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February 16, 2024

The Honorable Mayes Middleton
P.O. Box 12068
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Dear Senator Middleton:

Thank you for your letter of February 12, 2024 seeking further information about certain actions taken by ERCOT during the January 14-17, 2024 winter storm, also known as "Winter Storm Heather." Below, I have provided responses to your questions.

Q1. How much of the demand response was voluntary, and how much was deployed at ERCOT's request? Of the quantity deployed by ERCOT, what was the duration and cost of that deployment?

ERCOT did not deploy any demand response services during Winter Storm Heather. All observed reductions in load attributed to demand response during this time were voluntary actions by end users or their retailers. These load reductions may have been influenced by ERCOT's active conservation appeal or the high energy prices observed during the event. Large-scale users of electricity often reduce their demand during periods of high prices.

ERCOT does have the ability to deploy Emergency Response Service (ERS) when facing operational challenges. ERS is a demand response service ERCOT procures to decrease the likelihood of system-wide load shedding during an actual or anticipated emergency condition. However, ERCOT did not deploy this service during Heather. ERCOT also did not deploy any ancillary services provided by load or any capacity from load-management programs operated by transmission and distribution utilities.

Q2. Did ERCOT utilize reliability unit commitments (RUCs) prior to or during the storm, and if so, what was the quantity, duration, and cost of those RUCs?

Yes. ERCOT did RUC two small units beginning 12:00 p.m. on January 16 and ending at 8:00 a.m. on January 17. The total amount of generating capacity affected by these RUCs was 42 megawatts (MW). The units were committed to address ERCOT's concern that it may not have sufficient capacity online to meet demand. The total settlement cost of these RUCs was $22,454.

Apart from this minimal use of RUC, all other generation during Winter Storm Heather was self-committed.

Q3. Did ERCOT procure additional ancillary services before and during the storm beyond what it normally procures? If so, what was the cost of that additional procurement? Did ERCOT's increased procurement of ancillary services relative to Winter Storm Elliott in 2022 bring additional reliability? If so, can you explain how and what that incremental cost was?

No additional ancillary services were procured before or during Winter Storm Heather.

During Winter Storm Heather, the daily average total ancillary service quantity was 196,235 megawatt hours (MWh) compared to 177,245 MWh during Winter Storm Elliott in 2022. This change in Ancillary Service procurement was due in part to the introduction of a new ancillary service called "ERCOT Contingency Reserve Service" (ECRS) in June 2023. ECRS is procured to help the system respond to frequency deviations within 10 minutes and to manage forecast uncertainty within the hour.

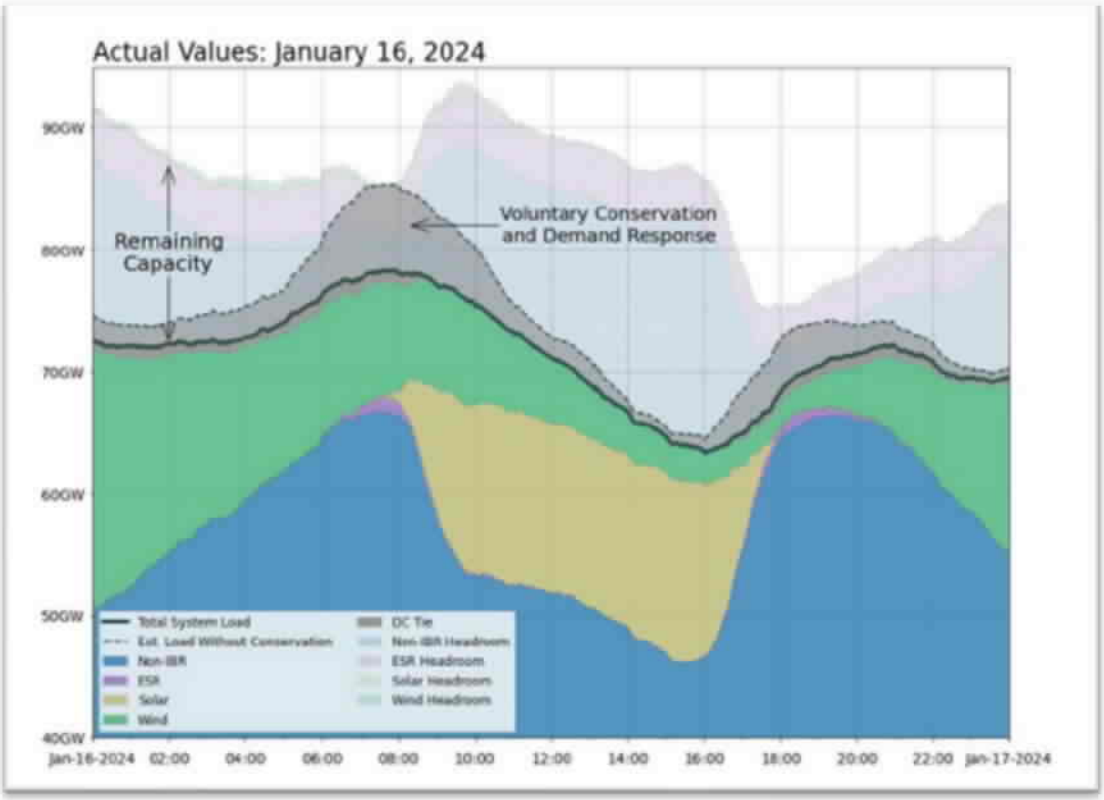
Regarding the incremental cost, the average daily cost of ancillary services during Winter Storm Heather—$23.8 million—was actually less than during Winter Storm Elliott—$46.6 million. This cost difference might be attributed to factors such as the introduction of ECRS, projected supply in the Day-Ahead Market, additional resource availability, and market expectations.

Operating the grid with a higher reserve margin due to this increased procurement of ancillary services provided the ERCOT control room with additional tools to help reliably serve load during Winter Storm Heather.

Q4. Can ERCOT explain further why it was forecasting load at 85 GW or higher, exceeding this summer's peak load, despite a consistent forecast for weather conditions that were similar to Christmas 2022, when load only reached 74 GW, and forecasts from market participants that were consistently below 80 GW?

In order to identify the need for conservation and properly signal that need to the market, ERCOT's forecasting models do not include the impact of prospective conservation appeals and voluntary demand response, if they were to occur. Consequently, it is not surprising that the public's response to these requests resulted in actual load well below that of the original forecasts.

ERCOT's analysis shows that without conservation, the actual load during the coldest part of the storm would have been near the forecasted 85 gigawatt (GW) peak. That peak would have been higher than the 2022 Winter Storm Elliott peak, with similar conditions, due to load growth. The graph below shows the impact conservation had on the overall peak and how tight reserves might have been.



Forecasting load that is price responsive is also a considerable challenge. ERCOT has limited visibility into large industrial loads, as well as large flexible loads (LFL), which makes them difficult to predict, and their respective consumption of electricity is highly sensitive to electricity pricing. ERCOT continues to work on processes to quantify the demand response of these loads and their response to pricing.

For Heather, the combined effect of conservation appeals, the Monday holiday schedule, and school closings had a considerable impact on the variance between forecasted load and actual load. This was further exacerbated by some large school districts announcing their school closures after the day-ahead load projections are made.

Q5. What was the cost of ERCOT's deployment of firm fuel service resources?

ERCOT procures Firm Fuel Supply Service (FFSS) through a Request for Proposal (RFP) process in advance of each winter season. ERCOT's FFSS procurement for the winter 2023-24 season resulted in awards to 32 Generation Resources at a clearing price of $9,000/MW, which is the offer cap established by the Public Utility Commission. 31 of the resources offered fuel oil as the reserve fuel type, and 1 resource offered to use natural gas storage. A total of 3,319.9 MW of FFSS capacity was procured at a total cost of $29,879,100. This cost is incurred irrespective of whether the service is deployed.

FFSS is a cost-based service, and when these resources are deployed, their maximum capacity limits are excluded from the on-line Operating Reserve Demand Curve (ORDC) reserve calculations to avoid any price distortions. Resources that received a FFSS deployment instruction will be reimbursed to restock the fuel used during the deployment period after receiving approval to restock. The costs associated with the fuel reimbursement have not been finalized.

We hope you find this information responsive to your request. If you need any additional information, please do not hesitate to contact me.

Respectfully submitted,

/s/ D.W. Rickerson, P.E.

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