NEW JERSEY

EMISSIONS ANALYSIS

NEW JERSEY'S 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, both in New Jersey 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. Emissions of key air pollutants and greenhouse gases have declined significantly across the state, even though New Jersey remains a large energy consumer:,

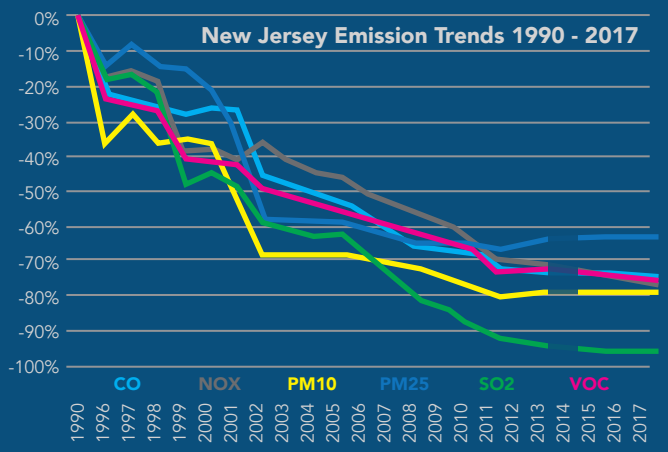


Figure 1. New Jersey Emission Trends 1990-2017 (Source: U.S. Environmental Protection Agency and Energy Information Administration) NOTE - 2014 EPA emissions data omitted due to reporting error

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

- 77 percent reduction in nitrogen oxides (NOx)
- 96 percent reduction in sulfur dioxide (SO2)
- 74 percent reduction in carbon monoxide (CO)
- 75 percent reduction in volatile organic compounds (VOCs)
- 64 percent reduction in fine particulate matter (PM2.5)
- 79 percent reduction in coarse particulate matter (PM10)

Additionally, from 2005 to 2016, New Jersey's carbon dioxide (CO2) emissions decreased by 15 percent.

- A 180 percent increase in the state's gross domestic product
- A 15 percent increase in vehicle miles traveled per capita
- A 15 percent increase in population

At the same time, natural gas usage as an electricity source nearly tripled, growing from about 17 percent of the total mix to about half today.

New Jersey's cleaner air means that the state's wildlife and natural assets will be protected. This ensures that New Jersey's tourism industry, which brought in 110 million visitors and $44.7 billion in 2018, will continue to thrive. Not only that, New Jersey's families and children can enjoy all their state has to offer in a healthier way, from the pristine dunes of Island Beach to the miles of hiking trails through the Pine Barrens.

Additionally, cleaner air means that all New Jersey's 9,000 farms – agriculture is state's third-largest industry - will continue to generate more than $1 billion for the economy annually. Fruits and vegetables, along with specialty crops, will continue to be distributed throughout the northeast and Canada.

NEW JERSEY ECONOMIC GROWTH

With the eighth-largest economy in the U.S., worth more than $590 billion a year, New Jersey remains focused on growth and innovation. With assets such as the Port of New York and New Jersey's recent completion of the Bayonne Bridge and the ExpressRail Port Jersey facility, the Port Authority predicts it will soon become the nation's second-busiest port.

With such a vital economy, it's not surprising that New Jersey is also a major consumer of energy. The state does not produce its own crude oil or natural gas and must rely on supplies from neighboring states via an interstate pipeline network. These energy supplies are critical for keeping New Jersey families and small businesses growing and on the move.

NEW JERSEY ENERGY CONSUMPTION

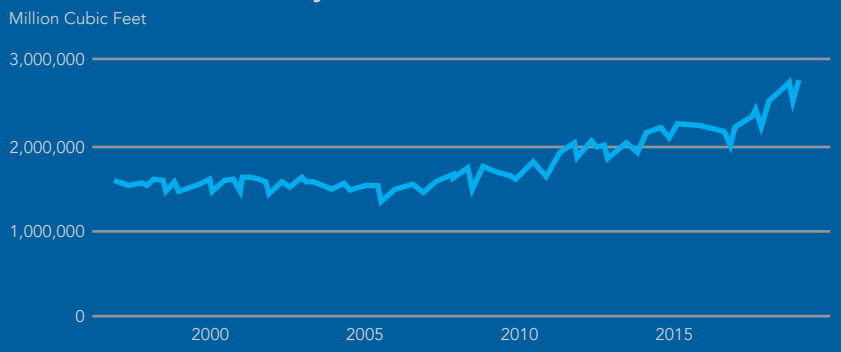
More than 83 percent of New Jersey's energy needs are met by oil and natural gas. More than 63 percent of state's electricity was powered by natural gas in June 2019 , and it ordinarily accounts for about half the state's energy mix. Additionally, 75 percent of New Jersey's residents depend on natural gas for heat during the winter months. Another 10 percent of New Jersey households depend on petroleum products as their primary home heating source.

Gov. Murphy's proposed Energy Master Plan (EMP) intends to eliminate access to oil and natural gas energy sources and instead establish a mandate for 100 percent clean energy. With a large portion of the state reliant on affordable natural gas for electricity and heating, there is growing concern that under the EMP, New Jersey's economy – particularly small businesses and families – could face long-term impacts from higher energy costs. Garden State residents already pay a residential electric rate that is more than 20 percent above the national average and is the 12th highest in America. In addition, New Jersey's business climate is the 6th worst in the nation already – something higher energy prices won't help.

U.S. ENERGY PRODUCTION

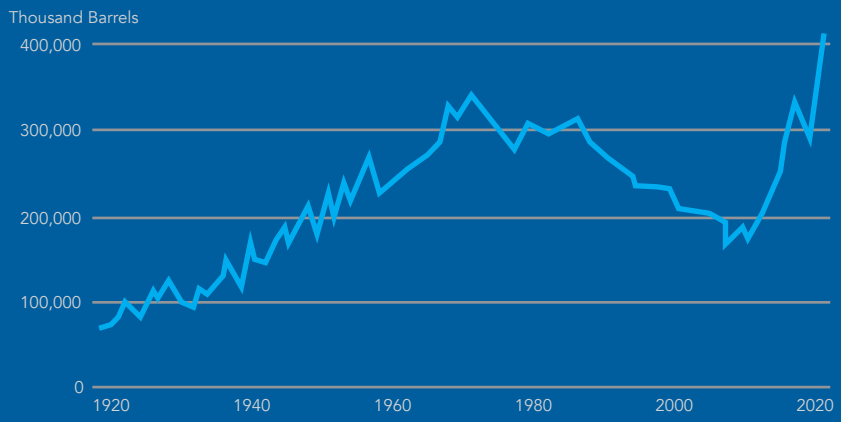
New, efficient technologies have enabled the United States to increase oil and gas production over the last two decades. The U.S.became the world's largest crude oil and natural gas producer last year, having surpassed Russia and Saudi Arabia, according to the U.S. Energy Information Administration.

U.S. Dry Natural Gas Production



Source: U.S. Energy Information Administration

U.S. Field Production of Crude Oil



Source: 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 New Jersey and the rest of the country.

With the emission reductions that have occurred recently, New Jersey'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.

National Emissions Trends

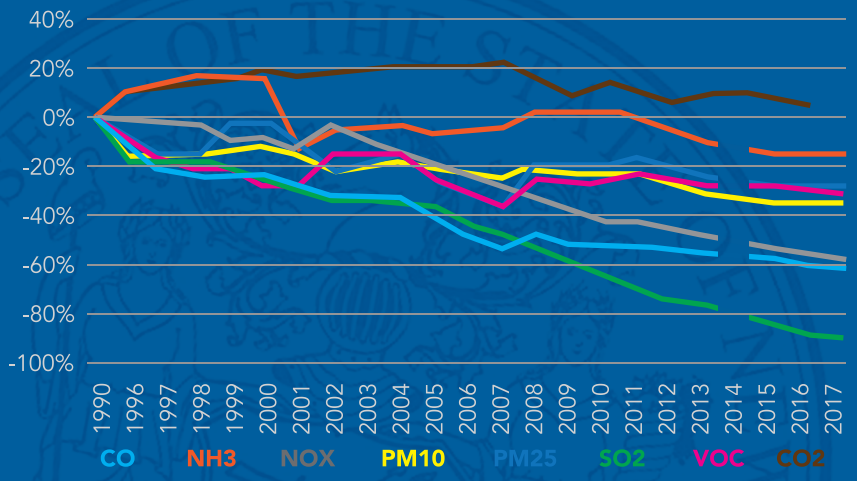


Figure 4. National Emission Trends 1990-2017. (Sources: U.S. Environmental Protection Agency and Energy Information Administration) NOTE - 2014 EPA emissions data omitted due to reporting error; EIA C02 data only available through 2016.

World Health Organization, https://www.who.int/airpollution/ambient/health-impacts/en/
EIA, State Carbon Dioxide Emissions Data. https://www.eia.gov/environment/emissions/state/
Bureau of Economic Analysis, Regional Data – GDP and Personal Income, https://apps.bea.gov/itable/iTable.cfm?ReqID=70&step=1
U.S. VMT Per Capita by State, 1981-2017. https://www.enotrans.org/wp-content/uploads/2019/06/VMT-per-capita-by-state-1981-2017-1.pdf
U.S. Census Bureau., https://www.census.gov/
https://www.eia.gov/electricity/state/newjersey/index.php Table 5
Economic Impact of Tourism in New Jersey, 2018. https://www.visitnj.org/sites/default/files/2018-nj-economic-impact.pdf
State of New Jersey Department of Agriculture. https://www.state.nj.us/agriculture/about/overview.html
New Jersey Economic Development Authority 2018 Annual Report. https://www.njeda.com/pdfs/2018AnnualReport.aspx
Port of NY and NJ Poised to Become Nation's Second Busiest Port. https://www.-globest.com/2019/06/19/port-of-ny-and-nj-poised-to-become-nations-second-busiest-port/?slreturn=20190830165846
https://www.eia.gov/state/?sid=NJ#tabs-4
New Jersey Energy Analysis. https://www.eia.gov/beta/states/states/nj/analysis
https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a
https://www.cnbc.com/2019/07/09/top-states-for-business-new-jersey.html
https://www.eia.gov/todayinenergy/detail.php?id=40973
International Energy Agency – Emissions, https://www.iea.org/geco/emissions/
EIA Short Term Energy Outlook, July 2019 https://www.eia.gov/outlooks/steo/pdf/steo_full.pdf

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