# Written Testimony of

Jay Duffy Litigation Director Clean Air Task Force

Before the United States House of Representatives Committee on Energy and Commerce Subcommittee on Environment, Manufacturing & Critical Materials

June 6, 2023

## **Summary**

Section 111 of the Clean Air Act directs the Environmental Protection Agency (EPA) to list categories of stationary sources that it determines cause or contribute significantly to air pollution that endangers public health or welfare. EPA listed gas and coal-fired power plants in the 1970s. Following this determination, the Agency must promulgate standards for pollution from new sources. The Supreme Court ruled that greenhouse gases are an air pollutant subject to the Clean Air Act in 2007, and EPA's subsequent endangerment finding recognized that greenhouse gases in the atmosphere endanger public health and welfare. Therefore, EPA must set standards for greenhouse gas emissions from new power plants and emission guidelines for existing power plants.

Section 111 is technology-forcing and forward-looking, and its "standards of performance" are based on pollution controls that the Administrator determines have been adequately demonstrated. EPA has regulated pollutants in this way since the 1970s, and repeatedly industry has successfully responded in ways that are both cost-effective and maintained the reliability of our electricity supply.

The U.S. electricity system is rapidly changing. Due to a confluence of factors, fossil fuel-fired power plants are retiring or operating at lower capacity factors, and renewable generation is accounting for a greater percentage of electricity. This proposal for certain new and existing sources in the sector is in line with industry trends and trajectories while also abiding by the plain text of the Clean Air Act and recent Supreme Court decisions. The impacts of the proposal are modest and manageable and include several overlapping features to ensure that we do not need to choose between public health and reliable electricity. In fact, the proposal can be strengthened to achieve greater public health and climate benefits while still not jeopardizing the reliability of the electricity supply.

Chairman Johnson, Ranking Member Tonko, and Honorable Members of the Committee, my name is Jay Duffy, and I am the litigation director at Clean Air Task Force (CATF), a non-profit organization. I've been an attorney with CATF for ten years. CATF's mission is to push the technology and policy changes needed to achieve a zero-emissions, high-energy planet at an affordable cost. In furtherance of that mission, CATF advocates for and defends strong Clean Air Act pollution standards for power plants. CATF's legal, policy, and technical experts have advocated for strong Clean Air Act section 111 greenhouse gas emission standards since 2008. That is when, in light of the Supreme Court's determination that greenhouse gases are an air pollutant subject to the Clean Air Act, the Bush Administration first requested comment on if, and how, to regulate the carbon pollution from power plants under section 111.

In the following fifteen years, there have been two attempts at regulating existing power plant sources' outsized impact on climate pollution.<sup>5</sup> Along the way, we all have learned many lessons. While EPA's latest proposal can, and should be strengthened, it represents a reasonable approach—in line with the power sector's trends and trajectory while also abiding by the plain text of the Clean Air Act and recent Supreme Court decisions—to meaningfully reduce emissions from new and existing coal and gas fired power plants.

<sup>&</sup>lt;sup>1</sup> About Us, Clean Air Task Force, <a href="https://www.catf.us/about/">https://www.catf.us/about/</a> (last visited June 4, 2023).

<sup>&</sup>lt;sup>2</sup> Comments of Clean Air Task Force et al., on Advanced Notice of Proposed Rulemaking: Regulating Greenhouse Gas Emissions Under the Clean Air Act (Nov. 28, 2008), <a href="https://www.regulations.gov/comment/EPA-HQ-OAR-2008-0318-1814">https://www.regulations.gov/comment/EPA-HQ-OAR-2008-0318-1814</a>.

<sup>&</sup>lt;sup>3</sup> Massachusetts v. EPA, 549 U.S. 497 (2007)

<sup>&</sup>lt;sup>4</sup> Regulating Greenhouse Gases Under the Clean Air Act, 73 Fed. Reg. 44354 (advanced notice of proposed rulemaking July 30, 2008).

<sup>&</sup>lt;sup>5</sup> Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64661 (Oct. 23, 2015) (The Clean Power Plan or CPP); Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations, 84 Fed. Reg. 32520 (July 8, 2019) (The Affordable Clean Energy Rule or ACE Rule)

#### **Clean Air Act Section 111**

Section 111 directs EPA to list categories of stationary sources that it determines cause or contribute significantly to air pollution which may reasonably be anticipated to endanger public health or welfare. EPA listed gas and coal-fired power plants in the 1970s. The Agency must then promulgate standards of performance for new sources. A "standard of performance" is one that

reflects the degree of emission limitation achievable through the application of the best system of emission reduction which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.<sup>6</sup>

EPA surveys the systems of emission reduction for the pollutant from the source category that are adequately demonstrated and cost reasonable and chooses the best one, assesses what levels of emissions levels it can achieve, and sets emissions standards based on that best system. The Agency gets flexibility in balancing the relevant factors and choosing the best system of pollution, but the courts have provided guidance over the years.

The Clean Air Act is technology-forcing and forward-looking.<sup>7</sup> A pollution control technology need not be on every street corner in order to be the basis of standards. Standards have been upheld on the basis of test programs, pilot scale technology, operation of one plant, vendor information, and performance of the controls in other industries.<sup>8</sup>

<sup>&</sup>lt;sup>6</sup> 42 U.S.C. § 7411(a)(1).

<sup>&</sup>lt;sup>7</sup> Comments of Clean Air Task Force and Natural Resources Defense Council on the Proposed ACE Rule, at 2 (Oct. 31, 2018), <a href="https://www.regulations.gov/comment/EPA-HQ-OAR-2017-0355-24266">https://www.regulations.gov/comment/EPA-HQ-OAR-2017-0355-24266</a>.

<sup>&</sup>lt;sup>8</sup> *Id.* at 2, nn. 6-11 (identifying instances in which standards have been upheld on those bases).

Once EPA establishes pollution standards for new sources in the source category, it must establish emission guidelines for the pollutant for existing sources, so long as that pollutant is not already covered by another section of the Clean Air Act for that source category. The Act provides states with flexibility to implement the guidelines through state plans, which will set performance standards for individual existing sources.

### History of Regulating Greenhouse Gas Pollution from Power Plants under Section 111

In 2007, the Supreme Court determined that greenhouse gases, including carbon dioxide, unambiguously fell within the Clean Air Act's definition of an "air pollutant," and therefore are subject to regulation. Congress recently reaffirmed this determination in the Inflation Reduction Act. PA in 2009 issued the regulatory Endangerment Finding, recognizing that greenhouse gases in the atmosphere may reasonably be anticipated to endanger public health and welfare. Then, in 2011, the Supreme Court confirmed that under section 111 of the Act, "Congress delegated to EPA the decision whether and how to regulate carbon-dioxide emissions from power plants."

\_

 $\underline{Energy\%20 Foundation\&text=} The \%20 Inflation\%20 Reduction\%20 Act\%20 (IRA, substantial\%20 new\%20 authorities \%20 and \%20 resources.$ 

<sup>&</sup>lt;sup>9</sup> Massachusetts v. EPA, 549 U.S. 497, 529 (2007).

<sup>&</sup>lt;sup>10</sup> Greg Dotson & Dustin J. Maghamfar, *The Clean Air Act Amendments of 2022: Clean Air, Climate Change, and The Inflation Reduction Act*, 53 Env't L. Rep. 10017, 10023 (2023), https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=4338903#:~:text=Dustin%20Maghamfar,-

<sup>&</sup>lt;sup>11</sup> Endangerment and Cause or Contribute Findings for Greenhouse Gases Under Section 202(a) of the Clean Air Act, 74 Fed. Reg. 66495 (Dec. 15, 2009).

<sup>&</sup>lt;sup>12</sup> Am. Elec. Power Co. v. Conn., 564 U.S. 410, 426 (2011).

In 2015, EPA finalized standards for new coal-fired power plants based on the availability and cost reasonableness of partial carbon capture and sequestration.<sup>13</sup> For new gas-fired power plants, EPA divided the source category into subcategories based on the amount of time the plants operated (or their capacity factor) and set standards for those subcategories based on clean fuels and efficiency.<sup>14</sup>

For existing coal and gas-fired power plants, EPA issued the Clean Power Plan, which based emission guidelines on efficiency improvements, shifting generation away from coal-fired power and toward natural-gas fired power; and substituting zero-emitting, renewable generation for fossil fuel-fired generation.<sup>15</sup>

Then in 2019, EPA repealed the Clean Power Plan and replaced it with the Affordable Clean Energy Rule. <sup>16</sup> The Affordable Clean Energy Rule did not set any binding emission limits at all but left it to the states to assess the applicability of several efficiency measures to their fleet and set standards. This repeal and replacement rule was reviewed by the Supreme Court. There the Court confirmed that "[t]he Agency, not the States, decides the amount of pollution reduction that must ultimately be achieved," rejecting the ACE approach. <sup>17</sup> But the Court also determined that shifting generation from the regulated sources toward unregulated sources could not be the basis of emission standards as contemplated by the Clean Power Plan and spoke more favorably of traditional, at-the-source pollution controls that cause the power plant to operate more

<sup>&</sup>lt;sup>13</sup> Standards of Performance for Greenhouse Gas Emissions From New, Modified, and Reconstructed Stationary Sources: Electric Utility Generating Units, 80 Fed. Reg. 64510 (Oct. 23, 2015) (codified at 40 C.F.R. pts. 60, 70, 71, 98).

<sup>&</sup>lt;sup>14</sup> *Id.* at 64515.

<sup>&</sup>lt;sup>15</sup> The Clean Power Plan, 80 Fed. Reg. 64661.

<sup>&</sup>lt;sup>16</sup> The Affordable Clean Energy Rule, 84 Fed. Reg. 32520.

<sup>&</sup>lt;sup>17</sup> West Virginia v. EPA, 142 S. Ct. 2587, 2601-02 (2022).

cleanly. 18 And once the emission limits in the guidelines are set, a power plant working with the state where it is located "may achieve that emissions cap in any way it chooses." 19

#### **Power Sector Trends**

Humans have already induced 2 degrees Fahrenheit of global temperature rise, inducing unparalleled changes to the climate system, including rising sea levels, more extreme weather events, and rapidly disappearing sea ice.<sup>20</sup> Additional warming will increase the magnitude of these changes and could result in tripping catastrophic tipping points.<sup>21</sup>

Current carbon dioxide concentrations are unmatched for at least the last two million years.<sup>22</sup> The IPCC recently indicated that burning uncontrolled fossil fuels is the number one cause of the climate crisis.<sup>23</sup> In 2022, the U.S. power sector emitted 1,539 million metric tons (MMT) of CO<sub>2</sub>, accounting for about 31 percent of U.S. emissions of CO<sub>2</sub>. Coal-fired power accounts for 55 percent of CO<sub>2</sub> power sector emissions despite accounting for less than 20 percent of generation.<sup>24</sup>

<sup>&</sup>lt;sup>18</sup> *Id.* at 2610-11.

<sup>&</sup>lt;sup>19</sup> *Id.* at 2601.

<sup>&</sup>lt;sup>20</sup> Sophie Boehm & Clea Schumer, World Resources Inst., 10 Big Findings from the 2023 IPCC Report on Climate Change (Mar. 20, 2023), <a href="https://www.wri.org/insights/2023-ipcc-ar6-synthesis-report-climate-change-findings">https://www.wri.org/insights/2023-ipcc-ar6-synthesis-report-climate-change-findings</a> (summarizing the findings of the Intergovernmental Panel on Climate Change's Sixth Assessment Report).

<sup>&</sup>lt;sup>21</sup> David I. Armstrong Mckay et al., *Exceeding 1.5°C global warming could trigger multiple climate tipping points*, Science, Sept. 9, 2022, <a href="https://www.science.org/doi/10.1126/science.abn7950">https://www.science.org/doi/10.1126/science.abn7950</a>.

<sup>&</sup>lt;sup>22</sup> Boehm & Schumer, *supra* note 20.

<sup>&</sup>lt;sup>23</sup> ClientEarth, Fossil fuels and climate change: the facts, ClientEarth Communications (Feb. 18, 2022), https://www.clientearth.org/latest/latest-updates/stories/fossil-fuels-and-climate-change-the-facts/#:~:text=The%20Intergovernmental%20Panel%20on%20Climate,from%20fossil%20fuels%20and%20industr

y.
<sup>24</sup> How much of U.S. carbon dioxide emissions are associated with electricity generation?, U.S. Energy Info.
Admin. (EIA) (May 1, 2023), <a href="https://www.eia.gov/tools/faqs/faq.php?id=77&t=11">https://www.eia.gov/tools/faqs/faq.php?id=77&t=11</a>; Short-Term Energy Outlook, EIA (May 9, 2023), <a href="https://www.eia.gov/outlooks/steo/report/elec">https://www.eia.gov/outlooks/steo/report/elec</a> coal renew.php.

There is no doubt that the U.S. electricity system is rapidly changing. Due to an aging coal fleet, low natural gas prices, declining costs of renewable generation, as well as new and existing government subsidies, irrespective of EPA rules, coal-fired power plants are retiring, fossil fuel-fired power plants are operating at lower capacity factors and renewable generation is accounting for a greater percentage of electricity.<sup>25</sup>

EPA modeling projects that coal-fired generation capacity will fall from 100 GW in 2028 to 33 GW in 2035 irrespective of this rule.<sup>26</sup> Retirement decisions are made based on the combined effects of various market and regulatory expectations including the future cost to operate the coal unit, future wholesale power prices, and future cost of new and other competing resources. These dynamics happen over the course of decades and can be highly uncertain. Each plant takes all these considerations into account considering its own individualized circumstances in very different ways. This proposal is one of several power plant rulemakings that ensures that during this dynamic period, states and power plant owners will know the rules of the road with sufficient lead time to make informed choices.

<sup>&</sup>lt;sup>25</sup> Metin Celebi et al., Brattle, *A Review of Coal-Fired Electricity Generation in the U.S.* (2023), https://www.brattle.com/wp-content/uploads/2023/04/A-Review-of-Coal-Fired-Electricity-Generation-in-the-U.S..pdf; EIA, *Annual Energy Outlook* 2023 (2023), https://www.eia.gov/outlooks/aeo/pdf/AEO2023 Narrative.pdf [hereinafter EIA, *AEO* 2023].

<sup>&</sup>lt;sup>26</sup> Regulatory Impact Analysis for the Proposed New Source Performance Standards for Greenhouse Gas Emissions from New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions from Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule, Docket ID No. EPA-HQ-OAR-2023-0072-0007, at table 3-14 (May 23, 2023), <a href="https://www.regulations.gov/document/EPA-HQ-OAR-2023-0072-0007">https://www.regulations.gov/document/EPA-HQ-OAR-2023-0072-0007</a>.

The Proposal is Consistent with the Clean Air Act and Designed to Accommodate the Regulated Sources' Shifting Roles

Accounting for recent caselaw, the changing role and trajectory of the regulated power plants, and recent limits imposed by the Supreme Court, EPA has undertaken its job as defined by Congress in the Clean Air Act and has proposed emission standards and guidelines for greenhouse gas emissions from sources in the listed category.<sup>27</sup> The proposal is keyed to reality: coal plants are retiring, overall fossil plants are running less and supporting an increasingly renewable grid, and pollution control costs are coming down, both due to industry learnings and advancements and incentives established by Congress. <sup>28</sup>

Generally, EPA's proposal provides pathways for older plants that are approaching retirement and smaller plants that do not operate as much to control their pollution based on fuels and efficiencies, while at the same time allowing these facilities to avoid major investments that could not be recouped. And let's be clear, as proposed, that's the majority of the fleet. As noted above, irrespective of this rule, EPA modeling projects that coal-fired generation capacity will fall from 100 GW in 2028 to 33 GW in 2035 irrespective of this rule, and that 84 percent of new and existing gas units will fall into these low and intermediate subcategories. But for those plants that are operating the most and polluting the most, EPA proposes that they meet an emission limit consistent with carbon capture and sequestration or hydrogen co-firing.

<sup>&</sup>lt;sup>27</sup> New Source Performance Standards for Greenhouse Gas Emissions From New, Modified, and Reconstructed Fossil Fuel-Fired Electric Generating Units; Emission Guidelines for Greenhouse Gas Emissions From Existing Fossil Fuel-Fired Electric Generating Units; and Repeal of the Affordable Clean Energy Rule, 88 Fed. Reg. 33240 (proposed May 23, 2023) (to be codified at 40 C.F.R. pt. 60).

<sup>&</sup>lt;sup>28</sup> EIA, *AEO* 2023, *supra* note 25.

In the proposal, EPA utilized several design features that have been used throughout the history of Clean Air Act regulation to accommodate the varying roles power plants play and to ensure that the emission standards are consistent with the trajectory and trends in the regulated source category. EPA has broad authority to subcategorize by size, class, or type and has used this discretion throughout the history of the Clean Air Act. The proposal has subcategories for coal plants based on when they plan to retire; subcategories for new gas plants based on how much the plants intends to operate (low, intermediate, or baseload capacity factors); and for existing gas plants based on the size and capacity factor. The proposal also has long timelines and significantly defers compliance requirements for the more stringent standards. EPA has a long history of deferring compliance for several years to provide owners and operators time for planning, permitting, designing, purchasing, and installing pollution control equipment and uses that authority here. And while these long lead times make sense for large pollution control projects, CATF is investigating whether timelines could be shortened for emission limits associated with efficiencies and fuels.

For new gas plants, those operating less than 50 percent of the time must meet standards associated with low-emitting fuels, efficiency, and eventually low levels of hydrogen co-firing. For reference, gas-fired combined cycle plants operated at an average capacity factor of 56.7 percent in 2022.<sup>29</sup> Those operating more than 50 percent of the time have near-term efficiency-based standards. Then depending on its pollution reduction pathway (hydrogen co-firing or

<sup>&</sup>lt;sup>29</sup> Electric Power Monthly: Table 6.07.A. Capacity Factors for Utility Scale Generators Primarily Using Fossil Fuels, EIA, <a href="https://www.eia.gov/electricity/monthly/epm">https://www.eia.gov/electricity/monthly/epm</a> table grapher.php?t=table 6 07 a (last visited June 4, 2023) [hereinafter EIA, Capacity Factors].

carbon capture and sequestration) they must meet a stringent standard between 2035 and 2038. CATF is exploring whether EPA could set standards based on one system, and one timeline, that could be met by multiple control technologies. Any plant that commences construction after the date of proposal will need to comply with the final standards.

For existing coal plants, EPA subcategorizes based on the date a plant is planning to retire, an element of the proposal requested by the Edison Electric Institute, an association that represents all U.S investor-owned electric companies.<sup>30</sup> A coal plant that commits to retire by 2032 must maintain historical emission rates. A plant that commits to retire by 2035 and runs less than 20 percent can maintain historical emission rates. For reference, the average capacity factor for coal-fired power plants in 2022 was 47.8 percent.<sup>31</sup> For a plant retiring before 2040 but not falling into one of these two categories, the standard is based on 40 percent co-firing with natural gas. And for a plant that is operating past December 2039, the standard is based on carbon capture and sequestration. Compliance for all coal plant subcategories begins in 2030.

Finally, EPA proposes to set standards for those existing gas plants that are larger than 300 MW and have a capacity factor of more than 50 percent. This covers 7 percent of natural gas units accounting for less than 30 percent of carbon dioxide emissions from the existing gas fleet.<sup>32</sup> Those plants would need to meet the same standards as new gas plants. EPA is requesting comment on covering plants down to 150 MW operating at a 40 percent capacity factor or more

<sup>&</sup>lt;sup>30</sup> Comment of Edison Electric Institute on Pre-Proposal Public Docket: Greenhouse Gas Regulations for Fossil Fuel-Fired Power Plants (Nov. 18, 2022), <a href="https://www.regulations.gov/comment/EPA-HQ-OAR-2022-0723-0024">https://www.regulations.gov/comment/EPA-HQ-OAR-2022-0723-0024</a>. <sup>31</sup> EIA, *Capacity Factors*, *supra* note 29.

<sup>&</sup>lt;sup>32</sup> Sophia Ahmed, Natural Resources Defense Council, *Strengthen Power Plant Carbon Standards for Greater Climate Benefit*, NRDC: Expert Blog (May 22, 2023), <a href="https://www.nrdc.org/bio/amanda-levin/strengthen-power-plant-carbon-standards-greater-climate-benefit">https://www.nrdc.org/bio/amanda-levin/strengthen-power-plant-carbon-standards-greater-climate-benefit</a>.

in this rulemaking. And CATF will advocate for expanded coverage of the existing gas fleet. If EPA were to finalize a rule covering existing gas plants larger than 150MW and operating at 40 percent capacity factor or more, the coverage would increase to 44 percent of all units, accounting for almost 80 percent of generation and more than 80 percent of CO<sub>2</sub> emissions. For the remainder of the fleet - the smaller load-following resources that balance renewable generation - EPA is requesting comment on how to regulate it in a future rulemaking.

For those long-lived plants that operate and pollute the most, EPA properly determined that carbon capture and sequestration (CCS) is the best system of emission reduction and set standards consistent with the emissions decreases that can be achieved using this technology. EPA first found CCS adequately demonstrated and cost-reasonable in 2015 for new coal-fired power plants. Post combustion capture has become only more cost-reasonable, widespread, and proven since that time.<sup>33</sup>

When EPA set standards based on sulfur scrubbers in the 1970s there were only three units in operation and one vendor for the technology.<sup>34</sup> At least thirteen vendors have done significant testing and offer carbon capture pollution controls specifically for coal and gas-fired power plants. Carbon capture and sequestration has been installed and proven on two large-scale coal-

-

<sup>&</sup>lt;sup>33</sup> Jay Duffy & John Thompson, CATF, *The time is now: The Biden administration must adopt strict CO2 emission standards for the power sector* (Feb. 7, 2023), <a href="https://www.catf.us/2023/02/time-now-biden-administration-must-adopt-strict-co2-emission-standards-power-sector/">https://www.catf.us/2023/02/time-now-biden-administration-must-adopt-strict-co2-emission-standards-power-sector/</a> [hereinafter Duffy & Thompson, *The time is now*]; Jay Duffy & John Thompson, *EPA's golden opportunity to dramatically reduce climate pollution from the U.S. fossil fuel-fired power fleet* (May 5, 2023), <a href="https://www.catf.us/2023/05/epas-golden-opportunity-dramatically-reduce-climate-pollution-us-fossil-fuel-fired-power-fleet/">https://www.catf.us/2023/05/epas-golden-opportunity-dramatically-reduce-climate-pollution-us-fossil-fuel-fired-power-fleet/</a>.

<sup>&</sup>lt;sup>34</sup> Frank Sturges & Jay Duffy, CATF, *Unleashing technological potential through regulation: Scrubbing away pollution* (May 5, 2023), <a href="https://www.catf.us/2023/05/unleashing-technological-potential-through-regulation-scrubbing-away-pollution/">https://www.catf.us/2023/05/unleashing-technological-potential-through-regulation-scrubbing-away-pollution/</a>

fired power plants.<sup>35</sup> Carbon capture is currently installed and operating on three coal-fired power plants in the United States (AES Warrior Run, AES Shady Point and Searles Valley Minerals). And the Bellingham natural gas combine cycle power plant demonstrated Fluor's post combustion capture from 1991 to 2005 on a 40MW slipstream, logging more than 120,000 hours of operation and capturing 85-95 percent of its CO<sub>2</sub> emissions.<sup>36</sup> Several other food grade CO<sub>2</sub> capture plants are currently operating post combustion capture on emissions from gas turbines with similar properties to a gas-fired power plant.<sup>37</sup> There are also several Front-End Engineering and Design studies that determine the technical and economic feasibility of applying post-combustion capture to coal and gas-fired power plants.<sup>38</sup> Due to learning-by-doing and increased 45Q tax credits, EPA found costs even more reasonable than they did in 2015 and well below the costs of sulfur scrubbers – a comparable pollution control to CCS. EPA's record to support standards based on CCS is robust and more than sufficient for the purposes of a forward-looking and technology-forcing statute.<sup>39</sup>

For the existing sources, the Clean Air Act requires EPA to choose the best system of pollution control and set an emission limit, and then the states have the flexibility to regulate sources within their jurisdictions, in ways that are equivalent to the emission limit. They can also take

<sup>&</sup>lt;sup>35</sup> Kevin Crowley, *The World's Largest Carbon Capture Plant Gets a Second Chance in Texas*, Bloomberg (Feb. 8, 2023), <a href="https://www.bloomberg.com/news/articles/2023-02-08/the-world-s-largest-carbon-capture-plant-gets-a-second-chance-in-texas#xj4y7vzkg">https://www.bloomberg.com/news/articles/2023-02-08/the-world-s-largest-carbon-capture-plant-gets-a-second-chance-in-texas#xj4y7vzkg</a>; *BD3 Status Update: Q1 2023*, SaskPower (Apr. 20, 2023), <a href="https://www.saskpower.com/about-us/our-company/blog/2023/bd3-status-update-q1-2023">https://www.saskpower.com/about-us/our-company/blog/2023/bd3-status-update-q1-2023</a>

<sup>&</sup>lt;sup>36</sup> Commercially Available CO2 Capture Technology, Power (Aug. 1, 2009), https://www.powermag.com/commercially-available-co2-capture-technology/

<sup>&</sup>lt;sup>37</sup> Appendix B to Comments of Clean Air Task Force and Natural Resources Defense Council on the Proposed ACE Rule (Oct. 31, 2018), <a href="https://www.regulations.gov/comment/EPA-HQ-OAR-2017-0355-24266">https://www.regulations.gov/comment/EPA-HQ-OAR-2017-0355-24266</a>.

<sup>&</sup>lt;sup>38</sup> Duffy & Thompson, *The time is now, supra* note 33.

<sup>&</sup>lt;sup>39</sup> Greenhouse Gas Mitigation Measures: Carbon Capture and Storage for Combustion Turbines: Technical Support Document, Docket ID No. EPA-HQ-OAR-2023-0072-0057 (May 23, 2023), https://www.regulations.gov/document/EPA-HQ-OAR-2023-0072-0057.

into consideration the remaining useful life of the plants and other similar factors in setting the individual emission rates for their plants, which are implemented through state plans. They also can decide not to write a plan and EPA will write a plan for covered sources in the state.

EPA has proposed to finalize the rule in June 2024, and, after that, the states then have two years to write their plans. EPA was explicit and detailed in its directive to states that, as they prepare their state plans, they must provide meaningful engagement especially with vulnerable communities most impacted by the regulated power plants. After submission, EPA has a year to approve or disapprove the plans. And under the proposal, compliance with the standards would not be required until 2030 at the earliest.

EPA is requesting significant comment on the proposal, and the final rule may be different from what has been proposed, but based on the proposal, the Agency projects that the rules covering existing coal plants and new gas plants would reduce CO<sub>2</sub> emissions by 617 MMT. These emission reductions would result in \$85 billion in net climate and health benefits between 2024 and 2042 – seven times the costs of compliance. EPA separately analyzed the existing gas proposal and determined that it would further reduce emissions by 214-407 MMT of cumulative CO<sub>2</sub> by 2042.

The proposal is legally robust and includes a modest but meaningful set of standards. It provides a backstop to ensure that those fossil plants that continue to operate and pollute the most are controlling their climate pollution commensurate with the best controls available.

## The Proposal Provides Several Safeguards to Support Reliable Electricity

In the proposal, EPA took seriously the ongoing changes to the grid as well as related reliability concerns, stating that "[p]reserving the ability of power companies and grid operators to maintain system reliability has been a paramount consideration in the development of these proposed actions."

In addition to recognizing and accommodating the power sector trends described *supra*, EPA recognized that many parts of the country are experiencing increased frequency and severity of extreme weather events, in part, because of climate change. These weather events have impacted energy infrastructure and supply and demand for electricity leading to increased reliability concerns.

The design features of the rule discussed above are intended to complement this dynamic period for the regulated sources. The proposal is designed with long compliance time horizons aligned with power sector planning and the need for coordination between plant owners, RTOs, balancing authorities, and state regulators. The various subcategories impose limited or no requirements upon those plants that operate and pollute the least. EPA's IPM modeling, accompanying the rule, indicates that 84 percent of regulated gas plants will fall into the low or intermediate source categories in 2035 irrespective of rules. States have significant flexibility to consider the remaining useful life and other factors of plants within their border and set less stringent standards if necessary. Plant owners have significant compliance flexibility to choose a

<sup>&</sup>lt;sup>40</sup> 88 Fed. Reg. at 33415.

subcategory and comply with the emission limit in any way they choose. This includes the choice of remaining a baseload fossil plant and utilizing the regulatory certainty provided by the proposal to install the best pollution controls and recover those costs.

In the proposal, EPA reasserts its commitment to consistent consultation with FERC and DOE throughout this rulemaking process. The Agency also points to the ability to revise state plans in the case of significant changes. EPA sets forth its intention to exercise enforcement discretion to address instances where a power plant may need to temporarily operate out of compliance with the rules for reliability purposes. In the case of emergency, plant owners may also request a temporary reprieve from all environmental requirements for reliability purposes from the Department of Energy.

The impacts of the proposal are modest and manageable. Congress directed EPA to set emission standards for carbon pollution from power plants based on the best system of emission reduction. EPA performed that duty here. Several overlapping layers of security are in place to ensure that we do not need to choose between public health and reliable electricity.