

Renewable Energy Cleans Up the Environment

Alex Thompson, Communications Associate • Apr. 22, 2024

Believe it or not, Earth Day is already here. This time of year presents a great opportunity to reflect on an important *why* behind our work. Namely, the undeniable environmental benefits of clean energy.

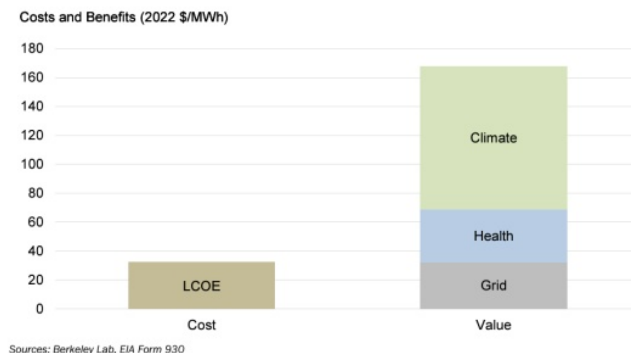
Renewable energy is a viable alternative to fossil fuels. It provides clean, reliable, low-cost electricity that leaves minimal carbon footprint. Cleaner air and water, and decreased greenhouse gas emissions offer a cleaner future for America.

One of the greatest environmental benefits renewable energy delivers is pollution reduction. [Nearly 30%](#) of U.S. greenhouse gas emissions come from burning fossil fuels used in electricity generation. The Plains has seen the largest reduction in emission intensity from electricity generation over the last 10 years thanks at least in part to the growth of wind power capacity in the region. According to a recent [report](#) by the Business Council for Sustainable Energy, the United States' emissions are the lowest they have been since 1987 (that same year, Bon Jovi released their chart-topping "Living On A Prayer"). The nation's power emissions - emissions that are caused by power generation - have decreased a whopping 40 percent since 2005.

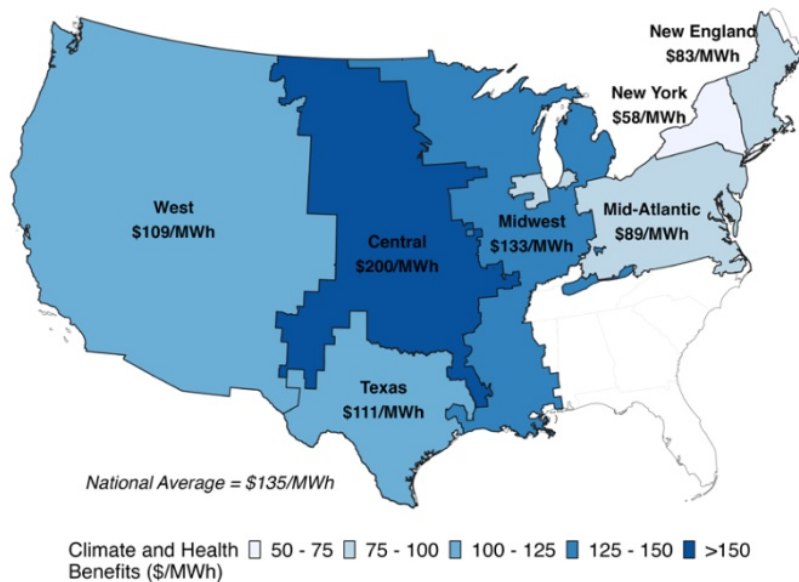
Wind energy is [the number one renewable energy source](#), providing over 10 percent of the nation's electricity needs. Last year, wind energy avoided 336 million metric tons of carbon dioxide emissions. That's the equivalent of taking 73 million cars off the road. That makes for cleaner air, and a cleaner environment.

Solar energy continues to rapidly expand, now providing an astounding 155 gigawatts (GW) of carbon-free electricity. According to the Solar Energy Industries Association (SEIA,) solar energy saves as much carbon as 3.3 billion trees. More than 27 million homes derive their electricity from solar, which has offset more than [88 million metric tons](#) of carbon dioxide emissions. In 2024, the U.S. Energy Information Administration projects the nation's solar industry will add another [34 GW of capacity](#).

Renewable energy resources, like wind and solar, also reduce sulfur dioxide, nitrogen oxide and fine particulate matter, which cause health problems. According to the Center for Disease Control and Prevention, about [25 million people](#) suffer from asthma. About 6.5 percent of children in the U.S. have been diagnosed with asthma. The health and climate benefits from clean energy can be broken down in monetary terms. For example, according to [the Office of Energy Efficiency and Renewable Energy](#), the climate and health benefits of wind energy in the Midwest are valued as \$133/MWh. That's a massive amount of



value that usually gets left out of the conversation.



Note: Estimates not provided for Southeast due to small number of wind plants in that region.

Sources: Berkeley Lab, Form EIA-930

But that's not all! Renewable energy also reduces water consumption. Fossil fuel power plants rely on water for generation and cooling, making the U.S. power sector the highest water consumer. Thankfully, renewables like wind and solar offer a solution. Clean energy in the United States saved [228 billion gallons](#) of water in 2023 alone.

Lastly, renewables are recyclable. Reducing waste from decommissioned projects unlocks a host of benefits, including conserving resources, reducing environmental impact, saving costs, and creating a sustainable business model. Take solar panels, for example. Up to 95 percent of a panel's semiconductor material and 90 percent of the glass are recyclable. Beyond recycling, parts can also be repurposed, refurbished, or resold. There are all sorts of creative solutions to reduce waste, such as taking old turbine blades and turning them into [public art](#).

Spring is a season of renewal. Trees and flowers come to life, the days grow brighter and warmer, and many of us begin to think about growth and change - what we can do to improve the world in which we live. The renewable energy industry has come a long way, bringing with it an abundance of environmental benefits that create a healthier planet. And there's more to look forward to.

As the demand for clean energy grows, the future looks bright and the air smells clean.