

A Look at Emissions During

EARTH WEEK

Climate change conversations have been front and center. If you only read today's news headlines, you'd think the U.S. is among the worst polluters on the planet, which couldn't be farther from the truth. It's great more people are paying attention to our environmental health. Still, it's also important to understand the facts and figures for an educated, productive discussion.

Thanks to natural gas, conservation, efficiency, and increased usage of wind and solar power, the U.S. is leading the world in cutting air-polluting emissions. Yes, you read that right! And we're more than halfway toward reaching our pollution-reduction goals under the Paris climate accord – even without being a signatory.

The World Health Organization identifies outdoor air emissions as “injurious to human health” and attributes emissions such as particulate matter (PM), ozone (formed by volatile organic compounds [VOCs] and nitrogen oxides [NOx]) and sulfur dioxide (SO₂) to lung cancer, respiratory infection, heart disease and stroke.

These emissions have adverse human health and environmental impacts. There are significant economic impacts, including increased health care costs, decreased labor productivity, and declining agricultural crop yields.

Thankfully, even as U.S. energy production has increased and the expanded use of natural gas has surged, emissions of key air pollutants and greenhouse gases have declined significantly across the country.

According to the U.S. Environmental Protection Agency, nationwide emissions of key pollutants have decreased across the board from 1990 to 2019:

- 65% reduction in nitrogen oxides (NO_x)
- 91% reduction in sulfur dioxide (SO₂)
- 58% reduction in carbon monoxide (CO)
- 30% reduction in volatile organic compounds (VOCs)
- 25% reduction in fine particulate matter (PM_{2.5})
- 38% reduction in coarse particulate matter (PM₁₀)
- 1% reduction in ammonia (NH₃)

The International Energy Agency (IEA) reports that global energy-related CO₂ emissions declined 5.8% in 2020. However, emissions in the U.S. fell even more - by 10% - leading the world in energy-related carbon reductions. The IEA attributes this commendable emission reduction to a shift toward natural gas and renewable energy.

While global emissions will remain a concern, it's important to remember through innovation and smart energy policy; the U.S. has drastically reduced its emissions across the board. Making positive changes that will benefit the environment and our health while still providing us with energy to fuel our lives. Through future innovations in carbon capture technology, renewable energy, and battery storage, we will continue to lower our carbon footprint and be a model for the world.