

## IMPACTS OF EPA'S CARBON PROPOSAL ON PENNSYLVANIA

### BACKGROUND

- In 2013, coal provided almost 40% of Pennsylvania's electricity, with nuclear providing 35%, natural gas 22%, and renewables and other sources providing the remaining 3%.<sup>i</sup> Pennsylvania's average electricity price of 9.83 cents/kWh last year was slightly below the national average.<sup>ii</sup>
- Currently, coal is responsible for more than 72,000 direct and indirect jobs in Pennsylvania.<sup>iii</sup>
- Despite below-average electricity prices, many Pennsylvania families are struggling with high energy costs. The 2.4 million low-income and middle-income families in Pennsylvania -- almost 50% of the state's households -- spend 19% of their after-tax income on energy.<sup>iv</sup> In addition, one-third of Pennsylvania households receive Social Security.<sup>v</sup> Lower income families and Social Security recipients are especially vulnerable to further increases in energy prices.<sup>vi</sup>
- Pennsylvania utilities have announced the retirement or conversion of 30 coal units (totaling 5,548 MW) due to EPA policies. Nationwide, utilities have announced the retirement or conversion of 381 coal units (totaling 60,104 MW) in 36 states due to EPA policies.<sup>vii</sup>

### EPA'S CARBON PROPOSAL

- In June, EPA proposed its "Clean Power Plan" (CPP) to reduce carbon dioxide (CO<sub>2</sub>) emissions from existing coal-fired and natural

gas-fired power plants in 49 states, including Pennsylvania. EPA plans to finalize the proposal in June of next year.

- Under the EPA proposal, Pennsylvania will be required to reduce the CO<sub>2</sub> emissions rate of its electric generating fleet by 31%.<sup>viii</sup> EPA's proposal will force Pennsylvania to change the way the state produces electricity, reduce the amount of electricity used by Pennsylvania consumers, and significantly increase the price of electricity.
- EPA *assumed* the following in setting Pennsylvania's emissions rate:
  - The efficiency of existing coal-fired units can be improved by 6%;<sup>ix</sup>
  - Electricity from natural gas can be increased by 18%;<sup>x</sup>
  - Electricity from coal can be reduced 10%;<sup>xi</sup>
  - Electricity from renewable energy sources can be increased by nearly 700%;<sup>xii</sup>
  - None of the state's nuclear capacity will retire;<sup>xiii</sup> and
  - Pennsylvania consumers can reduce electricity use by more than 12%.<sup>xiv</sup>
- This year, the Pennsylvania legislature passed House Bill 2354, which requires the legislature to approve any state compliance plan. In addition, the Pennsylvania House of Representatives passed House Resolution No. 815; EPA's proposed guidelines conflict with the resolution. The Governor of Pennsylvania signed a letter stating that EPA does not have the legal authority to regulate carbon emissions from power plants.<sup>xv</sup>
- In total, officials from over 30 states, including Pennsylvania, have expressed opposition to the approach EPA has included in its proposal. Further, 13 states have joined litigation challenging EPA's proposal.<sup>xvi</sup>

## SERIOUS ECONOMIC AND RELIABILITY IMPACTS

- Modeling by NERA Economic Consulting projects that the CPP will cause a 13% increase in retail electricity prices for Pennsylvania consumers, with a peak year increase of 21%. Under another scenario (what will happen if Pennsylvania consumers do not significantly reduce their electricity use), electricity prices in Pennsylvania could increase by 19%, with a peak year increase of 31%.<sup>xvii</sup>
- Another independent study conducted for the National Mining Association estimates similar impacts, including a peak year wholesale electricity price increase of 10.3% for Pennsylvania consumers.<sup>xviii</sup>
- NERA also projects double digit electricity price increases in 42 other states, as well as nationwide costs averaging \$41 billion to \$73 billion per year. NERA's projections include \$560 billion that consumers nationwide will have to spend to reduce their electricity use.<sup>xix</sup>
- EPA acknowledges that electricity generation from coal will decline by nearly 30% nationwide.<sup>xx</sup> NERA also projects that electricity generation from coal will decline by 29% or more. As a result, domestic coal consumption will decline by at least 240 million tons in 2020.<sup>xxi</sup> This will affect demand for Pennsylvania coal because approximately half of Pennsylvania's coal is used by power plants in other states.<sup>xxii</sup>
- Grid operators and electric utilities in many regions of the country are expressing serious concerns about the threat of EPA's proposal to electric reliability.<sup>xxiii</sup>

## NO BENEFITS

- In 2013 the U.S. electric sector emitted 2.05 billion metric tons of

CO<sub>2</sub>, representing approximately 4% of global anthropogenic greenhouse gas emissions.<sup>xxiv</sup>

- Analysis based on another EPA rulemaking shows that the climate effects of the EPA proposal are meaningless. For example, the atmospheric CO<sub>2</sub> concentration would be reduced by less than 0.5%; global average temperature increase would be reduced by less than 2/100<sup>ths</sup> of a degree Fahrenheit; and sea level rise would be reduced by 1/100<sup>th</sup> of an inch (the thickness of three sheets of paper).<sup>xxv</sup>
- To justify the EPA proposal, its supporters argue the U.S. must show global leadership in reducing CO<sub>2</sub> emissions. However, other countries are abandoning pledges to reduce emissions or increasing emissions regardless of their pledges. According to the *Washington Post*, many industrialized countries are not expected to meet their commitments to reduce CO<sub>2</sub> emissions.<sup>xxvi</sup>

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<sup>i</sup> U.S. Energy Information Administration, *Electric Power Monthly*, February 2014.

<sup>ii</sup> *Ibid.*

<sup>iii</sup> National Mining Association, <http://www.countoncoal.org/states/>.

<sup>iv</sup> Eugene M. Trisko, *Energy Cost Impacts on Pennsylvania Families*, December 2013.

<sup>v</sup> *Ibid.*

<sup>vi</sup> *Ibid* and The 60 Plus Association, *Energy Bills Challenge America's Fixed-Income Seniors*, 2014.

<sup>vii</sup> ACCCE, *Coal Unit Shutdowns as of October 23, 2014*. Retirements and, in a few cases, conversions are based on public announcements by the coal unit owners.

<sup>viii</sup> The percentage reduction is relative to emission rates in 2012. The Pennsylvania emissions rate goal is from Table 8, pages 346 – 348, of EPA's proposal, and 2012 emission rates are found in EPA's *Goal Computation Technical Support Document*, June 2014. <http://www2.epa.gov/sites/production/files/2014-05/documents/20140602tsd-goal-computation.pdf>.

<sup>ix</sup> EPA, *GHG Abatement Measures* technical support document, June 2014. EPA assumes the heat rate of every coal-fired electric generating unit can be improved by 6%.

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<sup>x</sup> EPA, *Technical Support Document (TSD) for the CAA Section 111(d) Emission Guidelines for Existing Power Plants: Goal Computation Technical Support Document*, June 2014, Appendix 1.

<sup>xi</sup> *Ibid.*

<sup>xii</sup> EPA, *Technical Support Document (TSD) for the CAA Section 111(d) Emission Guidelines for Existing Power Plants: GHG Abatement Measures*, June 2014, Table 4.9.

<sup>xiii</sup> EPA, *Technical Support Document (TSD) for the CAA Section 111(d) Emission Guidelines for Existing Power Plants: Goal Computation Technical Support Document*, June 2014, page 14.

<sup>xiv</sup> EPA, *Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and Emission Standards for Modified and Reconstructed Power Plants*, June 2014, Table 3.3.

<sup>xv</sup> September, 9, 2014, letter signed by 15 governors to President Obama.

<sup>xvi</sup> Petition for Review, *West Virginia v. EPA*, Case No 14-1146 (D.C. Cir. filed Aug. 1, 2014); Brief of the States of West Virginia, Alabama, Alaska, Kentucky, Nebraska, Ohio, Oklahoma, South Carolina, and Wyoming as *Amici Curiae* in Support of the Petitioner, *In Re: Murray Energy Corporation v. EPA*, Case No. 14-1112, (D.C. Cir. filed June 25, 2014).

<sup>xvii</sup> NERA Economic Consulting, *Potential Impacts of the EPA Clean Power Plan*, October 2014. An annual average increase of 13% means that electricity prices are projected to be 13% higher each year, on average, under EPA's proposal than electricity prices would be in the absence of the proposal.

<sup>xviii</sup> *EPA Clean Power Plan: Costs and Impacts on U.S. Energy Markets*, Energy Ventures Analysis, August 2014 <http://www.countoncoal.org/states/>

<sup>xix</sup> NERA Economic Consulting, *Potential Impacts of the EPA Clean Power Plan*.

<sup>xx</sup> EPA, *Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and Emission Standards for Modified and Reconstructed Power Plants*, June 2014.

<sup>xxi</sup> NERA Economic Consulting, *Potential Impacts of the EPA Clean Power Plan*.

<sup>xxii</sup> EIA, *Pennsylvania State Profile and Energy Estimates*, <http://www.eia.gov/state/analysis.cfm?sid=PA>.

<sup>xxiii</sup> Southwest Power Pool, *Grid Reliability and Transmission Buildout Issues*, presentation to Arkansas DEQ Stakeholder Meeting, October 1, 2014; Midwest Independent System Operator, *Clean Power Plan: MISO Analysis Update for ADEQ/APSC Stakeholder Meeting*, October 1, 2014; and American Electric Power, *Transmission Challenges with the Clean Power Plan*, September 2014.

<sup>xxiv</sup> IPCC, *Climate Change 2014: Mitigation of Climate Change: Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*; EIA, *Monthly Energy Review*, February 2014.

<sup>xxv</sup> ACCCE, *Climate Effects of EPA's Proposed Carbon Regulations*, June 2014.

<sup>xxvi</sup> Steven Mufson, *All over the planet, countries are completely missing their emissions targets*, (September 23, 2014) <http://www.washingtonpost.com/blogs/wonkblog/wp/2014/09/23/all-over-the-planet-countries-are-completely-missing-their-emissions-targets/>