THE KANSAS CHAMBER
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Testimony before Senate Utilities Committee
SB 170 – State Response to Proposed Federal CO2 standards
Presented by Mike O'Neal – Kansas Chamber CEO
(Written only)

Feb. 19, 2015

Mr. Chairman and members of the Committee:

On behalf of The Kansas Chamber I appreciate the opportunity to present written testimony regarding a strong Kansas response to the EPA's proposed Clean Air Act CO2 emission standards. The Kansas Chamber **is neutral** with regard to the specific mechanism of a state response to the EPA's proposed Clean Air Act regulations governing electric generating units and carbon dioxide standards. We do support a strong response in the best interests of the state and the many affected ratepayers, both present and future, and one that will protect against a federal implementation plan (FIP).

The Kansas Chamber's Legislative Agenda supports a regulatory climate that promotes a healthy business climate and which instills regulatory certainty. Our agenda also calls for promoting market-driven, not government-driven solutions to reduce energy costs. We oppose government mandates and policies that increase business costs when sourcing energy. We oppose government picking winners and losers among energy sources and technologies. Rising energy costs remains a major concern among Kansas businesses, both large and small.

We listened with alarm to reports in this Committee earlier in the session about the probable impact of the proposed EPA regulations. Information shared by KDHE and the KCC, of which you have been briefed, illustrates the relative insanity of the EPA proposals. I've attached a study I received just yesterday that provides additional impact data regarding Kansas specifically. The study concludes Kansas will lose 3.74% of its total manufacturing jobs by 2023. The attached map showing where the EPA proposals would hit the hardest is sobering for Kansas in relationship to surrounding states.

The Institute for 21st Century Energy and the U.S. Chamber of Commerce study concluded that Americans would pay significantly more for electricity, see slower economic growth and fewer jobs, and have less disposable income. In fact, the cumulative impact to the economy could be as high as $859B by 2030, or roughly $50B annually. The 2 graphics attached show projected regional impacts.

More importantly, EPA regulations would result in **a very slight reduction in carbon emissions,** which would be overwhelmed by global increases. Studies show that CO2 concentration would be reduced by less than .5%; global avg. temperature increase would be reduced by less than 2/100ths of a degree (F); and sea level rise would be reduced by 1/100th of an inch (the thickness of 3 sheets of paper). Please protect Kansas businesses and ratepayers from needless federal regulations.

The Obama Administration's Climate Agenda Will Hit Manufacturing Hard: A State-by-State Analysis

http://www.heritage.org/research/reports/2015/02/the-obama-administrations-climate-agenda-will-hit-manufacturing-hard-a-state-by-state-analysis

By Kevin D. Dayaratna, Ph.D., Nicolas Loris and David W. Kreutzer, Ph.D.

Abstract

Building on an earlier study of the economic impact of Obama Administration climate policies, this study breaks down the employment impacts of new regulations by state and congressional district. The climate regulations disproportionately and negatively impact states and districts with higher-than-average employment in manufacturing or mining.

In an earlier study, we examined the economic impact of climate change–related regulations at the national level and found devastating job losses over the course of the next two decades. In this study, we quantify this impact by state and congressional district. Not surprisingly, we find that all states would suffer from this policy. Given these results and the regulations' negligible positive impact on the climate and the environment, policymakers should avoid instituting these potentially burdensome regulations.

Overview

The Obama Administration has put forward a variety of rules and goals aimed at cutting carbon dioxide emissions. These rules would drive up energy costs, reduce economic activity, and disrupt job markets. A previous Heritage Foundation study outlined the projected economic impact of such policy.[1] It found by 2030:

- An average employment shortfall of nearly 300,000 jobs,
- A peak employment shortfall of more than 1 million jobs,
- 500,000 jobs lost in manufacturing,
- Destruction of more than 45 percent of coal-mining jobs,
- A loss of more than $2.5 trillion (inflation-adjusted) in aggregate gross domestic product, and
- A total income loss of more than $7,000 (inflation-adjusted) per person.

In the current study, job impacts are disaggregated to show potential effects by state and by congressional district. Because manufacturing jobs are disproportionately affected, state economies that are manufacturing-intensive can expect disproportionate employment losses.

The Proposed Regulations

For decades, environmental activist organizations have pushed to regulate carbon dioxide emissions. Even though such regulations would have a negligible positive impact on the climate and the environment, the Obama Administration has introduced a series of measures aimed at controlling emissions from motor vehicles and power plants, both new and existing.[2] The economic basis for these regulations has been the social cost of carbon (SCC).

Derived from integrated assessment models (IAMs), the SCC supposedly quantifies the economic damages associated with carbon dioxide emissions. Although conceptually appealing and technically sophisticated in many ways, the IAMs suffer from inherent flaws, including unrealistic assumptions about the costs of future damages, the temperature changes caused by increased carbon dioxide emissions into the atmosphere, and the time horizon (nearly 300 years into the future). Because of these flaws, the IAMs are fundamentally unsuitable for regulatory application.[3]

The Economic Impact by State

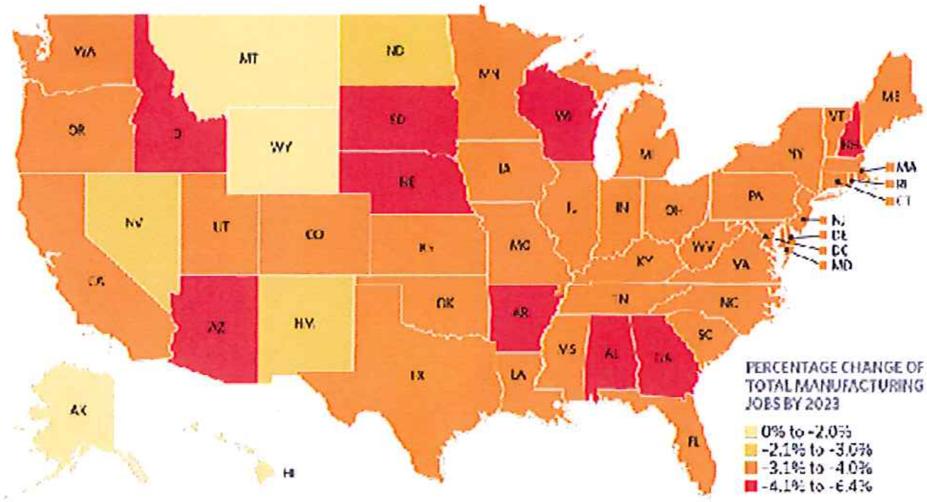
In the earlier study, we used the Heritage Energy Model (HEM) to quantify the economic impact that such regulations based on the SCC would have on the American economy.[4] To estimate the economic impact of the Administration's regulatory scheme, based on an estimated SCC of $37 per ton, we modeled the impact of an equivalent tax of $37 per ton of carbon emissions[5] instituted in 2015 and increasing according to the EPA's annual SCC estimates.[6] Taxing CO2-emitting energy incentivizes businesses and consumers to change production processes, technologies, and behavior in a manner comparable to the Administration's regulatory scheme. To neutralize the analytical impacts of a tax's income transfer, we model a scenario in which 100 percent of carbon-tax revenue is returned to taxpayers.

Map 1 shows the impact of such a regulatory scheme on manufacturing jobs by state eight years from now (the midpoint of the period analyzed).[7]

MAP 1

EPA Regulations Would Eliminate 586,000 Manufacturing Jobs

EPA regulations on carbon dioxide emissions would significantly impact the U.S. manufacturing sector. By 2023, 34 states would lose 3–4 percent of their manufacturing jobs, and nine other states would lose more.



State	Jobs Lost	% Total	State	Jobs Lost	% Total	State	Jobs Lost	% Total
Alabama	10,718	-4.14%	Kentucky	9,819	-3.40%	North Dakota	1,037	-2.33%
Alaska	524	-1.59%	Louisiana	6,288	-3.53%	Ohio	31,747	-3.82%
Arizona	7,954	-4.02%	Maine	2,371	-3.30%	Oklahoma	6,497	-3.09%
Arkansas	6,826	-4.16%	Maryland	5,893	-3.36%	Oregon	7,643	-3.84%
California	65,330	-3.67%	Massachusetts	17,080	-3.82%	Pennsylvania	28,976	-3.60%
Colorado	7,116	-3.00%	Michigan	28,294	-3.71%	Rhode Island	2,260	-3.16%
Connecticut	7,571	-3.94%	Minnesota	14,771	-3.67%	South Carolina	10,731	-3.70%
Delaware	1,605	-3.47%	Mississippi	6,068	-3.80%	South Dakota	1,622	-5.05%
District of Columbia	147	-0.34%	Missouri	12,500	-3.76%	Tennessee	14,159	-3.51%
Florida	17,314	-3.77%	Montana	839	-1.75%	Texas	42,760	-3.74%
Georgia	18,082	-4.10%	Nebraska	3,974	-4.32%	Utah	5,431	-3.51%
Hawaii	773	-0.97%	Nevada	2,006	-2.40%	Vermont	1,378	-3.41%
Idaho	2,695	-5.76%	New Hampshire	3,452	-6.39%	Virginia	11,500	-3.41%
Illinois	29,858	-3.72%	New Jersey	14,827	-3.58%	Washington	13,077	-3.79%
Indiana	21,848	-3.76%	New Mexico	1,727	-2.39%	West Virginia	2,457	-3.25%
Iowa	8,968	-3.74%	New York	24,196	-3.89%	Wisconsin	20,421	-4.19%
Kansas	6,871	-3.72%	North Carolina	20,995	-3.63%	Wyoming	489	-0.58%

Source: Authors' calculations based on data from the Heritage Energy Model. For more information, see the Appendix.

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As the numbers illustrate, all states would experience overwhelmingly negative impacts as a result of these regulations.

The Appendix includes these results by congressional district.

Although the economic damages from the Obama Administration's energy-stifling carbon policy will be overarching, these damages will clearly impact manufacturing jobs all across the country. Most notably, states with manufacturing-intensive economies will suffer a great deal as a result of this policy. As a result, policymakers should avoid imposing these destructive policies on such an integral component of the American economy.

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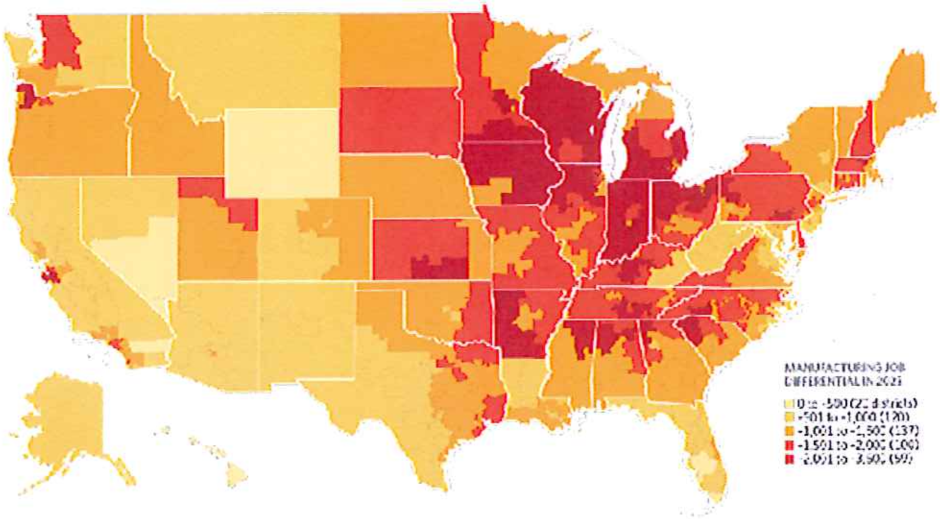
MAP 2

Where EPA Regulations Would Hit the Hardest

States in the Midwest would lose the largest number of manufacturing jobs due to proposed EPA regulations on carbon dioxide emissions. A total of 296 U.S. congressional districts would lose 1,000 or more jobs.



Source: Authors' calculations based on data from the Heritage Energy Model. For more information see the Appendix.

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Appendix

Appendix Table 1 shows the economic impact of the regulations modeled in this study by congressional district.

APPENDIX TABLE 1

The Effect of EPA Regulations on Manufacturing Jobs, by Congressional District (Page 1 of 2)

MANUFACTURING JOB DIFFERENTIAL IN 2023

State	District	Job Differential
Alabama	1	-1,276
	2	1,418
	3	-1,788
	4	-2,050
	5	-1,809
	6	-1,167
	7	-1,209
	Total	-10,718
Alaska		-524
Arizona	1	-667
	2	776
	3	-715
	4	-619
	5	-1,366
	6	-853
	7	-972
	8	-788
	9	-1,208
	Total	-7,964
Arkansas	1	-1,687
	2	-1,042
	3	2,095
	4	-2,002
	Total	-6,826
California	1	-622
	2	816
	3	-814
	4	-755
	5	-1,280
	6	-603
	7	-745
	8	632
	9	938
	10	-1,385
	11	-820
	12	-955
	13	-927
	14	-1,021
	15	-1,721
	16	-934
	17	-3,174
	18	-2,230
	19	-2,224
	20	-755
	21	-649
	22	-740
	23	-715
	24	-920
	25	-1,441
	26	-1,246
	27	-1,091
	28	875
	29	-1,324
	30	-1,059
	31	-1,115
	32	-1,562
	33	-1,310
	34	-1,452
	35	-1,675
	36	-451
	37	-819
	38	-1,678
	39	-1,718
	40	-1,990
	41	1,192
	42	-1,397
	43	-1,364
	44	-1,644
	45	1,756
	46	-1,954
	47	-1,507
	48	-1,600
	49	-1,217
	50	-1,159
	51	-792
	52	-1,510
	53	-968
	Total	-65,330
Colorado	1	-900
	2	1,349
	3	-635
	4	-1,270
	5	-831
	6	-936
	7	-1,196
	Total	-7,116
Connecticut	1	-1,477
	2	-1,774
	3	-1,606
	4	-1,013
	5	1,701
	Total	-7,571
Delaware		-1,005
District of Columbia	Total	-147
Florida	1	-583
	2	-515
	3	577
	4	-754
	5	-693
	6	-686
	7	719
	8	-1,116
	9	-532
	10	627
	11	-509
	12	-633
	13	-997
	14	-691
	15	-765
	16	708
	17	-433
	18	-613
	19	-381
	20	500
	21	-527
	22	-650
	23	-687
	24	-407
	25	-883
	26	-461
	27	-588
	Total	-17,314
Georgia	1	-1,125
	2	1,087
	3	-1,537
	4	-1,028
	5	-726
	6	-1,056
	7	-1,238
	8	-1,105
	9	-1,704
	10	-1,274
	11	-1,299
	12	-1,314
	13	-956
	14	-2,484
	Total	18,082
Hawaii	1	-447
	2	-326
	Total	-773
Idaho	1	-1,392
	2	-1,303
	Total	-2,695
Illinois	1	863
	2	-1,172
	3	-1,572
	4	-2,189
	5	1,415
	6	-1,938
	7	-926
	8	-2,285
	9	-1,152
	10	-2,025
	11	-1,761
	12	-1,253
	13	-1,248
	14	2,139
	15	-1,844
	16	-2,238
	17	-2,143
	18	1,605
	Total	-29,858
Indiana	1	-2,059
	2	3,271
	3	-3,397
	4	-2,447
	5	-1,742
	6	-2,660
	7	-1,483
	8	-2,593
	9	-2,197
	Total	-21,848
Iowa	1	-2,682
	2	-2,568
	3	1,364
	4	-2,353
	Total	-8,968
Kansas	1	-1,682
	2	-1,455
	3	-1,295
	4	-2,439
	Total	-5,871
Kentucky	1	-1,891
	2	-2,110
	3	-1,420
	4	-1,008
	5	-953
	6	-1,638
	Total	-9,819
Louisiana	1	-1,015
	2	-966
	3	-1,149
	4	-949
	5	-823
	6	1,385
	Total	-5,288
Maine	1	1,252
	2	-1,120
	Total	-2,371
Maryland	1	-1,170
	2	901
	3	-786
	4	-512
	5	-527
	6	-815
	7	-609
	8	-574
	Total	-5,893
Massachusetts	1	-1,530
	2	-1,683
	3	-2,186
	4	1,379
	5	-1,071
	6	-1,431
	7	-785
	8	-906
	9	-1,028
	Total	-12,080
Michigan	1	-1,245
	2	-2,791
	3	-2,310
	4	-1,816
	5	1,505
	6	-2,560
	7	-2,171
	8	-2,061
	9	-2,256
	10	-2,661
	11	-2,496
	12	-1,734
	13	-1,395
	14	-1,293
	Total	-28,294
Minnesota	1	2,291
	2	-1,801
	3	-2,109
	4	-1,684
	5	1,393
	6	-2,227
	7	-1,981
	8	-1,284
	Total	-14,771

Note: Figures may not sum to totals due to rounding.
Source: Authors' calculations based on data from the Heritage Energy Model

APPENDIX TABLE 1

The Effect of EPA Regulations on Manufacturing Jobs, by Congressional District (Page 2 of 2)

MANUFACTURING JOB DIFFERENTIAL IN 2023

State	District	Differential
Mississippi	1	-2,091
	2	1,201
	3	-1,298
	4	-1,478
	Total	-6,068
Missouri	1	-1,155
	2	-1,647
	3	-1,901
	4	-1,379
	5	-1,336
	6	-1,782
	7	-1,537
	8	1,763
	Total	-12,500
Montana	Total	-839
Nebraska	1	-1,466
	2	-1,077
	3	-1,431
	Total	3,974
Nevada	1	332
	2	-847
	3	-459
	4	-368
	Total	-2,006
New Hampshire	1	-1,618
	2	-1,834
	Total	-3,452
New Jersey	1	-1,081
	2	870
	3	-921
	4	-902
	5	-1,352
	6	-1,277
	7	-1,761
	8	-1,318
	9	-1,616
	10	-794
	11	-1,481
	12	-1,455
	Total	-14,827
New Mexico	1	-670
	2	525
	3	-532
	Total	-1,727
New York	1	-883
	2	-1,330
	3	-701
	4	-644
	5	-546
	6	-569
	7	-801
	8	-369
	9	398
	10	-593
	11	-477
	12	-599
	13	-507
	14	-619
	15	414
	16	-462
	17	-744
	18	-930
	19	1,027
	20	-864
	21	-1,143
	22	-1,467
	23	-1,877
	24	-1,386
	25	-1,656
	26	-1,291
	27	-1,900
	Total	-24,196
North Carolina	1	-1,515
	2	-1,830
	3	-975
	4	-1,072
	5	1,932
	6	-1,937
	7	-1,451
	8	-1,937
	9	-1,460
	10	-2,308
	11	-1,629
	12	-1,315
	13	-1,635
	Total	-20,996
North Dakota	Total	-1,037
Ohio	1	-1,805
	2	1,812
	3	-1,667
	4	-2,937
	5	-2,857
	6	-1,747
	7	-2,635
	8	-2,561
	9	-1,855
	10	-1,502
	11	-1,249
	12	-1,556
	13	-2,033
	14	-2,505
	15	1,402
	16	-2,221
	Total	-31,777
Oklahoma	1	-1,671
	2	1,537
	3	-1,232
	4	-1,070
	5	-987
	Total	6,497
Oregon	1	-2,487
	2	-1,092
	3	-1,528
	4	-1,210
	5	-1,324
	Total	-7,643
Pennsylvania	1	-819
	2	-512
	3	-2,036
	4	-2,088
	5	-1,933
	6	1,975
	7	-1,593
	8	-1,882
	9	-1,593
	10	-1,760
	11	-1,602
	12	-1,482
	13	-1,316
	14	-956
	15	-1,979
	16	-2,158
	17	-1,761
	18	-1,480
	Total	-28,926
Rhode Island	1	-1,147
	2	1,113
	Total	-2,250
South Carolina	1	-1,126
	2	-1,249
	3	-2,132
	4	-2,099
	5	-1,817
	6	-1,127
	7	-1,180
	Total	-10,731
South Dakota	Total	-1,622
Tennessee	1	-1,090
	2	-1,335
	3	1,823
	4	-2,097
	5	-1,066
	6	-1,733
	7	1,561
	8	-1,729
	9	-966
	Total	-14,159
Texas	1	-1,316
	2	1,624
	3	-1,530
	4	-1,553
	5	-1,099
	6	-1,643
	7	-1,349
	8	-1,242
	9	-977
	10	-1,443
	11	-986
	12	-1,540
	13	-1,270
	14	-1,563
	15	624
	16	-785
	17	-1,261
	18	-1,245
	19	-735
	20	-672
	21	873
	22	-1,382
	23	-685
	24	-1,439
	25	1,159
	26	-1,399
	27	-1,049
	28	526
	29	-1,465
	30	-1,050
	31	-1,199
	32	1,398
	33	-1,555
	34	-535
	35	-846
	36	-1,743
	Total	-42,760
Utah	1	-1,726
	2	1,130
	3	-1,090
	4	-1,486
	Total	-5,431
Vermont	Total	-1,378
Virginia	1	-794
	2	1,042
	3	-1,208
	4	-1,345
	5	-1,366
	6	-1,602
	7	-886
	8	398
	9	-1,611
	10	-756
	11	-497
	Total	-11,503
Washington	1	1,820
	2	-1,801
	3	-1,363
	4	-959
	5	-919
	6	-967
	7	1,166
	8	-1,631
	9	-1,517
	10	-903
	Total	13,077
West Virginia	1	-991
	2	-895
	3	-581
	Total	-2,467
Wisconsin	1	-2,733
	2	-1,817
	3	-2,270
	4	-1,717
	5	-2,829
	6	-3,489
	7	2,457
	8	-3,000
	Total	-20,421
Wyoming	Total	-489

Note: Figures may not sum to totals due to rounding.
Source: Authors' calculations based on data from the Heritage Energy Model.

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Methodology

Overview of Heritage Energy Model. This analysis utilizes the Heritage Energy Model (HEM), a derivative of the National Energy Model System 2014 Full Release (NEMS).[8] NEMS is used by the Energy Information Administration (EIA) in the Department of Energy as well as various nongovernmental organizations for a variety of purposes, including forecasting the effects of energy policy changes on a plethora of leading economic indicators. The methodologies, assumptions, conclusions, and opinions in this report are entirely the work of statisticians and economists in the Center for Data Analysis (CDA) at The Heritage Foundation and have not been endorsed by, and do not necessarily reflect the views of, the developers of NEMS.

HEM is based on well-established economic theory as well as historical data and contains a variety of modules that interact with each other for long-term forecasting. In particular, HEM focuses on the interactions among (1) the supply, conversion, and demand of energy in its various forms; (2) American energy and the overall American economy; (3) the American energy market and the world petroleum market; and (4) current production and consumption decisions as well as expectations about the future.[9] These modules include:

- Macroeconomic Activity Module,[10]
- Transportation Demand Module,
- Residential Demand Module,
- Industrial Demand Module,
- Commercial Demand Module,
- Coal Market Module,
- Electricity Market Module,
- Liquid Fuels Market Module,
- Oil and Gas Supply Module,
- Renewable Fuels Module,
- International Energy Activity Module, and
- Natural Gas Transmission and Distribution Module.

HEM is identical to the EIA's NEMS with the exception of the Commercial Demand Module. Unlike NEMS, this module does not make projections regarding commercial floor-space data of pertinent commercial buildings. Other than that, HEM is identical to NEMS.

Overarching the modules is the Integrating Module, which consistently cycles, iteratively executing and allowing these various modules to interact with each other. Unknown variables that are related, such as a component of a particular module, are grouped together, and a pertinent subsystem of equations and inequalities corresponding to each group is solved via a variety of commonly used numerical analytic techniques, using approximate values for the other unknowns. Once these group's values are computed, the next group is solved similarly and the process iterates. Convergence checks are performed for each statistic to determine whether subsequent changes in that particular statistic fall within a given tolerance. After all group values for the current cycle are determined, the next cycle begins. For example, at cycle *j*, a variety of *n* pertinent statistics represented by the vector,

$$(x_1^j, x_2^j, \ldots, x_n^j) \in R^n$$

is obtained.[11] HEM provides a number of diagnostic measures, based on differences between cycles, to indicate whether a stable solution has been achieved.

Carbon Tax Simulations and Diagnostics. We used the HEM to analyze the economic effects of instituting a \$37 carbon tax based on the EPA's estimation of the SCC assuming a 3 percent discount rate. HEM is appropriate for this analysis because similar models have been used in the past to understand the economic effects of other carbon tax proposals.[12] In particular, we conducted simulations running a carbon fee that started in 2015 at \$37 (in 2007 dollars per metric ton of carbon dioxide) and followed the schedule presented by the Obama Administration through the year 2040.[13] We chose a revenue-neutral carbon tax that returns 100 percent of the carbon tax revenues directly to taxpayers. We ran the HEM for 12 cycles to get consistent feedback into the Macroeconomic Activity Module, which provided us with the figures presented in this study. Since we are modeling the proposed regulations as a tax, the economic impact is likely understated because actual regulations would have a more stifling impact on the economy.

The diagnostic tests suggested that the forecasts provided by the model had stabilized at the end of the 12 runs, based on differences between cycles. The 12 cycles were therefore sufficient to attain meaningful convergence, thus providing us with macroeconomic statistics from which we could make informative statistical inferences.

Translating National Employment Impacts to Local Impacts. To estimate employment differentials, two employment trajectories were created for each state and congressional district: a baseline trajectory and a policy trajectory. Initial manufacturing employment levels for each state or district were multiplied by the national manufacturing employment growth factors for each year for both the baseline and policy cases estimated using the HEM.[14] The three categories were totaled to calculate total employment for the baseline and policy cases.