Clean Power Technologies Help Our Economy and our Planet

Clean energy sources like wind and solar are critical parts of reducing greenhouse gas emissions and combating climate change.

Transitioning to majority zero-carbon energy sources like land-based wind, offshore wind and solar will help drive the clean energy economy forward while benefiting our planet.

#JustTheFacts Clean Power + Climate:

Clean Power Provides a Cleaner and Healthier Environment for Americans

When generating electricity, wind and solar power produce zero carbon emissions, the greenhouse gas primarily responsible for climate change.

A typical wind project repays its carbon footprint from construction in six months or less, providing decades of zero-emission energy.

The carbon footprint of a typical solar pv plant is 11x smaller than a natural gas plant and 21x smaller than a coal plant.

Clean Power Reduces Carbon Emissions

Wind and solar power avoid emitting 405 million metric tons of carbon dioxide per year. That amount is the emissions equivalent of:

- Taking more than 86 million cars off the road each year
- 373 million one-way trips down scenic Route 66
- Driving 993 billion miles in your average car. That’s the emissions equivalent of:
  - 40 million trips around the Earth
  - 17.5 trillion football fields long
  - 14.6 trillion trips around the bases on a baseball diamond
- Would equal the amount of carbon sequestered by planting 18.2 trillion trees
- The carbon emissions saved is equivalent of not using more than 45 billion gallons of gasoline
- The carbon emissions savings can prevent over $20 billion in future climate-related damages each year

Clean Power Saves Water

Because clean power does not require water for cooling like conventional power plants, wind and solar projects save 200 billion gallons of water each year. That amount of water is enough to fill:

- 300,000 Olympic-sized swimming pools
- 1.5 billion single-use sized bottles of water

Clean Power Makes Communities Healthier by Improving Air Quality

Generating electricity using clean power provides public health benefits. Wind and solar power cut significant amounts of harmful air pollutants that impair the respiratory system and exacerbate asthma, like sulfur dioxide (SO2) and nitrogen oxides (NOx) from entering the Earth’s atmosphere.

Decreasing these pollutants helps to reduce smog and the rates of asthma attacks and other respiratory issues.

- Wind and solar power avoid 284,000 metric tons of nitrogen oxides from being emitted into the Earth’s atmosphere
  - That’s the same amount of NOx emitted by an average tractor trailer driving nearly 31 billion miles
- Wind and solar power prevent 255,000 metric tons of sulfur dioxide from being emitted into the Earth’s atmosphere

Learn more at cleanpower.org
Clean Power is a Cost-Effective Solution to Combat Climate Change
Wind and solar costs have fallen 65% and 85% over the last decade, making them the most affordable new electricity sources in most of the U.S.

Clean Power Lifts Up Communities
Clean power expands the tax base in American communities and provides extra revenue from drought-proof land lease payments to landowners that host projects.
- $1.2 billion in new tax revenue from clean power projects in 2021
- $1.3 billion from land lease payments to farmers, ranchers, and private landowners

Wind and Solar Energy Can Cleanly Power Homes, Businesses, Farms, and Entire Communities
- Wind is the nation’s #1 source of renewable electricity generation
- There’s over 200 gigawatts of clean power operating in the U.S.
That’s enough to power: over 55 million homes

Clean Energy Sources are Critical in the Global Fight Against Climate Change
Climate change is a global threat that requires international collaboration to address.
- As carbon-free and cost-competitive energy sources, wind and solar power are leading climate solutions on the path toward a low-carbon future
- Reaching a majority renewable energy future by 2050 will lower emissions from the electric sector by 76 percent below 2005 values, helping meet most of the target set under the Paris Agreement

Clean Power Creates Climate-Friendly and Family-Sustaining Jobs
- Clean power supports over 415,000+ jobs across all 50 U.S. states
- Wind turbine technician and solar installer are 2 of the top 5 fastest-growing jobs in the country
- Clean energy is set to have nearly 200,000 domestic workers in the manufacturing sector alone by 2030 as part of achieving a majority renewable electric grid
- U.S. offshore wind growth will support up to 83,000 jobs by 2030
- Renewable energy workers are paid 25-35 percent more than the national median wage and 10% of the workforce is unionized

America’s clean power sector stands ready to play its role as the world works together to achieve a lower-carbon future and shift to a 21st century economy powered by clean energy.

Learn more at cleanpower.org