

Will natural gas profit from the death of US coal?

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[by Kate Mackenzie](#)

The US natural gas industry, so angsty of late about its [profile in Washington](#) as a way of reducing CO2 emissions, might not have so much to worry about.

Despite the uncertainty over the outlook for GHG regulations in the US, Bernstein Research believes a broad switch to gas-fired power will start to come about anyway as a result of existing plans in the Clean Air Act. Firstly, eastern states that are currently allowed to trade sulphur allowances among themselves are likely to come under a state-by-state restriction from next month. Secondly, plans to curb mercury emissions by insisting coal plants use the best technology available could mean all coal-fired plants across the country would need to install SO2 (sulphur dioxide) scrubbers.

Interestingly, the measures are targeted at health, not environmental improvements.

In January we wrote about predictions from Bernstein that the new regulations [could significantly accelerate](#) the retirement of older coal plants. The killer fact then was estimates from 'industry sources' putting the cost of installing SO2 scrubbers at about \$300 per kilowatt.

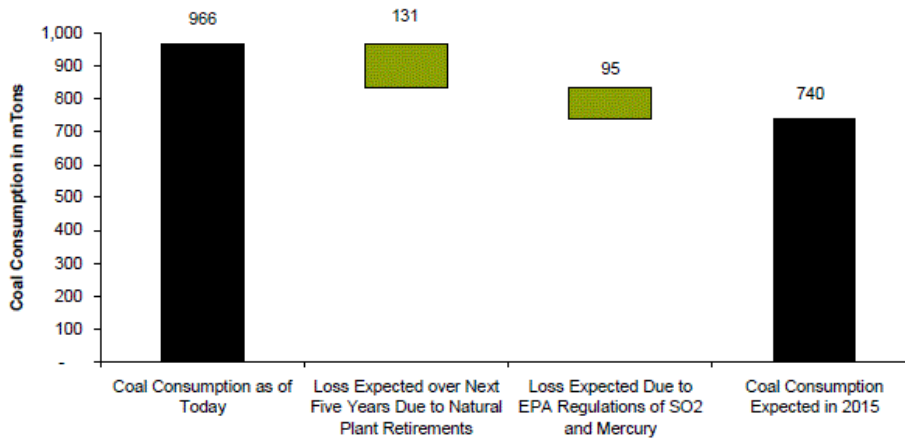
However Bernstein's Hugh Wynne now has estimates from the Electric Power Research Institute, no less, that puts the scrubber cost at \$420/kw - which Wynne says is approximately the cost of building a new gas turbine peaker plant.

He writes:

This cost will be prohibitive at certain coal-fired power plants, particularly those older, less efficient units whose high operating costs, consequently limited hours of operation, and short remaining useful lives make it impossible to recover the capital cost of a scrubber out of the future cash flows of the plant.

A widespread requirement to install SO2 scrubbers, therefore, is likely to result in the accelerated retirement of a portion of the coal fired fleet. The power output of the retired units is likely to be substituted with generation from the nation's gas fired power plants.

When considering the likely path of the regulations, natural attrition rates, and where the pollution reductions could most cheaply be achieved, Wynne estimates that coal consumption by the US power industry would fall by more than 20 per cent by 2015:



Source: Ventyx, EPRI, EIA, Bernstein Analysis

Interestingly, the second and third column labels reveal that the natural attrition will still have a bigger effect than the SO₂ and mercury regulations, even in what is the ‘worst case’ regulation scenario for coal-fired generators.

Meanwhile, Wynne carries forward those estimates to forecast the consequent increase in demand for natural-gas fired generation could be a 16 per cent increase by 2015.

There are a few unknowns in this equation, however. Although the regulations Wynne talks about are broadly going ahead, their exact execution isn’t certain. Part of the reduction, for example, is based on the EPA requiring that the ‘most advanced current technology’ is implemented for the mercury regulations.

And the coal industry is not taking it lying down. Dow Jones reported last month (link not available) on the war of words between the EPA and American Electric Power Co. AEP’s vice-president for strategic policy analysis, Bruce Braine, reportedly said:

The new greenhouse-gas Clean Air Act rules are “going to be litigated like crazy,” Braine told a gathering of Washington-based lawyers examining the impacts of the proposed regulations.

He also said the way the rules were interpreted would be crucial to decisions over plants:

Braine said it is particularly important the EPA be flexible on when it will consider which facilities need to apply for permits. By a letter-of-the-law reading, the EPA could force firms to apply for a new permitting process, for example, when a boiler is changed or if the company is installing pollution-reduction equipment.

The EPA dismissed the claims as ‘unsubstantiated’, and so far we can find no reports of, say, new bills being introduced to curtail the new rules.