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Aggregate Distributed Energy Resource Pilot Project Governing Document

Approved at the October 18, 2022 meeting of the ERCOT Board of Directors

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1. Introduction

As authorized by 16 Texas Administrative Code (TAC) § 25.361(k), and as directed by the Public Utility Commission of Texas (PUCT), the ERCOT Board of Directors (Board) hereby establishes a pilot project to evaluate the participation of Aggregate Distributed Energy Resources (ADERs) in the ERCOT wholesale market (Pilot Project). An ADER is a Resource consisting of multiple Premises connected at the distribution system level that has the ability in aggregate to respond to ERCOT Dispatch Instructions. As described by the Commissioner Memorandum filed on July 13, 2022, in Project No. 51603, the Pilot Project is intended to answer, "questions related to how ADERs can support reliability, enhance the wholesale market, incentivize investment, potentially reduce transmission and distribution investments, and support better load management during emergencies." This document lays out the framework for the first phase of the Pilot Project and envisions a multi-phase Pilot Project in which future revisions to this Governing Document would establish the details for the additional phases. Lessons learned from the early phases will be considered when designing additional phases for the Pilot Project that could create opportunity to expand overall participation while maintaining the reliable operation of the transmission and distribution grid.

2. Purpose of the Pilot Project Phase 1

The purpose of this phase of the Pilot Project is to:

1. Assess the operational benefits and challenges of heterogeneous Distributed Energy Resource (DER) aggregations which are net generation or net load and address those challenges to allow meaningful use of DER aggregation.
2. Understand the impact of having Ancillary Services and energy delivered by ADERs and assess how ADERs can best be used to support reliability.
3. Assess challenges to incentivizing competition and attract broad DER participation through Load Serving Entities (LSEs), while ensuring adequate customer protections are in place.
4. Allow Distribution Service Providers (DSPs), the Commission, and others to study distribution system impacts of ADERs which inject to the grid.
5. Evaluate the impacts to transmission system congestion management associated with the dispatch and settlement of ADERs at a zonal level.
6. Identify potential Pilot Project enhancements and study the need for and benefit of transitioning distribution-level aggregations to different levels of more granular dispatch and settlement and evaluate more complex use-cases and business models.

This Pilot Project is intended to provide a means for Premises with any combination of generation, energy storage technologies, or controllable load with the capability of 1 MW or less to participate in the ERCOT wholesale markets. This Pilot Project is not intended to investigate or propose changes to existing participation models, such as those for Distributed Generation Resources (DGRs), Distributed Energy Storage Resources (DESRs), Aggregate Load Resources (ALRs), or Settlement Only Distributed Generators (SODGs) greater than 1 MW. Aggregations of multiple Premises that include only Load may already participate as ALRs and are not eligible to participate in this Pilot Project.

3. Pilot Project Timeline and Duration

The Pilot Project will continue until implementation of ERCOT market rules and systems are in place to accommodate participation by ADERs or until ERCOT, following PUCT consultation, or the PUCT deems the Pilot Project unnecessary. ERCOT expects that the Pilot Project will need to continue for a minimum of three years, across all phases, to allow for any incorporation of ERCOT system upgrades, testing of customer migration, and qualifying Resources for multiple ERCOT services, as determined to be allowable while maintaining grid reliability.

This Governing Document provides the necessary details for a first phase of the Pilot Project to quickly and efficiently implement an ADER program with minimum changes to ERCOT and DSP systems. Subsequent, future phases may introduce additional design elements to help expand participation opportunities while still maintaining distribution and transmission grid reliability. This phased approach will ensure that Pilot Project participation can commence at the earliest date possible.

Subject to any ERCOT decision or PUCT directive to delay project implementation, the Pilot Project will proceed according to the following timeline:

- October 18, 2022: Board approval of Pilot Project.
- November 4, 2022: ERCOT to begin accepting completed "Distribution Service Provider Acknowledgment" and "Supplement to the Standard Form Market Participant Agreement" forms from QSEs, as described below in subsection 5.c.2.
- November 18, 2022: ERCOT to begin accepting ADER registration forms from Resource Entities, as described below in subsection 5.c.3.
- January 3, 2023: ERCOT to begin ADER qualification testing. Energy and Ancillary Service Offers from QSEs for ADERs are valid once ERCOT has confirmed that qualification testing is complete and acceptable.
- Following a successful demonstration of the dispatch of energy and Non-Spin provision by ADERs in Phase 1 of the Pilot Project, as described in subsection 5.g, for a period of at least three months, ERCOT shall prepare an outline of Phase 2 of the Pilot Project.
- Following the development of an outline of Phase 2 of the Pilot Project: ERCOT shall prepare a Phase 2 Pilot Project Governing Document and submit it to the Board for approval.
- One year after the first wholesale offer from an ADER or simultaneously with submission of the Phase 2 Governing Document to Board for approval, the ADER Task Force established in PUCT Project No. 53911 (Task Force) and ERCOT will prepare a Phase 1 Report and consider the possible closing of Phase 1.
- Quarterly: Task Force to draft quarterly reports and file them with the PUCT.

4. Policy Questions to be Considered in Phase 1

During Phase 1, the Task Force must make a recommendation to the PUCT on the following issues, to be included in one of its quarterly reports to the PUCT:

- Device-level sub-meter data, power quality metering, or methods for independent certification of QSE-provided data: This Pilot Project will need to evaluate the need for and methods for collecting data from individual Premises or devices that can be used to validate ADER performance and compliance of ADERs, including for the provision of additional Ancillary Services. This may include requiring, for future Pilot Project phases, data recorders located on individual DERs and on the distribution system. If that is needed, who installs/owns these data recorders and how is the accuracy of data provided for performance and compliance guaranteed or certified?
- Provision of additional Ancillary Services: During Phase 1 of the Pilot Project, ERCOT will continue to work with the PUCT and stakeholders regarding the provision of additional Ancillary Services by Resources connected to the distribution system. The approach taken for ADERs will be linked to broader discussions on this topic, under PUCT Project No. 51603, as it relates to all distribution-connected Resources.
- ADER modeling with alternative dispatch and pricing schemes: As part of this Pilot Project, ERCOT will evaluate a Logical Resource Node (LRN) concept and other alternative dispatch and pricing schemes. Specific to the LRN concept, implementation of this model approach will require the Settlement Meter location for each Premise to be identical to the Premise's telemetry location. If a Premise has only one Settlement Meter, then the telemetry location will be required to correspond to the Settlement Meter location. This implies that all native load behind the Settlement Meter will be settled at an LRN price. Among other issues, this scheme will require

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