

Chart of the Week #2023-13

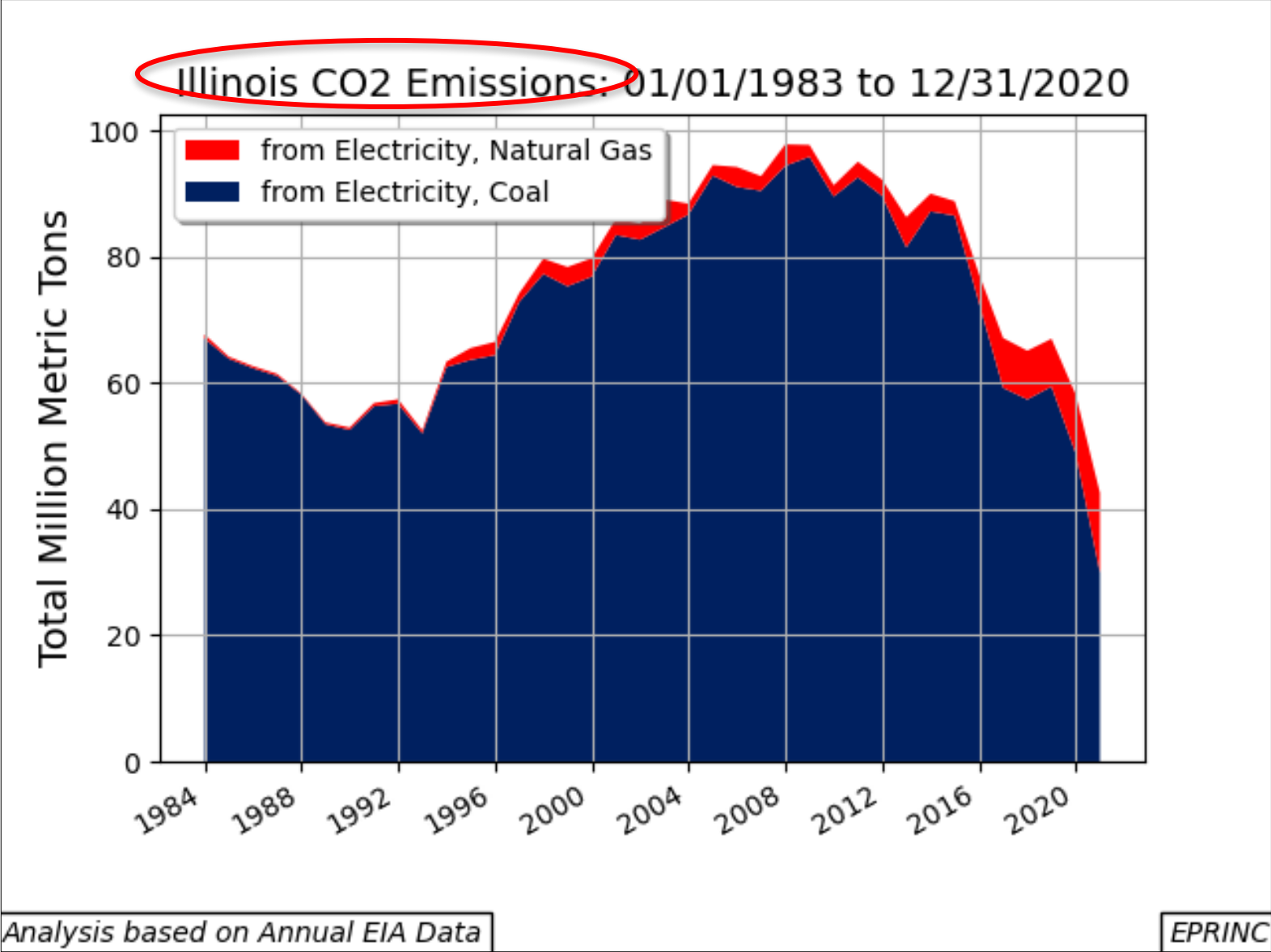
Illinois CO₂ Emissions From Electricity Production



Max Pyziur
March 29, 2023
Washington, DC

Source: E. Jason Wambsgans / Chicago Tribune
Prairie State Generating Station, Marissa IL

Illinois CO₂ Emissions From Electricity Generation



2019 Illinois State CO2 Emissions from Electricity Production		
	Million Metric Tons	Percentage of Global CO ₂
Coal	48.81	0.00%
Natural Gas	9.34	0.00%
	58.1	0.00%

Illinois CO₂ Emissions from Electricity Production



- The Illinois Energy Transition Act was signed into law in September 2021. It mandates that almost all commercially-owned coal-fired electricity-producing plants are free from CO₂ emissions by 2030. If they are unable to comply, they are required to be shut down.
- Municipally-owned coal-fired plants and commercially-owned natural-gas plants, along with several commercial coal-fired plants named in the Act that had recently been recently commissioned, have until 2045 to comply.
- In 2022, Illinois generated a total of 190 million megawatt hours of electricity. Emissions-producing coal and natural gas generation accounted for 21.5% and 12.8% of total generation, respectively. Since 2014, coal generation has declined from 43.5% of total while natural gas has risen from 5.1%.
- In this same period (2014-2022) emissions-free nuclear generation has ranged from 48% to 52% while solar and wind generation, combined, rose from 5.1% to 13.6%.
- *continuing ...*

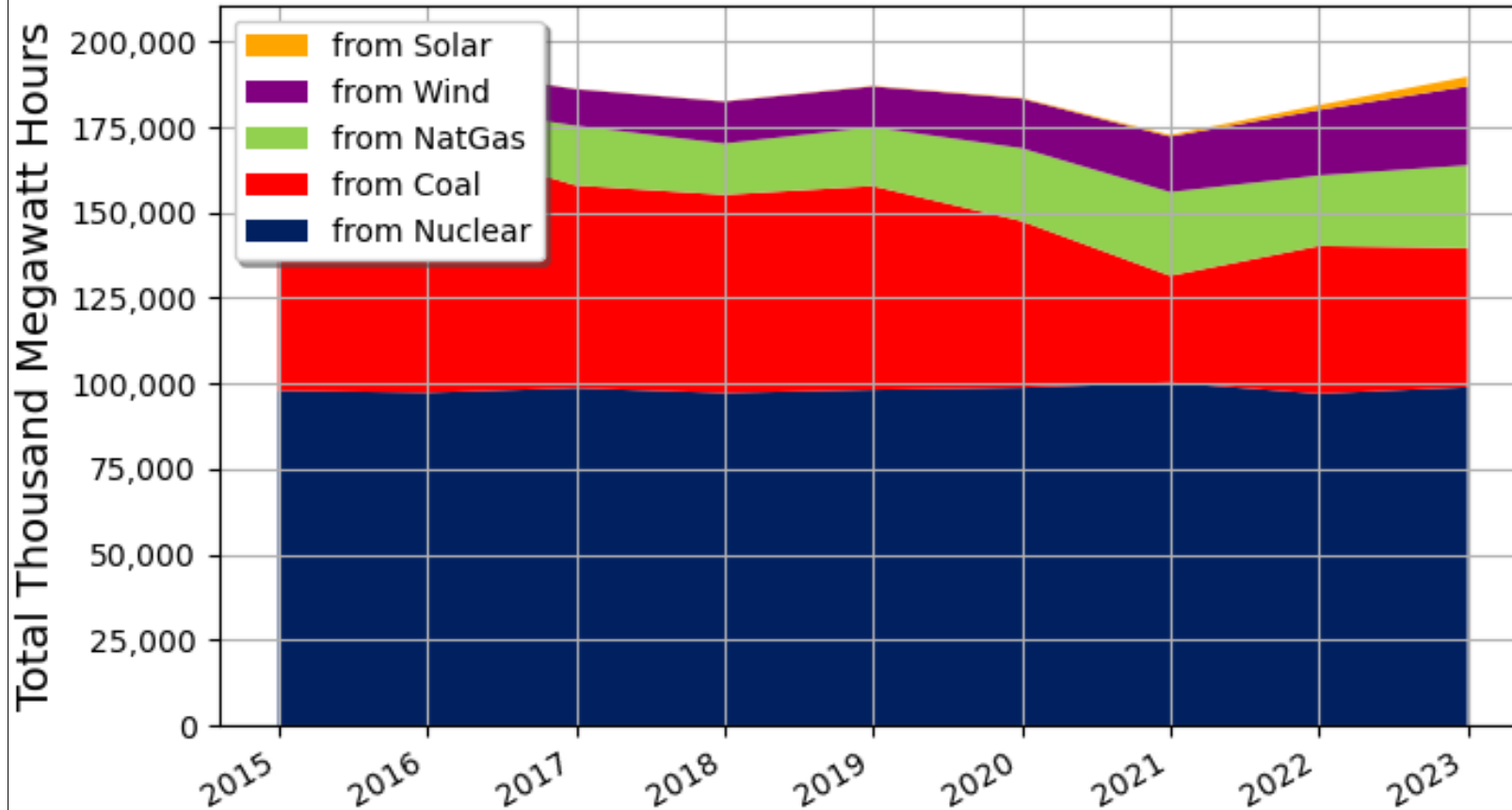
Illinois CO₂ Emissions from Electricity Production



- The earth's atmosphere contains 2.1 trillion metric tons of CO₂, comprising 0.041% of the aggregate 5.15 quadrillion metric tons.
- Global CO₂ emissions from hydrocarbon fuel use are 36.4 billion metric tons per year. Of this, about 45%, or 16.4 billion tons, remains in the atmosphere, a contribution of 0.8% to the total 2.1 trillion tons.
- U.S. CO₂ emissions are 5.2 billion metric tons, or 14% of total emissions.
- In 2019, Illinois CO₂ emissions from fuel combustion were 203.4 million metric tons, 3.9% and 0.55% of the U.S. and global total, respectively. Of this, Illinois' electricity generation emitted 58.2 million tons, or 1.1% of the U.S. and 0.15% of global, primarily from coal generation.
- The Illinois Energy Transition Act seeks to affect global CO₂ emissions through actions within its relatively small jurisdiction and emissions profile, an approach that is costly to Illinois with little prospect for impact on the U.S. or global total.
- This slide deck is available at [EPRINC's Chart of The Week Archive](#). For more information on these charts, please contact Max Pyziur (maxp@eprinc.org).

Additional Slides

Illinois Annual Electricity Production: 01/01/2014 to 12/31/2022

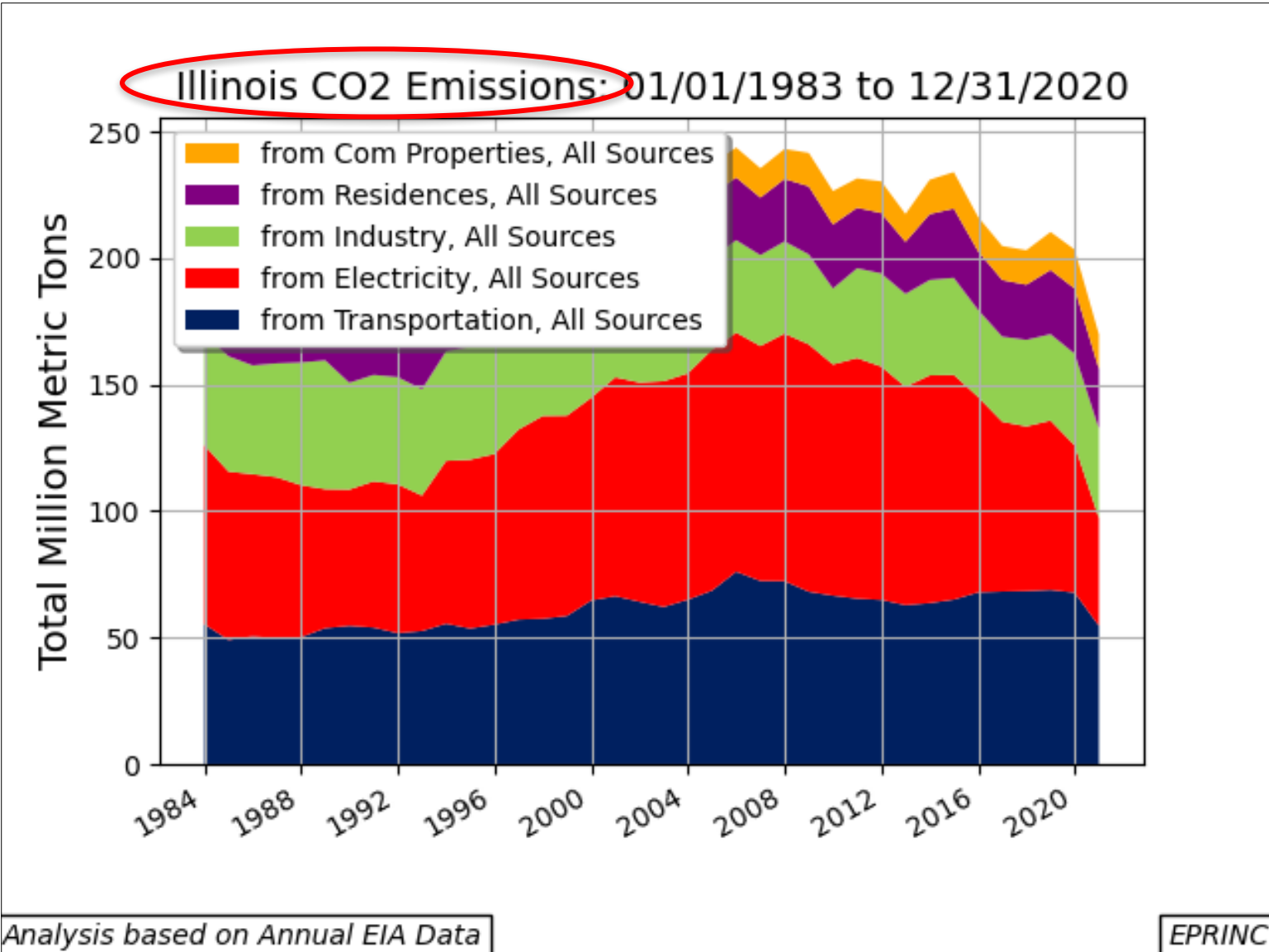


Analysis based on Annual EIA Data

@EPRINC_DC - Mar 27, 2023

2022 Illinois Electricity Production		
	Million Megawatt Hours	Percent
Nuclear	98,870	52.1%
Coal	40,711	21.5%
Natural Gas	24,260	12.8%
Wind	23,063	12.2%
Solar	2,823	1.5%
	189,727	

Illinois CO₂ Emissions From All Fuels by Sector



2019 Illinois State CO2 Emissions by Sector		
	Million Metric Tons	Percentage of Global CO ₂
Com	15.4	0.00%
Res	25.7	0.00%
Electricity	58.2	0.00%
Transportation	67.8	0.00%
Industry	36.3	0.00%
	203.4	0.01%

Illinois CO₂ Emissions from Electricity Production

