ORAL ARGUMENT SCHEDULED ON JUNE 2, 2016

No. 15-1363
(and consolidated cases)

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF WEST VIRGINIA, ET AL.,

Petitioners,

v.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, ET AL.,

Respondents.

On Petitions for Review of Final Action
by the United States Environmental Protection Agency

RESPONDENT EPA'S INITIAL BRIEF

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Pursuant to D.C. Circuit Rule 28(a)(1), the undersigned counsel certifies as follows:

A. Parties and Amici.

The parties in these consolidated cases are:

Petitioners: No. 15-1363: the States of West Virginia, Texas, Alabama, Arkansas, Colorado, Florida, Georgia, Indiana, Kansas, Louisiana, Michigan, Missouri, Montana, Nebraska, New Jersey, Ohio, South Carolina, South Dakota, Utah, Wisconsin, Wyoming, and the Commonwealth of Kentucky, the Arizona Corporation Commission, the State of Louisiana Department of Environmental Quality, the State of North Carolina Department of Environmental Quality; No. 15-1364: the State of Oklahoma, ex rel. E. Scott Pruitt, in his official capacity as Attorney General of Oklahoma, and the Oklahoma Department of Environmental Quality; No. 15-1365: the International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, AFLCIO; No. 15-1366: Murray Energy Corporation; No. 15-1367: the National Mining Association; No. 15-1368: the American Coalition for Clean Coal Electricity; No. 15-1370: the Utility Air Regulatory Group and the American Public Power Association; No. 15-1371: Alabama Power Company, Georgia Power Company, Gulf Power Company, and the Mississippi Power Company; No. 15-1372: the CO2 Task Force of the Florida Electric Power Coordinating Group, Inc.; No. 15-1373: Montana-Dakota Utilities Co., a Division of MDU Resources Group, Inc.; No. 15-1374: the Tri-State Generation and Transmission Association, Inc.; No. 15-1375: the United Mine Workers of America; No. 15-1376: the National Rural Electric Cooperative Association, Arizona Electric Power Cooperative, Inc., Associated Electric Cooperative, Inc., Big Rivers Electric Corporation, Brazos Electric Power Cooperative, Inc., Buckeye Power, Inc., Central Montana Electric Power Cooperative, Central Power Electric Cooperative, Inc., Corn Belt Power Cooperative, Dairyland Power Cooperative, Deseret Generation & Transmission Co-operative, Inc., East Kentucky Power Cooperative, Inc., East River Electric Power Cooperative, Inc., East Texas Electric Cooperative, Inc., Georgia Transmission Corporation, Golden Spread Electric Cooperative, Inc., Hoosier Energy Rural Electric Cooperative, Inc., Kansas Electric Power Cooperative, Inc., Minnkota Power Cooperative, Inc., North Carolina Electric Membership Corporation, Northeast Texas Electric Cooperative, Inc., Northwest Iowa Power Cooperative, Oglethorpe Power Corporation, Powersouth Energy Cooperative, Prairie Power, Inc., Rushmore Electric Power Cooperative, Inc., Sam Rayburn G&T Electric Cooperative,

Inc., San Miguel Electric Cooperative, Inc., Seminole Electric Cooperative, Inc., South Mississippi Electric Power Association, South Texas Electric Cooperative, Inc., Southern Illinois Power Cooperative, Sunflower Electric Power Corporation, Tex-La Electric Cooperative of Texas, Inc., Upper Missouri G. & T. Electric Cooperative, Inc., Wabash Valley Power Association, Inc., Western Farmers Electric Cooperative, and Wolverine Power Supply Cooperative, Inc.; No. 15-1377: Westar Energy, Inc.; No. 15-1378: NorthWestern Corporation, doing business as NorthWestern Energy; No. 15-1379: the National Association of Home Builders; No. 15-1380: the State of North Dakota; No. 15-1382: the Chamber of Commerce of the United States of America, National Association of Manufacturers, American Fuel & Petrochemical Manufacturers, National Federation of Independent Business, American Chemistry Council, American Coke and Coal Chemicals Institute, American Foundry Society, American Forest & Paper Association, American Iron and Steel Institute, American Wood Council, Brick Industry Association, Electricity Consumers Resource Council, Lignite Energy Council, National Lime Association, National Oilseed Processors Association, and the Portland Cement Association; No. 15-1383: the Association of American Railroads; No. 15-1386: Luminant Generation Company, LLC, Oak Grove Management Company, LLC, Big Brown Power Company, LLC, Sandow Power Company, LLC, Big Brown Lignite Company, LLC, Luminant Mining Company, LLC, and Luminant Big Brown Mining Company, LLC; No. 15-1393: Basin Electric Power Cooperative, Inc.; No. 15-1398: Energy & Environment Legal Institute; No. 15-1409: Mississippi Department of Environmental Quality, State of Mississippi, and Mississippi Public Service Commission; No. 15-1410: International Brotherhood of Electrical Workers, AFL-CIO; No. 15-1413: Entergy Corporation; No. 15-1418: LG&E and KU Energy LLC; No. 15-1422: West Virginia Coal Association; No. 15-1432: Newmont Nevada Energy Investment, LLC, and Newmont USA Limited; No. 15-1442: the Kansas City Board of Public Utilities – Unified Government of Wyandotte County/Kansas City, Kansas; No. 15-1451: the North American Coal Corporation, Coteau Properties Company, Coyote Creek Mining Company, Falkirk Mining Company, Mississippi Lignite Mining Company, North American Coal Royalty Company, NODAK Energy Services, LLC, Otter Creek Mining Company, LLC, and Sabine Mining Company; No. 15-1459: Indiana Utility Group; No. 15-1464: Louisiana Public Service Commission; No. 15-1470: GenOn Mid-Atlantic, LLC, Indian River Power LLC, Louisiana Generating LLC, Midwest Generation, LLC, NRG Chalk Point LLC, NRG Power Midwest LP, NRG Rema LLC, NRG Texas Power LLC, NRG Wholesale Generation LP, and Vienna Power LLC; No. 15-1472: Prairie State Generating Company LLC; No. 15-1474: Minnesota Power, an operating division of ALLETE, Inc.; No. 15-1475: Denbury Onshore, LLC; No. 15-1477: Energy-Intensive Manufacturers' Working Group on Greenhouse Gas Regulation; No. 15-1483: Local Government Coalition for Renewable Energy; No. 15-1488: Competitive Enterprise Institute, Buckeye Institute for Public Policy Solutions,

Independence Institute, Rio Grande Foundation, Sutherland Institute, Klaus J. Christoph, Samuel R. Damewood, Caterine C. Dellin, Joseph W. Luquire, Lisa R. Markham, Patrick T. Peterson, and Kristi Rosenquist;

Intervenor for Petitioners: Peabody Energy Corporation, Dixon Bros., Inc., Nelson Bros., Inc., Wesco International, Inc., Norfolk Southern Corporation, Joy Global Inc., Gulf Coast Lignite Coalition;

Respondents: The United States Environmental Protection Agency and Regina A. McCarthy, Administrator, United States Environmental Protection Agency;

Intervenors for Respondent: American Wind Energy Association, Advanced Energy Economy, American Lung Association, Center for Biological Diversity, Clean Air Council, Clean Wisconsin, Conservation Law Foundation, Environmental Defense Fund, Natural Resources Defense Council, Ohio Environmental Council, Sierra Club, Solar Energy Industries Association; the States of New York, California, Connecticut, Delaware, Hawaii, Illinois, Iowa, Maine, Maryland, Minnesota, New Hampshire, New Mexico, Oregon, Rhode Island, Vermont, and Washington; the Commonwealths of Massachusetts and Virginia; the District of Columbia; the Cities of Boulder, Chicago, New York, Philadelphia, Seattle, South Miami, and Broward County, Florida; City of Austin, doing business as Austin Energy, New York Power Authority, Sacramento Municipal Utility District, Southern California Edison Company, City of Los Angeles Department of Water and Power, Nextera Energy, Inc., Calpine Corporation, National Grid Generation, LLC, Pacific Gas and Electric Company, West Virginia Highlands Conservancy, Ohio Valley Environmental Coalition, Coal River Mountain Watch, Kanawha Forest Coalition, Mon Valley Clean Air Coalition, Keepers of the Mountains Foundation;

Amicus Curiae for Petitioner: Philip Zoebisch, Municipal Electric Authority of Georgia, Pacific Legal Foundation, Texas Public Policy Foundation, Morning Star Packing Company, Merit Oil Company, Loggers Association of Northern California, Norman R. Brown, Members of Congress[1], State of Nevada, Consumers' Research,

[1] Sen. Mitch McConnell, Sen. James M. Inhofe, Sen. Lamar Alexander, Sen. John Barrasso, Sen. Roy Blunt, Sen. John Boozman, Sen. Shelly Moore Capito, Sen. Bill Cassidy, Sen. Dan Coats, Sen. John Cornyn, Sen. Michael D. Crapo, Sen. Ted Cruz, Sen. Steve Daines, Sen. Michael B. Enzi, Sen. Deb Fischer, Sen. Orrin G. Hatch, Sen. John Hoeven, Sen. Ron Johnson, Sen. James Lankford, Sen. Joe Manchin, Sen. John McCain, Sen. Lisa Murkowski, Sen. Rand Paul, Sen. James E. Risch, Sen. Pat Roberts, Sen. M. Michael Rounds, Sen. Marco Rubio, Sen. Tim Scott, Sen. Richard C. Shelby, Sen. Dan Sullivan, Sen. John Thune, Sen. Patrick J. Toomey, Sen. David Vitter, Sen. Roger Wicker, Speaker Paul Ryan, Majority Leader Kevin McCarthy, Majority Whip Steve Scalise, Rep. Cathy

(Footnote Continued …)

Landmark Legal Foundation, Former State Public Utility Commissioners[2], 60Plus Association, Southeastern Legal Foundation, State and Local Business Associations[3],

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[2] Congressman Kevin Cramer, David Armstrong, Randall Bynum, Charles Davidson, Jeff Davis, Mark David Goss, Robert Hix, Terry Jarrett, Larry Landis, Jon McKinney, Carl Miller, Polly Page, Anthony Rachal III, Dr. Edward Salmon, Joan Smith, Jim Sullivan, David Wright, and Tom Wright.

[3] Texas Association of Business, Pennsylvania Chamber of Business and Industry, Ohio Chamber of Commerce, Alaska Chamber of Commerce, Arizona Chamber of Commerce and Industry, Arkansas State Chamber of Commerce/Associated Industries of Arkansas, Associated Industries of Missouri,

(Footnote Continued …)

Association of Commerce and Industry, Bakersfield Chamber of Commerce, Beaver Dam Chamber of Commerce, Billings Chamber of Commerce, Birmingham Business Alliance, Bismarck Mandan Chamber of Commerce, Blair County Chamber of Commerce, Bowling Green Area Chamber of Commerce, Bullitt County Chamber of Commerce, Business Council of Alabama, Campbell County Chamber of Commerce, Canton Regional Chamber of Commerce, Carbon County Chamber of Commerce, Carroll County Chamber of Commerce, Catawba Chamber of Commerce, Central Chamber of Commerce, Central Louisiana Chamber of Commerce, Chamber Southwest Louisiana, Chamber630, Chandler Chamber of Commerce, Colorado Association of Commerce and Industry, Colorado Business Roundtable, Columbus Area Chamber of Commerce, Dallas Regional Chamber, Davis Chamber of Commerce, Detroit Regional Chamber of Commerce, Eau Claire Area Chamber of Commerce, Erie Regional Chamber & Growth Partnership, Fall River Area Chamber of Commerce & Industry, Fremont Area Chamber of Commerce, Georgia Association of Manufacturers, Georgia Chamber of Commerce, Gibson County Chamber of Commerce, Gilbert Chamber of Commerce, Grand Junction Area Chamber, Grand Rapids Area Chamber of Commerce, Great Lakes Metro Chambers Coalition, Greater Flagstaff Chamber of Commerce, Greater Green Bay Chamber of Commerce, Greater Irving-Las Colinas Chamber of Commerce, Greater Lehigh Valley Chamber of Commerce, Greater Muhlenberg Chamber of Commerce, Greater North Dakota Chamber of Commerce, Greater Orange Area Chamber of Commerce, Greater Phoenix Chamber of Commerce, Greater Shreveport Chamber of Commerce, Greater Summerville/Dorchester County Chamber of Commerce, Greater Tulsa Hispanic Chamber of Commerce, Greater West Plains Area Chamber of Commerce, Hartford Area Chamber of Commerce, Hastings Area Chamber of Commerce, Hazard Perry County Chamber of Commerce, Illinois Manufacturers Association, Indiana Chamber of Commerce, Indiana County Chamber of Commerce, Iowa Association of Business and Industry, Jackson County Chamber, Jax Chamber of Commerce, Jeff Davis Chamber of Commerce, Johnson City Chamber of Commerce, Joplin Area Chamber of Commerce, Kalispell Chamber of Commerce, Kansas Chamber of Commerce, Kentucky Association of Manufacturers, Kentucky Chamber of Commerce, Kingsport Chamber of Commerce, Kyndle, Kentucky Network for Development, Leadership and Engagement, Latino Coalition, Lima - Allen County Chamber of Commerce, Lincoln Chamber of Commerce, Longview Chamber of Commerce, Loudoun Chamber of Commerce, Lubbock Chamber of Commerce, Madisonville-Hopkins County Chamber of Commerce, Maine State Chamber of Commerce, Manhattan Chamber of Commerce, McLean County Chamber of Commerce, Mercer Chamber of Commerce, Mesa Chamber of Commerce, Metro Atlanta Chamber of Commerce, Metropolitan Milwaukee Association of Commerce, Michigan Chamber of Commerce, Michigan Manufacturers Association, Midland Chamber of Commerce, Milbank Area Chamber of Commerce, Minot Area Chamber of Commerce, Mississippi Economic Council The State Chamber of Commerce, Mississippi Manufacturers Association, Missouri Chamber of Commerce, Mobile Area Chamber of Commerce, Montana Chamber of Commerce, Montgomery Area Chamber of Commerce, Morganfield Chamber of Commerce, Mount Pleasant/Titus County Chamber of Commerce, Myrtle Beach Chamber of Commerce, Naperville Area Chamber of Commerce, Nashville Area Chamber of Commerce, National Black Chamber of Commerce, Nebraska Chamber of Commerce and Industry, Nevada Manufacturers Association, New Jersey Business & Industry Association, New Jersey State Chamber of Commerce, New Mexico Business Coalition, Newcastle Area Chamber of Commerce, North Carolina Chamber of Commerce, North Country Chamber of Commerce, Northern Kentucky Chamber of Commerce, Ohio Manufacturers Association, Orrville Area Chamber of

(Footnote Continued …)

Inc., Hispanic Leadership Fund, National Black Chamber of Commerce, Joseph S. D'Aleo, Harold H. Doiron, Don J. Easterbrook, Theodore R. Eck, Gordon J. Fulks, William M. Gray, Craig D. Idso, Richard A. Keen, Anthony P. Lupo, Thomas P. Sheahen, S. Fred Singer, James P. Wallace, III, George T. Wolff; and

Amicus Curiae for Respondent: William D. Ruckelshaus, William K. Reilly, Institute for Policy Integrity at New York University Law School, National League of Cities, United States Conference of Mayors; the Cities of Baltimore, Maryland; Coral Gables, Florida; Grand Rapids, Michigan; Houston, Texas; Jersey City, New Jersey; Los Angeles, California; Minneapolis, Minnesota; Pinecrest, Florida; Portland, Oregon; Providence, Rhode Island; Salt Lake City, Utah; San Francisco, California; West Palm Beach, Florida; Boulder County, Colorado; American Thoracic Society, American Medical Association, American College of Preventive Medicine, American College of Occupational and Environmental Medicine, Service Employees International Union, American Sustainable Business Council, South Carolina Small Business Chamber of Commerce.

Commerce, Oshkosh Chamber of Commerce, Paducah Area Chamber of Commerce, Paintsville/Johnson County Chamber of Commerce, Pennsylvania Manufacturers Association, Port Aransas Chamber of Commerce/Tourist Bureau, Powell Valley Chamber of Commerce, Putnam Chamber of Commerce, Rapid City Area Chamber of Commerce, Rapid City Economic Development Partnership, Redondo Beach Chamber of Commerce, Roanoke Valley Chamber of Commerce, Rock Springs Chamber of Commerce, Salt Lake Chamber of Commerce, San Diego East County Chamber of Commerce, San Gabriel Valley Economic Partnership, Savannah Area Chamber of Commerce, Schuylkill Chamber of Commerce, Shoals Chamber of Commerce, Silver City Grant County Chamber of Commerce, Somerset County Chamber of Commerce, South Bay Association of Chambers of Commerce, South Carolina Chamber of Commerce, South Dakota Chamber of Commerce, Southeast Kentucky Chamber of Commerce, Southwest Indiana Chamber, Springerville-Eagar Chamber of Commerce, Springfield Area Chamber of Commerce, St. Louis Regional Chamber, State Chamber of Oklahoma, Superior Arizona Chamber of Commerce, Tempe Chamber of Commerce, Tennessee Chamber of Commerce and Industry, Tucson Metro Chamber of Commerce, Tulsa Chamber of Commerce, Tyler Area Chamber of Commerce, Upper Sandusky Area Chamber of Commerce, Utah Valley Chamber, Victoria Chamber of Commerce, Virginia Chamber of Commerce, Wabash County Chamber of Commerce, West Virginia Chamber of Commerce, West Virginia Manufacturers Association, Westmoreland County Chamber of Commerce, White Pine Chamber of Commerce, Wichita Metro Chamber of Commerce, Williamsport/Lycoming Chamber of Commerce, Wisconsin Manufacturers & Commerce, Wyoming Business Alliance, Wyoming State Chamber of Commerce, Youngstown Warren Regional Chamber.

Movant-Amicus Curiae for Respondent: Former State Energy and Environmental Officials.[4]

B. Rulings under Review.

This final agency action under review is: Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Final Rule, 80 Fed. Reg. 64,662 (October 23, 2015).

C. Related Cases.

This following consolidated cases pending before the Court challenge a related agency action: State of North Dakota v. EPA, No. 15-1381; Murray Energy Corporation v. EPA, et al., No. 15-1396; Energy & Environment Legal Institute v. EPA, No. 15-1397; State of West Virginia, et al., v. EPA, et al., No. 15-1399; International Brotherhood of Boilermakers v. EPA, No. 15-1434; Peabody Energy Corporation v. EPA, et al., No. 15-1438; Utility Air Regulatory Group, et al., v. EPA, No. 15-1448; National Mining Association v. EPA, No. 15-1456; Indiana Utility Group v. EPA, et al., No. 15-1458; United Mine Workers of America v. EPA, No. 15-1463; Alabama Power Company, et al., v. EPA, et al., No. 15-1468; Chamber of Commerce, et al., v. EPA, et al., No. 15-1469; Biogenic CO2 Coalition v. EPA, et al., No. 15-1480; American Coalition for Clean Coal Electricity v. EPA, No. 15-1481;

[4] Matt Baker, Janet Gail Besser, Ron Binz, Michael H. Dworkin, Jeanne Fox, Dian Grueneich, Roger Hamilton, Paul Hibbard, Karl Rábago, Barbara Roberts, Cheryl Roberto, Jim Roth, Kelly Speakes-Backman, Larry Soward, Sue Tierney, Jon Wellinghoff, and Kathy Watson.

Luminant Generation Company, et al., v. EPA, et al., No. 15-1482; and National Rural Electric Cooperative Association, et al., v. EPA, No. 15-1484.

/s/ *Eric G. Hostetler*
ERIC G. HOSTETLER

TABLE OF CONTENTS

TABLE OF AUTHORITIES

CASES

*Authorities chiefly replied upon are marked with an asterisk.

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STATUTES

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CODE OF FEDERAL REGULATIONS

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FEDERAL REGISTERS

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LEGISLATIVE HISTORY

MISCELLANEOUS

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GLOSSARY

ADA	Americans with Disabilities Act
CAA	Clean Air Act
CO_2	Carbon Dioxide
DOE	Department of Energy
EIA	Energy Information Administration
EPA	Environmental Protection Agency
ERCOT	Electric Reliability Council of Texas
ESA	Endangered Species Act
FERC	Federal Energy Regulatory Commission
JA	Joint Appendix
NAAQS	National Ambient Air Quality Standards
NO_x	Nitrogen Oxide
NREL	National Renewable Energy Laboratory
RIA	Regulatory Impact Analysis
RTC	Response to Comments
SO_2	Sulfur Dioxide
TSD	Technical Support Document
UARG	Utility Air Regulatory Group

INTRODUCTION

The Clean Power Plan ("the Rule") addresses the Nation's most important and urgent environmental challenge. The Rule will secure critically important reductions in carbon dioxide ("CO_2") emissions from what are by far the largest emitters in the United States—fossil-fuel-fired power plants. CO_2 and other heat-trapping greenhouse-gas emissions pose a monumental threat to Americans' health and welfare by driving long-lasting changes in our climate, leading to an array of severe negative effects, which will worsen over time. These effects include rising sea levels that could flood coastal population centers; increasingly frequent and intense weather events such as storms, heat waves, and droughts; impaired air and water quality; shrinking water supplies; the spread of infectious disease; species extinction; and national security threats.

The Clean Air Act ("the Act" or "the CAA") provides the Environmental Protection Agency ("EPA") well-established authority to abate threats to public health and welfare by limiting the amount of air pollution that power plants pump into the atmosphere. For decades, a host of CAA regulatory programs have limited various pollutants emitted by these plants.

The Supreme Court has clarified that EPA's duties under CAA Section 111(d), 42 U.S.C. § 7411(d), encompass the responsibility to limit power plants' CO_2 emissions to abate climate change threats. Am. Elec. Power Co. v. Connecticut

("AEP"), 564 U.S. 410, 423 (2011). The Rule properly exercises the statutory authority recognized in AEP.

EPA has thoroughly and carefully applied—based on an extensive administrative record—the Section 111 criteria to the unique circumstances of CO_2 emissions from fossil-fuel-fired power plants. The Rule determines the "best system of emission reduction" ("Best System") for existing power plants and an achievable degree of cost-reasonable CO_2 emission limitation that reflects that system's application. 42 U.S.C. § 7411(a)(1).

To determine the Best System, EPA closely examined the strategies, technologies, and approaches that power plants and states are already using to reduce CO_2 emissions. Based on that analysis, the Best System applied by EPA includes highly cost-effective, flexible, and proven emission-reduction strategies premised on increased utilization of cleaner forms of power generation. These emission-reduction strategies—which EPA terms "generation-shifting"—are not only already widely used but have been previously incorporated into numerous CAA regulatory programs for the power industry. These strategies take advantage of the industry's unique characteristics, including the fact that power plants generate electricity within an interconnected electric grid using processes that have vastly different air-pollution impacts, with all sources' operations closely and constantly coordinated to keep supply and demand in balance.

Under the Act's program of cooperative federalism, the Rule applies the Best System to calculate achievable emission-reduction targets for states to meet (or, if a state so chooses, for EPA to implement directly) through their subsequent establishment of specific emission standards for specific plants. The Rule gradually phases in emission standards from 2022 to 2030; provides states considerable flexibility to design standards tailored to their individual circumstances and preferences; and follows existing industry trends without resulting in any fundamental redirection of the energy sector.

Petitioners seek to thwart any federal limitation of power plants' voluminous CO_2 emissions, or at least limit the scope to negligible requirements that would fail to address the threats presented and fall far short of what is cost-effectively achievable. To these ends, Petitioners champion statutory constructions that are not required by the statutory text and would frustrate Congress's intent.

The Rule reflects the eminently reasonable exercise of EPA's recognized statutory authority. It will achieve cost-effective CO_2 reductions from an industry that has already demonstrated its ability to comply with robust pollution-control standards through the same measures and flexible approaches. The Rule fulfills both the letter and spirit of Congress's direction in the Act, and the petitions should be denied.

STATEMENT OF JURISDICTION

The consolidated petitions for review of the Rule were timely filed in this Court pursuant to 42 U.S.C. § 7607(b).

STATEMENT OF THE ISSUES

Section 111(d)(1)(A) directs the regulation of existing sources of certain pollutants through a program of cooperative federalism. It authorizes EPA to set guidelines directing states to establish "standard[s] of performance" for sources, which must reflect the emission limitation achievable applying the "best system of emission reduction" EPA determines has been adequately demonstrated, taking into account cost and other factors. Against this background, this case presents the following issues:

1. Did EPA appropriately determine that the Best System of CO_2 emission reduction for fossil-fuel-fired power plants includes proven and cost-effective strategies to increase utilization of cleaner forms of power generation, given that power plants operate within an interconnected grid linking facilities that have vastly disparate CO_2 emissions, and given that alternative systems of emission reduction such as sequestering CO_2 underground would be far more expensive?
2. Did EPA reasonably conclude that the prior regulation of different pollutants emitted by power plants under a different statutory program (42 U.S.C. § 7412, the hazardous pollutant program) does not bar regulation of power-plant CO_2 emissions under Section 111(d)?
3. Does a regulatory program that permits states to choose between regulating power plants' CO_2 emissions themselves or declining to do so—in which

case EPA would have full responsibility for directly regulating sources in that state—violate the Tenth Amendment, or is it a lawful exercise in "cooperative federalism"?

4. Does a procedural challenge alleging inadequate notice meet the requirements of 42 U.S.C. § 7607 where the identified provisions flow directly from EPA's proposals and where procedural challenges were not raised with reasonable specificity during the period for public comment?
5. Did EPA identify an achievable degree of emission limitation where EPA developed a robust record and applied conservative estimates for projecting feasible heat-rate improvements and increased use of cleaner production methods over the Rule's lengthy implementation period?
6. Did EPA properly consider, based on a robust record, the relevant statutory factors and reasonably determine that the performance standards will not compromise the reliability of the electricity system?
7. Did EPA properly calculate emission reduction goals for Wisconsin, Wyoming and Utah, and reasonably disallow compliance credits for existing generation that is already accounted for in a baseline level?

PERTINENT STATUTES AND REGULATIONS

The pertinent statutes and regulations are set forth in the addendum.

STATEMENT OF THE CASE

I. Statutory and Regulatory Background.

The purpose of the CAA is to promote public health and welfare by addressing air pollution. 42 U.S.C. § 7401(b)(1). The Act establishes a comprehensive program for air-pollution control through a system of shared federal and state responsibility.

The CAA's regulatory program addresses three general categories of pollutants emitted from existing stationary sources: (1) criteria pollutants, which are addressed under the National Ambient Air Quality Standards ("NAAQS") program, see 42 U.S.C. §§ 7408-7410; (2) hazardous air pollutants, which are addressed under the National Emission Standards for Hazardous Air Pollutants program, see 42 U.S.C. § 7412; and (3) "pollutants that are (or may be) harmful to public health or welfare but are not or cannot be controlled under [42 U.S.C. §§ 7408-7410 or 7412]," which are addressed under the Section 111 "Standard of Performance" program, see 42 U.S.C. § 7411. 40 Fed. Reg. 53,340 (Nov. 17, 1975). Together, these three programs constitute a comprehensive framework to regulate air pollutants with "no gaps in control activities pertaining to stationary source emissions that pose any significant danger to public health or welfare." S. Rep. No. 91-1196, at 20 (1970); see 80 Fed. Reg. 64,662, 64,711 (Oct. 23, 2015).

Section 111 "speaks directly to emissions of [CO_2]" from the Nation's existing power plants. AEP, 564 U.S. at 424. Section 111 "directs the EPA Administrator to list 'categories of stationary sources' that 'in [her] judgment … caus[e], or contribut[e]

significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare.'" Id. (quoting 42 U.S.C. § 7411(b)(1)(A)). For each category, EPA must prescribe federal "standards of performance" for emissions of pollutants from new or modified sources. 42 U.S.C. § 7411(b)(1)(B). In addition, EPA "shall prescribe regulations" under Section 111(d) with respect to existing sources for pollutants not covered under certain other programs. Id. § 7411(d). These regulations are not designed to regulate existing sources directly, but instead to guide "each State" in submitting to EPA a "satisfactory" plan that establishes "standards of performance" for any existing source of the relevant pollutant. Id.

A "standard of performance" is defined as:

> a standard for emissions of air pollutants which 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.

Id. § 7411(a)(1). Under that definition, the emission requirements imposed on particular sources must "reflect[]" an overarching, foundational determination that is made by EPA. Specifically, EPA identifies those "system[s] of emission reduction" that are "adequately demonstrated" for a particular source category; determines the "best" of these systems, based on the relevant criteria; and then derives from that system an "achievable" emission-performance level for sources. 80 Fed. Reg. at 64,720.

EPA promulgates its determination in "emission guidelines." 40 C.F.R. Part 60, Subpart B. These guidelines also provide procedures for states to submit, and EPA to approve or disapprove, individualized state plans, which specify the specific emission standards applicable to particular sources within a state, along with implementation measures. 42 U.S.C. § 7411(d)(1). If a state elects not to submit a plan, or does not submit a "satisfactory" plan, EPA must promulgate a federal plan that directly limits emissions from the state's sources. Id. § 7411(d)(2).

II. Factual Background.

A. Greenhouse-Gas Emissions and Climate Change.

CO_2 and other greenhouse gases in the atmosphere have risen to unprecedented levels as a result of human activities, and these gases are the root cause of ongoing global climate change. 74 Fed. Reg. 66,496, 66,517 (Dec. 15, 2009). In Massachusetts v. EPA, 549 U.S. 497 (2007), the Supreme Court held that the "sweeping definition of 'air pollutant'" in the CAA unambiguously covers "greenhouse gases"—so named because they "act[] like the ceiling of a greenhouse, trapping solar energy and retarding the escape of reflected heat." Id. at 505, 528-29 (citing 42 U.S.C. § 7602(g)). On remand, EPA comprehensively assessed the effects of greenhouse-gas pollution, concluding that it endangers the public health and welfare of current and future generations and thus requires CAA regulation. 74 Fed. Reg. at 66,516-36. EPA determined, among other things, that the risks include sea level rise, extreme weather events, drought, and harm to agriculture and water

resources; as well as sickness or mortality from reduced air quality, intensified heat waves, and increases in food- and water-borne pathogens. Id. at 66,497, 66,524-36.

Climate change is already occurring. Nineteen of the twenty warmest years on record have all occurred in the past twenty years, and 2015 was the hottest year ever recorded.[5] Recent scientific assessments have found that climate change is damaging every area of the country. 80 Fed. Reg. at 64,686-88. These assessments make clear that substantially reducing emissions now is necessary to avoid the worst impacts. Id.

In December 2015, 195 countries adopted the most ambitious climate change agreement in history, which establishes a long-term global framework to reduce greenhouse-gas emissions.[6] This agreement sets a goal of keeping warming well below two degrees Celsius and recognizes that to meet that goal countries will need to reduce their greenhouse-gas emissions as soon as possible.

B. Fossil-Fuel-Fired Power Plants.

Fossil-fuel-fired power plants are particularly large sources of numerous air pollutants. Since the CAA's passage in 1970, EPA has set emission requirements for these plants to fulfill the Act's primary objective to protect public health and the environment. Many CAA regulatory programs apply to these plants' emissions,

[5] NOAA, Global Temperature Recap, available at https://www.climate.gov/news-features/videos/2014-global-temperature-recap; https://www.climate.gov/news-features/featured-images/no-surprise-2015-sets-new-global-temperature-record

[6] Paris Agreement, available at http://www.cop21.gouv.fr/en/195-countries-adopt-the-first-universal-climate-agreement/.

including the NAAQS, Section 111, hazardous-pollutant, regional-haze, and acid-rain programs. To implement these programs, EPA has promulgated numerous rules limiting emissions from these plants in a manner that does not interfere with the reliable supply of electricity at a reasonable cost.[7]

Fossil-fuel-fired power plants are by far the highest-emitting stationary sources of CO_2, generating approximately 37% of all domestic man-made CO_2 emissions—almost three times as much as the next ten stationary-source categories combined.[8] No serious effort to address the monumental problem of climate change can succeed without meaningfully limiting these plants' CO_2 emissions.

The Supreme Court addressed the regulation of CO_2 from power plants in AEP. There, the utility industry used EPA's ability to regulate power-plant CO_2 emissions to oppose federal common law nuisance claims. Examining Section 111(d), the Court concluded that the Act provides a means for EPA to provide the "same relief" sought by the plaintiffs—that is, limitations on power-plant CO_2 emissions that would abate their contribution to climate change. The Court found that because the Act "'speaks directly' to emissions of [CO_2] from the defendants' plants," there was "no room for a parallel track." 564 U.S. at 424-25. The Court explained that EPA is an "altogether fitting" "expert agency" that is "best suited to serve as primary

[7] 80 Fed. Reg. at 64,696-99.

[8] Id. at 64,689; EPA-HQ-OAR-2013-0602-36479, 3-14, JA___.

regulator" of power-plant CO_2 emissions, and to determine "the appropriate amount of [CO_2] regulation." Id. at 427. The Court further explained that Congress, through Section 111(d), specifically entrusted EPA to engage in the "complex balancing" task of weighing "the environmental benefit potentially achievable" with "our Nation's energy needs and the possibility of economic disruption." Id. The Court added that "[t]he appropriate amount of regulation … cannot be prescribed in a vacuum: as with other questions of national or international policy, informed assessment of competing interests is required." Id.

C. Overview of the Clean Power Plan.

In 2014, EPA proposed CO_2 emission standards for new and existing fossil-fuel-fired power plants. See 79 Fed. Reg. 34,830 (June 18, 2014) (existing sources); 79 Fed. Reg. 34,960 (June 18, 2014) (modified sources); 79 Fed. Reg. 1430 (Jan. 8, 2014) (new sources). The existing source proposal ("the Proposal") proposed state-by-state emission-reduction goals. Later in 2014, after receiving extensive stakeholder input, EPA published a supplemental Notice of Data Availability ("Supplemental Notice") for the existing source rule, soliciting comment on stakeholders' suggestions. 79 Fed. Reg. 64,543 (Oct. 30, 2014).

On October 23, 2015, EPA published two final rules. One establishes CO_2 emission standards under Section 111(b) for new, modified, and reconstructed plants.

80 Fed. Reg. 64,510.[9] The other, the Rule, establishes Section 111(d) emission guidelines for states to follow in developing plans limiting CO_2 from existing plants. 80 Fed. Reg. 64,662. EPA additionally proposed two approaches to a federal plan for states that do not submit an approvable plan and models for states to use in developing their own plans. 80 Fed. Reg. 64,966 (Oct. 23, 2015).

1. The Building Blocks and the best system of emission reduction.

In the Rule, based on an analysis of what power plants are already doing with the purpose or effect of reducing CO_2 emissions, EPA determined that the "best system of emission reduction" "adequately demonstrated" for existing plants is a combination of three general types of pollution-control measures, referred to as "Building Blocks":

> (1) improving heat rates[10] at coal-fired steam plants ("Building Block 1");
>
> (2) substituting generation from lower-emitting existing natural gas combined-cycle plants ("gas plants")[11] for generation from higher-emitting steam plants, which are primarily coal-fired ("Building Block 2");[12] and

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[9] This rule is the subject of a separate set of consolidated petitions in this Court (Case No. 15-1381 and consolidated cases).

[10] Heat rate represents the efficiency with which plants convert fuel to electricity.

[11] For simplicity, coal-, oil- and gas-fired steam plants collectively are referred to in this brief as "coal-fired" or "steam" plants or units. Accord 80 Fed. Reg. at 64,795. Natural gas combined-cycle units are referred to as "gas" or "gas-fired" plants or units.

[12] A typical gas-fired plant produces less than half as much CO_2 per megawatt-hour of electricity generated as a typical coal-fired plant. Id.

> (3) substituting generation from new zero-emitting renewable-energy generating capacity for generation from existing fossil-fuel-fired plants, which are primarily coal- or gas-fired ("Building Block 3").[13]

80 Fed. Reg. at 64,666-67. EPA determined that these measures are collectively the Best System because plants can implement them to achieve substantial CO_2 reductions cost-effectively, without adverse energy reliability impacts. Id. at 64,744-51.

EPA evaluated a full range of alternatives, including available technological measures that can be integrated into the design and operation of individual plants, such as converting coal-fired plants to combust a combination of natural gas and coal ("co-firing") or capturing CO_2 and storing it securely underground ("carbon sequestration"). Id. at 64,724-28. EPA concluded that some co-firing and carbon-sequestration measures were "technically feasible and within price ranges that the EPA has found to be cost effective in the context of other [greenhouse-gas] rules, that a segment of the source category may implement these measures, and that the resulting emission reductions could be potentially significant." Id. at 64,727. EPA concluded, however, that Building Blocks 2 and 3 (generation-shifting) would be less expensive and otherwise better meet the relevant statutory factors, in part because

[13] Renewable-energy plants that emit no CO_2 include hydroelectric, wind, solar, and some geothermal plants.

they are the prevalent approach states and companies are already taking to address CO_2 emissions. Id.

EPA explained that generation-shifting measures are well-established techniques for reducing power-plant emissions that have already been incorporated into many other CAA programs. Id. at 64,709, 64,725. Power generators produce a relatively fungible product—electricity—and they operate within an interconnected grid in which electricity generally cannot be stored in large volumes, so generation and use must be balanced in real time. Id. at 64,677. Because of their uniquely interconnected and interdependent operations, power plants shift generation in the normal course of business. For example, assuming demand is constant, when a power plant goes off-line for repairs, its generation is replaced by another plant's.

Generators can cost-effectively reduce pollution by shifting generation from higher- to lower-emitting plants, thereby achieving a degree of emission limitation that might otherwise have required more expensive investments in end-of-the-stack technologies at their particular plants. Id. at 64,782 n.604, 64,795-811. For example, shifting generation from a coal-fired plant to a gas-fired plant or renewable generation generally results in a 50% or 100%, respectively, emission reduction. Id. at 64,795.

EPA described in great detail the specific steps that particular sources may take to implement generation-shifting measures as a pollution-control strategy for purposes of complying with state-adopted emission standards. Id. at 64,731-33, 64,796, 64,804-06; Legal Memorandum Accompanying Clean Power Plan for Certain

Issues ("Legal Mem.") 137-48, EPA-HQ-OAR-2013-0602-36872, JA___. For example, if a state were to establish rate-based[14] limitations, a particular source might make direct investments in cleaner power generation, for which it could receive emission-rate credits (i.e., an adjustment to its actual emission rate for purposes of demonstrating compliance with a regulatory standard). Or the source might acquire emission-rate credits from other sources that have invested in eligible measures. 80 Fed. Reg. at 64,731-33.

If a state were to establish a mass-based trading program[15] (limiting the total mass of its sources' emissions), its higher-emitting sources would need more emission allowances, and thereby incur higher costs, than lower-emitting sources. In this manner, a mass-based approach provides market-based economic incentives for lower-emitting generation.

2. The uniform rates and state plans.

Having identified the "best" CO_2 reduction system, EPA quantified the degree of emission reduction achievable under that system for two subcategories of sources: steam units and gas-fired units. Id. at 64,663. To do so, EPA applied the Best System

[14] A rate-based standard is expressed in the form of a rate of emissions per unit of energy production (e.g., pounds per megawatt-hour).

[15] Trading-based emission programs can take different forms, but generally provide sources with an incentive to employ cost-effective emission-reduction strategies by enabling sources, through projects that reduce emissions, to earn or save credits or allowances, which can then be sold to other sources to meet emission requirements.

to 2012 baseline data and quantified, in the form of CO_2 emission rates, the reductions achievable for each subcategory in 2030 in each of three regions, known as "Interconnections," in which electricity generation is managed.[16] Id. at 64,738. EPA then established the least stringent of the three calculated regional rates as nationally uniform performance rates ("uniform rates") for each subcategory: 771 pounds of CO_2 per megawatt-hour (lb. CO_2/MWh) for gas-fired units, and 1305 lb. CO_2/MWh for steam units. Id. at 64,742, 64,961 (Table 1). These uniform rates are effective emission rates, incorporating adjustments to actual rates to credit sources' ability to implement generation-shifting measures as a pollution-control strategy.

To enhance state planning flexibility, the Rule translates the uniform rates into equivalent state-specific emission goals for 2030, expressed in terms of both the rate of emissions per unit of energy production ("rate-based goals") and the total mass of emissions ("mass-based goals"). Id. at 64,820. The Rule then gives each state several options for its plan: simply apply the uniform rates to all sources within the state, or otherwise meet either the equivalent rate-based or mass-based state-specific goals. Id. at 64,832-37. Under the latter options, states can assign emission standards for particular plants that depart from the uniform rates, so long as the equivalent state

[16] Electricity across the continental United States is transmitted and distributed through three physically interconnected networks: the Eastern Interconnection, the Western Interconnection, and the Texas Interconnection, which each act like a single machine. 80 Fed. Reg. at 64,692.

goals are met. The Rule thus does not require any particular amount of reductions by any particular source at any particular time.

The Rule does not limit states and sources to using the specific measures identified by EPA as the Best System. Id. at 64,710. Instead, states and sources have the flexibility to choose from a wide range of measures to achieve the emission limitations, including technological controls such as carbon sequestration or co-firing (which some sources are already undertaking). Id. at 64,756-57. The Rule also accommodates emission-trading programs and other compliance strategies that significantly enhance flexibility and cost-effectiveness. Id. at 64,834-35.

To further enhance state flexibility, the Rule authorizes a "state measures" approach, under which states may defer imposing Section 111(d) emission standards on plants by relying upon new or existing state-law-only measures applicable to entities other than fossil-fuel-fired power plants (e.g., programs that encourage more efficient energy use and thereby indirectly reduce power plants' emissions by lowering demand for power), provided the state goal is achieved. Id. at 64,835-37.[17]

While EPA's guidelines contemplate that the industry will gradually move towards cleaner production processes, the guidelines do not require any particular source to reduce its operations. Regardless of whether a state decides to apply the

[17] Demand-side energy efficiency refers to an extensive array of technologies, practices and measures that are applied to reduce energy demand while providing the same or better level and quality of service. 80 Fed. Reg. at 64,692 n.100.

uniform rates or to meet the guidelines' equivalent state goals, each source may increase its own operations, so long as it obtains emission-rate credits (in the case of rate-based standards) or allowances (in the case of tradeable mass-based standards) as needed to meet its emission-reduction obligations. 80 Fed. Reg. at 64,779. Nor does the Rule require any reduction in overall electricity generation,[18] or require any plants to close.

The Rule's requirements phase in gradually, in a fairly even amount each year, through 2030.[19] No reductions are required from sources until 2022 at the earliest. In fact, all states may delay requiring emission reductions from sources until 2023, and most until 2024, and still meet the Rule's requirements. Id. at 64,785-86. When fully implemented in 2030, the Rule will reduce power-plant CO_2 emissions by approximately 16% from 2020 levels. Id. at 64,924, Tables 15 and 16. This amount of reduction follows existing industry trends and is not far from the amount of CO_2 reductions achieved from the power sector between 2002 and 2013, when no federal

[18] Contrary to Petitioners' assertion, Pet. Legal Br. 15, 21 n.18, the guidelines are premised entirely on the application of the Building Blocks, and not based on any assumed fall in demand for electricity. 80 Fed. Reg. at 64,778. Petitioners conflate EPA's regulatory impact analysis, which contains an assessment that many states will voluntarily elect to draw upon demand-side energy efficiency for purposes of *compliance* with the guidelines, with the manner in which the guidelines were set.

[19] Goal Computation Technical Support Document ("Computation TSD") 19, EPA-HQ-OAR-2013-0602-36850, JA___.

guidelines were in place. Regulatory Impact Analysis ("RIA") 2-26, Table 2-6, EPA-HQ-OAR-2013-0602-37105 (Oct. 2015), JA___.

Under the Rule, States have until September 2018 to submit their plans. 80 Fed. Reg. at 64,669. States may also entirely decline to do so, in which case the only consequence is that EPA will promulgate a federal plan, which as proposed would institute a flexible emission-trading program for that state's plants. Id. at 64,881-82; 80 Fed. Reg. at 64,970.

3. The regulatory impact analysis.

When promulgating the Rule, EPA also released a detailed assessment of its likely economic impact. EPA concluded that the Rule would not result in any substantial increase in electricity costs to the public. 80 Fed. Reg. at 64,679-81, 64,748-51; RIA 3-35–3-40, JA___. EPA further explained that the Rule would not reduce the reliability of the electricity system and is consistent with long-term trends towards less coal-fired and more gas-fired and renewable generation. 80 Fed. Reg. at 64,671, 64,694-96, 64,709.

4. Public outreach and response to comments.

The Rule is the product of an extensive public engagement process. 80 Fed. Reg. at 64,672. The Proposal and Supplemental Notice together solicited comment on a broad range of options for quantifying and applying the Building Blocks. E.g., 79 Fed. Reg. at 64,548-53; 79 Fed. Reg. at 34,862, 34,865-71, 34,875-78, 34,882,

34,888, 34,890, 34,892.[20] Given the diversity of options, EPA's proposal included a mechanism allowing states to compute how the options would change the draft state goals. See Goal Computation Technical Support Document (Proposal) 20, EPA-HQ-OAR-2013-0602-0460 (describing accompanying Excel workbook), JA___.

EPA received more than four million comments on the Proposal and Supplemental Notice, which led to numerous improvements to the Proposal. 80 Fed. Reg. at 64,672.[21] But these improvements did not change the fundamental design of the Rule. The final Rule, like the Proposal, establishes state-by-state emission targets based on the application of identified Building Blocks; places responsibility on states to develop plans to meet these emission-reduction targets; and allows states to rely on a broad set of measures, including trading programs and, at least initially, state-law-only measures that do not hold power plants directly responsible for reducing their emissions.

[20] EPA also solicited comment on whether trading programs should be authorized. 79 Fed. Reg. at 34,927.

[21] For example, after requesting and considering comments on these issues, EPA in the final Rule applied the Building Blocks on a regional, as opposed to a state-by-state, basis, and updated its proposed alternative methodology for quantifying renewable-energy potential—premised on adding an annual growth component to a base case—to reflect the most relevant and recent data. 79 Fed. Reg. at 34,865, 34,869-70; 79 Fed. Reg. at 64,547; 80 Fed. Reg. at 64,738-39, 64,806-07.

5. The stay applications.

Petitioners sought a stay of the Rule pending review. On January 21, 2016, this Court unanimously denied that request, and established an expedited briefing schedule. Dkt. No. 1594951. The Supreme Court granted applications for a stay by a 5-4 vote on February 9, 2016. Order, West Virginia v. EPA, No. 15A773.

SUMMARY OF ARGUMENT

Fossil-fuel-fired power plants emit vast amounts of CO_2 pollution, and this pollution poses grave threats to public health and welfare. The Supreme Court has confirmed that EPA has the authority to regulate this pollution, from these sources, under this statutory provision. AEP, 564 U.S. at 424. In the Rule, EPA has appropriately exercised this recognized statutory authority.

Section 111(d) identifies specific factors that EPA must consider in establishing emission guidelines for states to follow in setting emission standards for specific plants. EPA properly applied these factors in the Rule. The Rule reasonably applies the Best System for reducing CO_2 emissions from sources that operate by means of an interconnected electric generating system. The Rule is premised on flexible and cost-effective emission-reduction measures that are already widely employed by power plants and that have been used in numerous prior CAA and state regulatory programs.

Petitioners' assorted attacks on EPA's interpretations and analyses lack merit. EPA's interpretation that the Best System for reducing CO_2 may include emission reductions achieved through greater use of cleaner forms of generation is consistent

with the statutory text and best fulfills Congress's intent to cost-effectively reduce pollution and protect public health and welfare. Indeed, even if EPA had premised the Best System on technological measures such as co-firing and carbon sequestration, few plants would likely elect to comply with their standards by actually using these technologies; rather, they would rely on lower-cost generation-shifting. EPA's interpretation does not impinge upon states' traditional authorities to regulate intrastate electricity sales and to license new power facilities.

Petitioners' argument that the text of Section 111(d) bars EPA from regulating power plants' CO_2 emissions because power plants' emissions of other pollutants are regulated under Section 112 also fails. Section 111(d) is ambiguous, and EPA reasonably resolved those ambiguities—and avoided creating an unnecessary conflict in enacted statutory text—by concluding that Congress did not intend to bar regulation of different pollutants under different programs.

Petitioners' claims that the Rule is unconstitutional also lack merit. The Rule is an exercise in cooperative federalism akin to numerous other court-approved regulatory programs, and it neither unlawfully coerces nor commandeers states given that states may opt to do nothing, in which case EPA will regulate sources directly. The fact that sources may ask state regulators to take ancillary action—e.g., modifying a permit—as an indirect result of a federal plan does not implicate the Tenth Amendment. To hold otherwise would break new ground, throwing the constitutionality of many other federal programs into question.

With respect to Petitioners' "record-based" arguments, the Rule's requirements are lawful in all respects. The Rule was promulgated using proper procedures. The improvements made to the final rule were a logical outgrowth of EPA's Proposal and Supplemental Notice.

EPA identified an achievable degree of emission limitation applying the three Building Blocks comprising the Best System. EPA made reasonable projections based on extensive data and analyses, and in setting the required degree of limitation, EPA made numerous conservative assumptions so as to assure that standards would be achievable. The record supports EPA's determination that states are likely to establish trading programs that will facilitate compliance, but sources can achieve standards consistent with the guidelines without trading.

The Rule comports with the Act in all other respects. EPA reasonably performed its Congressionally assigned task to consider energy requirements and the reliability of electricity supply. EPA subcategorized appropriately and established reasonable requirements if carbon sequestration is employed. The Rule does not regulate new sources. EPA's limitations on compliance crediting were reasonable.

STANDARD OF REVIEW

The Rule can be overturned only if it is "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" or in excess of EPA's "statutory jurisdiction, authority, or limitations." 42 U.S.C. § 7607(d)(9). "The scope of review under the 'arbitrary and capricious' standard is narrow and a court is not to substitute

its judgment for that of the agency." Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983). The Court must "give an extreme degree of deference to the EPA's evaluation of scientific data within its technical expertise," especially where it reviews "EPA's administration of the complicated provisions of the [CAA]." Miss. Comm'n on Envtl. Quality v. EPA ("Miss. Comm'n"), 790 F.3d 138, 150 (D.C. Cir. 2015) (quotations omitted).

In interpreting statutory terms, the Court applies the familiar analysis of Chevron, U.S.A. v. Natural Res. Def. Council, Inc., 467 U.S. 837 (1984). The Court applies the language of the statute where it reflects "the unambiguously expressed intent of Congress," but where the statute is "silent or ambiguous with respect to the specific issue," the Court must defer to the agency's interpretation so long as it is "based on a permissible construction of the statute." Id. at 842-43. As the Supreme Court has explained, an administrative agency's power to administer a Congressionally created program "'necessarily requires the formulation of policy and the making of rules to fill any gap left, implicitly or explicitly, by Congress.'" Long Island Care at Home, Ltd. v. Coke, 551 U.S. 158, 165 (2007) (quoting Chevron, 467 U.S. at 843). Furthermore, under Chevron, the Court "presume[s] that when an agency-administered statute is ambiguous with respect to what it prescribes, Congress has empowered the agency to resolve the ambiguity." Natural Res. Def. Council v. EPA ("NRDC v. EPA"), 777 F.3d 456, 463 (D.C. Cir. 2014).

Judicial review of procedural challenges is governed by 42 U.S.C. § 7607(d)(9)(D). Under Section 7607(d)(9)(D), a court may not reverse a CAA action for procedural error unless: (1) the error was arbitrary or capricious, (2) an objection to the procedure was raised with reasonable specificity during the public comment period, and (3) the error was so serious and related to matters of such central relevance that there is a substantial likelihood that the rule would have been significantly changed absent the error.

ARGUMENT

I. EPA Properly Exercised Its Section 111(d) Authority by Including Generation-Shifting Within the Selected Best System.

This critically important Rule marks a significant step forward in addressing the Nation's most urgent environmental threat. Fossil-fuel-fired power plants are, far and away, the largest stationary sources of CO_2 pollution, and no meaningful effort to abate climate change can fail to address them. EPA's authority and responsibility under Section 111(d) to control this pollution is well-established and was central to the Supreme Court's holding in AEP that "the [CAA] and the EPA actions it authorizes displace any federal common-law right to seek abatement of [CO_2] emissions from fossil-fuel fired power plants." 564 U.S. at 424. EPA has properly performed its Congressionally assigned task to limit this pollution.

The Rule's emission requirements are based on methods of cleaner electricity generation that are *already* prevalent in the industry and included within existing state

programs. The requirements are gradually phased in over a period of fifteen years, are consistent with existing power sector trends, and can be readily implemented, without imposing excessive costs or adversely affecting energy reliability.

Petitioners' core legal arguments largely rest on hyperbolic mischaracterizations of this Rule as broadly regulating energy markets and generation. This Rule is an air-pollution rule specifically authorized by the CAA. It is not an energy rule. The Rule limits emissions of an exceptionally important air pollutant that is emitted in huge quantities by power plants, but it does not regulate any other aspect of energy generation, distribution, or sale. Like any pollution limits for the power industry, the Rule will indirectly impact energy markets, but those impacts do not mean EPA has overstepped its authority.

A. EPA Properly Applied the Statutory Factors.

Under Section 111(d)'s program of shared federal and state responsibility, EPA requires states to submit "satisfactory" state plans that "establish standards of performance for any existing source." 42 U.S.C. § 7411(d). The standards of performance must "reflect[]" the "degree of emission limitation" that is "achievable" through the application of the "best system of emission reduction" that "*the Administrator* determines has been adequately demonstrated." Id. § 7411(a)(1) (emphasis added). Thus, EPA has authority to determine the substantive criteria that will govern EPA's review of whether state plans are "satisfactory." The Rule contains such guidelines for CO_2.

Breaking the definition of "standard of performance" into its component parts, EPA's task in establishing guidelines for states is straightforward. EPA's guidelines comport with the statutory scheme if they satisfy the following four criteria: (1) they are based on the application of a "system of emission reduction," (2) that is "adequately demonstrated," (3) that is the "best" available system considering, among other things, "costs" and "energy requirements," and (4) they "reflect[]" an "achievable" degree of emission limitation. Id. § 7411(a)(1); 80 Fed. Reg. at 64,720-22; see also 40 C.F.R. §§ 60.21(e), 60.22(a). As demonstrated next, the Rule meets each criterion.

1. Generation-shifting is a "system of emission reduction."

Congress's language—identifying the "best system of emission reduction" as the central determination in the standard-setting process—establishes that a broad scope of potential pollution-curbing measures can serve as the basis of guidelines. The plain meaning of the word "system" is expansive, encompassing "a set of things or parts forming a complex whole" or "a set of principles or procedures according to which something is done."[22] This broad statutory language shows that Congress was directing EPA to consider a wide range of measures to reduce emissions from sources. 80 Fed. Reg. at 64,762; see infra Argument I.A (addressing why generation-

[22] See Oxford Dictionary of English (3d ed. 2010), available at http://www.oxforddictionaries.com/us/definition/american_english/system; 80 Fed. Reg. at 64,762.

shifting measures are the "best" "adequately demonstrated" measures for this industry and why contextual factors and legislative history also strongly support the inclusion of generation-shifting measures within the Best System). In the case of power plants, those can include on-site technology-based control measures, but they can also include measures through which power plants reduce emissions by replacing higher-emitting generation with lower-emitting generation. Id.

To be sure, the phrase "system of emission reduction" carries some significant constraints when read in context, and EPA identified and applied these constraints. First, because emission standards must apply to sources, actions taken by sources that do not result in emission reductions from sources (for example, planting forests to sequester CO_2) do not qualify. Id. at 64,776. Second, because sources must be able to attain their emission standards, the "system" must encompass actions the sources themselves can implement. Id. In addition, any "best system," as that phrase is construed by EPA, must target supply-side activities that allow continued production of a product through cleaner processes, rather than targeting consumer-oriented behavior (such as improvements in demand-side energy efficiency). Id. at 64,778-79.

Generation-shifting measures fit within the plain meaning of a "system of emission reduction" for power plants, while meeting these contextual constraints. Power plants can, and do, apply these measures to reduce their emissions, as discussed next.

2. Generation-shifting is an "adequately demonstrated" system of emission reduction.

A robust record demonstrates that generation-shifting measures are an "adequately demonstrated" system of emission reduction for power plants. Indeed, these measures are already widely used by power plants for controlling pollution, including CO_2. Id. at 64,667, 64,724-26, 64,762 n.468, 64,768-73, 64,795-811.

These measures are successful because of the way power plants operate in a uniquely integrated system. Power generators produce a relatively fungible product—electricity—and they operate within "an interconnected 'grid' of near-nationwide scope." FERC v. Elec. Power Supply Ass'n ("FERC v. EPSA"), 136 S. Ct. 760, 768 (2016). Electricity generally cannot be stored in large volumes, so all generation and use must be balanced in real time. Id. Thus, unlike other industries, the operations of electric generators must be, and are, closely and constantly coordinated. 80 Fed. Reg. at 64,725. Assuming consumer demand is held constant, adding electricity to the grid from one generating plant will result in the instantaneous reduction in generation from other plants, and vice versa. Id. at 64,769. For this reason, the power system has been characterized as a "complex machine." Id. at 64,725. No other industry features these characteristics.

Accordingly, every time a power plant either increases or decreases operations, that has automatic implications not just for the amount of pollution emitted by *that plant*, but also for the overall amount of pollution emitted by *other* plants within the

interconnected grid, because those other plants must commensurately decrease or increase their operations to balance supply with demand. As a result, by shifting some generation from higher-emitting to lower-emitting plants, sources can achieve an effective degree of emission limitation that might otherwise have required them to make much more expensive investments in end-of-the-stack technologies at their particular plants. Id. at 64,782 n.604, 64,795-811.

Power plants are able to, and do, employ these same generation-shifting techniques to reduce CO_2. Id. at 64,731. For example, a fossil-fuel-fired power plant may, through any of several methods, add zero-carbon renewable energy to the grid, which displaces generation elsewhere that is typically carbon-emitting (because supply and demand must remain balanced).[23] And because CO_2 is a global pollutant that poses the same degree of risk regardless of its source, it is of no consequence *where* particular CO_2 emissions occur. Id. at 64,725.

a. Existing sources are using generation-shifting to reduce CO_2 to meet state requirements and corporate objectives.

Power plants already have been using generation-shifting measures to reduce CO_2, either to meet CO_2-reduction requirements imposed by some states in recent years, or to meet corporate environmental objectives—confirming that generation-

[23] See id. at 64,693 (providing further background on mechanisms for dispatching electric generators to meet electricity demand).

shifting is an "adequately demonstrated" system. Id. at 64,725, 64,769-72. Petitioners themselves acknowledge this. Petitioners' Brief on Procedural and Record-Based Issues ("Pet. Record Br.") 58 (acknowledging that before promulgation of the Rule, plants have "chose[n] to invest in zero- and lower-emission resources … to address the very problem EPA seeks to tackle").

Nine northeastern states have implemented a cap-and-trade program to reduce power plants' CO_2 emissions: the "Regional Greenhouse Gas Initiative." Legal Mem. 139 & n.380, JA___. California has implemented a similar program. 79 Fed. Reg. at 34,880. Both state programs rely on generation-shifting from dirtier to cleaner plants. Id. at 34,835.

In addition, many power generators have voluntarily lowered their CO_2 emissions by shifting to cleaner generation. See, e.g., Exelon Comments 18, EPA-HQ-OAR-2013-0602-23155, JA___; NextEra Energy Comments 2-4, EPA-HQ-OAR-2013-0602-22763, JA___; see also 80 Fed. Reg. at 64,725, 64,769 n.520. Further confirming that generation-shifting can successfully reduce CO_2 emissions, numerous power generators commented that EPA should promulgate guidelines authorizing generation-shifting for Section 111(d) compliance purposes. Legal Mem. 14-18, JA___.

b. Other CAA programs or rules for the power sector have relied on generation-shifting.

Previous CAA programs and rules for the power sector have also drawn upon generation-shifting as one way for plants to cost-reasonably reduce air pollution, further demonstrating that generation-shifting is an adequately demonstrated system. 80 Fed. Reg. at 64,770-73. For example, generation-shifting has been an important component of three successive significant "transport" rules under 42 U.S.C. § 7410(a)(2)(D)(i)(I) addressing criteria pollutant precursor emissions. 80 Fed. Reg. at 64,772 & n.545; Legal Mem. 95-102, JA___. These rules have required power plants in upwind states to control emissions to avoid significantly polluting downwind states. Id. In the 2011 "Cross-State Rule," for example, EPA set statewide emissions budgets for power plant nitrogen oxide ("NO_x") and sulfur dioxide ("SO_2") emissions, and based those budgets in part on the ability of plants to cost-efficiently shift generation to lower-emitting plants. 80 Fed. Reg. at 64,772; 76 Fed. Reg. 48,208, 48,252 (Aug. 8, 2011); Legal Mem. 98-99, JA___.

As another example, in the acid rain program in CAA Title IV, 42 U.S.C. §§ 7651-7651o, Congress recognized power plants' ability to use generation-shifting as one available pollution-control strategy. See S. Rep. No. 101-228, at 316 (1989) (identifying strategies for power plants to reduce emissions to include "least-emissions dispatching," i.e., generation-shifting). Title IV established a nationwide cap on power-plant SO_2 emissions to harness the ability of plants to undertake a range of

control actions, including shifting generation to renewable and other cleaner generation. 80 Fed. Reg. at 64,770-71; see 42 U.S.C. § 7651(b) (encouraging renewable energy as statutory purpose). Contrary to Petitioners' argument, Petitioners' Brief on Core Legal Issues ("Pet. Legal Br.") 56, Congress's creation of the Title IV cap-and-trade program strongly *supports* EPA's conclusion that generation-shifting is an "adequately demonstrated" and appropriate pollution-control strategy for power plants. Cf. Van Hollen v. FEC, 811 F.3d 486, 493 (D.C. Cir. 2016) (upholding FEC's interpretation of statute in part because FEC "simply opted for an approach already endorsed by Congress in a related context").

Further, in its recent rule regulating hazardous power-plant emissions, EPA interpreted the phrase "installation of controls" in 42 U.S.C. § 7412(i)(3) to include the construction of cleaner replacement generation off-site for purposes of considering compliance extension requests. 77 Fed. Reg. 9304, 9410 (Feb. 16, 2012); Legal Mem. 113-16, JA___. Many of the Petitioners here requested in comments that EPA adopt this interpretation. Legal Mem. 114-15, JA___.

Finally, in a prior Section 111(d) rulemaking for this very industry ("the Mercury Rule"), EPA determined the Best System for reducing mercury emissions as, in part, a cap-and-trade program, and based the level of the cap partly on the ability of sources to cost-effectively shift generation to lower-emitting plants. 70 Fed. Reg.

28,606, 28,619 (May 18, 2005).[24] By identifying the cap-and-trade program as part of the Best System, EPA recognized that sources need not reduce emissions at their own plants using add-on controls, but could instead use other approaches to reduce emissions, including using "dispatch changes" (i.e., generation-shifting) or buying allowances from sources that had reduced emissions at their plants. 70 Fed. Reg. at 28,619. Significantly, many of the Petitioners here strongly supported the Mercury Rule. For example, in rulemaking comments, Petitioner Utility Air Regulatory Group ("UARG") agreed "that an interstate cap-and-trade program provides the 'best system' of mercury reduction for [power plants]." UARG Mercury Rule Comments ("UARG Mercury Rule Comments") 137, EPA-HQ-OAR-2002-0056-2922, JA___. Likewise, on judicial review, many of the same Petitioners here stated that EPA has "offered compelling legal justifications" for establishing a cap-and-trade program under Section 111(d).[25]

3. Generation-shifting is the "best" system of emission reduction for power-plant CO_2.

EPA reasonably concluded that the three Building Blocks collectively constitute the "best" system of emission reduction, applying the relevant considerations (including the degree of reductions achieved, costs, energy

[24] The Mercury Rule was vacated on grounds immaterial to the interpretive issue presented here. New Jersey v. EPA, 517 F.3d 574, 583-84 (D.C. Cir. 2008).

[25] See Joint Brief of State Resp't-Intervenors, Indus. Resp't-Intervenors, and State Amicus, New Jersey v. EPA, 517 F.3d 574 (No. 05-1097), 2007 WL 3231261, at *25.

requirements, and non-air quality health and environmental impacts). 80 Fed. Reg. at 64,744-51; see also id. at 64,801-02, 64,810-11 (cost considerations); id. at 64,670-71, 64,693-94, 64,800, 64,874-81 (energy considerations); id. at 64,746, 64,748 (non-air quality health and environmental impacts). The selected set of measures presents the most cost-effective available system for sources to meaningfully limit their voluminous CO_2 emissions. 80 Fed. Reg. at 64,751. See Sierra Club v. Costle, 657 F.2d 298, 321, 326 (D.C. Cir. 1981) (EPA has broad discretion in weighing different factors in selecting the Best System, and the amount of air pollution reduced is an important factor).

EPA appropriately rejected including as part of the Best System other technological measures, including co-firing and carbon sequestration, which can be integrated into the design and operation of individual plants. To be clear, EPA did conclude that some of these measures are feasible and could achieve potentially significant emission reductions, but EPA reasonably rejected them because they are more expensive than the selected Best System measures. 80 Fed. Reg. at 64,727-28.[26]

EPA further recognized that because its guidelines do not compel sources to implement the Best System measures, even if it were to include co-firing and carbon sequestration in the Best System, few plants would likely comply with their resulting

[26] Petitioners' assertion, Pet. Legal Br. 12-13, that large CO_2 emission reductions cannot be feasibly achieved using technological controls is incorrect and contradicted by the record.

emission standards by actually using these technologies. Rather, they would rely on lower-cost generation-shifting. Id. at 64,746-51.

EPA further sensibly concluded that limiting the Best System to heat-rate improvements (Building Block 1) would have been a far inferior approach to the three-building-block approach. As EPA explained, implementing heat-rate improvements in isolation would, at best, have decreased sources' emissions by a few percentage points and might have actually *increased* emissions. Because heat-rate improvements lower higher-emitting plants' operating costs, their application in isolation could lead to greater reliance upon higher-emitting generation, increasing overall emissions from the industry. Id. at 64,745, 64,748.

4. EPA identified an "achievable" degree of emission limitation that "reflects" the application of generation-shifting measures.

EPA also reasonably determined that the guidelines "reflect[]" an "achievable" degree of emission limitation and therefore meet the fourth statutory criterion. EPA explained in detail the specific steps that particular sources may take to implement generation-shifting measures as a pollution-control strategy to comply with an emission standard that a state might adopt for that source. See supra Argument I.A.2.

EPA further determined that "all types and sizes of [fossil-fuel-fired power plants], in all locations are able to undertake [generation-shifting], including investor-owned utilities, merchant generators, rural cooperatives, municipally-owned utilities, and federal utilities." Id. at 64,735. Many companies already own coal-fired, gas-fired,

and renewable plants, which facilitates their ability to reduce pollution through off-site crediting measures without transacting with third parties. Approximately 77% of coal-fired generation occurs at a plant affiliated with natural gas combined-cycle generation, and approximately 82% of fossil-fuel-fired generation occurs at a plant affiliated with renewable generation. Id. at 64,796, 64,805. EPA explained, moreover, that even those plants not presently affiliated with cleaner generation can implement generation-shifting through cross-investment measures, such as acquiring credits or allowances, or directly investing in cleaner power. Id. at 64,735.

A robust record also supports EPA's determination that there are sufficient amounts of unused existing natural gas-fired generation capacity and potential for new renewable-energy capacity to enable all sources to successfully employ clean-generation pollution-control strategies and achieve the degree of emission limitation required. Id. at 64,797-802, 64,806-11. Significantly, EPA did not set the guidelines to reflect the *maximum* possible degree of stringency that would be achievable. Id. at 64,718. Instead, EPA set more modest reduction goals so as to provide significant "compliance headroom," thereby easing power plants' ability to achieve their state-promulgated standards. Id. at 64,718. For example, EPA used conservative estimates for increased utilization of gas plants and construction of renewable resources (Building Blocks 2 and 3), and set the uniform rates at the least stringent of three calculated regional rates. Id. at 64,730, 64,735, 64,799, 64,801; 40 C.F.R. §§ 60.5800, 60.5880. To further facilitate sources' ability to comply with their

emission limits, EPA also authorized the use of measures for *compliance* purposes that are not part of the Best System, including, among many others, implementing readily available and cost-effective demand-side energy-efficiency measures. 80 Fed. Reg. at 64,724; Legal Mem. 150-52, JA___.

Petitioners miscast the nature of the guidelines in wrongly contending that they are not achievable. Pet. Legal Br. 14-17, 51. The guidelines are purposefully set in the form of *effective* emission rates for the two source subcategories. These effective emission rates are regulatory constructs intended to reflect adjustments to actual emission rates—for regulatory compliance purposes—with such adjustments crediting certain cost-effective generation-shifting pollution-reduction measures that can be successfully undertaken by sources. Because the effective rates *can* be achieved using the identified Best System, they "reflect[]" a "degree of emission limitation achievable," consistent with Congress's direction in Section 111(a)(1).[27]

5. The guidelines follow industry trends.

Contrary to Petitioners' hyperbolic mischaracterizations, Pet. Legal Br. 6, the degree of limitation contemplated by the guidelines will not result in any fundamental "restructuring" of the "electric grid."

[27] Accordingly, EPA does not "concede," Pet. Legal Br. 15, that sources cannot meet the uniform rates.

The guidelines reduce CO_2 emissions. 80 Fed. Reg. at 64,663. While they rely on generation-shifting measures to do so, they follow industry trends towards greater use of renewable energy and gas-fired generation, and less use of coal-fired generation. These trends are due largely to falling prices for renewables and gas, as well as the aging of existing coal-fired plants. Id. at 64,678, 64,694-95, 64,795, 64,803-04. Notably, the use of renewable energy was already exploding prior to Rule promulgation; by 2013, renewable energy had increased five-fold in just fifteen years. Id. at 64,695. And while EPA projects that the Rule will reduce some coal-fired generation by the time the Rule is fully implemented in 2030, the amount of that reduction is projected to be less than, and to occur more gradually than, the reduction that already occurred from 2005 to 2014. Id. at 64,785.

EPA further projects that significant reductions in coal-fired generation would occur even in the Rule's absence, and that following full implementation of the Rule in 2030, the amount of coal-fired generation will be 27.4% of total generation—only 5.4% less than projected without the Rule. RIA 3-27 (Table 3-11), JA___.[28] Based on modeling analysis and other record evidence, EPA ultimately determined that the Rule

[28] Petitioners' citation, Pet. Legal Br. 22, to EPA's projection that coal-fired generating capacity will be cut in half by 2030 is highly misleading, as Petitioners fail to acknowledge that most of the projected capacity reduction (129,000 MW out of 162,000 MW in reduced capacity) is projected to occur even without this Rule. RIA 2-3, 3-31, JA___, ___. Likewise, the vast majority of growth in non-hydro renewable generation is projected to occur without the Rule. Id.

is "fully consistent with the recent changes and current trends in electricity generation," and will by "no means entail fundamental redirection of the energy sector." 80 Fed. Reg. at 64,785. Accordingly, Petitioners' characterization of the Rule as radically transforming the industry, Pet. Legal Br. 22, contradicts EPA's record-based findings. 80 Fed. Reg. at 64,785.[29]

B. Petitioners Posit Limitations on EPA's Discretion That Are Not Compelled by the Statute, and Would Frustrate the Statutory Objective to Protect Public Health and Welfare.

Petitioners' chief legal argument is that EPA's guidelines must be premised exclusively on technological measures that individual sources can integrate into the design and operation of their plants. Pet. Legal. Br. 29-61. Under their view, even though states will likely facilitate cost-effective generation-shifting in their plans and sources will likely rely on generation-shifting to meet state standards, EPA cannot consider these same measures for purposes of setting the targets states must meet. Nothing in the text of the Act compels this counterintuitive outcome.

1. Petitioners apply an incorrect standard of review.

As a threshold matter, Petitioners' argument goes astray because they apply an incorrect standard of review. The statutory interpretations at issue here are reviewed under the familiar two-step Chevron standard. 467 U.S. at 842-43. Under that

[29] Petitioners rely improperly on extra-record material to support their mischaracterizations, including declarations prepared by Petitioners after Rule promulgation, Pet. Legal Br. 22. See 42 U.S.C. § 7607(d) (review limited to record).

standard, the Court must uphold an expert agency's interpretations of a statute it administers unless those interpretations are either foreclosed by the text or are an unreasonable reading of ambiguous language. Id. This standard fully applies to the interpretation of ambiguity that concerns the scope of an agency's regulatory authority. City of Arlington v. FCC, 133 S. Ct. 1863 (2013).[30]

Petitioners, citing King v. Burwell, 135 S. Ct. 2480, 2489 (2015), Pet. Legal Br. 32-33, claim that Chevron does not apply. They are wrong. The CAA clearly delegates to EPA authority to fill gaps in the Act concerning the appropriate amount of pollution reduction that should be obtained from long-regulated major pollution sources. Indeed, Chevron *itself* involved major sources and EPA's construction of the Act. In Burwell, the Court found it "especially unlikely" that Congress delegated the ability to interpret a central health-care reform provision within the Affordable Care Act to the IRS—the agency that collects taxes but has "no expertise" in health-care policy. 135 S. Ct. at 2489. In contrast, EPA has decades of expertise addressing power-plant emissions. Unlike Burwell, this case involves EPA's construction of a statute that it has long administered and of provisions that go to the core of EPA's mission to protect public health and welfare.

[30] Chevron applies even in cases where the agency's construction would purportedly result in a "fundamental change in the regulatory scheme" and "concerns about agency self-aggrandizement are at their apogee." City of Arlington, 133 S. Ct. at 1872.

Beyond Burwell, Petitioners rely upon Utility Air Regulatory Group v. EPA ("UARG"), 134 S. Ct. 2427 (2014). Essentially, Petitioners construe UARG as obliterating the second step of Chevron in economically and politically significant cases. Under Petitioners' view, ambiguity in such cases must necessarily be resolved *against* the implementing agency's exercise of its regulatory authority, even if the agency's interpretation is wholly reasonable. But UARG does not nullify Chevron. UARG simply reflected one application of Chevron to particular facts, which are readily distinguishable from those here. UARG involved EPA interpretations that would have expanded two CAA permitting programs by sweeping in millions of small emitters (e.g., residential buildings), as well as EPA's effort to avoid that anomalous result by promulgating regulations to override unambiguous statutory numerical thresholds. Id. at 2448. The Supreme Court applied Chevron in the normal manner and concluded that EPA did not operate within the "bounds of reasonable interpretation." Id. at 2442 (quotation omitted).

This case bears no resemblance to the "singular situation" in UARG. Id. at 2444. First, EPA is not rewriting a clear numerical threshold or otherwise ignoring unambiguous statutory text. Second, EPA has not adopted an interpretation that would sweep millions of new sources into the Act's regulatory coverage absent modifications of clear numerical thresholds. Instead, EPA is regulating the very largest CO_2 polluters in the Nation, which have long been subject to extensive CAA regulation and which the Supreme Court recognized in AEP were subject to Section

111(d) regulation. EPA is therefore not claiming any "enormous and transformative expansion" of power. Pet. Legal Br. 34 (citing UARG, 134 S. Ct. at 2444).

The interpretive question here is whether EPA may appropriately set pollution limitations for power plants by applying the most cost-effective measures (generation-shifting), or whether EPA, to obtain comparable limitations, is limited to applying much more expensive technology-based measures like carbon sequestration and co-firing. This interpretive issue falls squarely within EPA's authority and expertise, and the question, as always under Chevron, is whether EPA's interpretation is either unambiguously foreclosed or unreasonable. It is neither.

Indeed, this Court has routinely applied Chevron to EPA interpretations involving questions of "deep economic and political significance." See, e.g., Miss. Comm'n, 790 F.3d at 151 (considering whether nonattainment areas may encompass broad multi-state regions); NRDC v. EPA, 777 F.3d 456 (addressing ozone NAAQS implementation). Further, if there were any doubt as to Chevron's applicability, it has been removed by AEP. That case addressed EPA's authority to regulate the very same pollutant, under the very same provision, from the very same sources. The Court concluded that Congress had "delegated to EPA the decision whether and *how* to regulate [CO_2] emissions from power plants" (emphasis added). Citing Chevron, the Court added that EPA is an "altogether fitting" "expert agency" "best suited to serve as primary regulator of greenhouse gas emissions." 564 U.S. at 428.

And even if Petitioners' purported "clear statement rule" applied, AEP confirms that Section 111 contains a sufficiently "clear statement." The term "system of emission reduction" plainly encompasses generation-shifting measures. As stated in AEP, EPA has authority under Section 111(d) to determine "the appropriate amount" of CO_2 regulation and to decide "how" to limit CO_2 emissions to abate climate change. Id.[31]

2. Applying Chevron, EPA's interpretation is reasonable and entitled to deference.

Applying the correct standard of review, EPA's interpretation is readily upheld as either consistent with the Act's plain meaning or as a reasonable construction of any ambiguous statutory language.[32] EPA's interpretation that a "best system of emission reduction" includes cost-effective generation-shifting for this industry and pollutant is eminently reasonable. The purpose of Section 111 is, after all, to protect public health and welfare through cost-effective measures that sources can implement, and EPA's interpretation best fulfills that purpose.

Indeed, as a matter of common sense, where interconnected sources operate in concert to produce the same product (electricity) using processes that have vastly

[31] As AEP underscores, Section 111(d) is not an "obscure" or "unheralded" provision, Pet. Legal Br. 2, 3; it "speaks directly" to the problem at hand. 564 U.S. at 424.

[32] Petitioners' arguments, Pet. Legal Br. 41-45, 50-54, that Section 111 unambiguously forecloses the consideration of generation-shifting as a pollution-control strategy are addressed in Argument I.B.6.

different air-pollution impacts, with supply and demand in constant balance, it is reasonable to consider that sources may cost-effectively address their emissions through arrangements that incorporate cleaner forms of power generation. This is particularly so where the sources already commonly engage in that practice on their own, where using generation-shifting for compliance will be far *less* costly than compelling sources to apply specific technologies (e.g., carbon sequestration) at their plants, and where sources would likely use generation-shifting measures to comply with standards *regardless* of what measures were selected for the Best System. 80 Fed. Reg. at 64,728.

Moreover, the premise of Petitioners' counter-interpretation—i.e., that generation-shifting fails to incorporate "*production processes* or control technologies" that can be integrated into a particular plant's "design and *operations*"—is false. See Pet. Legal Br. 54 (emphasis added). The Best System applied by EPA recognizes that a highly salient and unique attribute of power plants is that a network physically connects them and their customers. 80 Fed. Reg. at 64,728. As EPA explained, this physical interconnectedness largely determines any given plant's operations on a nearly moment-to-moment basis. Id. As a result, generation-shifting does incorporate changes in "production processes" or "operations" of an individual plant. For example, a particular plant may change its production process to increase or reduce its level of generation, and that action—in and of itself—accomplishes generation-shifting, because other sources must decrease or increase commensurately

their operations to balance supply with demand. See 80 Fed. Reg. at 64,780 (noting reduced generation entails no significant disruption because of the integrated nature of the power sector).

It further bears emphasis that, regardless of whether a plant complies with an emission limitation by installing technologies or by shifting generation off-site, the source's compliance actions address the external harm to society caused by its *own* operations and pollution. In the case of technological controls, its compliance actions directly reduce the pollution generated at its plant. In the case of generation-shifting (or any kind of emission trading), its compliance actions achieve comparable pollution reduction by utilizing the lower-emitting generation capacity of other plants. But either way, the compliance actions reduce pollution and address the external harm caused by the source's *own* operations.

In sum, EPA's interpretation that the Best System includes generation-shifting for this industry and pollutant is eminently reasonable and comports with the Act.

3. Contextual considerations support EPA's interpretation of the phrase "best system of emission reduction."

Contextual considerations add considerable support to the conclusion that EPA's interpretation is reasonable.

a. The flexibility states have under Section 111(d)'s cooperative federalism structure supports EPA's interpretation.

States have wide discretion in fashioning "standards of performance" under Section 111(d). This flexibility supports EPA's interpretation that the "best system of emission reduction" that underlies such standards also encompasses a wide range of pollution-reduction strategies, including generation-shifting.

Under the cooperative federalism principles underlying the CAA, 42 U.S.C. § 7401(a)(3), states may implement a range of standards to control emissions. The references in Sections 111(d)(1) and (d)(2) to Section 7410 and to the flexibility states have under the NAAQS program (see 42 U.S.C. § 7410(d)(2)(A)) further indicate that Congress intended that states be able to incorporate a broad range of emission-reduction mechanisms into their Section 111(d) "standards of performance," including having the ability to craft standards that authorize, incentivize, or compel generation-shifting.

Consistent with these cooperative federalism principles, it is well-established that states may adopt Section 111(d) standards of performance in the form of tradeable emission rates or mass limits. See 40 C.F.R. § 60.21(f); 80 Fed. Reg. at 64,840-41. In fact, numerous state and industry Petitioners agreed in comments that under Section 111(d), states have discretion to adopt standards in the form of trading programs intended to facilitate the ability of industry to rely on the very generation-shifting measures in Building Blocks 2 and 3. Id. at 64,733 n.380; Legal Mem. 14-18,

JA___.[33] For example, lead state Petitioner West Virginia submitted comments before the Proposal clarifying its belief that it could permissibly adopt a "mass-based allowance system" for sources that would "account for … load shifting to lower CO_2-emitting generation, and the deployment of renewable (zero-emitting) energy sources." West Virginia Comments 14, EPA-HQ-OAR-2013-0602-24999, JA___.

Similarly, a group representing all state environmental regulators (including Petitioners), commented that EPA should design guidelines that "maximize" state flexibility and allow states "to allocate credit for zero-carbon resources" (i.e., facilitate implementation of Building Block 3). Envtl. Council of the States Comments 3, EPA-HQ-OAR-2013-0602-24059, JA___. Industry Petitioners agreed that states have authority to "allow sources to comply with [a] standard by purchasing allowances or credits representing emission reductions achieved outside their boundaries," which would include generation-shifting. See, e.g., UARG October 2013 Comments 4, EPA-HQ-OAR-2013-0602-0431, JA___.

In short, Petitioners seek to have it both ways. They agree *states* have discretion to promulgate "standards of performance" that authorize and incentivize sources to use generation-shifting measures to lower pollution. Yet they disagree that *EPA* can consider the same cost-efficient measures as part of the Best System that informs the

[33] Petitioners' comments contradict their representation that Section 111(d) does not authorize trading programs. Pet. Legal Br. 56.

stringency of the standards. But if states can properly craft standards designed to accommodate and encourage the use of generation-shifting as a suitable pollution-control strategy, then EPA can likewise reasonably interpret the phrase "system of emission reduction" to encompass the same suitable strategy. Section 111 does not dictate the provision of maximum flexibility for the purpose of achieving the most minimal emission limitation.[34]

The inconsistencies in Petitioners' logic extend to their attempt to argue that, because the definition of "standard of performance" incorporates a "continuous" requirement under 42 U.S.C. § 7602(k), those standards cannot be based on generation-shifting measures. This argument is incorrect for many reasons, discussed below at Argument I.B.6.b. But if it were true, then it would likewise preclude *states* from exercising their conceded authority to adopt standards in the form of trading programs that authorize compliance through generation-shifting.

b. The phrase "best system of emission reduction" contrasts with more narrowly crafted language elsewhere in the statute.

The phrase "best system of emission reduction" in Section 111(a)(1) contrasts sharply with narrower language appearing elsewhere in the same statutory subsection.

[34] This is not to suggest that the scope of a Best System necessarily can include *any* measure a source could implement. As discussed above at Argument I.A.1, EPA's interpretation of Best System includes significant constraints, and Building Blocks 2 and 3 comport with those.

This contrast shows that Congress purposefully granted EPA flexibility in Section 111(a)(1). In Section 111(a)(7), Congress defined the term "*technological* system of continuous emission reduction" (emphasis added) as meaning "a technological process for production or operation by any source which is inherently low-polluting or nonpolluting," or "a technological system for continuous reduction of the pollution generated by a source before such pollution is emitted into the ambient air, including precombustion cleaning or treatment of fuels." 42 U.S.C. § 7411(a)(7). Section 111(a)(7) has no application here, but its presence in the same section illustrates that Congress knew how to limit the scope of EPA's discretion to consideration of "technological" systems that might be applicable only on a plant-by-plant basis when it wished to do so. See Nat'l Fed'n of Indep. Bus. v. Sebelius ("NFIB"), 132 S. Ct. 2566, 2583 (2012) ("Where Congress uses certain language in one part of a statute and different language in another, it is generally presumed that Congress acts intentionally.").[35]

[35] The Act includes other examples where Congress used narrower language to cabin EPA's discretion. See, e.g., 42 U.S.C. § 7491(b)(2)(A) (providing that certain sources "shall procure, install, and operate … the best available retrofit technology … for controlling emissions"); 42 U.S.C. § 7521(a)(3)(A)(1)(i) ("[S]tandards [for mobile source pollutants must] reflect the greatest degree of emission reduction achievable through the application of technology which the Administrator determines will be available…., giving appropriate consideration to cost, energy, and safety factors associated with the application of such technology.").

In fact, Congress did temporarily narrow the scope of the Section 111(a)(1) Best System provision in the 1977 Amendments to require, among other restrictions, "technological" controls for new sources and "continuous" controls for new and existing sources. But in the 1990 Amendments, Congress repealed those restrictions and reinstated the broader provision it had enacted in 1970. See 80 Fed. Reg. at 64,765-67. This legislative sequence further indicates Congressional intent to provide EPA with broad flexibility in applying Section 111(d) to specific source categories and pollutants.[36]

That Congress used the broad phrase "best system of emission reduction" to provide EPA with such flexibility is unsurprising. Congressional use of "broad language" "reflects an intentional effort to confer [regulatory] flexibility," "without [which], changing circumstances and scientific developments would soon render the [CAA] obsolete." Massachusetts, 549 U.S. at 532; see also Pub. Citizen v. U.S. Dep't of Justice, 491 U.S. 440, 475 (1989) (Congress "usually does not legislate by specifying examples, but by identifying broad and general principles that must be applied to particular factual instances"); 80 Fed. Reg. at 64,766 (noting similarly broad flexibility in other CAA provisions adopted in 1970). Congress's decision to grant EPA broad

[36] Tellingly, in trying to persuade the Court to narrow the plain scope of the phrase "best system of emission reduction," Petitioners, Pet. Legal Br. 53, direct the Court's attention to a quotation from a 1978 case, ASARCO v. EPA, 578 F.2d 319 (D.C. Cir. 1978), that was, in fact, applying the materially different and narrower language then in effect for new sources.

discretion in implementing the Section 111(d) program is a logical policy choice in view of the catch-all nature of the program. The program addresses threats posed by a potentially wide range of pollutants, including CO_2, that are not addressed elsewhere in the Act. 80 Fed. Reg. at 64,761 n.464.[37]

Petitioners' effort to cast doubt on Congress's intent by pointing to recent legislative proposals is unavailing. Pet. Legal Br. 2-3, 35. The fact that subsequent Congresses have considered and rejected different approaches to climate change says nothing about what Congress meant when it drafted Section 111's operative language. See Massachusetts, 549 U.S. at 529-30 (rejecting consideration of post-enactment legislative history in assessing whether CAA addresses climate change).

4. EPA has authority and expertise to make suitable judgments about CO_2 reductions and energy requirements in setting Section 111(d) guidelines.

Contrary to Petitioners' characterizations, Pet. Legal Br. 35-36, EPA has ample technical expertise to perform its Congressionally assigned task to consider "energy requirements," including issues pertaining to grid reliability, in setting Section 111(d) guidelines. Indeed, Congress specifically directed and entrusted EPA, as the "expert administrative agency," to determine the "appropriate amount of [CO_2] regulation"

[37] Section 111(d)'s important gap-filling role is not diminished by its infrequent use. See Pet. Legal Br. 34. Most CAA actions have addressed criteria or hazardous pollutants that Section 111(d) does not address. CO_2 has not been categorized as either a criteria or hazardous pollutant, but currently presents the Nation's most urgent air-pollution threat.

from power plants by engaging in "complex balancing" that weighs "the environmental benefit potentially achievable" against "our Nation's energy needs and the possibility of economic disruption." AEP, 564 U.S. at 427. As the Supreme Court concluded, EPA is an "altogether fitting" "expert administrative agency" for this Congressionally assigned task. Id. at 427-28.

And this is hardly the first rule in which EPA has considered such issues in the context of setting pollution standards. Since the Act's inception, EPA has promulgated numerous rules setting significant emission limitations for the power sector, 80 Fed. Reg. at 64,696-99, and in doing so has considered issues related to grid reliability and energy markets, all without disrupting electricity availability. See e.g., 77 Fed. Reg. at 9406-11; 76 Fed. Reg. at 48,265-66. It has done so again here.

EPA has also not assumed any impermissible "central planning" role for the power sector. Pet. Legal Br. 33. EPA has simply performed its statutory duty to require a reasonable degree of CO_2 emission limitation for fossil-fuel-fired plants, while leaving states and sources with enormous flexibility to meet that requirement through virtually any means they choose. See Massachusetts, 549 U.S. at 512, 530-31 (distinguishing FDA v. Brown & Williamson Tobacco Corp., 529 U.S. 120 (2000), and noting that "there is nothing counterintuitive to the notion that EPA can curtail the emission of substances that are putting the global climate out of kilter").

Petitioners also overlook, that under EPA's own interpretation of Section 111, its authority is substantially constrained in important respects. See supra Argument

I.A.1. In view of these acknowledged constraints, EPA does not claim, as Petitioners hyperbolically suggest, "unilateral authority to end the use in this country of certain kinds of energy generation." Pet. Legal Br. 33. The Rule specifies a cost-reasonable and feasible degree of pollution limitation for states to obtain from large polluters, consistent with industry trends, and comports with textual constraints.

Petitioners provide no support for their proposition that generation-shifting could qualify as the Best System for other industries. EPA developed a robust record and explained at length why, in the case of power plants, generation-shifting meets textual constraints on a Best System, in critical part because of the unique attributes of power-plant operations. 80 Fed. Reg. at 64,723-36, 64,744-55. See also Legal Mem. 120-127 (explaining why generation-shifting would not qualify as Best System for other industries), JA___.[38]

Petitioners further misconstrue this Court's decision in Delaware Department of Natural Resources v. EPA ("Delaware"), 785 F.3d 1, 18 (D.C. Cir. 2015). Pet.

[38] Having unsuccessfully identified in comments any source category that is similarly situated to the electricity sector, Petitioners now assert that the Best System for reducing municipal-landfill emissions could be "switching to recycling plants." Pet. Legal Br. 34. But Petitioners make no case that such a system is "adequately demonstrated" for landfills or meets other Best System criteria. For example, they do not acknowledge that EPA's recently proposed revised guidelines for municipal landfills expressly rejected requiring materials separation—a prerequisite for recycling—for emission-causing organic waste. See 80 Fed. Reg. 42,100, 42,116 (Aug. 27, 2015) (identifying significant "technical barriers" precluding any requirement for landfills to separate organic waste).

Legal Br. 36. In that case, the Court perceived that EPA relaxed Section 112 environmental controls for the *specific purpose* of furthering grid reliability, but in the Court's view, failed to respond to public comments raising reliability concerns or consult with the Federal Energy Regulatory Commission ("FERC"). Here, EPA performed its core function of limiting pollution to protect human health and the environment and properly considered, among other things, "energy requirements," as Congress instructed it to do. 42 U.S.C. § 7411(a)(1). Unlike in Delaware, EPA engaged in extensive consultation with FERC, grid operators, utilities and others prior to making any judgments relating to "energy requirements"; responded to their comments; and set up a process to work with FERC to continue to monitor reliability issues. 80 Fed. Reg. at 64,671, 64,693-94, 64,706-07, 64,800, 64,874-81.

5. EPA's interpretation does not invade states' regulatory domain.

The Rule, like prior nationwide CAA rules for this industry, appropriately limits pollution, consistent with the central objectives of the Act. In doing so, the Rule does not impinge upon states' sovereign rights or invade traditional state authorities. See Pet. Legal Br. 3, 36-41.

Petitioners ignore the important distinction between (1) regulation of pollution, as authorized by the Act, which indirectly affects energy prices and markets, and (2) direct regulation of energy markets. This Rule is the former. As is the case with *any* pollution limitations for power plants (which, given the amount of these plants'

emissions, are commonplace under the Act), the Rule will entail compliance costs that will necessarily indirectly affect energy markets.[39] That does not mean EPA lacks authority to establish guidelines for pollution limitations for the industry or that establishing such guidelines will impermissibly interfere with states' traditional responsibilities in the field of electricity regulation. See FERC v. EPSA, 136 S. Ct. at 784 (distinguishing between federal regulations that "inevitably[] influenc[e]" areas of state control, and those that "intrude on the States' power"); Conn. Dep't of Pub. Util. Control v. FERC, 569 F.3d 477, 479-83 (D.C. Cir. 2009) (same).

Indeed, taken to its logical extension, Petitioners' sovereignty argument would absurdly preclude EPA from implementing *any* Section 111(d) guidelines, or any limitation for power plants under any other CAA provision. Any "system of emission reduction" that EPA might apply to the power sector under Section 111(d)—including Petitioners' preferred technological controls—would require generators that emit more pollution to bear higher compliance costs than generators that emit less, and thereby would indirectly influence electricity rates and the relative utilization of plants.

Petitioners essentially point to two types of state police power they believe the Rule implicates: the power to (1) regulate retail sales of electric power in intrastate

[39] Petitioners suggest that the Rule is impermissible if it might impair a regulated party's market share. Pet. Legal Br. 4, 33. Any air-pollution standard, however, has competitive implications for plants that need to do more to comply.

markets and (2) license new electric generating capacity. Pet. Legal Br. 3, 36-41. But the Rule does not impinge upon either.

With respect to retail-sales regulation, the Rule leaves states with precisely the same power they have always had—the authority to decide the rates that state ratepayers should bear and to otherwise condition the terms of sale. Power plants may need to incur costs to comply with new CO_2 standards, as they do for *any* air-pollution standards, but state regulators will continue to decide rates, and can elect whether or not to reflect CO_2-control costs in those rates. The Rule is no different in this regard from any other rule EPA has ever promulgated for this industry.[40]

Nor will the Rule affect state "renewable portfolio standards." Pet. Legal Br. 39.[41] Nothing in the Rule precludes states with such standards from amending or terminating them or requires states without such standards to enact them. Indeed, the Rule is designed to allow states to rely on renewable portfolio standards, should they

[40] Title IV demonstrates that a mass-based trading program can be successfully implemented for power plants without any invasion of state police power. Title IV specifically provides that it should not be construed as "requiring a change of any kind in any State law regulating electric utility rates and charges," but that qualification has not in any way impeded the successful implementation of the acid rain program. 42 U.S.C. § 7651b(f).

[41] A renewable portfolio standard generally obligates retail sellers of electricity to include certain minimum amounts of electricity from renewable-energy sources in the collection of resources from which the retailer obtains electric power.

so wish, for purposes of meeting emission-reduction targets, but the Rule can be implemented independently of those programs. 80 Fed. Reg. at 64,836-37, 64,908.[42]

The Rule likewise does not affect states' power to license new electric generating capacity. States will continue to have the same authority over licensing decisions that they have always had. The Rule's CO_2 emission standards might indirectly affect the types of projects that power generators propose (e.g., encourage more renewable-energy projects), but that does not usurp state authority to determine whether to license those projects. If a state decides to reject new renewable capacity, it is free to do so. While the Rule leaves each state with this choice, overwhelming record evidence supports EPA's conclusion that the Nation, as a whole, will continue to be able to draw upon an ever-increasing supply of lower-emitting power, consistent with existing market trends.

Petitioners' assertions that states will need to "restructure[] their power systems," "fundamentally alter electricity generation," and "reverse countless decisions" are specious. Pet. Legal Br. 3, 22, 40. States do not have to engage in any particular legislative or regulatory activities to implement the Rule.[43] In fact, states can elect to have EPA implement the Act's required reductions through a federal plan. 80

[42] The same is true for state energy-efficiency standards. See Pet. Record Br. 81.

[43] Petitioners fail to rely on record evidence to support their contrary position, relying solely on post-promulgation declarations. See Pet. Legal Br. 40; 42 U.S.C. § 7607(d)(7)(B).

Fed. Reg. at 64,882. For those states that elect to prepare state plans, the Rule provides expansive flexibility. While the Best System informs the stringency of emission-reduction targets, the Rule grants states almost complete flexibility to decide *how* to meet those targets. For example, if a state prefers a plant-by-plant command-and-control technological approach to reducing emissions, it could compel its coal plants to switch their fuel to natural gas, or require carbon sequestration where feasible. Alternatively, under the "states measures" approach, a state could obtain the required degree of reduction through demand-side energy-efficiency programs that would not impose any direct requirements on power plants (provided the state meets its emission target), or affect the state's present generation mix.

For similar reasons, the Rule does not intrude on FERC's power under the Federal Power Act, 16 U.S.C. §§ 791a, et seq. See Pet. Legal Br. 38-39. The Rule appropriately limits air pollution under the CAA. It does not regulate any kind of electricity sales or rates—interstate or intrastate. Thus, the dividing line between interstate and intrastate rate regulation addressed in the cases cited by Petitioners has no relevance here.

Finally, there is no basis for New Jersey's claim that the Rule requires states that have deregulated electricity markets to change their regulatory approach. Pet. Record Br. 80-82. The Rule gives states considerable flexibility in developing their plans and provides that states may, if they wish, simply require plants within the state to meet the uniform rates, while allowing crediting.

6. Assorted textual snippets relied on by Petitioners do not unambiguously foreclose EPA's reasonable interpretation of the Best System.

Petitioners try to conjure from a grab bag of textual snippets an argument that the Act unambiguously precludes utilization of generation-shifting as a pollution-control strategy. See Pet. Legal Br. 41-45, 50-54. This effort fails. Even if the text they point to could be read to create some arguable degree of ambiguity, that ambiguity must be resolved in favor of EPA's reasonable interpretation. Chevron, 467 U.S. at 842-43.

a. The guidelines call for standards "for" and "applicable to" each source.

First, Petitioners assert that EPA's guidelines fail to call for the promulgation of emission standards "for" and "applicable to" each regulated "source." See Pet. Legal Br. 41-43 (quoting 42 U.S.C. § 7411(d)(1), (a)(2)). This is wrong. As under any Section 111(d) rule, each source will have its own CO_2 emission standard that will be set by its state. Such standards will be "for" that source and "applicable to" that source.

Essentially, Petitioners' argument conflates the future emission standards that states will set for particular sources with the "best of system of emission reduction" used to establish the degree of emission limitation those standards must collectively achieve. While the Best System informs the *stringency* of the emission standards, the nature of the Best System (here, including generation-shifting measures) does not

somehow prevent states from setting standards "for" and "applicable to" sources. These standards will be "for" and "applicable to" "sources" for the simple reason that they will impose emission limits to which the sources will be subject. See 40 C.F.R. § 60.5740(a)(2)(i) (state plan required to "impose[] emission standards on [sources]"); 80 Fed. Reg. at 64,826. Section 111 requires only that emission standards "reflect[] the degree of emission limitation achievable through the application of the best system of emission reduction," as they will here.

Thus, the fact that states set standards "for" or "applicable to" any existing source does not itself place any limits on the scope of measures that can be considered as part of the Best System, much less limit the scope to only measures that could be implemented under the presumption that each and every source is hermetically sealed off from the rest of the world. Certainly it does not do so unambiguously, as would be required for Petitioners to prevail under Chevron.

Next, Petitioners point to the fact that the term "source" is defined as a "building, structure, facility or installation." Pet. Legal Br. 44. This definition simply makes clear that the entities to which standards must apply are stationary sources, and not, for example, mobile sources, which the Act regulates elsewhere. But this definition does nothing to limit the scope of measures that can be considered as part of the "best system of emission reduction" for sources. See 80 Fed. Reg. at 64,767.

Petitioners mistakenly suggest that EPA's guidelines impermissibly conflate a "source" with its "owner or operator." Pet. Legal Br. 44-45. Section 111 specifies

that the "owner or operator" of a new "source" bears the legal obligation to "operate" such "source" in compliance with the "standards of performance" applicable to it. 42 U.S.C. § 7411(e). The Rule provides the same for existing sources. See 40 C.F.R. § 60.5825(a). To make clear that the emission-performance levels within the guidelines are achievable by sources through generation-shifting, EPA made the unremarkable observation that it is the owner or operator of a source that will implement generation-shifting measures, as facilities are inanimate objects. See 80 Fed. Reg. at 64,762 (stating that "[a]s a practical matter, the 'source' includes the 'owner or operator' of [the source]" in the sense that the owner or operator implements measures to achieve the source's emission limit). But EPA's guidelines do not thereby conflate the terms "source" and "owner or operator." The "source" is the entity subject to the emission limit, 60 C.F.R. § 60.5740(a)(2)(i), not the "owner or operator." If the Rule actually conflated "sources" with their "owners or operators," then it would direct states to set a single standard for the CO_2 emissions from all of a particular *company's* power operations. The Rule does not do that. It directs states to establish standards for particular "sources." Id.

Petitioners contend that it is "one thing" for an owner or operator to take actions reducing emissions at the source (e.g., installing new equipment) and "another" for the owner or operator to rely on emission reductions obtained through clean-power-generation off-site. Pet. Legal Br. 45. But that contention does not mean that the emission standards are not "for" the sources and, in any event,

Petitioners fail to reconcile their contention with the fact that power plants and other sources routinely rely on emissions-trading programs to meet a range of CAA requirements. 80 Fed. Reg. at 64,773. Under those programs, a particular source complies with an emission limitation when its owner or operator acquires credits from *other* sources that have reduced their emissions, rather than taking action to reduce the source's own emissions. Consequently, the balkanized construct that Petitioners assert as a textually mandated limiting principle cannot be squared with real-world practice and would undermine Petitioners' own requests for compliance flexibility.

Petitioners' reliance on ASARCO is also misplaced. Pet. Legal Br. 46-47. ASARCO did not address the meaning of "standard of performance" or "best system of emission reduction," much less hold that the latter phrase requires EPA to view individual sources as if they were sealed off from the rest of the world. That case instead rejected an EPA regulation that expressly redefined the statutory term "stationary source" to include "any … combination of … facilities." 578 F.2d at 326 (quotation omitted). EPA had promulgated that regulation to allow a plant operator who increased emissions from some structures within a facility to avoid complying with Section 111(b)'s new source standards by offsetting those increases with emission decreases from other structures within that facility. In rejecting the regulation, the Court emphasized that it would thwart the Act's air-quality objectives. Here, of course, it is Petitioner's interpretation that would thwart those objectives. ASARCO is of questionable validity anyway because it was decided before Chevron,

which endorsed a more flexible approach to interpreting the scope of the term "source" within the Act. 467 U.S. at 842-66 (reversing D.C. Circuit decision, which was based on ASARCO).

In any event, EPA's guidelines do not require states to establish standards for "multiple sources," or "at the level of the entire source category." See Pet. Legal Br. 47. The guidelines instead require states to apply standards to individual sources.[44] 40 C.F.R. § 60.5745(a)(4). Those guidelines appropriately "reflect[]" a degree of emission limitation that individual sources can achieve applying the Best System. 42 U.S.C. § 7411(a)(1).

Further, it is entirely appropriate for EPA to consider the total amount of emission reductions that will accrue across a source category in choosing the *best* "system of emission reduction" for that source category, just as it is appropriate for EPA to consider total costs across a source category. To ignore total air-quality benefits as a relevant factor in selecting the *best* "system of emission reduction" for a source category would be wholly inconsistent with the statute's objectives, and particularly irresponsible given the magnitude of the threats here.

[44] Petitioners incorrectly suggest that this Rule regulates renewable plants. Pet. Legal Br. 47-48. While a regulated fossil-fuel-fired source may comply with its emission standard by obtaining credits associated with a new renewable plant, that plant itself has no emission standard and remains unregulated.

b. EPA's guidelines enable the promulgation of "standards of performance," as that term is defined.

Petitioners next try to cobble together two theories for why the Rule does not respect the definition of "standard of performance." Pet. Legal Br. 50-54. Neither has merit.

First, without disputing that the guidelines apply a "system of emission reduction," Petitioners claim that the Rule gives no meaning to the word "performance" in "standard of performance." That argument fails as a threshold matter because the phrase "standard of performance" is a statutorily defined term, and the Rule comports with each and every element of the term as defined, supra Argument I.A. See Stenberg v. Carhart, 530 U.S. 914, 942 (2000) ("When a statute includes an explicit definition, we must follow that definition, even if it varies from that term's ordinary meaning"). In any event, the statutory context makes clear that the word "performance" refers to *emissions* performance, not *production* performance. See Section 111(a)(1) ("standard of performance" is a "standard for emissions" that reflects a "degree of emission limitation" determined in a specified manner). And regardless of whether a source complies with its emissions performance standard by installing in-plant technologies or shifting generation off-site, its compliance

obligations address the external harm caused by its *own* operations, and its compliance obligations—reducing emissions—therefore are closely tied to those operations.[45]

Petitioners next point to Section 7602(k)'s definition of "emission limitation," 42 U.S.C. § 7602(k), contending that the guidelines do not call for emission reduction on a "continuous basis." Pet. Legal Br. 52-53. But they again conflate the emission standards to be set by states with the Best System to be identified by EPA. In the 1990 Amendments, Congress specifically amended the Section 111(a) definition of "standard of performance" to remove the word "continuous" from the phrase "best system of emission reduction." 80 Fed. Reg. at 64,765. Thus, the "system of emission reduction" selected by EPA as a foundational determination for purposes of determining the stringency of the guidelines need not itself entail "continuous" reduction.

Regardless, EPA's guidelines do call for emission standards that will require "continuous" emission reduction by sources. Under EPA's guidelines, there is never a time when sources may emit without needing to comply with the state-established standards of performance. 80 Fed. Reg. at 64,841; 40 C.F.R. § 60.5770; see also Sierra Club v. Johnson, 551 F.3d 1019, 1027-28 (D.C. Cir. 2008) (interpreting Section

[45] Petitioners' reliance, Pet. Legal Br. 51, on Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001), is misplaced. This is not a case where the word "performance" in "standard of performance" is "given no effect whatever." Id. at 172.

7602(k) to require that emission standards apply at all times). Even if the state adopts a trading program, the emission rate or mass limit "applies continuously" because it imposes an uninterrupted obligation on the source to meet the rate or assure that its emissions will not exceed its allowances. 80 Fed. Reg. at 64,841. Moreover, the generation-shifting measures in the Best System allow sources to achieve these continuous emission limits. See supra Argument I.A.4. This understanding of "continuous" is consistent with the usage of the term "emission limitation" appearing elsewhere in the Act. For example, in Title IV, Congress used the same term "emission limitation" in describing the standards encompassed in that Title's cap-and-trade program. See 42 U.S.C. § 7651c(a)(1).

In a fruitless attempt to show that Section 7602(k) precludes generation-shifting measures, Petitioners also mischaracterize the 1977 legislative history related to that provision's enactment. Pet. Legal Br. 30, 52. The cited 1977 House Report reflects Congress's concern with control measures that simply disperse pollutants away from higher concentration areas and towards lower concentration areas—for example, "load switching from one power plant *where dispersion is poor* to another *where dispersion is favorable*"). H.R. Rep. No. 95-294, at 81-89 (1977) (emphasis added). Congress was concerned that this kind of weather-related dispersion strategy would not "decrease the total amount of [pollution] in the regional atmosphere." Id. at 83. The generation-shifting measures that are part of the Best System do not involve any such weather-related dispersion strategy, and *will* decrease the total

amount of CO_2 in the atmosphere on a continuous basis. Notably, the cited history also reflects Congress's specific concern with "the possibility of effects on weather and climate"—the very threats the Rule addresses. Id. at 86.

Petitioners' effort to rely on distinctions between air-quality-based programs and performance-based programs also fails. See Pet. Legal Br. 54-56. While there are some distinctions between programs like the NAAQS, which are focused on attaining a particular level of air quality, and programs like Section 111(d), which are focused on establishing emission standards for categories of sources, they are not distinctions that speak to whether the "best system of emission reduction" for interconnected power plants can include a reasonable amount of cost-effective generation-shifting. Contrary to Petitioners' argument, performance-based programs under the CAA, like air-quality-based programs, commonly utilize trading mechanisms. See, e.g., 40 C.F.R. § 60.21(f) (authorizing trading programs under Section 111(d)); 40 C.F.R. § 86.1865-12(k) (authorizing trading for purpose of motor vehicle CO_2 emission standards under 42 U.S.C. § 7521(a)(2)). Petitioners agree power plants may rely on generation-shifting to meet the requirements of trading programs. See supra Argument I.B.3.a.

7. EPA's interpretation is consistent with preexisting implementing regulations and past practice.

Petitioners' effort to contest the reasonableness of EPA's interpretation by suggesting that it is "novel" also fails. Pet. Legal Br. 48-50. As an initial matter, even

if the Rule entailed a different interpretation of Section 111, an agency is perfectly free to change its interpretation of a statute that it administers so long as it has a principled basis for doing so. Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Servs., 545 U.S. 967, 981 (2005). EPA has explained in depth why the interpretation set forth in the Rule is consistent with the statutory text and is sensible.

But EPA's interpretation has *not* changed. In the Rule, EPA explained that it was taking the same approach it took in prior Section 111 rules, which was to develop the Best System based on what was appropriate for the particular industry and air pollutant. 80 Fed. Reg. at 64,724-26. In other Section 111 rules for this industry, the fact that power plants "are part of the integrated grid" likewise has "informed some of the regulatory requirements." Legal Mem. 7-9, JA___.

Additionally, EPA implementing regulations put in place prior to the Rule already clarified that Section 111(d) standards may include trading programs like those authorized here (i.e., programs that allow a source to avoid applying controls to its own facilities by paying others to control their facilities). See 40 C.F.R. § 60.21(f) (defining an "emission standard" under Section 111(d) as encompassing "an allowance system").[46]

[46] Petitioners mistakenly characterize other portions of EPA's Subpart B regulations, 40 C.F.R. §§ 60.21(b) and (e), as requiring that the Best System be limited to plant-level technological controls. Pet. Legal Br. 49-50. EPA's regulations say no such thing. They provide, consistent with the Section 111(a)(1) definition of "standard of performance," that EPA will set guidelines based on the Best System adequately

(Footnote Continued …)

8. EPA's guidelines for existing sources are not inconsistent with EPA's regulation of new sources.

Finally, Petitioners' effort to challenge EPA's interpretation by depicting the Rule's guidelines as incompatible with EPA's separate regulation of new (including modified and reconstructed) sources is misplaced. Pet. Legal Br. 56-61. EPA addressed this issue at length. 80 Fed. Reg. at 64,785-87; Legal Mem. 1-5, JA___.

First, EPA did not adopt a "conflicting interpretation" of "standard of performance" in the new source rule. Pet. Legal Br. 58. As EPA explained, the "same" systems of emission reduction can be considered for purposes of setting either new or existing source standards, and EPA applied the same statutory factors to new and existing sources. Legal Mem. 1, JA___. But applying the same factors does not dictate that both cases will have identical "systems." EPA selected different systems for new and existing sources not based on any different "definition" or "reading" of the statute, Pet. Legal Br. 57, but because the relevant factual circumstances were different. Legal Mem. 1, JA___.

Several considerations led EPA to decline to include generation-shifting within the Best System for new sources, unrelated to the issue of statutory interpretation presented here. For example, EPA recognized that new sources would need to incur

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demonstrated that sources can implement or apply to reduce their emissions, as EPA did here. See also Auer v. Robbins, 519 U.S. 452, 462 (1997) (an agency's interpretation of its own regulations commands substantial deference).

capital and operational costs to meet and maintain their emission limits (e.g., coal-fired plants may need to install partial-carbon-sequestration systems), and EPA reasonably concluded it was not appropriate to impose the additional costs of implementing generation-shifting. 80 Fed. Reg. at 64,627.[47] EPA also considered that because new source standards are effective immediately, new sources would not have the benefit of lead time to implement generation-shifting measures, and therefore some of the least-cost compliance options for these measures may not be available to them. Legal Mem. 4, JA___.

Next, Petitioners' focus on the relative stringencies of the existing and new source standards is unavailing. The stringency of the two rules cannot be directly compared. The new source standards became effective immediately. 80 Fed. Reg. at 64,538. However, under the Rule, existing sources will not be subject to CO_2 performance standards until 2022 at the earliest—in fact, states may delay imposing requirements until 2023 or, in most cases, 2024—and the standards are then gradually phased in through 2030. 80 Fed. Reg. at 64,785-86. Meanwhile, EPA is required to review and, if appropriate, revise the stringency of new source standards no less frequently than every eight years—i.e., by 2023. Thus, the stringency of the limits that

[47] As EPA explained, new construction is the preferred time to drive new investment in technological controls that will make a source inherently low-emitting (without any need to obtain offsets), since new sources will have long operating lives over which initial substantial capital costs can be amortized. 80 Fed. Reg. at 64,626.

will apply to new sources when the existing source standards actually go into effect (2022 or later) and become fully effective (2030) is not yet known.

Moreover, the new source standards apply directly to each new source individually and are expressed in the form of a rate that each source must meet in practice without reliance on emission-rate credits. In contrast, states have great flexibility in fashioning requirements for existing sources consistent with EPA's guidelines, and existing sources are expected to be able to access cost-effective crediting measures to meet their eventual state standards.

In any event, as EPA noted, "[n]o provision in [S]ection 111, nor any statement in the legislative history, nor any of its case law, indicates that the standards for new sources must be more stringent than the standards for existing sources." Id. at 64,787. To support their position that new source standards must be more stringent, Petitioners principally point to EPA's 1975 implementing regulations, Pet. Legal Br. 58, in which EPA noted that existing source guidelines will "*ordinarily* be less stringent." 40 Fed. Reg. at 53,344 (emphasis added). But EPA's use of the word "ordinarily" itself clarifies that there may be instances where existing source guidelines *are* more stringent.

The Primary Aluminum Guidelines cited by Petitioners are one such instance and refute Petitioners' proposition that EPA has "never" adopted more stringent existing source guidelines. Pet. Legal Br. 59 n.30. As EPA noted in those guidelines, an "occasional old [aluminum] plant may have a [more stringent] guideline fluoride

emission rate than a new plant subject to [a new source standard]; but such a rate will not be unreasonable to attain." 45 Fed. Reg. 26,294, 26,295 (Apr. 17, 1980).

Ultimately, the relevant question for review—in either the case of new source standards or existing source guidelines—is whether EPA has identified a suitable system of emission reduction, and has reasonably explained the decisions made.[48] EPA has done so here. No more is required.

C. The Rule Is Consistent with the Discretion Given to States by Section 111(d) and EPA's Regulations.

Petitioners argue that, by setting guidelines expressed as "uniform performance rates," EPA has expropriated states' right to establish specific emission standards for sources themselves. Pet. Legal Br. 74-76. They are mistaken.

Under Section 111(d) and longstanding regulations (40 C.F.R. Part 60, Subpart B), the agency promulgates "guidelines" for states to follow when submitting "satisfactory" plans establishing emission standards for existing sources. While it is the states' job to establish such standards, those standards must "reflect[]" the "degree of emission limitation achievable through the application of the best system of

[48] As explained below at Argument VI.D, the Rule's "leakage" provisions, see Pet. Legal Br. 60-61, have nothing to do with the relative stringency of the emission *rates* in the new and existing source standards. Rather, they are necessary to eliminate perverse incentives that would undermine the integrity of the *mass* cap in states that choose the option of a mass-based trading plan, and would be needed regardless of whether the rates in the new source standards are more or less stringent than the existing source standards. If states adopt rate-based emission limits, these "leakage" requirements do not apply. See 80 Fed. Reg. at 64,822-23.

emission reduction … *the Administrator determines* has been adequately demonstrated." 42 U.S.C. § 7411(a)(1) (emphasis added). Thus, it is *EPA's* job to determine the best system of emission reduction and the degree of emission limitation achievable through that system—i.e., to establish a minimum level of stringency—which then enables states to create "satisfactory" plans.[49] EPA regulations have so stated since 1975,[50] making Petitioners' argument untimely. See 42 U.S.C. § 7607(b)(1).

Here, EPA expressed the degree of emission limitation achievable through application of the Best System in the form of uniform CO_2 emission rates, and then translated those rates into state-specific rate- and mass-based goals. 80 Fed. Reg. at 64,667. But EPA left it to each state to set particular standards for particular sources, taking advantage of the Rule's menu of options. Id. at 64,707, 64,823-24. Thus, "state[s] may apply a standard of performance that is either more stringent or less stringent than the performance level in the emission guidelines, as long as, in total, the state's sources achieve at least the same degree of emission limitation as included in

[49] Petitioner UARG previously recognized EPA's role in this regard. See UARG Mercury Rule Comments, 133-34 ("[S]tate plans must be consistent with EPA's regulatory determination. … Nothing in the Act … gives states the ability to choose not to follow the guidelines that EPA establishes under § 111 based on the Administrator's 'best system' determination."), JA___.

[50] See 40 Fed. Reg. at 53,342-43 (rejecting argument that it was inappropriate for EPA to determine minimum stringency); 40 C.F.R. § 60.24(c) (requiring that state "emission standards shall be no less stringent than the [EPA] guidelines"). Petitioners cite instances where EPA approved state plans addressing pollutants that endanger welfare but not health. Pet. Legal Br. 75 n.39. CO_2, however, endangers both health and welfare, 80 Fed. Reg. at 64,682, so 60.24(c), not 60.24(d), applies here.

the EPA's emission guidelines." Id. at 64,719. This division of responsibilities is consistent with Section 111(d) and cooperative federalism principles.

Petitioners also mistakenly argue that EPA has unlawfully encroached on states' authority to consider sources' remaining useful lives. Pet. Legal Br. 76-78. But the statute requires only that EPA "*permit* the State in applying a standard of performance *to a particular source* … to take into consideration, among other factors, the remaining useful life of the existing source." 42 U.S.C. § 7411(d)(1) (emphasis added). EPA did so here by allowing states to decide, *inter alia*, whether to enable trading,[51] what interim steps to meet, and whether to impose varying emission standards. 80 Fed. Reg. at 64,871-72; Legal Mem. 41-42, JA___.[52]

Petitioners do not argue that this range of choices is insufficient. Instead, they claim that the Act requires EPA to allow states to "relax" *the overall degree of emission limitation*. Pet. Legal Br. 77. The Act says no such thing. Rather, it is silent—and thus gives EPA discretion—regarding *how* EPA should "permit"[53] states to consider

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[51] Trading alone gives sources with shorter remaining useful lives proportionately lower total costs of compliance; thus states can account for remaining useful life even if they adopt the uniform rates. 80 Fed. Reg. at 64,871.

[52] Petitioners suggest that Kansas sources that have installed expensive technology to meet other requirements will be forced to retire early. Pet. Legal Br. 77-78 nn.40-41. This is speculation, and ignores that Kansas has a wide range of options; it can avoid premature retirements by, e.g., allowing trading. See id. at 64,872.

[53] To "permit" means "to allow or give consent" and is commonly understood as granting authority that may be subject to conditions. See Legal Mem. 37 (citing the

(Footnote Continued …)

remaining useful life and other factors. Legal Mem. 41, JA___.[54] Here, EPA permits states to consider such factors by giving them numerous tools for achieving their mass- or rate-based goals, and allowing them to determine the appropriate means and level of control for any particular source.

II. Regulation of Hazardous Pollutant Emissions under CAA Section 112 Does Not Bar Regulation of CO_2 Emissions under Section 111(d).

Consistent with the Supreme Court's holding in AEP that Section 111 "speaks directly" to the emission of CO_2 from existing power plants, 564 U.S. at 424, EPA has authority to regulate such plants' CO_2 emissions under that provision. Petitioners argue that, in 1990, Congress eviscerated EPA's authority under Section 111(d), barring it from using that provision to regulate any source category that is also regulated under Section 112, even in regard to different pollutants. But EPA's regulation of different pollutants under a different statutory program does not nullify its authority under Section 111(d). Rather, EPA reasonably interpreted Section 111(d)

Oxford English Dictionary and noting that "the law permits the sale of drugs" is understood to mean that the law may set conditions on such sales), JA___.

[54] Petitioners mistakenly claim, Pet. Legal Br. 77, that, in 1977, Congress "codified" the variance provision set forth in 40 C.F.R. § 60.24(f), which is not applicable here. But Congress knew how to create an explicit variance when it desired, and the statute does not contain such language. See Legal Mem. 34, 45-46, JA___, ___. Nor does the statute "provide an unmitigated ability for States to exempt their sources from standards." Id. at 35-37, JA___. Rather, it requires states to "apply[]a standard of performance" to each "particular source." 42 U.S.C. § 7411(d)(1).

—which is ambiguous in several respects—consistent with the Act's purpose, the statutory context, and the legislative history.

A. Congress Amended the Act in 1990, Adding the Text at Issue.

Before 1990, Section 111(d) undisputedly directed EPA to regulate existing sources' emissions of a pollutant regulated under Section 111(b) so long as that pollutant was not a criteria or hazardous pollutant. Congress accomplished this by cross-referencing the listing provisions of the criteria and hazardous pollutant programs, Sections 108(a) and 112(b)(1)(A) respectively:

> The Administrator shall prescribe regulations … under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued or *which is not included on a list published under section 7408(a) or 7412(b)(1)(A)* of this title ….

42 U.S.C. § 7411(d)(1)(A) (1988) (emphasis added).

In 1990, Congress amended the Act to, *inter alia*, accelerate EPA's regulation of hazardous pollutants under Section 112, compelling EPA to regulate more pollutants more quickly.[55] In doing so, Congress eliminated Section 112(b)(1)(A), which described a process for identifying hazardous pollutants, and replaced it with a list of 189 hazardous pollutants that EPA must regulate. See 42 U.S.C. § 7412(b). To address that change, Congress enacted two amendments to Section 111(d) that replaced the prior cross-reference to Section 112(b)(1)(A), but in different ways.

[55] See 80 Fed. Reg. at 64,711; S. Rep. No. 101-228, at 133.

Section 108(g), drafted by the House, replaced the obsolete cross-reference with the phrase "emitted from a source category which is regulated under section 112."[56] Section 302(a), drafted by the Senate, replaced the old cross-reference with a cross-reference to new Section 112(b).[57] When the 1990 Amendments were codified, the Law Revision Counsel updated 42 U.S.C. § 7411(d) by incorporating section 108(g), but not section 302(a). Congress has not enacted the codified version as positive law.

B. EPA Reasonably Read Section 111(d) To Allow CO_2 Regulation.

Petitioners argue that once a source category's emissions of hazardous pollutants have been regulated under Section 112,[58] that source category cannot be regulated under Section 111(d), even in regard to a pollutant not listed as hazardous. Pet. Legal Br. 61-64. Petitioners' interpretation of Section 111(d)—which would strip that provision of nearly all effect—is not reasonable, let alone mandatory. Section 302(a) of the 1990 Amendments (the Senate-drafted amendment) plainly permits regulation of power plants' emissions of CO_2 and other dangerous, but

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[56] Pub. L. No. 101-549, § 108(g), 104 Stat. 2467 (1990).

[57] Id. § 302(a), 104 Stat. 2574.

[58] EPA regulated power plants' emissions of certain hazardous pollutants in 2012. 77 Fed. Reg. 9304 ("Mercury and Air Toxics Rule"). This rule was upheld by this Court, reversed in part by the Supreme Court, and remains in place on remand. See Michigan v. EPA, 135 S. Ct. 2699 (2015), stay of rule denied March 3, 2016; White Stallion Energy Ctr. v. EPA, 748 F.3d 1222 (D.C. Cir. 2014) (No. 12-1100), Dkt. No. 1588459.

non-hazardous pollutants under Section 111(d). The text of Section 111(d) as amended by the House only is ambiguous, and EPA reasonably interpreted it to allow regulation of dangerous emissions not regulated under Section 112. EPA's reasonable interpretation is entitled to deference. See Chevron, 467 U.S. at 837.

1. Read literally, the House-amended text of Section 111(d) allows regulation of any non-criteria pollutant.

As set forth in the U.S. Code, the House-amended text of Section 111(d) reads:

> The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by section 7410 of this title under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued or which is not included on a list published under section 7408(a) of this title or emitted from a source category which is regulated under section 7412 of this title but (ii) to which a standard of performance under this section would apply if such existing source were a new source ….

42 U.S.C. § 7411(d)(1).

Petitioners characterize their interpretation as the "literal meaning" of this convoluted text. Pet. Legal Br. 64. It is not. Rather, if this text is read literally, it directs EPA to regulate a source category's emission of *any pollutant that is not a criteria pollutant*. This is because Congress used "or" rather than "and" between the clauses delineating the scope of the provision:

> The Administrator shall prescribe regulations … under which each State shall submit to the Administrator a plan … for any existing source for any air pollutant for which air quality criteria have not been issued **or** which is not

> included on a list published under section 7408(a) of this title **or** emitted from a source category which is regulated under section 7412 ….

42 U.S.C. § 7411(d)(1) (emphasis added). If "or" is given its literal meaning, those clauses are alternatives,[59] meaning that EPA must regulate so long as *either* air quality criteria have not been established for the pollutant at issue *or* one of the remaining criteria is met. Air quality criteria have not been issued for CO_2.

Although this literal reading would authorize CO_2 regulation, EPA reasonably rejected it because it "gives little or no meaning to the limitation covering [hazardous pollutants] that are regulated under CAA section 112," 80 Fed. Reg. at 64,713, and Petitioners do not advance it. The critical point, rather, is that the text that Petitioners claim has one "literal" meaning cannot be read literally, but rather is ambiguous and must be interpreted in light of the statute's purpose, scheme, and legislative history.

2. EPA reasonably interpreted the ambiguous House-amended text of Section 111(d).

Having explained that the House-amended text of Section 111(d), as set forth in the U.S. Code, cannot be read literally, EPA reasonably interpreted that provision, addressing several other ambiguities in that text along the way. 80 Fed. Reg. at 64,711-15.

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[59] "Or" "indicate[s] an alternative <coffee *or* tea> <sink *or* swim>." Merriam-Webster Dictionary, available at http://www.merriam-webster.com/.

Petitioners argue that the phrase introduced by section 108(g) of the 1990 Amendments—"emitted from a source category which is regulated under section 7412 of this title," 42 U.S.C. § 7411(d)—is plain, citing a broad dictionary definition of "regulated." Pet. Legal Br. 62. But when construing that term in a particular statutory context, one must take a "commonsense" approach, and ask not only "who" is regulated under Section 112 (i.e., source categories including power plants), but also "what." See Rush Prudential HMO v. Moran, 536 U.S. 355, 366 (2002).[60] Here, the "what" that is "regulated under section 7412" is power plants' emission of specific pollutants: hazardous pollutants listed under Section 112. Therefore, EPA reasonably interpreted the phrase "any air pollutant … emitted from a source category which is regulated under section 7412" as identifying, and thus excluding from the scope of regulation under Section 111(d), only a source category's emissions of *hazardous pollutants regulated under Section 112*. 80 Fed. Reg. at 64,713.

Moreover, EPA also reasonably considered that the phrase "emitted from a source category regulated under section 7412" modifies "any air pollutant," 42 U.S.C. § 7411(d), an ambiguous term that the Supreme Court has instructed must be given a "reasonable, context-appropriate meaning." UARG, 134 S. Ct. at 2440. Here, context suggests that "any air pollutant" "emitted from a source category which is

[60] See also UNUM Life Ins. Co. of Am. v. Ward, 526 U.S. 358, 363 (1999) ("'regulates insurance' … require[s] interpretation, for [its] meaning is not 'plain'").

regulated under section 7412" is most reasonably interpreted to mean *hazardous* pollutants, because only source categories' hazardous pollutant emissions are "regulated under section 7412."

Petitioners ignore these ambiguities, accusing EPA of attempting to "evade a literal reading of the CAA." Pet. Legal Br. 66 (quoting UARG, 134 S. Ct. at 2446). But as discussed above, the "literal reading" of 42 U.S.C. § 7411(d) authorizes regulation of CO_2 because it is not a criteria pollutant. All parties agree that this literal reading is not what Congress intended, so the question then is whether EPA has reasonably resolved the ambiguities in the provision. EPA has done so, employing traditional "tools of statutory interpretation, including text, structure, purpose, and legislative history," Loving v. IRS, 742 F.3d 1013, 1016 (D.C. Cir. 2014) (quotation omitted), to conclude that Congress did not intend to bar regulation of all emissions—whether otherwise regulated or not—from most major industrial sources under Section 111(d).

Statutory purpose: The Act's purpose is to protect "public health and welfare," 42 U.S.C. § 7401(b)(1), and Congress's purpose in enacting the 1990 Amendments was to *strengthen*, not undermine, the Act's core programs.[61]

[61] See S. Rep. No. 101-228, at 14, 133; H.R. Rep. No. 101-952, at 336, 340, 345 & 347 (1989).

Petitioners' interpretation of section 108(g) of the 1990 Amendments (the House-drafted language), however, would practically nullify the Section 111(d) program. Section 112 *mandates* that EPA regulate each major source category emitting any of the almost 190 pollutants listed under Section 112(b).[62] 42 U.S.C. § 7412(d)(1). EPA has accordingly regulated over 140 source categories under Section 112. Petitioners' interpretation would preclude regulation of any of those source categories—even in regard to dangerous pollutants not regulated under Section 112. Given the Act's and the 1990 Amendment's stated purposes, the idea that Congress, in 1990, intended to disable EPA from regulating virtually any significant category of major industrial sources under Section 111(d) makes no sense.

Statutory context: EPA's interpretation also best accounts for statutory context. See UARG 134 S. Ct. at 2442 (a "reasonable statutory interpretation must account for … the broader context of the statute as a whole") (quotation omitted). Here, the "broader context" is that Section 111(d) was designed to work in tandem with the criteria and hazardous pollutant programs to collectively cover the full range

[62] The only exception is power plants, in regard to which Congress instructed EPA to first consider whether regulation is "appropriate and necessary." See 42 U.S.C. § 7412(n)(1). Thus, insofar as Petitioners argue that EPA can choose between regulating a source category's emissions of hazardous pollutants under Section 112 or other dangerous pollutants under Section 111(d)—a "pick your poison" approach that is antithetical to the Act's goals—that is only true in regard to power plants.

of dangerous emissions from stationary sources, leaving no gaps.[63] But under Petitioner's reading, there would be a gaping hole in the Act's coverage, allowing the unregulated emission of pollutants not listed as "hazardous" or "criteria," but nonetheless dangerous to public health or welfare. Such a result cannot be squared with the Act's scheme. See Burwell, 135 S. Ct. at 2492 ("A provision that may seem ambiguous in isolation is often clarified by the remainder of the statutory scheme … because only one of the permissible meanings produces a substantive effect that is compatible with the rest of the law." (citations omitted)).

Furthermore, where the Court is "charged with understanding the relationship between two different provisions within the same statute," it "must analyze the language of each to make sense of the whole." Bell Atl. Tel. Cos. v. FCC, 131 F.3d 1044, 1047 (D.C. Cir. 1997). Here, Petitioners' view of Section 111(d) is inconsistent with Section 112(d)(7), which states:

> No emission standard or other requirement promulgated under this section [112] shall be interpreted … to diminish or replace the requirements of a more stringent emission limitation or other applicable requirement established pursuant to section [1]11 ….

42 U.S.C. § 7412(d)(7). This text strongly indicates that Congress anticipated that the Section 111 and 112 programs would apply to the same sources simultaneously.

[63] See S. Rep. No. 91-1196, at 20.

Thus, like the lower court's reading of the phrase "regulations applicable solely to public lands" in Sturgeon v. Frost, No. 14-1209, Slip Op. at 13 (S. Ct. Mar. 22, 2016), Petitioners' reading of Section 111(d) "may be plausible in the abstract, but it is ultimately inconsistent with both the text and context of the statute as a whole."

Legislative history: Petitioners have not identified a single statement indicating that, in 1990, Congress sought to restrict EPA's authority under Section 111(d).[64] Petitioners would have the Court believe that Congress cut the heart out of Section 111(d) without uttering a word to that effect. "It would have been extraordinary for Congress to make such an important change in the law without any mention of that possible effect," Sale v. Haitian Ctrs. Council, 509 U.S. 155, 176 (1993), and it is particularly unreasonable to think that Congress did so when simply replacing an obsolete cross-reference. See Whitman v. Am. Trucking Ass'ns, 531 U.S. 457, 468 (2001) ("Congress … does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions.").

[64] Petitioners point to a Senate Managers' "Statement" noting that the Senate "recede[d]" to the House regarding section 108 of the 1990 Amendments. Pet. Legal Br. 73 (citing 136 CONG. REC. 36,067 (Oct. 27, 1990)). But "recedes" means simply that a chamber is withdrawing an objection, and that term was used here only in regard to section 108, and thus tells us nothing about Congress's intent for section 302 (containing the Senate's amendment). Regardless, this Statement was "not reviewed or approved by all of the conferees," 136 CONG. REC. 36,067, and "cannot undermine the statute's language." Envtl. Def. Fund v. EPA, 82 F.3d 451, 460 n.11 (D.C. Cir. 1996).

Rather, the reasonable conclusion is that, like the Senate, the House intended only to update Section 111(d) to reflect the structural changes made to Section 112, not dramatically change its scope.[65] Indeed, the Congressional Research Service characterized the two amendments as "duplicative" edits that "change the reference to section 112" using "different language" shortly after their enactment.[66]

Lacking legislative history supporting their contrary interpretation of section 108(g) of the 1990 Amendments, Petitioners theorize that Congress sought to prevent "double regulation." Pet. Legal Br. 68. This theory does not survive examination. Sections 112 and 111 regulate different air pollutants: "hazardous" versus other dangerous pollutants. There is no "double regulation" when the programs at issue address different pollutants. Indeed, sources are often subject to multiple CAA

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[65] Section 108(g) appears to be a vestige of an earlier bill that would have barred from regulation *under Section 112* "[a]ny air pollutant … which is regulated for a source category under section 111(d)." See 80 Fed. Reg. at 64,711, n.289 (citing H.R. 4, § 2 (Jan. 3, 1989)). In other words, "the Section 112 Exclusion in section 111(d) … was originally crafted as what might be called a 'Section 111(d) Exclusion' in section 112." Id. In that context, the "source category" phrasing was plainly pollutant-specific. Furthermore, when the House subsequently introduced its initial draft of the 1990 Amendments, it proposed that Section 112 regulation be discretionary. See H.R. 3030, 101st Cong. § 301 (July 1989), reprinted in 2 Leg. History of the Clean Air Act Amends. of 1990 (Comm. Print 1993) ("1990 Leg. Hist."), at 3937. The use of the "source category" phrasing in section 108(g) of that early bill may have been intended to convey that EPA could regulate a source category's emissions of hazardous pollutants under Section 111(d) where it chose not to regulate those emissions under Section 112, and then inadvertently retained after the House amended the bill to adopt the Senate's mandatory approach to Section 112 regulation.

[66] 1 1990 Legis. Hist. at 46 n.1.

programs addressing different pollutants—or even the same pollutants for different purposes—simultaneously. For example, Congress made power plants subject to at least four different CAA programs (not counting Section 111(d)),[67] as well as state regulation.[68] And even under Petitioners' interpretation, EPA could regulate a source category under both Section 111(d) and 112 *so long as it regulated under Section 111(d) first*, which only underscores the absurdity of that interpretation.

Finally, Petitioners' theory that section 108(g) of the 1990 Amendments reflects Congress's intent to bar most Section 111(d) regulation ignores "the most telling evidence of congressional intent": section 302(a), the contemporaneous Senate amendment, which plainly preserved the preexisting scope of Section 111(d). CBS v. FCC, 453 U.S. 367, 381 (1981).

3. The Senate's amendment plainly permits CO_2 regulation.

While section 108(g) of the 1990 Amendments is ambiguous, section 302(a) (the Senate's amendment) is not. It plainly authorizes EPA to regulate power plants' CO_2 emissions under Section 111(d) regardless of whether other power-plant emissions are regulated under Section 112. EPA properly considered this clear indication of congressional intent when interpreting Section 111(d).

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[67] 80 Fed. Reg. at 64,696-98 (describing the Acid Rain Program, the "Good Neighbor Provision," the hazardous pollutant program, and the Regional Haze Program).

[68] See 42 U.S.C. § 7416.

Section 302(a) is straightforward. It substitutes "section 112(b)" for the prior cross-reference to "section 112(b)(1)(A)." Pub. L. No. 101-549, § 302(a), 104 Stat. at 2574. So amended, Section 111(d) mandates that EPA require states to establish standards "for any existing source for any air pollutant … which is not included on a list published under section [1]08(a) or section [1]12(b)." See id. CO_2 is not listed as a criteria pollutant under Section 108(a) or as a hazardous pollutant under Section 112(b); therefore, as amended by the Senate, Section 111(d) instructs EPA to regulate CO_2 emissions from power plants.

It is black-letter law that "the [U.S.] Code cannot prevail over the Statutes at Large when the two are inconsistent." Stephan v. United States, 319 U.S. 423, 426 (1943); Five Flags Pipe Line Co. v. Dep't of Transp., 854 F.2d 1438, 1440 (D.C. Cir. 1988) ("[W]here the language of the Statutes at Large conflicts with the language in the United States Code that has not been enacted into positive law, the language of the Statutes at Large controls.").[69] Thus, EPA properly considered both sections 108(g) and 302(a) of the 1990 Amendments when interpreting Section 111(d).

[69] Intervenors charge that EPA has "interfere[ed]" with an ongoing attempt to enact the Act into positive law. Intervenors' Brief Supporting Petitioners ("Int. Br.") 15. But EPA's concerns with the restatement drafted by the Office of Law Revision Counsel go well beyond Section 111(d). While purporting not to change the meaning of the statutory text, the draft in fact makes many wording and organizational changes. EPA therefore informed Congress that reviewing such proposed legislation would be an enormous undertaking and that its enactment would only complicate interpretation of the statute. See Nov. 18, 2015 Letter from EPA Gen. Counsel Avi S. Garbow, JA___.

Petitioners nonetheless claim that section 302(a) should be ignored. They argue that the Office of Law Revision Counsel ("the Office") properly disregarded it as "conforming" in favor of the "substantive" House-drafted amendment. Pet. Legal Br. 69-72. To begin with, a decision "made by a codifier without the approval of Congress … should be given no weight."[70] United States v. Welden, 377 U.S. 95, 98 n.4 (1964). EPA does not "contend[] that [the Office] erred," Pet. Legal Br. 72; rather, the Office's handling of the amendments is simply not instructive, as it tells us nothing about their comparative import or meaning. The Office is a functionary of the House; its job is to "prepare[] and publish[] the United States Code."[71] While it may *recommend* revisions, the Statutes at Large control until Congress enacts a revised version of the statute into positive law. The Office's own website so states.[72]

Moreover, the idea that the House's amendment is "substantive" while the Senate's amendment is "conforming" is a fallacy. Petitioners define "conforming" amendments as those "necessitated by the substantive amendments." Pet. Legal Br. 69 (quoting Senate Legislative Drafting Manual § 126(b)(2)). Here, both amendments

[70] EPA does not dispute that there are numerous instances in which an amendment has not been executed in the U.S. Code. See Pet. Legal Br. n.36. But Petitioners miss the point. While most unexecuted amendments are trivial or duplicative, in the rare instances where unexecuted text has substantive import, it must be considered.

[71] See Office website, at http://uscode.house.gov/about/info.shtml.

[72] See http://uscode.house.gov/codification/legislation.shtml ("The text of the law appearing in the Statutes at Large prevails over the text of the law appearing in a non-positive law title.").

were necessitated by Congress's substantive change to Section 112 (the replacement of listing procedures with a list of 189 pollutants to be regulated), and thus both are "conforming." Indeed, the "Miscellaneous Guidance" heading above section 108(g) of the 1990 Amendments no more indicates substance than the "Conforming Amendments" heading above section 302(a). See Burgess v. United States, 553 U.S. 124, 135 (2008) (parties should not "place[] more weight on the 'Conforming Amendments' caption than it can bear").

In any event, this Court gives full effect to conforming amendments. See Wash. Hosp. Ctr. v. Bowen, 795 F.2d 139, 149 (D.C. Cir. 1986). Petitioners cite American Petroleum Institute v. SEC ("API"), 714 F.3d 1329, 1336 (D.C. Cir. 2013), as suggesting otherwise. Pet. Legal Br. 73. But the Court did not ignore a conforming amendment in API; rather, it refused to presume that Congress intended to give it original jurisdiction over certain agency action but forgot to enact a conforming amendment doing so. 714 F.3d at 1336-37. And the Court reiterated that "a statute should be construed so that effect is given to all its provisions." Id. at 1334 (quotation omitted). Here, the statutory text includes both section 108(g) and 302(a) of the 1990 Amendments, and both must be given effect.

4. EPA's interpretation properly avoids creating an unnecessary conflict within enacted statutory text.

Unlike Petitioners, who interpret sections 108(g) and 302(a) of the 1990 Amendments to be in conflict and then simply disregard the latter to resolve that

conflict, EPA has complied with the canon that "provisions in a statute should be read to be consistent, rather than conflicting, if possible." 80 Fed. Reg. at 64,713 (citing Scialabba v. Cuellar De Osorio, 134 S. Ct. 2191, 2219-20 (2014) (plurality op.)); see also Scialabba, 134 S. Ct. at 2228 (Sotomayor, J., dissenting) ("before concluding that Congress has legislated in conflicting and unintelligible terms," "traditional tools of statutory construction" should be used to "allow [the statute] to function as a coherent whole") & 2214 (Roberts, C.J., concurring) (statute should be read "as a symmetrical and coherent regulatory scheme," "fit[ting], if possible, all parts into a harmonious whole" (quotation omitted)).

Moreover, this Court has opined that where Congress "drew upon two bills originating in different Houses and containing provisions that, when combined, were inconsistent in respects never reconciled in conference," "it was the greater wisdom for [EPA] to devise a middle course." Citizens to Save Spencer Cnty. v. EPA, 600 F.2d 844, 872 (D.C. Cir. 1979). That is exactly what EPA did here: it gave meaning to both sections 108(g) and 302(a) of the 1990 Amendments, resulting in a reading that excludes a substantial set of emissions from the scope of Section 111(d)—hazardous emissions already regulated under Section 112—but leaves Section 111(d) with a meaningful role in the statutory scheme.

Petitioners argue that, if both amendments have effect, they should be applied cumulatively, excluding from Section 111(d)'s scope (1) all source categories regulated under Section 112 (per Petitioners' interpretation of section 108(g)) *and* (2) all

hazardous pollutants (per section 302(a)). Pet. Legal Br. 48-50; Int. Br. 14. But if the effects of the two amendments are combined, the result would clearly be to authorize regulation where *either* the pollutant is not listed as hazardous, *or* the source category is not regulated under Section 112. Section 111(d) is framed as an affirmative mandate: EPA "shall prescribe regulations" unless a particular restriction applies. 42 U.S.C. § 7411(d)(1). Thus, if both amendments are given full effect, EPA has authority to regulate pursuant to either affirmative grant of authority. Petitioners' approach, in contrast, would render section 302(a) of the 1990 Amendments a nullity and leave an even bigger gap in the Act's coverage. This is no reasonable "middle course," Spencer Cnty., 600 F.2d at 872, and does not "fit[] best with, and make[] [the] most sense of, the statutory scheme," Scialabba, 134 S. Ct. at 2203.

In any event, if this Court concludes that the two amendments have the irreconcilable meanings Petitioners ascribe to them, then the appropriate course is to disregard *both*. See ANTONIN SCALIA & BRYAN A. GARNER, READING LAW: THE INTERPRETATION OF LEGAL TEXTS 189 (2012) ("if a text contains truly irreconcilable provisions … and they have been simultaneously adopted, neither provision should be given effect"), JA___.[73] Under that approach, Section 111(d) would revert to its pre-1990 text, and EPA would have authority to regulate CO_2.

[73] Alternatively, this Court has held that "if there exists a conflict in the provisions of the same act, the last provision in point of arrangement must control." Lodge 1858,

(Footnote Continued …)

Intervenors argue that if both amendments are effective, it is not for EPA to resolve the conflict between them. Int. Br. 11-13.[74] But Chevron does not go out the window at the first sign of potential statutory inconsistency. Rather, where "internal tension" in a statute "makes possible alternative reasonable constructions," "Chevron dictates that a court defer to the agency's … expert judgment about which interpretation fits best with, and makes the most sense of, the statutory scheme." Scialabba, 134 S. Ct. at 2203. And Chevron is equally applicable when the scope of an agency's authority is at issue. See City of Arlington, 133 S. Ct. at 1871. EPA's interpretation of Section 111(d) is therefore entitled to deference.

5. EPA's interpretation is consistent with AEP.

The holding of AEP—that Section 111 "speaks directly to emissions of [CO_2] from the defendants' [existing power] plants," and therefore leaves "no room" for federal common law claims seeking to limit such emissions, 564 U.S. at 424-25—severely undercuts Petitioners' arguments. It is difficult to see how one can

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Am. Fed'n of Gov't Emps. v. Webb, 580 F.2d 496, 510 (D.C. Cir. 1978). Section 302(a) (the Senate's amendment) follows section 108(g).

[74] Intervenors cite Whitman, 531 U.S. at 457, for the proposition that EPA may not choose between "versions" of a statute. Int. Br. 12. But that case concerned whether Congress's command that EPA set air quality standards "requisite to protect public health" and "allowing an adequate margin of safety" was unlawfully broad, and it was in that context that the Court noted that an agency could not overcome such a deficiency by declining to exercise some portion of the authority granted. The Court noted that it has found this to be the case only twice, whereas it has routinely upheld agencies' authority to execute vaguely drafted commands. Whitman, 531 U.S. at 472-74.

reasonably assert that a provision that "speaks directly" to power plants' CO_2 emissions is in fact entirely off the table as a tool for addressing them.

To try to make that argument, Petitioners point to a footnote in AEP stating that "EPA may not employ § 7411(d) if existing stationary sources of the pollutant in question are regulated under the national ambient air quality standard program, §§ 7408-7410, or the 'hazardous air pollutants' program, § 7412." Pet. Legal Br. 62 (citing 564 U.S. at 424 n.7). But this dictum cannot fairly be read to endorse Petitioners' interpretation of Section 111(d).

First, the question of whether Section 111(d) bars regulation of *all* emissions from a source category once *hazardous* emissions from that category have been regulated under Section 112 was not raised or briefed in AEP.

Second, the Court's use of the phrase "of the pollutant in question" suggests that it understood the regulatory bar to be pollutant-specific (consistent with EPA's interpretation), as does the structure of that statement. The Court references the Section 108 and 112 carve-outs as functioning identically, and the Section 108 restriction is plainly and undisputedly criteria-pollutant specific. Thus, if the AEP footnote means what Petitioners believe, it is at least half wrong.

Finally, the fact that both Section 111 and 112 regulation of existing power plants were ongoing during AEP strongly suggests that neither the Court nor the parties in that case (including states and utilities) thought that the latter barred the

former. EPA listed coal-fired power plants under Section 112 a decade before AEP,[75] became subject to a consent decree requiring it to promulgate Section 112 standards for power plants a year before AEP,[76] and signed the proposed Mercury and Air Toxics Rule a month before oral argument.[77] Petitioners in AEP nonetheless asserted in briefing that "EPA may … require States to submit plans to control" existing power plants' greenhouse-gas emissions, citing Section 111(d),[78] and reiterated at argument that "EPA can consider, as it's undertaking to do, regulating existing [power plants] under section 111."[79] The Court accordingly noted that such regulatory action was underway when opining that EPA's authority over power plants' CO_2 emissions preempted federal common law.[80] The absence of any suggestion that the ongoing regulation of power plants under Section 112 deprived EPA of its authority to regulate those sources' CO_2 emissions under Section 111(d) is telling.

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[75] 65 Fed. Reg. 79,825, 79,827 (Dec. 20, 2000).

[76] See Am. Nurses Ass'n v. Jackson, No. 08-2198, 2010 WL 1506913 (D.D.C. Apr. 15, 2010) (Dkt. No. 33).

[77] See 76 Fed. Reg. 24,976, 25,091 (May 3, 2011) (signed Mar. 16, 2011).

[78] Brief for Pet.'s, AEP, 564 U.S. 410 (No. 10-174), 2011 WL 334707, at *6-7.

[79] Oral Argument Transcript, id., 2011 WL 1480855, at *16-17.

[80] 564 U.S. at 417-18 ("EPA commenced a rulemaking under § 111 of the Act … to set limits on greenhouse gas emissions from new, modified, and existing fossil-fuel fired power plants").

6. EPA's interpretation is consistent with past rulemakings.

Petitioners and Intervenors also claim that EPA has previously read Section 111(d) as they do, pointing to the 2005 Mercury Rule as well as a 1995 background report on municipal solid waste landfills. Pet. Legal Br. 62-63; Int. Br. 6-7. To begin with, the agency is free to change its interpretation of a statute that it administers. See Nat'l Cable & Telecomms. Ass'n, 545 U.S. at 981. Indeed, Chevron itself addressed EPA's "changed [] interpretation" of the statutory term "source," and the Court rejected the assertion that deference was therefore unwarranted. See 467 U.S. at 863-64 ("An initial agency interpretation is not instantly carved in stone. On the contrary, the agency, to engage in informed rulemaking, must consider varying interpretations and the wisdom of its policy on a continuing basis."). In any event, in the past rulemaking proceedings cited by Petitioners here, EPA reached the same conclusion that it reached in the Rule: Section 111(d) permits regulation unless *the same source category's emissions of the same pollutant* are regulated under Section 112.

In 2005, EPA addressed whether Section 111(d) bars regulation of emissions of a pollutant listed under Section 112, but not actually regulated under that section, and concluded that it did not. 70 Fed. Reg. 15,994, 16,032 (Mar. 29, 2005). EPA "note[d]" that "*a* literal reading" of the House-amended text is the one now advanced by Petitioners. Id. at 16,031 (emphasis added). But EPA concluded that this interpretation was not reasonable because it "would be inconsistent with the general thrust of the 1990 amendments which, on balance, reflects Congress's desire to

require EPA to regulate more substances, not to eliminate EPA's ability to regulate large categories of pollutants like non-[hazardous pollutants]." Id. at 16,032.[81] State and industry intervenors in litigation challenging the Mercury Rule— many of which are Petitioners here—agreed, opining that EPA had "developed a reasoned way to reconcile" section 108(g) and 302(a) of the 1990 Amendments, to which "the Court should defer."[82] See also UARG Mercury Rule Comments, 131 ("Where there are conflicting provisions in a statute, a federal agency must try to harmonize the conflicting provisions and adopt a reading that gives some effect to both provisions … UARG believes that EPA's reconciliation of the differing language is reasonable"), JA___.[83] Thus, it is Petitioners that advance an interpretation of Section 111(d) inconsistent with their prior conclusion.

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[81] Similarly, in the 1995 municipal landfill report, EPA noted that the House-amended text could be read as Petitioners advocate, but concluded that regulation under Section 111(d) was authorized where the source category's emissions of the pollutant at issue (landfill gas) were not actually regulated under Section 112. EPA, Air Emissions from Municipal Solid Waste Landfills—Background Info. for Final Standards and Guidelines, Pub. No. EPA-453/R-94-021, 1-5–1-6 (1995), JA___. In other words, regulation could proceed because EPA had not regulated the same source category's emissions of the same pollutant. Indeed, EPA explained that even *after* municipal landfills were regulated under Section 112, it would still be able to regulate the *non-hazardous* components of landfill gas. Id.

[82] Joint Brief of State Resp't-Intervenors, Indus. Resp't-Intervenors, and State Amicus, New Jersey v. EPA, 517 F.3d 574 (No. 05-1097), 2007 WL 3231261, at *5 n.4 & 25.

[83] Even the CAA Handbook written by UARG's counsel states: "Section 111(d) … governs the regulation of emissions from existing sources of air pollutants that are not … listed as hazardous air pollutants under section 112." HUNTON & WILLIAMS, CLEAN AIR HANDBOOK (4th ed. 2015) at 211.

In summary, EPA's interpretation of the relevant portion of Section 111(d) as mandating regulation of dangerous pollutants except where the same sources' emissions of the same pollutant are regulated under Section 112 is a reasonable reading of ambiguous statutory text.

III. The Rule Poses No Constitutional Issues.

This case presents routine issues of statutory interpretation, not a constitutional dilemma. Courts have consistently approved cooperative federalism regimes like the Rule. Accepting Petitioners and Intervenors' argument that the Rule violates the Tenth Amendment would break new ground, implicating the constitutionality of numerous other regulatory regimes and federal programs.

A. The Rule Is a Textbook Example of Cooperative Federalism.

"[T]he power conferred by the Commerce Clause [is] broad enough to permit congressional regulation of activities causing air or water pollution … that may have effects in more than one State." Hodel v. Va. Surface Mining & Reclamation Ass'n, 452 U.S. 264, 282 (1981). Congress often exercises this power in statutes that "allow States to administer [the] federal program[] but provide for direct federal administration if a State chooses not to administer it." Miss. Comm'n, 790 F.3d at 175 (quotation omitted). The Supreme Court has "repeatedly affirm[ed]" the constitutionality of these "cooperative federalism" programs. Id.

In Hodel, the Court unanimously upheld an environmental statute offering states the option of regulating surface mining according to minimum federal standards

or being preempted in that area by direct federal regulation. 452 U.S. at 268-72. Rejecting the argument that the government was "usurp[ing]" the state's traditional authority over land use, the Court found no Tenth Amendment issue because "the States are not compelled to enforce the [] standards, to expend any state funds, or to participate in the federal regulatory program." Hodel, 452 U.S. at 288-89.

New York v. United States, 505 U.S. 144, 167-68 (1992), is another example of the Supreme Court's approval of cooperative federalism. While striking down a provision of the Low-Level Radioactive Waste Policy Act that would have required states to affirmatively take title to radioactive waste, the Court upheld a provision that offered states the choice between regulating such waste themselves and direct federal regulation. Id. at 173-175. The Court again "recognized the ability of Congress to offer States the choice of regulating … to federal standards or having state law pre-empted," noting that such "program[s] of cooperative federalism" are "replicated in numerous federal statutory schemes." Id. at 167, 173-74. The Court found no Tenth Amendment issue where "any burden caused by a State's refusal to regulate will fall on those who generate waste … rather than on the State as a sovereign." Id. at 174.

Finally, this Court recently rejected Texas' Tenth Amendment challenge to the CAA's criteria pollutant program—upon which Section 111(d) is patterned—holding that provisions allowing EPA to designate areas "nonattainment" despite a state's objection, and then requiring the state to submit a plan for that area, did not violate the Tenth Amendment. Miss. Comm'n, 790 F.3d at 174-80. Responding to Texas'

argument that states could not be compelled to implement a federal emissions-reduction program, the Court explained: "But the [CAA] does not do that. Instead, the statutory scheme authorizes the EPA to promulgate and administer a federal implementation plan of its own if the State fails to submit an adequate state implementation plan … Under these circumstances, 'there can be no suggestion that the Act commandeers … the States.'" Id. at 175 (citing Hodel, 452 U.S. at 288).

The Rule cannot be meaningfully distinguished from the examples of cooperative federalism discussed above. States are given a choice: they can take advantage of the Rule's flexibility to develop their own plans to reduce power plants' CO_2 emissions, or they can decline to do so and EPA will directly regulate those sources' CO_2 emissions instead. See 80 Fed. Reg. at 64,986. There is no constitutionally significant distinction in this regard between the Rule and the regulatory frameworks approved in Hodel, New York, and Miss. Comm'n.

Petitioners argue there is a "mismatch" here between EPA's authority and what the Rule requires because EPA lacks the authority to "decarbonize … the U.S. economy." Pet. Legal Br. 80. But, under the Rule "EPA would only *regulate* emissions" of specific pollutants from specific sources. Massachusetts, 549 U.S. at 531. "[T]here is nothing counterintuitive to the notion that EPA can curtail the emission of substances that are putting the global climate out of kilter." Id. As discussed in Argument I.B.5, the Rule's effects on energy production are indirect,

resulting from EPA's congressional mandate to regulate dangerous emissions with interstate effects.

B. The Rule Does Not Unlawfully Coerce or Commandeer States.

Petitioners and Intervenors argue that the Rule unlawfully coerces and commandeers states. Pet. Legal Br. 81-86; Int. Br. 31-37. It does not. Rather, the Rule shows a deep respect for states' sovereignty by giving them the opportunity to design an emissions-reduction plan that makes sense for their citizens. If states choose not to avail themselves of that opportunity, they face no sanctions and they are not compelled to take action to implement the resulting federal standards. There is no constitutional issue where states may "defend their prerogatives by adopting 'the simple expedient of not yielding' … when they do not want to embrace the federal policies as their own." NFIB, 132 S. Ct. at 2603 (quotation omitted).

Petitioners and Intervenors rely on NFIB to argue instead that the Rule impermissibly coerces states. See Pet. Legal Br. 84-85; Int. Br. 38. But unlike in NFIB, where states could lose preexisting funding representing significant portions of their budgets if they declined to implement the program, see 132 S. Ct. at 2604-05, the Rule expressly *prohibits* EPA from withholding "any existing federal funds" from

states. 40 C.F.R. § 60.5736. Indeed, a state that does not submit a Section 111(d) plan faces *no penalties at all*. 80 Fed. Reg. at 64,882; 80 Fed. Reg. at 64,968.[84]

Petitioners argue that the Rule coerces states because the consequences of declining to regulate (and the resulting federal plan) supposedly are dire: disruption of electricity services. Pet. Legal Br. 85; Int. Br. 35 (states will have to ensure "the power stays on"). But claims of impending blackouts have no basis in the record. Rather, EPA addressed stakeholders' "disruption" concerns in both the Rule[85] and the proposed federal plan.[86] Moreover, the reasonableness of any final federal plan will be subject to judicial review. See 42 U.S.C. § 7607(b)(1), (d)(9).

In regard to Petitioners' claims of commandeering, the Rule does not "directly compel[]" states "to enact and enforce a federal regulatory program." New York, 505 U.S. at 176. Rather, if a state chooses not to submit a plan, EPA itself will promulgate emission standards directly "on affected [power plants]" through a federal plan. 80 Fed. Reg. at 65,054. Analyzing the lawfulness of the *proposed* federal plan is plainly premature and, for that reason alone, Petitioners cannot meet their burden of

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[84] Intervenors' passing invocation of the "unconstitutional conditions doctrine" in a footnote is off-base for the same reasons. See Int. Br. 38 n.36. Regardless, the Court "need not consider cursory arguments made only in a footnote." Hutchins v. Dist. of Columbia, 188 F.3d 531, 539 n.3 (D.C. Cir. 1999).

[85] E.g., the Rule made available a "reliability safety valve" in the unlikely event that an unanticipated emergency causes substantial reliability issues. 80 Fed. Reg. at 64,671.

[86] See, e.g., 80 Fed. Reg. at 64,981-82.

demonstrating that states have been offered an unconstitutional choice. But in any event, a program that "regulate[s] individuals, not States" poses no Tenth Amendment issue. 505 U.S. at 166.

Petitioners cite District of Columbia v. Train, 521 F.2d 971 (D.C. Cir. 1975), vacated and remanded sub nom. EPA v. Brown, 431 U.S. 99 (1977), to support their commandeering argument. Pet. Legal Br. 84. But the illuminating aspect of that case is the contrast it provides. In Train, EPA attempted to require states to *establish and implement* vehicle retrofit and inspection programs. 521 F.2d at 992. In concluding that was unlawful, this Court explained that "where [state] cooperation [with a federal objective] is not forthcoming, we believe that the recourse contemplated by the commerce clause is direct federal regulation of the offending activity." Id. at 993. Here, if states decline to cooperate with the federal objective of reducing CO_2 emissions from power plants, the result will be direct federal regulation. Unlike in Train, states are not required to establish and implement anything.

Petitioners argue that, even under a federal plan, state utility regulators will "have to take regulatory action" or "be involved in decommissioning coal-fired plants, addressing replacement capacity … undertaking all manner of related regulatory proceedings." Pet. Legal Br. 83, 85; see also Int. Br. 35 ("state government will have to … issue permits"). Not true. If a state wishes to refuse, for example, to grant a power plant's request for a permit modification for an action the plant wants to take to comply with a federal plan, the state may do so. The full compliance burden then

rests with the plant, which will have to pursue an alternative compliance method that is agreeable to state regulators or does not require approval.[87]

Petitioners and Intervenors seem to think that a constitutional impediment arises from the fact that private entities may ask state regulators to take routine regulatory actions—e.g., to grant or modify a permit, adjust rates, or decommission plants—to facilitate their compliance with federal requirements. It plainly does not. If it did, then many other CAA programs,[88] regulatory programs addressing utilities,[89] and generally applicable federal laws[90] would arguably be similarly infirm. Indeed,

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[87] For example, if a federal plan provided for interstate trading, a plant might prefer to comply by purchasing credits, and then recouping costs from ratepayers. But the state would be free to decline to allow recovery from ratepayers, in which case the plant would have to draw from different funds or pursue a different compliance option.

[88] For example, the CAA's Acid Rain Trading Program—a Congressionally enacted program for power plants that is materially indistinguishable from the proposed Federal Plan, 80 Fed. Reg. at 64,970—would be unconstitutional, as would the Cross-State Rule upheld in EPA v. EME Homer City Generation, L.P., 134 S. Ct. 1584 (2014), and the NO_x SIP Call upheld in Michigan v. EPA, 213 F.3d 663 (D.C. Cir. 2000), because both establish trading programs partially premised on power plants' ability to shift from coal to lower-emitting generation, which implicate the same state regulatory processes. Legal Mem. 95-99, JA___. The same fate would befall the Mercury and Air Toxics Rule given that some power plants have retired rather than comply, triggering decommissioning processes implicating state regulators.

[89] Under the Federal Power Act, FERC may require "[a]ll users, owners and operators of the bulk-power system" to comply with federal reliability standards. 16 U.S.C. § 824o(b)(1). Those standards are not unconstitutional simply because an entity may seek to comply through actions for which state law requires approval.

[90] Under Petitioners' view of the Tenth Amendment, raising the federal minimum wage would be problematic because utilities might initiate state ratemaking proceedings to recover increased salary costs. Even the Americans with Disabilities

(Footnote Continued …)

such a holding would suggest that Congress could never legislate to address power plants' greenhouse-gas emissions, or any other aspects of their operations. This cannot be squared with the existing case law. See, e.g., FERC v. Mississippi, 456 U.S. 742, 759, 765 (1982) (rejecting Tenth Amendment challenge to federal utility regulation that "use[d] state regulatory machinery to advance federal goals," but did not "directly compel[]" states to promulgate or enforce laws). As a constitutional matter, the state's only legal responsibilities are those it has voluntarily assumed under state law.[91] Accordingly, the Court should reaffirm that there is "no Tenth Amendment impediment" to federal regulation of "private persons and businesses," who are "necessarily subject to [] dual sovereignty." Hodel, 452 U.S. at 286-87 (quotation omitted).

Act ("ADA") could be unconstitutional insofar as private entities must obtain state or local building permits to install ADA-required ramps and elevators.

[91] Petitioners argue that EPA relies on states exercising "responsibility to maintain a reliable electricity system." Pet. Legal Br. 80, 85 (quoting 80 Fed. Reg. at 64,678). But that section of the Rule (titled "Additional Context") merely recognizes that power plants operate in an "integrated system" with "numerous" federal, state, and nongovernmental entities regulating reliability," and that EPA promulgates power-sector rules with an "awareness of the importance of the efficient and continuous, uninterrupted operation of the interconnected electricity system." 80 Fed. Reg. at 64,677-78. The quoted statements do not suggest that state grid regulators must take action in order for sources to comply with a federal plan, much less that EPA will impose draconian standards on sources and expect states to "clean up its mess." Pet. Legal Br. 80. At a minimum, such claims are premature, because the federal plan is not final. See In re Murray Energy Corp., 788 F.3d 330, 334 (D.C. Cir. 2015) (noting "a proposed rule is just a proposal" and rejecting challenges as premature).

The possibility that state officials may choose to act on requests from private entities that are indirectly prompted by federal regulations does not make those regulations—much less the alternative offer to allow states to promulgate regulations themselves—unlawful. See FERC v. EPSA, 136 S. Ct. at 784 (distinguishing between federal regulations that "(inevitably) influenc[e]" areas of state control and those that actually "intrude on the States' power"). To hold otherwise would expand the Tenth Amendment light-years beyond its traditional bounds.

C. The Constitutional Avoidance Canon Has No Application Here.

Petitioners' constitutional claims appear to be designed less to succeed on their merits than as an excuse to invoke the constitutional avoidance canon in support of their statutory arguments and avoid Chevron.[92] See Pet. Legal Br. 79; Int. Br. 35 ("the serious constitutional questions raised by the Rule eliminate any agency claim to Chevron deference"). This attempt to put a thumb on the scales of this Court's statutory analysis should be rebuffed.

"[T]he burden of establishing unconstitutionality is on the challenger." Miss. Comm'n, 790 F.3d at 178. Applying the avoidance canon here would lift that burden

[92] Intervenors hypothesize that the Rule "may give rise to" regulatory takings issues, which the Court should construe Section 111(d) to avoid. Int. Br. 41 n.40 (citing Bell Atl. Tel. Cos. v. FCC, 24 F.3d 1441 (D.C. Cir. 1994)). EPA correctly concluded that such arguments are meritless and unripe, Legal Mem. 57-62, JA___, and Bell applies only to "*per se* physical takings," Cellco P'ship v. FCC, 700 F.3d 534, 549 (D.C. Cir. 2012). In any event, a constitutional argument raised in a footnote merits no attention. Hutchins, 188 F.3d at 539 n.3.

from Petitioners, turning spurious claims of unconstitutionality into a weapon to be wielded in support of other arguments. The Supreme Court rejected a similar attempt in Rust v. Sullivan, explaining that the avoidance canon "will not be pressed to the point of disingenuous evasion." 500 U.S. 173, 191 (1991) (quotation omitted). Thus, while the Court believed that the constitutional challenges raised in Rust had "some force," it declined to apply the avoidance canon because it did not believe those arguments "raised … grave and doubtful constitutional questions that would lead us to assume Congress did not authorize" the regulatory actions at issue, and instead upheld them under Chevron. Id.

Petitioners' and Intervenors' constitutional arguments here are similarly lacking, to say the least. These arguments should not weigh in their favor—or indeed be considered at all—when analyzing the statutory issues that lie at the heart of this case.

IV. Petitioners Do Not Establish Procedural Error under Section 7607 of the Act.

Petitioners' assertions of procedural error are meritless. See Pet. Record Br. 13-17. The CAA specifies unique statutory requirements that govern judicial review of procedural challenges. 42 U.S.C. § 7607(d)(9)(D). As this Court has long recognized, a court may not reverse a CAA action for procedural error unless three elements are satisfied. See Util. Air Regulatory Grp. v. EPA, 744 F.3d 741, 747 (D.C. Cir. 2014). *First*, petitioners must demonstrate that the procedural error, if it occurred, was "arbitrary or capricious." 42 U.S.C. § 7607(d)(9)(D)(i). *Second*,

petitioners must show that they have met the requirements of Section 7607(d)(7)(B)—in particular, that their "objection to a rule or procedure [] was raised with reasonable specificity during the period for public comment." Id. § 7607(d)(7)(B), (d)(9)(D)(ii).[93] *Third*, petitioners must prove, consistent with Section 7607(d)(8), that "the errors were so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed" absent the error. Id. § 7607(d)(8), (d)(9)(D)(iii).

Thus, petitioners raising procedural claims under the CAA must make an "unusually strong showing" (compared to claims of procedural error under the Administrative Procedure Act), see U.S. Steel Corp. v. EPA, 444 U.S. 1035, 1035 (1980) (Rehnquist, C.J., dissenting from denial of certiorari), and, therefore, "[r]eversal for procedural defaults under the Act will be rare." Am. Petroleum Inst. v. Costle, 665 F.2d 1176, 1184 (D.C. Cir. 1981). Petitioners claim that EPA failed to provide adequate notice regarding: (1) the establishment of uniform rates, (2) the entities ultimately responsible for achieving the emission reductions, and (3) minor changes to the applicability criteria.[94] Petitioners fail to carry their burden under the statutory

[93] New objections may be raised in petitions for administrative reconsideration, but are not ripe for judicial review until reconsideration is completed or denied. Id. § 7607(d)(7)(B). A subset of Petitioners have petitioned EPA for administrative reconsideration, but those petitions are still under consideration.

[94] Petitioners also state, without further explanation, that EPA "applied an entirely different methodology with new data in establishing [uniform] rates." Pet. Record Br.

(Footnote Continued …)

standard, relying instead on rhetoric and broad generalities. In any event, Petitioners' assertions are incorrect.

A. Petitioners Cannot Demonstrate Arbitrary or Capricious Error Because the Changes to the Rule Were Noticed or Are the Logical Outgrowth of the Proposal.

"An agency may promulgate a rule that differs from a proposed rule," provided "the final rule is a 'logical outgrowth' of the proposed rule." Allina Health Servs. v. Sebelius, 746 F.3d 1102, 1107 (D.C. Cir. 2014) (citation omitted). A final rule is a logical outgrowth "if affected parties should have anticipated that the relevant modification was possible," id., or if additional notice and comment "would not provide commenters with their first occasion to offer new and different criticisms." Fertilizer Inst. v. EPA, 935 F.2d 1303, 1311 (D.C. Cir. 1991) (quotation omitted). Here, EPA's modifications to the Rule were foreseeable and the subject of extensive comment, including by Petitioners, so there is no procedural error. Petitioners thus not only fail to acknowledge their burden under Section 7607(d)(9)(D)(i), they cannot meet it.

Petitioners first contend that EPA's Proposal "rejected the option of setting uniform rates," so their adoption in the Rule was not foreseeable. Pet. Record Br. 13-14. Petitioners are mistaken. EPA initially proposed state-specific goals

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16. This conclusory allegation is too vague to address and plainly fails to meet Petitioners' burden under Section 7607(d)(9)(D). See also Bd. of Regents of Univ. of Wash. v. EPA, 86 F.3d 1214, 1221 (D.C. Cir. 1996).

established by applying the Building Blocks to each state. Stakeholders pointed out that this approach created wide disparities among states' goals and was disconnected from the reality of the electricity system, in which electricity flows across state lines. See 79 Fed. Reg. at 64,545, 64,549. Accordingly, in the Supplemental Notice (which Petitioners fail to mention), EPA took comment on reducing those disparities by applying Building Blocks on a regional basis, which would more accurately reflect the interconnected, interstate electricity market. See id. at 64,547, 64,550-52; see also 79 Fed. Reg. at 34,865, 34,899.

The uniform rates are a logical outgrowth of the noticed regional approach. EPA applied the Building Blocks across three regions, resulting in uniform rates within each region for each subcategory. But rather than setting different rates for different regions, EPA gave *all* regions—and thus all states and sources—the benefit of the *least-stringent* rates calculated in *any* region. 80 Fed. Reg. at 64,738. Thus, the uniform nationwide rate was simply a more lenient application of the regional approach, and one that further reduces disparities between comparable units in different regions—addressing EPA's and commenters' concerns. Id. at 64,736-37. It also effectuates the Proposal's commitment to flexible, cost-effective compliance, see, e.g., 79 Fed. Reg. at 34,859; 79 Fed. Reg. at 64,549, by creating a surplus of achievable emission-reduction opportunities available for all states and sources. 80 Fed. Reg. at 64,742. The uniform rates thus fall squarely within this Court's recognition "that an agency must be able to respond flexibly to comments and need not provide a new

round of notice and comment every time it modifies a proposed rule." Fertilizer Inst., 935 F.2d at 1311; see Pers. Watercraft Indus. Ass'n v. Dep't of Commerce, 48 F.3d 540, 543 (D.C. Cir. 1995).

Furthermore, the Rule's subcategory-specific uniform rates are consistent with longstanding practice under Section 111. See 80 Fed. Reg. at 64,737; 79 Fed. Reg. at 34,894 (noting that the Proposal varied from EPA's typical practice by using state-specific rates "rather than nationally uniform emission rates"); compare, e.g., 42 Fed. Reg. 55,796 (Oct. 18, 1977) (111(d) rulemaking for sulfuric acid production units); 61 Fed. Reg. 9905 (Mar. 12, 1996) (111(d) rulemaking for municipal solid waste landfills). EPA's proposal to set state-specific goals based on a single, blended rate for both coal- and gas-fired units was a *departure* from previous rulemakings. This alone made it foreseeable that EPA might modify its novel proposed approach in response to comments and revert to more traditional source- and subcategory-specific uniform rates.

This is a critical distinction between this case and those relied on by Petitioners, where the Court found procedural error because the proposal would have *affirmed* an agency's longstanding interpretation, but the final rule unexpectedly reversed that interpretation. Envtl. Integrity Project v. EPA, 425 F.3d 992, 993-95 (D.C. Cir. 2005); accord Kooritzky v. Reich, 17 F.3d 1509, 1513 (D.C. Cir 1994). Indeed, the Court has frequently recognized that in choosing the form of a standard, the agency necessarily invites comments on foreseeable alternative, and even opposite, forms for that

standard. See Ne. Md. Waste Disposal Auth. v. EPA, 358 F.3d 936, 952 (D.C. Cir. 2004); Ariz. Pub. Serv. Co. v. EPA, 211 F.3d 1280, 1299-300 (D.C. Cir. 2000); see also Long Island Care at Home, Ltd. v. Coke, 551 U.S. at 175 (citing Ariz. Pub. Serv.).

Here, the fact that EPA might return to its traditional approach to the emission guidelines was entirely foreseeable, especially because EPA "invite[d] comment on all aspects of the proposed form of the goals," 79 Fed. Reg. at 34,895, and specifically sought comment on regional approaches, 79 Fed. Reg. at 64,547, 64,550-52. In fact, numerous stakeholders, including many Petitioners, urged uniform rates. See, e.g., Int'l Bhd. of Boilermakers Comments 3, 8-12, EPA-HQ-OAR-2013-0602-22562, JA___, ___; State of New Jersey Technical Comments 3-4, 7, EPA-HQ-OAR-2013-0602-22758, JA___, ___; Texas Comm'n on Envtl. Quality Comments 15-16, EPA-HQ-OAR-2013-0602-23305, JA___. "[I]nsightful comments may be reflective of notice and may be adduced as evidence of its adequacy." Horsehead Res. Dev. Co. v. Browner, 16 F.3d 1246, 1268 (D.C. Cir. 1994).

Petitioners also incorrectly assert that EPA failed to "signal" that the Rule might place "responsibility for implementation" of emission reductions solely on power plants. See Pet. Record Br. 14. While EPA proposed to *allow* (but not require) states to place responsibility on other entities as well as power plants, 79 Fed. Reg. at 34,853, 34,901 (describing the "portfolio approach"), EPA specifically requested comment on the merit and legality of this approach and whether "responsibility … must be assigned solely to affected [sources]." Id. at 34,902-03. Petitioners thus had

notice and an opportunity to comment on whether legal responsibility for reducing power-plant emissions should fall on other entities or only on power plants, and a number contended Section 111 required the latter. See, e.g., UARG December 2014 Comments 44-50, EPA-HQ-OAR-2013-0602-22768, JA___; Nat'l Ass'n of Home Builders Comments 8, EPA-HQ-OAR-2013-0602-23572, JA___.

Petitioners' assertion that EPA unlawfully expanded the applicability criteria without notice is likewise unproven and incorrect. Pet. Record Br. 14-15. EPA proposed the applicability criteria in the "new source" rule, and explicitly "incorporate[d] that discussion by reference [in the existing source rule]." 79 Fed. Reg. at 34,854; cf. Portland Cement Ass'n v. EPA, 665 F.3d 177, 192 (D.C. Cir. 2011) (rejecting procedural error claims where an associated rulemaking provided notice). The new source proposal discussed whether applicability should be determined based on a source's "purpose" when constructed or on other criteria, see 79 Fed. Reg. at 1459-61, and included in the docket for comment alternative criteria that did not require that a source be "constructed for the purpose of" supplying a specific amount of electricity to the grid, see Office of Air Quality Planning & Standards Memorandum 23, 37-38, EPA-HQ-OAR-2013-0495-0062, JA___, ___. EPA's decision to delete that phrase was a logical outgrowth of the proposed new source

rule and reflected comments EPA received from Petitioners and others.[95] See, e.g., Am. Fuel & Petrochemical Mfrs. Comments 5, EPA-HQ-OAR-2013-0495-10098-A1, JA___; Duke Energy Comments 52, EPA-HQ-OAR-2013-0495-9426, JA___.

All three changes were thus actually proposed or a logical outgrowth of the Proposal. Petitioners fail to make any demonstration to the contrary—let alone a persuasive and specific offer of proof that EPA's procedures were arbitrary and capricious under Section 7607(d)(9)(D). Their arguments must therefore be rejected.

B. Petitioners Have Not Established a "Substantial Likelihood" That Different Procedures Would Have "Significantly Changed" the Rule.

Even assuming, *arguendo*, that Petitioners had established procedural error, Petitioners fail to demonstrate that the alleged errors are "so serious" that there is a "substantial likelihood that the rule would have been significantly changed" absent the errors. 42 U.S.C. § 7607(d)(8). As noted above, Petitioners have not identified any specific objections to EPA's decision to adopt subcategory-specific uniform rates based on the least-stringent regional rates—let alone "new and different criticisms which the agency might find convincing." Fertilizer Inst., 935 F.2d at 1311 (quotation omitted). Nor could they. Petitioners supported the establishment of source-specific rates, and EPA's decision to apply the *least*-stringent regional rate to all sources inures

[95] The other change noted by Petitioners, Pet. Record Br. 15, is one of form, not function: "219,000 MWh net sales … is functionally equivalent to the 25 MW net sales language." 79 Fed. Reg. at 1446.

to Petitioners' benefit. Thus, there is no prejudice to Petitioners and no "serious" error. Cf. Am. Coke & Coal Chems. Inst. v. EPA, 452 F.3d 930, 939, 941 (D.C. Cir. 2006) (finding no prejudice under the Administrative Procedure Act where an unnoticed change "resulted in a less stringent limitation").

Likewise, Petitioners cannot demonstrate that an additional round of comment would "significantly change[]" EPA's conclusion that Section 111(d) requires sources to bear responsibility for meeting the standards. 80 Fed. Reg. at 64,843. As noted above, Petitioners advanced this same legal interpretation in their comments, and so, unsurprisingly, they fail now to identify fault with it. See Pet. Record Br. 14. In any event, states may rely on a broad set of measures to meet the Rule's emission targets, including measures achieved by other entities, provided that ultimate responsibility for reducing emissions rests with the sources. 80 Fed. Reg. at 64,835.

Finally, Petitioners do not identify "new and different," let alone convincing, criticisms of EPA's final applicability criteria, Pet. Record Br. 14-15, which were amply explained in the final new source rule. 80 Fed. Reg. at 64,544. Indeed, the final applicability criteria are functionally equivalent to the proposed criteria in most respects. Compare EPA-HQ-OAR-2013-0602-36849 (final list of likely sources), JA___, with EPA-HQ-OAR-2013-0602-0256 (proposed list of likely sources), JA___; see EPA-HQ-OAR-2013-0602-36741 (explaining list changes), JA___. Moreover, Petitioners have failed to identify a single facility affected by the changes they describe.

C. Section 7607(d)(7)(B) Bars Petitioners' Challenges.

Finally, even if Petitioners had raised colorable procedural claims, they do not satisfy the second statutory element of Section 7607(d)(9)(D). Petitioners' procedural challenges were not "raised with reasonable specificity during the period for public comment," and so they may not be raised in this proceeding. 42 U.S.C. § 7607(d)(7)(B). "This court enforces [Section 7607(d)(7)(B)] strictly." Appalachian Power Co. v. EPA, 249 F.3d 1032, 1055 (D.C. Cir. 2001) (quotation omitted). Accordingly, this Court has routinely refused to consider notice arguments raised for the first time in a petition for review, even though such arguments cannot logically be raised during public comment. See Mexichem Specialty Resins v. EPA, 787 F.3d 544, 553 (D.C. Cir. 2015). In Utility Air Regulatory Group, the petitioner tested these limits, arguing that "even if it cannot obtain judicial review of substantive challenges raised for the first time in a still-pending petition for reconsideration, it can obtain judicial review of procedural challenges raised for the first time in such a petition." 744 F.3d at 747. But this Court held that this argument was "foreclose[d]" by the plain language of the Act. Id. at 746-47. Petitioners do not, and cannot, argue that Section 7607(d)(7)(B) does not apply here, so their procedural challenges, even if valid, are barred.

V. EPA Identified an Achievable Degree of Emission Limitation Applying the Best System.

Turning to Petitioners' challenges to EPA's record-based determinations, EPA identified an achievable degree of emission limitation applying the Best System that is firmly supported by the record. This Court gives an "extreme degree of deference" to EPA's record-based determinations. Miss. Comm'n, 790 F.3d at 150 (citation omitted).

A. Building Block 1 Is Achievable.

Building Block 1 reflects an achievable degree of emission limitation applying heat-rate-improvement measures, which are operating practices and equipment upgrades that coal-fired plants can implement to more efficiently convert fuel to electricity (i.e., lowering heat rate)—reducing the amount of CO_2 emitted per kilowatt-hour of generated electricity. 80 Fed. Reg. at 64,787. EPA identified dozens of such practices and upgrades to improve or maintain heat rate. Greenhouse-Gas Mitigation Measures Technical Support Document ("Mitigation TSD"), 2-11–2-15, EPA-HQ-OAR-2013-0602-37115, JA___. Although some of these measures may be "already widely adopted," Pet. Record Br. 25, extensive technical literature indicates there remains substantial opportunity for cost-effective heat-rate improvement across the industry. Mitigation TSD, 2-16–2-22, JA___.

To project the potential for heat-rate improvement, EPA used three kinds of statistical analyses, all based on the reasonable premise that coal-fired units can

achieve heat rates approximating what they have demonstrated and achieved in the recent past. Id. at 2-22, JA___. These analyses were grounded in a robust and representative dataset of nearly 62 million hours of operating data submitted by 884 coal-fired units over an eleven-year period. Id. at 2-28, 2-32, JA___, ___.

While each of the three analytical approaches EPA used provides an independently reasonable way to estimate Building Block 1, EPA conservatively applied the approach yielding the *lowest* degree of potential improvement. Id. at 2-50, JA___. Under that approach, EPA performed unit-by-unit statistical analyses to determine the overall efficiency improvements that would result if coal-fired units "operat[ed] more consistently" with some of the better heat rates they demonstrated under similar operating conditions. Id. at 2-45–2-49, JA___. Specifically, EPA assumed that a unit could have improved some of its less-efficient hours by a modest percentage (37.1-38.4% depending on the region) to be closer to its efficiency "benchmark" (i.e., its 10th-percentile best heat rate) demonstrated under similar conditions.[96] Id. The approach also controlled for two variables that can affect a

[96] Contrary to Petitioners' assertion, this approach did not "assum[e] that the best historical efficiency *ever achieved* can be achieved every year in the future." Pet. Record Br. 26 (emphasis added).

unit's heat rate: capacity factor and ambient temperature.[97] Id. at 2-33–2-42, JA___. And it also applied a number of conservative assumptions.[98]

Petitioners argue that EPA: (1) erred in making projections based on statistical modeling instead of the application of specific measures, (2) did not sufficiently account for uncontrollable factors or other circumstances, and (3) provided inadequate notice. Pet. Record Br. 22-26. All of these claims are meritless.

EPA has "undoubted power to use predictive models," West Virginia v. EPA, 362 F.3d 861, 868 (D.C. Cir. 2004) (quotation omitted), and it was reasonable to do so here. See Appalachian Power Co. v. EPA, 135 F.3d 791, 802 (D.C. Cir. 1998) (upholding EPA's use of a model to set "best system" emission limits, and noting that "perhaps the prime example" of the kind of technical judgment warranting deference is EPA's use of "[s]tatistical analysis," which "does not easily lend itself to judicial review"). Because conducting independent engineering assessments for each coal-fired unit throughout the country was impractical and unnecessary, EPA sensibly performed predictive modeling premised on real-world operating data to set

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[97] To do so, EPA grouped each unit's hourly heat-rate values into unit-specific "capacity temperature bins," allowing comparison under similar operating conditions. Mitigation TSD, 2-40, JA___. Where a single unit's heat rates under similar operating conditions nevertheless varied from one hour to another, EPA reasonably concluded that the difference was partially due to inconsistent application of efficiency measures.

[98] See, e.g., Mitigation TSD, 2-24 (assuming most costly measures), 2-25 (assuming units cannot improve beyond benchmark), 2-33 (using gross heat rate), 2-41 (assuming capacity factor is outside operator's control), 2-45 (using 10th percentile benchmark), 2-50 (using two-year averages), JA___, ___, ___, ___, ___, ___.

historically derived levels of improvement potential. 80 Fed. Reg. at 64,793. In doing so, EPA's model reflects heat rates that are "demonstrated and achievable" by individual units using available efficiency measures and accords with extensive technical literature showing similar or even better results. Mitigation TSD, 2-22–2-25, JA___.

Next, EPA's modeling accounted for the "uncontrollable factors" and circumstances that Petitioners allege were overlooked. Pet. Record Br. 26. First, because the model analyzes past performance, it neither assumes that all units can implement every measure nor adds together benefits from specific combinations. Mitigation TSD, 2-10, JA___. See Pet. Record Br. 26. Comparing each unit's past performance against itself also controls "for many design characteristics that vary among [units] but are constant or nearly constant over time at individual [units]." Mitigation TSD, 2-22, JA___. See Pet. Record Br. 23. Second, EPA's representative dataset of operations over an eleven-year operating period fairly accounts for a "range of relevant conditions," id. at 24-25, plants may face in the future. See Mitigation TSD, 2-32, JA___.[99] Third, the model *did* control for capacity factor and temperature, see supra n.93, and Petitioners fail to explain how EPA's approach is remotely

[99] Regardless, EPA's power sector modeling for the Rule projects that future operating conditions will generally not lead to lower capacity factors, negating Petitioners' concerns about coal-fired units increasingly serving peak loads. Id. at 2-56–2-58, JA___; see infra n.98, n.114.

arbitrary or capricious. See Pet. Record Br. 24. Fourth, EPA's assessment recognizes that certain improvements can degrade over time, see Pet. Record Br. 26, and EPA explained that these degradations can be mitigated or avoided at reasonable cost. Mitigation TSD, 2-61–2-62, JA___. Fifth, EPA analyzed *gross* heat rate, which is not affected by auxiliary power requirements, and the impact of post-2012 controls, Pet. Record Br. 25, on regional *net* heat rates is negligible. Mitigation TSD, 2-52–2-55, JA___.

And even if EPA's model did not account for every imaginable variable, Petitioners "cannot undermine" EPA's model simply by "'pointing to variables not taken into account that might conceivably have pulled the analysis's sting.'" Appalachian Power v. EPA, 135 F.3d at 805 (citations omitted). They must show how that failure "would have a significant effect" on the outcome. Id. But Petitioners merely offer bald speculation. Pet. Record Br. 24 (using *if* and *could*). "That the model does not fit every application perfectly is no criticism; a model is meant to simplify reality in order to make it tractable." Chem. Mfrs. Ass'n v. EPA, 28 F.3d 1259, 1264 (D.C. Cir. 1994).

Lastly, EPA adequately noticed Building Block 1. EPA's model applies the same dataset noticed in the Proposal and its most conservative statistical approach was "discussed at length in the proposal." 80 Fed. Reg. at 64,788. Petitioners' own comments belie their assertion that EPA provided "no opportunity to comment" "on incorrect 2012 data," Pet. Record Br. 26. See, e.g., Southern Co. Comments 83, EPA-

HQ-OAR-2013-0602-22907 (discussing the 2002-2012 study period), JA___. In any event, they fail to carry their burden under 42 U.S.C. § 7607(d). See supra Argument IV.

B. Building Block 2 Is Achievable.

As part of determining the Best System, EPA conducted a thorough analysis of the measures referred to as "Building Block 2." These generally involve substituting electric-power generation from lower-emitting gas units for generation from higher-emitting steam plants. E.g., 80 Fed. Reg. at 64,728-29.

EPA comprehensively considered factors relevant to determining whether Building Block 2 constitutes part of the Best System, such as: (1) the availability of mechanisms to shift generation between steam and gas units, and the feasibility of increasing gas utilization to EPA's assumed rates; (2) the amount and timing of generation shift from existing steam to gas units that is reasonable; (3) reliability, infrastructure, natural gas supply, and transmission planning concerns; and (4) costs. See generally 80 Fed. Reg. at 64,795-803; Mitigation TSD, Chapter 3, JA___; Response to Comments ("RTC") 3.2, EPA-HQ-OAR-2013-0602-37106, JA___; compare with 80 Fed. Reg. at 64,720-22 (factors Court has identified as generally relevant to Best System determination). After thoroughly examining these factors, EPA adopted a conservative rate of gas utilization in comparison to its analysis. The

record supports EPA's analytical approach and conclusions concerning the degree of emission limitation that can be obtained through Building Block 2 measures.[100]

1. Increasing existing gas units' utilization is technically feasible and relies on a conservative estimate of their capabilities.

EPA did not rely on unduly "speculative assumptions" about the existing gas-fired fleet's potential to increase its rate of power generation. Pet. Record Br. 27-30. Instead, EPA's analysis was supported by a robust record regarding the existing fleet's design capabilities, the technical feasibility of increased generation levels, and other relevant data.

To estimate the potential magnitude of emission reductions obtainable by increasing gas utilization, EPA closely examined such units' design capabilities and historic utilization, including their "availability and capacity factors." Mitigation TSD 3-5, JA___; 80 Fed. Reg. at 64,799. "Availability" refers to the annual percentage of hours that a plant is available to generate (i.e., not in a planned or forced outage), while "capacity factor" refers to the plant's actual annual utilization. Mitigation TSD 3-5–3-6, JA___. EPA found that national-average capacity factors for gas units historically range from 40-50%, id. at 3-5 & nn.11-12, JA___, but their availability "generally exceeds 85[%], and can exceed 90[%] for some groups." 80 Fed. Reg. at

[100] EPA's consideration of resource adequacy, reliability and costs is addressed in Arguments VI.A and B.

64,799. Thus, existing gas units are largely underutilized relative to their design potential. This underutilization is primarily due to dispatch practices and does not reflect actual limits on design capability or technical feasibility. Mitigation TSD 3-5, JA___.

Petitioners appear to contend that EPA should only consider a generation rate "demonstrated" if the entire existing fleet has attained that level. See Pet. Record Br. 28. But an "adequately demonstrated" Best System is not limited to measures "in actual routine use somewhere"; rather, EPA may make a reasonable "projection based on existing technology" and may "hold the industry to a standard of improved design and operation advances, so long as there is substantial evidence that such improvements are feasible." 80 Fed. Reg. at 64,720; see Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 391 (D.C. Cir. 1973); Sierra Club v. Costle, 657 F.2d at 364. Here, EPA found that existing gas units "are designed for, and are demonstrably capable of, reliable and efficient operation at much higher annual capacity factors, as shown in observed historical data for particular units and their design and engineering specifications." Mitigation TSD 3-5, JA___; see also id. at 3-5–3-6 & nn.15-18, JA___; 80 Fed. Reg. at 64,799.

Petitioners also claim EPA should have disregarded 2012 gas-fired generation data because natural gas prices were "historically low." Pet. Record Br. 28; see Mitigation TSD 3-11–3-12 (the fleet-wide capacity factor increased by 15% in 2012), JA___. Those data, however, are evidence that existing gas-fired generation can

rapidly increase in response to market drivers, and, thus, are relevant to determining the technical feasibility of the rate of generation shift assumed in Building Block 2. Mitigation TSD 3-11, JA___. Moreover, EPA did not look solely at 2012; rather, it conducted a robust analysis including data from other years and historical trends. E.g., id. at 3-5 nn.11-12 (citing sources), 3-11–3-12, JA___, ___.

Ample data support EPA's determination that existing gas units can achieve, by 2030, an annual utilization rate of 75% on a "net-summer" capacity basis.[101] 80 Fed. Reg. at 64,799. For example, EPA found that 88% of such units operated at capacities equaling or exceeding 70% of nameplate capacity—approximately equivalent to 75% of net-summer capacity—for at least one day in the summer of 2012. Mitigation TSD 3-10, JA___. Although Petitioners question the value of daily usage rates in determining whether the average unit can be operated at that rate indefinitely, Pet. Record Br. 28, they ignore the fact that EPA did not rely on such data *in isolation*; it also considered existing gas units' long-term performance. EPA found that roughly 15% of such units operated at *annual* utilization rates of 75% or

[101] "Net-summer" generating capacity reflects a reduction from a power plant's "nameplate" capacity during the summer peak demand period "due to on-site electricity use (e.g., station service or auxiliaries) and local temperature conditions." Mitigation TSD 3-6, JA___; see also RTC 4.4.2, 238 (Comment 9) (nameplate capacity is "the nominal maximum output of a generator, assuming a particular set of ideal, often location-specific, operating conditions"), JA___; 80 Fed. Reg. at 64,799 (comments stated that net-summer capacity is "a more meaningful and reliable metric than nameplate capacity"); id. at nn.665-66.

higher on a net-summer basis. 80 Fed. Reg. at 64,799; Mitigation TSD 3-8–3-10, JA___. Many more gas units operated at such capacities "during certain periods of time, in response to higher demand"—e.g., on a seasonal basis. Id. at 3-10, JA___; 80 Fed. Reg. at 64,799. Based on this complete analysis, EPA concluded that 75% is "*below* the maximum levels at which some units have demonstrated the capability to operate" and, therefore, conservatively "offer[s] sources additional compliance flexibility, given that the extent to which they realize a utilization level beyond 75[%] will reduce their need to rely on other emission reduction measures or building blocks." 80 Fed. Reg. at 64,799, 64,803 (emphasis added).[102]

Petitioners attack a straw man by arguing that external constraints such as permit limits may prevent gas units from operating at "available" levels. Pet. Record Br. 29. As shown above, EPA's assumptions are well below the ceiling established by existing units' availability. In addition, the record shows very few air permits that could limit such units' utilization. See Clean Air Task Force Comments 70-75, EPA-HQ-OAR-2013-0602-22612, JA___. Petitioners have not demonstrated that these limitations create a barrier to the fleet-wide average level of generation-shift assumed

[102] EPA's approach is also conservative because EPA computed performance rates for each of the three interconnections and then used the least stringent as the national uniform rate, creating headroom in the other two interconnections and ensuring achievability in all three. See 80 Fed. Reg. at 64,802 ("[T]here is substantial [B]uilding [B]lock 2 potential in the Western Interconnection and Texas Interconnection that is not actually captured in the source category performance rates.").

under Building Block 2, which may be implemented "through the most efficient units increasing utilization rather than every unit increasing to the same 75% utilization level." RTC 4.4.3, 376 (Response 43), JA___.

2. Historical data support EPA's determination that a phased increase in gas utilization is reasonable.

EPA's determination that Building Block 2 is part of the Best System is further supported by the gradual application of its measures. Contrary to Petitioners' assertion that "EPA provides no data or analysis suggesting how that level of generation might be accomplished," Pet. Record Br. 28, EPA fully examined the feasibility of this phased-in approach.

Specifically, Building Block 2 "reflects a glide path of increases" in gas utilization over an "interim period" from 2022 until full implementation in 2030. 80 Fed. Reg. at 64,797-98. This glide path represents a conservative assessment of generation-shifting ability from steam to gas units over time, based on historical data. See id. at 64,798 & Table 7; Mitigation TSD 3-11–3-15 & nn.25-28, JA___.

Petitioners suggest that EPA should have attributed historical gas-fired generation growth rates primarily to "construction of *new* units" rather than increased utilization of existing ones. Pet. Record Br. 28-29.[103] But the data support EPA's

[103] Petitioners also erroneously assert that EPA failed to account for "the eventual deterioration and retirement of existing units." Id. at 27. EPA specifically considered the age of the existing gas fleet, observing that the bulk of it (over 80% of existing

(Footnote Continued …)

analysis. In 2012, for example, net gas-fired generation increased approximately 22% over 2011, while the gas fleet's total capacity rose just 3%. Mitigation TSD 3-11–3-13 & Tables 3-3 & 3-4, JA___. Thus, the bulk of the increased generation in 2012 clearly came from *existing*, not new sources. Moreover, EPA conservatively used the rate of increased generation in this single year as a benchmark to determine feasible generation growth over *ten* years from 2012[104] until interim compliance begins in 2022. 80 Fed. Reg. at 64,798. And to determine each successive year's feasible generation growth until 2030, EPA used the average annual growth rate from 1990 to 2012, thus adding to the conservatism of its approach. Id. Accordingly, it was reasonable for EPA to conclude that existing gas units had "demonstrated the ability for a quick shift in generation patterns in response to market or economic drivers," Mitigation TSD 3-11, JA___, and to develop conservative parameters defining such units' further generation growth potential.

3. EPA reasonably accounted for geographic considerations.

EPA also carefully assessed potential "real-world constraints" on the ability of existing gas units to implement Building Block 2, Pet. Record Br. 27, 29-30, and

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capacity) has come online in the last 15 years. Mitigation TSD 3-7 & Table 3-1, JA___. Overall, "the existing fleet is relatively young." Id.; see also Documentation for EPA Base Case v.5.13 Using the Integrated Planning Model 8-14, EPA-HQ-OAR-2013-0602-0212 (EPA assumed 30-year useful life for gas plants), JA___.

[104] EPA made certain adjustments to the 2012 baseline data. E.g., infra Argument V.B.5.

reasonably determined that these measures are feasible. See generally infra Argument VI.A. Petitioners' argument, that EPA failed to consider whether existing gas units are "located in areas where [they] can serve demand that would otherwise be supplied by coal generation," Pet. Record Br. 29, ignores the fundamental nature of the interconnection, in which "electricity system resources operate in a complex, interconnected grid system that is physically interconnected and operated on an integrated basis across large regions." 80 Fed. Reg. at 64,692. EPA's Building Block 2 modeling demonstrated that each interconnection can support the requisite generation-shifting while continuing to meet "transmission, dispatch, and reliability constraints." Mitigation TSD 3-20, JA___. Moreover, EPA detailed how all types and sizes of units in all locations are able to undertake the Building Block 2 measures. 80 Fed. Reg. at 64,731-36, 64,796-97. Petitioners' conclusory objections do not identify any deficiencies in this record.

Petitioners further contend that geographic concerns are heightened in Texas, "where over 90% of electricity is consumed in ERCOT [Electric Reliability Council of Texas, hereinafter "Council"], which has limited import capacity." Pet. Record Br. 30. The Council, however, is its own region under this Rule (i.e., the Texas Interconnection). 80 Fed. Reg. at 64,739. Any limitations on the Council's ability to "import" power from *outside* the region are irrelevant to the question EPA analyzed, which was whether generation may be shifted among existing sources *within* the region. Id. at 64,738-42.

4. EPA's modeling supports its conclusions.

Petitioners argue that EPA's model shows that increased utilization of existing gas units would displace significant generation from *new* gas units rather than existing steam units. Pet. Record Br. 30. This is incorrect. The model holds total generation from existing fossil-fuel-fired plants (gas plus steam) constant in each interconnection with the level of such generation projected in the base case. See Mitigation TSD 3-20, JA___. By definition, then, any modeled increase in existing gas-fired generation must displace existing steam generation. The decrease in new gas-fired generation within the modeled scenario is a response to changes in other variables (e.g., increased demand for natural gas) that also lead to offsetting increases in generation from renewable, nuclear and other sources.[105]

5. EPA reasonably accounted for generation from existing units that were under construction in 2012.

Petitioners also challenge Building Block 2's incorporation of gas units under construction prior to January 8, 2014, claiming that such units have operated at 77% capacity, and, thus, cannot increase their utilization as required in Building Block 2. Pet. Record Br. 31-32. This fundamentally mischaracterizes how Building Block 2 works. EPA assumed a 55% capacity factor for purposes of including the under-

[105] See Cover Sheet, "Modeled increase in existing gas-fired generation must displace existing steam generation" (summarizing EPA-HQ-OAR-2013-0602-36476 and EPA-HQ-OAR-2013-0602-36477), JA___.

construction units' incremental generation and emissions in the 2012 baseline to which Building Block 2's reductions are applied, as if they actually operated in 2012. As commenters noted, and EPA explained in response to comments, "some newly under construction [units] may operate at utilization rates greater than 55% in some cases," but "some of this generation may offset existing 2012 generation and not reflect a purely incremental change to the baseline." RTC 4.5, 11 (Response 10), JA___. Although some under-construction units are presently operating at a 77% capacity factor, they have substituted for retiring fossil-fuel-fired units in many cases and, therefore, have reduced overall emissions when compared to the 2012 baseline. Far from undermining Building Block 2 or EPA's modeling in support of it, this validates the intraregional generation-shifting premise of Building Block 2.

For example, for the North Carolina Lee plant Petitioners cite, Pet. Record Br. 31, EPA's 2012 baseline reflects both *expected incremental* generation from under-construction gas units (assuming the 55% utilization rate is incremental) and *actual* 2012 generation from then-existing coal-fired units that subsequently retired.[106] The Lee gas units operated at high capacity factors in their first full year of operation because part of their generation *replaced* generation from the retired, higher-emitting

[106] Numerous other coal-fired plants scheduled for retirement in 2012-2014 and beyond also were included in EPA's 2012 baseline. See Cover Sheet, "Coal plants scheduled for retirement in 2012-2014 included in EPA's 2012 baseline" (summarizing EPA-HQ-OAR-2013-0602-36849), JA___.

coal units. Thus, the Lee gas units need not increase utilization to a "92[%] capacity factor" to realize Building Block 2 reductions from the baseline, Pet. Record Br. 31, as reductions have already been achieved. The assumed capacity factor for under-construction sources was intended to capture the extent to which such sources *incrementally* added to total 2012 power generation, and it reasonably served that purpose.

6. EPA reasonably included duct burners in its analysis.

Finally, EPA's record shows that gas units equipped with duct burners (i.e., supplemental combustion equipment)[107] can sustainably operate at higher capacity factors. As explained above, reported data show that "roughly 15 percent of existing [gas] plants operated at *annual* utilization rates of 75[%] or higher on a net summer basis" in 2012. 80 Fed. Reg. at 64,799 (emphasis added). Over 60% of those high-capacity-factor units are *equipped with duct burners*. See 2012 NGCC Plant Capacity Factor, EPA-HQ-OAR-2013-0602-0250, JA___.[108] Consequently, Petitioners' claim

[107] A typical combined-cycle gas unit is comprised of combustion turbines, a heat recovery steam generator that uses waste heat from the combustion turbines to generate steam, and a steam turbine. Heat-recovery steam generators can be used with or without duct burners, 80 Fed. Reg. at 64,960, which provide supplemental firing to generate additional steam.

[108] This spreadsheet contains gas-plant data submitted to the Energy Information Agency in 2012. The "2012 EIA 860 Form" tab includes data regarding net-summer capacity and equipment configuration (including whether a plant has units equipped with duct burners), while the "2012 EIA 923 Form" tab includes generation data. Based on this information, 41 of the 67 gas plants with a 75% or greater annual-net-

(Footnote Continued …)

that gas units cannot achieve 75% annual utilization without "continual operation" of their duct burners and "accelerated equipment wear" is demonstrably wrong. Pet. Record Br. 32-33.

C. Building Block 3 Is Achievable.

To determine the renewable generation achievable under Building Block 3, EPA used historical data to project annual targets, and then used modeling to confirm the technical feasibility and cost-effectiveness of those targets. This projection, based on the best available data and consistent with external expert projections, is reasonable. Where analysis "requires a high level of technical expertise," as here, "the informed discretion of the responsible federal agencies" is entitled to substantial deference. Marsh v. Or. Natural Res. Council, 490 U.S. 360, 377 (1989) (quotation omitted).

1. EPA reasonably projected renewable generation based on historical patterns and conservative modeling assumptions.

To quantify Building Block 3, EPA modeled baseline renewable generation in 2021 and then added an annual "growth factor" each year to project how quickly renewable generation could grow under the Rule. To determine the growth factor, EPA used historical data on five renewable-energy technologies to calculate both the *average* and *maximum* amount of generating capacity that was built between 2010 and

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summer capacity factor have units equipped with duct burners. See Cover Sheet, "2012 NGCC Plant Capacity Factor" (summarizing EPA-HQ-OAR-2013-0602-0250), JA___.

2014 for each technology. EPA then computed the *average* and *maximum* generation—using present-day technology—that could be added to the grid from building that much new renewable capacity each year.

For the Rule's first two years, EPA projected that renewable generation would only grow beyond the 2021 baseline at the *average* historical pace; starting in 2024, EPA projected that generation could grow at the *maximum* historical pace. 80 Fed. Reg. at 64,807-08; Mitigation TSD 4-1–4-6, JA___. Under this projection, total renewable generation in 2030 reaches 706,030,112 megawatt-hours. 80 Fed. Reg. at 64,808.

EPA then tested the "technical feasibility and cost-effectiveness" of the projected generation in the Integrated Planning Model, which confirmed that it could be installed at a reasonable cost, accounting for considerations like resource availability and distance from transmission. Id. at 64,808-09; Mitigation TSD 4-6–4-9, JA___. The Model also distributed the generation between the three interconnections to calculate Building Block 3's contribution to the regional rates. Id.

This was a reasonable, and indeed conservative, approach.

First, by basing projections on actual renewable capacity built between 2010 and 2014, EPA limited the targets to "demonstrated levels of [renewable-energy] deployment that have been successfully integrated into the power system." Id. at 64,806-07. This was a significant constraint because it presumes that additions of renewable generation under the Rule will never exceed 2010-2014 levels, even after

two decades of technological development and industry expansion. See id. at 64,809 (describing recent renewable growth). Moreover, EPA declined to apply the maximum growth rate in 2022 and 2023 to ensure significant lead time to invest in and plan for the larger generation additions thereafter. Id. at 64,808.

Second, EPA's methodology conservatively assumes that present-day technological "capacity factors," used to calculate the average and maximum generation added between 2022 and 2030, will not increase over time. Mitigation TSD 4-3, JA___. Capacity factors—which in this context represent the actual power a generating unit is expected to produce annually compared to its generating capacity, given, for example, design efficiency, maintenance disruptions, or fluctuations in resource availability—have historically increased for renewable technologies, suggesting EPA's calculation may significantly undercount possible renewable generation. 80 Fed. Reg. at 64,803-04, 64,809.[109]

Third, EPA set conservative modeling parameters.[110] Id. at 64,808; Mitigation TSD 4-20–4-21, JA___. For example, EPA constrained the Model from forecasting new generation in places where significant new transmission would be required, or

[109] Petitioners allege that technological gains will be outweighed by resource quality declines. Pet. Record Br. 35. History suggests otherwise, as does the breadth of undeveloped resources and the speed of technological advancement. 80 Fed. Reg. at 64,804, 64,809-10.

[110] These included proximity to transmission, siting and land use restrictions, and construction lead times. See Pet. Record Br. 36, 68-69.

where transmission costs would be prohibitive. See 80 Fed. Reg. at 64,808; Mitigation TSD 4-23–4-24, JA___. Likewise, EPA's Model capped the amount of wind and solar generation that could be built in any one area so that no part of the grid (broken into 64 subregions) would have more than 30% of its electricity coming from wind and solar together, or more than 20% from either alone. 80 Fed. Reg. at 64,808. These generation levels have already been demonstrated and are considered reasonable. Id. at 64,808, 64,810.

EPA's approach was conservative in other ways. EPA calculated targets based on five renewable-energy technologies, while allowing other renewable technologies to be used for compliance, id. at 64,810; modeled the targets without federal tax credit incentives, see RTC 3.3.7, 348 (Response 10), JA___; and set the uniform rates based on the least-stringent regional rate, 80 Fed. Reg. at 64,810-11. The latter factor alone means that states and sources can meet their emission-reduction goals without needing over 160,000,000 megawatt-hours of renewable generation projected under Building Block 3—about 20% of the total. Id.; Mitigation TSD 4-10, JA___.

EPA's approach thus ensures that the Building Block 3 targets are moderate projections that can be achieved at reasonable cost. EPA's targets are consistent with those identified in several other expert studies. Mitigation TSD 4-19–4-20, 4-22 n.45 (citing National Renewable Energy Laboratory ("NREL") analysis compiling renewable feasibility studies), 4-23, JA___, ___, ___.

2. Petitioners' exaggerated claims are at odds with the best available data and EPA's conservative approach.

Petitioners assert that EPA should have relied on data from the Energy Information Administration ("EIA"), rather than NREL, to develop its 2021 baseline because EIA is "the governmental entity charged with forecasting electricity generation and demand." Pet. Record Br. 33-34. But NREL—which, like EIA, is part of the Department of Energy ("DOE")—is the nation's expert on the development and deployment of renewable energy. As EPA explained, comparing NREL and EIA data demonstrated that "[NREL's] estimates are more in line with current costs and recent market analysis and projections than [EIA's] costs." Mitigation TSD 4-14, JA___. For example, EIA's 2013 projection for wind installation costs in 2030 was almost 30% higher than *actual* costs in 2013. Id. at 4-15, JA___. While EIA improved its 2015 projections, see id. at 4-17, JA___, EPA reasonably concluded that NREL was a better data source "based on the quality of its data" and its "demonstrated success in both reflecting and anticipating [renewable-energy] cost and performance trends." 80 Fed. Reg. at 64,807; see Mitigation TSD 4-12–4-17, JA___. EPA selected NREL's middle rather than most optimistic estimates, however, to support moderate rather than the highest possible targets. 80 Fed. Reg. at 64,807, 64,809; Mitigation TSD 4-12–4-13.[111]

[111] Petitioners also claim EPA "gamed" its cost analysis by "lowering coal generation" in the baseline. Pet. Record Br. 69. As elsewhere, Petitioners rely on extra-record

(Footnote Continued …)

Petitioners next contend that EPA's historical growth projection is flawed because an "inflated" amount of renewable generation was added in 2012, and because it assumes industry will maintain its maximum growth rate over a period of seven years. Pet. Record Br. 34-35. But whether generation additions in a particular year were above the historical norm is immaterial; those additions were actually achieved and demonstrate that the electric grid can integrate significant levels of renewables. See 80 Fed. Reg. at 64,809. And as explained above, given continuing technological advancements, dramatic cost reductions, and renewable industry expansion, maximum capacity additions between 2010 and 2014 are an entirely reasonable benchmark for additions more than a decade later—especially given EPA's other conservative assumptions.

Petitioners also dispute EPA's assumptions regarding capacity factors for existing technology, Pet. Record Br. 35, but as above, EPA's reliance on NREL, rather than EIA, data is reasonable. See Mitigation TSD 4-3, 4-12–4-13, JA___, ___. Moreover, Petitioners err in contrasting EPA's "capacity factor for Texas wind of between 39 and 41%," with "a prior [Council] estimate of 8.7% availability during summer peak demand." See Pet. Record Br. 69. The two are different metrics: the

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evidence, which cannot be considered on judicial review. See 42 U.S.C. § 7607(d)(7)(A). Regardless, the base case is determined by modeling, and EPA does not predetermine the Model's outcome—nor have Petitioners challenged the Model's underlying design or fossil-fuel-related inputs. 80 Fed. Reg. at 64,801 (describing the Model).

former concerns a wind turbine's expected annual generation; the latter concerns the amount of wind generation capacity a grid operator can *depend* on being available whenever demand hits its peak. EPA's Model recognized that only 8.7% of total wind capacity can be depended on to meet peak demand, RTC 3.3.3, 184 (Response 28), JA___, but was nonetheless able to meet the renewable targets.

Petitioners further claim that EPA's targets will disrupt grid reliability, including grid support services (like "voltage support") needed to ensure the continuous flow of electricity on the electric grid. Pet. Record. Br. 68. But EPA's targets for renewable generation match levels of renewables that "have been achieved without negative impacts to reliability," 80 Fed. Reg. at 64,809, and EPA's modeling included multiple constraints to ensure sufficient resources to maintain reliability. Id. at 64,808. Additionally, with technological advances, renewables are themselves providing grid support services. Id. at 64,810.

Finally, EPA's conservative approach belies Petitioners' exaggerated claims about the targets. See Pet. Record Br. 36. Building Block 3 projects excess renewable generation that is not necessary to comply with the Rule but which can be used directly for compliance or to generate credits for sale—one of many factors supporting EPA's conclusion that robust credit markets will develop. Id. at 64,732. In any case, credit markets are not necessary for compliance; power plant owners also have multiple opportunities to directly purchase or invest in renewables. See id. at 64,804-06; Mitigation TSD 4-24–4-25, JA___.

Given the staggering advances in renewable-energy development over the last decade, EPA's measured projections regarding further development over the next two decades are reasonable and achievable, and entitled to deference.

D. EPA Reasonably Determined That the Best System Would Not Increase Existing Plants' Emission Rates.

Petitioners assert that EPA's calculation of performance standards was flawed because it failed to consider alleged increases in CO_2 emission rates from reduced utilization of coal plants and increased utilization of gas plants (including "heavy use" of duct burners). Pet. Record Br. 37-38. However, the record demonstrates that EPA did consider whether emission rates from existing plants would change and concluded that the alleged increases will not occur.

For gas plants, historical state-level data demonstrates a negative correlation between emission rate and utilization rate, notwithstanding any supplemental fuel consumed by duct burners during hours of high utilization, which would already be reflected in the historical data for such hours. That is, gas units' emissions are generally *lower* (contrary to Petitioners' claim) as their utilization increases, likely due to efficiency gains from less cycling. RTC 4.4.3, 373 (Response 39), JA___; see also RTC 3.2.2, 103 (Comment 4), JA___.

As to coal plants, by 2030 EPA projects *increased* utilization of existing coal-fired plants in operation, which refutes the premise of Petitioners' assertion that such plants will emit at higher rates due to inefficiencies resulting from *lower*

utilization. Mitigation TSD 2-55–2-58 (noting industry's pre-Rule announcements of plans to retire 16% of coal capacity by 2020, and that modeling projects those retirement trends to continue through 2030), JA___. Further, Petitioners fail to show that their asserted error would exceed the headroom EPA built into its calculation of the uniform rates to ensure their achievability. E.g., id. 2-50–2-51 (EPA conservatively did not account for the full extent of heat-rate improvements available to coal plants), JA___; 80 Fed. Reg. at 64,792 (same); supra n.95 (same). Thus, Petitioners have not demonstrated that EPA's determination was arbitrary or capricious.

E. EPA Was Not Required to Perform Individual Plant Achievability Analyses.

As discussed above (Argument I.A.4), EPA reasonably concluded that all types of plants can implement the Building Blocks and comply with the uniform rates. There is no basis to Petitioners' claim that EPA must provide a specific demonstration that every individual source can comply with the uniform rates. Pet. Record Br. 48-49. To the contrary, the Rule allows for sufficiently flexible measures to allow every source to comply. Moreover, in setting Section 111 guidelines, EPA is not required to "perform repeated tests on every plant operating within its regulatory jurisdiction." Nat'l Lime Ass'n v. EPA, 627 F.2d 416, 433-34 (D.C. Cir. 1980). Rather the appropriate test is whether EPA gave "due consideration" to "the possible impact on emissions of recognized variations in operations and some rationale … for

the achievability of the promulgated standard given the tests conducted and the relevant variables identified." Id. at 434. EPA's extensive analysis of the ability of the various sectors of the industry to implement the Best System easily passes that test. Supra Argument I.A.4.[112]

F. Achieving the Uniform Rates Does Not Require Trading, Although the Record Demonstrates That Successful Trading Programs Are Likely to be Established.

Petitioners' claim that EPA did not demonstrate that sources can achieve the uniform rates because EPA relied on trading programs as an emission-reduction measure outside the Best System, Pet. Record Br. 48-53, lacks merit because trading is not an emission-reduction measure, but simply one of several approaches that sources can utilize to implement Building Blocks 2 and 3.[113] Furthermore, the record demonstrates that sources can implement the Building Blocks and achieve the uniform rates without trading, 80 Fed. Reg. at 64,731-32, and clearly supports EPA's determination that sources will be able to rely on trading if they choose. Id. at 64,734-35.

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[112] Moreover, Petitioners' argument is inconsistent with states' ability to consider cost and achievability factors such as remaining useful life.

[113] "Trading" refers to the purchase or sale of compliance instruments (allowances or credits) between parties, such as power plants, renewable-energy facilities, or other market participants. 80 Fed. Reg. at 64,733, and does not include acquiring credits from direct investment.

The uniform rates are based on the amount of emission reductions EPA determined sources can achieve by implementing the Building Blocks. Sources have a wide range of options for implementing Building Blocks 2 and 3. They can, *inter alia*, increase generation from existing gas plants they control; invest in existing gas plants or new renewable-energy facilities; or enter into agreements to purchase power from existing gas plants or new renewable-energy generators. Id. at 64,731-32; Legal Mem. 137-48, JA___. Sources can utilize these options directly, i.e., through investing in or purchasing power from another generator, or indirectly by participating in a market for tradeable credits (which represent units of generation for compliance in rate-based states) or allowances (which represent authorizations to emit a specified amount of CO_2 for compliance in mass-based states). 80 Fed. Reg. at 64,733-35. Trading, therefore, is not an emission-reduction measure outside of the Best System (such as programs that reduce demand for generation by increasing energy efficiency), but rather one possible method for implementing Building Blocks 2 and 3. EPA never stated that trading is necessary to achieve the uniform rates. Rather, EPA said that trading was integral to its analysis of how the uniform rates could be achieved in light of the near certainty that states will establish trading programs. Id. at 64,733-34.

Nowhere did EPA concede that individual sources are unable to achieve the uniform rates through application of the Building Blocks, and the record demonstrates the opposite. Id. at 64,735 ("all types and sizes of [sources] in all locations are able to undertake the actions described as the [best system]"); id. at

64,752-54 (performance standards are achievable through application of the Building Blocks). Petitioners' contrary claims, Pet. Record Br. 48-49, are based solely on snippets taken out of context. For example, the quoted statement from the Computation TSD is from a discussion of EPA's methodology for calculating the uniform rates that focused on how sources *would* implement the Best System (on a regional basis), and does not address how sources *must* implement the Best System. JA___. Similarly, the reference to non-Best System measures in the Response-to-Comments document is not to trading, but to such potential measures as energy-efficiency requirements. JA___. Furthermore, the fact that sources *can* rely on non-Best System measures for compliance does not mean that they *must* do so. 80 Fed. Reg. at 64,755-58.

Petitioners' reliance on National Lime, Pet. Record Br. 50, is specious. There EPA relied on enforcement discretion to ameliorate the consequences of a standard that could not be met under most adverse conditions which could reasonably be expected to recur. 627 F.2d at 431 n.46. Here, by contrast, the record demonstrates that the uniform rates are achievable and facilities have multiples ways to achieve them.

EPA's record shows that many, if not all, state plans will provide for trading because it is the most cost-effective method for implementing Building Blocks 2 and 3, and there is no basis to Petitioners' claim that trading programs and markets will not develop. Pet. Record Br. 50-52. Commenters, including some Petitioners (e.g.,

Alabama, Michigan, North Carolina, Wisconsin), urged EPA to allow for trading as a means of compliance. 80 Fed. Reg. at 64,733 n.379. Thus, Petitioners clearly believe that trading is a cost-effective method for compliance, and their eagerness for the option is itself evidence that states are likely to establish successful trading programs.

Furthermore, Petitioners do not dispute that in every case where the utility industry has been allowed to trade to comply with CAA requirements, vigorous trading markets have rapidly developed. Id. at 64,734-35. Petitioners' attempt to distinguish these programs on the ground that they were federally imposed, Pet. Record Br. 51-52, is misplaced. The three transport rules implementing Section 7410(a)(2)(D)(i)(I), see supra Argument I.A.2.b, established emission standards and provided that states could join a multi-state trading program if they wished, and states did so. For example, in the NO_x SIP call, 63 Fed. Reg. 57,356 (Oct. 27, 1998), EPA promulgated a model trading rule that states could adopt and all states did so.[114]

There is also currently robust trading to meet state renewable-energy standards even though each state adopted its own program without any overarching federal requirement. 80 Fed. Reg. at 64,735. This history demonstrates that the states and the utility industry recognize that trading is an efficient and cost-effective mechanism to achieve compliance with emission requirements, and that they are quite capable of

[114] "The NO_x Budget Trading Program: 2008 Highlights," at 1, https://www.epa.gov/sites/production/files/2015-09/documents/2008_highlights.pdf.

implementing a trading program for CO_2 emissions. See Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 535-36 (D.C. Cir. 1983) (upholding as reasonable EPA's prediction that a trading market would develop based on competitive nature of industry, experience with other CAA programs, and support for trading in comments). EPA has taken numerous actions to facilitate the development of trading programs, including proposing model trading programs that states can adopt. 80 Fed. Reg. at 64,838-40, 64,892-94, 64,910-11. Given the enthusiasm for trading shown in comments and the states' past participation in CAA trading programs, it is unreasonable to think that states will not design plans that facilitate a robust trading market.

Petitioners' claim that the Rule imposes undue restrictions on trading, Pet. Record Br. 52, is also without merit. Petitioners present no evidence for their assertion that provisions of the Rule that limit the ability of specified facilities to generate tradeable credits, all of which are necessary to ensure the integrity of the Rule so that it achieves the necessary emission reductions, see Argument VII.A below, will impede trading. EPA determined that such a situation is "extremely unlikely" and that EPA would address it if it arose. 80 Fed. Reg. at 64,732 n.377.

G. The Rule Does Not Require States to Regulate Beyond Their Borders.

Petitioners' claim that the Rule is not achievable because states cannot regulate beyond their borders, Pet. Record Br. 54-55, is meritless because the Rule contains no

such requirement. Rather, the Rule requires only that a state adopt a plan requiring that sources *within* the state comply with the performance standards. EPA has amply demonstrated that sources will be able to achieve the uniform rates by implementing the Building Blocks. See supra Argument I.A.4.

Petitioners identify nothing in Section 111(d) that limits sources' implementation of the Best System to measures that can be taken within a state. That sources may engage in transactions in other states is fully consistent with the fact that interstate exchanges of generation already occur on a regular and substantial basis, due to the integrated interstate market for electricity. 80 Fed. Reg. at 64,691-93; see FERC v. EPSA, 136 S. Ct. at 768. In fact, numerous commenters, including Petitioners, objected to the proposal's application of the Building Blocks on a state-by-state basis, emphasizing the interstate nature of the electricity system and power company transactions. RTC at 4.4.1, 206-208 (Comment 9), JA___. Moreover, it imposes no burden on a state that its sources might take measures outside the state, either directly through investment or contract or indirectly through tradeable credits, and the flexibility to do so allows sources to achieve the uniform rates at the lowest cost. It is not uncommon for sources to rely on out-of-state measures for compliance, whether the purchase of allowances, coal-cleaning services, or alternative sources of fuels.

VI. EPA Reasonably Considered Statutory Factors, Including Costs and Energy Requirements, and Promulgated Appropriate Subcategories and Implementation Requirements.

A. EPA Reasonably Considered Available Infrastructure and Grid Reliability Issues.

Contrary to Petitioners' argument, Pet. Record Br. 38-47, EPA carefully examined the extent to which available infrastructure can support implementation of the Best System, and reasonably determined that the Rule will not necessitate significant infrastructure additions or modifications. EPA also reasonably assessed reliability concerns.

1. EPA reasonably concluded that the Rule would not significantly increase infrastructure needs.

Although Petitioners suggest a concern regarding gas pipeline infrastructure, their single sentence is not sufficient to raise the issue. Pet. Record Br. 38. Nonetheless, EPA's thorough examination of the natural gas supply and delivery system, including already-planned expansions thereof, supports its conclusion that Building Block 2 is achievable. 80 Fed. Reg. at 64,800-01; Mitigation TSD 3-15–3-19, JA___. Moreover, Building Block 2 incorporates a gradually phased schedule designed to allow time for any modest infrastructure improvements needed to increase gas plant utilization. Id. 3-14, JA___.

With regard to transmission, EPA found that although "some upgrades to the grid (including potential, but modest, expansions of transmission capacity) may be necessary" to support operating gas units at higher capacity factors for longer periods

of time, "such upgrades are part of the normal planning process." 80 Fed. Reg. at 64,801. Indeed, the electric-transmission system already is undergoing substantial expansion. Id. at n.676. Accordingly, EPA found that Building Block 2 would not necessitate significant additional requirements for transmission planning and construction "beyond those already being addressed at routine intervals by the power sector." Id. at 64,801.

EPA also determined that Building Block 3 should not result in significant additional transmission capacity needs. E.g., id. at 64,809-10; Mitigation TSD 4-22–4-24, JA___. Since the added renewable-generation capacity under Building Block 3 occurs over a fifteen-year period, and with renewable-energy generation equivalent to only 20% of total generation, EPA found that "these additions should be manageable in the normal planning and expenditure process for transmission." Mitigation TSD 4-23–4-24, JA___.

EPA's conclusion is supported by data indicating that the limited amount of transmission construction needed for Building Block 3 is well within the historical range of annual transmission investments. DOE's analysis, for example, projected base case wind capacity growth from 2021 to 2030 of 11.5 gigawatts per year, a growth rate consistent with Building Block 3. 80 Fed. Reg. at 64,810. This added capacity would require 890 circuit miles per year of new transmission, only slightly greater than the 870 miles per year added on average between 1991 and 2011. Id.

Finally, EPA made several Rule changes to address commenters' concerns regarding infrastructure, e.g., Pet. Record Br. 39-40, such as delaying the start of the interim-compliance period by two years and revising the interim emission limits to assume gradual phase-in of Building Block 2 from 2022 to 2030, thereby providing additional time to build any needed infrastructure. 80 Fed. Reg. at 64,798, 64,879.

2. EPA reasonably assessed reliability and resource adequacy.

Although Petitioners argue that EPA "did not conduct a true reliability assessment" and failed to meaningfully address reliability comments, Pet. Record Br. 40-43, the record demonstrates otherwise. As an initial matter, EPA has never "conceded" that it "lacks the expertise to assess grid reliability." Id. at 40. Nor does this Court's opinion in Delaware support that proposition. Id. at 45; see supra Argument I.B.4.

EPA carefully considered the comments of state and regional entities, power companies, and other stakeholders concerning reliability; consulted with DOE and FERC; and participated in multiple FERC technical conferences. 80 Fed. Reg. at 64,874.[115] EPA also considered published reports and analyses addressing the Proposal's reliability implications. Id. at 64,879-81. Many such analyses concluded that the Proposal could be implemented in a manner "prevent[ing] reliability issues

[115] EPA also developed a coordination strategy with DOE and FERC to monitor Rule implementation, share information, and resolve any difficulties. Id. at 64,879.

while also reducing carbon pollution and costs." Id. at 64,881; see also id. at 64,880 (e.g., Brattle Group study "concluded that there are real world solutions" to reliability concerns; PJM analysis noted that its capacity market has "sufficient resources to maintain reliability"). Moreover, some of the more pessimistic analyses "assume 'inflexible implementation, are based upon worst-case scenarios, and assume that policy makers, regulators and market participants will stand on the sidelines until it is far too late to act' to ensure reliability"—assumptions that "are not consistent with past actions." Id. at 64,881 (quoting Analysis Group).[116] Indeed, despite similar worries that past environmental regulations would jeopardize the grid, the electric industry has always "done an excellent job of maintaining reliability, including when it has had to comply with environmental rules with much shorter compliance periods and much less flexibility." Id. at 64,875.

Nonetheless, EPA made numerous changes to the Proposal to accommodate stakeholders' reliability concerns, in part by incorporating within the Rule "overall flexibility, a long planning and implementation horizon, and a wide range of options for states and affected [sources]" to achieve the emission requirements. Id. at 64,874; see id. at 64,879. These changes ensure that, "[g]iven the different characteristics of

[116] Many such studies "assume that states, rather than developing state plans that make use of the wide latitude in the final rule to develop plans that are consistent with that state's energy sector and policies," will simply "implement the [B]uilding [B]locks in cookie cutter fashion." RTC 8.9, 148 (Response 7), JA___. This premise is wrong. Id.

the electric grid within each state and region," there are "many paths to meeting the final rule's requirements that can be taken while" maintaining grid reliability. Id. at 64,875.

For example, EPA modified the Rule's interim-compliance provisions specifically in response to FERC's and others' comments that sufficient time for planning and implementation is essential to ensuring reliability. Id. at 64,875 & n.867. These changes include: allowing states to obtain a two-year extension of their plan submission deadline based on a minimal showing; starting the interim-compliance period in 2022, not 2020; phasing in Building Block 2 requirements between 2022 and 2029; and providing that states need meet interim-compliance milestones only "on average or cumulatively, as appropriate." Id. at 64,875-76, 64,879.

EPA also adopted commenters' suggestion to include a "reliability safety valve" in the Rule. Pet. Record Br. 42. Commenters expressed concerns that a serious, unforeseen event might "require immediate reliability-critical responses by system operators and affected [sources] that would result in unplanned or unauthorized emissions increases." 80 Fed. Reg. at 64,878. Accordingly, in such an emergency, the Rule allows a source to operate under less-stringent emission limits for up to 90 days. Id. at 64,878-79. If after 90 days "there is still a serious, ongoing reliability issue," the source may continue to operate under less-stringent emission limits for a longer period. Id. at 64,879.

Finally, Petitioners' criticism of the Model's role in assessing reliability is misplaced. Pet. Record Br. 41-42. EPA has used the Model for over two decades "to better understand power sector behavior under future business-as-usual conditions and to evaluate the economic and emission impacts of prospective environmental policies." RIA 3-1–3-2, JA___; accord Technical Support Document: Resource Adequacy and Reliability Analysis 2, EPA-HQ-OAR-2013-0602-36847, JA___. Here, EPA used the Model appropriately to address resource adequacy and reliability concerns "at a general level," while recognizing that local reliability conditions cannot be more specifically assessed "until the [Rule's] planning and implementation process provides the necessary information for reliability authorities to conduct the necessary analysis." RTC 8.9, 184 (Response 14), JA___. Petitioners do not come close to showing that EPA's use of the Model was arbitrary and capricious.

3. EPA adequately addressed the concerns of the Council and rural cooperatives.

The record demonstrates that EPA also reasonably considered reliability concerns associated with the Council and rural cooperatives. Pet. Record Br. 43-47.

a. The Council.

EPA treated the Council as a separate region (i.e., the Texas Interconnection). 80 Fed. Reg. at 64,739. Contrary to Petitioners' suggestion, EPA neither assumed nor "mandated" that Texas Interconnection sources import power from outside the interconnection. Pet. Record. Br. 44. Rather, EPA determined achievable emission

limitations based on measures that could be reliably implemented *within* this region. See, e.g., RTC 3.1.4, 129 (Response 3) ("[W]ith respect to Texas, the final rule calculates heat-rate improvement on an interconnection basis and thus further obviates commenters' concerns about direct comparisons between plants in [the Council] and those in other interconnections."), EPA-HQ-OAR-2013-0602-36876, JA___; Computation TSD 6 (describing EPA's regional analysis), JA___; Mitigation TSD 3-20, 4-6 (same), JA___, ___.

Rule compliance need not disrupt, and in fact may be incorporated in, the Council's economic dispatch approach, Pet. Record Br. 44. Generally, under any economic dispatch approach, "the system operator will dispatch an electric power plant that experiences an increase in its variable costs—e.g., for environmental-compliance measures—less than it otherwise would have." Legal Mem. 139, JA___. Compliance costs or limits on generation "can be factored in with fuel costs to determine when the unit is committed to be available, how the unit can be most efficiently cycled, and at what level the unit is dispatched." Id.; see also id. at 147 (discussing contractual mechanisms), JA___.[117] And while sources within the Council may "already [be] motivated to make efficiency improvements," Pet. Record Br. 44, both published technical literature and EPA's analysis supported the agency's

[117] Accord, e.g., Analysis Group, EPA's Clean Power Plan: State Plans and Consumer Impacts 12 (July 2014), JA___.

conclusion that there is further room for improvement. Mitigation TSD 2-50 (Table 2-8), JA___; see generally id. at 2-10–2-51, JA___.[118]

Finally, the Rule neither "ignores" nor interferes with the jurisdictional scheme under the Federal Power Act. Pet. Record Br. 45. This Rule only establishes emission limitations under the CAA; it does not regulate electricity markets. Supra Argument I.B.5.

b. Rural cooperatives.

EPA also considered the reliability concerns of rural cooperatives. Pet. Record Br. 45-47. EPA explained how all types and sizes of covered sources in all locations, including rural cooperatives, feasibly can undertake the measures that constitute the Best System. E.g., 80 Fed. Reg. at 64,796-97, 64,804-06; Legal Mem. 144-47, JA___. The Rule allows states to "implement a broad range of approaches that recognize that the power sector is made up of a diverse range of companies that own and operate fossil fuel-fired [plants]," including rural cooperatives, "all of which are likely to have different ranges of opportunities to reduce [greenhouse-gas] emissions." RTC 2.5, 56 (Response 2), JA___.

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[118] EPA did find that the potential for heat-rate improvement within the Texas Interconnection is substantially lower than it is nationwide. Id. 2-50, JA___. EPA used the interconnection where the achievable emission rate is highest—i.e., least stringent—to calculate the uniform rates for all three interconnections, which "ensure[s] that there is 'headroom' within the [Best System] measures that provides greater assurance of the[ir] achievability" in each region, including Texas. 80 Fed. Reg. at 64,730.

B. EPA Reasonably Considered the Costs of the Building Blocks and Did Not Use the Benefit-Cost Analysis in the RIA for That Purpose.

Petitioners' challenges to EPA's benefit-cost analysis are irrelevant because EPA did not (nor was required to) use that analysis when considering costs. As required by Section 111(a)(1), EPA analyzed the costs of the Building Blocks[119] when determining the Best System and found that those costs are reasonable. Specifically, EPA found the Building Blocks' costs to be reasonable compared to two benchmarks: the costs that power plants incur to reduce other pollutants, and the CO_2 prices that owners of sources use for planning purposes in their integrated resource plans. 80 Fed. Reg. at 64,750. EPA also found that the costs were reasonable compared to other potential control measures, such as carbon sequestration and co-firing, "in light of the severity of the observed and projected climate change effects on the U.S., U.S. interests, and U.S. citizens, combined with [power plants'] large contribution to U.S. [] emissions." Id. EPA explained that power plants are "by far the largest emitters of [greenhouse gases] among stationary sources," and that EPA "would therefore consider even relatively high costs—which these are not—to be reasonable." Id. at 64,749, 64,751. Petitioners do not challenge these findings.

[119] EPA quantified the Building Blocks' costs individually and in combination. See 80 Fed. Reg. at 64,749, 64,791, 64,801-02, 64,810-11; Mitigation TSD 2-62–2-66, 3-20–3-21, 4-21, JA___, ___, ___.

Instead, Petitioners exclusively focus on EPA's calculation of benefits in its formal benefit-cost analysis. Pet. Record Br. 69-71. The Act does not require EPA to conduct such an analysis when determining the Best System. Portland Cement Ass'n v. Train, 513 F.2d 506, 508 (D.C. Cir. 1975) (benefit-cost analysis not required under Section 111(a)(1)); cf. Michigan, 135 S. Ct. at 2711 (benefit-cost analysis not required under Section 112). Although EPA performed a benefit-cost analysis, which is included in the Rule's Regulatory Impact Analysis, it did so to comply with an executive order governing significant regulations. See 80 Fed. Reg. at 64,751 & n.431; Executive Order 12,866 § 1 (Sept. 30, 1993).[120] EPA did *not* use that analysis in determining that the costs of the Building Blocks are reasonable. 80 Fed. Reg. at 64,751 (EPA "is not using" a "benefit-cost test (i.e., a determination of whether monetized benefits exceed costs)"). Thus, Petitioners' challenges to the social cost of carbon and other aspects of EPA's benefit-cost analysis in the Regulatory Impact Analysis are irrelevant.

Petitioners' arguments also lack merit. Petitioners impermissibly rely on three extra-record sources, two of which post-date the Rule, to criticize EPA's use of the

[120] EPA's compliance with Executive Order 12,866 is not reviewable. See id. § 10 ("Nothing in this Executive Order shall affect any otherwise available judicial review of agency action. This Executive Order … does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States …."); Air Transp. Ass'n of Am. v. FAA, 169 F.3d 1, 7 (D.C. Cir. 1999) (identical language in another executive order foreclosed judicial review).

social cost of carbon. Pet. Record Br. 69-70. As EPA explained in the Rule, however, "the [social cost of carbon] estimates" were developed "over many years, using the best science available, and with input from the public." 80 Fed. Reg. at 64,931. The Office of Management and Budget specifically recommends that agencies use the social cost of carbon in their regulatory impact analyses. See, e.g., Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12,866 (May 2013), JA___; Response to Comments: Social Cost of Carbon for Regulatory Impact Analysis under Executive Order 12,866 (July 2015), JA___. Nothing in the Act forecloses EPA's consideration of the social cost of carbon in a benefit-cost analysis, and EPA explained why the estimates account for global rather than only domestic benefits. RTC 8.7.2, 42-45, JA___.

Petitioners' remaining objections are equally unfounded. Their assumption that the Clean Energy Incentive Program will result in 300 million additional tons of emissions, Pet. Record Br. 71, incorrectly conflates a theoretical regulatory maximum with the modeling projections used to assess emissions impacts, and ignores compensating reductions prior to the start of the Rule's performance period. See RIA 4-8–4-9, JA___; see generally 80 Fed. Reg. at 64,830-32.[121] EPA projected modest

[121] EPA requested comment on early-action crediting (which is accomplished by the Clean Energy Incentive Program) and no commenter raised an objection regarding its

(Footnote Continued …)

electricity price changes from the Rule, ranging from 3.2% in 2020 to no change in 2030, and addressed the small possibility that industries might respond to those price increases by shifting production abroad. RIA 4-5, 5-4 (Table 5-1), JA___, ___; see Pet. Record Br. 71. Finally, there is no evidence that the Rule could cause "30,000 premature deaths," Pet. Record Br. 71; on the contrary, EPA estimated that the pollution reductions associated with the Rule will *avoid* up to 3,530 premature deaths per year by 2030. RIA 4-31 (Table 4-24), JA___.

C. EPA Established Appropriate Subcategories.

The Rule establishes emission guidelines for two subcategories of existing sources: steam units and combustion turbines, 80 Fed. Reg. at 64,760, consistent with EPA's new source standards, 80 Fed. Reg. at 64,543, 64,601. And contrary to Petitioners' argument, EPA reasonably determined that no other subcategories were "necessary." Pet. Record Br. 67.

Neither the statute nor EPA's regulations "mandate" subcategorization. Id. EPA retains discretion to determine whether it is "appropriate" to subcategorize under Section 111(d). 40 C.F.R. § 60.22(b)(5) ("The Administrator will specify different emission guidelines … when … [such] factors *make subcategorization appropriate*") (emphasis added); see Consumer Fed'n of Am. v. HHS, 83 F.3d 1497,

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relevance to EPA's benefit-cost analysis. See 79 Fed. Reg. at 34,918-19; 79 Fed. Reg. at 64,545-46. Therefore, Petitioners cannot do so here. 42 U.S.C. § 7607(d)(7)(B).

1504 (D.C. Cir. 1996) ("shall, as appropriate," does not eliminate discretion). And subcategorizing for lignite in a different context does not compel EPA to make the same determination here. See White Stallion, 748 F.3d at 1249-50 (establishing a subcategory in one rule does not necessitate a similar subcategory in another), rev'd on other grounds, Michigan, 135 S. Ct. 2699.

EPA appropriately subcategorized for steam units and combustion turbines because Building Blocks 1 and 2 apply only to steam units and "all affected [sources] can achieve the relevant performance standard set by applying the [Best System] to each of the[] two subcategories." RTC 1.10.3, 159 (Response 6), JA___; 80 Fed. Reg. at 64,760. No other factors merited additional subcategories. 80 Fed. Reg. at 64,760 (rejecting further subcategorization, including on the basis of coal type). The possibility that some sources may cause unique downstream impacts by retiring—which is an economic choice not mandated by the Rule—is a red herring. States can "impose different emission reduction obligations on different sources," including for mine-mouth lignite units, so long as the overall state goals are met, id. at 64,723, and can avoid stranded assets by implementing, inter alia, a trading program, id. at 64,872.

D. The Rule Does Not Impermissibly Regulate New Sources.

Petitioners' claim that the Rule requires States to "prevent the increased dispatch of new units," and thereby "unlawfully subject such units … to a state plan," Pet. Record Br. 65-66, is without merit. The Rule imposes no such requirement. It requires only that states *choosing* to adopt a mass-based trading program as an

alternative way to implement the Rule must design their plans to achieve emission performance equivalent to the uniform rates.[122] To do so, the state *could*, among other options, incentivize lower- or non-emitting generation or adopt state-law-only limits on new source emissions. 40 C.F.R. § 60.5790(b)(5). This "leakage" requirement is consistent with EPA's authority to offer alternative compliance options under Section 111(d) provided they result in emission performance meeting the requirements of the Rule and Section 111(d).

The Rule's fundamental requirement is that states develop plans to limit CO_2 from existing plants by securing a degree of emission limitation, expressed in the form of uniform rates, that EPA determined is achievable through application of the Best System. Under the uniform rates, existing sources are incentivized to shift generation to lower or non-emitting generators, which creates emission rate credits that existing sources can use to lower their effective emission rate. Responding to comments requesting flexibility to implement the Rule through mass-based trading limits, EPA calculated a mass-based goal for each state as an equivalent compliance alternative to the uniform rates. 80 Fed. Reg. at 64,822-23.

However, EPA recognized that sources in a mass-based trading program have different incentives, with different implications for overall emissions, than sources

[122] This requirement applies only to mass-based trading plans, not any other type of mass-based plan or any rate-based plan. 40 C.F.R. § 60.5790(b)(5).

with rate-based limits, and that the mass-based goal would not be equivalent if these incentives were not addressed. Id. at 64,823. Specifically, sources with rate-based limits have limited incentive to shift generation to new fossil-fuel-fired sources because those sources do not create emission rate credits. In contrast, sources in an existing-source mass-based trading program have incentives to shift generation to *any* generator outside the program, including new fossil-fuel-fired sources, because doing so lowers their mass emissions, which frees up allowances they can then sell to other existing sources. Because shifting generation to new fossil-fuel-fired sources does not reduce existing plants' effective emission rates but allows emissions up to the total number of allowances, without provisions to protect against leakage, a state's existing sources would in the aggregate have a higher effective emission rate than the uniform rate. Under these circumstances, the mass-based trading plans would not provide equivalence with the uniform rates and would violate the requirements of Section 111(d). Id. at 64,820-21. Moreover, without provisions to protect against leakage, the greater incentive to shift emissions to new fossil-fuel-fired sources under mass-based trading plans could result in higher overall emissions (emissions from new sources resulting from the shifted generation plus emissions authorized by the allowances from existing sources) than under the uniform rates—which would again undermine the purpose of the Rule and Section 111(d).

Accordingly, the Rule requires that a state choosing a mass-based trading program must include measures to address such emissions "leakage," thereby

safeguarding an emissions performance equivalent to the uniform rates. Id. Furthermore, any such optional regulation of new sources will be under state, rather than federal, law. Id. at 64,888. Thus, such regulation would not conflict with Section 111's distinction between new and existing sources.

E. The Rule Does Not Prohibit Enhanced Oil Recovery.

While carbon sequestration is not part of the Best System, it is an option that sources can use, subject to reporting requirements under 40 C.F.R. Part 98, Subpart RR. 80 Fed. Reg. at 64,884. These requirements do not "functionally prohibit[] facilities from using CO_2 in enhanced oil recovery," i.e., by injecting CO_2 into an oil reservoir to increase production. Pet. Record Br. 64. Rather, compliance with Subpart RR is of reasonable cost, does not change an oil recovery well's permitting status, and does not cause injected CO_2 to be classified as waste. 80 Fed. Reg. at 64,590, 64,591 n.490. Contrary to Petitioners' claims, "[t]here is also no *a priori* restriction on commingling CO_2 from different sources." NSPS RTC 6.3, 6-41 (Response 6.3-71), EPA-HQ-OAR-2013-0495-11865, JA___.

Petitioners had adequate notice. EPA solicited comment on carbon sequestration and directed commenters to the new source rule for additional discussion. 79 Fed. Reg. at 34,876. The new source rule expressly proposed that injection of captured CO_2 for enhanced oil recovery would trigger Subpart RR reporting. 79 Fed. Reg. at 1483. Petitioners knew this. See, e.g., UARG Comments, Vol. 5, No. 23, 10, EPA-HQ-OAR-2013-0602-22767 (quoting Petitioner Denbury's

concern with Subpart RR's effect on enhanced oil recovery operations), JA___. And any perceived error is harmless. Portland Cement Ass'n v. EPA, 665 F.3d at 192 (finding harmless error where notice was provided in parallel rulemaking).

VII. EPA Reasonably Calculated State-Specific Goals and Determined That All States Will be Able to Develop Compliant Plans.

A. EPA Reasonably Determined That Pre-2013 Generating Facilities Cannot Provide Emission-Rate Credits.

Petitioners' challenges to the December 31, 2012 cutoff for generating emission-rate credits, Pet. Record Br. 56-63, 82-84, are meritless. EPA calculated the uniform rates by applying the Best System to the amount of fossil-fuel-fired generation in 2012.[123] To provide flexibility, EPA calculated rate- and mass-based goals for each state by applying those rates to the amount of each state's steam and gas generation in 2012. 80 Fed. Reg. at 64,821. State plans may allow sources to comply with a rate-based standard by holding credits that reflect generation from certain low- or zero-emitting sources, such as renewable or nuclear generation. 40 C.F.R. §§ 60.5790; 60.5800.[124] Because only facilities that commence operation or increase generation capacity after December 31, 2012, can be assumed to reduce

[123] EPA chose 2012 because it was a representative year for the power sector and had the best data for baseline emissions (with certain adjustments). 80 Fed. Reg. at 64,814-15. No Petitioner has challenged EPA's choice of the baseline year.

[124] The limitations on which sources can generate credits are necessary only for a rate-based plan. In a mass-based plan, crediting of low- or zero-emitting generation is unnecessary; sources simply must hold allowances equal to their total emissions during a compliance period. 40 C.F.R. §§ 60.5790(b); 60.5825(a).

fossil-fuel-fired emissions from the baseline level, only such facilities are eligible to generate credits for rate-based compliance. Id. at § 60.5800(a)(1); 80 Fed. Reg. at 64,737, 64,814, 64,896-97.

Moreover, if pre-2013 measures reduced fossil-fuel emissions, such reductions have already been accounted for in the baseline, and cannot logically be credited as reductions from baseline emissions.[125] In fact, the pre-2013 emission reductions can be beneficial to utilities and the states because they may need to make fewer additional reductions to meet the uniform rates or state goals. For example, North Carolina's Clean Smokestacks Act required sources in the state to reduce sulfur dioxide and nitrogen oxides emissions to reduce ozone and particulate matter pollution. Pet. Record Br. 82-84; see http://daq.state.nc.us/news/leg/cleanstacks.shtml. That sources chose to comply with those requirements by replacing their fossil-fueled-fired generation with cleaner generation put the state in a better position to comply with the Rule's requirements. 80 Fed. Reg. at 64,897. However, those pre-2013 reductions do not reduce emissions from the 2012 baseline, and there is no basis for granting them credits.

[125] Facilities that commenced operation during 2012 also reduce the baseline in accordance with the amount of fossil generation they replaced during 2012, and crediting is unwarranted. 80 Fed. Reg. at 64,815. Such facilities also contribute to reduced emissions.

Petitioners ignore this fundamental logical flaw in their argument and none of Petitioners' arguments demonstrates that EPA's determination was arbitrary or capricious. First, Petitioners generically argue that EPA "ignored" various existing sources of electric generation as compliance options. Pet. Record Br. 56-58. However, EPA explained why it is inappropriate to issue credits for generation already accounted for in the baseline. EPA accounted for fluctuations in hydropower generation due to changing weather by adjusting the baseline for states with high percentages of hydropower. 80 Fed. Reg. at 64,815; Computation TSD, Appendix 7, JA___. EPA also discussed the role of generation by nuclear plants and waste-to-energy facilities. 80 Fed. Reg. at 64,899-900, 64,901-02. Petitioners do not address these facts and do not specify in what way (other than allowing credits for pre-2013 generation) they believe EPA should have considered these facilities.

Petitioners' second argument, that the Rule "discriminates" against or "punishes" states or utilities that had high levels of non-fossil-fuel generation before 2013, Pet. Record Br. 58-63, 82-84, is also meritless. All states and facilities are treated the same and have the same cutoff date. Petitioners provide no explanation of why units already in operation in 2012, and thus already reflected in the generation and emissions baseline, should be able to generate credits representing emission reductions from the 2012 level. Furthermore, the pre-2013 renewable and nuclear facilities cited by Petitioners, Pet. Record Br. 59, 62-63, were constructed either to meet increasing demand or to replace demand previously met by fossil-fuel-fired

plants. In either case, if that demand had instead been met by continuing or increased fossil-fuel generation, those states would now have significantly higher baselines and their sources would now need to achieve correspondingly greater emission reductions. 80 Fed. Reg. at 64,737.

Thus, rather than being discriminated against or punished, states in which larger amounts of non-fossil generation were in place prior to 2013 have to make a smaller effort now to meet the Rule's requirements. Petitioners provide no record support, nor any other factual support, for their assertion that pre-2013 renewable sources will cease operating if they cannot generate emission credits. Pet. Record Br. 60. Nor do Petitioners address the fact that utilities have an incentive to keep such renewable generation in operation, whether credited or not, because it contributes to sources' ability to meet their emission standards. Petitioners provide no evidence that the value of credits would be large enough to justify the capital cost of replacing existing renewable generation that is currently operating and economically viable. To the contrary, EPA found that renewable generation, once installed, remains competitive, 80 Fed. Reg. at 64,805; that programs that incentivize existing renewable generation will likely continue to be robust, id. at 64,803; and that all low-carbon generation contributes toward meeting the Rule's emission-performance levels, and thus has an incentive to remain in operation under the Rule, id. at 64,897.

Petitioners' claims regarding waste-to-energy facilities, Pet. Record Br. 60-62, as well as North Carolina's claims, id. at 82-84, are based almost exclusively on

non-record evidence, and thus are not properly before the Court. 42 U.S.C. § 7607(d)(7). Regardless, waste-to-energy facilities in operation during the baseline year do not reduce emissions from the baseline, and thus there is no basis for granting them credits. 80 Fed. Reg. at 64,899-900. EPA's rationale for crediting only the biogenic portion of a post-2012 facility's throughput is also self-evident. While the biogenic portion may meet the Rule's qualified biomass requirements and thus help control increases of atmospheric-CO_2 levels, id. at 64,757, 64,899, burning the anthropogenic portion (e.g., plastics), emits fossil-based CO_2. Id. at 64,900. Because combusting anthropogenic wastes increases, rather than controls, atmospheric-CO_2 levels, there is no basis for granting it credits.

B. EPA Reasonably Calculated Wisconsin's Baseline Emissions.

Petitioners allege, Pet. Record Br. 72-73, that EPA "improperly" declined to adjust Wisconsin's 2012 baseline to reflect the 2013 retirement of the Kewaunee nuclear plant. In fact, EPA consistently and reasonably excluded adjustments for *all* retirements occurring after the 2012 baseline year—including both zero-emitting nuclear plants, like Kewaunee, and high-emitting facilities like coal-fired plants. As EPA explained, it chose 2012 because it "was the most recent data year for which complete data were available when the EPA undertook analysis for the [Proposal] and it reflected *actual performance* at the state level." 80 Fed. Reg. at 64,814 (emphasis added). While EPA did make particular adjustments to reflect unique circumstances *in that baseline year*, as it did for Minnesota, EPA concluded that the historical,

"objective" nature of the baseline year, id., would be undermined by additional adjustments based on uncertain projections of grid response to fleet turnover. Computation TSD 7, JA___.

Accordingly, EPA uniformly rejected adjustments based on unit retirements after the baseline year. See 80 Fed. Reg. at 64,813 n.741. "Even where fleet turnover is certain," like in Wisconsin's case, "the *impact* of that retirement is not." Computation TSD 7 (emphasis added), JA___; see RTC 4.5, 25-26 (Response 24, addressing Kewaunee plant closure), JA___. Attempting to determine whether, in an interconnected system, generation was replaced by non-emitting or fossil-fuel-fired sources, by in- or out-of-state generation, or not replaced at all, would "begin to shift the baseline from a historical-data informed baseline to a projection-informed baseline."[126] Computation TSD 7, JA___. EPA reasonably declined to engage in such speculation, whether for nuclear retirements or coal retirements. In any event, given the extensive flexibility in the Rule, Wisconsin's state-specific goals are reasonable and achievable.

[126] This speculative exercise is demonstrated by Wisconsin's own comment, which offered four distinct proposals for the assumed mix of replacement generation. Wisconsin Dep't of Natural Res. Comment 49-52, EPA-HQ-OAR-2013-0602-23541, JA___.

C. The Rule Will Not Cause Particular Harm to Utah.

Petitioners assert that EPA is "unfairly penalizing Utah" by not adjusting its baseline to account for a 2012 outage at the Intermountain Power Project. Pet. Record Br. 77-79. EPA did make adjustments to the baseline for outlier events causing exceptional distortions in the baseline year; for outages, an adjustment was made where: (1) the outage constituted a more than 75% reduction in the unit's "heat input" (the total energy potential of the feedstock fuel); and (2) the unit represented more than 10% of the state's total "heat input" (i.e., all fossil generation). See Computation TSD Appendix 7, JA___; 80 Fed. Reg. at 64,814-15.

However, Intermountain's outage failed to meet the first criterion, as it resulted in only a 35% reduction as compared to a 2014 benchmark year. See Unit Outage Criteria Sheet, Rows 1924-25, EPA-HQ-OAR-2013-0602-36848, JA___. Petitioners do not challenge the reasonableness of EPA's adjustment criteria for unit outages, or the factual basis for EPA's determination that the criteria were not met. Pet. Record. Br. 78-79. Petitioners also fail to support with record evidence their claim that "Utah plants were not deployed to make up the shortfall." See Intermountain Power Agency Comments 6, EPA-HQ-OAR-2013-0602-24053, JA___, cited in Pet. Record Br. 78.

Petitioners separately assert that Utah cannot increase gas generation because it agreed in a state implementation plan for another pollutant that it would "run its gas units at lower (moderate) capacities." Pet. Record Br. 79. This argument is barred

because it was not raised during public comment. See 42 U.S.C. § 7607(d)(7)(B). Rather, Utah commented that its four gas-fired plants "are permitted—*and not constrained by existing State Implementation Plans*—to operate at the levels envisioned by EPA." State of Utah Comments 15 (emphasis added), EPA-HQ-OAR-2013-0602-23100, JA___. Petitioners now rely on information outside the record, which cannot be considered on judicial review. See Pet. Record Br. 79-80; 42 U.S.C. § 7607(d)(7)(A).

In any event, Petitioners' assertion that the Rule will jeopardize public health and welfare in areas near gas-fired plants is unsubstantiated. States have flexibility in establishing gas-fired plants' emission rates—and sources have flexibility in implementing them—to avoid such concerns. See 80 Fed. Reg. at 64,783, 64,801. Utah has not established that its sources are unable to forgo increasing generation at gas-fired plants and achieve reductions through the other Building Blocks, alternative emission-reduction measures, or emission-credit trading. Id. at 64,730, 64,732, 64,736.

D. EPA Properly Considered Wyoming's Circumstances.

Petitioners Wyoming and North Dakota contend that EPA ignored "difficulties for Wyoming in developing renewables in the protected sage grouse corridor" and that EPA should have consulted with the Fish and Wildlife Service under the Endangered Species Act ("ESA"), 16 U.S.C. § 1536(a)(2), to "avoid these difficulties." Pet. Record Br. 75-76. This argument fails for two independent reasons.

First, consultation is required only if an agency concludes that its action "may affect" a species listed as threatened or endangered; if the agency determines that its action will have no effect on a listed species or its critical habitat, ESA consultation is not triggered. 50 C.F.R. § 402.14(a); Ctr. For Biological Diversity v. U.S. Dep't of the Interior, 563 F.3d 466, 474-75 (D.C. Cir. 2009). Because the sage grouse is not listed, 80 Fed. Reg. 59,858 (Oct. 2, 2015), any difficulties Wyoming might face in developing sage grouse habitat could not trigger ESA consultation.

Second, EPA reasonably determined that ESA consultation was not triggered because issuing the Rule has no direct or indirect effects on listed species. 80 Fed. Reg. at 64,925-27. The Rule provides the states (or EPA, as necessary) with considerable discretion in developing implementation plans, and does not authorize or require any on-the-ground action affecting listed species. Id. at 64,926-27, 64,710. ESA consultation is not triggered in these circumstances. See Ctr. For Biological Diversity, 563 F.3d at 483.[127]

Wyoming's remaining contentions are also unavailing. As described in Argument V.A, Building Block 1 accounts for variations among individual units, and

[127] Nor does the Rule resemble the "past agency action[]" cited by Petitioners. Pet. Record Br. 76-77. There, agencies intending to authorize new wind projects predetermined siting and operating criteria to obviate project-specific ESA review. 80 Fed. Reg. 24,914 (May 1, 2015). In contrast, EPA's Rule does not (and could not) predetermine how wind projects should be sited or operated, and the extent to which a plan may rely on wind projects is speculative. See 80 Fed. Reg. at 64,926.

has not "ignored" the particular features of Wyoming's fleet. See Pet. Record Br. 75. Moreover, the Rule incorporates significant compliance flexibility and does not mandate the application of the Building Blocks. See 80 Fed. Reg. at 64,816. Nor has the Rule "disproportionately" affected Wyoming. See Pet. Record Br. 75. EPA's regional approach in fact *reduces* disparities among states. 80 Fed. Reg. at 64,736-37, 64,742; see supra Argument IV.A.

E. Utah's and Arizona's Concerns Regarding Tribal Lands Are Purely Speculative.

Utah's and Arizona's claims regarding sources on tribal lands, Pet. Record Br. 73-75, are not properly before the Court because they are speculative, and thus not ripe. Nor is there any support for any more general claim that EPA should have permitted trading between rate- and mass-based states. Both states assert that they may have a problem if EPA finalizes its proposed federal plan for specific power plants in tribal jurisdictions and if that plan is mass-based while the state's plan is rate-based (or vice versa). However, EPA's plan is not yet final and neither state plan exists yet. Furthermore, the states do not explain why they could not meet their goals in light of the Rule's flexibilities, or why, if they needed to coordinate with EPA or the tribes, they would not be able to do so. 80 Fed. Reg. at 64,897-98.

Moreover, Petitioners' attempt to compare EPA's calculation of mass-based goals to the establishment of a hybrid mass- and rate-based trading program is specious. The former is a one-time mathematical exercise. Id. at 64,822. The latter is

an unexplained suggestion that EPA should allow the interchangeable use of different types of compliance instruments without any record basis as to how it could function, much less how it would maintain the emission-performance integrity of interstate trading. Id. at 64,839.

CONCLUSION

For the foregoing reasons, the petitions for review should be denied.

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE WITH FEDERAL RULE OF APPELLATE PROCEDURE 32(A)

I hereby certify that this brief complies with the requirements of Fed. R. App. P. 32(a)(5) and (6) because it has been prepared in 14-point Garamond, a proportionally spaced font.

I further certify that this brief complies with the type-volume limitation of Fed. R. App. P. 32(a)(7)(B) because it contains **41,949 words**, excluding the parts of the brief exempted under Rule 32(a)(7)(B)(iii), according to the count of Microsoft Word.

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CERTIFICATE OF SERVICE

I hereby certify that on March 28, 2016, I electronically filed the foregoing brief with the Clerk of the Court for the United States Court of Appeals for the District of Columbia Circuit by using the appellate CM/ECF system.

The participants in the case are registered CM/ECF users and service will be accomplished by the appellate CM/ECF system.

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