



Regulating Carbon Emissions from Power Plants in Virginia – Update 1

This paper updates the March 2016 CCH background paper, “[Options for Implementing the Clean Power Plan in Virginia](#).” Following a chronology of key events relating to national, state, and international efforts to address greenhouse gas (GHG) emissions, it discusses and analyzes the most recent developments relating to carbon emission reductions in Virginia.

Chronology

- August 3, 2015 The U.S. Environmental Protection Agency (EPA) releases its Clean Power Plan (CPP) final rule, designed to reduce carbon dioxide emissions from fossil fuel-fired power plants. States are given until September 2016 to submit implementation plans (or to request an extension of up to two years to develop their plans).
- October 23, 2015 Virginia’s Department of Environmental Quality (DEQ) establishes a stakeholder group to discuss possible alternatives and compliance paths for the Commonwealth to consider in meeting the requirements of the CPP rule. DEQ holds six stakeholder meetings between November 2015 and March 2016.
- December 21, 2015 The U.N. Climate Change Conference (COP 21) concludes in Paris with agreement by the 196 participating countries to reduce GHG emissions based on Intended Nationally Determined Contributions (INDCs) pledged by each country. The Obama Administration cites the CPP as key to the U.S. pledge to reduce GHG emissions by 26-28 percent of 2005 levels by 2025.
- February 9, 2016 The U.S. Supreme Court stays (i.e., suspends) enforcement of the CPP final rule, pending resolution of a lawsuit challenging the rule in the U.S. Court of Appeals for the D.C. Circuit, brought by 28 states and various industry groups. The next day, Virginia Governor Terry McAuliffe announces that Virginia “will stay on course and continue to develop the elements for a Virginia plan to reduce carbon emissions and stimulate our clean energy economy.”
- April 20, 2016 The Virginia General Assembly blocks DEQ from spending money to work on a CPP implementation plan as long as the Supreme Court stay is in effect.

- April 22, 2016 The Paris climate agreement is officially signed in New York. Signatories set as their goal “[h]olding the increase in the global average temperature to well below 2°C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change”
- June 28, 2016 Governor McAuliffe issues [Executive Order 57](#), directing the Secretary of Natural Resources to convene a work group to study and recommend methods for reducing carbon emissions from electric power plants. The Secretary is to provide a report to the Governor by May 31, 2017.
- November 4, 2016 The Paris climate agreement goes into effect, following ratification by more than 55 countries representing more than 55 percent of global GHG emissions, including the U.S., China, India, and the European Union.
- March 28, 2017 President Trump signs [Executive Order 13783](#), revoking climate-related Executive Orders issued by President Obama and directing EPA to review the CPP and related rules “and, if appropriate, . . . as soon as practicable . . . publish for notice and comment proposed rules suspending, revising, or rescinding those rules.”
- April 28, 2017 The U.S. Court of Appeals for the D.C. Circuit grants EPA’s request to suspend the litigation challenging the CPP final rule while EPA conducts the review ordered by the President. (Meanwhile, the Supreme Court stay remains in effect.)
- May 12, 2017 The Governor’s Executive Order 57 Work Group issues its [report and final recommendations](#) to the Governor. The leading recommendation is that “the Governor consider taking action via a regulatory process to establish a ‘trading-ready’ carbon emissions reduction program for fossil fuel fired electric generating facilities that will enable participation in a broader, established multi-state carbon market.”
- May 16, 2017 Approving the Work Group’s recommendation, Governor McAuliffe issues [Executive Directive 11](#), instructing DEQ to “[d]evelop a proposed regulation for the State Air Pollution Control Board’s consideration to abate, control, or limit carbon dioxide emissions from electric power facilities” DEQ is to present the proposed regulation to the Board by December 31, 2017.
- June 1, 2017 President Trump announces that the U.S. will withdraw from the Paris climate agreement, calling it unfair to American workers and taxpayers.

Governor McAuliffe responds with a statement criticizing the President's decision and reiterating Virginia's commitment to cut carbon emissions and embrace the clean energy economy.

June 5, 2017 Governor McAuliffe announces that Virginia and 12 other states have formed an alliance to move forward on the principles of the Paris climate agreement, despite the President's decision to withdraw from the accord.

Discussion

At the time our March 2016 background paper was written, the Supreme Court had stayed enforcement of the CPP final rule, but DEQ was continuing its series of stakeholder meetings to develop alternatives for a state implementation plan. The Supreme Court's stay meant that EPA could not enforce its deadline for states to submit a plan, but states were free to develop and submit a plan if they so chose, and the Governor had announced that Virginia would proceed with its process. Our paper examined various options for Virginia's CPP state implementation plan.

In April 2016, however, the General Assembly barred DEQ from taking further action to develop a plan. The Governor responded in June 2016 by issuing Executive Order 57, tasking members of his Administration with developing recommendations under existing state law for reducing carbon emissions from power plants.

The Executive Order 57 Work Group conducted its review from July 2016 through April 2017. It held six public meetings, heard over 40 presentations from experts and stakeholders, and received over 8,000 written comments during a three-month public comment period. Its May 12, 2017, report to the Governor made five recommendations, summarized under the following headings:

- Promulgate regulations to limit carbon dioxide emissions from power plants;
- Update state building codes to reflect current technology and standards for energy conservation;
- Improve access to clean energy resources like solar, wind, and energy efficiency;
- Develop an energy efficiency accounting and registry tool; and
- Establish a statewide Environmental Justice Advisory Council.

Regarding the first recommendation, the Work Group noted that Virginia's Attorney General had just issued a legal opinion affirming that the state Air Pollution Control Board has the authority to regulate carbon dioxide from electric power generation facilities. Specifically, the Attorney General's May 12, 2017, [opinion](#) (which the Work Group did not quote) concludes that "the State Air Pollution Control Board is legally authorized to regulate GHG emissions,

including establishing a statewide cap on GHG emissions for all new and existing fossil fuel electric generating plants.”

In his May 16, 2017, Executive Directive, the Governor endorsed the Work Group’s first recommendation:

Among the most significant recommendations from the group is the need to develop regulations limiting the total amount of carbon dioxide emitted from electric power facilities. Given the nature of the climate change threat and the promise of clean energy solutions, I agree with this recommendation.

Accordingly . . . , I hereby direct the Director of the Department of Environmental Quality, in coordination with the Secretary of Natural Resources, to take the following actions . . . :

1. Develop a proposed regulation for the State Air Pollution Control Board’s consideration to abate, control, or limit carbon dioxide emissions from electric power facilities that:
 - a. Includes provisions to ensure that Virginia’s regulation is “trading-ready” to allow for the use of market-based mechanisms and the trading of carbon dioxide allowances through a multi-state trading program; and
 - b. Establishes abatement mechanisms providing for a corresponding level of stringency to limits on carbon dioxide emissions imposed in other states with such limits.
2. By no later than December 31, 2017, present the proposed regulation to the State Air Pollution Control Board for consideration for approval for public comment in accordance with the Board’s authority pursuant to Virginia Code § 10.1-1308.

In a [press release](#) announcing his directive, the Governor said,

The threat of climate change is real, and we have a shared responsibility to confront it. Once approved, this regulation will reduce carbon dioxide emissions from the Commonwealth’s power plants and give rise to the next generation of energy jobs. As the federal government abdicates its role on this important issue, it is critical for states to fill the void. Beginning today, Virginia will lead the way to cut carbon and lean in on the clean energy future.

In [oral remarks](#), the Governor added that he will partner with other states to multiply the impact of the carbon cap and make sure Virginia is ready to allow organizations to trade their right to emit carbon. For his part, Virginia House Speaker William Howell [decried](#) the Governor’s action and vowed to “take every action necessary” to ensure that such major policy changes go through the General Assembly.

Analysis

Several aspects of the Governor's directive are worth noting. First, the Governor's action is a significant move in the multiparty chess match between proponents and opponents of regulatory limits on GHG emissions. The federal CPP rule was blocked by the Supreme Court, and DEQ's work on an implementation plan was thwarted by the General Assembly; so the Governor has countered with executive actions to pursue the same objective under existing state authorities. And he has persisted despite President Trump's actions to order a review of the CPP and withdraw from the Paris agreement.

Under the timeline the Governor has set, DEQ will have until December 31 to dust off the input from its 2015-2016 stakeholder meetings, consider the record compiled by the Executive Order 57 Work Group, and come up with a proposed rule. Hence, this process will be completed before the next General Assembly convenes and could take any action to block the initiative. But it will then take many more months for the state Air Pollution Control Board to review DEQ's proposed rule, make any changes the Board deems necessary, publish a proposed rule for public comment, evaluate the comments received, and develop and publish a final rule, extending the process long beyond the end of Governor's McAuliffe's term and the start of the next legislative session, both in January 2018.

Thus, while Governor McAuliffe has taken an important next step in developing a regulatory framework for reducing GHG emissions from power plants in Virginia, the ultimate success or failure of the initiative will depend to a significant degree on the results of the November elections for Governor and members of the House of Delegates and on actions taken in the General Assembly's 2018 session.

Second, it is not clear from the Governor's directive what features the proposed rule will have, in light of the various options available (see our March 2016 background paper for specifics). Some hints were provided, however. The Governor talks about "limiting the *total amount of carbon dioxide emitted* from electric power facilities" (emphasis added), which suggests he may intend that both existing and new power plants be covered. As noted, the Attorney General's opinion explicitly states that the Air Pollution Control Board has the authority to impose "a statewide cap on GHG emissions for all new and existing" power plants.

The Governor also states that the proposed rule should "ensure that Virginia's regulation is 'trading-ready' to allow for the use of market-based mechanisms and the trading of *carbon dioxide allowances* through a *multi-state trading program* . . ." (emphasis added). This language suggests that the Governor is thinking in terms of a mass-based approach, in which *allowances* are traded, rather than a rate-based approach, in which emission rate *credits* are traded. For a number of reasons (explained [here](#)), a mass-based approach is much better suited to a multistate trading program than a rate-based approach. So the Governor's reference to such a program may likewise imply a mass-based approach. (The Attorney General's opinion also explicitly mentions a "mass-based cap" in a footnote.)

Our March 2016 background paper advocated adoption of a mass-based approach covering both existing and new power plants, so these hints in the Governor’s directive are encouraging.

No hints were provided on how allowances would be allocated. As noted in our March 2016 paper, a number of options are potentially available:

Allowances could be given to power plant owners for free, or they could be sold at auction. Selling allowances would generate funds that could be used to benefit impacted communities, workers, or consumers, or to promote energy efficiency or clean energy. A state could also set aside a certain number of allowances for a specific goal. For example, some allowances could be given directly to energy efficiency providers and clean energy developers to sell in order to raise funds for their projects.

Giving allowances to power plant owners for free would seem to be a seriously wasted opportunity, in light of the beneficial alternatives available.¹ But it may be the only course that would not require legislation, so DEQ and the Board may feel constrained to adopt that approach in their proposed rules.

Third, in contrast to the CPP, the Governor did not specify the level of carbon reductions to be achieved (see our March 2016 background paper for the levels specified in the CPP). Instead, he said the proposed rule should provide for “a corresponding level of stringency to limits on carbon dioxide emissions imposed in other states with such limits.” Thus, contrary to his press release statement about Virginia’s “lead[ing] the way to cut carbon,” the Commonwealth will actually be following the lead of other states in deciding how much carbon to cut.²

Given political realities, this provision is entirely understandable. Given climate realities, however, it is likely to be entirely inadequate. It is widely acknowledged that the INDCs submitted in connection with the Paris agreement are cumulatively insufficient to meet the global warming limits set in that agreement (explained [here](#)), and the President has just announced that the U.S. is reneging on its INDC pledge. To offset the Administration’s carbon-friendly policies, many states will need to take much more aggressive action in cutting GHG emissions than the Governor’s directive envisions.

Fourth, the Governor’s directive focuses on only one of the Work Group’s five recommendations. It mentions “the promise of clean energy solutions,” but it does not

¹ The nine Northeastern and Mid-Atlantic states that form the Regional Greenhouse Gas Initiative (RGGI) operate a mass-based cap-and-trade program that issues CO₂ allowances “which are distributed almost entirely through regional auctions, resulting in proceeds for reinvestment in strategic energy and consumer programs. . . . More than \$1.3 billion in RGGI auction proceeds were invested in programs including energy efficiency, clean and renewable energy, greenhouse gas abatement, and direct bill assistance. Energy efficiency and clean and renewable energy continued to receive the largest share of investments.” www.rggi.org/rggi_benefits.

² The RGGI states implemented a 2014 cap of 91 million short tons of CO₂, and the cap declines 2.5 percent annually from 2015 to 2020 (link [here](#)). California’s cap was set at 2 percent below 2012 emissions levels for 2013, and it declined 2 percent below that for 2014 and 3 percent annually from 2015 to 2020 (link [here](#)).

otherwise address the Work Group's four other recommendations. Implementing a carbon reduction plan for power plants may indirectly boost both energy efficiency measures and renewable energy sources, but it would be far better to promote them directly and aggressively and to establish a statewide Environmental Justice Advisory Council as recommended by the Work Group.

Conclusion

Governor McAuliffe is to be applauded for the actions he has taken to keep Virginia on a path of decreasing GHG emissions from power plants. Given a hostile political climate at the federal level and in the General Assembly, he is using his executive authority to push for a statewide cap-and-trade program for carbon emissions. By joining forces with other states with similar programs, and possibly encouraging additional states to adopt such programs, Virginia may help counteract some of the negative policies emanating from Washington for the next few years.

Much more needs to be done at all levels of society if we are to avoid the worst effects of climate change. And the extent to which even these steps by the Governor ultimately bear fruit remains to be seen. But by the end of the year, Virginia will at least have a detailed proposal for reducing carbon pollution statewide, and that's a very positive development.

Bob More
Care for Our Common Home Ministry, St. John Neumann Catholic Church
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