

## **What the Cold Snap Tells Us About EPA Carbon Rules**

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On January 8, 2014, the US Environmental Protection Agency (EPA) published in the Federal Register its proposed new source performance standard (NSPS) for new electric generating units. On February 6, 2014, EPA held a public hearing on the proposed rule. Most commentators agree that the rule effectively ends investment in new coal-powered generation, and sharply curtails expected innovations that might keep coal a robust and vital part of the generation mix in the future. As the Agency trains its regulatory authority on the existing fleet in the near future, significant additional retirements are expected on top of those scheduled as a result of implementation of the air toxics rule finalized by EPA in 2012. As labor leaders have recently observed, “compliance with MATS under the EPA’s current timeline would result in the closing of 56 gigawatts of coal-fired generation and the loss of 250,000 jobs.”

Against the EPA’s regulatory backdrop, this winter has unleashed brutally cold temperatures on citizens around the U.S. – teaching our country some hard lessons about the importance of reliable and affordable electricity, and the need for policymakers in Washington to be very careful about limiting the flexibility and diversity of our electricity generation options. The cold snap has sent natural gas prices soaring, resulted in shortages of propane used to heat many homes, and has exposed the fact that without fuel flexibility our country could face serious electricity reliability problems in the future.

Here are some important lessons:

- **The cold snap has threatened electric reliability and exposed weaknesses in relying on some sources of alternative energy.**

*The Federal Energy Regulatory Commission (FERC) recently noted that:* “Last week, cold temperatures stressed the bulk power system with high loads, increased generator forced outages, and other challenging operating conditions....PJM filed an application with the Commission for a week-long waiver...[which] allowed PJM to engage in unit-specific review of day-ahead plans with the interstate natural gas pipelines to help ensure that adequate supplies of natural gas were available and to confirm unit availability...Wind turbines were also affected by the cold, with some wind turbine models reaching their minimum operating temperatures.”

*Also, one energy company CEO explained that:* “Our peak demand between 7 and 8 am, which is when the peak is, there was almost no solar available because the sun is not up, so we need to have a system that can address those requirements and be prepared to provide the service our customers expect and the reliability they expect in those periods. That is the beauty of a portfolio.”

- **On-site storage of coal reduces any volatility related to cold snaps.**

Coal-powered generating facilities will frequently have two to three month's supply on hand, making them particularly useful for the increased demand associated with unusually cold weather. By contrast, natural gas facilities rely on a continuous delivery of fuel by pipeline, which can be subject to interruption under the circumstances of high demand.

- **The cold snap has increased awareness of the fact that coal-fired generation is an important part of electric reliability.**

Even in New England, power providers like PSEG had to rely upon remaining coal capacity in order to keep up with demand during the recent cold months:

“One of the last coal-fired power plants in the region is under pressure from energy experts and environmentalists to close down, but owner PSEG says it's too important to shutter. The plant, on Bridgeport Harbor across Long Island Sound and owned by a PSEG subsidiary, no longer is financially viable, according to a report released last week by an independent think tank. The plant has operated heavily through December and January, and power from the plant is available to Long Island on the New England spot energy market via the Cross-Sound cable...PSEG says Bridgeport is "among the cleanest" U.S. coal-fired plants, and is "important to the reliability of the [electric] grid" -- particularly in winter, when the prices of natural gas and heating oil surge.”

Of particular note, as leadership at the American Electric Power observed, some 89 percent of the plants slated for retirement by mid-2015 were needed at full capacity during the Polar Vortex:

“Looking at the physical side, when 89% of our coal capacity slated for retirement in mid-2015 is called upon and running, natural gas delivery is challenged and voltage and load reductions are occurring is another reminder that we should carefully plan and design the social safety net, we call the electric grid to meet extreme requirements, not just steady state conditions. We believe the nexus of EPA initiatives, energy market development and security threats, whether physical or cyber is a national security issue.”

Similarly, during the initial cold snap in early January, approximately 75% of Southern Company's coal-fired generating units scheduled to be retired were operated; and during the second bout of cold weather a few weeks ago, nearly 90% of the plants that will be retired were used to provide electricity. Also, Luminant brought two coal-fired generating facilities back into operation in Texas to deal with the cold weather, and the Tennessee Valley Authority (TVA) set new records for electricity demand at the same time that nearly 20 of its coal-fired generating facilities are scheduled for retirement.

The bottom line is this: EPA carbon regulations, coupled with other regulations, push the power sector away from an optimal fuel diversity necessary to best protect American consumers, households, small businesses, and communities in the event of severe cold weather. The most recent experience with the Polar Vortex provided a vivid demonstration of this fact. As the EPA seeks to finalize carbon standards, the Agency must take electric reliability fully into account and must listen to interagency, industry and state/local input in earnest.

- **EPA Regulations Are Forcing a Significant Number of Electricity Generating Units into Retirement, Threatening to Make Reliability Problems Much Worse in the Future**

The Energy Information Administration (EIA) recently released their Annual Energy Outlook for 2014, which noted that EPA regulations will cause a “wave of coal-fired generating capacity” by 2016, and that as much as 50 GW of coal-fired generation will be retired by 2021.

As one report in Cleveland recently summarized:

“Columbia Gas of Ohio joined Dominion's conservation call during the second Arctic invasion earlier this week...What's going on? It's a classic tale of unintended consequences, tied to the move away from using coal as an energy source. Facing stringent new federal clean air rules, electric companies have decided not to upgrade old coal-fired power plants. Instead, they have been shutting down or replacing them with new generators that burn clean and cheap natural gas coming from shale. And the pace is expected to increase over the next few years.”

- **This year's cold snap greatly increased natural gas prices, forcing electric generators to turn to emergency expensive supplementary fuel sources, such as jet fuel.**

During the course of recent cold weather, data from the PJM region encompassing New York and New England have shown substantial increase in wholesale market prices as a direct result of spikes in the underlying market price for natural gas. With half of New England reliant upon natural gas, some local utilities have had to run infrequently used turbines on jet fuel to meet demand.

- **The cold snap has stressed the natural gas supply and resulted in propane shortages that threaten the safety and well-being of millions of Americans.**

In turn, as natural gas flows to electric generation at high costs, the incentive to remove natural gas liquids that are necessary for America's propane consumers decreases. As a result, there have been significant propane shortages for consumers in the Midwest, Northeast and Southeast. About 14 million Americans rely on propane for home heating.

The Electric Reliability Coordinating Council is a group of power-generating companies working on commonsense regulatory policy. For more information, please contact Scott Segal at 202-828-5845 or [scott.segal@bgllp.com](mailto:scott.segal@bgllp.com)