



Ohio Citizens for Climate Action

On June 2, the U.S. Environmental Protection Agency (EPA) introduced a proposal to reduce carbon emissions from existing power plants—a critical step to address climate change in the U.S. The proposal, dubbed the Clean Power Plan, requires each state to design a state-specific strategy—including investing in more renewable energy and energy efficiency—to achieve carbon reduction targets by 2030. The EPA has proposed a 29 percent emission reduction target by 2030 for Ohio.¹ The agency expects to finalize the Clean Power Plan in June 2015. Then, Ohio will have one year to develop a compliance plan and submit it to the EPA for approval.

The EPA rule means that Ohio *must* reduce its carbon emissions—but it also offers the state a significant opportunity to save its consumers money and boost its economy. The state must seize that opportunity if it wishes to serve its citizens and play a leadership role in the new energy economy. In fact, Ohio not only can meet the power sector emissions target, but it can achieve even greater reductions if the state resumes—and in some cases expands—its successful renewable and energy efficiency standards, and rejects efforts by state utilities to prop up their aging and uneconomical coal-fired plants. A strong Ohio carbon emissions standard would also enhance economic opportunity. Taking action to reduce climate causing pollution would sharpen Ohio's competitive edge, spur innovation and create jobs in the state.

The Case for Significant Carbon Emission Reductions in Ohio

Promoting energy efficiency is a win-win for Ohio consumers and the environment.

- Energy efficiency programs required under the state's clean energy laws have netted Ohio consumers more than \$1 billion in savings from 2009 through 2012.²
- Reports to the Public Utility Commission of Ohio show that investment in energy efficiency programs of \$456 million has resulted in savings of \$1.03 billion. That's \$2 saved for every \$1 spent on energy efficiency programs.³
- These same energy efficiency programs have helped avoid as much carbon pollution as 567,000 cars produce in a year.⁴
- Ohio can reap even more benefits from energy efficiency by expanding the state's existing energy savings target, investing in cost-effective Combined Heat and Power, updating its building energy codes and implementing equipment standards. Adopting all of these policies would save Ohioan consumers \$3.3 billion in 2030.⁵
- Additionally, these policies would enable the state to avoid the emission of 27,000,000 tons of carbon dioxide, save more than \$8,000,000 that otherwise would be lost from missed work days and prevent more than 12,000 asthma attacks.⁶
- Despite these benefits, fossil fuel interests succeeded this year in pushing through the state Legislature a measure intended to dismantle Ohio's clean energy laws and eliminate the cost-savings programs.
- A strong carbon standard provides a huge incentive for Ohio to resume its investment in energy efficiency measures, which would result in reducing electricity bills and climate causing pollution.

Ohio should continue to capitalize on the expanding clean energy economy.

- Targeted investment in green technology has revitalized Ohio's manufacturing base. For example, Quasar Energy uses microorganisms to convert waste—including garbage from FirstEnergy Stadium, where the Browns play—into power for homes and vehicles. The firm used to import components from Europe but now buys 85 percent of its parts from Ohio companies.⁷
- The state ranks No. 1 in the nation for wind-related manufacturing facilities, providing jobs for more than 5,000 Ohioans in 2013.⁸
- Lake Erie Energy Development Corporation (LEEDCo) is undertaking the development of a 5,000-megawatt (MW) offshore wind farm north of Cleveland. The company projects that by the time the wind farm is operational, 8,000 jobs will have been created.⁹
- In 2010, Ohio had 105,000 out of the 2.7 million green jobs in the U.S.¹⁰ By contrast, the coal industry employs approximately 90,000 Americans,¹¹ but only 3,000 are Ohioans, according to the Ohio Coal Association.¹²
- Green businesses in Ohio are growing at a rate that far outpaces the state's economy. Green technology jobs expanded by 3 percent from 2007 to 2010 while the state's economy lost 419,300 jobs over that same period.¹³
- Efforts to dismantle the state's renewable energy targets mean that the state could miss out on further investments in this growing industry. In response to legislation

passed this year that puts a freeze on how much electricity utilities must get from renewable energy sources, the president of Milford's Melink Corporation, which develops clean energy systems for companies, stated, "'We're going to have to commit our investments to other states that embrace renewable energy. It's a very unfortunate situation.'"¹⁴

Ohio can use renewable energy to move beyond fossil fuels altogether.

- Only 1 percent of the electricity generated in Ohio came from renewable sources in 2012, which means the state has not even scratched the surface of what's possible.
- Lake Erie Energy Development Corporation is looking to build the first offshore wind project in fresh water on Lake Erie. According to the National Renewable Energy Laboratory, Ohio has the potential to install more than 46,000 MW of wind capacity offshore. That's more than twice the electricity used by all of Ohio's households in 2011.¹⁵
- According to data from the National Renewable Energy Laboratory, Ohio's onshore wind potential is 54,919 MW. Wind power is capable of meeting more than 98 percent of the state's current electricity needs.¹⁶
- Ohio averages four to five peak sun hours daily. With this level of sun energy, the state gets an estimated 40 percent more solar energy than Germany, one of the world's leaders in solar energy production.¹⁷

Ohio is heavily dependent on fossil fuels, but clean energy policies, renewable energy potential and residents' support for climate action can rapidly change Ohio's energy portfolio. A strong and flexible carbon standard gives the state even greater incentive to shift away from fossil fuels.

- Ohio's power plants produce more carbon dioxide than power plants in all but four other states. That's because Ohio generates nearly 70 percent of its energy from coal-fired plants, which are the most carbon-intensive way to produce electricity.¹⁸
- Ohio's power plants emitted 1,850 pounds of carbon pollution per megawatt hour of electricity in 2012. The EPA's proposal would require Ohio to reduce that rate to 1,338 pounds by 2030.¹⁹
- Efforts by Ohio's three largest utilities—AEP, Duke and FirstEnergy—to lock electricity customers into buying power from their aging and uncompetitive coal plants is bad policy for consumers and will hinder the state's ability to meet strong clean energy goals.
- According to recent polling conducted by Public Policy Polling, Ohioans want more investment in renewable energy over fossil fuels, and an overwhelming majority of those polled expressed concern about air quality in Ohio.²⁰

Ohio is feeling the devastating effects of extreme weather. We have a huge stake in cutting climate causing pollution.

- Lake Erie will see more invasive species and more algae blooms, and the quality of beaches will be degraded.²¹
- In 2012, Ohio ranked eighth out of all U.S. states in the number of heat records set. It set 583 new high temperature records, which was three times the expected number. The state saw 49 times more high temperature records set than low-temperature records that year, and the new temperature records were, on average, hotter by 2.6° F.²²
- If no action is taken to slow down climate disruption, spring flooding could worsen in the Ohio River Basin beyond 2040. Droughts within the Basin could get longer and stretch beyond summer in mid-century and later.²³
- And about 80 percent of Ohio's counties will face a higher risk of water shortage by mid-century.²⁴

For more information about the EPA carbon rule, visit <http://www.citizen.org/documents/public-citizen-consumer-case-for-clean-power-plan.pdf>.

1. EPA, *Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants and Emission Standards for Modified and Reconstructed Power Plants ES-5* (2014), <http://pubc.it/VEfZWt>.
2. Ohio Advanced Energy Economy, *Ohio Utilities Energy Efficiency Programs Program Costs vs. Savings* (2014), <http://pubc.it/1Gf1sFl>.
3. Id.
4. Frontier Group, *Moving America Forward: State and Federal Leadership Is Producing Results in the Fight against Global Warming* 38 (2014), http://www.environmentohio.org/sites/environment/files/reports/OH_Moving_Forward_scrn.pdf
5. Sara Hayes, et al., *Change Is in the Air: How States Can Harness Energy Efficiency to Strengthen the Economy and Reduce Pollution* 27 (2014).
6. Id.
7. Amy Nordrum, *Cleveland Becomes Cleantech Leader But Ohio Backtracks on Renewable Energy*, *Inside Climate News*, Sept 11, 2014, <http://pubc.it/1yQRIUR>.
8. American Wind Energy Association, *State Wind Energy Statistics: Ohio*, <http://pubc.it/1Editwd> (last visited Oct. 4, 2014).
9. Jennifer Todd et al, *Creating the Clean Energy Economy: Analysis of the Offshore Wind Energy Industry* 14 (2103) <http://pubc.it/13zP8yW>.
10. Mark Muro et al, *Sizing the Clean Energy Economy: A National and Regional Green Jobs Assessment* 6 (2011), <http://pubc.it/1DSLTXF>.
11. U.S. Energy Information Administration, *Annual Coal Report 2012* 27 (2013), <http://pubc.it/1tuHPRu>.
12. Ohio Coal Association, *Ohio Coal Quick Facts*, <http://pubc.it/1rSBOKt> (last visited Oct 2014).
13. Amy Nordrum, *Cleveland Becomes Cleantech Leader But Ohio Backtracks on Renewable Energy*, *Inside Climate News*, Sept 11, 2014, <http://pubc.it/1yQRIUR>.
14. Deirdre Shesgreen & Maureen Groppe, *New EPA Power Plant Rules Affect Ohio More Than Most*, *Cincinnati Enquirer*, June 3, 2014, <http://pubc.it/1t6YCqa>.
15. Marc Swartz et al., *National Renewable Energy Laboratory, Assessment of Offshore Wind Energy Resources for the U.S.* 30 (2010), <http://pubc.it/1DSNgwm>.
16. American Wind Energy Association, *State Wind Energy Statistics: Ohio*, <http://pubc.it/1Editwd> (last visited Oct. 4, 2014).
17. Office of the Ohio Consumers' Counsel, *Solar Makes Cents: A Residential Consumer's Guide to Harnessing the Sun's Energy* 4, <http://pubc.it/1A5kFXP>.
18. Public Utilities Commission of Ohio, *Where Does Ohio's Electricity Come from?*, <http://pubc.it/1x1TXuL> (last visited Oct. 2014).
19. William Bowen, *New Federal Regulations on Carbon Emissions Make Ohio's Energy Debate More Important Than Ever*, *Crains Cleveland Business*, June 27, 2014, <http://pubc.it/1tTBcJX>.
20. Public Policy Polling, *Ohio Survey Results* 1 (2014) <http://pubc.it/1x1UnkK>.
21. Melinda Koslow et al., *Taken by Storm: How Heavy Rain is Worsening Algal Blooms in Lake Erie* (2013) <http://pubc.it/1tulzWF>.
22. National Climate Assessment Development Advisory Committee, *United States Global Change Research Program, National Climate Assessment: Draft for Public Review* 617 (2013), <http://pubc.it/13zRf6o>.
23. Institute for Water Resources, *Pilot Study of the Ohio River Basin: Synopsis of Down-scaled Modeling Results* 8 (2013), <http://pubc.it/1A5mGn7>.
24. Natural Resources Defense Council, *Climate Change Health Threats in Ohio* (2014), <http://pubc.it/1xoRBoH>.