

# COLORADO CAN CREATE 2,700 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 **Coloradans 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.

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

**13.2**  
MILLION TONS  
LESS POLLUTION

SETTING THE FIRST-EVER NATIONAL CARBON LIMITS...will cut Colorado’s dangerous carbon pollution by 13.2 million tons.<sup>1</sup>

**2,700**  
JOBS

USING SMART STRATEGIES... can put more than 2,700 people to work in efficiency-related jobs in Colorado.

**\$62**  
MILLION IN SAVINGS FOR HOUSEHOLD AND BUSINESS CUSTOMERS

AND THAT WILL SAVE COLORADO HOUSEHOLD CUSTOMERS... \$26 million annually.

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 into the atmosphere, according to reporting by the industry.<sup>2</sup>
- In Colorado, power plants released 44 million tons of carbon pollution in 2011, equal to the annual emissions of 9.2 million cars. That ranks 21st-highest in the nation, according to air emissions tracking from the 100 largest electricity providers.<sup>3</sup>
- 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.<sup>4</sup> 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 COLORADO 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.<sup>5</sup>

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.<sup>6</sup>
- Stimulate significant growth in the energy efficiency industry.

In Colorado, the impacts would be substantial. The state could in 2020:

- **Create 2,700 new jobs**—largely through investments in energy efficiency.
- **Cut 13.2 million tons** of carbon pollution.
- **Save Colorado households a total of \$2 million every month or \$26 million every year** on their electricity bills, NRDC estimates.
- **Save Colorado business interests \$36 million.**
- **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.

## COLORADO ALREADY LEADS ON CLEAN ENERGY

Already, Colorado's clean energy policies and growing energy efficiency and renewable energy industries have provided big benefits to the state:

- Colorado was home to 72,629 green energy jobs in 2011, according to the Bureau of Labor Statistics.<sup>7</sup>
- The pace of green job growth continues. Large-scale solar and wind projects completed in the past year generate more than 880 megawatts (MW) of clean electricity. Colorado's growing solar industry added more than 1,100 jobs to the state in just one year.
- NextEra's Limon Wind Farms generate not only 200 MW of power for the region, but also \$130 million in state and local tax payments and landowner royalties as well.<sup>8</sup>
- The wind energy industry directly and indirectly supports 4,100 to 5,000 jobs in Colorado.<sup>9</sup>
- Colorado has significantly more wind resources that have yet to be tapped. These resources are ranked 12th in the country, according to the American Wind Energy Association, and have the potential to generate 25 times the state's current electricity needs.<sup>10</sup>
- The National Renewable Energy Laboratory is based in Colorado. The nation's primary laboratory for renewable energy and energy efficiency research and development, the NREL is developing clean energy solutions to address America's energy and environmental challenges. The lab conducts research on biomass, photovoltaic technology, hydrogen and fuel cells, wind, energy efficient buildings, and advanced vehicles.<sup>11</sup>
- Colorado is at the forefront among states with an improved Renewable Energy Standard. Last summer, Governor John Hickenlooper signed into law a measure to expand the standard, which will drive clean energy investment and increase jobs and renewable-energy project development in rural Colorado. The measure increases Colorado's Renewable Energy Standard for cooperative associations that provide wholesale electricity in the state, and for large electric associations that provide service to at least 100,000 customers. It doubles the amount of renewable energy these utilities must provide—to 20 percent by 2020—while capping cost increases at 2 percent. Already, renewable energy employs nearly 10,000 Coloradans, helping to reduce the state's dependence on fossil fuels and to curb climate change.<sup>12</sup>

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

### Rising temperatures are a health concern

Asthma sickened about 105,192 of Colorado's children and 322,410 adults in 2013.<sup>13</sup> Climate change, driven by rising carbon pollution, leads to higher concentrations of ground-level ozone, or the pollutant smog, which aggravates asthma.

### It is driving extreme weather

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 the newly broken records had stood for 30 years or more.<sup>14</sup>

### Climate change 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.<sup>15</sup>

### Colorado's share is significant

In 2012 an estimated \$1.5 billion in federal taxes paid by Colorado residents went to clean up after extreme weather, according to Natural Resources Defense Council calculations.

### Extreme Weather and Pollution Are Affecting Coloradans Now

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

- Drenching rainstorms set precipitation records in 15 Colorado counties in 2012.<sup>16</sup> The same year, the state endured 43 large wildfires.<sup>17</sup>
- In 2012, excessive heat broke records in 33 Colorado counties, and heavy snowfall set records in 8 counties.<sup>18</sup>
- Deadly, record-breaking rains drenched communities along Colorado's Front Range in September 2013, swamping roughly 18,000 homes and causing an estimated \$2 billion in damage.<sup>19</sup>
- Climate change intensifies the impacts of air pollution. In Colorado 13 counties have experienced excessive ragweed pollution and 5 have had unhealthy levels of smog.<sup>20</sup>
- The federal government has issued disaster declarations for Colorado seven times since 2000 due to severe rainstorms, winter snowstorms, wildfires such as those that ravaged the Waldo Canyon area, tornadoes, and flooding.<sup>21</sup>

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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