ERCOT Trending Topics

TOPIC: ERCOT Contingency Reserve Service (ECRS) Procurement Cost Updated July 19, 2024

Much has been written lately about the cost to consumers of the new Ancillary Service product that ERCOT began in June 2023: the ERCOT Contingency Reserve Service or ECRS. In this ERCOT Trending Topic, we will explain what ECRS is, why it's needed, how it's used, and what it actually costs consumers.

FACTS:

First, what are Ancillary Services and why do we need them?

Ancillary Services are essentially reliability insurance products that ERCOT buys (on behalf of consumers) to help mitigate reliability risks that may occur during the day. These risks can include such things as generation and load changes, variations in wind and solar generation, forced outages of conventional plants, and changes in weather that were not forecasted. All of these and more can contribute to operational risks on the grid. Ancillary Service products help fill in the gaps and are used by ERCOT to maintain a generation and load balance.
The methodology used to determine how much of each Ancillary Service product to procure is based on a detailed analysis of risks. Those risks change by season and by the time of day. The Ancillary Service methodology takes those factors into account when the methodology is reviewed and revised annually.

In order to provide this Ancillary Service insurance, some energy capacity from generation, storage, and load resources must be reserved and held out of the competitive market in order to be available to address reliability concerns.

What kind of Ancillary Service products are there?

ERCOT uses five Ancillary Service products to manage the increasing variability and uncertainty of the power system. These five ancillary services are: Regulation (Regulation Up, Regulation Down), Responsive Reserve Service (RRS), Non-Spin Reserve Service (Non-Spin), and ERCOT Contingency Reserve Service (ECRS). ECRS was implemented in June 2023. Each one of these products has unique time and duration capabilities to match potential risk to the system during the day. Some may be deployed more often than others depending on what happens during any given day.

What is ECRS and how is it used?

Much has been made of the "cost" of ECRS to consumers. Numbers thrown about have ranged from $8 billion to $12 billion. These numbers are absolutely false. Electric consumers DID NOT pay $8 - $12 billion more for electricity in 2023 than they would have if ECRS were not purchased. These types of hyperbolic declarations may be great for grabbing headlines or driving a particular narrative, but they do a grave disservice to Texans because they simply aren't true.

Explanation: Most power procurement decisions are not made in real-time but are procured well in advance of real-time. This is called "hedging" and the vast majority of the energy market in Texas is hedged to the benefit of consumers. While it is true that the average price of electricity did rise about 11% in 2023 (June through November) when compared to 2022, much of that increase should be attributed to the historically hot summer and a 6.7% growth in peak load from the summer of 2022. For context, in the summer of 2022, ERCOT's peak load broke 80,000 MW one time. In the summer of 2023, the peak load broke 80,000 MW 49 times. That's how much more electricity was used. With that said, ECRS does have a cost to consumers, as does any insurance policy. The actual procurement cost of ECRS in 2023 (which began in June), totaled $669 million, but that cost has helped ERCOT mitigate risks to the system and reliably leverage growing amounts of wind and solar generation. Further, ECRS has been released in a total of 52 events between June 2023 and May 2024. Two-thirds of those occasions were to address ECRS's intended purposes: 16 of those events were to support recovering frequency following a large unit trip and 19 of those events were to cover the forecasted 10-min net load ramp. The remaining third of deployment events were releases of ECRS due to scarcity conditions, with 10 events to provide additional capacity during sunset hours on days with extremely high demand and low wind, and 7 events to resolve potentially cascading transmission overloads in South Texas.

ECRS as an Ancillary Service took three years to build and was deployed for the first time in June 2023. It's a brand-new product and, over the first six months of its implementation, we have learned much on how it works in the Texas market and how it interacts with the other Ancillary Services ERCOT utilizes. Over the next few months, ERCOT will take what we have learned and refine how we use it, how much we procure, and how and when we deploy it in the future.

ERCOT will continue to utilize ECRS as an integral part of its Ancillary Services set of tools that are used for grid reliability. Learn more about ERCOT's procured Ancillary Services.