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ACE No More: Analyzing the D.C. Circuit's Vacatur and Remand of EPA's Affordable Clean Energy Rule, the Biden Administration's Clean Slate to Regulate Carbon Dioxide, and Musings on the Energy Mix and Grid Resilience

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CPP: The Big Climate Rule That Never Fully Was



- The Clean Power Plan (CPP), finalized by the United States Environmental Protection Agency (EPA) on 8-3-15, and published in the Federal Register on 10-23-15, was the premiere component of President Obama's Climate Action Plan.
 - EPA's 2009 Endangerment Finding predicated the CPP.
- The stated goal of the CPP was to cut carbon pollution from existing power plants.
- EPA heralded the CPP as the first-ever national standards to address carbon pollution from electric-generating units.
- The EPA explicitly stated in its rollout of the CPP that "climate change is one of the greatest environmental and public health challenges we face."
 - The EPA fact sheet called out the critical importance of taking immediate action.

CPP: The Big Climate Rule That Never Fully Was (cont'd)

- The CPP relied on generation shifting to lower-emitting sources of electricity through the grid system.
 - Natural gas
 - Renewables
- According to the EPA fact sheet, the CPP would have reduced carbon pollution from the power sector by 32 percent below 2005 levels.
- Supporters lauded the CPP's scope and breadth and endorsed its interpretation of the industry sector encompassing the entire grid system, not just facility boundaries.
- CPP's opponents claimed the rule exceeded the scope of EPA's statutory authority of the Clean Air Act, and that the rule could only lawfully mandate changes to a facility within its fenceline.

CPP: Goal Setting

- The CPP cited Section 111(d) of the Clean Air Act as its underlying authority to regulate the fossil fuel industry and created "building blocks" to establish the Best System of Emissions Reduction, or BSER, for electric generating units in reducing carbon dioxide (CO2)
- It set individual state targets- in mass and rate formats- for CO2 reduction.
- The CPP established aggressive timelines for compliance.
 - Final plan submission by 9-16-16; or
 - Extension request by 9-16-16 with final plan by 9-6-18.

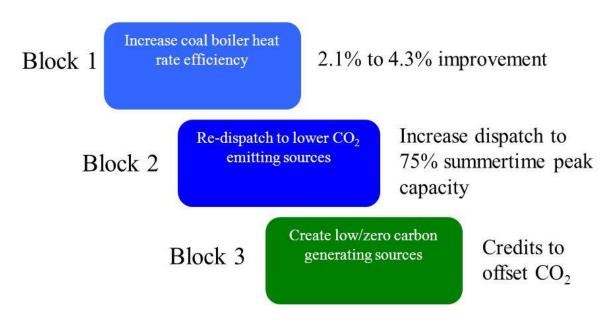
Goal-Setting Calculations

BSER used to determine emission performance rates is based on three building blocks:

- Improved Efficiency at Coal-Fired EGUs
- 2. Shifting Generation from Coal-Fired to Natural Gas-Fired EGUs
- Shifting Generation to Zero-Emitting Renewables

CPP: Building Blocks

Clean Power Plan (CPP) Building Blocks— Final Regulation



National average of 32% reduction in 2005 CO₂ net emission intensity (lbs/MWh) by 2030

2

CPP: Arkansas Snapshot

Arkansas at a Glance

- Under a rate-based plan, Arkansas would be required to reduce carbon dioxide emissions intensity (Ib/MWh) from 54 affected EGUs at 19 power plants by 36% from 2012 rates.
- Under a mass-based plan, Arkansas would be required to reduce carbon dioxide emissions (tons) from affected EGUs by 24% (or 23% if new sources are included) from 2012 emissions.

Plan Type Options		Interim Goal	Final Goal
Emission Standards Applied to Individual EGUs	Fossil Steam	1534 lb/MWh	1305 lb/MWh
	NGCC	832 lb/MWh	771 lb/MWh
Statewide Rate-Based Goal		1304 lb/MWh	1130 lb/MWh
Mass-Based Goal		33,683,258 tons	30,322,632 tons
Mass Goal with New Source Complement		34,094,572 tons	30,685,529 tons

ADEQ

^{*}Graphic above taken from ADEQ slide presentation on CPP.

CPP: Unprecedented And Short-lived

- Heavily briefed and litigated.
 - A total of 27 states joined in challenging the CPP, lead by West Virginia.
 - The Arkansas Attorney General supported the challenge to the CPP.
- UNPRECEDENTED: Stayed by the Supreme Court on 2-9-16 during active litigation in the D.C. Circuit.
- The D.C. Circuit Court of Appeals heard arguments *en banc* re: the legality of CPP on 9-27-16 but never issued a ruling. Why?
 - 2016 Presidential Election
 - 3-28-17: Executive Order 13783 (suspend, revise, or rescind CPP).
 - 6-1-17: U.S. withdrew from the Paris Agreement.
- Current status?
 - Spoiler alert: the D.C. Circuit Court of Appeals dismissed the CPP appeal as moot.

ACE Arrives

- The Affordable Clean Energy (ACE) rule was proposed by EPA
 Administrator Scott Pruitt on 8-21-18.
- Final ACE rule signed by EPA Administrator
 Andrew Wheeler on 6-19-19.
- Concurrent with the issuance of the ACE rule,
 EPA repealed the CPP.



- The ACE rule **repealed**, **replaced**, and **revised** existing carbon dioxide rules:
 - (i) repealed the CPP;
 - (ii) replaced the CPP with ACE; and
 - (iii) revised the EPA's rules implementing the Clean Air Act for 111(d).
- ACE was published in the Federal Register on 7-8-19 and took effect on 9-6-19.

ACE vs CPP

Comparing the CPP & ACE

CPP

- Power plant efficiency & generation shifting-based guidelines
- Standards:
 - Rate (lb/MWh) or mass (tons)
 - Statewide goals
- Variety of compliance options:
 - Inter- or intra-state trading
 - Energy efficiency
 - Biomass

ACE

- Power plant efficiency-based guidelines
- Standards:
 - Rate (lb/MWh)
 - Unit-specific
- Unit-level compliance



CPP Repeal

Repeal of Clean Power Plan (CPP)

- Legal rationale for repeal:
 - ► CPP exceeded EPA's authority under Clean Air Act by dictating generation shifting as part of best system of emission reduction (BSER) determination
 - CPP Building Blocks 2 and 3 employed measures designed to shift balance of power generation across grid (i.e., coal vs. gas vs. renewables)
 - ▶ BSER must be limited to measures that can be applied to and at an individual source (Building Block 1)
- The CPP was never put into effect due to Supreme Court intervention

Background

- CPP repeal proposal published October 16, 2017
 - EPA received 1.3 million public comments
 - ► EPA held 1 public hearing and 3 listening sessions

CPP Repeal (cont'd)

 According to the ACE rule preamble, "the EPA is precluded from basing BSER on strategies like generation shifting and corresponding emissions offsets because these types of systems cannot be put into use at the regulated building, structure, facility, or installation."

"Implementation" v. "Application"

- EPA asserted in the CPP repeal, that the CPP was "impermissibly based on 'implementation' rather than 'application' of the BSER."
- EPA continued that because "CPP is premised on 'implementation of the BSER by a source's owner or operator' and not 'application of the [BSER]' to an individual source, the rule contravenes the plain language of Clean Air Act section 111(a)(1) and must be repealed. (Emphasis added)."
 - EPA further contended that the conflict between the terms "implement" and "apply" "is compounded by the conflation of the source and its owner, concepts EPA says are separately defined in the Clean Air Act.

ACE Background

ACE Background

- ACE is an emission guideline promulgated under CAA section 111(d)
- Emission guidelines are a less common type of regulation; rely on cooperative federalism to achieve emission reductions
- Roles can be summarized by a three-step process:
 - EPA identifies BSER
 - States establish standards of performance for designated facilities within jurisdiction – standards consistent with emission limitation achievable by application of BSER – and will submit plans to EPA for approval
 - 3. Affected sources comply with standards of performance (set by states)using most appropriate technologies or techniques (sources do not have to apply BSER technologies to comply with standards)

Background

- ACE proposal published August 30, 2018
 - ► EPA received more than 500,000 public comments
 - EPA held 1 public hearing

Designated Facilities

ACE Designated Facilities

- Designated facilities are coal-fired electric utility steam generating units (EGUs) with nameplate capacity greater than 25 MW-net and commenced construction on or before January 8, 2014
- States in contiguous U.S. are affected by this subpart
 - States are required to submit a plan or negative declaration to regulate designated facilities by July 8, 2022 (within three years of publication)
- ► EPA still evaluating information and data for other fossil fuel-fired EGUs

Arkansas Subject Unit Identification

7 Independence 1

at 5 Independence 2

John W. Turk

Plum Point

White Bluff 1

White Bluff 2



ACE BSER

ACE BSER

- Consistent with legal rationale to repeal CPP, EPA may only consider systems of emission reduction that can be applied at and to a designated facility and that lead to continuous emission reductions
- For ACE, EPA determined BSER for existing coal-fired EGUs to be heat rate improvements (HRI, also referred to as efficiency improvements)
- EPA evaluated other systems of reductions but did not include them as part of BSER:
 - Natural gas repowering
 - Natural gas co-firing and refueling
 - Biomass co-firing
 - Carbon capture and storage

ACE Guidelines

ACE Guidelines

- Efficiency Gains (heat rate improvement) from:
 - 6 candidate technologies
 - Neural network/intelligent sootblower
 - Rebuild/replace boiler feed pumps
 - Air heater and duct leakage control
 - Variable frequency drives
 - Steam turbine blade path upgrades
 - Redesign/replace economizer
 - Best operating and maintenance practices



States Plan Requirements

Requirements for State Plans

- Unit-specific evaluation of candidate technologies/practices
- Adopt standards, monitoring, recordkeeping, and reporting requirements
- Project future operating characteristics of each unit through 2035
- Submit plan for EPA approval/enforceability by July 8, 2022



Compliance Pathways

- BSER measures, plus:
 - Natural gas co-firing.
 - Carbon capture and sequestration.
- Not allowed:
 - Mass standards.
 - Mass averaging/trading.
 - Rate averaging/trading.
 - Intra-facility trading ("bubbling").
 - Biomass co-firing.
 - Reduced utilization.
 - Generation shifting.

EPA's Bold/Risky Legal Stance

- EPA took a narrow interpretation of its authority under section 111 of the Clean Air Act.
- The Agency's position was that section 111 allows only one method of defining BSER, and that is what can be added on or implemented at the facility (inside-the-fenceline) rather than measures such as generation shifting or emissions trading (outside-the-fenceline).
- This strategy was in contrast to one in which the EPA could have argued that ACE rule is the most reasonable option, rather than the only option.
- EPA explicitly stated in ACE, "[B]y making clear that the 'application' of BSER must be to the source, Congress spoke directly in Chevron step one terms to the question of whether the BSER may contain measures other than those that can be put into operation at a particular source: it may not. (Emphasis added)."

ACE Litigation

- First to file!
 - The American Lung Association and American Public Health Association, represented by the Clean Air Task Force, were the first groups to file a challenge to the ACE rule in the DC Circuit Court of Appeals.
 - Filed on the first day a Petition for Review could be filed (7-8-19).
 - Scope of issues on appeal: narrow interpretation of 111(d), determination of Best System of Emissions Reduction (BSER), and restriction on compliance measures.

ACE Killed The CPP?

- On 7-15-19, state and industry CPP opponents filed a motion in the D.C. Circuit to dismiss the CPP ligation in the case of *West Virginia*, et al. v. EPA, et al.
 - Arkansas Attorney General signed on.
- The CPP litigation had been held in abeyance since shortly after 2016 election.
- On 7-17-19, EPA filed with the D.C. Circuit court in support of state and industry CPP opponents seeking to dismiss CPP litigation.
- Despite opposition, the D.C. Circuit dismissed the CPP litigation on 9-18-19.
- Thus, the CPP is no more (maybe...)

DC Circuit Vacates ACE

- On 1-19-21, the D.C. Circuit vacated ACE
- The key statutory question under review was the scope of emissions control measures achievable by power plants "through the application of the best system of emission reduction" under Section 111.
- The court analyzed whether EPA was limited to "inside the fence line" measures.
- In its 147-page majority opinion, the D.C. Circuit held that the ACE rule must be vacated because it rested on a "fundamental misconstruction" of Section 111(d) as unambiguously limiting BSER to inside-the-fence-line measures.

"Clear and Unambiguous"

- Under the Trump EPA's interpretation, Congress did not authorize EPA to inform its standard of performance on generation shifting or any other offsite mechanism.
- Thus, EPA determined it was obligated to withdraw the CPP and promulgate a new rule that stayed within the bounds of its authority granted by Congress.
- The court was consequently limited to reviewing the first analytical step of *Chevron*, which grants agencies great deference in their interpretations of ambiguous statutes.
- Chevron refresher...

The Chevron Doctrine

- The Chevron doctrine is tied to the 1984 Chevron U.S.A., Inc. v Natural Resources Defense Council case.
- It tees up a two-step test for whether the courts should defer to agencies' interpretations of federal statute.
- Under *Chevron*, a court will defer to an agency's interpretation of an ambiguous provision in a statute that it administers, if the agency's interpretation is reasonable.

Chevron Doctrine continued

- Step 1: When evaluating an agency's interpretation of statute, a court will first investigate whether Congress has spoken directly to the precise question at issue.
- Step 2: If the court finds there is not a definitive statement from Congress and the statute is ambiguous, it will assess whether the agency's interpretation of the statute is reasonable.
- Under Step 2, the agency does not need to show that it's interpretation is the best of the options in order to prevail.
- Rather, an agency must act according to its discretion and expertise when a statute is ambiguous.

Chevron Step 1

- In the case of ACE, EPA is using a Chevron Step 1 justification.
- Instead of explaining why the ACE rule is a reasonable interpretation of Clean Air Act section 111, EPA is arguing that its version of the rule is the only way the Clean Air Act can be interpreted.
- Risk: higher legal bar with severe consequences if unsuccessful.
- Advantage: a much more permanent result that would tie the hands of any future administration wanting to redo a CO2 reduction rule.

Chevron Step 1 analysis

- To allow Step 1 deference, the court first must review the statutory authorization de novo to determine whether it's ambiguous at all.
- Agency actions made based upon an erroneous statutory interpretation are void.
- Therefore, EPA would fail if the statutory provisions at issue were ambiguous.

ACE is doomed

- According to the court, the "shortcomings of [EPA's] statutory interpretation are more than enough to doom the agency's claim that Section [111] announces an unambiguous limit on the best system of emission reduction."
- The court found that the ACE rule's "cabined" interpretation of BSER was inconsistent with the history, structure, and purpose of Section 111.
- The court also interpreted EPA's authority to regulate greenhouse gases to apply to the grid as a whole, as a system, as the "components of the grid must operate as a perfectly calibrated machine."

Generation shifting

- The court also observed that the ACE rule would have required EPA to ignore more cost-effective methods of emission reduction
- According to the majority opinion, the record before the EPA shows that generation shifting to prioritize use of the cleanest sources of power is one of the most cost-effective means of reducing emissions that plants have already adopted and that have been demonstrated to work, and that generation shifting is capable of achieving far more emission reduction than controls physically confined to the source.
- The court ultimately rejected EPA's reading of the statute that required it to turn its back on major elements of the systems that the power sector is actually and successfully using to efficiently and cost-effectively achieve the greatest emission reductions.

Dissenting Opinion

- The dissenting opinion by Judge Walker stated that EPA was right to repeal the Clean Power Plan under the major rules doctrine.
 - This doctrine requires that an agency have a clear grant of statutory authority for rules with "vast economic and political significance."
- The dissent also would have found that EPA does not have the authority to regulate carbon emissions from coal-fired power plants because it already regulates mercury emissions from those plants under Section 112.
 - This argument is based on a mistake during congressional negotiations of Section 111(d) that resulted in two versions of the same provision being included in the final law.

WHAT WILL BIDEN'S EPA DO?

PEDPLE PRIORITIES TIMING



"READING THE TEA LEAVES"

PEOPLE

WHITE HOUSE

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for Stationary Sources

AVI GARBOW

Senior Counselor

VICKI ARROYO

Associate Administrator For Policy

PRIDRITIES

- O CLIMATE*
 - D POWER PLANTS (REPLACE ACE RULE)
 - O CAR + TRUCK STANDARDS
- * CARBON REDUCTIONS COME IN MANY FORMS:
- MERCURY + AIR TOXICS STANDARD (MATS)
- D CRITERIA POLLUTANTS

 (SOx, NOx, PM)

TIMING

- a EPA Rulemakings take about 2 years
 - TRUMP EPA PROPOSED ACE IN AUG 2018 AND FINALIZED IN JULY 2019
 - PROPOSAL REQUIRES BACKUP ANALYSIS
- BIDEN EKEC OPDER CAUS FOR PROPOSALS BY SUMMER/SEPT
- " We're starting with a clean slate, but we're not starting from scratch".

HOW TO REPLACE ACE

- CURRENT SUPREME COURT

 A BIG FACTOR—
- WHAT CAN BE DONE INSIDE THE FENCELINE"?
 - o heat rate improvements
 - o co-firing natural gas?
 - o co-firing biomass?
 - D carbon capture?

- OF FOLLOW DC CIRCUIT DECISION

 ALLOW BROADER BSER
 INTERPRETATION?

 LD SET STRINGENCY
- O STATES THEN HAVE FLEXIBILITY IN THEIR PLANS AND CAN GRANT PLANT OWNERS FLEXIBILITY

Arkansas Issues

- On March 3, 2021, Arkansas Governor Asa Hutchinson issued Executive Order 21-05 which establishes an "Energy Resources Planning Task Force.
- The Task Force was formed to assess:
 - Vulnerabilities in critical energy resources because of winter storms
 - •Increased demand/inadequate supply of critical energy/Arkansas business closures
 - Need to evaluate the ability of Arkansas's critical energy resources and infrastructure to withstand extreme events

The Task Force charged with addressing these issues includes:

- The Secretary of the Department of Energy and Environment, or his or her designee;
- The Director of the Arkansas Oil and Gas Commission, or his or her designee;
- The Director of the Arkansas Liquefied Petroleum Gas Board, or his or her designee; and
- The Secretary of the Department of Commerce, or his or her designee.

Task Force

The Task Force will hear testimony from the following:

- 1. The Chair of the Arkansas Public Service Commission, or his or her designee;
- 2.A representative of the Midcontinent Independent System Operator (MISO);
- 3.A representative of the Southwest Power Pool (SPP);
- 4.A representative of Entergy Arkansas;
- 5.A representative of the Arkansas Electric Cooperatives Corporation;
- 6.A representative of Southwestern Electric Power Company;
- 7.A representative of Oklahoma Gas and Electric Company;
- 8.A representative of the Empire District Electric Company;
- 9.A representative of the Arkansas Municipal Power Association (AMPA);
- 10.A representative of Center Point Energy;
- 11.A representative of Arkansas Oklahoma Gas Corporation;
- 12.A representative of Black Hills Energy;
- 13.A representative of the Arkansas Electric Energy Consumers (AEEC);
- 14.A representative of the Arkansas State Chamber of Commerce;
- 15. The Executive Director of the Arkansas Environmental Federation, or his or her designee;
- 16. The President of the Arkansas Independent Producers and Royalty Owners (AIRPRO) association, or his or her designee;
- 17.Additional citizens, as the Task Force deems necessary, with knowledge and expertise in energy and environmental matters; and
- 18. Additional citizens, as the Task Force deems necessary.

Task Force continued

- The Task Force is charged to:
 - Recommend actions needed to ensure adequate supply of critical energy sources during extreme events; and
 - Develop priorities for allocation of limited energy resources in the event of supply shortages due to emergency situations necessitating action to preserve life, health, and safety.
- Both the Arkansas Department of Energy and Environment and the Arkansas Public Service Commission are requested to provide staff as needed.

Sierra Club & Entergy Settlement

- On March 11, 2021, U.S. District Judge Kristine Baker approved a settlement agreement between Entergy and Sierra Club and National Parks Conservation Association.
- The agreement stipulates that Entergy will retire two coal-fired plants and a natural gas plant by the end of 2030.
- The plants to be closed include the 1,800-megawatt White Bluff Steam Electric Station in Jefferson County, 1,800megawatt Independence Steam Electric Station in Independence County and 528-megawatt Lake Catherine Steam Electric Station in Hot Spring County. The White Bluff and Independence plants are expected to cease coal operations by Dec. 31, 2028, and Dec. 31, 2030, respectively. The Lake Catherine plant is expected to cease operations by Dec. 31, 2027.

Sierra Club & Entergy Settlement Continued

- Also under the settlement agreement, Entergy is expected to begin developing renewable energy projects with a total capacity of 800 megawatts by Dec. 31, 2027.
- At least half of the capacity is expected to be in development by Dec. 31, 2022
- Entergy is working toward a goal of net-zero carbon emissions by 2050.

Arkansas Legislation

- Senate Bill 65
- An Act To Amend Arkansas Law Regarding State Emission Plans For Fossil-fuel-fired Electric Generating Units; And For Other Purposes
- Requirements for submitting plan to EPA

Questions?

For any follow-up questions or clarifications, please contact me at:

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