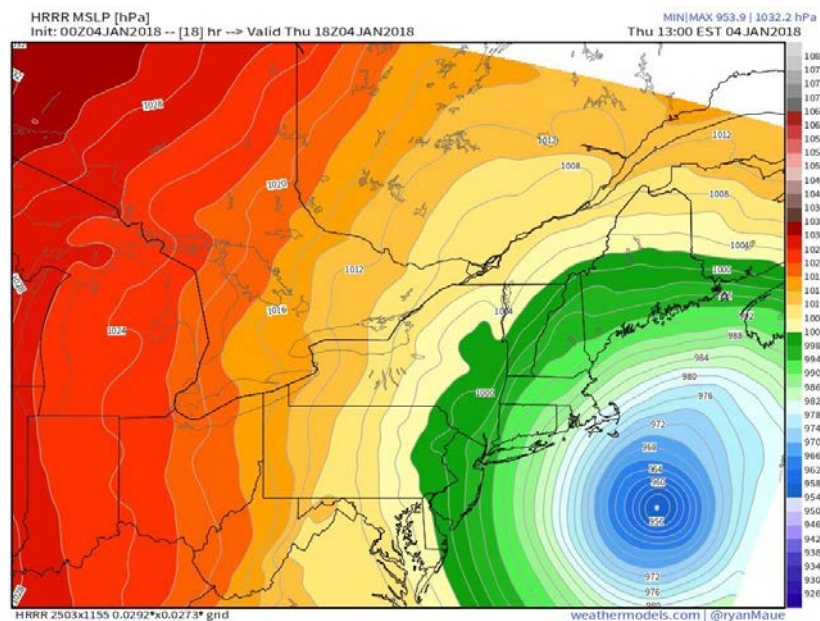


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## U.S. nuclear power issues remain



**Bomb Cyclone Grayson**

2018 started in Washington (and a lot of the U.S.) with very cold weather and a new weather term – bomb cyclone. So far, U.S. electricity systems have avoided major outages, but high demand for electricity, limits on deliverability / availability of natural gas for electricity generation, and extensive use of oil for electricity generation fuel have raised concerns. Nuclear power was essential to meeting demand.

Meanwhile, multiple existing nuclear units, some of which were critical suppliers during Bomb Cyclone Grayson, face early retirement.



Electricity industry reforms replaced long-term generation resource planning with the invisible hand of market prices, with these electricity market prices failing to provide financial incentives to invest in new baseload generation or even keep existing nuclear power plants in operation.

Many countries declined to reform the electricity industry and are engaged in long-term generation planning that includes nuclear power, including China, India, France, Russia, and other countries.

In the UK, the Electricity Market Reform process allowed the government to implement an incentive program for new nuclear power projects that would not be built in the electricity market. This led to the Hinkley Point C project and is the driving force behind the Horizon, NuGen, Bradwell and other new nuclear projects.

In the U.S., there are several efforts underway to provide nuclear power with additional revenue to prevent early retirement for financial reasons.

In New York and Illinois, ZEC programs were approved and placed into operation to provide additional revenue to selected nuclear power plants to ensure that these plants do not retire early. New Jersey, Ohio, and Pennsylvania have nuclear units threatened with early retirement, but have not put similar measures in place.

On 8 Jan 2018, FERC issued an [order](#) that dismissed the U.S. DOE Proposed Rule on Grid Reliability and Resilience Pricing and established a new Docket (AD18-7-000) that requires RTOs and ISOs to respond to a request for more information on reliability issues.

The invisible hand of electricity market prices has resulted in significant changes to the U.S. electricity industry, as Commissioner Chatterjee noted in the FERC order:

*“The scale and pace of those changes are staggering. Between 2014 and 2015 alone, the U.S. added approximately 15,800 megawatts (MW) of natural gas, 13,000 MW of wind, 6,200 MW of utility scale solar photovoltaic, and 3,600 MW of distributed solar photovoltaic generating capacity. Meanwhile, nearly 42,000 MW of synchronous generating capacity (e.g., coal, nuclear, and natural gas) retired between 2011 and 2014, with an additional seven nuclear units (representing 10,500 MW of nameplate capacity) planning retirement by 2025.”*

By the time that action is taken on these issues by FERC or by the states, it may be too late to save nuclear power plants threatened by early retirement.

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