

Controversy on EPA's regulation on carbon emissions from electric generation

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Abstract. In 2021, the case of West Virginia and other state governments against the U.S. Environmental Protection Agency (EPA) brought the Clean Air Act's carbon emissions regulations back into the public eye. The Supreme Court's decision in this lawsuit will have far-reaching implications for the Clean Air Act and the EPA, so the outcome of the lawsuit is being awaited. Therefore, this study focuses on the background of the lawsuit, a description of the law involved, and an assessment and prediction of the overall case. Moreover, it introduces the two different regulating plans regarding the interpretation of §7411(d) of the CAA, and proposes two solutions and discusses their feasibility. One suggestion is to increase EPA's authority over carbon emissions control. Another proposal is to limit EPA's control of carbon emissions to the fence line. Since then, this paper has expressed a more favorable view of limiting EPA's rights based on analysis and trade-offs.

Keywords: Carbon emissions, Clean Air Act, Environmental law, EPA

1. Introduction

Since the occurrence of extreme weather, the extinction of rare and protected animals, and the disappearance of beautiful natural landscapes due to high temperatures, most countries around the world have become aware of the impact of humans on the environment and nature. Therefore, many countries have begun to introduce laws and policies to reduce the impact of humans on the planet's ecology: like the control of carbon emissions, which can slow down the rate of global warming and thus avoid more extreme weather and species extinction. In recent years, more and more regions and countries have adopted carbon emission targets and related policies, and some have even established relevant legislation. For instance, New Zealand joined a group which contains many elite countries that has already enacted emission target legislation, targeting to eliminate carbon emissions by 2050 [1]. Accordingly, the Chinese government set a 'dual carbon' goal, which basically states China's carbon emissions will peak in 2030 and then become carbon neutral by 2060 [2].

Recently, however, the United States has seen a debate over the definition of legislation to control carbon emissions. The regulation for eliminating the effect of climate change is always a spotlight topic in the environmental law field in the United States. In 2015, the Obama administration introduced an ambitious Clean Power Plan (CPP). It is designed to reach a 32% reduction in carbon emissions by 2030, and the Environmental Protection Agency (EPA) plays a significant role in executing this plan [3,4]. However, it was repealed by the Affordable Clean Energy (ACE) Power Plan, which the Trump administration issued in 2019. The ACE keeps the EPA authority "within the fence line.", targeting about 0.7~1.5% of deduction on carbon emission by 2030 [5,6]. So much less regulation on carbon emissions can lead to a significant effect on climate change. If the ACE is kept implemented, the anticipation is that the sea levels will be up by about one to eight feet by 2100, and the Arctic glaciers will be melting. [7]. Under ACE's implementation, there will be between 1,500 and 3,600 new cases accompanied by 15,000 new cases of upper respiratory tract infections, as the program will increase the number of airborne pollutants [8].

Consequently, based on the "major questions doctrine," West Virginia and other coal burning energy states with some companies related to coal challenged the introduction of the ACE rule, and claimed that the EPA had already misinterpreted §7411(d) of the Clean Air Act. The DC Circuit terminated ACE's enforcement for it was so discretionary and uncertain since the Trump administration failed to consider that the EPA has the authority to regulate carbon emissions beyond

the fence line. However, West Virginia et al. asked the Supreme Court to examine D. C. Circuit's holdings on the case and challenged the EPA was too extensive in its jurisdiction over greenhouse gas emissions [9].

EPA's authority determination will have a significant influence on the agency's capacity to monitor emissions in the future. Meanwhile, the court is willing to review congressional authorization of agency action, further deciding how the EPA can regulate emissions later [10]. This study focuses on this controversy, introduces the two different regulating plans regarding the interpretation of §7411(d) of the CAA, and proposes two solutions and discusses their feasibility.

2. Parties and Issue Description

2.1 Parties

2.1.1 The petitioners/ appellees

The petitioners are West Virginia, Alabama, Alaska, and other coal-burning energy states. They need to make a guideline on emission carbon and execute reduction emissions in the electricity sector. Some coal companies and one Electric cooperatives in North Dakota need to update their power and substitute renewable generation.

The DC Circuit's decision could significantly impact states relevant to electricity generation and power plant companies. They need to refer to the interpretation made by the Supreme Court to decide what they should do next for regulation of their carbon emission: updating the power plant efficiency, submitting a new plan for reducing emissions, and so forth. Every step could be related to their interest since they have extra costs through implementing the power plan. It is supposed that the EPA gets a broader range of authorization for regulating carbon emissions. The fate of industries could be totally up to the agency. Consequently, this is what the petitioners like West Virginia do not want to see. They filed a Petition for writ of mandamus from the Supreme Court to examine the D.C. Court's determination and seek declaratory relief to determine whether EPA has the authority to regulate greenhouses so broadly under Section 7411(d).

2.1.2 The respondents/ appellants

The appellants are EPA and Michael Regan (EPA), representing the federal agency responsible for implementing CPP/ ACE and compliance with the CAA. In this case, the final decision made by the Supreme Court could determine the power range of EPA's regulation on carbon emissions. If the Supreme Court decides to restrict the agency from looking beyond the fence line, in this way, probably the court will take power away from EPA. So, they assert that the petitioners have a narrow interpretation of §7411(d), which leads to a constraint of state power. Hence, they refuse the challenge from West Virginia et al.

2.2 Issue Description

The issue associated with this controversy began with the CPP in 2015; West Virginia et al. and other coal-burning energy states with some companies related to coal challenged the CPP while it was repealed by the ACE introduced by the Trump administration within the time of the case abeyance. Immediately after the final rule of ACE was posted, more than 170 petitioners initiated a lawsuit in July 2019 in D.C. District Court to contest the rules. West Virginia and others argued that EPA has failed to meet its obligations to reduce greenhouse gas emissions and improve public health by failing to comply with the CAA. Instead, EPA has left states without emissions measures as their required implementation actions [11]. In January 2021, the D.C. Circuit favored petitioners by revoking ACE and its abrogation of the CPP. They reasoned that ACE was arbitrary and capricious and would slow down the pace of decreasing carbon emissions while having a wrong interpretation of §7411(d) from the CAA. In addition, this decision led to the CPP being brought into enforcement since the last case against the CPP was rendered moot. The following step was whether to execute it.

Nevertheless, this decision got challenged by nineteen states led by West Virginia; they contended that the decision made the EPA have broad authority to regulate carbon emissions. Thus, they asked the Supreme Court to review it. In short, the controversy revolves around the power range that Congress gave EPA on earth through the CAA and the accurate interpretation of §7411(d). What interpretation of §7411(d) given by the DC Circuit was concerned by petitioners since the EPA had been given "universal power" which would have an impact on billions of dollars over several industries by setting emission standards and changing how and where the electricity was produced [4]. Concerning interpretations of §7411(d) have been a dispute for a long time. Therefore, with the final decision made by the Supreme Court, the longtime controversy of §7411(d) in the air act will get solved. Hence, it is necessary to bring it to court to clarify that, which could influence relevant states and industries and the EPA's authority on regulation under the CAA.

3. Relevant Laws

As already briefly discussed, the primary law in *West Virginia v. EPA* is the explanation of §7411(d) of the Clean Air Act and two plans that comply with CCA— the CPP and ACE Rule.

3.1 §7411 of the Clean Air Act

The Clean Air Act, the principal federal air quality in the United States, was originally enacted in 1963 and became part of Title 42, United States Code, Chapter 85. CAA is one of the most influential environmental laws in America's history.

Specifically, the CAA is the law that defined the EPA's duties to conserve and promote national air quality, and it has been updated several times since it was introduced to the public in 1963. The last significant change in the law was in 1990 and was enacted in 1990. Additionally, since the 1990 amendments to the Clean Air Act, several minor revisions have been adopted to the legislation [10]. The issue of *West Virginia v. EPA* is affiliated with §7411 of the Clean Air Act(d). As power generation is classified as a stationary source, the facilities of the power plant or appliance emit or have the potential to release any air contaminants. In this context, for existing sources, it provides that the EPA Administrator shall recommend and authorize the development of legislation that should establish a process requiring each state to submit to the Administrator a plan for performance criteria for any existing air pollutants (emission standard for air pollutants that may be reflective of the extent to which emissions are limited through the Administrator's determining the best system of emission reductions that have been sufficiently proven). [11]. More importantly, the EPA Administrator should have the same authority under §7410(c) to specify a plan under §7410(c) in the event that the state is unable to present a satisfied plan. In the event that the state fails to submit a plan, the EPA Administrator shall implement the provisions of the plan in accordance with §7413 and §7414. [11].

Based on the interpretation of §7411, the plaintiffs allege that the EPA is not empowered to regulate or charge the electricity supply across the electricity industries. Section 7411 expressly grants authority "within the fence line," a term used for sources of pollution. Just as a performance standard that captures the extent of attainable emission abatement through a "fully evidenced" system, EPA is unable to impose regulation on anything it desires. It must promulgate the standard emissions through evaluations that have been tested in different ways. On the contrary, if the EPA can pick any regulation, this probably lead to any system that can be "adequately demonstrated" since the decision can be made by itself [4].

The plaintiffs also asserted that the measures had nothing to do with a specific source. Any performance standard must be consistent with the "stationary source of pollution," i.e., "the building itself," not its "owner or proprietor," which is determined by a separation definition. Thus, by this interpretation, any measure beyond the fence line is not allowed [6].

3.2 Clean Power Plan

The CPP is a rule launched by the Obama government in 2014. Its purpose is to establish emission guidance for states to decrease CO₂ emissions from current power plants [14]. The core goal for CPP is to achieve a 32% abatement of CO₂ emissions from electricity generating by 2030. This rule was adopted under the authorization from CAA §7411(d). Hence, this implies that every state must submit its regulation plans by 2018 and make them into law enforcement by 2022. Plus, states relevant to electricity generations should improve existing power's efficiency or incorporate renewable energy generation, which complies with §7411(b) [4]. In 2019, the CPP was repealed by the ACE Rule.

3.3 The Affordable Clean Energy Rule

The Trump administration introduced this rule in 2019. The agency established the ACE rule based on the duties that EPA set forth in *Massachusetts v. EPA*. However, it only sets a minimum requirement for carbon dioxide emissions between 0.7%~1.5% from the 2005 level by 2030. Ace intended to keep EPA's authority on regulations of carbon dioxide "within the fence line." Hence, there is a weaker requirement for carbon emissions and a lack of allowance for efficiency improvements of power plants plus renewable resources [7]. In a January 2021, the D.C. Circuit reversed the ACE and its abrogation of the CPP.

3.4 Relevant cases

The prior EPA litigations can be seen as wind indicators of possible outcomes of how the Supreme Court may make the final decision regarding EPA's regulation on carbon emissions.

The first case is *Massachusetts v. EPA* in 2006. The key issue in this case is the interpretation of CAA section 202(a)(1). The plaintiffs (*Massachusetts et al.*) filed suit against the EPA after denying a request to regulate GHG emissions from incoming vehicles. Originally, EPA claimed that the CAA had not authorized the agency to regulate GHG emissions and that it would be unwise to do so [15]. Nevertheless, by a 5-4 vote, the court decided to favor the plaintiffs. The majority asserts that the term "air pollutant" is defined sufficiently broad to encompass greenhouse gases, as "any physical, chemical substance or matterwhich is released into the environment [16]". In this way, the EPA must regulate greenhouse gas.

The second case is *Michigan v. EPA*, a landmark Supreme Court case in 2015. EPA reconfirmed that the electric utility steam generating units (EGUs) were necessary to regulate based on their harm to public health in 2012 [17]. Nevertheless, the EPA set the regulations for EGUs without considering the additional costs of \$9.6 billion per year that would be imposed on electric generators [18]. The plaintiffs later filed a lawsuit in the Supreme Court questioning the EPA's denial to considering costs when regulating electric generators, as the Columbia Circuit affirmed the agency's determination not to take costs into account. The majority asserts that EPA's ignoring of costs is based on its explanation of section 7412(1)(a), which means that EPA can impose regulations on plants without regard to cost based on its conclusion that "such regulation is adequate and needed." On the contrary, the Supreme Court contended the agency must engage in "reasoned decision making." To put it simply, the EPA should consider all relevant factors, including the costs of power plants [19].

Above all, according to two prior litigations related to EPA's authority and regulation. The final decision of the Supreme Court probably gives the authority to EPA to regulate carbon emissions from electricity generation. Still, it needs to consider the cost when promulgating emission standards.

4. Evaluation

The petitioners seek declaratory relief from the Supreme Court, which means they ask for the interpretation of §7411(d) to put it simply, it is about the range of EPA's authority on regulating carbon emissions concerning electricity power. Concerning interpretation of §7411(d), the Supreme Court can address the merits of the case in both ways. First, the Supreme Court can give a relatively general interpretation of §7411, which means the court would not give a specific explanation

regarding what EPA can do on-site. This would give the EPA wiggle room to adopt a new electricity program rule or choose to continue the CPP. Some have called this approach a "soft landing" [9]. For the alternative, the Supreme Court could also choose to stop the EPA's authority by focusing outside the fence line and clarifying the EPA's actual authority to regulate carbon emissions, which could benefit petitioners like West Virginia. This option emphasizes the importance of "significant doctrine." In this way, the power of the EPA could be limited, and the authority could give back to Congress [9].

It is assumed that the second way is a better result for the issue. If EPA could regulate emissions out of the fence line, there are more negative effects on the whole nation. Since the previously vague definition of §7411(d) does not clarify the range of authority from EPA. Thus, the D.C. Circuit's decision makes it possible to take virtually any step to force stationary sources to achieve specific performance standards, like closing carbon emission installations, if the D.C. Circuit's decision is still endorsed by a Supreme Court Justice. Moreover, if the D.C. Circuit's decision stands, there will be financial hardship for either the state or individuals. As noted by West Virginia, the reimposition of the CPP would raise the consumption. In addition, the D.C. Circuit's unprecedented acquiescence to the EPA's authority could allow the EPA to regulate any construction that utilizes or generates carbon emitting electricity. The overboard interpretation of §7411(d) allows the agency to customize regulations on carbon emissions that can influence millions of Americans [6].

5. Conclusion

Climate change has been posed to human beings for a long time, and the regulation of carbon emissions will alleviate the pace of climate deterioration has become a kind of common sense.

The outcome of this case will determine the extent to which the U.S. Environmental Protection Agency will have control over carbon credits, and therefore the outcome will involve the interests of many parties, including various sectors such as industrial manufacturing, government agencies, etc. The outcome of the Supreme Court's decision will have a decisive impact on the future trajectory of each party's business and development.

This is why this case is so influential in the field of environmental laws, the decision made by the Supreme Court is more likely to decide how the carbon emissions on electricity are regulated in the future.

There are two predictions for the outcome of the lawsuit: First, the Supreme Court will delegate authority to the United States EPA, which means EPA will have more control over carbon emissions; second, the Supreme Court will limit the EPA's control over carbon emissions, in other words, the EPA will only be able to determine a small portion of the carbon emissions rulings for each state and each manufacturing industry. From a macro perspective, this paper favors limiting EPA's rights to control carbon emissions, because expanding EPA's rights would trigger a series of chain reactions that would likely affect the interests of the American people.

Since the final decision has not yet happened, whether the EPA's authority would get limited or not is still unknown to people. Many people are looking to see what kind of result will come out after the final decision made by the Supreme Court. The new clarification of §7411(d) could bring the implementation of carbon emission back on the positive rails.

References

- [1] These are the countries that have made climate commitments law. World Economic Forum. <https://www.weforum.org/agenda/2019/11/new-zealand-net-zero-2050/>
- [2] Yang, D., & Goulder, L. How Far Can China's New Carbon Market Cut Its emissions? World Economic Forum, 2021, <https://www.weforum.org/agenda/2021/11/new-carbon-market-slash-chinas-emissions/>
- [3] Clean Power Plan for Existing Power Plants | Clean Power Plan | US EPA. Web.archive.org, 2016, <https://web.archive.org/web/20160325042337/https://www.epa.gov/cleanpowerplan/clean-power-plan-existing-power-plants>

- [4] Plumer, B. The Supreme Court just halted the most crucial part of *Obama's climate plan*. Vox, 2016, <https://www.vox.com/2016/2/9/10955470/supreme-court-blocks-obama-co2-rule>
- [5] Affordable Clean Energy Rule (ACE). Obama's climate plan. Vox, 2019, <https://www.vox.com/2016/2/9/10955470/supreme-court-blocks-obama-co2-rules>https://www.epa.gov/sites/default/files/2019-07/documents/ace_overview_presentation_july2019.pdf
- [6] Newton, C. *West Virginia v. Environmental Protection Agency*. LII /Legal Information Institute, 2022, <https://www.law.cornell.edu/supct/cert/20-1530>
- [7] Irfan, U. EPA analysis of its new climate proposal: thousands of people will die. Vox, 2018, <https://www.vox.com/2018/8/21/17763916/epa-clean-power-plan-affordable-clean-energy>
- [8] NASA. Global climate change: Effects. *Climate Change: Vital Signs of the Planet*; NASA, 2022, <https://climate.nasa.gov/effects/>
- [9] Staff, R. R. N. Supreme Court preview: *West Virginia v. EPA*. Harvard Law Today, 2022, <https://today.law.harvard.edu/scotus-preview-west-virginia-v-epa/>
- [10] King, N. H. F., Pamela. What the Supreme Court's move means for EPA climate rules. E&E News, 2021, <https://www.eenews.net/articles/what-the-supreme-courts-move-means-for-epa-climate-rules/>
- [11] Federal court scraps Trump administration's power plant rule. Washington Post, 2021, <https://www.washingtonpost.com/climate-environment/2021/01/19/federal-circuit-court-scraps-trump-administration-power-plant-rules/>
- [12] US EPA. Summary of the Clean Air Act | US EPA. US EPA, 2018, <https://www.epa.gov/laws-regulations/summary-clean-air-act>
- [13] USC Title 42. THE PUBLIC HEALTH AND WELFARE, 2013, [Www.govinfo.gov.https://www.govinfo.gov/content/pkg/USCODE-2013-title42/html/USCODE-2013-title42-chap85-subchapI-partA-sec7411.htm](https://www.govinfo.gov/content/pkg/USCODE-2013-title42/html/USCODE-2013-title42-chap85-subchapI-partA-sec7411.htm)
- [14] US EPA, O. Electric Utility Generating Units: Repealing the Clean Power Plan, 2017, [Www.epa.gov.https://www.epa.gov/stationary-sources-air-pollution/electric-utility-generating-units-repealing-clean-power-plan#rule-summary](https://www.epa.gov/stationary-sources-air-pollution/electric-utility-generating-units-repealing-clean-power-plan#rule-summary)
- [15] Supreme Court Of The United States Syllabus *Massachusetts Et Al. V. Environmental Protection Agency Et Al. Certiorari To The United States Court Of Appeals For The District Of Columbia Circuit*, 2006, <https://www.supremecourt.gov/opinions/06pdf/05-1120.pdf>
- [16] govinfo. [Www.govinfo.gov. https://www.govinfo.gov/app/details/USCODE-2010-title42/USCODE-2010-title42-chap85-subchapIII-sec7602](https://www.govinfo.gov/app/details/USCODE-2010-title42/USCODE-2010-title42-chap85-subchapIII-sec7602)
- [17] SUPREME COURT OF THE UNITED STATES, 2014, https://www.supremecourt.gov/opinions/14pdf/14-46_bqmc.pdf
- [18] *Michigan v. Environmental Protection Agency* [Review of *Michigan v. Environmental Protection Agency*], 2014, Oyez. <https://www.oyez.org/cases/2014/14-46>
- [19] MICHIGAN v. EPA. LII / Legal Information Institute. <https://www.law.cornell.edu/supremecourt/text/14-46#:~:text=EPA>