

**Testimony of Thomas F. Farrell II
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Before the House Committee on Energy and Commerce
Subcommittee on Energy and Power
Abingdon, Virginia
July 16, 2012**

Good morning, Chairman Whitfield, Congressman Griffith and Members of the Energy and Power Subcommittee. Thank you for the opportunity to discuss Dominion's views on the Environmental Protection Agency's proposed performance standards for greenhouse gas emissions from new fossil-fueled power stations.

It is our view that the rule should be revised in four fundamental areas. First, EPA should set different standards for combined cycle gas and advanced coal facilities. Second, the standard for new coal-fired plants should be at least 2,000 pounds of carbon dioxide (CO₂) per megawatt-hour. Third, EPA must reaffirm that existing facilities installing pollution controls will not be regulated as "new" units. Fourth, the standard for combined cycle gas facilities should be no lower than 1,100 pounds of carbon dioxide (CO₂) per megawatt-hour.

Further, this rule for new generating facilities also gives because for concern about the direction the Agency may take on the expected regulation of greenhouse gas emission limits for existing facilities, as I will explain in a moment.

For all new fossil-fueled generating stations, EPA proposes a single emissions limit for greenhouse gases of 1,000 pounds of carbon dioxide (CO₂) per megawatt-hour. This CO₂ emissions limit can be met by one fuel only – natural gas – using one type of generating technology – combined cycle. This same emissions limit, however, also applies to new coal-fired power stations. For this reason, the proposed standard would

eliminate new coal-fired generation units and would restrict the use of a major base load fuel.

As you know, there is currently no demonstrated, commercially available carbon capture and storage (CCS) technology that can be installed on a coal plant to comply with this standard. The adoption of EPA's proposed standard will lead, in our view, to an undesirable national policy: abandoning coal, one of our most abundant natural resources.

This outcome, however, is not mandated by the Clean Air Act, and it can be avoided. EPA has full authority under the law and precedents of past policies to set performance standards that ensure the continued viability of all reliable and affordable fossil fuels, including coal.

The provisions in the Clean Air Act governing the setting of performance standards for new plants are flexible. This standard is defined as one that "reflects the degree of emission limitation achievable through the application of the best system of emission reduction which ...taking into account cost ... the Administrator determines has been adequately demonstrated."

In past performance standards developed by EPA for other pollutants; emission limits have been set that could be achieved by existing pollution control equipment installed on coal, oil or natural gas facilities.

The law allows EPA to set separate standards for each fuel type – coal, oil and natural gas.

The law allows a separate standard based on the best emission reduction technology – for each fuel type.

The law also allows EPA to set a performance standard based on actual emissions data instead of vendor design projections.

These essential features of the Clean Air Act are not found in this rule. EPA has discretion to make these modifications in the final rule. Dominion, along with others, has urged the Agency to do so. Standards can be set to reduce emissions and stimulate the deployment of advanced generating technologies – without eliminating a major domestic fuel source.

Mr. Chairman, the industry has offered clear and concise comments detailing corrections needed to the proposed rule. Setting emission limits under the New Source Performance Standard program is a well understood and enforced section of the Clean Air Act.

It is important to note that in the history of Clean Air Act implementation, EPA has never set a single standard for all power plants based on an emissions limit that can be achieved by one fuel only and by one technology with the lowest emissions rate. Performance standards have been set routinely for conventional pollutants. Most recently, EPA set new source standards for sulfur dioxide (SO₂), nitrogen oxide (NO_x) and mercury in the Mercury and Air Toxics Standard (MATS) rule. In response to comments on the MATS rule, EPA acknowledged that it is not appropriate to base standards on the use of natural gas alone because they are “neither technically nor economically achievable for a coal-fired EGU.”

This well-established regulatory approach should be followed in setting standards for CO₂ limits at new, modified and existing facilities. A single standard is not only

unwarranted, it also threatens fuel diversity, which is critical for providing reliable, affordable electricity.

To be sure, the electric industry is transitioning to newer, lower-emitting advanced coal and natural gas technologies. Many existing facilities are being retired, either because of age, market trends or regulatory requirements.

Renewable energy sources, demand-side management and smart grid technologies are assuming an increasingly important role in meeting energy demand. But the heart and soul of the industry – base load power generation – continues to be supplied by our coal, nuclear, hydro and natural gas plants. The challenges to siting and permitting new nuclear and hydro facilities are well documented. If we remove coal from our energy future, we will undermine the diversity of our supply base, and ultimately, consumers may be more exposed to unpredictable natural gas prices.

It would be shortsighted to assume that the time will never come when new, advanced coal-fired facilities will be economically and environmentally desirable. We already have experienced the unintended consequences of a national policy that prohibited the use of available fuels for power generation. The history of the industry provides ample evidence that fuel diversity has a direct and important impact on the affordability and reliability of electric service.

EPA states that the proposed rule does not foreclose the possibility of new coal-fired generation. The Agency says new coal plants can be built if carbon capture and storage technologies are incorporated now or at least by the 11th year of operation. Even though EPA acknowledges that CCS technology is not commercially available at

this time, it seems clear that the Agency's intent is to use this new rule to force CCS into the marketplace.

However, this so-called alternative compliance is not a viable option, nor does it meet the requirements of the Clean Air Act which provides that any performance standard must be shown to be achievable.

According to a Congressional Budget Office report issued last month on "Federal Efforts to Reduce the Costs of Capturing and Storing Carbon Dioxide," "integrating CCS technology into the production of electricity generation at coal-fired power plants appears to be more demanding technically than, for example, the use of CCS in the production of natural gas." DOE hopes that the \$7 billion available for CCS demonstration and deployment projects will reduce costs and prove the feasibility of the technology on a commercial scale. The report concludes, however, that without increased and sustained funding or other incentives to encourage investment in CCS, federal support will have little impact on technology deployment or reducing the costs of electricity from CCS-equipped coal plants.

The CBO report confirms our views that there remain legal, regulatory and technical obstacles to deploying CCS on a utility scale that will be overcome only with a comprehensive federal strategy that includes funding, permitting and liability protections.

Simply put, performance standards will not succeed at forcing the adoption of CCS technologies. The CCS requirement will create an insurmountable hurdle to obtaining financing and securing public utility commission approval for new coal stations. Without assurance that a new facility would be able to operate for its expected lifespan of 30

years or more, EPA's requirement that CCS technology would have to be installed and meet a specific standard within 10 years would jeopardize project financing.

EPA should abandon this approach and set a specific standard for new, advanced coal-fired facilities: at least 2,000 pounds of CO₂ per megawatt-hour.

It is also important to understand that the impacts of the proposed rule extend beyond just new plants. It has the potential to create significant uncertainty about the future of existing coal-fired plants. Utilities today are planning to retrofit or repower hundreds of coal plants

to comply with the new MATS rule and the Cross-State Air Pollution Rule (CSAPR) by 2015 or 2016.

By EPA's own estimates, 85 gigawatts of scrubbers, 102 gigawatts of baghouses and other control systems will have to be installed on the existing coal fleet – requiring billions of dollars of investment that can only be recovered by the continued operation of these plants well into the future.

EPA must make clear that upgrading these facilities will not change their regulatory classification to “new” sources from “existing” sources. A “new” source designation would require these coal units to meet the natural gas performance standard of 1,000 pounds CO₂ per megawatt-hour, or install CCS technology within 10 years. In all likelihood, the only practical compliance option would be closing the plant – even though major capital investments had just been made. In short, EPA's final rule must remove the regulatory uncertainty that clouds the future of these facilities.

EPA can resolve this issue by reaffirming the Act's pollution control project exemption in the new source performance standard program. That does not mean these units will be

exempt from future greenhouse gas regulations. These upgraded units will be regulated when EPA issues the standards for existing sources in the future.

Last week Dominion began full commercial operation of our Virginia City Hybrid Energy Center – a new 585-megawatt advanced coal-fired station in Wise County. At the height of construction activity, this \$1.8 billion project employed nearly 2,000 people. According to an economic impact study conducted by Virginia Tech University, the station will generate more than \$440 million annually in tax revenues and other benefits for Wise County, and provide employment for 100 people.

The facility employs a circulating fluidized bed technology that by design reduces emissions of SO₂ and NO_x. It has been outfitted with dry scrubbers and additional NO_x controls to achieve further reductions in these pollutants. Other state-of-the-art controls for particulate matter and mercury have been installed. Our early testing and monitoring of mercury emissions indicate removal rates well in excess of the 90 percent required by the Mercury and Air Toxics Standard rule. Any future greenhouse gas standard for existing plants must ensure that it can be achieved at our newer, highly-efficient coal-fired facilities.

Mr. Chairman, much of my testimony has focused on the impacts of the proposed rule on future and existing coal stations. However, there are also critical issues affecting natural gas combined cycle facilities. Although EPA maintains the proposed standard is consistent with efficient natural gas combined cycle units, there are significant uncertainties about whether the standard can be met by all plants under all operating conditions. The proposed standard is based on vendor design specifications – not on actual emissions data from the newer combined-cycle plants in today's fleet.

Actual emissions data indicate that the standard for new gas-fired combined-cycle units should be no lower than 1,100 pounds of CO₂ per megawatt-hour. This standard ensures that all new facilities can comply under all operating conditions. It would accommodate periods of facility startup and shutdown when emissions levels vary. This cycling occurs in response to demand and to the integration of renewable resources into the grid. EPA has recognized these different operating conditions in other rules by establishing best management practices during startup and shutdown times instead of using numeric limits.

EPA's proposed rule does have several positive features that should be retained in the final rule. The rule does not cover simple cycle combustion turbines because EPA correctly recognizes that these are not base load facilities and typically operate to meet times of peak demand. EPA also excluded facilities with biomass-fired boilers while ongoing analysis of the greenhouse gas impacts of these facilities is underway. Further, we believe it is appropriate that the rule focuses on CO₂ emissions and does not propose separate standards for methane and nitrous oxide as they comprise minimal emissions levels.

We know that the next step for EPA is to propose greenhouse gas performance standards for existing facilities. EPA has only said they will do so "at the appropriate time," but I expect this will happen, either by EPA's own decision or through litigation. Most importantly, the proposal for new sources must not become the model for the existing or modified source standard.

States will have a more direct role in determining existing source compliance by developing state implementation plans. EPA must allow states and the industry the

flexibility to use every available tool to meet the existing source standard once it is set. As I have already emphasized, EPA must set different standards for different fuel types. Energy efficiency improvements will play a large role in emissions reductions, but EPA should avoid requiring specific numeric reductions.

Achieving emissions reductions through efficiencies are very unit specific and are based on design, fuels, and operating conditions. As such, EPA should set work practice standards or best operating practices for each type of generating facility – rather than a one-size fits all approach.

Equally important, energy efficiency projects used to reduce CO₂ emissions must not trigger new source review. For years, EPA's policies on new source review have hindered modifications to existing facilities. It is time for EPA to address this problem by relieving energy efficiency projects of the uncertainties that result from new source review.

In addition, states and utilities must be allowed to average emissions among sources as part of any existing source compliance regime. This would acknowledge the impact of retired units and ensure that the same level of emissions reductions would occur cost-effectively.

In conclusion, Mr. Chairman, it is clear that EPA can and should significantly modify the proposed new source standard to address these issues. In doing so, the Agency would support the transformation of the electricity generating fleet to advanced coal and gas technologies and, at the same time, achieve desired reduction in CO₂ emissions.

Thank you again for the opportunity to join you today. I would be pleased to answer any questions you may have.
