Over the past decade, **coal-to-natural gas switching** in power generation has driven domestic emissions reductions, positioning America at the leading edge of climate and air quality progress. And last year, U.S. greenhouse gas emissions fell by 2.1% – almost entirely due to a decline in coal consumption, according to new analysis from the Rhodium Group.

The increase of **cleaner-burning natural gas** in electricity production accounts for much of this positive development, as natural gas emits about half the carbon compared to coal combustion. In 2019, coal-fired power generation fell by an estimated 18%, the largest year-on-year decline on record, and related emissions dropped by 190 million metric tons – equivalent to the amount of carbon sequestered by nearly 250 million acres of U.S. forests in one year.

Per the Rhodium Group, overall power sector emissions were down by nearly 10% last year, with the affordability of natural gas and renewables driving an increasing share of lower-carbon energy options in U.S. electricity generation.

The **U.S. Energy Information Administration** (EIA) forecast a similar drop in carbon dioxide emissions in 2019, emphasizing that the decline would largely result from the growing prevalence of natural gas in the electricity generation mix. EIA data also show that, last year, the average annual price for natural gas was the **lowest since 2016**, supporting higher use – particularly in the **power sector**. Natural gas spot prices at the national benchmark Henry Hub in Louisiana were down 20% in 2019, the lowest level in decades, bolstered by record-setting growth in domestic energy production.

These latest analyses are consistent with the years-long trend in U.S. emissions reductions. Competitive prices, and the increasing efficiency of the natural gas generator fleet, have incentivized coal-to-natural gas switching, which has delivered on climate progress.
Between 2005-2018, carbon dioxide emissions from the U.S. power sector declined by 28%, with natural gas accounting for more than half of the reductions – and this same trend has played out at the state level. During that time, for example, power generation from natural gas in Ohio and North Carolina increased from about 2% to more than 30%, while statewide emissions of carbon dioxide from the sector decreased by 35% or greater in both cases.

Globally speaking, affordable natural gas also supports U.S. liquefied natural gas (LNG) exports, which grew 69% since 2018, making America the third largest LNG exporter. Growing LNG export capacity enables the U.S. to share the economic and environmental benefits of natural gas with our allies around the world.

To serve this growing demand for both LNG exports and U.S. natural gas-fired power generation, energy producers rely on pipeline infrastructure connecting supply regions, like the Permian and Appalachian Basins, with export facilities and power plants. Over the past five years, liquids pipeline mileage increased nearly 12% to accommodate increased domestic energy production, and ongoing infrastructure expansion will ensure that our abundant resources reach American households, businesses and trading partners.

In 2020, America’s natural gas and oil industry will continue to deliver the affordable and reliable fuels that contribute to emissions reductions and climate progress. Today, the U.S. is the global leader in both energy production and environmental performance, largely thanks to low-cost natural gas and its role in reinforcing our ever-cleaner energy solutions.

About The Author

Sam Winstel is a writer for the American Petroleum Institute. He comes to API from Edelman, where he supported communications marketing strategies for clients across the firm’s energy and federal government practices. Originally from Dallas, Texas, Sam graduated from Davidson College in North Carolina, and he currently resides in Washington, D.C.

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