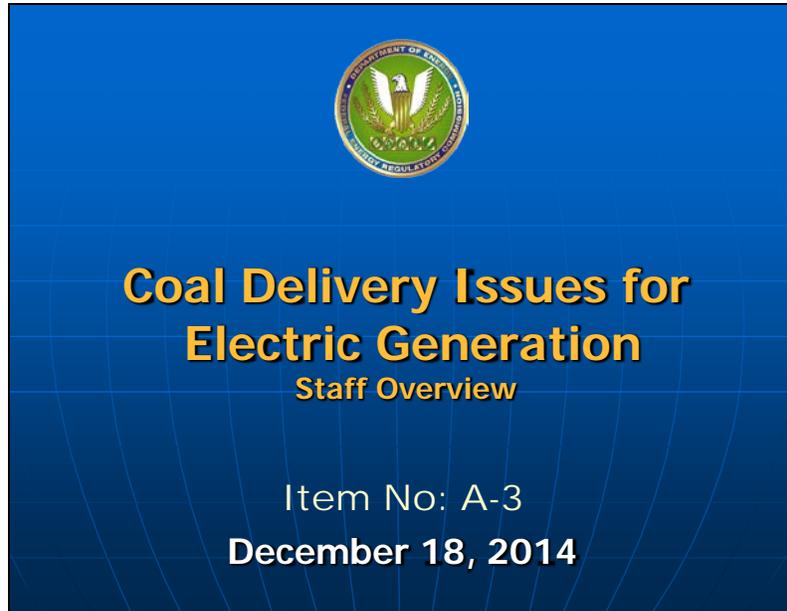


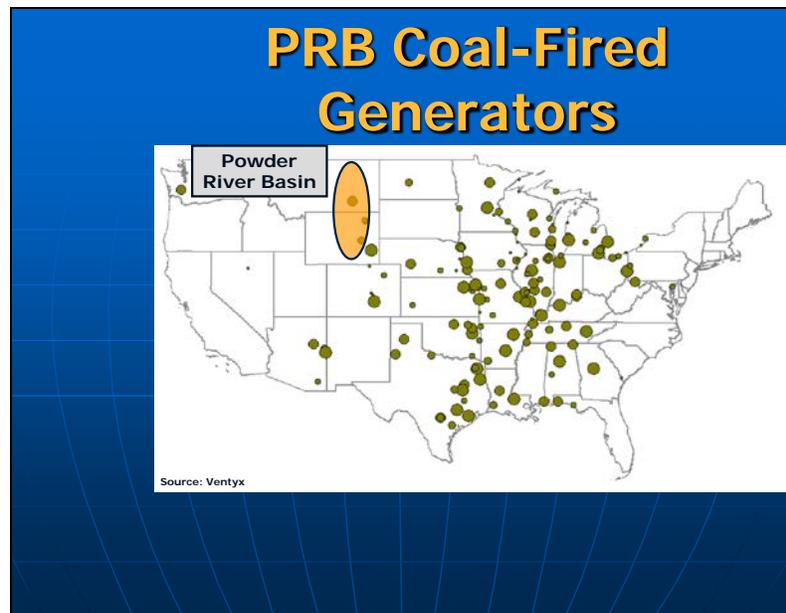
Slide 1



Chairman LaFleur, Commissioners, good morning.

Staff will provide an overview into the reliability and market impacts associated with coal delivery interruptions, which present challenges for some electric generators in the central part of the country.

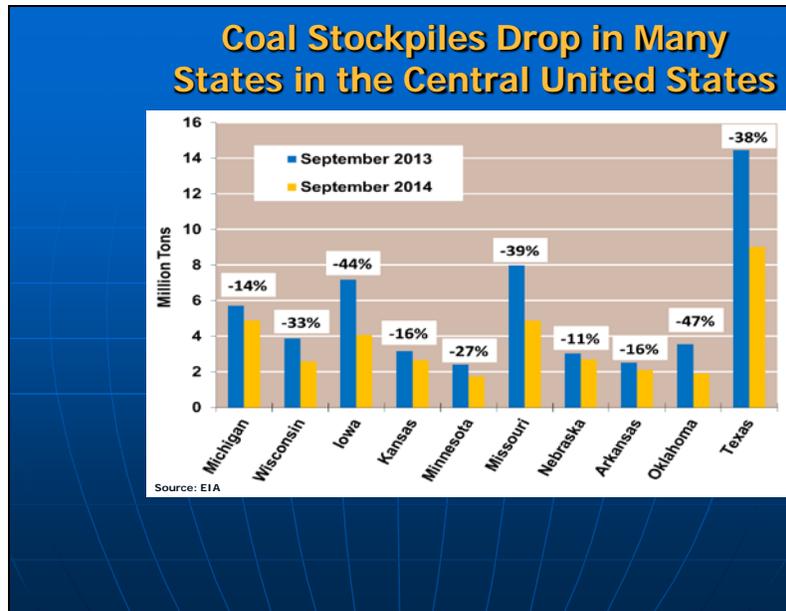
This overview is a collaborative effort by the Office of Enforcement's Division of Energy Market Oversight, the Office of Electric Reliability, and other offices within the Commission.



The extreme cold weather of last winter brought attention to the issue of replacing the drawdown of coal inventory in the central United States. Since the middle of 2013, many generators already have had problems getting requested delivery levels. One concern centered on the rail delivery of Powder River Basin or PRB coal by BNSF.

There are 166 power plants throughout the U.S. that use Powder River Basin coal, representing 172 GW of capacity. The majority of these plants are in the MISO, SPP and ERCOT regions.

Rail operations in the Midwest are going through a period of adjustment and multi-faceted challenges. Coal is just one of several commodities vying for space on the rail system. Because of these developments and their implications for electric reliability and markets, Staff has paid particular attention to the coal delivery picture. Staff analyzed the fundamentals involved, monitored regulatory developments, and had discussions with a number of stakeholders. The utilities and RTOs that we spoke with relayed various levels of concern about their ability to maintain and build their stockpiles prior to the winter. While much of what Staff heard was specific to the individual entities, we heard a number of common themes. For instance, one theme was that generators who relied on BNSF for delivery of PRB coal claim to have consistently received less coal than they had requested. Generators asserted that their deliveries were being rationed, along with other commodities, on a rail system that was over-taxed and hampered by disruptions caused by construction intended to improve future capacity.



PRB coal deliveries in the Central U.S. have been below previous levels all year as well as for the second half of 2013. As we can see, the inventories for all types of coal in the central states lag well behind the inventories of a year ago. Coal stockpiles at U.S. power plants are below the five-year average.

At the state level, the greatest impact is on plants in MISO and SPP that rely on PRB coal, with stockpiles in Iowa and Oklahoma more than 40% below last year's level. Other heavily affected states are Minnesota, Wisconsin, Missouri, and Texas, where stockpiles are between 25 and 40% below last year.

It is likely that below-average stockpiles will persist through 2015 as railroads struggle to keep up with overall demand before system upgrades are complete. This is raising concerns among some generators that low stockpiles coming out of the winter could create challenges in the summer of 2015.

Coal Delivery Effects

- Generation owners can be harmed by coal shortages if there is prolonged cold and continued delivery disruption.
- The regions involved appear to be preparing adequately for winter, even if it is colder than forecast.

Some generating utilities and independent plant operators are unable to establish the coal stockpiles that meet the targets they have set for this winter. Certain affected generators who use PRB coal delivered by BNSF have taken steps, such as reducing output and using trucks, to conserve coal and build inventories. The relatively mild summer also helped to mitigate the deficiency going into this winter.

It is possible that individual power plants could run low on coal in the event of protracted cold weather and coal deliveries, and some locations cannot count on deliveries at all once the water portion of their delivery route is frozen over.

The RTOs can rely on fuel diversity and surplus capacity to help manage any unexpected loss of generation due to coal supply shortages.

Market Effects

- Higher off-peak prices have occurred this past Fall season.
- Delivery disruptions and a colder than forecast winter could result in small to moderate power price increases.
- Market impacts could be significant if combined with other system disruptions.

A handful of generating companies in MISO and SPP have had their reference prices adjusted through consultation with the market monitors. A higher reference price reflects the opportunity cost of using a limited fuel supply and enables the generator to raise its offer without being subject to market power mitigation. Higher offer prices allow the generator to run less and conserve coal. These conservation measures typically reduce generation in the hours and days that load is relatively low.

These offer adjustments have been effective in reducing coal consumption by some units, resulting in minor market effects thus far. In recent months, MISO's off-peak prices have increased compared to a year ago while most peak prices have been little changed. This is a reasonable result because the RTO calls on these units only at higher load times. The higher offers price the units out of the low-load hours such as off-peak, shoulder-period hours. This can be an efficient market solution as long as the generators have estimated coal needs and offer impacts well.

If the coming winter presents challenges similar to last year's experience, the coal inventory problems could result in significant market impacts. However, Staff would expect to see a somewhat measured reduction of coal generation supply as plant operators with inventory issues take more and more conservation actions. By itself, coal inventory deficiencies should not produce significant power market dislocation. However, the inventory deficiencies could result in more significant impacts when combined with other events such as a high-level of unplanned outages or natural gas disruptions.

Slide 6



**Coal Delivery Issues for
Electric Generation**
Staff Overview

Item No: A-3
December 18, 2014

This completes our presentation. We will be happy to answer any question you may have.