

AMERICA CAN CREATE 274,000 EFFICIENCY-RELATED JOBS, CUT ELECTRIC BILLS BY BILLIONS, 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

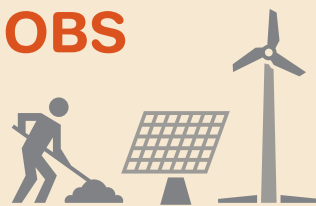
That sobering prospect and challenge from leading scientists makes it clear that **all Americans** have an obligation to address climate change now, chiefly by reducing the carbon pollution fueling changes we’re already seeing. In doing so, we can reap substantial benefits to our economy while protecting 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.

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

531
MILLION TONS
LESS POLLUTION

SETTING THE FIRST-EVER NATIONAL CARBON LIMITS... will cut America’s dangerous carbon pollution by 531 million tons.¹

274,000
JOBS



USING SMART STRATEGIES... we can put more than 274,000 people to work in efficiency-related jobs.

\$37.4
BILLION
IN SAVINGS
FOR HOUSEHOLD
AND BUSINESS
CUSTOMERS

AND THAT WILL SAVE U.S. HOUSEHOLD ELECTRIC CUSTOMERS... \$13 billion, or \$103 per average household.

All figures for 2020

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



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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
- 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 powerplants—at low cost and with big benefits.³ 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 statebased 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 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.⁴

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.**
- **Stimulate significant growth** in the 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.

Energy Efficiency Employment and Bill Savings by State					
	AR	CO	FL	IL	IA
Energy Efficiency Jobs					
Direct energy efficiency jobs	2,200	2,700	10,000	7,200	2,500
Net energy bill savings from efficiency					
Annual per household bill savings	\$43	\$12	\$3	\$70	\$76
Total annual household bill savings	\$57,000,000	\$26,000,000	\$27,000,000	\$355,000,000	\$101,000,000
Total commercial savings	\$32,000,000	\$23,000,000	\$19,000,000	\$273,000,000	\$65,000,000
Total industrial savings	\$33,000,000	\$13,000,000	\$3,000,000	\$175,000,000	\$69,000,000
Total energy bill savings (households and businesses)*	\$122,000,000	\$62,000,000	\$48,000,000	\$803,000,000	\$235,000,000
Carbon pollution benefits					
Reduced carbon pollution (tons CO ₂)	1,916,000	13,265,000	11,410,000	33,271,000	9,215,000
Health and environmental benefits of carbon pollution standard (in dollars)	\$82,000,000	\$570,000,000	\$491,000,000	\$1,431,000,000	\$396,000,000

Energy Efficiency Employment and Bill Savings by State					
	MI	MN	MO	NC	NV
Energy Efficiency Jobs					
Direct energy efficiency jobs	6,900	7,500	3,900	6,700	1,200
Net energy bill savings from efficiency					
Annual per household bill savings	\$109	\$105	\$67	\$86	\$2.78
Total annual household bill savings	\$462,000,000	\$244,000,000	\$180,000,000	\$363,000,000	\$3,000,000
Total commercial savings	\$399,000,000	\$194,000,000	\$129,000,000	\$245,000,000	\$2,000,000
Total industrial savings	\$230,000,000	\$149,000,000	\$54,000,000	\$105,000,000	\$2,000,000
Total energy bill savings (households and businesses)*	\$1,091,000,000	\$586,000,000	\$363,000,000	\$713,000,000	\$7,000,000
Carbon pollution benefits					
Reduced carbon pollution (tons CO ₂)	18,907,000	744,000	20,232,000	4,111,000	4,064,000
Health and environmental benefits of carbon pollution standard (in dollars)	\$831,000,000	\$32,000,000	\$870,000,000	\$177,000,000	\$175,000,000

Energy Efficiency Employment and Bill Savings by State			
	OH	PA	VA
Energy Efficiency Jobs			
Direct energy efficiency jobs	8,600	5,100	5,600
Net energy bill savings from efficiency			
Annual per household bill savings	\$82	\$41	\$159
Total annual household bill savings	\$399,000,000	\$214,000,000	\$517,000,000
Total commercial savings	\$288,000,000	\$131,000,000	\$406,000,000
Total industrial savings	\$216,000,000	\$110,000,000	\$125,000,000
Total energy bill savings (households and businesses)*	\$903,000,000	\$456,000,000	\$1,047,000,000
Carbon pollution benefits			
Reduced carbon pollution (tons CO ₂)	32,042,000	37,249,000	7,881,000
Health and environmental benefits of carbon pollution standard (in dollars)	\$1,378,000,000	\$1,602,000,000	\$339,000,000

THE UNITED STATES ALREADY LEADS ON CLEAN ENERGY

The nation's clean energy industries and workforce are growing fast, putting our country in a strong position to further leverage industry innovation and cost-effectively bring carbon pollution down to the level called for in NRDC's proposal. In the United States there were 3.4 million green goods and services jobs in 2011, the latest year for which data are available, according to the U.S. Bureau of Labor Statistics. That was 150,000 more such jobs than in the previous year.⁶ In particular, developing sources of clean, renewable energy in America will create good jobs, boost local and regional economies, strengthen our national security, and help curb global warming. Some renewable technologies are already making an important contribution to our domestic energy supply and employ hundreds of thousands of Americans. Already:⁷

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

- Private-sector investment in renewables surpassed \$100 billion in 2012–2013.
- Solar power is on track to grow 26 percent in 2014.
- The wind industry is growing and on schedule to supply 20 percent of U.S. power needs by 2030.

Environmental Entrepreneurs (E2), a national community of business leaders who promote sound environmental policies that build economic prosperity, continually tracks new job announcements. Its latest year-end report shows that 78,600 clean energy and clean transportation jobs were announced in America in 2013.⁸

Energy efficiency standards also deliver big savings and reduce carbon pollution. Federal appliance, equipment, and lighting standards have been a cornerstone of U.S. energy policy since first enacted in the 1980s. They have reduced energy consumption and provided real economic benefits for consumers and businesses. Through 2035, existing standards will save consumers and businesses more than \$1.1 trillion. Over the same period, cumulative energy savings will rise to more than 200 quads, or about two years' worth of total U.S. energy consumption.⁹ Through NRDC's proposal, consumers will save billions more.

These clean energy and energy efficiency advances are helping Americans get more power for less and moving our country toward reducing the dangerous carbon pollution that drives climate change. Standards limiting carbon pollution from power plants are the next big piece of the puzzle the nation needs to add to safeguard future generations.

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

Rising temperatures are a health concern

Asthma sickened about 20 million adults and more than 7 million children in the United States in 2013.¹⁰ 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.¹¹

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.¹²

Extreme Weather and Pollution Are Affecting All Americans Now

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

- Eight of the nine warmest years ever recorded since recordkeeping began in 1880 have occurred since 2000.¹³
- Each of the past three decades has been hotter than the one before, and the past three decades were hotter than any time in the past 1,400 years.¹⁴
- 2013 was tied with 2003 as the fourth-warmest year since recordkeeping began in 1880—annual land and ocean surface temperatures were 0.62°C (1.12°F) higher than average.¹⁵
- In 2013, seven weather and climate disasters, with losses exceeding \$1 billion each, occurred across the United States. Overall, these events killed 109 people and had significant economic effects on the areas impacted.¹⁶
- From 2000 to 2013, there were 849 federal disaster declarations in the United States due to severe storms, hurricanes, fires, floods, and tornadoes. From 1980 to 1993, there had been just 395 disaster declarations.¹⁷

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

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