The National Coal Council
Power for America from America

Reliable & Resilient

The Value of Our Existing Coal Fleet

The 2014 Polar Vortex

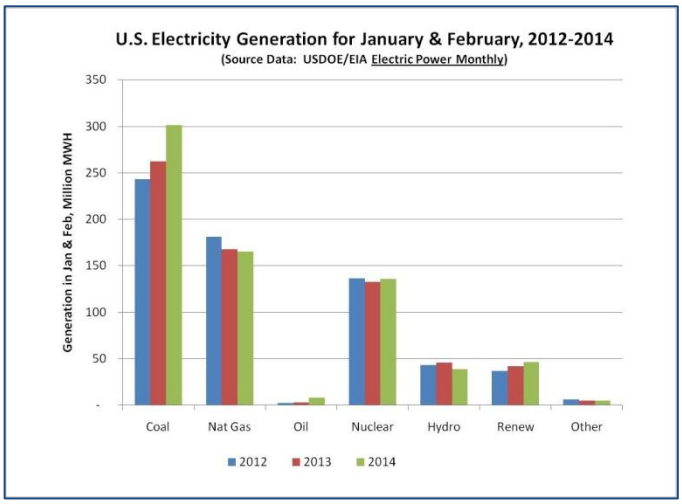
www.nationalcoalcouncil.org/NEWS/NCCValueExistingCoalFleet.pdf

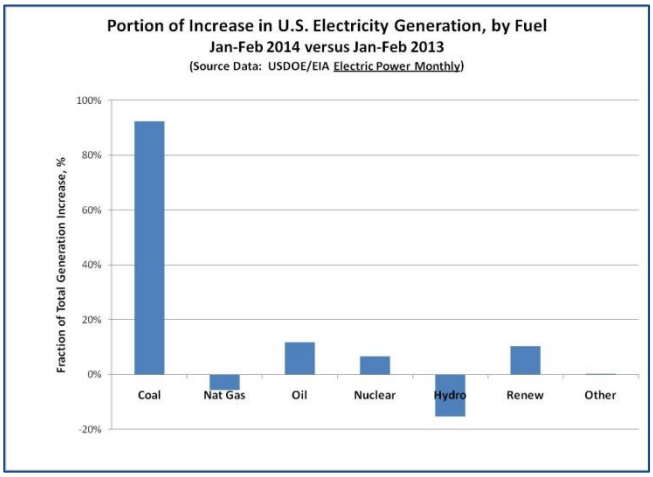
"This country did not just dodge a bullet – we dodged a cannonball."
– Nick Akins, CEO
American Electric Power
Testimony before
Senate ENR Committee

The National Coal Council's Existing Coal Fleet Study was conducted during the winter of 2013-2014. The severe cold weather events experienced throughout the U.S. highlighted the value of our existing coal fleet and reinforced the need to maintain our coal generation option. While electricity supply did meet demand, even under these sever conditions, electricity and gas prices surged and energy supplies were stretched to their limits. Were it not for the utilization of existing coal plants that are slated to go offline in the near future, many regions would not have met the demand for power.

"Coal to the Rescue"

The Polar Vortex situation is best summed up by the title of an article published on March 10th, 2014, the *New York Times* – Coal to the Rescue, but Maybe Not Next Winter. For the months of January/February 2014, coal was the leading source of electric power in the U.S. Wind produced just 4.7% of the nation's power while solar produced less than 0.2%. Nuclear provided only 5% of incremental "year-over-year" generation and hydroelectric output declined 13%.





The value of the existing fleet is not an abstract concept. At this time of great stress on power demand (Jan/Feb 2014), coal produced 92% of the increase in U.S. electricity generation relative to the same period in 2013. During this time, natural gas generation *decreased* because natural gas was diverted to fuel residential heating needs and gas prices soared to over three times that of coal.

As the year progresses, the nation is depending upon "gas to coal switching" to allow for refilling of gas storage which declined to 822 billion cubic feet (bcf) at the end of March 2014, the lowest level in over a decade.

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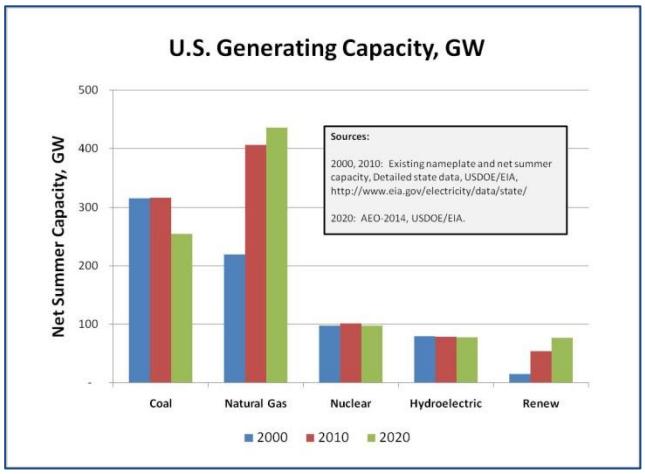
The Value of Diversity

Based on the most recent data from the Energy Information Administration (EIA), if the projected premature closure of 60 GW of existing coal plants proceeds, by 2018 natural gas generating capacity will exceed that of coal, nuclear and hydro combined. This dependence on natural gas for electricity places both reliability and affordability at risk.



- "89% of our coal capacity slated for retirement in mid-2015 is called upon and running. Natural gas delivery is challenged."

  Nick Akins, CEO, AEP

- At least 75% of Southern Company's coal power plants scheduled to soon close was need to meet consumer demand.
- At one point about 75% of New England's gas generating capacity was not operating due to lack of supply or high prices.
- The TVA set new records for electricity demand at the same time that many of its coal-fired units are scheduled for closure.
- "We really counted on a combination of coal and gas and nuclear and pump storage and hydro, we needed every bit of it."

  Lynn Good, CEO, Duke Energy

The Existing Coal Fleet's Value Has Never Been More Apparent

EIA indicates that at least 54 GW of coal generation will be forced to close by 2016, more than one-sixth of the entire coal fleet in just two years. Cuts into coal capacity may go much deeper, particularly as new environmental regulations now under development are promulgated.

The major lesson learned from the 2014 Polar Vortex is that the U.S. power grid is less resilient than previously believed. Only the availability and operation of coal units now scheduled for retirement over the next two years enabled the power sector to meet demand during periods of harsh weather.

NCC Recommendation

DOE should lead collaborative efforts with industry to assess the impacts of the 2014 Polar Vortex experience on power prices, availability and reliability.