PROTECTING OUR COMMUNITIES:

ENGAGING IN THE EPA COMMENT PERIOD

POWER PLANT RULE & PUBLIC COMMENT TOOLKIT

PREPARED BY:
NEW JERSEY ENVIRONMENTAL JUSTICE ALLIANCE

WWW.NJEJA.ORG • INFO@NJEJA.ORG • (973) 306-4696 • 45 ACADEMY ST, SUITE 205, NEWARK, NJ

THE MATERIALS

EPA Power Plant Rule Fact Sheet

To explain the rule and how we got here

Carbon Capture Fact Sheet & Hydrogen Fact Sheet

To explain what these terms mean, and the risks of these technologies

Comment Template

To support the comment writing process

Submit an EPA Comment

A "How-To" for comment submittal

PROPOSED EPA POWER PLANT RULE 2023-2024

FACTSHEET PT. 1

Official 2023 Rule Title:

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 FR 33240).

Rule Summary:

The proposed EPA Power Plant Rule broadly revises greenhouse gas emission standards and guidelines for new, modified, and existing fossil fuel-fired power plants.

Brief Breakdown of Power Plants Covered by the Rule:

Base load power plants (capacity greater than 300 MW with a capacity factor of 0.5 or greater) in the following categories:

- New and existing coal plants (Notably, there are no new coal plants currently being planned)
- New natural gas plants
- Existing natural gas plants

How this rule regulates/reduces carbon emissions from these plants:

Establishes a Standard of Performance: A standard for air pollutants emissions reductions based on what is achievable through the application of the best system of emission reduction (BSER)

- BSER: A significant legal designation for carbon reduction technologies

Designates carbon capture and storage (CCS) and/or hydrogen co-firing as a BSER

- The use of CCS to achieve a 90% capture of GHG emissions by 2035
- The co-firing of 30% (by volume) hydrogen by 2032, ramping up to 96% by volume low-GHG hydrogen by 2038

Brief Overview of CCS and Hydrogen Co-firing:

- CCS refers to a variety of different chemical systems that can be added to a power plant to remove a portion of the carbon that would be emitted from the burning of fossil fuels.
- Hydrogen co-firing is the process of mixing H2 gas with fossil fuels, then burning this mixture to produce power and reduce carbon emissions.

Key Issues:

- There is a growing number of studies showing evidence that both CCS and hydrogen co-firing have a high risk of increasing GHG co-pollutant emissions (particularly NOx).
  - Additionally, it is highly disputed that CCS can actually reduce carbon to the degree that the power plant rule is based on (90-99% carbon capture rate).
- Relying on these technological solutions further entrenches our dependence on fossil fuels and slows down our transition to renewable energy
- Many power plants affected by the rule are located in EJ communities; both CCS and hydrogen co-firing threaten to exacerbate pollution in these already overburdened communities

PROPOSED EPA POWER PLANT RULE 2023-2024

FACTSHEET PT. 2

Since the release of this rule, EJ communities and leaders have mobilized around CCS and hydrogen co-firing in response to federal investment:

- Unprecedented regulatory moves: H2 Hubs announced, one including NJ (MACH2)
- Large amounts of federal funding (Justice40) opening up to CCS and hydrogen production
  - $8 billion for hydrogen, $500 million for CCS
- EJ groups have nationally come out against both CCS and hydrogen co-firing5

Current Status:

On April 25, 2024, EPA announced that they would be reconsidering the roll out of the final power plant ruling, and pulled the portion of the rule addressing existing gas plants

- EPA published the final rule for existing coal and new gas plants on the federal registry on May 9, 2024 and it will come into effect July 8, 2024
- The ruling on existing gas plants was opened up to reconsideration and they issued a non-regulatory docket to solicit public input on this decision
- Hydrogen co-firing has been removed from consideration as BSER

What Comes Next:

- EPA plans on finalizing its ruling on existing natural gas power plants by the end of 2024
- Commenting period for the non-regulatory docket closes on May 28, 2024
  - Now is a crucial time to ensure that the EJ voice is included in this critical process
- Once the final rule is adopted, move on to state implementation

State Implementation Plans:

States have 2 years to develop implementation plans and submit to EPA after the final rule comes into effect

States do not necessarily have to use BSER (CCS or hydrogen co-firing)

- They are allowed to implement a different strategy for emission reductions as long as it achieves equivalent reductions to BSER and is approved by the EPA

We strongly advocate for use of renewable energy, energy efficiency, and mandatory emissions reductions as the best alternative

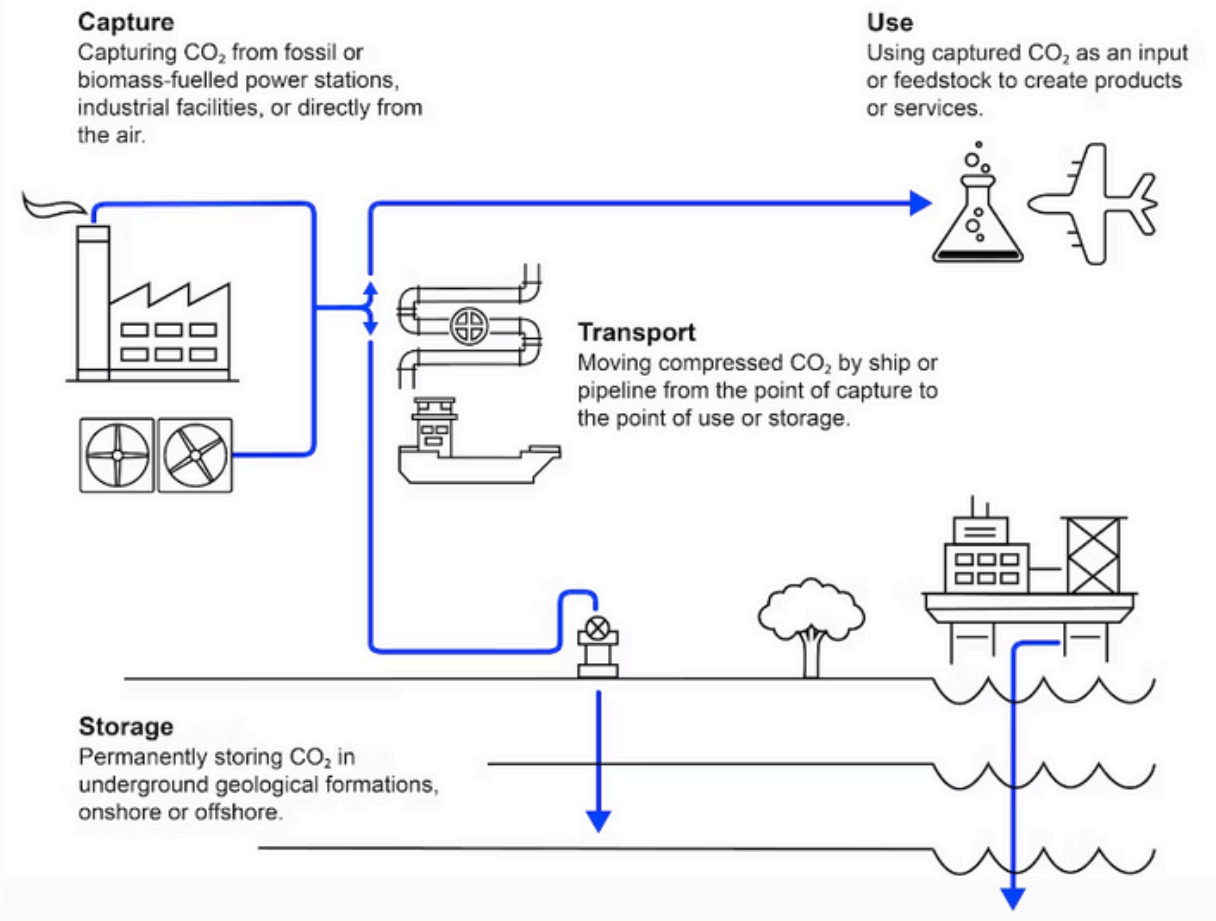
CARBON CAPTURE AND STORAGE

PT. 1

AS MANY AS 85% OF CCS PROJECTS IN THE U.S. GO TO ENHANCED OIL RECOVERY

WHAT IS CARBON CAPTURE AND STORAGE (CCS)?

CCS (sometimes called Carbon Capture Utilization and Storage or CCUS) is the process in which carbon dioxide (CO2) is captured from power plants and transported for use or storage. Most CO2 from CCS becomes used In "Enhanced Oil Recovery" (EOR) which, more simply, means additional production and the continuation of fossil fuel usage.



Using resources, time, and energy to power the CCS process redirects from the important work of ending reliance on fossil fuels and turning to renewable, truly clean energy.

CARBON CAPTURE AND STORAGE

PT. 2

ASSOCIATED RISKS AND DANGERS OF CCS/CCUS

Highly Ineffective, but Extremely Costly

CCS projects are incredibly expensive, relying on both public and private funding. However, they have very little success.

Ex: Mississippi coal CCS project cost $7.5B, eventually cancelled and replaced with fossil fuels and no CCS

Ex: Recent Illinois plant received $281M in gov't funding, only captured 10-12% of emissions

A CO2 pipeline rupture in Santartia, Mississippi in February 2020, released 30,000 barrels of liquid CO2and led 200 people to be evacuated and 45 people to seek medical attention

Source: Yazoo County Emergency Management Agency

Health, Safety, and Environmental Risks

CCS comes with several serious risks including:

- Contamination of ground water/drinking water
- Migration of carbon from injection site
- Cracks/fissures in the earth where injected
- Injection well explosions
- Can lead to asphyxiation (i.e. choking) where people breathe in carbon that has leaked from storage/transport
- Pipeline rupturing and explosions

The long story, short: Carbon Capture and Storage (CCS or CCUS) is an ineffective, false solution to the problem of air pollution, reliance on fossil fuels, and climate change. Not only are we wasting precious time and resources when we invest in this technology, but given that these projects are often sited In EJ Communities, we are directly allowing our vulnerable frontline communities to become a sacrifice zone.

HYDROGEN PRODUCTION, HYDROGEN CO-FIRING

WHAT IS HYDROGEN FUEL?

Hydrogen fuel has been marketed as an alternative to fossil fuel and a solution to the climate crisis. However, at every point in its life cycle, hydrogen fuel poses significant risk to EJ communities and communities where this infrastructure is built. Irregardless of how the hydrogen was produced, it still poses a danger to workers and communities when transported, stored, and co-fired.

THE DANGERS

Production

All colors of hydrogen, except for green, rely on non-renewable fuel to power their process which poses a risk to EJ communities. Green hydrogen, although produced via electrolysis powered by renewable energy, is still highly water intensive and not sustainable water usage.

Transportation/Storage

All hydrogen types have risks with transport and storage. Transporting by pipelines risks embrittlement, leaks, and explosions. Transportation by super-cooled trucks could lead to explosions or fires. Transport and storage also carry risks of co-pollutant emissions.

Co-Firing

When co-fired (i.e. when burned alongside natural gas to generate energy), hydrogen produces co-pollutants (hazardous pollutants that are released alongside greenhouse gases) and dangerous toxins such as PFAs and NOx, and can generate smog and particulate matter.

Colors

Gray Hydrogen
Hydrogen produced from fossil fuels

Blue Hydrogen
Hydrogen produced from fossil fuels, employs CCS to "capture" emissions

Pink Hydrogen
Hydrogen produced from nuclear energy

Green Hydrogen
Hydrogen produced via electrolysis using renewable technologies

The Bottom Line

The color code for hydrogen merely refers to the way in which it was created. It masks the dangers associated with the rest of its lifecycle (ie. production, transportation, storage, and end-use/co-firing). There may be some limited uses for green hydrogen in hard-to-decarbonize sectors, but this should be examined with caution and determined on a case by case basis, only if other renewable alternatives are not feasible.

So you want to...

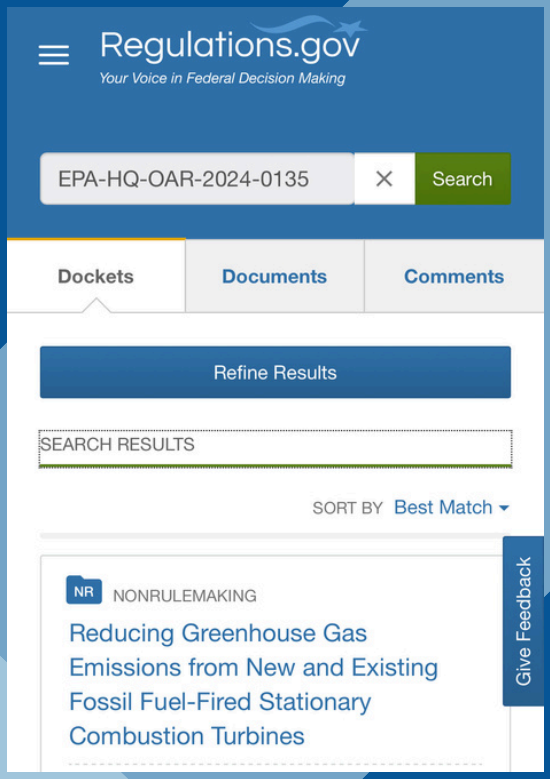
SUBMIT AN EPA COMMENT

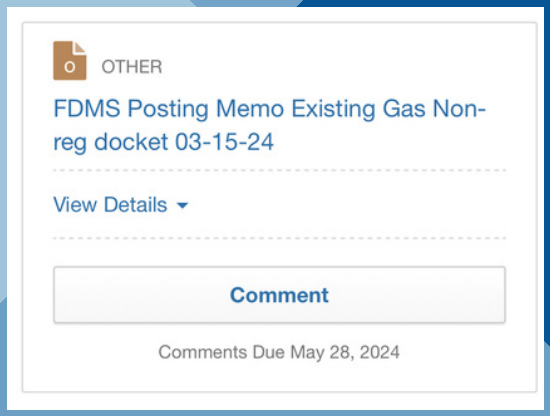
1. Go to Regulations.gov and search Docket Number **EPA-HQ-OAR-2024-0135**

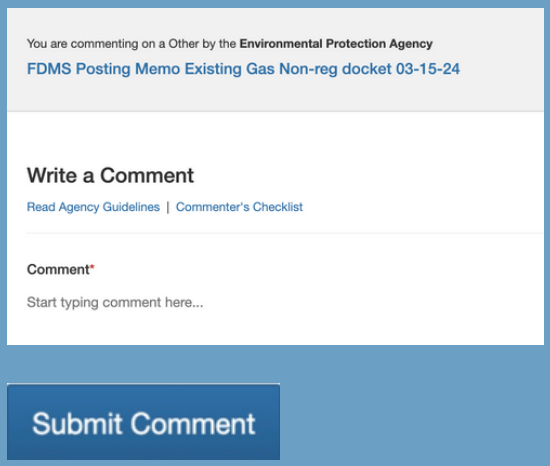
2. Select the Docket entitled: "Reducing Greenhouse Gas Emissions from New and Existing Fossil Fuel-Fired Stationary Combustion Turbines". Then select the tab that says **"Browse Documents"**

3. Find the Open Memo and click "**Comment**"

4. Write and submit your comment. Be sure to complete all required boxes/questions and hit the blue submit box at the bottom once you are done







Submit Comment

Alternatively, the EPA will accept comments via email at: **a-and-r-docket@epa.gov.** Include docket ID No. **EPA-HQ-OAR-2024-0135** in the subject line of the message.

NJEJA COMMENT TEMPLATE

PT 1

The following is a template which can be used for developing your comments to the EPA on these issues. Please feel free to utilize this template and adjust it to your needs. ***For comment writing support, please reach out to info@njeja.org.***

Introduction

- Group or individual name
- For groups: mention your organization, location, community served, motto, etc.
- For individuals: mention your community, why you care about this issue

**Comments are visible to all members of the general public, so only mention information that you are comfortable being on public record. Be careful with how much personal/private information is posted.*

Point #1: EPA Must Not Include Carbon Capture as a BSER (Best System of Emissions Reduction)

- CCS projects pose **serious risks** to communities
  - Example: **Satartia, Mississippi project** (200 people evacuated, 45 hospitalized)

→ **Risks:**
- Groundwater/Drinking water contamination (**study by Duke University**)
- Risks of asphyxiation (i.e. when pure carbon gets leaked, it can cause individuals who breathe it is to choke and lose consciousness)
- Pipeline explosions
- Migration of carbon at injection point

- CCS projects have a very low success rate
  - Examples: **Illinois project** (10-12% capture rate)

- CCS projects are extremely expensive and rely heavily on government funding, which undercuts funding to EJ communities and historically marginalized communities

- CCS projects do not get us away from our true goal of fossil fuel divestment, but merely provide a false solution

- CCS projects do not have sufficient regulatory oversight (at all levels of governance) which poses a risk to host communities and to environmental goals

NJEJA COMMENT TEMPLATE

PT 2

The following is a template which can be used for developing your comments to the EPA on these issues. Please feel free to utilize this template and adjust it to your needs. ***For comment writing support, please reach out to info@njeja.org.***

Point #2: EPA Must Not Include Hydrogen Co-Firing as a BSER (Best System of Emissions Reduction)

- Hydrogen Co-Firing is dangerous for all communities, irregardless of how the hydrogen was produced (i.e. fossil fuels or renewable energy)
- Transporting hydrogen in pipelines can lead to cracks in the pipes, leaks, and explosions
  - Transporting hydrogen in supercooled trucks can lead to explosions due to the pressurized nature of these vehicles
  - Hydrogen storage can bring leaks and explosions
  - Co-firing hydrogen (i.e. burning it alongside natural gasses) can produce large amounts of pollutants and toxins including PFAs, NOx, smog, and particulate matter.
- Hydrogen projects are extremely expensive and are increasingly relying on government funding, which undercuts funding to EJ communities and historically marginalized communities

Point #3: The EPA Must Incorporate A Cumulative Impacts Framework

- **Cumulative Impacts** Framework means: examining the risks and impacts caused by multiple pollutants, usually emitted from multiple sources, both in isolation and by their interaction with each other as well as any social vulnerabilities that exist in a community
  - This is contrasted with the current practice of analyzing standards on an individual basis (i.e. determining standards one pollutant at a time) which does not take into account the total amount of pollution (i.e. the aggregation of all pollutants in a particular area)
  - There can be detrimental health and safety impacts to communities, which can be seen by using a cumulative impacts framework, even in cases where no one individual standard has been violated.
- It is imperative that the EPA uses this framework because it protects EJ Communities from potential harms by ensuring that BSERs to do not exacerbate current burdens
- Incorporating this framework also takes into account that residents of EJ communities are likely to be more vulnerable to pollution due to factors outside of their control, including the impacts of racist zoning and planning practices

Point #4: BSERs Should Incorporate Co-Locating Renewable Energy At Power Plants and Incorporate Energy Efficiency Standards

- Operational improvements can increase efficiency and decreased wasted energy, thereby decreasing emissions
- Plants should consider building on-site renewable energy (i.e. co-locating renewable energy production) and battery storage capacity. Although it may not be feasible for a plant to run entirely on renewable energy and battery storage, it would decrease reliance on natural gas and further the transition off of fossil fuels, offering a true emissions reduction