

## IMPACTS OF EPA'S CARBON PROPOSAL ON ILLINOIS

### BACKGROUND

- In 2013, nuclear provided 48% of Illinois' electricity, with coal providing 43%, natural gas 3%, renewables 5%, and other sources 1%.<sup>i</sup> Illinois' average electricity price of 7.99 cents/kWh last year was 21% below the national average.<sup>ii</sup>
- Currently, coal is responsible for nearly 36,000 direct and indirect jobs in Illinois.<sup>iii</sup>
- Despite below-average electricity prices, many Illinois families are struggling with high energy costs. The 2.2 million low-income and middle-income families in Illinois -- 47% of the state's households -- spend 18% of their after-tax income on energy.<sup>iv</sup> In addition, 27% of Illinois households receive Social Security.<sup>v</sup> Lower income families and Social Security recipients are especially vulnerable to further increases in energy costs.<sup>vi</sup>
- Illinois power plant operators have announced the retirement or conversion of 13 coal units (totaling 2,996 MW) due to EPA policies. Nationwide, power plant operators 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 Illinois. EPA plans to

finalize the proposal in June of next year.

- Under the EPA proposal, Illinois will be required to reduce the CO<sub>2</sub> emissions rate of its electric generating fleet by 33%.<sup>viii</sup> EPA's proposal will force Illinois to change the way the state produces electricity, reduce the amount of electricity used by Illinois consumers, and significantly increase the price of electricity.
- EPA *assumed* the following in setting Illinois' emissions rate:
  - The efficiency of existing coal-fired units can be improved by 6%;<sup>ix</sup>
  - Electricity generation from natural gas can be increased by 165%;<sup>x</sup>
  - Electricity from coal can be reduced by 16%;<sup>xi</sup>
  - Electricity from non-hydro renewable energy sources can be increased by 113%;<sup>xii</sup>
  - None of the state's nuclear generation will retire;<sup>xiii</sup> and
  - Illinois consumers can reduce electricity use by more than 12%.<sup>xiv</sup>
- This year, the Illinois House passed a resolution (HR0782) supporting CO<sub>2</sub> emission standards based on measures that can be implemented at fossil-fueled power plants ("inside the fence" measures). EPA's proposal conflicts with this resolution. In total, officials from over 30 states have expressed opposition to the approach EPA included in its proposal. In addition, 13 states have joined in litigation challenging EPA's proposal.<sup>xv</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 Illinois consumers, with a peak year increase of 25%. Under another scenario (what will happen if Illinois consumers do not significantly reduce their electricity use), electricity prices in Illinois could increase by 26%,

with a peak year increase of 30%.<sup>xvi</sup>

- Another independent study conducted for the National Mining Association estimates similar impacts, including a peak year wholesale electricity price increase of 19.7% for Illinois consumers.<sup>xvii</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>xviii</sup>
- Grid operators and electric utilities in many parts of the country are expressing serious concerns about the threat of EPA's proposal to electric reliability. Those concerned include the North American Electric Reliability Corporation (NERC), whose mission is to "ensure the reliability of the bulk power system in North America," as well as the Midcontinent Independent System Operator (MISO), which is responsible for grid reliability in a 15-state region that includes much of Illinois.<sup>xix</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>xx</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>xxi</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>xxii</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 Illinois 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 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 Illinois 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%.

<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.* While EPA assumed only a 16% decrease in the utilization of coal units in Illinois in order to set the state's target, this does not mean that coal-fired electricity generation in Illinois would not need to change more in order to comply with the EPA target.

<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> 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>xvi</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

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year, on average, under EPA's proposal than electricity prices would be in the absence of the proposal.

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

<sup>xviii</sup> NERA Economic Consulting, *Potential Impacts of the EPA Clean Power Plan*, October 2014.

<sup>xix</sup> North American Electric Reliability Corporation, *Potential Reliability Impacts of EPA's Proposed Clean Power Plan: Initial Reliability Review*, November 2014; Midwest Independent System Operator, *Clean Power Plan: MISO Analysis Update for ADEQ/APSC Stakeholder Meeting*, October 1, 2014; Southwest Power Pool, *Grid Reliability and Transmission Buildout Issues*, presentation to Arkansas DEQ Stakeholder Meeting, October 1, 2014; and American Electric Power, *Transmission Challenges with the Clean Power Plan*, September 2014.

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

<sup>xxii</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/>