TEXAS ENERGY CRISIS: EXPLAINED

What happened in Texas?

In mid-February 2021, Texas experienced extreme winter weather and deep freeze temperatures not seen in decades. This severe weather led to significantly increased electricity demand, rising by nearly 50% at the height of the event. While all forms of generation faced weather-related challenges, natural gas electric generation ramped up from 10 GW to 37 GW, providing two-thirds of all generation in the Texas market during the crisis.

What went wrong in Texas?

There is not one single issue that caused the severe outages that were experienced. However, the lack of firm contracts for power along with the lack of winterized energy infrastructure interfered with power generation, transmission, and distribution. These challenges helped lead to prolonged electricity outages affecting health care facilities, homeowners, businesses, and other customers. Pennsylvania generation, transmission and distribution facilities are constructed and operated to account for fluctuating temperatures and employ a host of weatherization precautions to maintain reliability.

How are the Electricity Markets in Texas and Pennsylvania Different?

Texas's electricity market is largely overseen by a regional transmission organization known as the Electric Reliability Council of Texas (ERCOT). Unlike most of the other regional transmission organizations in the U.S., ERCOT is not regulated by the Federal Energy Regulatory Commission (FERC). By comparison, Pennsylvania is situated within the PJM market, and its market rules and operation are subject to FERC oversight. This ensures a comprehensive set of safeguards are in place to provide a stable, reliable and resilient electric grid in Pennsylvania.

How is PJM beneficial to Pennsylvania consumers?

PJM oversees the electric markets of all or parts of 13 states and the District of Columbia and stretches from New Jersey to Illinois.

PJM operates a capacity market which ensures the long-term reliability of the electric grid by providing for the sale of electric capacity three years into the future, based on anticipated consumer demand. As a result, consumers are assured of an affordable and reliable supply of electricity, while electric power generators that successfully compete in an annual capacity auction are assured of guaranteed revenue. Importantly, PJM maintains a capacity margin as well to make sure that more electricity than forecast is available to account for unanticipated outages or peak demand during extreme weather events.

PJM also evaluates proposed electric transmission infrastructure projects so that sufficient capacity is in place to move electricity throughout the market and meet anticipated demand.

How are Pennsylvania consumers benefitting from Marcellus Shale?

In 2008, Pennsylvania produced only 25% of its own natural gas demand. As a result, consumers were dependent on imports of natural gas from producers in Texas and along the Gulf Coast. Today, Pennsylvania produces 20% of the nation's natural gas demand and has vastly diversified its electricity generation portfolio. This means that as Texas took action to respond to its recent crisis – including instituting a temporary prohibition on exporting natural gas out of the state – Pennsylvania health care facilities, homes, businesses, and other consumers were spared of similar shortages of both natural gas for heating and electricity generation because of access to abundant Marcellus Shale resources here in Pennsylvania. In short, production from the Commonwealth's shale gas resources helped avert a crisis from ever materializing in Pennsylvania.

Where Can I Learn More?

For more information about what transpired in Texas, visit the Marcellus Shale Coalition (MSC) website to read Just the Facts on Texas' Deep Freeze. To learn more about Pennsylvania's competitive electricity market and its benefits to consumers, please read the MSC's Electricity Market Fact Sheet.