

PENNSYLVANIA CAN CREATE 5,100 EFFICIENCY-RELATED JOBS, CUT ELECTRICITY BILLS, AND CURB CARBON POLLUTION



“Earth’s climate is on a path to warm beyond the range of what has been experienced over the past millions of years. By making informed choices now, we can reduce risks for future generations and ourselves, and help communities adapt to climate change. People have responded successfully to other major environmental challenges such as acid rain and the ozone hole with benefits greater than costs, and scientists working with economists believe there are ways to manage the risks of climate change while balancing current and future economic prosperity.”

—“WHAT WE KNOW,” AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, 2014

That sobering prospect and challenge from leading scientists makes it clear that **Pennsylvanians and all Americans** have an obligation to address climate change now, chiefly by reducing the carbon pollution fueling changes we’re already seeing. In doing so, we can reap substantial benefits to our economy while protecting future generations. Under the Clean Air Act, the U.S. Environmental Protection Agency is moving now to curb power plant carbon pollution, which makes up 40 percent of our nation’s total carbon footprint.

PENNSYLVANIA CAN ADDRESS CLIMATE CHANGE, WITH GREAT BENEFIT TO FUTURE GENERATIONS AND OUR ECONOMY



SETTING THE FIRST-EVER NATIONAL CARBON LIMITS... will cut Pennsylvania’s dangerous carbon pollution by 37.2 million tons.¹



USING SMART STRATEGIES... can put more than 5,100 people to work in efficiency-related jobs in Pennsylvania.



AND THAT WILL SAVE PENNSYLVANIA HOUSEHOLD ELECTRIC CUSTOMERS... \$214 million, or \$41 per average household.

All figures for 2020

WE MUST ACT NOW TO MEET THE ENVIRONMENTAL CHALLENGE OF OUR TIME



For more information, please contact:

Kelly Henderson
khenderson@nrdc.org
(202) 289-2401
 switchboard.nrdc.org/
blogs/khenderson

www.nrdc.org/policy
www.facebook.com/nrdc.org
www.twitter.com/nrdc

THE EPA'S PLAN TAKES AIM AT THE HEART OF THE PROBLEM

- Electric power plants are the largest source of the dangerous carbon pollution that is driving climate change and extreme weather.
- In 2011, the nation's 100 largest electric power companies, which account for 86 percent of electricity production and 88 percent of the industry's carbon pollution, released 2.1 billion tons of carbon pollution, according to reporting by the industry.²
- Pennsylvania power plants released 125 million tons of carbon pollution in 2011, equal to the annual emissions of 26 million cars. That ranks 2nd-highest in the nation, according to air emissions tracking from the 100 largest electricity providers.³
- Today we limit the amount of arsenic, mercury, and soot these plants emit. But there are no limits on carbon pollution. That is wrong, and it must change.

In response, the president has directed the U.S. Environmental Protection Agency to end the limitless dumping of carbon pollution from these power plants. The EPA has both the authority and the responsibility to reduce carbon pollution under the Clean Air Act, and it should move forward to help protect future generations. The EPA has proposed standards for future power plants and is scheduled to issue the first federal standards for existing power plants in June 2014.

NRDC'S CARBON POLLUTION SOLUTION: EMPOWER STATES TO CURB CLIMATE CHANGE

In December 2012, the Natural Resources Defense Council unveiled a proposal showing one way for the EPA to significantly cut carbon pollution from the nation's power plants—at low cost and with big benefits.⁴ This approach:

- **Allows states to tailor policies to meet the standards**, choosing among such actions as cleaning up existing power plants, shifting power generation to plants with lower emissions or none at all, and improving the efficiency of electricity use.
- **Sets carbon intensity-based emissions standards** for all large fossil-fueled power plants. Each state would have a different target; states relying more on coal would have a higher carbon target than those depending less on coal.
- **Charts a path to affordable and effective emissions reductions** by tapping into the ingenuity of the states and leveraging their existing efforts to reduce pollution and provide more clean energy options. This state-based approach has been used for decades to cut other pollutants.
- **Can be implemented now** using the authority the EPA has under the Clean Air Act.

BENEFITS FOR PENNSYLVANIA AND THE UNITED STATES FROM ACTING ON POWER PLANT CARBON POLLUTION

NRDC selected a respected firm, ICF International, Inc., often used by industry and government to model impacts of regulations, to analyze the impact of its power plant plan on jobs and electricity bills. In a 2014 analysis conducted by ICF for NRDC and based on NRDC's policy designs and assumptions, it was found that the EPA could design carbon pollution standards to help the nation reduce carbon pollution 29 percent by 2020 and 38 percent by 2025, compared with 2012 levels.⁵

These carbon reductions would generate between \$28 billion and \$63 billion in benefits through avoided climate change impacts and avoided pollution-related illnesses and deaths.

NEW JOBS AND LOWER BILLS

In addition, this approach could help the country in 2020:

- Create 274,000 new efficiency-related jobs.
- Save U.S. household and business customers \$37.4 billion per year on their electricity bills, including:
 - Save U.S. household customers \$13 billion, or an average of \$103 per household.
 - Save U.S. business customers \$24.3 billion.
- Reduce U.S. carbon pollution by 531 million tons.⁶
- Stimulate significant growth in the energy efficiency industry.

In Pennsylvania, the impacts would be substantial. Using the Clean Air Act in this way to reduce carbon pollution, the state could in 2020:

- **Create 5,100 new jobs**—largely through investments in energy efficiency.
- **Save \$3.40 per month** on the average customer's electricity bill.⁷
- **Cut 37.2 million tons of carbon pollution a year**, equal to the annual emissions of 7.8 million cars.
- **Save Pennsylvania residents a total of \$18 million every month, or \$214 million every year**, on their electricity bills.
- **Save Pennsylvania business customers \$241 million on their electricity bills.**
- **Stimulate significant growth** in the state's energy efficiency industry.

Because the bulk of investments in energy efficiency focus on making our buildings and homes more efficient, such investments create thousands of jobs that require a broad range of homegrown expertise, in industries that have been especially hard hit by the recent recession. There will be greater demand for electricians, heating/air-conditioning installers, carpenters, construction equipment operators, roofers, insulation workers, industrial truck drivers, construction managers, and building inspectors.

PENNSYLVANIA ALREADY LEADS ON CLEAN ENERGY

Pennsylvania's clean energy policies and growing energy efficiency and renewable energy industries have already provided big benefits to the state:

- Pennsylvania has more than 118,000 clean economy jobs, 4th-highest in the country as of 2010.⁸
- Pennsylvania could curb power-sector emissions by 21 percent with its existing policies, helping to meet potential new EPA rules.⁹
- EverPower Wind Holdings Inc. is a Pittsburgh-based developer and operator of utility-scale wind projects, with wind farms in Pennsylvania, New York, and California. Two new EverPower projects in Pennsylvania went online in 2012, creating more than 200 construction jobs and generating enough electricity to power 54,000 homes.¹⁰
- Wind power now employs 3,000 to 4,000 Pennsylvanians.
- The largest wind farm in the state began full operation in early 2013 near Scranton.¹¹
- In May 2013, Governor Tom Corbett announced Pennsylvania would be expanding clean energy initiatives with investments totaling nearly \$10 million in 13 projects in 11 counties.¹²

Environmental Entrepreneurs, a national community of business leaders who promote sound environmental policies that build economic prosperity, tracks clean energy job announcements. To see Pennsylvania's profile in comparison with the other states, visit www.cleanenergyworksforus.org.

THE IMPACT OF POLLUTION AND CLIMATE CHANGE IN PENNSYLVANIA AND THE UNITED STATES SHOWS WHY WE NEED TO ACT NOW

Rising temperatures are a health concern

Asthma sickened about 276,961 children and 901,488 adults in Pennsylvania in 2013.¹³ Climate change, driven by rising carbon pollution, leads to higher concentrations of ground-level ozone, or the pollutant smog, which aggravates asthma.

Extreme weather is becoming more common

In 2012, there were 3,527 monthly weather records broken for heat, rain, and snow in the United States, according to information from the National Climatic Data Center. That's even more than the 3,251 records smashed in 2011—and some of those records had stood for 30 years or more.¹⁴

And it is imposing growing and grievous costs

Nationally, in 2012 alone, crop losses, flood damage, wildfires, and other climate-related disasters cost our country more than \$140 billion. Taxpayers picked up the lion's share of the tab, to the tune of \$1,100 each.¹⁵

Pennsylvania's share is significant

In 2012, an estimated \$4.1 billion in federal taxes paid by Pennsylvanians went to clean up after extreme weather, according to Natural Resources Defense Council calculations.

Extreme Weather and Pollution Are Affecting Pennsylvanians Now

Although we cannot say climate change is responsible for any individual event, climate change is already making itself felt:

- In 2012, Pennsylvanians endured intense high temperatures that broke 24 heat records, drenching rains that broke 40 precipitation records, and five large wildfires.¹⁶
- Climate change will worsen smog and cause plants to produce more pollen pollution, increasing respiratory health threats, particularly for people with allergies and asthma. Residents in all 67 counties in Pennsylvania have faced ragweed pollution, and at least 31 counties also have unhealthy smog levels.¹⁷
- Combined sewer overflows due to flooding are a health risk for 150 Pennsylvania communities, including Philadelphia and Pittsburgh.¹⁸
- Pennsylvania has been declared a disaster area 14 times since 2000 due to severe storms and flooding.¹⁹
- The state's economy has been harmed: Lower-snowfall winters in 2001/2002 and 2008/2009 cost Pennsylvania ski resorts \$67 million, with a 12 percent decline in skier visits and a loss of 820 jobs.²⁰

THE LONGER WE DELAY TAKING SUBSTANTIAL STEPS TO CURB CARBON POLLUTION, THE WORSE THESE CHANGES WILL BECOME. TO PROTECT OUR CHILDREN AND FUTURE GENERATIONS FROM CATASTROPHIC CLIMATE CHANGE, WE MUST ACT NOW.

ENDNOTES

- 1 Laurie Johnson, Starla Yeh, and David Hawkins, *Retail Electric Bill Savings and Energy Efficiency Job Growth from NRDC Carbon Standard: Methodology Description*, Natural Resources Defense Council, May 2014.
- 2 Christopher Van Atten, Amlan Saha, and Lee Reynolds, *Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States*, M.J. Bradley & Associates, May 2013, www.nrdc.org/air/pollution/benchmarking/files/benchmarking-2013.pdf.
- 3 Ibid.
- 4 NRDC, *Using the Clean Air Act to Sharply Reduce Carbon Pollution from Existing Power Plants, Creating Clean Energy Jobs, Improving Americans' Health, and Curbing Climate Change*, December 2012, www.nrdc.org/air/pollution-standards/files/pollution-standards-IB.pdf.
- 5 NRDC, *Cleaner and Cheaper: Using the Clean Air Act to Sharply Reduce Carbon Pollution from Existing Power Plants*, www.nrdc.org/air/pollution-standards/.
- 6 Laurie Johnson, Starla Yeh, and David Hawkins, *Retail Electric Bill Savings and Energy Efficiency Job Growth from NRDC Carbon Standard: Methodology Description*, Natural Resources Defense Council, May 2014.
- 7 Ibid.
- 8 Brookings Institution, "The Clean Economy in the State of Pennsylvania," *Sizing the Clean Economy*, www.brookings.edu/~media/Series/Clean%20Economy/42.PDF.
- 9 Nathaniel Massey, *Pa. Could Cut Emissions 21% with Existing Policies—Report*, Governors' Wind Energy Coalition, October 22, 2013, www.governorswindenergycoalition.org/?p=6859.
- 10 Environmental Entrepreneurs, "Pittsburgh Wind Developer Employs 60 People," *Clean Energy Works for Us*, cleanenergyworks-forus.org/pittsburgh-wind-developer-employs-60-workers/.
- 11 BP, "BP and Sempra US Gas & Power Announce Full Commercial Operation of Largest Wind Farm in Pennsylvania," press release, January 8, 2013, www.bp.com/en/global/corporate/press/press-releases/bp-and-sempra-us-gas-power-announce-full-commercial-operation-of-largest-wind-farm-in-pennsylvania.html.
- 12 Pennsylvania Department of Community & Economic Development, "Governor Corbett: New Alternative, Clean Energy Investments Will Create 25 Jobs and Leverage \$109 Million in Additional Economic Investments," press release, May 8, 2013, www.newpa.com/newsroom/governor-corbett-new-alternative-clean-energy-investments-will-create-25-jobs-and-leverage-109-milli.
- 13 American Lung Association, *Estimated Prevalence and Incidence of Lung Disease*, April 2013, www.lung.org/finding-cures/our-research/trendreports/estimated-prevalence.pdf.
- 14 NRDC, "Extreme Weather Map Shows 3,527 Monthly Weather Records Shattered in 2012," press release, January 2013, www.nrdc.org/media/2013/130115.asp. NRDC, *Extreme Weather Map 2012*, www.nrdc.org/health/extremeweather/.
- 15 NRDC, *Who Pays for Climate Change?* May 2013, www.nrdc.org/globalwarming/taxpayer-climate-costs.asp.
- 16 NRDC *Extreme Weather Map 2012*.
- 17 NRDC, "Climate Change Health Threats in Pennsylvania," *Climate Change Threatens Health*, www.nrdc.org/health/climate/pa.asp.
- 18 Laurie Johnson, Starla Yeh, and David Hawkins, *Retail Electric Bill Savings and Energy Efficiency Job Growth from NRDC Carbon Standard: Methodology Description*, Natural Resources Defense Council, May 2014.
- 19 Federal Emergency Management Agency, *Disaster Declarations for Pennsylvania*, www.fema.gov/disasters/grid/state-tribal-government/44?field_disaster_type_term_tid_1=All.
- 20 NRDC and Protect Our Winters, *Climate Impacts on the Winter Tourism Economy in the United States*, December 2012, www.nrdc.org/globalwarming/files/climate-impacts-winter-tourism-report.pdf.