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PROJECT NO. 53911

AGGREGATE DISTRIBUTED	§	PUBLIC UTILITY COMMISSION
ENERGY RESOURCE (ADER) ERCOT	§	
PILOT PROJECT	§	OF TEXAS
	§	

PROJECT NO. 54233

TECHNICAL REQUIREMENTS AND	§	PUBLIC UTILITY COMMISSION
INTERCONNECTION PROCESSES	§	
FOR DISTRIBUTED ENERGY	§	OF TEXAS
RESOURCES (DERS)	§	

COMMENTS OF OCTOPUS ENERGY ON INTEROPERABILITY

Octopus Energy, REP License #10262, files these Comments regarding open standards and interoperability of distributed energy resources (DERs). Octopus Energy appreciates and is supportive of the comments filed on January 9, 2024, by Autogrid in these two Projects. Autogrid makes the point that a lack of open standards and interoperability leaves megawatts of flexible demand unmanaged. Octopus itself has been contacted by residential customers who would like to participate in an Octopus aggregation, but the lack of interoperability precluded them from doing so. Therefore, to ensure reliable operation of the electric grid and maximize interoperability for *all* customers who want to participate in competitive markets, Octopus Energy continues to urge the Commission to require full compliance with the most recent standards, in their entirety, including IEEE 1547-2018 and UL 1741 SB, and include a mechanism in the DER interconnection rule to automatically adopt newer versions of these standards, as they become available. As discussed further below, there is existing precedent in Commission rules for an approach that requires automatically complying with subsequent versions of engineering standards.

Octopus Energy filed comments in Project No. 54233 on July 28, 2023, discussing the need for standards that will ensure DER reactive power capabilities and interoperability, and incorporates those comments here by reference.¹ To briefly recap, IEEE 1547-2018 requires manufacturers to allow industry access to the control mechanisms of the inverter to allow for absorbing or injecting reactive power to the grid;² therefore, it is essential for reliability of the grid that the Commission clearly specify that the standard to be applied is “IEEE 1547-2018” rather than simply “IEEE 1547.” Mandating open communication standards, by explicitly requiring compliance with IEEE 1547-2018 in its entirety would provide a multitude of benefits, ranging from improved grid stability and resilience to empowering consumers and driving innovation.

Further, Octopus Energy continues to urge that inverters be required in the rulemaking underway in Project No. 54233 to be compliant with IEEE 1547-2018 in its entirety. It is not adequate to require compliance with the “applicable portions” of IEEE 1547, as that is overly vague. Standards bodies spend years working with industry participants and power engineering experts to develop standards that are made to fit together as a comprehensive whole, and it is generally not good practice to allow market participants to pick and choose portions of a standard with which to comply since the standards are designed to work as a whole. Octopus Energy strongly recommends that the Commission be clear that the applicable standards are the most recent versions in their entirety.

¹ Comments Of Octopus Energy on Staff Draft Language Discussed at July 14, 2023 Workshop (Jul. 28, 2023).

² For more details on the differences between IEEE 1547-2018 and prior versions of the standard, see IEEE Power and Energy Society’s Technical Report PES-TR67.r1, *Impact of IEEE 1547 Standard on Smart Inverters and the Applications in Power Systems* (August 2020).

Stakeholders and Staff have discussed how standards change over time, and therefore the rule could become obsolete quickly unless provisions are made to incorporate future standards updates automatically. Octopus Energy recommends that as subsequent versions of adopted standards are ratified by their governing bodies, the Commission's rules should automatically incorporate these updated standards, and DERs should have 12 months to comply with the new standard. During that 12-month period, an affected entity could apply to the Commission to appeal adoption of a new standard if they believe it should not be adopted. This allows the rule to evolve with current best practices without requiring repeated rulemakings, and instead triggering a rulemaking (or potentially a waiver) only in limited, exceptional circumstances.

Additionally, to the extent that Commission or Commission Staff has concerns about whether designating a standard provides adequate transparency regarding the nature of the requirements, consideration should be given to who the audience is for the rules. It is not necessary that an end-use customer, nor even a regulatory affairs representative of an entity affected by the rule, understand the details of technical engineering standards; what is important is for the engineering staff of affected entities to be able to interpret and comply with the rules. Complying with an engineering standard in its entirety and as it changes over time will provide greater clarity to the engineers who must ensure their equipment that they want to sell in Texas complies with Commission rules.

Further, the Commission in prior instances has promulgated rules that specify engineering standards with which affected entities must comply, without duplicating the language (or portions of the language) of those standards in the Commission's rules

themselves. For example, P.U.C. Subst. R. 25.51, relating to Power Quality, requires utilities to comply with American National Standards Institute, Incorporated (ANSI) Standard C84.1, *Electrical Power Systems and Equipment-Voltage Ratings (60Hz)*, or equivalent ANSI standard as later amended. The rule also requires compliance with IEEE Standard 1159-1995, *IEEE Recommended Practice for Monitoring Electric Power Quality*, or any successor IEEE standard, when utilities are investigating customer complaints regarding power quality. Octopus Energy recommends that the Commission take the same approach in promulgating DER rules, simply specifying the national standards with which affected entities must comply, without duplicating partially or in full the individual provisions of those standards.

CONCLUSION

Octopus Energy appreciates the opportunity to provide these Comments and looks forward to working with the Commission and other interested parties on these issues.

Respectfully submitted,



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