

Winter freeze power resources charted in time-lapse video

December 21 2021, by Avery Ruxer Franklin



Credit: Unsplash/CC0 Public Domain

What happened to electrical power in Texas during last February's freeze? A new time-lapse video of electricity generation created by experts at Rice University's Baker Institute for Public Policy offers an

hour-by-hour picture of power plant and customer outages across the state during the devastating storm.

The freeze crippled the Texas power grid, which is managed by the Electric Reliability Council of Texas (ERCOT). The 30-second video shows ERCOT's daily generation of fuel between Feb. 10 and Feb. 28 by resource type: natural gas, coal, solar, wind and more. These resources are juxtaposed with visualizations of power plant and customer outages during the freeze.

Created by Kenneth Medlock, senior director of the Baker Institute's Center for Energy Studies, and Elsie Hung, research manager at the center, the time-lapse video shows that all types of power-generating resources experienced outages or reductions under the strain of the extreme cold. At the peak of the [freeze](#) on Feb. 16, over 30 percent of ERCOT's winter capacity was offline, forcing it to issue load-shed orders—rolling blackouts, which left millions cold and in the dark for days.

Hung and Medlock also created two other time-lapse videos: one to illustrate daily electric generation by resource in ERCOT since Jan. 1, 2009, and another that includes day-ahead load, or projected demand in megawatts, since June 5, 2011. These videos were produced to provide insight into the development of the Texas [power](#) grid's fuel mix.

The video of daily generation by resource runs about 25 minutes, and it will be updated quarterly. Users can pinpoint a specific date or utilize time stamps below the video to reference major events. The [video](#) that highlights the evolution of the Texas fuel mix runs 2 1/2 minutes.

Provided by Rice University

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