Since 1990, the US economy has produced robust economic output with significantly lower energy use and fewer emissions. Tracking such data trends enables a clarifying analysis of public policy impacts.

Energy, Economic and Environmental Indicators

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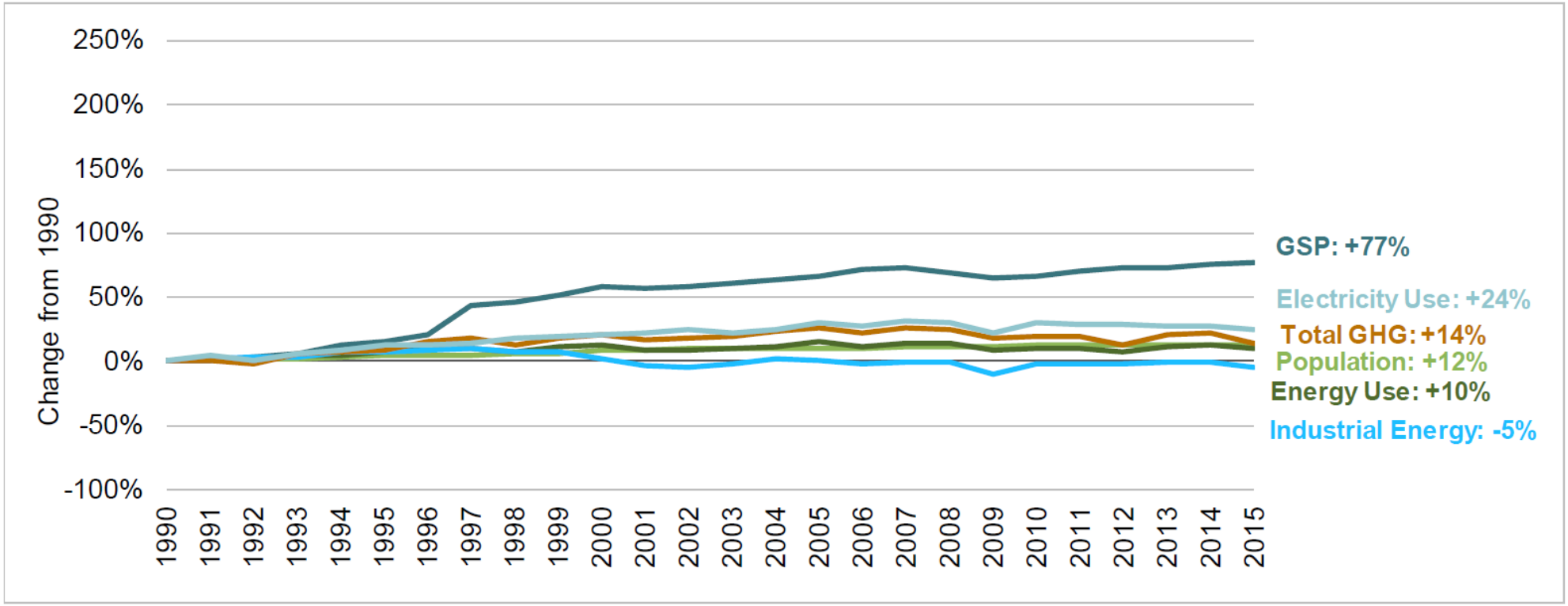
Illinois
1990-2015



Source: Census.gov, EIA.gov. Analysis by Synapse Energy Economics

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State Energy, Economic and Environmental 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 2015, national Gross Domestic Product (GDP) more than doubled, population grew by nearly a third, electricity use increased by 40 percent, and sector-wide industrial energy use increased by 15 percent. Yet after rising during the 1990s-2000s, nation-wide emissions fell in the past decade to be only 4 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 10 percent from 2010-15, energy use and electricity consumption both remained flat, and nationwide emissions dropped by 6 percent. Since the recession, the economy grew while emissions declined substantially.

Data Sources

Census population data comes from three different sources:

1990-2000: https://www2.census.gov/programs-surveys/popest/tables/1990-2000/intercensal/st-co/co-est2001-12-00.pdf

2000-2010: https://www2.census.gov/programs-surveys/popest/tables/2000-2010/intercensal/state/st-est00int-01.xls

2010-2017: https://www2.census.gov/programs-surveys/popest/tables/2010-2017/state/totals/nst-est2017-01.xlsx

EIA State Energy Data System (SEDS) database:

http://www.eia.gov/state/seds/sep_use/total/csv/use_all_btu.zip includes: Gross State Product (GSP), Statewide Energy Use, Industrial Energy Use

Emissions:

https://www.eia.gov/environment/emissions/state/excel/summary_2015.xlsx

Electric consumption is also from the EIA:

https://www.eia.gov/electricity/data/state/sales_annual.xlsx

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