ERCOT Passport Program to Deliver a Modern Electric Grid for Texas

ERCOT is taking a programmatic approach to three major projects that have been aligned with an upgrade of its Energy Management System (EMS). By leveraging the next generation of EMS software, ERCOT will be able to implement new tools to help address the grid's changing resource mix, including limited duration technologies and distribution level resources. When completed in 2024, ERCOT is expected to have one of the most sophisticated market designs in the world.

This combined approach is referred to as the Passport Program and represents the implementation path for incorporating Energy Storage Resources (ESRs) and Distribution Generation Resources (DGRs) into ERCOT systems, as well as Real-Time Co-optimization (RTC) of energy and Ancillary Services. In January 2019, the Public Utility Commission of Texas (PUC) directed ERCOT to implement RTC (Project No. 48540).

The changes being made to ERCOT's market design will allow emerging technologies to expand their participation in ERCOT's wholesale electricity market. With RTC, Ancillary Services will be awarded every five minutes throughout the operating day, allowing the market to adjust to changing grid conditions and creating more opportunities for all resources that would like to provide these types of services.

As of October 2020, ERCOT staff, in collaboration with stakeholders, has drafted more than 700 pages of new and/or revised protocols/market rules for ESRs, DGRs and RTC. These protocols will be presented to the ERCOT Board of Directors in December 2020 for approval. Once approved, they will be used to draft business requirements for the implementation of the combined projects. Nearly every system in ERCOT will be touched by these projects (i.e., markets, operations, registration, settlements, credit, etc.), as well as the systems used by stakeholders to interface with ERCOT.

ERCOT has established task forces to discuss and develop market rules for battery energy storage and RTC with stakeholders, and has held a number of workshops to address issues related to DGRs. Information about the Battery Energy Storage Task Force and Real-Time Co-optimization Task Force is available on ERCOT.com.

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