



## Public Utility Commission of Texas

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### **‘Virtual Power Plants’ to Provide Power to ERCOT Grid for the First Time**

*Pilot Project Launches First Aggregate Distributed Energy Resources in Texas*

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**Austin, Texas** - AUSTIN, Texas – Two ‘virtual power plants’ (VPPs) are now qualified and able to provide dispatchable power to the Texas electric grid, which is operated by the Electric Reliability Council of Texas (ERCOT). This marks a first for the state’s electricity market and is part of the Aggregate Distributed Energy Resource (ADER) pilot project the Public Utility Commission of Texas (PUCT) directed ERCOT to begin developing in June 2022. The pilot project tests how consumer-owned, small energy devices, such as battery energy storage systems, backup generators, and controllable Electric Vehicle (EV) chargers, can be virtually aggregated and participate as a resource in the wholesale electricity market, strengthening grid reliability.

“Small energy resources found in homes and businesses across Texas have incredible potential to continue improving grid reliability and resiliency by selling the excess power they generate to the ERCOT system,” said PUCT Commissioner Will McAdams. “It’s a win-win for Texas. Home and business owners get paid for power they supply and consumers in ERCOT get more reliability.”

“This ADER pilot project is an example of the electric industry, PUCT and ERCOT developing a pilot to solve issues rather than just studying them. The collaboration achieved the clear goals outlined by the Commission and is a model for future projects at the PUCT,” said PUCT Commissioner Jimmy Glotfelty. “We have a market in ERCOT that allows us to innovate and learn through real-time experimentation with real-world impact.”

Texans are increasingly investing in small energy resources, such as backup generators or solar panels connected to battery energy storage systems, for their homes and businesses. There are currently 2.3 GW of these small (less than 1 MW each) resources across the state, with 300 MW added so far in 2023 alone. An ADER represents the aggregation of devices that are located at multiple sites as a single resource. The ADER coordinates the operation of individual devices to collectively reduce demand or feed power to the grid. Through an automated process, the ADER responds to specific ERCOT instructions, allowing participating customers to sell their surplus power to the grid when called upon or reduce use. This is an additional source of dispatchable power for the ERCOT grid.



ADERs are formed and operated by retail electric providers or utilities that sell electricity to homes and businesses. In this pilot project, compensation terms and participation requirements will vary depending on the provider operating the ADER. To qualify for the pilot project, an ADER must be able to produce at least 100 kW, and each individual device in the ADER must be less than 1 MW. The average residential battery is about 5 kW. The pilot project is currently capped at 80 MW of total participation to ensure a safe and controlled rollout.

“As generation and distribution technology continues to improve, we expect to see more Texans taking advantage of these small energy resources in the future,” said ERCOT President and CEO Pablo Vegas. “This pilot project is an opportunity for us, the electric industry, and participants to learn how to harness these resources to support reliability in the ERCOT market.”

The two ADERs announced today involve Tesla Electric customers who have Powerwall storage systems in their homes and have agreed to sell their surplus power in the ERCOT market. One ADER aggregates Houston-area CenterPoint Energy customers and the other ADER aggregates Dallas-area customers served by Oncor Electric Delivery Company. These two VPPs are the first to participate in the ERCOT wholesale market as ADERs.

“Today’s launch of the first phase of the Tesla Virtual Power Plant is a milestone for Texas residents, Texas distribution utilities and the ERCOT grid,” said Tesla Senior Vice President of Powertrain & Energy Engineering Drew Baglino. “Our collective work has allowed Tesla to build a decentralized energy ecosystem that seamlessly integrates stored solar energy from Powerwalls onto the ERCOT grid.”

Participating in the PUCT’s pilot project is voluntary, and any entity that serves electric customers in ERCOT is encouraged to learn about the project and plan for future participation. There are currently eight ADERs totaling 7.2 MW in the pilot project. Six have completed the initial registration steps and are in the commissioning process. Two of the eight (both represented by Tesla Electric) have completed required testing and are qualified to participate. ADERs participating in the pilot project must include power generation devices, such as battery energy storage systems or generators, and may also include demand response devices like smart thermostats, controllable EV chargers and smart water heaters that can be controlled to reduce electricity use.

The ADER Pilot Project and a 20-member task force were established by PUCT Commissioners McAdams and Glotfelty. The task force assists the PUCT and ERCOT by ensuring public transparency, providing subject matter expertise and facilitating stakeholder collaboration with ERCOT. The Pilot Project will continue to collaboratively develop solutions until permanent rules are developed for ADER participation in the market or until the PUCT and ERCOT deem the lessons-learned from the pilot project are complete.



Additional information can be found in PUCT Project No. [53911](#), the [ADER Task Force YouTube](#), and the [ERCOT website](#). Customer information for Tesla Electric participants is available on their [website](#).

### **About the Public Utility Commission**

Our mission is to serve Texans by regulating the state's electric, telecommunication, and water and sewer utilities, implementing respective legislation, and offering customer assistance in resolving consumer complaints. Since its founding in 1975, the Commission has a long and proud history of service to Texas, protecting customers, fostering competition, and promoting high quality infrastructure. To learn more, please visit <https://www.puc.texas.gov>