



2021 Weather Event - Overview and Timeline

Customer Impacts:

The bullet points below discuss jurisdictional and non-jurisdictional utilities. The types of utilities the KCC regulates (*i.e.*, investor owned, cooperatives, and municipalities) has diminished over time due to statutory changes which rate deregulated cooperatives and municipalities.¹

- The 2021 Winter Weather Event impacted both natural gas utilities as well as electric utilities. For most natural gas utilities, the extreme cold weather during the week of February 12th through the 19th set new winter system peaks due to the high demand for natural gas for home, commercial, and industrial heating. In addition, commercial and industrial facilities continued to need natural gas for processing their products. For most electric utilities, the extreme cold also set new winter peaks due to the need for electricity to run home, commercial, and industrial heating and processing loads. This high demand along with generation facility issues due to the cold weather created supply shortages and high electricity prices in the Southwest Power Pool Integrated Market (SPP IM). The specific issues related to natural gas and electricity are discussed in more detail later in this outline.
- The Commission approved an Emergency Order (Order) in Docket No. 21-GIMX-303-MIS on Monday, February 15, 2021 and it is addressed in more detail below. The Order will protect customers of KCC jurisdictional electric and natural gas utilities from paying the extraordinary high prices for electric and natural gas service during February 2021 in a single bill. The final costs and the bill impacts customers can expect are not yet known. Once final costs are known, each jurisdictional utility will file a plan with the Commission detailing the utility's proposal to minimize the financial impacts of the 2021 Winter Weather Event on its customers.
- For non-jurisdictional utilities such as municipal systems and cooperatives, the KCC has very little ability to aid customers with high bills or assist the non-jurisdictional utility with the financial impacts. That being said, the KCC is very concerned about the financial impact of the 2021 Winter Weather Event on municipal and cooperative utilities and their customers. To that end, we stand ready to assist in any way we can.

KCC Activities:

Initial Concerns

The energy supply issue appears to have developed very rapidly. One article blamed an overly optimistic forecast on the amount of natural gas in storage at the end of the week of February 12, 2021.

Saturday, February 6 and Sunday, February 7, 2021:

- KGS was in discussions with Evergy regarding Evergy's use of gas in excess of nominations in the McPherson and Hutchinson (and surrounding) areas. The excess gas usage by Evergy was placing significant stress on KGS' system pressures.

¹ See, 66-104d and 66-104f.

Monday, February 8, 2021:

- Southern Star issued a winter weather warning and took steps to mitigate system constraints.

Tuesday, February 9, 2021:

- KGS issued an order to Evergy requiring the daily balancing of receipts of natural gas for Evergy in the McPherson and Hutchinson (and surrounding areas).

Friday, February 12, 2021:

- The KCC noticed a spike in natural gas prices of \$100 per MMBtu in a trade journal article.
- The KCC was made aware by a large natural gas utility that prices for natural gas purchased for the four day stretch of February 13 through February 16 was \$200 to \$300 per MMBtu.

Saturday, February 13, 2021:

- Several KCC jurisdictional utilities reached out to the KCC to make us aware of looming natural gas and electricity supply constraints due to widespread and extended arctic temperatures.
- The primary concern expressed was the ability to procure and transport natural gas for home heating and electricity generation given the enormous demand created by the sub-zero temperatures as well as the mounting financial cost impact to customers.
- Natural gas utilities began requesting conservation measures or curtailing interruptible customers and large volume customers through Tuesday, February 16, 2021.
- The KCC met with Kansas Gas Service regarding its response to the event, the steps it had taken to prepare operationally for the event, and the financial effects of purchasing gas for the event.

Sunday, February 14, 2021:

- The KCC had several conversations with the Governor's office regarding the energy supply and price issues and the State of Disaster Emergency declaration. The KCC also began promoting conservation measures to utility customers.
- Updates from jurisdictional utilities regarding supply and price became more frequent.
- The KCC met with Kansas Municipal Gas Association (KMGA) regarding its concerns related to its ability to source natural gas and the financial impact to KMGA and its customers.
- To address the supply constraints and extraordinary costs, the KCC began working on an Emergency Order that would apply to every jurisdictional electric and natural gas distribution utility.

KCC Emergency Order

The Commission approved an Emergency Order (Order) in Docket No. 21-GIMX-303-MIS on Monday, February 15, 2021. The Order, applicable only to KCC jurisdictional utilities, noted the following:

- On February 14, 2021, Governor Kelly issued a State of Disaster Emergency due to wind chill warnings and stress on utility and natural gas providers, noting that the current sub-zero temperatures are causing increased energy demand and natural gas supply constraints throughout Kansas, and utilities are currently experiencing wholesale natural gas price increase from 10 to 100 times higher than normal (the "2021 Winter Weather Event").
- The costs will eventually flow through to consumers through increases in monthly natural gas and electric bills.
- Kansas utilities are facing potential reliability issues related to the prolonged arctic temperatures.
- Jurisdictional natural gas and electric utilities are ordered to do everything necessary to ensure natural gas and electricity service continues to be provided to their customers in Kansas.

- The Commission directed all jurisdictional natural gas and electric utilities to coordinate efforts and take all reasonably feasible, lawful, and appropriate actions to ensure adequate transportation of natural gas and electricity to interconnected, non-jurisdictional Kansas utilities.
- The Commission authorized every jurisdictional electric and natural gas distribution utility that incurs extraordinary costs associated with ensuring that their customers or the customers of interconnected Kansas utilities that are non-jurisdictional to the Commission continue to receive utility service during the unprecedented cold weather event to defer those costs to a regulatory asset account. Such costs include but are not limited to:
 - The cost of procuring and transporting natural gas supplies for jurisdictional utility customers.
 - Costs associated with jurisdictional utilities coordinating and assisting non-jurisdictional utilities with the transportation of gas supplies. However, this assistance was not intended to require a jurisdictional utility to procure natural gas supplies for non-jurisdictional utilities.
 - Any other reasonable costs necessary to ensure stability and reliability of natural gas and electricity service. These deferred costs may also include carrying costs at the utility's weighted average cost of capital.
- Once the 2021 Winter Weather Event is over, and after all costs have been accumulated and recorded, each jurisdictional utility is directed to file a compliance report in this Docket detailing the extent of such costs incurred, and present a plan to minimize the financial impacts of this event on ratepayers over a reasonable time frame.

Preliminary Causes

- Natural Gas
 - Record high demand created concerns about the integrity of pipelines. As a result, interstate pipelines and natural gas distribution companies required careful balancing of nominations versus actual load on their system by all of their transportation customers. Failures to balance resulted in penalties.
 - There were reports of wellheads freezing. One energy research firm, EBW Analytics Group, reported on Feb. 15th that at least 7 Bcf/d of gas production was shut in.
 - Capacity constraints in transmission pipelines were reported.
 - There was a significant draw down of natural gas in storage the week prior that may have been underreported.
 - All of the causes of high gas prices are not completely known at this time.
 - While KCC jurisdictional gas utilities have hedging plans in place, those hedging plans are meant to hedge against significant price volatility over the course of a year based on average volume. The 2021 Winter Weather Event caused significant purchases of natural gas supplies in the open market that exceeded annual average volumes by several times.
 - KCC jurisdictional gas utilities were able to procure natural gas on the open market to meet demand, but at prices that were 100 to 200 times higher than average. These prices were widespread with entire pipelines and market indexes hitting all-time highs.
- Electricity
 - The extended arctic temperatures placed a high demand on electricity.
 - Electric utilities generally have firm contracts for natural gas to run their gas-fired generation sufficient for minimum load levels due to the intermittent nature of when gas-fired generation is dispatched. This requires utilities to source natural gas from the open market when dispatched at higher levels. Given wholesale prices of natural gas, gas-fired generation became an expensive source of electricity.

- A utility reported issues with coal piles freezing, which caused a generation unit(s) to lower output.
- Wind speeds were generally low during the week, which reduced wind energy output. Wind turbines were also reported to be freezing up in the Texas ERCOT market. To date the KCC has not had any confirmation of freezing wind turbines in the SPP footprint.
- There were transmission line congestion issues due to high electricity demand.
- SPP was able to import energy from both the MISO RTO and the Western Interconnect to help support load stability, but these imports were limited at times due to congestion constraints.
- Several generation units went offline for maintenance issues caused by the extreme cold.

Next Steps

- The KCC will investigate, among other things, the causes of the reduced supply of natural gas, high natural gas prices, demand and supply issues in the SPP Integrated Market, and what steps can be taken to make sure utilities are better prepared for future weather events.
- The KCC will monitor, and potentially intervene and participate in, FERC and North American Reliability Corporation (NERC) investigations that are pending.
- The KCC will also monitor any additional investigation at the federal or state level that may be undertaken