



Free markets. Real solutions.

R STREET SHORTS NO. 13
August 2015

USING THE CLEAN POWER PLAN'S CARBON FEE OPTION TO OFFSET STATE TAXES

Josiah Neeley

INTRODUCTION

Earlier this month, the U.S. Environmental Protection Agency released the final version of its Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units.¹ Known colloquially as the “Clean Power Plan,” the rule sets standards for carbon-dioxide emissions from existing power plants.

The CPP calls for an overall reduction in CO₂ emissions of 32 percent from 2005 levels by 2030. However, it applies different standards to each state depending on what prescriptions, in the EPA’s view, are technically feasible. The CPP proposed two alternative standards for each state: a mass-based standard that limits the total amount of CO₂ emitted, and a rate-based standard that would be applied to average emissions per kilowatt-hour of electricity.

The final rule does not set standards for Alaska or Hawaii, as the EPA claimed it lacked sufficient technical information

ISSUE SNAPSHOT

- The Environmental Protection Agency’s Clean Power Plan gives states an option to comply by charging a fee on carbon dioxide emissions from power-generating plants.
- The cost of compliance via a carbon fee varies widely by state, from \$26 for each ton of carbon for Utah to \$0 a ton for a number of states.
- The revenues that would be generated on an ongoing basis would be sufficient to reduce or eliminate various state taxes in a number of states.

for those two states. In addition, the CPP sets no emissions-reduction standards for Vermont, which receives its electricity largely from Canadian hydroelectric power. But each of the other 47 states are required to develop a plan to meet reduction goals, while retaining discretion as to the methods used to achieve those goals.

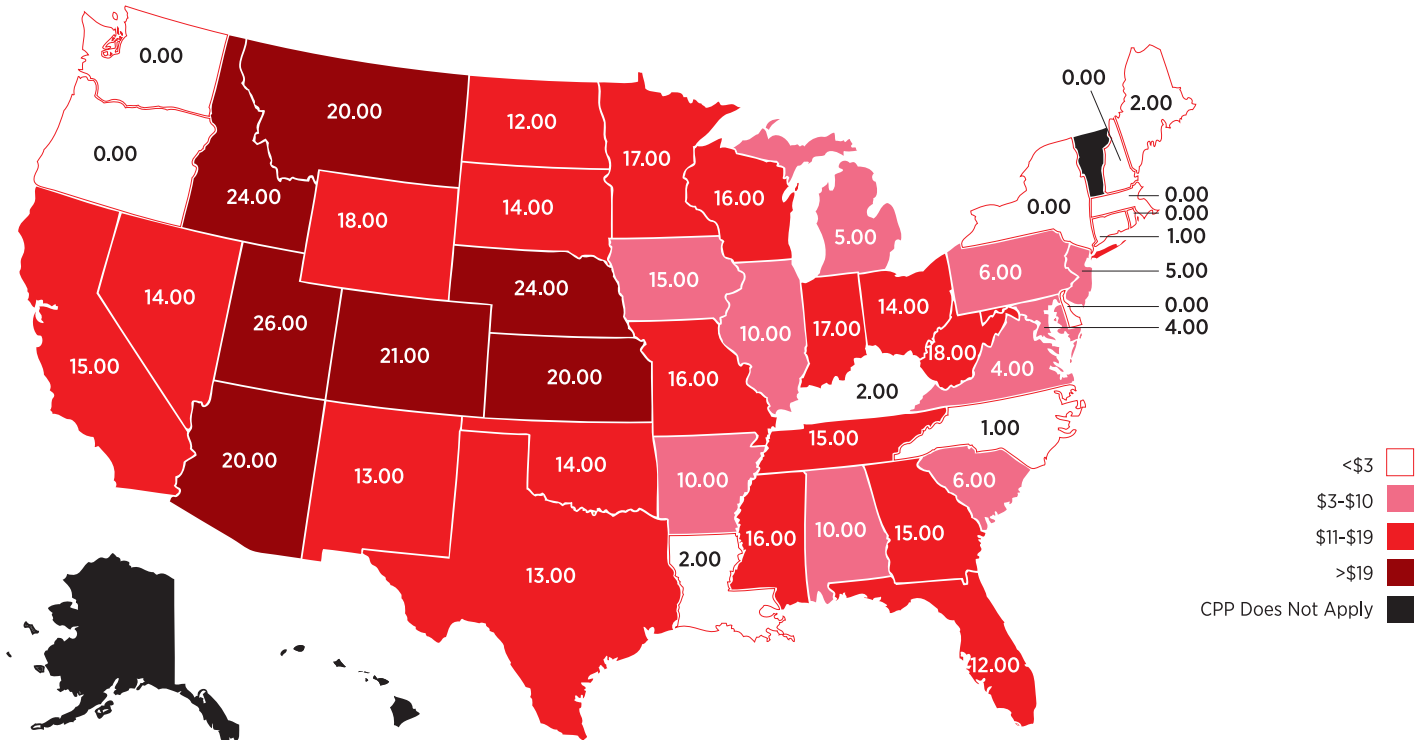
Of particular interest to those who prefer a market-based approach, the final rule stipulates that the plan “could accommodate imposition by a state of a fee for CO₂ emissions from affected EGUs [electric generating units].”²

Most economists view a carbon fee as a more efficient way to achieve emissions reductions than regulatory mandates or subsidies.³ A carbon fee has the additional advantage that it can be paired with equivalent cuts to existing taxes. Depending on the type of taxes involved, making a carbon fee revenue-neutral could largely or entirely offset the economic damage that would otherwise stem from higher energy costs imposed by the CPP.

‘SHADOW’ CARBON PRICES

In order to estimate how much revenue a CPP-compliant carbon fee would generate, we looked to EPA modeling on the implicit carbon price needed in each state to achieve the required emissions reductions. For the calculations, we relied on the EPA’s mass-based standards, rather than the rate-based standards, as outlined in the EPA’s state-specific fact sheets.⁴

FIGURE I: STATE 'SHADOW' CARBON PRICES FOR 2030



SOURCE: R Street analysis of EPA data

From this modeling, the “shadow” carbon prices can be combined with state-specific limits for the amount of CO₂ that can be emitted under the CPP.⁵ We used this to estimate the revenue that would be generated from a carbon fee that complies with the CPP.

This shadow carbon price varies considerably across the states, from \$26 a ton for Utah to \$0 a ton for Delaware, Massachusetts, New Hampshire, New York, Oregon, Rhode Island and Washington state.

Importantly, these calculations assume the carbon fee applies only to emissions from the power sector, rather than being an economy-wide carbon tax. An economy-wide price on carbon would be substantially lower than one applied only to electric-generating plants, as it would apply to a much broader tax base. This briefing makes no attempt to calculate what economy-wide carbon fees each state would need to adopt to meet its CPP reduction goals, as such fees ultimately would generate equivalent revenue.

CARBON FEE REVENUES

The amount of revenue each state would get annually from a CPP-compliant carbon fee is listed in Table 1. Based on the fees that would be collected should the state hit its 2030 emissions targets, the highest annual revenue is generated by

Texas, at \$2.5 billion, followed by Indiana, at \$1.3 billion; Florida, at \$1.3 billion; and Ohio, at \$1 billion.

Revenues from a CPP-compliant carbon fee exceed many individual state taxes. Many states would be able to reduce or eliminate state corporate, income, gasoline or other taxes if they adopted a tax-swap approach.

For example, in Texas, revenue from a CPP-compliant tax would be greater than what the state currently collects in taxes on insurance; natural-gas production; cigarettes and tobacco; alcoholic beverages; hotels; and utilities.⁶ The fees could offset a 9 percent cut in the sales tax; a 52 percent cut in the franchise tax; a 59 percent cut in motor-vehicle sales and rental taxes; a 64 percent cut in the oil-production tax; or a 75 percent cut in the fuel tax. The insurance and utilities taxes could be phased out entirely, and still leave \$45 million to apply toward the state’s \$267 million in miscellaneous taxes.

It should be stressed that these estimates do not represent projections about the total cost of the CPP to the wider economy. How costly the CPP ultimately proves to be will depend both on how each state chooses to go about meeting the required reduction goals. The estimates do, however, provide a sense both of how costly meeting the CPP goals via a carbon fee would be, and how much revenue would potentially be available for offsetting tax cuts.

TABLE I: PROJECTED STATE-BY-STATE CARBON-FEE REVENUES

State	Emissions (millions of tons)		Projected revenues (\$M)	
	2030 (target)	2012 (actual)	2012 levels	2030 levels
AR	30	40	400	300
AL	57	76	836	627
AZ	30	40	800	600
CA	48	46	690	720
CO	30	42	882	630
CT	7	7	7	7
DE	5	5	0	0
FL	105	118	1,416	1,260
GA	46	63	945	690
IA	25	38	570	375
ID	1	1	24	24
IL	66	96	960	660
IN	76	107	1,819	1,292
KS	22	34	680	440
KY	63	91	182	126
LA	35	43	86	70
MA	12	13	0	0
MD	14	20	80	56
ME	2	2	4	4
MI	48	70	350	240
MN	23	28	476	391
MO	55	78	1,248	880
MS	25	26	260	250

MT	11	18	360	220
NC	51	59	59	51
ND	21	33	396	252
NE	18	27	27	18
NH	4	5	0	0
NJ	17	15	75	85
NM	12	17	221	156
NV	14	16	224	196
NY	31	35	0	0
OH	74	102	1,428	1,036
OK	40	53	742	560
OR	8	8	0	0
PA	90	117	702	540
RI	4	4	0	0
SC	26	36	216	156
SD	4	3	42	56
TN	28	41	615	420
TX	190	208	2,704	2,470
UT	24	31	806	624
VA	27	27	108	108
WA	11	7	0	0
WI	28	42	672	448
WV	51	72	1,152	816
WY	32	50	900	576

SOURCE: R Street analysis of EPA data

ABOUT THE AUTHOR

Josiah Neeley is senior fellow and Texas director for the R Street Institute.

Josiah was previously a policy analyst for the Center for Tenth Amendment Studies and the Armstrong Center for Energy & the Environment at the Texas Public Policy Foundation.

Prior to TPPF, Josiah was an associate specializing in constitutional litigation with the firm of Bopp, Coleson & Bostrom in Terre Haute, Ind. He also clerked for federal district court Judge Roger Vinson in Pensacola, Fla.

Josiah has written extensively on a variety of public-policy topics, including water, environmental regulation, energy, administrative law, health care, antitrust and constitutional law. His writing has appeared in the Houston Chronicle, the Austin American Statesman, the Dallas Morning News, The American Spectator, The American Conservative and the Texas Tech Administrative Law Journal, among other publications.

He has a bachelor's in government and philosophy from the University of Texas and law degree from Notre Dame Law School. He is a member of the State Bar of Texas.

ENDNOTES

- 1 Gina McCarthy, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units," Environmental Protection Agency, Aug. 3, 2015. <http://www.epa.gov/airquality/cpp/cpp-final-rule.pdf>
- 2 Final Rule, at 899.
- 3 Greg Mankiw, "Rogoff joins the Pigou Club," Greg Mankiw's Blog, Sept. 16, 2006. <http://gregmankiw.blogspot.com/2006/09/rogoff-joins-pigou-club.html>
- 4 U.S. Environmental Protection Agency, "Clean Power Plan State-Specific Fact Sheets," Clean Power Plan Toolbox, Aug. 3, 2015. <http://www2.epa.gov/cleanpower-plantoobox/clean-power-plan-state-specific-fact-sheets>
- 5 The author would like to thank Michael Wara of Stanford Law School for his assistance in helping to navigate EPA's modeling data.
- 6 Texas Transparency, "Revenue by Source for Fiscal Year 2014," accessed Aug. 11, 2015. http://www.texastransparency.org/State_Finance/Budget_Finance/Reports/Revenue_by_Source/