

Energy, Economic and Climate Indicators

Context

Since 1990, the US economy became much more efficient, producing high volumes of economic output with less energy use and fewer emissions. Tracking publicly available metrics over time provides an invaluable method to assess progress of the combined impact of public policies at both national and state levels.

1990 is an appropriate baseline because:

1. Over the last three decades, and particularly over the last decade, economic growth frequently has occurred independent of electric load growth or increased reliance upon fossil fuel consumption.
2. Many local, national, and international climate targets were set as reductions in greenhouse gas emissions from 1990.

Between 1990 and 2018, national Gross Domestic Product (GDP) more than doubled, population grew by nearly a third, energy use increased by 20 percent, and sector-wide industrial energy use increased by 3 percent. Yet after rising during the 1990s-2000s, nationwide emissions fell in the past decade to be only 5 percent higher than emissions in 1990. These trends become even more apparent when focusing on changes to economic and environmental indicators following the 2008-09 recession. While cumulative Gross State Product (GSP) grew by 19 percent from 2010-18, energy use grew by just 4 percent, electricity consumption dropped by 4 percent, and nationwide emissions dropped by 5 percent. Since the recession, the economy grew while emissions declined substantially.

Data Sources

Emissions data comes from the EIA tables on State Carbon Dioxide Emissions from Fossil Fuels:

<https://www.eia.gov/environment/emissions/state/>

All other data comes from the EIA State Energy Data System (SEDS) database:

<https://www.eia.gov/state/seds/seds-data-fuel.php?sid=US#DataFiles>

Using the following MSN Codes:

Population: TPOP
Gross State Product: GDPRX
Total Energy Use: TETCB
Industrial Energy Use: TEICB