

# EPA's CLEAN POWER PLAN, CLIMATE CHANGE AND AGRICULTURE

---

Carbon pollution threatens the health of Americans and our environment. We are already seeing an increase in temperatures, extreme weather events, drought, flooding, and sea level rise in areas across the United States, and these impacts are expected to get worse as carbon pollution in our atmosphere increases. On August 3, 2015, the U.S. Environmental Protection Agency (EPA), as part of President Obama's Climate Action Plan, finalized a historic plan to cut carbon pollution from power plants—the largest source of carbon pollution in the United States. EPA's Clean Power Plan will maintain an affordable, reliable energy system, while cutting pollution and protecting public health and the environment now and for future generations.

## IMPACTS OF CLIMATE CHANGE ON AGRICULTURE

U.S. agriculture has a long history of successful adaptation to climate variability. The accelerating pace and intensity of climate change, however, present new challenges for production. Climate change poses serious threats to agriculture, an important sector of the U.S. economy. In addition to providing us with much of our food, the crops, livestock, and seafood that are grown, raised, and caught in the United States, agriculture contributes over \$300 billion to the economy each year.

**Climate disruptions to agricultural production have increased in the past 40 years and are projected to continue increasing over the next 25 years.** Many agricultural regions will experience declines in crop and livestock production from increased stress due to weeds, diseases, insect pests; changes in extreme weather, such as droughts and floods; and other climate change induced stresses like changes in wildfires. Though increased carbon dioxide (CO<sub>2</sub>) fertilization could benefit production in the near term, by mid-century and beyond, these impacts will be increasingly negative on most crops and livestock. [U.S. Global Change Research Program, National Climate Assessment, [2014](#)]

**Heat waves, which are projected to increase under climate change, could directly threaten livestock.** Heat stress in livestock can increase vulnerability to disease, reduce fertility, and decrease milk production. Exposure to high temperatures can be costly to producers, as was the case in 2011, when heat-related production losses exceeded \$1 billion. [U.S. Global Change Research Program, National Climate Assessment, [2014](#)]

**Climate change may increase the prevalence of parasites and diseases that affect livestock.** Warmer winters and the earlier onset of spring could allow some parasites and pathogens to survive more easily. In areas with increased rainfall, moisture-reliant pathogens could thrive. [U.S. Global Change Research Program, National Climate Assessment, [2014](#)]

**Climate change will have consequences for food security.** Both in the U.S. and globally, climate change will affect food security through changes in crop yields and food prices; effects on food processing, storage, and

safety; and disruptions to distribution, transportation, and retailing. Adaptation measures can help delay and reduce some of these impacts. [U.S. Global Change Research Program, National Climate Assessment, [2014](#)]

## THE CLEAN POWER PLAN:

The Clean Power Plan achieves significant reductions in carbon pollution from power plants while advancing clean energy innovation, development and deployment. It follows on and will help advance current trends in the power sector towards increased use of low- and no-carbon electricity generation and greater use of energy efficiency, in ways that will preserve affordability for consumers and continues U.S. leadership in addressing climate change. States and businesses have already charted a course toward cleaner, more efficient power, and the Clean Power Plan builds on their progress. Supported by EPA's ongoing scientific assessment, the Clean Power Plan will allow states to use qualified biomass resources as a component of their state plans.

The Clean Power Plan will:

- Put our nation on track to cut carbon pollution from the power sector by 32 percent by 2030 while maintaining electric system reliability and affordable electricity.
  - In addition to helping make our electric system cleaner, the Clean Power Plan will make electricity more affordable in the long run. EPA's analysis of impacts on electricity bills shows that Americans are expected to save over \$80 annually on their utility bills by 2030.
- Reduce CO<sub>2</sub> emissions from power plants—an essential step toward reducing the impacts of climate change and providing a more certain future for our environment, our health and future generations.
  - By acting on climate now, we are fulfilling a moral obligation to our children and grandchildren to leave them with a healthier, more stable planet.
- Change the international dynamic and leverage international action. Climate change is a global challenge and we need global action. When the U.S. leads, other nations follow.

By acting on climate now, we are fulfilling a moral obligation to our children and grandchildren to leave them with a healthier, more stable planet.

## THE CLEAN POWER PLAN: SIGNIFICANT CLIMATE AND PUBLIC HEALTH BENEFITS

The transition to clean energy is happening faster than anticipated. This means carbon and air pollution are already decreasing, improving public health each and every year. The Clean Power Plan accelerates this momentum, putting us on pace to cut this dangerous pollution to historically low levels in the future. When the Clean Power Plan is fully in place in 2030, carbon pollution from the power sector will be 32 percent below 2005 levels, securing progress and making sure it continues. The transition to cleaner sources of energy will better protect Americans from other harmful air pollution, too. By 2030, emissions of sulfur dioxide from power plants will be 90 percent lower compared to 2005 levels, and emissions of nitrogen oxides will be 72 percent lower. Because these pollutants can create dangerous soot and smog, the historically low levels mean we will avoid thousands of premature deaths and have thousands fewer asthma attacks and hospitalizations in 2030 and every year beyond.

Within this larger context, the Clean Power Plan itself is projected to contribute significant pollution reductions, resulting in important benefits, including:

- Climate benefits of \$20 billion
- Health benefits of \$14-\$34 billion
- Net benefits of \$26-\$45 billion

Because carbon pollution comes packaged with other dangerous air pollutants, the Clean Power Plan will also protect public health, avoiding each year:

- 3,600 premature deaths
- 1,700 heart attacks
- 90,000 asthma attacks
- 300,000 missed work days and school days

From the soot and smog reductions alone, for every dollar invested through the Clean Power Plan, American families will see up to \$4 in health benefits in 2030.

## GET INVOLVED

Public engagement was essential throughout the development of the Clean Power Plan, and EPA will continue to engage with communities and the public during the rule's implementation. EPA will also be conducting a robust outreach effort throughout the comment period for the proposed federal plan.

To ensure opportunities for the public to continue to participate in decision-making, EPA will be providing training and resources throughout the implementation process. EPA is also requiring that states demonstrate how they are actively engaging with communities in the formulation of state plans developed for the Clean Power Plan. To learn more please visit the Clean Power Plan Portal for Communities at [www2.epa.gov/cleanpowerplan/clean-power-plan-toolbox-communities](http://www2.epa.gov/cleanpowerplan/clean-power-plan-toolbox-communities).



## LEARN MORE

For more information on the Clean Power Plan, visit [www.epa.gov/cleanpowerplan](http://www.epa.gov/cleanpowerplan).

For tips on how you can reduce your carbon footprint, visit [www.epa.gov/climatechange/wycd/](http://www.epa.gov/climatechange/wycd/).

###