

The Environmental Footprint of Clean Energy

Ella Laurent, Communications Associate • Apr. 27, 2023

As we celebrate Earth Month, it's exciting to know that transitioning to renewable energy sources means positive environmental benefits for people and our planet.

In 2022, the United States endured an alarming [18 weather disasters with repairs costing nearly \\$1 billion](#). Research shows that low air quality correlates to increases in the severity and number of extreme weather events as well as public health concerns? But, there is a silver lining. If we can reach 80% renewable energy generation by 2050, we have the potential to save [\\$1.2 trillion in health and environmental costs](#). It's a lofty goal, but it's worth striving for.

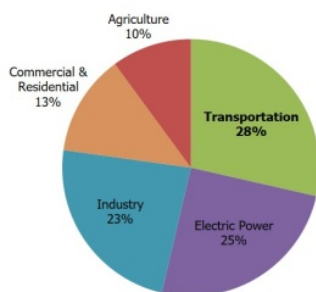
According to the [American Clean Power Association](#) (ACP), renewable energy sources, including wind, solar, and storage, currently provide 15 percent of the nation's electricity. With tremendous wind and solar resources, the Midwest alone has [32,400 Megawatts](#) (MW) of low-cost, clean, energy currently installed, and another [514 utility-scale clean energy projects](#), representing

[91,000 thousand](#) MW in development. This development will support our planet in many ways.

Here are 3 Ways Clean Energy Supports a Healthy Environment:

Clean energy supports a healthy planet by reducing carbon emissions that contribute to air and water pollution, decreasing water consumption, and benefiting farmland by promoting healthy soil.

Greenhouse Gas Emissions ([EPA](#))



U.S. Environmental Protection Agency (2023). Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2021

Clean Energy Increases Air Quality

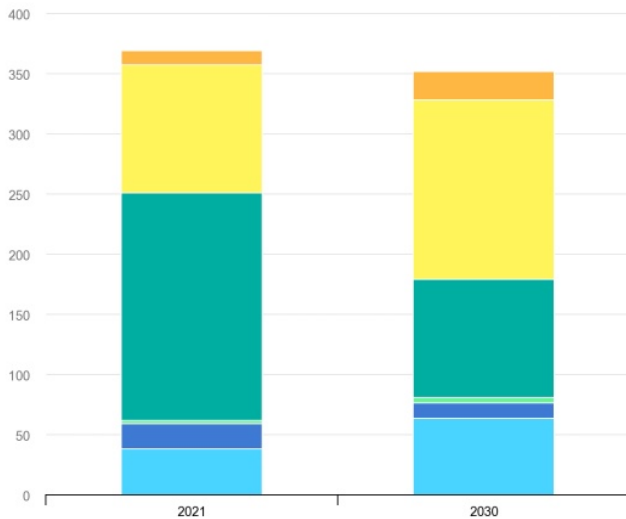
The use of fossil fuels releases large amounts of greenhouse gases, such as carbon dioxide, which pollute our environment and decrease our air quality. Globally, we have now reached a record high of [37.5 billion metric tons of carbon emissions](#). Carbon emissions cause smog and acid rain and contribute to rising temperatures and extreme weather events.

Generating more clean energy will allow us to move away from fossil fuel-based energy and thereby reduce greenhouse gas emissions from the electric sector. ACP reports that our currently installed wind, solar, and energy storage projects have avoided more than [435.5 million metric tons of carbon dioxide](#) - that's the equivalent of taking more than 94 million cars off the road.

Clean Energy Reduces Water Use

Expanding the use of clean energy resources also supports our nation's water conservation goals. According to ACP, clean energy projects avoided [218 billion gallons of water consumption](#). Solar and wind energy systems do not require water for power generation, whereas coal and natural gas power plants require a large amount of water for cooling. Expanding clean energy across the U.S. will result in water consumption reductions and positive environmental impacts.

Global water withdrawal in the energy sector in the Net Zero Scenario, 2021 and 2030 [\(IEA\)](#)



● Primary energy: Bioenergy ● Primary energy: Fossil fuels ● Primary energy: Hydrogen ● Power generation: Fossil fuels ● Power generation: Nuclear ● Power generation: Renewables

Clean Energy Improves Soil Health

Agriculture, particularly for food production, relies on healthy soil to support vegetation and livestock. Fortunately, [solar farms support agriculture](#) by promoting healthy habitat for growing crops or other beneficial vegetation underneath and around panels. Agrivoltaics enable land to be used for growing certain crops while harvesting the sun for crops. The shade from the panels lowers soil temperatures and increases the soil's ability to absorb nutrients. Harvesting the sun gives the soil a chance to rest and rejuvenate, making the soil richer and [reduces fertilizer and pesticide use](#) that contribute to water pollution.

The bottom line is that the future of our planet depends on transitioning to and embracing sustainable and reliable clean energy. A clean energy future means supporting carbon reduction, water conservation, better air quality, and weather stabilization. Clean, affordable, reliable renewable energy delivers on all these important metrics.