

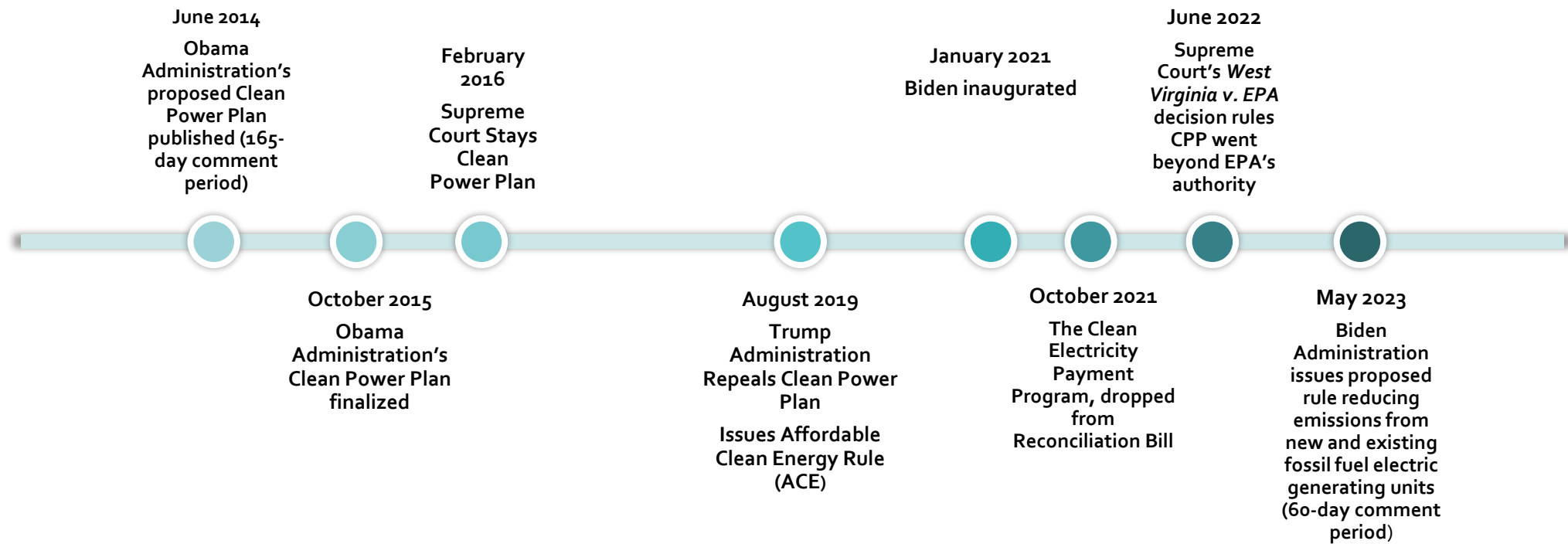
# **EPA'S PROPOSED POWER PLANT GHG RULES**

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**For SC Working Group**

**June 12, 2023**



## CLEAN AIR ACT—RECENT REGULATORY HISTORY

# Rulemaking process

May 23, 2023  
Rules Published in  
Federal Register



# EPA's Requested Comments

- Definition of natural gas
- Definition of low-GHG hydrogen
- Which existing gas plants should be (by size and capacity factor) included in the rule?
- The agency's **assumptions** about future operation of combustion turbines coupled with the **availability of CCS and hydrogen-related infrastructure**
- **Feasibility of the proposed BSER for existing gas plants, whether BSER should be a single pathway, and whether compliance should begin earlier (e.g., 2030)**"

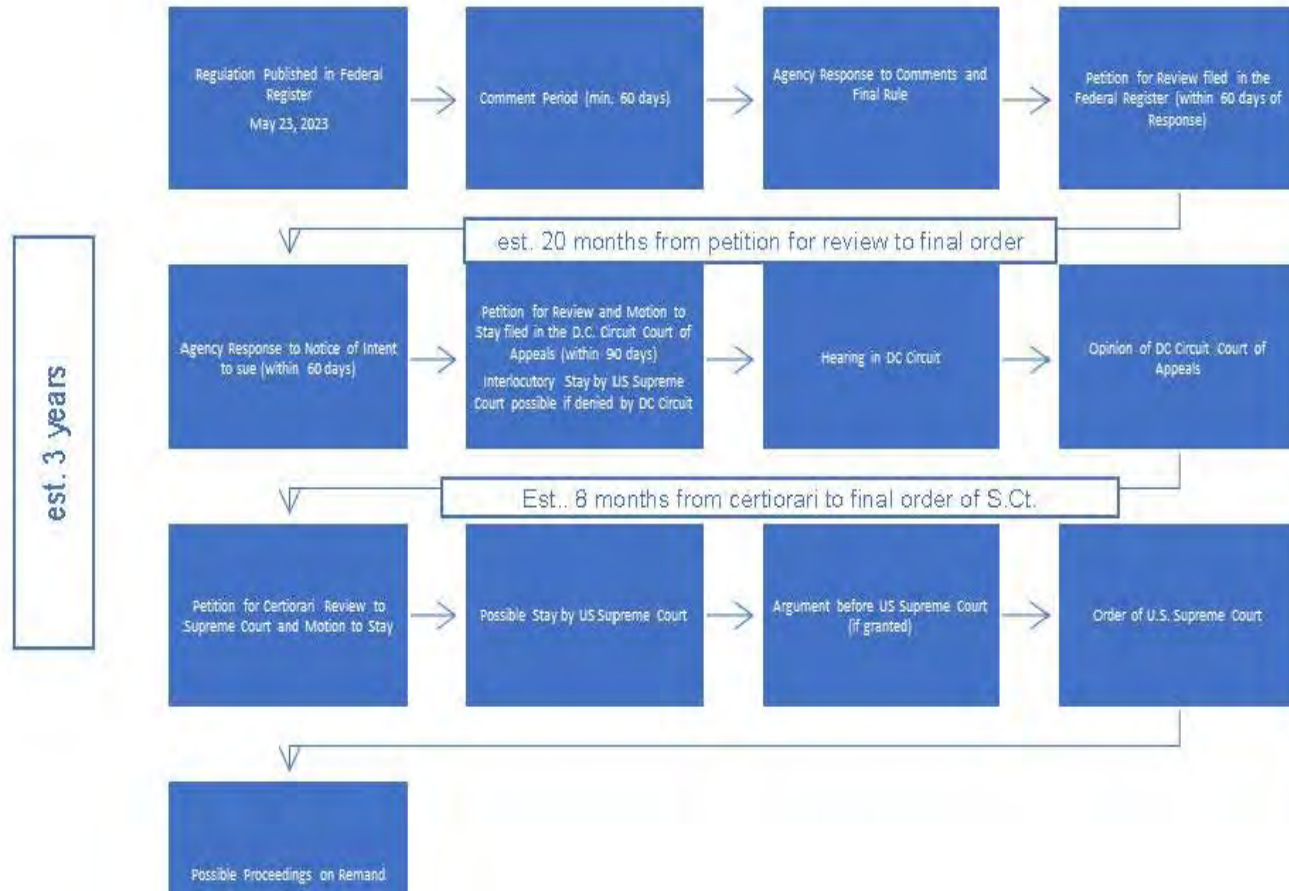
- *EPA's Proposed Greenhouse Gas Emission Standards for Power Plants are Consistent with Statutory Factors and Market Trends*, Harvard Law School, Environmental & Energy Law Program, May 19, 2023. <http://eelp.law.harvard.edu/wp-content/uploads/111-Power-Sector-Proposal-Summary-EELP.pdf>

# Historical Comment Periods

Rulemaking	Comment Period
2014 New Source Performance Standards (Clean Power Plan)--Obama	<b>120</b> (60 days plus 60-day extension)
2014 Existing Source Performance Standards--Obama	<b>165</b> (120 days plus 45-day extension)
2018 Affordable Clean Energy Rule--Trump	<b>192</b> (60 days plus 80-day extension, then reopened for an additional 42 days)
2023 Power Plant GHG Rule--Biden	<b>?</b> (60 days plus _____ extension)

# REQUESTS FOR EXTENSIONS

- **ORS** asked for a 120-day extension.
- Sen. Shelley Capito and 27 Republican Senators, including **Lindsay Graham and Tim Scott**, have requested a 60-day extension and public hearings in affected communities.
- Sen. **Joe Manchin** has requested a 30-day extension.
- Association of **Air Pollution Control Agencies** and **National Association of Clean Air Agencies** have requested 30 days.
- **NRECA and the PPA** jointly requested a 60-day extension.
- **US Chamber of Commerce** requested “a minimum of 60 days.”
- **Oklahoma** Dept. of Air Quality requested 60 days, **Arizona** Dept. of Environmental Qlty.—30 days, **Kentucky** Energy & Envir.—90 days.
- **Texas** General Land Office gave notice it will sue.



# LEGAL CHALLENGE TIMELINE

# Section 111 of the Clean Air Act

- Section 111 calls on EPA to issue (1) performance standards for **new sources of emissions** in categories found to endanger public health or welfare based on what EPA determines to be the “**best system of emission reduction**” (BSER) that is adequately demonstrated for a specific pollutant and source under Section 111(b), and (2) emissions guidelines based on BSER for **existing sources** in those categories that states will in turn use as a basis to develop performance standards for those sources in a plan subject to EPA approval under Section 111(d).



# Best System of Emission Reduction

- EPA must determine the “**best system of emission reduction**” (BSER) that, **taking into account costs**, energy requirements, and non-air quality health and environmental impacts, is “**adequately demonstrated.**” It must then determine the “degree of emission limitation” achievable by application of the BSER.
- For new sources, EPA may establish new source performance standards.
- For existing sources, EPA creates emission guidelines and directs the states to adopt state plans consistent with these guidelines.

# BSER Legal Challenge

- **Is the application of the BSER under the rule and whether clean hydrogen and carbon capture are “adequately demonstrated” as set forth in Section 111 of the CAA?**

# BSER Based - Challenges

- Are CCS and low-GHG hydrogen “adequately demonstrated, “taking into account their cost?
  - CCS has **never been commercially deployed**
  - **One operating plant** with CCS in Canada
  - Some hydrogen-fired combustion turbine in the **planning stages**
  - EPA acknowledges **the infrastructure is not in place**
  - Can the technology be reasonably projected to be **available by 2030?**

# West Va. v EPA Considerations

- To protect the rule, **EPA selected emissions reductions systems that can be installed at the source of the emissions.** EPA notes in the Power Plant GHG Rule preamble, the U.S. Supreme Court referred to “**efficiency improvements, fuel-switching, and add-on controls**” in *West Virginia v. EPA*... as the sorts of **traditional emissions control measures** that are consistent with well-established EPA rulemaking under Section 111.
- **Opponents might argue** that the BSER selected by EPA **effectively extends “beyond the fence line”** and requires generation shifting.
  - Carbon sequestration and storage requires pipeline and storage capacity.
  - The rule effectively forces utilities to shut down power plants and shift to renewables.

# Congressional Review Act

- A **joint resolution of disapproval** under the CRA avoids a rulemaking to repeal the rule
- A resolution must be **introduced during a 60 days of continuous session** period beginning on the day Congress receives the rule.
- Regulations promulgated in the final few months of a Congressional term in a presidential election year are **vulnerable to a CRA resolution at the beginning of the new presidential term.**
- The deadline for issuing rules so that they are not subject to CRA resolutions in the following presidential term is determined by the congressional calendar of the session, **this deadline typically occurs in May or June.**
- The joint resolution of disapproval is subject to **presidential veto** and may be overridden by a two-thirds vote of both parties.

*EPA's proposed power plant greenhouse gas emissions rule: Third time's a charm?* Davis Polk <https://www.davispolk.com/insights/client-update/epas-proposed-power-plant-greenhouse-gas-emissions-rule-third-times-charm>

The Congressional Review Act (CRA): A Brief Overview, Congressional Research Service (February 27, 2023) <https://crsreports.congress.gov/product/pdf/IF/IF10023>

**Questions?**

- “From the outset, and at a minimum, EPA must ensure that all proposed BSERs are subject to rigorous and transparent distributional impact analyses; that public hearings are widely accessible in geographic scope and timing; that community engagement is a required compliance component for states; that if a BSER is based on CCS, it includes rigorous guardrails to ensure safety and performance of capture equipment and supporting infrastructure both within the rule and in parallel administration efforts; and that compliance requirements include protections against the creation of pollution hot spots.”

EPA’s Power Plant Carbon Rules Are Critical—and Complex. Here’s What to Know, and What to Watch. – The Equation, Union of Concerned Scientists, April 20, 2023.

<https://blog.ucsusa.org/julie-mcnamara/epas-power-plant-carbon-rules-are-critical-and-complex-heres-what-to-know-and-what-to-watch/>

# EPA ALREADY HAS CCS STANDARDS

- Concurrent with the issuance of the CPP, EPA issued standards of performance for new, modified and reconstructed fossil fuel power plants under Section 111(b) (**the 2015 NSPS**). These standards – **which were not overturned by the Trump EPA or legal challenges** – **require that new, modified or reconstructed coal-fired power plants include high efficiency technologies and partial CCS and/or natural gas co-firing**. They also require new and reconstructed base load natural gas-fired combustion turbines to include natural gas combined cycle technology, and new and reconstructed non-base load natural gas units (as well as base load and non-base load multi-fuel units) to burn lower-GHG emitting fuels.

*EPA's proposed power plant greenhouse gas emissions rule: Third time's a charm?*

Davis Polk <https://www.davispolk.com/insights/client-update/epas-proposed-power-plant-greenhouse-gas-emissions-rule-third-times-charm>



# State Implementation Plans

- With EPA expecting to promulgate final emissions guidelines by June 2024, the Agency is projecting that states will need to submit **state implementation plans** (SIPs) by June 2026. The draft rules provide states with flexibility in developing SIPs. For instance, such SIPs could allow for covered sources to meet EPA's emissions guidelines in the aggregate, thereby authorizing states to use averaging and market-based mechanisms. States can also consider remaining useful life and other factors for covered power plants and apply a less stringent standard if a state demonstrates that the facility cannot reasonably meet the emissions limit through applying BSER.

*EPA Releases Proposed CO<sub>2</sub> Regulations for Power Plants, Dentons,*

*<https://www.dentons.com/en/insights/alerts/2023/may/16/epa-releases-proposed-co2-regulations-for-power-plants>*

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For SC Working Group

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# RECENT HISTORY OF GHG RULE UNDER SECTION 111 OF THE CLEAN AIR ACT

- In 2007 in *Massachusetts v. EPA* the Supreme Court held that the EPA had an obligation under the Act to either promulgate a rule to regulate GHG or justify its refusal to issue a regulation.
- In 2015 the Obama administration issued the Clean Power Plan to regulate GHG. The rule was stayed pending appeal and eventually reversed in *West Virginia v. EPA* (June 2022). The CPP was also repealed by the Trump Administration as part of its Affordable Clean Energy Act (ACE).
- The Trump administration issued the ACE in June 2019. The rule was reversed and remanded by the DC Circuit Court of Appeals in January 2021. The new proposed rule by the Biden administration would appeal the ACE.

# OVERVIEW OF THE MAY 2023 PROPOSED RULE

- Starting in 2030 the proposed rule would generally require more significant CO<sub>2</sub> emissions controls at fossil fuel power plants that plan to operate past 2031.
- More stringent emissions limitations would be phased in over time.
- The rule relies heavily on the use of Carbon Capture and Sequestration (CCS) and the use of clean hydrogen to meet the emissions limitations in the new rule.
- Under the proposed rule these methods are found to be the “best system of emissions reductions” (BSER) under the Clean Air Act.

# OVERVIEW – VARYING EMISSIONS REQUIREMENTS

- The proposed emissions requirements vary based on the type of unit: new or existing, coal or natural gas, combustion turbine or combined cycle.
- The proposed emissions requirements vary based on the capacity factor at which the unit operates. The higher the capacity factor the more stringent the requirements. This aspect of the rule has major implications for proposed new base load units.
- The proposed emissions requirements also vary depending on how long the plant will operate. For example, for coal plants that are scheduled to be closed by 2035 there are minimal new requirements.

# OVERVIEW – REQUIREMENTS FOR PROPOSED NEW BASE LOAD NATURAL GAS UNITS

- Applies new BSER rule requiring the use of CCS or co-firing plants with clean hydrogen.
- For hydrogen, compliance dates are 30% by 2032 and 96% by 2038.
- For CCS – 90% of carbon emissions must be captured by 2035.
- Neither CCS nor co-firing with hydrogen are established technologies and their efficacy and cost for SC are not well-understood.

# IMPACT ON SC – INTRODUCTION OF UNCERTAINTY

- Growing energy demand – recent economic development activity and the electrification of the economy (electric vehicles).
- Retiring coal plants.
- Reliability and economic growth depending on adding new generation. Most utilities are considering new natural gas plants.
- Siting Act requires consideration of costs and comparison with other proposed generation options.
- How do utilities, regulators and other stakeholders address a proposed rule that will likely be under appeal and perhaps stayed?
- How do utilities, regulators and other stakeholders address the cost of proposed projects when new emissions control technologies are being required?