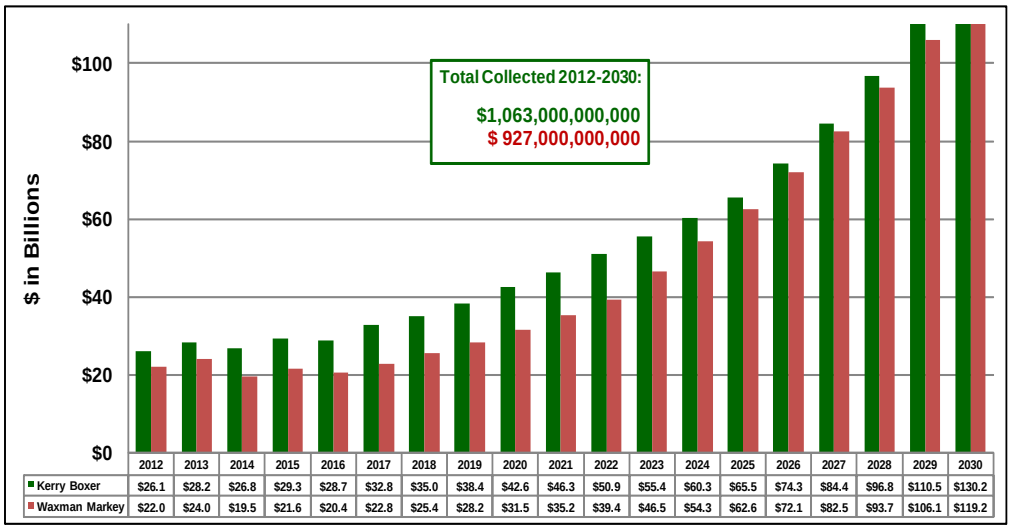
TAXING CARBON:
ARE THE BENEFITS WORTH THE COSTS?
A 2010 Update

Since publishing our Taxing Carbon White Paper and our analysis of H.R. 2454 (Waxman-Markey)[1], which demonstrated the very real possibility that proposals to tax carbon could bankrupt us all and urged a more vigorous debate, the Senate passed S. 1733, known as the "Clean Energy Jobs and American Power Act" (Kerry-Boxer). What follows is ***J.Pollock's*** analysis of Kerry-Boxer, using a methodology similar to that employed in the White Paper and Waxman-Markey.

The major difference between Kerry-Boxer and Waxman-Markey is the allocation of "free" carbon allowances over time. Kerry-Boxer promotes more ambitious reduction targets (*e.g.,* 20% reduction of 2005 emissions levels by 2020 and 83% reduction of 2005 emissions levels by 2050). This is a major driver for the higher cost of Kerry-Boxer. As with Waxman-Markey, the number of free allowances would be gradually phased out from 70% in 2012 to only 20% by 2030[2]. This will allow development of cost-effective GHG-mitigating technologies, thereby lessening the impact on affected industries, including electric utilities.

Assuming the same allowance prices as in our Waxman-Markey analysis, Kerry-Boxer would increase the costs to the electric sector by over $100 billion from 2012 through 2023; $336 billion to $440 billion[3]. The overall cost impact could range from $735 billion to $1.4 trillion from 2012 to 2030. ***J.Pollock*** estimates that Kerry-Boxer could cost the electric sector over $7 trillion from 2012 to 2050. The mid-point of the projected costs are shown in the following Chart.[4]



	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Kerry Boxer	$26.1	$28.2	$26.8	$29.3	$28.7	$32.8	$35.0	$38.4	$42.6	$46.3	$50.9	$55.4	$60.3	$65.5	$74.3	$84.4	$96.8	$110.5	$130.2
Waxman Markey	$22.0	$24.0	$19.5	$21.6	$20.4	$22.8	$25.4	$28.2	$31.5	$35.2	$39.4	$46.5	$54.3	$62.6	$72.1	$82.5	$93.7	$106.1	$119.2

Using the Kerry-Boxer impacts quantified above, ***J.Pollock*** has estimated the following distribution of carbon taxes by census region.[5] Those regions with the most amounts of coal-fired generation (Central and Atlantic) would be most impacted by carbon legislation.

Estimated Carbon Taxes Charged to Electricity Producers 2012 to 2030

Census Region	Amount
New England	$17,164,000,000
Middle Atlantic	$80,957,000,000
East North Central	$206,507,000,000
West North Central	$111,937,000,000
South Atlantic	$217,513,000,000
East South Central	$123,930,000,000
West South Central	$156,755,000,000
Mountain	$120,935,000,000
Pacific	$26,891,000,000
US Total	**$1,062,589,000,000**

Translating the projected regional carbon taxes into consumer impacts, Kerry-Boxer will result in significantly higher electricity costs by 2023. As the table below indicates, the most dramatic increase in electricity costs will occur after 2023. These impacts are on average 42% higher in 2016 and 20% higher in 2023 than under Waxman-Markey.

Consumer Impact of Projected Carbon Taxes on Electricity Producers ($ per year)				
Census Region	**Typical Customer***	**2016**	**2023**	**2030**
New England	Residential	$41	$79	$171
	Commercial	$6,000	$12,000	$26,000
	Industrial	$1,032,000	$1,965,000	$4,281,000
Middle Atlantic	Residential	$68	$120	$279
	Commercial	$10,000	$18,000	$42,000
	Industrial	$1,689,000	$2,992,000	$6,976,000
East North Central	Residential	$115	$210	$470
	Commercial	$17,000	$32,000	$70,000
	Industrial	$2,872,000	$5,252,000	$11,750,000
West North Central	Residential	$126	$225	$497
	Commercial	$19,000	$34,000	$75,000
	Industrial	$3,151,000	$5,625,000	$12,418,000
South Atlantic	Residential	$86	$153	$320
	Commercial	$13,000	$23,000	$48,000
	Industrial	$2,141,000	$3,835,000	$7,989,000
East South Central	Residential	$114	$209	$483
	Commercial	$17,000	$31,000	$72,000
	Industrial	$2,844,000	$5,235,000	$12,063,000
West South Central	Residential	$88	$159	$349
	Commercial	$13,000	$24,000	$52,000
	Industrial	$2,194,000	$3,985,000	$8,725,000
Mountain	Residential	$134	$238	$567
	Commercial	$20,000	$36,000	$85,000
	Industrial	$3,347,000	$5,951,000	$14,172,000
Pacific	Residential	$18	$35	$74
	Commercial	$3,000	$5,000	$11,000
	Industrial	$448,000	$885,000	$1,843,000
*** Monthly kWh Usage**	**Residential**	**1,000**		
	Commercial	**150,000**		
	Industrial	**25,000,000**		

The above estimates reflect only the cost impact on the electric sector that will be passed-through to all consumers. All pending carbon legislation would impose separate emission reduction goals on other energy-producing (*e.g.,* natural gas utilities, oil/gas refineries) and energy-consuming (*e.g.,* metals and metal products, pulp and paper, chemicals) sectors. Thus, in addition to the direct cost increases that will be reflected in electricity bills, consumers will

also experience higher costs for natural gas, transportation and a wide-array of manufactured goods.

Background Notes: ***J.Pollock, Inc.*** prepared for public distribution an in-depth White Paper entitled *Taxing Carbon: Are the Benefits Worth the Costs?* in April 2009. The initial report projected the impact of possible carbon legislation on consumer electricity costs by census region beginning as early as 2012. While the higher costs would be significant, the benefits, from the research, are appallingly minimal.

J.Pollock suggested that every citizen should be asking two questions:

1. What are the actual costs of taxing carbon, not just to me individually, but to our economy?

   and

2. What is the likelihood that the anticipated benefits of carbon taxes will actually materialize; that is, will they avert the predicted perils of global warming, resulting in a stronger, more secure and vibrant economy?

Unfortunately, the carbon tax advocates fail to provide answers to these two important questions.

Since the House passed climate change legislation (Waxman-Markey) and the debate continued, ***J.Pollock*** provided an Update Report in September 2009 to further elucidate the issues. That Update analyzed the impact of Waxman-Markey and suggested that electricity costs will surge dramatically after 2023, thereby shifting the burden to the next generation of consumers and business owners.

J.Pollock (www.jpollockinc.com) is *independently* owned, working on behalf of clients, not the utilities, energy suppliers and marketers. The firm's even-minded and experienced approach allows them to objectively evaluate their client's energy needs and develop sound strategies and purchase choices. ***J.Pollock*** provides counsel on a variety of complex energy and regulatory issues, and assists clients to procure and manage energy in both regulated and competitive markets.

J.Pollock has participated in hundreds of projects and regulatory proceedings involving investor-owned, municipal, cooperative, and government-owned utilities providing energy and delivery services throughout North America. In addition to being well versed in all aspects of utility regulation, ***J.Pollock*** is knowledgeable about how competitive and regulated energy markets work.

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[1] Prior estimates were based on the Obama Administration's projected climate revenues and ***J.Pollock's*** analysis of Waxman-Markey. See "Taxing Carbon: Are The Benefits Worth The Costs?" and "Update on Taxing Carbon" at www.jpollockinc.com.

[2] Allowances were obtained from: thebreakthrough.org. Kerry-Boxer Climate Bill Allowance Allocation Breakdown.

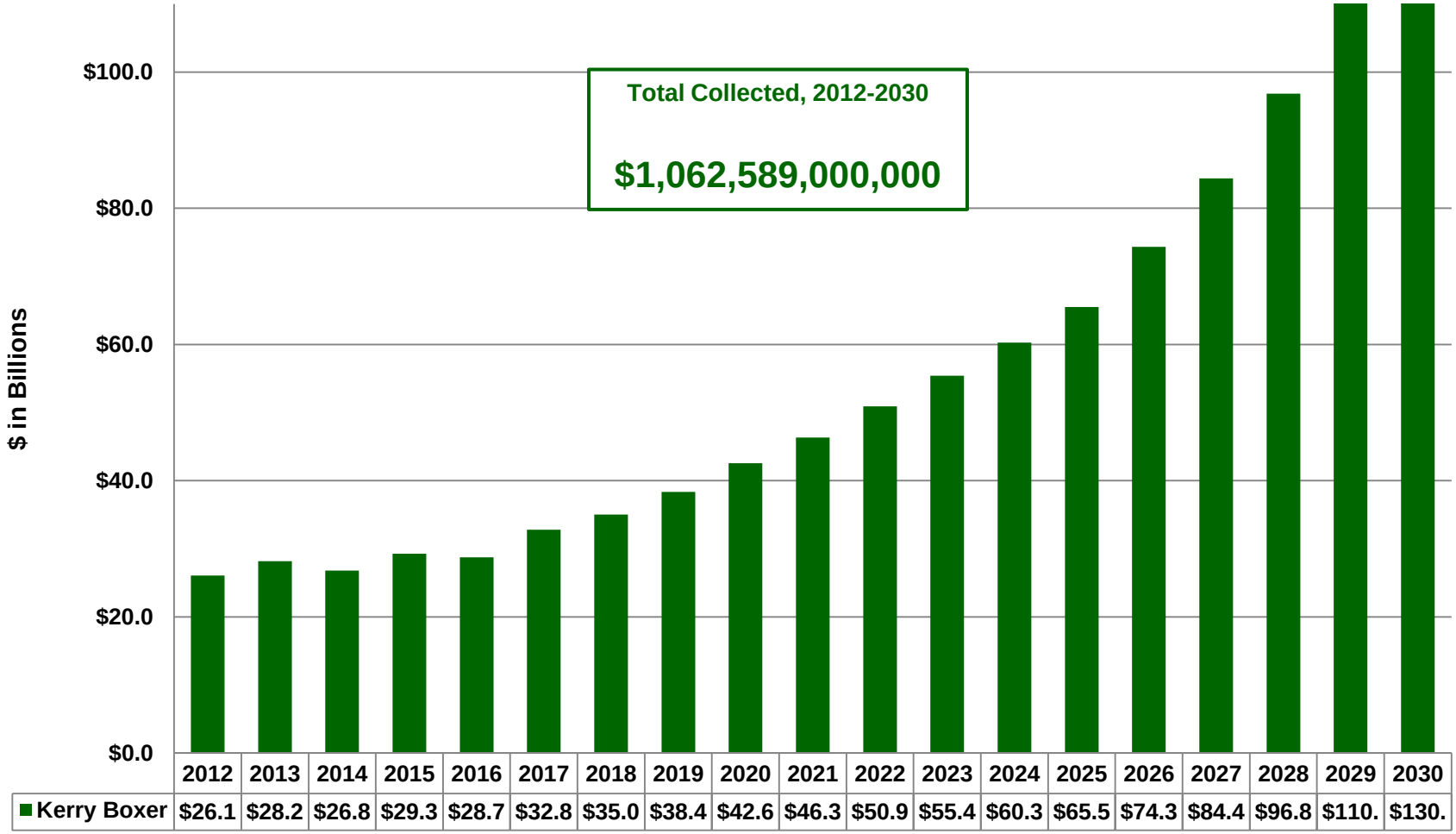
[3] The electricity sector emits about 40% of the total GHG emissions. This proportion was calculated from data obtained from: Table 18 Carbon Dioxide Emissions by Sector and Source. Data was obtained from the Energy Information Administration, (April, 2009). Report: An Updated Annual Energy Outlook 2009 Reference Case Reflecting Provisions of the American Recovery and Reinvestment Act and Recent Changes in the Economic Outlook. Retrieved from: http://www.eia.doe.gov/oiaf/servicerpt/stimulus/aeostim.html.

[4] The cost impacts shown under Waxman-Markey were revised to correct an error in our Updated Analysis.

[5] Census Regions are defined as follows:

New England:	Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
Middle Atlantic:	New Jersey, New York, Pennsylvania.
East North Central:	Illinois, Indiana, Michigan, Ohio, Wisconsin.
West North Central:	Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
South Atlantic:	Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia.
East South Central:	Alabama, Kentucky, Mississippi, Tennessee.
West South Central:	Arkansas, Louisiana, Oklahoma, Texas.
Mountain:	Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming.
Pacific:	Alaska, California, Hawaii, Oregon, Washington

Kerry-Boxer (S.1733) Projected Carbon Taxes (2012-2030)



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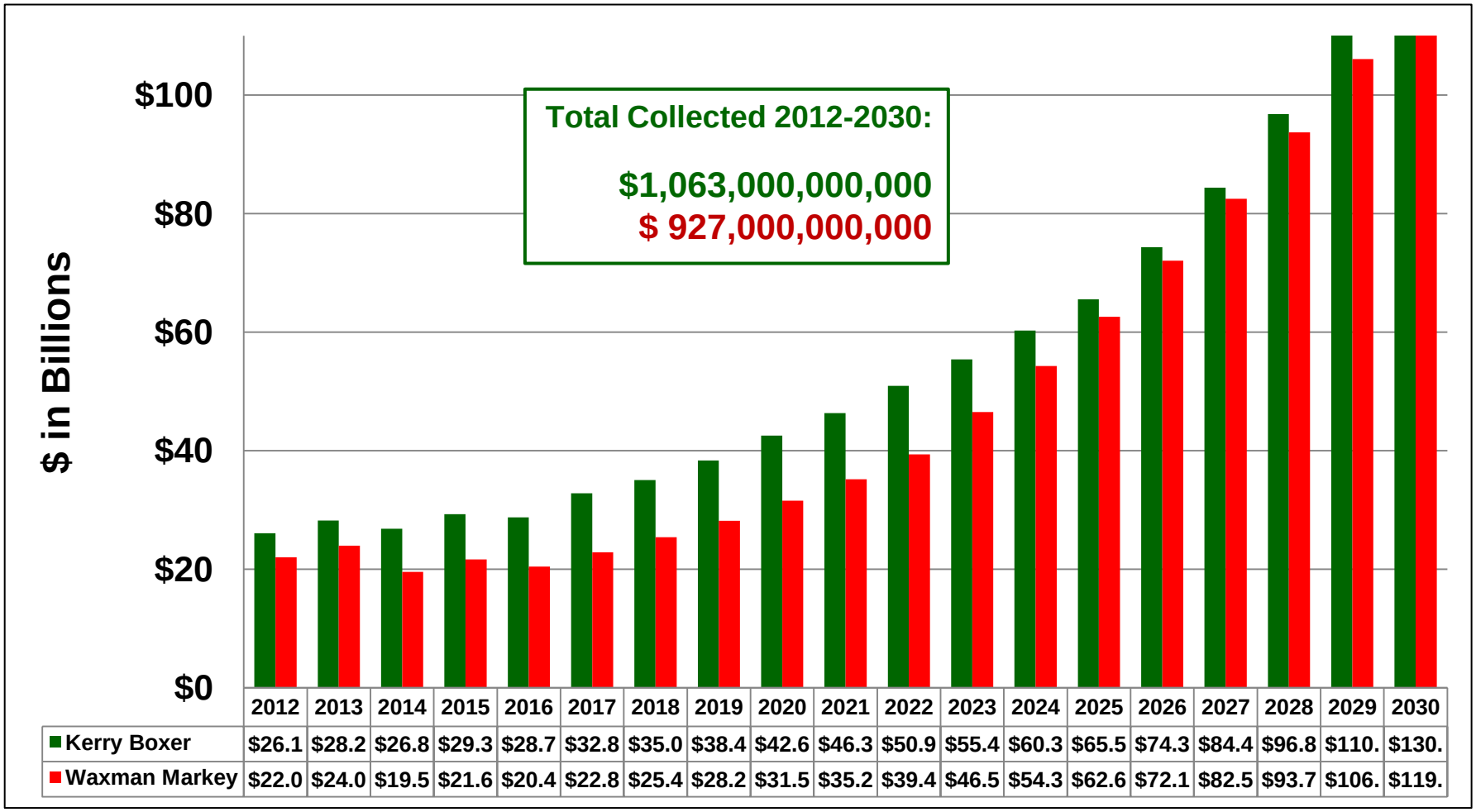
Projected Carbon Taxes (2012-2030)



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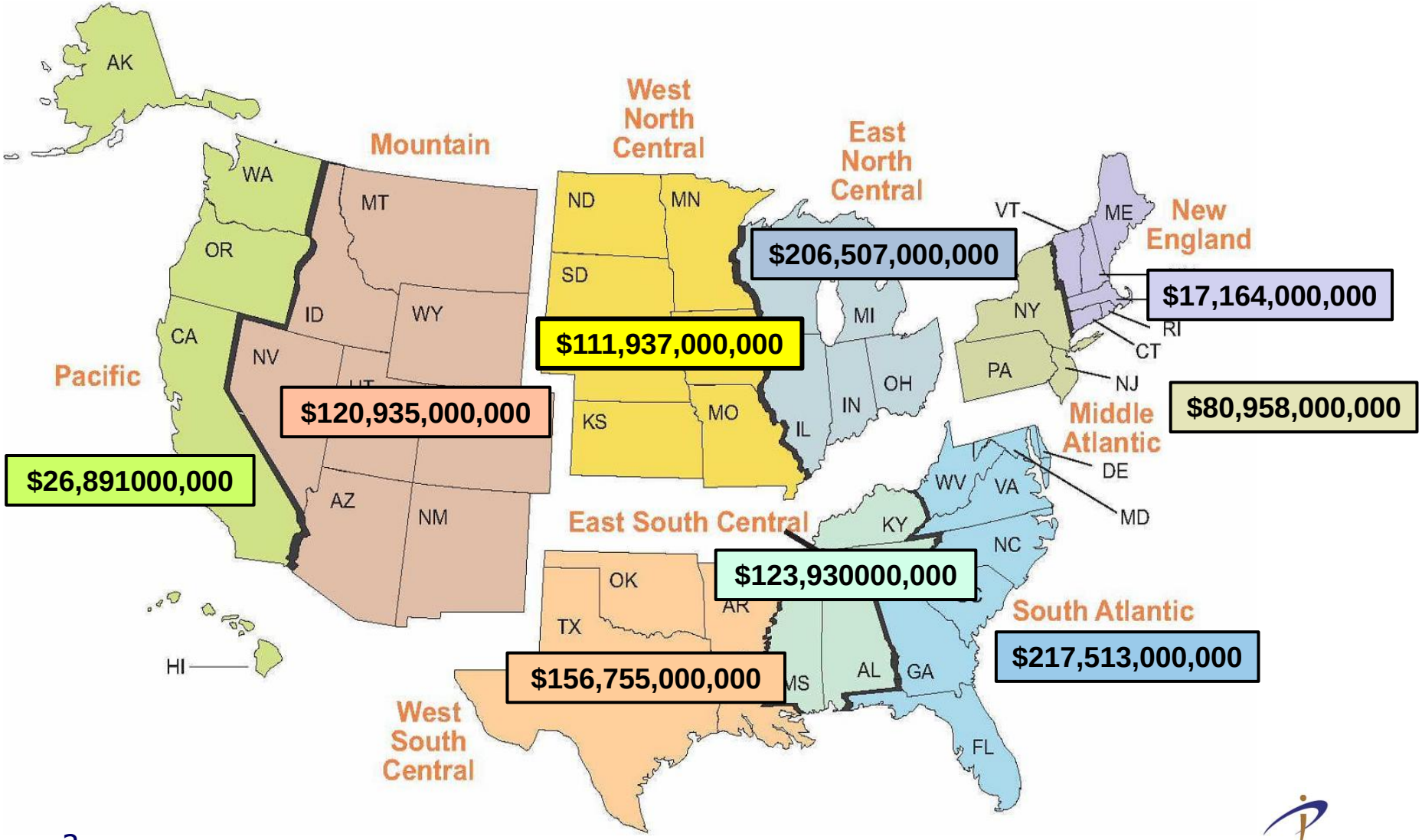
Projected Carbon Taxes by Census Region (2012 – 2030)



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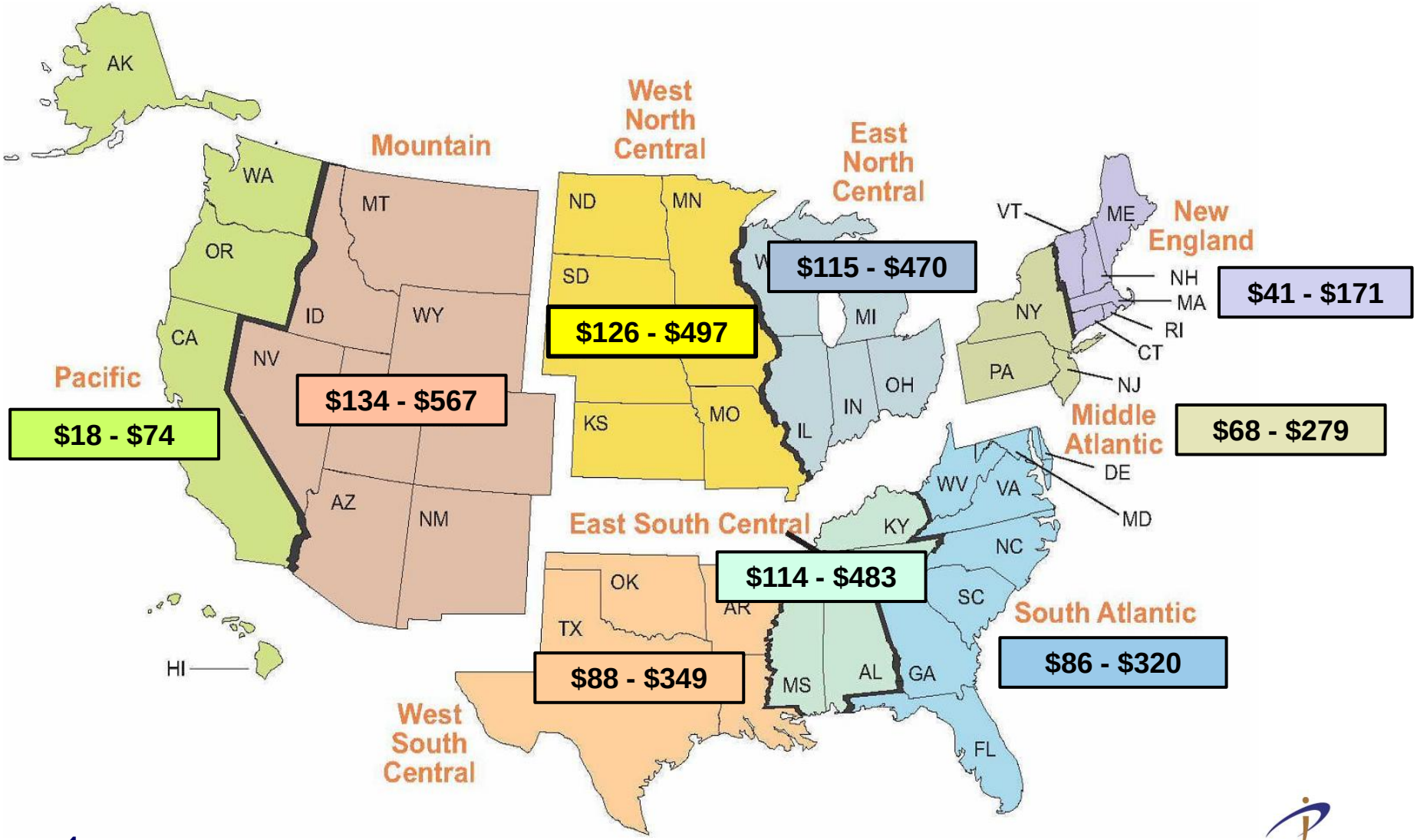
Annual Bill Impact: Residential (2016 and 2030)



1000 kWh per Month

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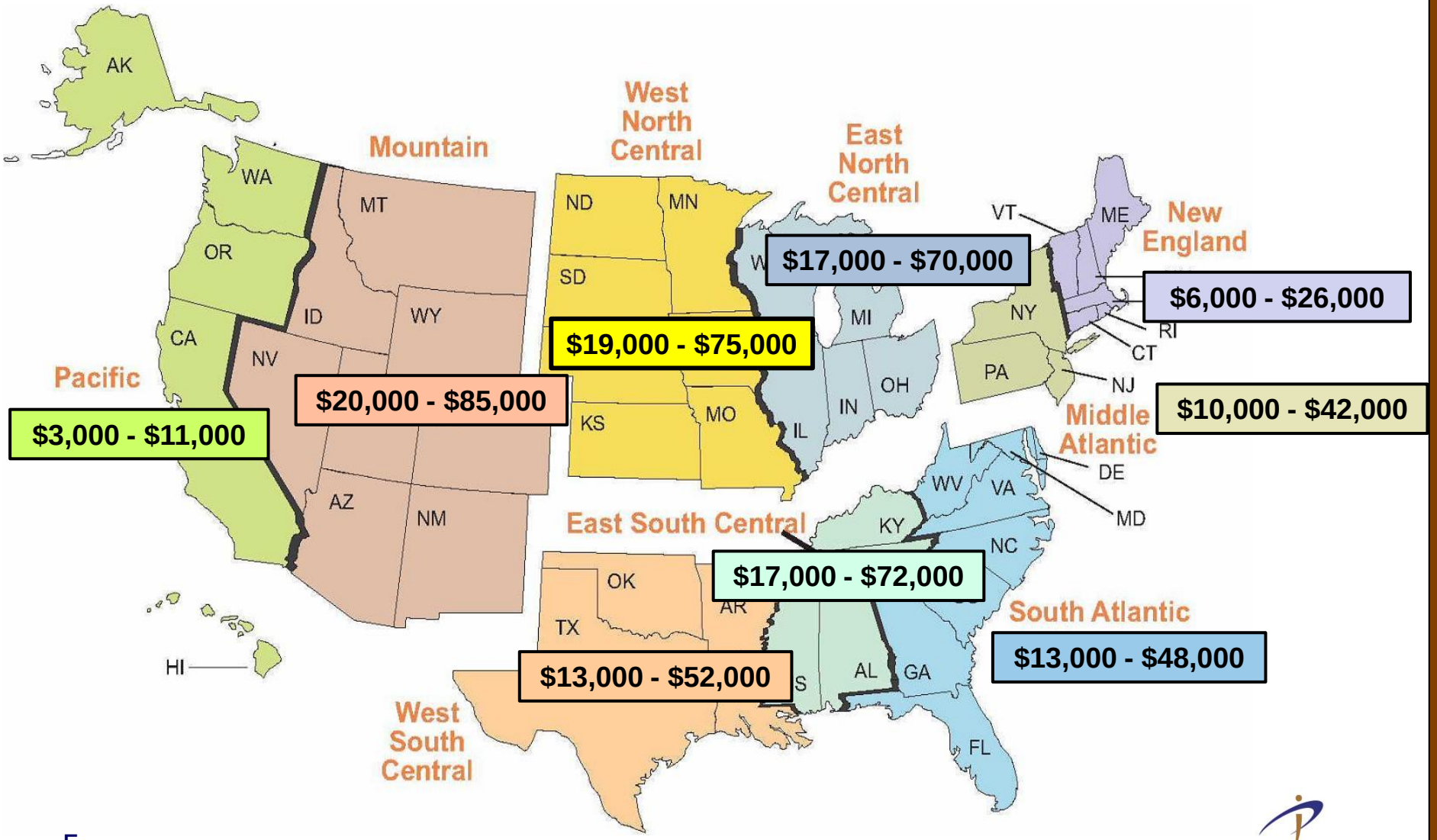
Annual Bill Impact: Commercial (2016 and 2030)



5 150,000 kWh per Month

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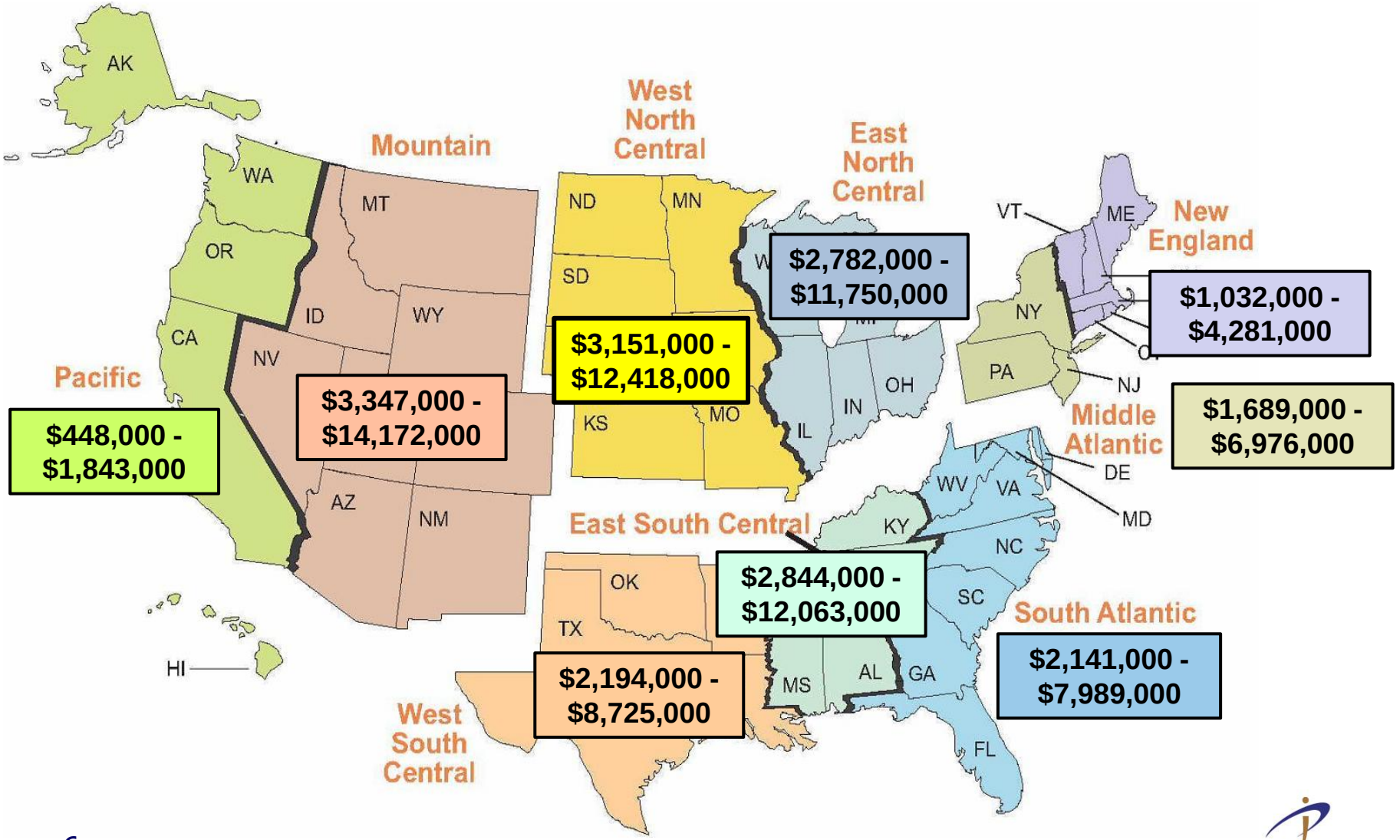
Annual Bill Impact: Industrial (2016 and 2030)



25,000,000 kWh per Month

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