

# THE CLEAN POWER PLAN: Protecting the Health of Iowans

The Clean Power Plan to cut carbon pollution from U.S. power plants 32% by 2030 will protect the health of Iowans, improve our economy, and increase our energy independence – all while maintaining an affordable, reliable energy supply.<sup>1</sup>

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## Carbon Pollution is Costing Iowans' Health

Carbon pollution (i.e., carbon dioxide or CO<sub>2</sub>) is the primary cause of climate change.<sup>2</sup> While climate change occurs over time, it poses significant health threats *today*.

In the *2014 Iowa Climate Statement*, scientists from 38 Iowa colleges and universities noted that climate change contributes to:

- Increased respiratory problems (e.g. asthma) from elevated levels of air pollutants like fine particulate matter and ozone, pollen, allergens, molds, and indoor moisture levels;
  - Increased cardiovascular problems (e.g. risk of stroke and heart attacks) from elevated heat stress and exposure to air pollutants;
  - Increased incidence of vectors (e.g. mosquitos and ticks) and new vector-borne diseases (e.g., Dengue fever and Ehrlichiosis);
  - Increased incidence of mental health issues associated with more frequent extreme weather events and higher temperatures (e.g., stress, aggression, and violence);
  - Increased exposures to toxic chemicals and raw sewage from more frequent heavy rain/flooding events; and
  - Decreased water quality from elevated water temperatures and already high nutrient levels (i.e., harmful algae blooms).<sup>3</sup>
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## Meeting the Challenge of Rising Carbon Pollution

Power plants are our nation's single largest source of carbon pollution.<sup>4</sup> Despite this fact, there have been *no limits* on the amount of carbon pollution power plants can emit.

The Clean Power Plan establishes these first-ever, federal limits on carbon pollution from existing power plants by setting state-specific carbon pollution reduction goals based on each state's energy portfolio. States have broad flexibility to determine how to best achieve their goal. Because Iowa is a national leader in wind energy generation and manufacturing, the state is well-equipped to meet its carbon reduction goal: Under the Clean Power Plan, Iowa has one of the least stringent state goals in the country.<sup>5</sup>

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## The Clean Power Plan Will Protect Public Health

By reducing carbon pollution, the Clean Power Plan is estimated to provide \$34 to \$54 billion in public health and climate benefits per year, beginning in 2030.<sup>6</sup>

The Clean Power Plan will also provide other health co-benefits. By indirectly reducing other harmful pollutants emitted by coal-fired power plants (e.g., mercury, sulfur dioxide, nitrogen oxides, and fine particulate matter), the Clean Power Plan is estimated to prevent up to:

- 3,600 premature deaths; 90,000 asthma attacks in children; 1,700 heart attacks; 1,700 hospital admissions; and 300,000 missed work/school days in the U.S. each year.<sup>7</sup>
- 47 premature deaths; 15 hospitalizations; and 3 non-fatal heart attacks in Iowa annually.<sup>8</sup>

These broad health benefits have helped the Clean Power Plan gain extensive support from national and state health groups:

- The American Academy of Pediatrics, American Heart Association, American Lung Association, American Public Health Association, American Thoracic Society, Health Care Without Harm, Public Health Institute, Trust for America's Health, the Iowa Public Health Association, the Iowa Environmental Health Association, and the Iowa Nurses Association all support the Clean Power Plan.<sup>9</sup>

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## The Clean Power Plan Will Increase Iowa's Energy Independence

Despite its leadership in wind energy, Iowa remains one of the most coal-dependent states in the country.<sup>10</sup> And because Iowa has no active coal mines within its borders, all of Iowa's coal demand must be imported from outside the state.<sup>11</sup>

- \$590M is spent each year to import coal to Iowa, costing each Iowan \$193 annually.<sup>12</sup>

The Clean Power Plan will help decrease Iowa's coal-dependence: By encouraging clean energy growth, the Clean Power Plan gives Iowans the opportunity to invest in their state's own renewable energy resources, and in turn increase Iowa's energy security and self-reliance.

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## The Clean Power Plan Will Strengthen Iowa's Economy

Meeting carbon reductions under the Clean Power Plan with renewable wind energy would not only allow Iowa to become more energy independent, but would also provide economic benefits for Iowa's rural communities.

- Iowa farmers/landowners already receive more than \$16 million annually in lease payments from wind turbines.<sup>13</sup>
- Total increased assessed value of property with wind turbines in Iowa through 2013 is estimated to be \$2.6 billion.<sup>14</sup>

As a national leader in wind energy generation and manufacturing, Iowa's state economy could benefit from helping to meet an increased demand for renewable energy.

- Iowa could sell its own excess wind energy to other states with more stringent carbon reduction goals or less clean energy to meet their own goals.
  - Iowa could also sell Iowa-made wind turbines and components to other states. Currently, Iowa has 15 manufacturing facilities that produce wind turbine parts,<sup>15</sup> and over 75 Iowa companies in the wind supply chain.<sup>16</sup>
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## The Clean Power Plan Will Maintain Energy Affordability & Reliability

Increasing our self-reliance on renewable wind energy under the Clean Power Plan will increase our energy independence, helping to keep Iowa's electricity rates low and its energy supply stable.

- Iowa's electricity rates have remained below the national average during peak wind energy growth,<sup>17</sup> and our energy supply has remained stable. In fact, studies show that the grid can handle much higher levels of renewable energy while maintaining and even strengthening reliability.<sup>18</sup>
- Iowans can expect increased savings under the Clean Power Plan. By 2030, the Clean Power Plan is projected to save the average American family about \$7 on their monthly electric bills (a savings of more than \$80 per year).<sup>19</sup>

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<sup>10</sup> This 22% estimated reduction is from 2005 carbon pollution levels. See U.S. Environmental Protection Agency, *By the Numbers: Cutting Carbon Pollution from Power Plants*, <http://www.epa.gov/airquality/csp/15-cpp-by-the-numbers.pdf>.

<sup>11</sup> See generally, U.S. Environmental Protection Agency, *Learn about Carbon Pollution from Power Plants*, available at: <http://www2.epa.gov/carbon-pollution-standards/learn-about-carbon-pollution-power-plants#fact> and <http://www.epa.gov/climatechange/science/causes.html>.

<sup>12</sup> Iowa Climate Statement 2014: Impacts on the Health of Iowans, [http://cgrer.iowa.edu/files/cgrer\\_iowa.edu/files/pdf\\_files/iowa%20Climate%20Statement%202014%20Impacts%20on%20the%20Health%20of%20Iowans\\_with%20Signatures.pdf](http://cgrer.iowa.edu/files/cgrer_iowa.edu/files/pdf_files/iowa%20Climate%20Statement%202014%20Impacts%20on%20the%20Health%20of%20Iowans_with%20Signatures.pdf).

<sup>13</sup> U.S. Environmental Protection Agency, *Overview of Greenhouse Gases: Carbon Dioxide Emissions*, <http://www.epa.gov/climatechange/gigases/gases-co2.html>.

<sup>14</sup> U.S. Environmental Protection Agency, *Clean Power Plan State at a Glance: Iowa* (August 3, 2015), available at: <http://www.epa.gov/airquality/cpptolow/iowa.pdf>.

<sup>15</sup> U.S. Environmental Protection Agency, *By the Numbers: Cutting Carbon Pollution from Power Plants*, <http://www.epa.gov/airquality/csp/15-cpp-by-the-numbers.pdf>.

<sup>16</sup> See, Joel Schwartz et al., *Health Co-benefits of Carbon Standards for Existing Power Plants: Part 2 of the Co-benefits of Carbon Standards Study*, Appendix S at 1 (September 30, 2014), available at: [http://www.dhightan.vard.org/sites/default/files/userfiles/2\\_Health%20Co-Benefits%20of%20Carbon%20Standards.pdf](http://www.dhightan.vard.org/sites/default/files/userfiles/2_Health%20Co-Benefits%20of%20Carbon%20Standards.pdf).

<sup>17</sup> See, letter from health groups to EPA Administrator Gina McCarthy (December 1, 2014), available at: [file:///C:/Users/lane/Downloads/Comments\\_2.pdf](file:///C:/Users/lane/Downloads/Comments_2.pdf) and webinar by the Iowa Public Health Association and Iowa Environmental Health Association, *The Clean Power Plan: Combating Climate Change and Protecting Public Health* (November 2014), available at: [http://www.iowapha.org/Health-Impacts-of-Climate-Change-and-Iowa-Nurses-Association-2014-Adopted-Resolutions\\_#5\\_Support-the-EPA's-Proposed-Carbon-Dioxide-Regulations-for-Existing-Cool-Fired-Power-Plants](http://www.iowapha.org/Health-Impacts-of-Climate-Change-and-Iowa-Nurses-Association-2014-Adopted-Resolutions_#5_Support-the-EPA's-Proposed-Carbon-Dioxide-Regulations-for-Existing-Cool-Fired-Power-Plants), available at: <http://www.iowanurses.org/Portals/11/2014/20Resolutions%20final.pdf>.

<sup>18</sup> U.S. Energy Information Administration, *Iowa State Profile Analysis*, <http://www.eia.gov/state/analysis.cfm?state=IA>.

<sup>19</sup> Union of Concerned Scientists, *Burning Cash: Burning Cash: Ranking the States That Import the Most Coal* 2014 Update, available at: [http://www.ucsusa.org/assets/documents/clean\\_energy/Burning\\_Cash\\_2014\\_Update\\_National\\_Findings.pdf](http://www.ucsusa.org/assets/documents/clean_energy/Burning_Cash_2014_Update_National_Findings.pdf).

<sup>20</sup> American Wind Energy Association, *State Wind Energy Statistics: Iowa*, <http://www.awea.org/Resources/state.asp?itemNumber=5224>.

<sup>21</sup> American Wind Energy Association, *supra*, <http://www.iowawindenergy.org/whywind.asp>.

<sup>22</sup> Environmental Law and Policy Center, *Iowa Wind Power and Solar Energy Supply Chain Businesses* (March 2015), available at: <http://elpc.org/newsroom/publications/79a9iowa-clean-energy-supply-chain>.

<sup>23</sup> See U.S. Energy Information Administration, *Average Retail Price of Electricity to Ultimate Customers by End Use Sector: April 2014 and 2015* (June 25, 2015), [http://www.eia.gov/electricity/monthly/epsa\\_table\\_grapher.cfm?reprint\\_5\\_6\\_a](http://www.eia.gov/electricity/monthly/epsa_table_grapher.cfm?reprint_5_6_a).

<sup>24</sup> American Wind Energy Association and Solar Energy Industries Association, *A Handbook for States: Propagating Renewable Energy into State Compliance Plans for EPA's Clean Power Plan, Version 1.0* (February 2015) at 98, available at: <http://awea.files.cms-plus.com/FileDownloads/pdfs/Handbook%20for%20States%20final.pdf>.

<sup>25</sup> U.S. Environmental Protection Agency, *Fact Sheet: Benefits of a Cleaner, More Efficient Power Sector*, available at: <http://www.epa.gov/cleanpowerplan/fact-sheet-clean-power-plan-benefits-cleaner-more-efficient-power-sector.pdf>.