a DESR’s monthly distribution charges with only on-peak charging would reinforce market signals and add further certainty that DESR owners would operate their

⁴ Joint Responses to Commission Staff Questions of Hunt Energy Network, Jupiter Power and Broad Reach Power (Joint Storage Commenters) at 7-9, 13 (Nov. 17, 2022).



systems in a way that minimizes distribution system costs. Furthermore, battery charging that occurs during the ERCOT testing and commissioning process should not be used to set the demand ratchet since it is required by ERCOT, it is not in the DESR's control, and it does not reflect normal charging behavior once the battery is operational.

B. Actions to Address Artificial Charging Limitations

New Leaf supports moving toward "dynamic" charging limitations that use real time substation load to set battery charging limits. This approach would link battery charging limits to actual grid conditions over the life of the system by protecting grid assets more effectively than the current upfront one-time worst-case scenario assessment methodology.

The "dynamic" charging limitations approach is already used by some DSPs in ERCOT. For instance, South Texas Electric Cooperative ("STEC") uses dynamic charging limits, whereby they provide a real-time signal to the battery storage facility to indicate the available transformer capacity for use by the battery, so that charging load does not exceed the substation transformer loading limits. The real time signal is provided via radio and fiber optic connection between the substation control house and the battery facility. As load increases on the transformer, the allowable charging load for the battery storage facility is accordingly reduced such that the transformer load levels do not exceed limitations for any significant amount of time. This approach allows for much greater charging flexibility and is more responsive to grid needs.

Dynamic charging limits strike a reasonable balance between grid safety and battery operational needs. If applied more broadly across ERCOT, DESRs would have the flexibility to operate as intended (meaning, to charge off-peak and discharge on-peak), and grid operators would have the tools to restrict charging if, and when, it is necessary to maintain the safety and resilience of the system.

III. Conclusion

New Leaf sincerely appreciates the opportunity to respond to Commission Staff's questions and looks forward to continuing to work with Commission Staff and other stakeholders as Project No. 54224 moves forward.



Respectfully submitted,

A handwritten signature in black ink, appearing to read "James McGarry", written in a cursive style.

James McGarry, Western Director of Policy &
Business Development, New Leaf Energy, Inc.