

SOUTH CAROLINA EMISSIONS ANALYSIS



SOUTH CAROLINA EMISSIONS ARE DECLINING

While the nation's increased energy production has received a great deal of media focus in recent years, little notice has been paid to the significant emission reductions and overall environmental improvement in South Carolina and across the nation.

The World Health Organization identifies outdoor air emissions as "a major cause of death and disease globally" and attributes emissions such as particulate matter (PM), ozone (formed by volatile organic compounds (VOCs), nitrogen oxides (NOx) and sulfur dioxide (SO2) to lung cancer, respiratory infection, heart disease and stroke. The economic impacts of these air emissions include increased health care costs, decreased labor productivity and declining agricultural crop yields.

South Carolina Emission Trends 1990-2017

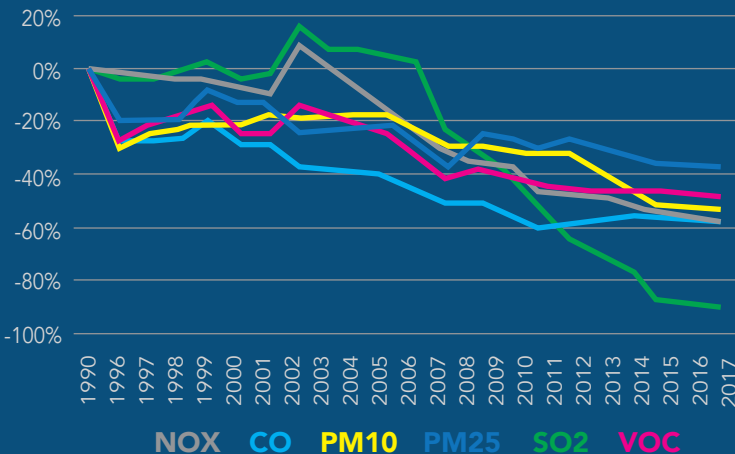


Figure 1. South Carolina Emission Trends 1990-2017 (Source: U.S. Environmental Protection Agency and Energy Information Administration) NOTE - 2014 EPA emissions data omitted due to reporting error

Emissions of key air pollutants and greenhouse gases have declined significantly across the state, even though natural gas consumption has grown substantially and South Carolina remains a large energy consumer:

From 1990 to 2017, South Carolina's emissions of key pollutants have decreased across the board:

- 59 percent reduction in nitrogen oxides (NOx)
- 89 percent reduction in sulfur dioxide (SO2)
- 58 percent reduction in carbon monoxide (CO)
- 48 percent reduction in volatile organic compounds (VOCs)
- 36 percent reduction in fine particulate matter (PM2.5)
- 52 percent reduction in coarse particulate matter (PM10)

Additionally, from 2000 to 2016, South Carolina's carbon dioxide (CO2) emissions decreased by more than 12 percent. These emissions reductions are remarkable in light of South Carolina's growth from 1990 to 2017, including:

- A 240 percent increase in the state's gross domestic product
- A 17 percent increase in vehicle miles traveled per capita
- A 49 percent increase in population

South Carolina's cleaner air means that the state's wildlife and natural assets will be protected. This ensures that tourism, a \$22.6 billion industry for the state, will keep thriving. Not only that, South Carolina's families and children can enjoy all their state has to offer in a healthier way, from exploring Greenville's Falls Park to fishing excursions at Hilton Head.

Additionally, improved air quality means that South Carolina's 25,000 farms will keep generating more than \$3 billion annually for the state's economy, mainly from poultry, corn and cotton.

SOUTH CAROLINA ECONOMIC GROWTH

Manufacturing drives South Carolina's economy. In 2018, 64 manufacturers announced expansions in the state. The automotive industry is also a leading sector in the state – automakers, suppliers and component manufacturers all call it home. In fact, South Carolina is ranked #1 for the export of completed passenger vehicles. The state is also rapidly becoming a leading center for the nation's aerospace industry with 400 such firms located there.

SOUTH CAROLINA ENERGY CONSUMPTION

More than 65 percent of South Carolina's energy needs are met by oil and natural gas. Over the last decade, the state's consumption of natural gas-powered electricity has quadrupled, and the power sector for nearly half of that. Additionally, about 20 percent of South Carolinians use natural gas for home heating during the winter. The state's transportation sector accounts for nearly 90 percent of petroleum use.

U.S. ENERGY PRODUCTION

New, efficient technologies have enabled the United States to increase oil and gas production over the last two decades. The U.S. is now the world's largest crude oil and natural gas producer, having surpassed Saudi Arabia and Russia, respectively, according to the U.S. Energy Information Administration.

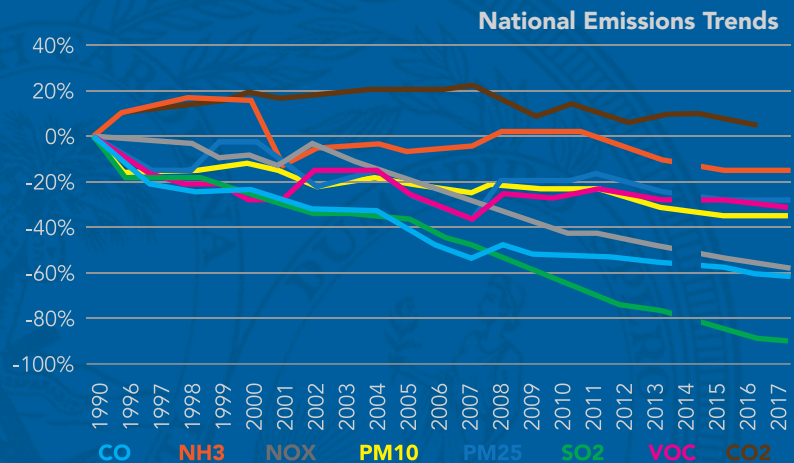
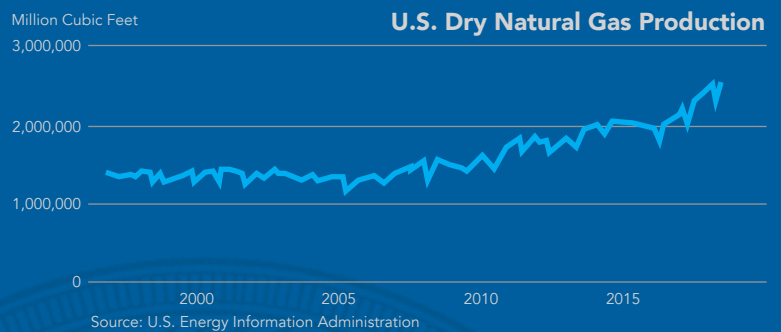
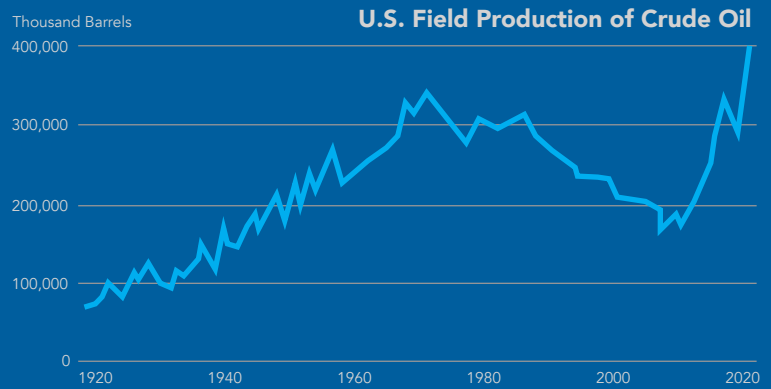
U.S. EMISSIONS ARE DECLINING TOO

Rigorous environmental standards and energy production can and do coexist. U.S. oil and gas companies banded together to form The Environmental Partnership to improve environmental performance and further reduce emissions of methane and volatile organic compounds. These improvements are occurring at a time when our country has catapulted forward to become the world's leading producer of oil and natural gas.

Worldwide CO₂ emissions increased 1.7 percent in 2018. The U.S. stands in stark contrast to global trends, leading the world in reductions by lowering carbon emissions with an anticipated decline of 2.2 percent in 2019 and an additional 0.7 percent decline in 2020. These reductions are forecast in large part due to U.S. usage of natural gas.

Consumer Energy Alliance (CEA) works to support and advocate for the continued development of a balanced energy portfolio including oil and natural gas as well as other traditional and renewable energy sources. CEA also recognizes the vital role that transportation infrastructure like pipelines and transmission lines serve, as they are critical for moving energy throughout South Carolina and the rest of the country.

With the emission reductions that have occurred recently, South Carolina's policymakers, regulators and leaders must come together in support of access to reliable energy resources and infrastructure development that will keep the state thriving, and ensure that hard-working families, seniors, households and small businesses can continue to enjoy the benefits of American energy.



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