HB 1042

Department of Legislative Services

Maryland General Assembly
2015 Session

FISCAL AND POLICY NOTE

House Bill 1042 (Delegate Stein)
Economic Matters

Environment - Nitrogen Oxide Emissions - Pollution and Combustion Control Technologies

This bill requires the owner or operator of specified coal-fired electric generating units (units) to (1) optimize the operation of all installed pollution control technologies during the ozone season (May 1 through September 30) beginning in 2016; (2) cap the systemwide (all units under common ownership) ozone season nitrogen oxide (NO_x) emissions rate beginning in 2016; and (3) for seven specified units at four facilities, by June 1, 2020, either install a specified type of pollution control technology and meet a reduced ozone season NO_x emissions rate, switch to natural gas fuel, or permanently retire the unit. The bill establishes individual threshold NO_x emissions rates for each unit and requires the owner or operator of the unit to report specified information for each day that emissions exceed the threshold rate. The bill also requires the submission, by November 15, 2015, of an optimization plan describing, among other things, how each unit will operate its pollution control technology to meet the ozone season optimization requirement. Finally, the bill requires the submission to the Maryland Department of the Environment (MDE) of a monthly report that provides data on the days in which a unit exceeds the threshold established by the bill for that unit.

Fiscal Summary

State Effect: State expenditures (all funds) may increase, although not likely in FY 2016, to the extent that the bill results in an increase in electricity rates paid by State agencies; however, any increase in rates cannot be reliably estimated and may occur even in the absence of the bill, as discussed below. MDE can implement the bill with existing resources.

Local Effect: Local government expenditures on electricity procurement may increase under the bill; however, any increase in rates cannot be reliably estimated and may occur

even in the absence of the bill, as discussed below. Local government revenues may be affected to the extent that the bill results in major investment decisions affecting coal-fired plants, which generate significant property tax revenues for several jurisdictions.

Small Business Effect: Potential meaningful.

Analysis

Bill Summary: The bill establishes several definitions applicable to the new subtitle, including a definition of "affected electric generating unit," which lists one or more specific coal-fired generating units located at seven locations in Maryland, representing each major coal-fired power plant facility currently in operation. The owner or operator of each affected unit must submit a plan for approval to MDE and the U.S. Environmental Protection Agency by November 1, 2015, that demonstrates, among other things, how each unit will optimize its operations to minimize NO_x emissions whenever the unit is in operation.

2016 Ozone Season Optimization Requirement

Beginning with the 2016 ozone season – from May 1, 2016 to September 30, 2016 – the owner or operator of each affected unit must optimize the use of all installed pollution control equipment consistent with technological limitations, manufacturers' specifications, good engineering and maintenance practices, and good air pollution control practices defined in specified federal regulations.

NO_x Emissions Control and Reporting Requirements Beginning in 2016

In addition to this optimization requirement, the 30-day systemwide (generally measured over multiple units under common ownership) rolling average NO_x ozone season emissions rate may not exceed 0.15 pounds per million British Thermal Units (lbs/MMBtu) beginning October 1, 2015 (effectively May 1, 2016 – the start of the following ozone season). This requirement (and the optimization requirement) does not apply to a unit equipped with a fluidized bed combustor (there is one unit in the State with this technology), which must instead meet a daily NO_x emissions rate of 0.10 lbs/MMBtu. Additionally, the 0.15 lbs/MMBtu cap does not apply to a unit located at a facility that is not owned or operated by an entity that owns or operates other facilities in the State.

The bill also establishes individual threshold daily NO_x emissions rates for each unit, ranging from .07 lbs/MMBtu (at five different units) to .33 lbs/MMBtu (at Chalk Point Unit 2); the bill also establishes an emissions rate of .008 lbs/MMBtu for one unit, but this is an error. An exceedance of the specified daily NO_x rate for each unit is not a violation

of the bill (unless the optimization plan required by the bill was not followed), but triggers the requirement to submit a report for each day that a unit exceeds its daily threshold rate, including specified data and information. The bill specifies that an exceedance includes emissions from a unit's start up and shut down, as well as time during which the unit was directed to operate in a specified manner by the grid operator and an exceedance occurring from operations consistent with good engineering and air pollution control practices, among other things.

Finally, the bill requires the submission to MDE of a monthly report during the ozone season that provides data on the days in which a unit exceeds the threshold established by the bill for that unit. The report must include, among other things, a daily record of whether the unit met or exceeded the daily NO_x rate threshold established for that unit under the bill.

NO_x Emissions Control Requirements Beginning June 1, 2020

By June 1, 2020, the owners or operators of seven specified units located at four facilities (C.P. Crane in Baltimore City, Chalk Point in Prince George's County, Dickerson in Montgomery County, and H.A. Wagner in Anne Arundel County) are required to either (1) install and operate a selective catalytic reduction (SCR) control system and meet a reduced 30-day rolling average ozone season NO_x emissions rate of 0.09 lbs/MMBtu; (2) switch to natural gas fuel; or (3) permanently retire the units.

Current Law/Background: Ozone is produced when volatile organic compounds and NO_x react in the presence of heat and sunlight. The federal Clean Air Act (CAA) requires the U.S. Environmental Protection Agency to establish National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, including ozone, which are harmful to public health and the environment. States are responsible for developing State Implementation Plans (SIPs) to meet the standards.

Maryland continues to exceed ozone standards and most of the State's population is located in an area designated as a "marginal" or "moderate" nonattainment area for the 2008 eight-hour ozone standard; the Baltimore region (classified as Baltimore City and Anne Arundel, Baltimore, Carroll, Harford, and Howard counties) is the only region east of the Mississippi River to be classified as in moderate nonattainment with this standard.

Sources of air pollution in nonattainment areas classified as moderate and above are also subject to a Reasonably Available Control Technology (RACT) requirement. RACT is the lowest emissions limitation that a particular source is capable of meeting by the application of control technology that is reasonably available considering technological and economic feasibility.

CAA requires MDE to review and revise the NO_x RACT requirements in Maryland's SIP as necessary to achieve compliance with new, more stringent, NAAQS. As a result, the State is required to submit to the U.S. Environmental Protection Agency (EPA) in 2015 an attainment plan for ozone that includes emission reduction strategies designed to achieve attainment status with a 75 parts per billion (ppb) ozone standard by 2018.

According to MDE, reductions in NO_x emissions from coal-fired electric generating units on high electricity demand days during the ozone season are necessary to achieve compliance with the 75 ppb ozone standard. These reductions are also viewed as a necessary prerequisite for compliance with the more stringent ozone standard of between 65 ppb and 70 ppb that EPA proposed in December 2014; EPA is expected to select a new compliance threshold and adopt final regulations by the end of 2015.

This bill generally codifies proposed MDE regulations that were published in the *Maryland Register* on December 1, 2014. After a notice and comment period, the proposed regulations were adopted by MDE, although the adoption was not published, which is necessary for a proposed regulation to take effect. The proposed regulation represented a compromise reached between MDE and several of the interested stakeholders after lengthy negotiations over other potential alternative emission reduction scenarios.

State/Local Expenditures: State and local government expenditures on electricity may increase to the extent that the bill results in an increase in electricity rates in the State. As an electric customer, State agencies and the University System of Maryland used approximately 1.56 million megawatt-hours of electricity in 2012, at a cost of $138.5 million.

The bill's optimization requirements, beginning in fiscal 2016, are not anticipated to materially affect electricity rates. However, electric rates may increase to the extent that some or all affected units are required to install new pollution control equipment, switch to natural gas generation, or cease operations at some point before June 1, 2020. For example, MDE advises that the capital costs to install an SCR control system may range from $40 million to $200 million per unit, while the cost to retrofit a facility to operate using natural gas may range from $25 million to $300 million. Additionally, the decision to cease operations may affect wholesale market rates or result in the construction of replacement generation at significant additional cost.

However, it should be noted that such investment decisions are a routine aspect of business operations for energy companies and are generally subject to considerable deliberation with State and federal energy market regulators. Some or all of these costs may be incurred even in the absence of the bill due to factors such as market forces, State or federal energy or environmental regulations, or company business and investment decisions regarding individual facilities. For example, the owner of two of the affected units under the bill

announced in December 2013 that the company intended to close the plants by May 2017. The closure of these or other plants in Maryland are part of a significant trend around the United States in which older, and in some cases, underutilized coal plants are being retired due to market forces (cheaper natural gas prices) and new regulatory requirements (such as from the mercury and air toxics rule adopted under CAA).

Local Revenues: Local property tax revenues may be affected by the bill's requirements. Property tax revenues may increase to the extent that the owner of a unit decides to invest in expensive new pollution control or natural gas generation equipment and invest in the long-term operation of the plant. Conversely, property tax revenues may decrease to the extent that the bill results in an accelerated retirement of an affected unit. For example, the previous owner of the Morgantown coal-fired facility was the largest property tax payer to Charles County in fiscal 2013; the previous owner of the Chalk Point facility had the ninth largest taxable property value assessed in Prince George's County in fiscal 2013; and the previous owner of the Dickerson facility had the fifth largest taxable property value assessed in Montgomery County in fiscal 2013. As significant sources of tax revenues to local governments, any significant investment decision may have significant fiscal ramifications for local jurisdictions.

Small Business Effect: While the facilities affected by the bill are not small businesses, any of the compliance-related activities may result in a change in the demand for small businesses engaged in servicing or constructing power plants, or installing or maintaining pollution control equipment.

Additional Information

Prior Introductions: None.

Cross File: None.

Information Source(s): Charles, Montgomery, and Prince George's counties; Department of Natural Resources; Maryland Department of the Environment; Maryland Energy Administration; *the Baltimore Sun*; U.S. Environmental Protection Agency; Department of Legislative Services

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