



## Wait! What!? Now We Have to Worry about Space Weather, too??

E arlier this month, I received a message in my email from the Midcontinent Independent System Operator that the National Oceanic and Atmospheric Administration's Space Weather Prediction Center—a division of the National Weather Service—had issued a Warning that the Geomagnetic K-index could

reach a level of 7 or greater, conditions were being monitored and any additional Warnings/Alerts would be issued if necessary. I thought, "Okay, well this is a first. What is the K-Index? And where is the Space Weather Prediction Center???"

Soon after, another email message came through indicating that the Space Weather Prediction Center had now issued an **Alert** that the Geomagnetic K-Index had indeed reached a magnitude of 7 and conditions would continue to be monitored. I didn't know if I should I quit worrying about the Covid and start worrying about radioactive zombies. Should I run for cover or run into the street? Thankfully, my internet search engine was still operating, and I was able to get to the bottom of this "emergency."

The K-index indicates and measures disturbances of earth's magnetic field with a number in the range of 0 through 9 with 1 being calm and 5 or more indicating a geomagnetic storm. The index number is derived from the maximum fluctuations observed on a magnetometer during a three-hour interval. A geomagnetic storm (also known as a solar storm) can be caused by a solar flare and subsequent coronal mass ejection from the sun that sends a strong solar wind shock wave and/or a magnetic burst traveling millions of miles an hour through space and interacts with the Earth's own magnetic field.

When NASA satellites capture strong solar flare activity, power grid operators, satellite operators, airlines and other are notified about potential impacts of a geomagnetic storm. Geomagnetic storms can affect electrical grids, GPS navigation systems and radio and satellite telecommunications. Geomagnetic storms can also provide spectacular auroras. The aurora forecast for this particular geomagnetic storm included the potential for auroras to be seen as far south as Pennsylvania, Iowa, and Oregon. While astronauts and high-altitude pilots can be subjected to increased levels of radiation during geomagnetic storms, the Earth's atmosphere and magnetic shield protects us ground-based humans from most of the radiation that travels to Earth.

Yes, Virginia, there really is a Space Weather Prediction Center. The Center continually monitors solar and geophysical events, conducts research in solar-terrestrial physics, and develops techniques for forecasting solar and geophysical disturbances. Oh yeah, the <a href="Space Weather Prediction Center">Space Weather Prediction Center</a> is located in......Boulder, Colorado. So now we both know!!



#### Other News

#### EML Notice of Intent to Issue a Request for Proposals for Renewable Generation

Entergy Mississippi, LLC ("EML") issued notice to interested parties on November 10 that it intends to issue a Request for Proposals for Renewable Generation Resources in 2022 ("RFP"). EML expects to post RFP documents as early as January 2022. Bidder registration for the RFP is anticipated to take place in late February 2022. Interested participants should monitor the RFP website at <a href="https://spofossil.entergy.com/ENTRFP/SEND/2022EMLSolarRFP/Index.htm">https://spofossil.entergy.com/ENTRFP/SEND/2022EMLSolarRFP/Index.htm</a> for information about the posting of RFP documents and bidder registration.

#### Infrastructure Investment and Jobs Act of 2021 Signed into Law

On Monday, the President signed the Infrastructure Investment and Jobs Act of 2021 into law. In last week's <u>newsletter</u>, I broke down how the major portions of the bill's spending will be divided up. As part of that description, it was stated that the bill includes \$65 billion for broadband. A breakdown of the \$65 billion for broadband is as follows:

- \$42.5 billion for the Broadband Equity, Access, and Deployment Program (BEAD), which creates a program to be overseen by the National Telecommunications and Information Administration (NTIA) and which will direct funding to the states for broadband deployments, adoption programs and other broadband programs. Each state will get at least \$100 million, with more going to states with a high level of unserved locations. (per this bill, unserved means areas that lack 25/3 Mbps)
- \$14.2 billion for the Affordable Connectivity Program, which will be overseen by the FCC and which will provide \$30 a month toward the cost of broadband for low-income and other in-need households. The program is designed to essentially extend and replace the Emergency Broadband Benefit program.
- \$2.75 billion Digital Equity Program, a broadband adoption and literacy program.
- \$2 billion in additional funding for the USDA Rural Utilities Service <u>ReConnect</u> program.
- \$2 billion in additional funding for the Tribal Broadband Program administered by NTIA
- \$1 billion for a new middle-mile program to be overseen by NTIA
- \$.6 billion for tax exempt private activity bonds, which state and local governments can use to support broadband deployments

Mississippi needs to begin now to get ready to administer the funds allocated to the state for broadband. Unfortunately, Mississippi does not have a state broadband office, broadband coordinator, broadband program, or a state broadband plan.



### Final Report on February 2021 Winter Storm Impacts

The Federal Energy Regulatory Commission (FERC), the North American Electric Reliability Corporation (NERC) and NERC's regional entities <u>announced</u> the issuance of the final report examining the impact the February 2021 winter storms had on the bulk electric system in Texas and other parts of the South

Central U.S. This analysis underscores <u>preliminary recommendations</u> released earlier this fall. The final report includes additional details regarding the need to strengthen rules for cold weather preparedness and coordination to prevent a recurrence of last winter's blackouts.

The final report, <u>The February 2021 Cold Weather Outages in Texas and the South Central United States</u>, highlights the critical need for stronger mandatory electric reliability standards with respect to cold-weather critical systems. The report also found that natural gas-fired units represented 58 percent of all generating units experiencing unplanned outages, derates or failures to start during the winter storm. The remaining portion was comprised of wind (27 percent), coal (6 percent), solar (2 percent) and other generation types (7 percent). The final report includes 28 formal recommendations that seek to prevent a recurrence of the failures experienced during the February 2021 cold weather event.



#### Louisiana Introduces GUMBO Program to Connect Residents

Members of Louisiana's <u>Office of Broadband Development & Connectivity</u> recently spent 10 days visiting 24 cities and town and covering 3,400 miles to promote the launch of the state's broadband grant program: the <u>Granting Unserved Municipalities Broadband Opportunities</u> (GUMBO) Program. The GUMBO grant program aims to help applicants facilitate the deployment of broadband service to unserved areas of the state. Learn more about GUMBO at FAQs and Rules.

#### Alabama Partnership to Drive EV R&D

The University of Alabama, Alabama Power and Mercedes-Benz have announced a new partnership to speed research and development of electric vehicle technology through the Alabama Mobility and Power Center. Workforce preparation will also be a focus of the Center. The announcement comes as Mercedes-Benz has already committed \$1 billion to expand electric

vehicle manufacturing in Tuscaloosa. Alabama is third in the nation in auto exports.

#### Florida Utility Files for Rate Increase to Offset Higher Natural Gas Costs

Florida Power & Light filed a request with the Florida Public Service Commission to increase rates to recover the costs of higher-than-expected natural gas prices. For residential customers who use 1,000 kilowatt hours of electricity a month, the request would translate to paying \$6.82 a month more. Natural gas produces over two-thirds of Florida's electricity.

#### Entergy Arkansas Signals Changes to Generation Portfolio

Entergy Arkansas' (EA) <u>2021 Integrated Resources Plan</u> (2021 IRP) will look to add more renewable energy resources in the coming years and no longer includes plans to build a new natural gas-fired power plant. EA owns or has power purchase agreements for 5,466 megawatts of installed capacity. This includes: 1,712 megawatts from the two-unit Arkansas Nuclear One plant, 303 megawatts from the Grand Gulf Nuclear Station, 1,028 megawatts from coal-fired White Bluff Steam Electric Station and Independence Steam Electric Station (these two coal-fired plants are expected to be retired by 2028 and 2030, respectively), 2,106 megawatts of natural gas-fired generation from Hot Springs Plant, Ouachita Plant and Union Power Station, 181 megawatts of solar from Stuttgart Solar and Chicot Solar, and 73 megawatts of hydropower. EA plans to acquire the 100-megawatt Searcy, 100-megawatt Walnut Bend, and 180-megawatt West Memphis solar plants as they are completed from 2021 to 2023. EA is also expected to develop more renewable energy projects by 2028 and 2032.

#### Last Week at the MPSC

- ☐ Town of Edwards filed its Notice of Intent to increase rates in its certificated area in Hinds County. The monthly water bill rates for customers beyond one mile of the city limits in the certificated area would increase to \$24.40 for up to 2,000 gallons and \$3.40 per 1,000 gallons over 2,000 gallons. The Commission filed a Suspension Order in regards to the Town of Edward's Notice of Intent to increase water rates in Hinds County. This provides the Commission more time to review the filings.

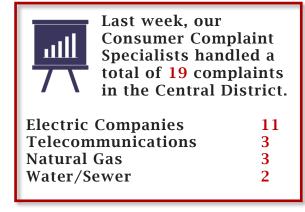


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- CenterPoint Energy filed its <u>Application</u> for a Certificate of Public Convenience and Necessity for Proposed Harrison County Service Area No. 9. The area includes 1,616 prospective customers.
- Mississippi Power Company filed its 2022 Energy Delivery Plan for the Commission's Annual Evaluation of Mississippi Power Company Pursuant to IRP Rule 29. The considerations in this Plan should provide a thorough review of the Company's plan to guarantee that customers continue to have access to safe, reliable, and affordable electric service, as well as, outline details on how Mississippi Power Company plans to address the following areas essential to maintaining an efficient energy delivery system: Demand Side Management (DSM), Distributed Energy Resources (DER), Transmission and Distribution Systems, Customer Offerings for Low Income Residents, and Enabling Technology.
- Entergy Mississippi, LLC filed its <u>Response</u> to Rankin County's Motion to Intervene in regards to Entergy Mississippi, LLC's Notice to implement a standard change in rates under Energy Cost Recovery Rider Schedule ECR-4.



On Monday of this week, U.S. Environmental Protection Agency (EPA) Administrator Michael Regan was in Jackson to visit with city and community leaders and tour critical water infrastructure facilities to gain a better understanding of the challenges facing Jackson and other entities to maintain water and wastewater utility systems. He will be making stops in Louisiana and Texas this week as well. I met Mr. Regan many years ago in North Carolina when we were both working to advance renewable energy and energy efficiency programs at the state level. He eventually became Secretary of the NC Dept. of Environmental Quality before becoming head of the EPA.



Last week, the Central District received a total of 254 complaints from consumers against potential telemarketers through our no call app, website and mail-ins.

We encourage consumers to file telemarketing complaints with the Federal Trade Commission at <a href="http://www.donotcall.gov/">http://www.donotcall.gov/</a> in addition to filing complaints with the Mississippi Public Service Commission.