Texas Public Policy Foundation

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REPORT SUMMARY

EPA as Overlord of U.S. Electric Power*

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Overview

"[EPA's Clean Power Plan] has the potential to comprehensively reorder the jurisdictional relationship between the federal government and states as it relates to the regulation of public utilities and energy development. … [States] will have entered a comprehensive 'mother-may-I?' relationship with EPA that has never before existed." Commissioner Tony Clark, Federal Energy Regulatory Commission.[1]

On June 2, 2014 the U.S. Environmental Protection Agency (EPA) proposed re-engineering our nation's system of electric generation through its proposed rule: "Carbon Pollution Guidelines for Electric Generating Units."[2] The rule would impose a mandatory national goal to reduce CO_2 from existing electric generation 30 percent from 2005 levels by 2030. Now commonly called EPA's "Clean Power Plan" (CPP), the rule would usurp long- upheld state authority over electric utilities to impose federally centralized low-carbon operation of the nation's electric power system. In this action, EPA has vastly expanded its authority to reduce polluting emissions at individual industrial facilities on a scale that would be unrecognizable by the Congress that enacted the Clean Air Act.

The magnitude of what EPA now champions as a flexible, common sense program to reduce CO_2 from the electric power sector has escaped most commentators and many policy makers.

The U.S. Congress has repeatedly considered, but always rejected, new law to control greenhouse gases (ghg). Undeterred, EPA has handily arrogated this authority under the existing Clean Air Act (CAA). Since EPA's Endangerment Finding in 2009 that ghg are harmful pollutants within the legal scope of the CAA, EPA has promulgated at least six rules for ghg that constitute the largest expansion of regulatory authority in the history of the CAA.[3]

By means of redefining a single word, EPA obliterates a fundamental statutory limit to its regulatory reach. The law authorizes EPA to establish emission standards that apply to the individual physical power plants which generate the emissions. And the maximal standard EPA can impose is limited by the following rubric in law: "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 non-air quality health and environmental impact and energy require-

continued

Key Points

- EPA's recently proposed Clean Power Plan would require a 30 percent reduction in greenhouse gas emissions from the electrical sector by 2030.
- EPA's proposed rule goes far beyond its legal authority, coercing states into dictating fuel mix according to federal criteria.
- Texas would be burdened far more than any other state and compliance with the Clean Power Plan mandates would require extensive changes in Texas law, including a re-regulation of Texas' competitive electrical market.
- U.S. Congress needs to set clear limits to EPA's authority in new law.

**The full report will be published in the coming weeks and will be available at www.TexasPolicy.com.*

ments) the Administrator determines has been adequately demonstrated."[4]

EPA's new CO_2 rule, however, reinterprets the word "system" to mean not pollution control technologies like scrubbers, but the nation's system of generating and dispatching electricity. Thus with a slight turn of phrase, EPA has laid claim to determining what is the 'best system of electric generation' for the country. For EPA, the best system of generation is low to zero carbon.

So understood, EPA seizes a sweeping economic power to control the means of production of electricity: fuel, generating system, dispatch, transmission and consumption. EPA's master plan envisions little to no coal, a 70 percent utilization rate for existing natural gas plants, 20 percent generation from renewables or nuclear, and 10 percent less demand for electricity.[5] Unlike cap and trade schemes or a carbon tax, EPA's CPP carries the coercive force of the CAA measures that are enforceable, verifiable, and quantifiable. This single rule impacts every business and home. What economic sector could be more important to all other sectors than electric power?

Introduction

In a landmark ruling on EPA's authority under the CAA, the Supreme Court reminded EPA that "Congress … does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouse holes."[6] In the proposed CPP, EPA has seized the largest elephant to date from a small, obscure portion of the law.[7] EPA's CPP rule would commandeer state governments by means of federally enforceable implementation plans closely resembling the Integrated Resource Plans (IRPs) widely used by state utility commissions to assure sufficient generation to meet demand for electricity.[8] "With the possible exception of California, no states have expressly delegated regulatory authority to implement and oversee carbon-based resource planning, including enforcement and corrective action authority."[9]

EPA's rule contemplates replacing such "security constrained economic dispatch" with low carbon dispatch. As such, EPA's Clean Power Plan goes to the nerve center of electric power: dispatch of electric power to the grid. State plans, as now envisioned by EPA, would make lowering CO_2 emissions the priority of dispatch in place of price and reliability, heretofore the driving variables for dispatching electricity on the hundreds of thousands of transmission lines across the nation.

EPA's proposed rule assigns to each state a mandatory standard expressed as average rate of carbon intensity per unit of electricity generated. To soften the regulatory edges of what is, indeed, an enforceable dictate, EPA now calls each state's federal standard a "performance goal." These standards must be enforceable, quantifiable and verifiable un-

Overview of EPA's Clean Power Plan

- Beyond Best System of Emission Reduction to EPA Preferred Best System of Electric Generation
- Standards of Performance for Existing Electric Generating Units- CAA Section 111(d)
- EPA assigns state-specific standards as: Annual average CO2 per Megawatt hour of electric generation
- State Implementation Plans Based on EPA Stipulated Building Blocks
- Building Blocks = EPA Determination of Best System of Emission Reduction (BSER)
  BSER Building Block 1 – 6 % efficiency improvement at coal-fired power plants (inside the fence).
  BSER Building Block 2 – Switch from coal to natural gas – 70% of generation
  BSER Building Block 3 – New Renewable - 13% of generation/TX- 20%
  BSER Building Block 4 – Demand-side Energy Efficiency- 9.9% cumulative average "savings" 2030.

Note: Blocks 2, 3, and 4 are "outside the fence" of the power plant.

Table 1: EPA's Performance Standard: Average Amount of CO_2 Emission per MWh of Electricity/year

EPA Mandate for Texas	18% of National Goal
TX Current Rate in CO_2 lbs./MWh	1,284 lbs./MWh
TX EPA Performance Standard	791 lbs./MWh
TX Interim Standard (2020)	853 CO_2 lbs./MWh
EPA Model	Texas 39% Reduction of CO_2 from Electric Power Sector

der the CAA. Aspirational goals, the CO_2 "performance goals" are not.

Individual state standards vary widely but EPA imposes a far heavier regulatory burden on Texas than any other state. The standard mandates that Texas achieves 18 percent of the nation-wide CO_2 reduction.[10] EPA's model, through which the rule was designed, finds that Texas would need to eliminate over 50 percent of current coal-fired generation,[11] expand utilization of natural gas combined cycle generation to 70 percent of total capacity,[12] increase renewable generation by over 150 percent,[13] and cumulatively reduce the projected consumption of electricity by 9.9 percent, all by 2030.[14]

Texas' Disproportionate Burden

Texas would be far more disproportionately impacted by the CPP than any other state. Yet, EPA did not even hold one of its four field hearings on the proposed rule in Texas. The obligation imposed on Texas is almost two times the next two states combined (Florida and Louisiana). Texas generates approximately 11 percent of the country's electricity but is obligated to achieve over 18 percent of EPA's national goal to reduce CO_2 from the nation's electrical sector by 30 percent. If considered on the basis of the volume of electricity generated, EPA imposes on Texas a regulatory obligation two-times its proportionate share of required emissions reduction. Texas is not—as has been frequently labeled—"the nation's worst CO_2 polluter." While the volume of CO_2 emitted from Texas power plants is higher than other states, Texas plants have a combined lower emission rate of CO_2 than 32 other states.

Texas' current average CO_2 emission rate is 1,284 lbs. CO_2/ MWh-yr. As proposed in the rule, EPA's enforceable performance goal for TX is 791 lbs. CO_2/ MWh-yr. This translates to reducing the carbon intensity of Texas' electric generation by 39 percent. **See Table 1.**

Note that this mandatory standard is significantly lower than the carbon intensity of generation from combined cycle natural gas plants—promoted by EPA as the most viable alternative to coal-fired generation. Thus, if Texas relied on combined cycle natural gas plants to meet 100 percent of demand, Texas still would exceed EPA's standard. EPA's CPP assumes a massive deployment of new renewables in addition to massive shift from coal to natural gas combined cycle. **See Table 2.**

Table 2: Carbon Intensity Rates

EPA Mandate for TX	791 lb. CO_2/MWh
Current TX	1,284 lb. CO_2/MWh
Combined Cycle Natural Gas	1,000 lb. CO_2/MWh
New Coal EPA Mandate	1,100 lb. CO_2/MWh
New Advanced Coal	1,800 lb. CO_2/MWh

According to EPA's modeling, the compulsory goal for Texas translates to a 42 percent overall reduction of CO_2 emissions and an elimination of over 50 percent of coal-fired generation.[15] Forced fuel switching from coal to natural gas of this magnitude would involve closure of at least 19 of the coal-fired electric generating units in this state by EPA's calculations.[16] EPA lists 25 coal units in Texas predicted to close by 2020 as result of all the EPA rules.[17] Risk of forced closure as a result of the CPP rule may lead companies to shutter additional coal plants now, rather than make the billion-dollar expenditures needed to comply with EPA's many new rules for conventional pollutants, such as mercury and ozone, effective within the next few years.[18]

Nationally, electric generators already anticipate the loss of 15 gigawatts (GW) of electric power in the next few years as a result of inability to comply with EPA's rule to control mercury adopted in 2012. By EPA's own estimate, the mercury rule has an annual compliance cost of $9.6 billion.[19] Industry estimates of compliance costs are much higher.[20] The proposed CPP and expected new Ozone standard will substantially exceed the costs of the mercury rule.

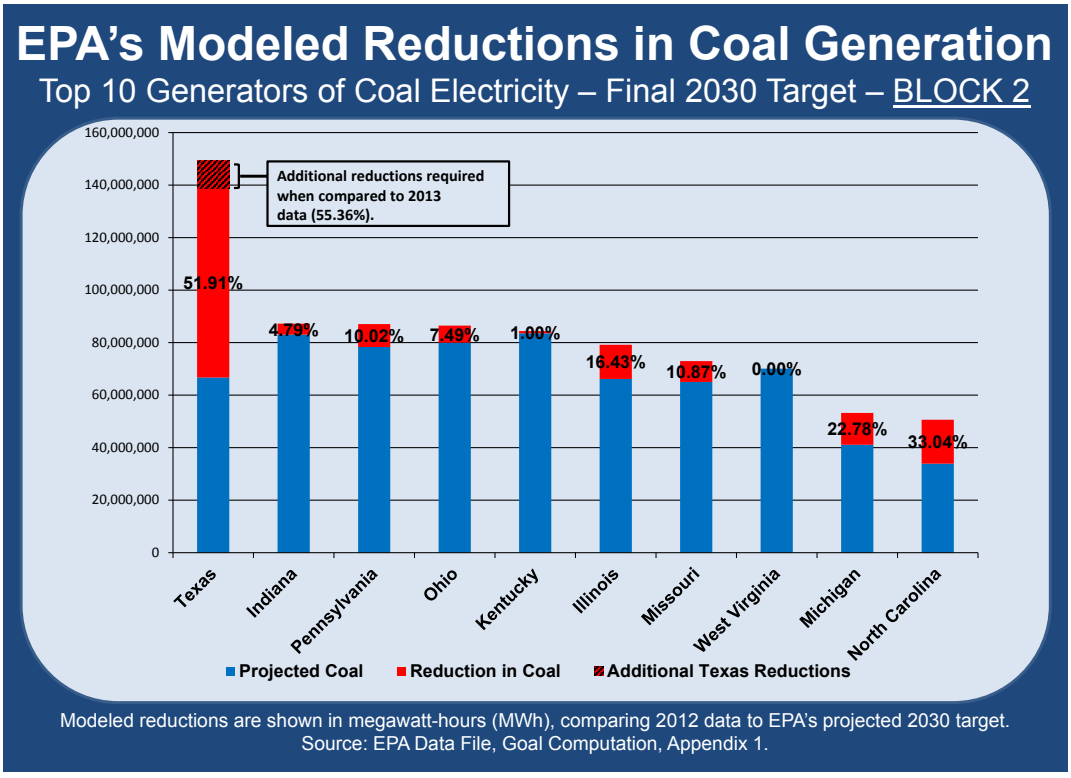
In total, EPA assumes that a total 119 GW of coal-fired generation will shut down from 2010-2020 as a result of EPA rules.[21] According to the Energy Information Administration, the total U.S. Electric Generating Capacity is 1032 GW as of 2012.[22] It is difficult to imagine that the loss of as much as 11 GW of base load power would not risk reliability and grid safety in large swaths of the country heavily dependent on coal.

Conclusion

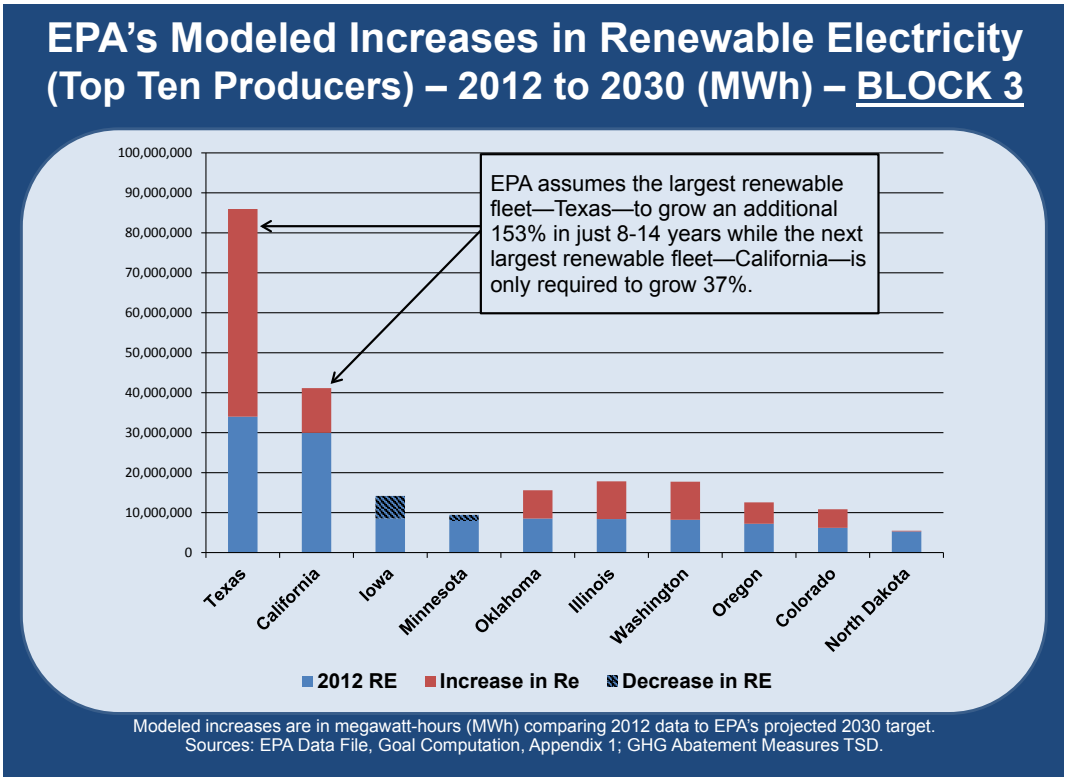
EPA's CPP is doubly ultra vires: beyond the powers granted in federal *and* state law. That the federal courts could possibly uphold EPA's power plan rule under the terms of the CAA is difficult to imagine. The proposed rule's performance standards and control measures reflect no consideration of cost, demonstrated achievability or electric reliability. Theoretical feasibility on paper becomes the operative principle to establish the mandatory performance standard.

Under the CAA, EPA is authorized to regulate pollutants at the physical source of the emissions from individual industrial facilities—commonly described as "inside the fence" of the power plant. Yet, the core measures in EPA's proposed CPP require wide-ranging actions "outside the fence" extending—state by state—to the entire national system of electric generation. Once EPA asserts authority beyond the source "inside the fence," EPA's power to compel lacks a limiting principle under the law.

EPA has acknowledged that the next CO_2 regulations will be performance standards for existing refineries and other industrial categories. If EPA's CPP scheme is a precursor of low-carbon performance standards for existing industrial sources, imagine what a CO_2 standard for oil refineries might look like. Building block 1 would be an infeasible standard for efficiency of the plant's operation. Building block 2 would require displacing oil refining with compressing natural gas for transportation fuel. Building block 3 would require 85 percent ethanol for liquid fuel blends. Building block 4 would



Modeled reductions are shown in megawatt-hours (MWh), comparing 2012 data to EPA's projected 2030 target.
Source: EPA Data File, Goal Computation, Appendix 1.



require demand side reductions in the form of maximum limits for vehicles miles traveled.

The predicted mess has arrived and it is an inglorious mess.[23] The Clean Air Act is not an appropriate vehicle for regulation of CO_2 unless maximizing federal control of the economy is the goal. Longtime chairman of the U.S. Energy and Commerce Committee—and an author of the original CAA, John Dingell, predicted what a "glorious mess" would arise from EPA's effort to regulate CO_2 under the CAA. Congressman Dingell well understands that the statutory architecture of this law was never intended for controlling CO_2—a natural, harmless and ubiquitous gas wholly unlike the conventional pollutants for which the CAA was designed.

Congress considered but ultimately rejected alternative ways to limit CO_2, including EPA regulation under the CAA, a carbon tax, a federal Renewable Portfolio Standard, or a trading scheme typically called cap and trade. Many recent descriptions of the clean power rule as an EPA-enacted cap and trade scheme miss the distinctive marks of the CAA. The regulatory mechanisms available in the CAA are more onerous, prescriptive and enforceable in the Soviet top-down style than trading or taxing schemes.[24] As early as 1988, a founding trustee of the Environmental Defense Fund noted, "The EPA's regulation has grown to the point where it amounts to nothing less than a massive effort of Soviet-style planning of the economy to achieve environmental benefits."[25]

The breadth and depth of EPA's foray "outside the fence" to mandate dispatch of electricity based on carbon content rather than cost and safety indeed amounts to reckless federal engineering at the nerve center of electric power. Yet, the CAA is devoid of a single provision that deputizes EPA as federal architect and enforcer of centralized energy planning.

The regulatory overreach of EPA's Clean Power Plan calls to the mind the words of Supreme Court Justice Scalia in his majority opinion on an earlier, more light-handed ghg regulation known as "Tailoring Rule." In ruling against EPA's blatant re-write of the black letter terms of the CAA, the Court took exceptional note of the "enormous and transformative expansion in EPA's regulatory authority without congressional authorization." Justice Scalia noted:

EPA's Projected Power Plant Closures in TX by 2020

Plant (# of Units)	Proj. Year of Retire.	Coal	CT	O/G	Total
AES Deepwater (1)	**			138	138
Big Brown (2)	2016	1195			1195
Coleto Creek (1)	2018-2020	592			592
Fayette (3)	2018-2020	1639			1639
Gibbons Creek (1)	2018-2020	466			466
Harrington (3)	2016 (1); 2018-2020 (2)	1018			1018
J T Deely (2)	2016 Base	870			870
Lake Creek (2)	**		4		4
Lewis Creek (2)	**			460	460
Monticello (2)	2016	1130			1130
Nichols (3)	**			457	457
Oklaunion (1)	2020-2025	669			669
W A Parish (4)	2016-2018 (2); 2018-2020 (2)	2509			2509
Pirkey (1)	2018-2020	723			723
Plant X (3)	**			200	200
Sabine (5)	**			1814	1814
San Miguel (1)	2016	391			391
Thomas Ferguson (1)	**			420	420
TNP 1 (1)	**	286			286
Welsh (3)	2016 Base (1); 2016 (2)	1584			1584
TOTAL		13,072	4	3,489	16,565

Source: EPA IPM, Base Case Unit Retirements, 2020.

> When an agency claims to discover in a long-extant statute an unheralded power to regulate a significant portion of the American economy, we typically greet its announcement with a measure of skepticism. We expect Congress to speak clearly if it wishes to assign to an agency decisions of vast economic and political significance.[26]

Federally stipulated and enforced control of generation, dispatch, transmission and consumption of electricity is, as Justice Scalia put it, "an agency decision of vast economic and political significance." Electric power may be characterized as a single industrial sector within the Standard Industrial Code but the price and reliability of electricity affect every enterprise and individual life.

Justice Scalia's rhetorical rebuke of EPA's overreach is notably strong. The Supreme Court's decision on the "Tailoring Rule," however, did not vacate the rule in entirety nor undermine EPA's claimed authority to regulate ghg—an authority that Congress declined to delegate but EPA nonetheless arrogated through the Endangerment Finding of 2009.

This vast expansion of EPA's powers never contemplated by Congress may seem a likely candidate for the High Court's undoing. Judicial restraint of EPA, however, has been rare and when restraint has occurred, it has been mild. Until the CAA is meaningfully amended, EPA's increasingly imperious rule over the economy is—more likely than not—to survive judicial review. The Court maintains that because Congress, in the CAA, delegated such broad decision-making authority to the EPA experts, the judiciary must defer to the legislative branch of our tri-parte constitutional structure.[27] Clarity must come from new federal law that articulates more specific limits to what the courts now view as EPA's discretionary regulatory authority.

EPA's Clean Power Plan poses grave questions for state governments. Compliance with the EPA's requirements would cede fundamental state authority over electric utilities. A state's effort to comply with EPA's plan would involve violating state law to comply with EPA's rule violating federal law. State law to create new "institutional arrangements" among environmental agencies and public utility commissions reeks of federal commandeering of state powers. The timelines for rule adoption and state plan submissions are too tight to allow full judicial review before the effective date of the rule. Upon adoption, petition for emergency stay of the rule may be the wisest step forward.

In this single power plan rule, EPA has arrogated federal authority far beyond the CAA to reconfigure the entire country's system of electric generation. Yet the intended 30 percent CO_2 reductions would have no effect on alleged global warming. If this 30 percent reduction is plugged into the official IPCC models, the benefit amounts to 0.018 degrees Celsius cooler temperatures. Predictions of warming are increasingly contradicted by physical evidence. Warming has ceased for more than 17 years.

So how does EPA justify regulation that would dismember the nation's miraculous system of electric generation finely-tuned over the last century? EPA has offered multiple implausible justifications—but most frequently claims the rule will be an important "symbol" in upcoming climate talks to forge a binding international agreement. So this radical disruption of the nation's system of electric power is justified because it will help seal international accords in which the U.S. cedes national sovereignty to a global overlord of energy?

Congress alone can end this inglorious mess and redress EPA's ever-expanding scope of jurisdiction. The time is nigh for Congress to establish clear limits for EPA's authority so that federal courts and thus states, can meaningfully restrain an agency which now knows no bounds. ✯

Endnotes

[1] Commissioner Tony Clark, Federal Energy Regulatory Commission, Testimony before the House Energy and Commerce Committee Subcommittee on Energy and Power (29 July 2014).
[2] 79 Fed. Reg. 34829 (18 June 2014).
[3] See 74 Fed. Reg. 66496 (15 Dec. 2009); 75 Fed. Reg. 25,324 (7 May 2010); 75 Fed. Reg. 17,004 (April 2, 2010); 75 Fed. Reg. 31,514, 31,539–40. (June 3, 2010); 79 Fed. Reg. 1429 (8 Jan. 2014); 79 Fed. Reg. 34829 (18 June 2014).
[4] 42 U.S.C. 111(a) (1).
[5] See infra.
[6] *Whitman v. American Trucking Association*, 531 U.S. 457, 468 (2001).
[7] Ibid.
[8] Raymond L. Gifford, Gregory E. Sopkin, & Matthew S. Larson, *State Implementation of CO2 Rules: Institutional and Practical Issues with State and Multi-State Implementation and Enforcement*, Wilkinson, Barker, & Knauer LLP (July 2014); *See also* "Best Practices in Integrated Resource Planning," *Synapse Energy Economics* (June 2013).
[9] Gifford, *State Implementation*, supra, at 5.
[10] U.S. EPA, Technical Support Document: Goal Computation Appendix 2.
[11] U.S. EPA, Data File: Goal Computation - Appendix 1.
[12] U.S. EPA, Data File: Goal Computation - Appendix 1; U.S. EPA, Office of Air Radiation, Goal Computation Technical Support Document (TSD) for the CAA Section 111(d) Emission Guidelines for Existing Power Plants (June 2014).
[13] U.S. EPA, Data File: Goal Computation - Appendix 1; U.S. EPA, Office of Air Radiation, GHG Abatement Measures Technical Support Document (TSD) for Carbon Pollution Guidelines for Existing Power Plants: Emission Guidelines for Greenhouse Gas Emissions from Existing Stationary Sources: Electric Utility Generating Units (10 June 2014).
[14] The 9.91% reduction by 2029 can be found at U.S. EPA, Data File: Goal Computation - Appendix 1 and in the Rule Proposal Preamble at 79 Fed. Reg. 34,874 [Fed. Reg. rounds the percentage to 9.9%. *See* Table 7 – Demand-side Energy Efficiency State Goal Development: Cumulative Annual Electricity Savings (percentage of annual sales) Resulting from Best Practices Scenario).
[15] "EPA's Clean Power Plan: 50 chefs stir the pot," *Bloomberg New Energy Finance* (2 June 2014).
[16] Ibid. *See also* U.S. EPA Technical Support Document: Goal Computation- Appendix 1 and 2. Numbers may vary according to calculations based on rate of carbon intensity versus mass of CO2 emissions.
[17] EPA Estimate of number of EGU's based on capacity factor found in EPA's Technical Support Document: 2012 Data Using e-GRID Methodology.
[18] Kathleen Harnett White, *EPA's Approaching Regulatory Avalanche*, Texas Public Policy Foundation (Feb. 2012).
[19] "Regulatory Impact Analysis for the Final Mercury and Air Toxics Standards" Environmental Protection Agency (Dec. 2011).
[20] Ibid.
[21] *See* EPA National Electric Energy Data System (NEEDS) modeling, v.5.13.
[22] EIA 2014 Annual Energy Outlook at A-20.
[23] Kathleen Hartnett White, "Inglorious Mess," *National Review Online* (29 June 2012).
[24] David Schoenbrod, *Saving Our Environment From Washington* (Yale University Press, 2005).
[25] Ibid.
[26] 134 S. Ct. 2427 (2014) (internal citations and quotations omitted).
[27] *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984).

About the Author

Kathleen Hartnett White joined the Texas Public Policy Foundation in January 2008. She is a Distinguished Senior Fellow-in-Residence and Director of the Armstrong Center for Energy & the Environment.

Prior to joining the Foundation, White served a six-year term as Chairman and Commissioner of the Texas Commission on Environmental Quality (TCEQ). With regulatory jurisdiction over air quality, water quality, water rights & utilities, storage and disposal of waste, TCEQ's staff of 3,000, annual budget of over $600 million, and 16 regional offices make it the second largest environmental regulatory agency in the world after the U.S. Environmental Protection Agency.

Prior to Governor Rick Perry's appointment of White to the TCEQ in 2001, she served as then Governor George Bush appointee to the Texas Water Development Board where she sat until appointed to TCEQ. She also served on the Texas Economic Development Commission and the Environmental Flows Study Commission. She recently completed her term as an officer and director of the Lower Colorado River Authority. White now sits on the editorial board of the *Journal of Regulatory Science*, the Texas Emission Reduction Advisory Board, and the Texas Water Foundation. Her writing has appeared in numerous publications including *National Review, Investors' Business Daily, Washington Examiner, Forbes, Daily Caller, The Hill*, and major Texas newspapers. She most recently testified before the U.S. Senate Environment and Public Works Committee.

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