

INDIANA RENEWABLE ENERGY

Siting through Technical Engagement and Planning (R-STEP™)

State of the Energy Industry

Alberta Electric System Operator

Electric System Operator (IESO)

Midcontinent ISO (MISO)

New York ISO (NYISO)

New England ISO (ISO-NE)

PJM

Southwest Power Pool (SPP)

California ISO (CAISO)

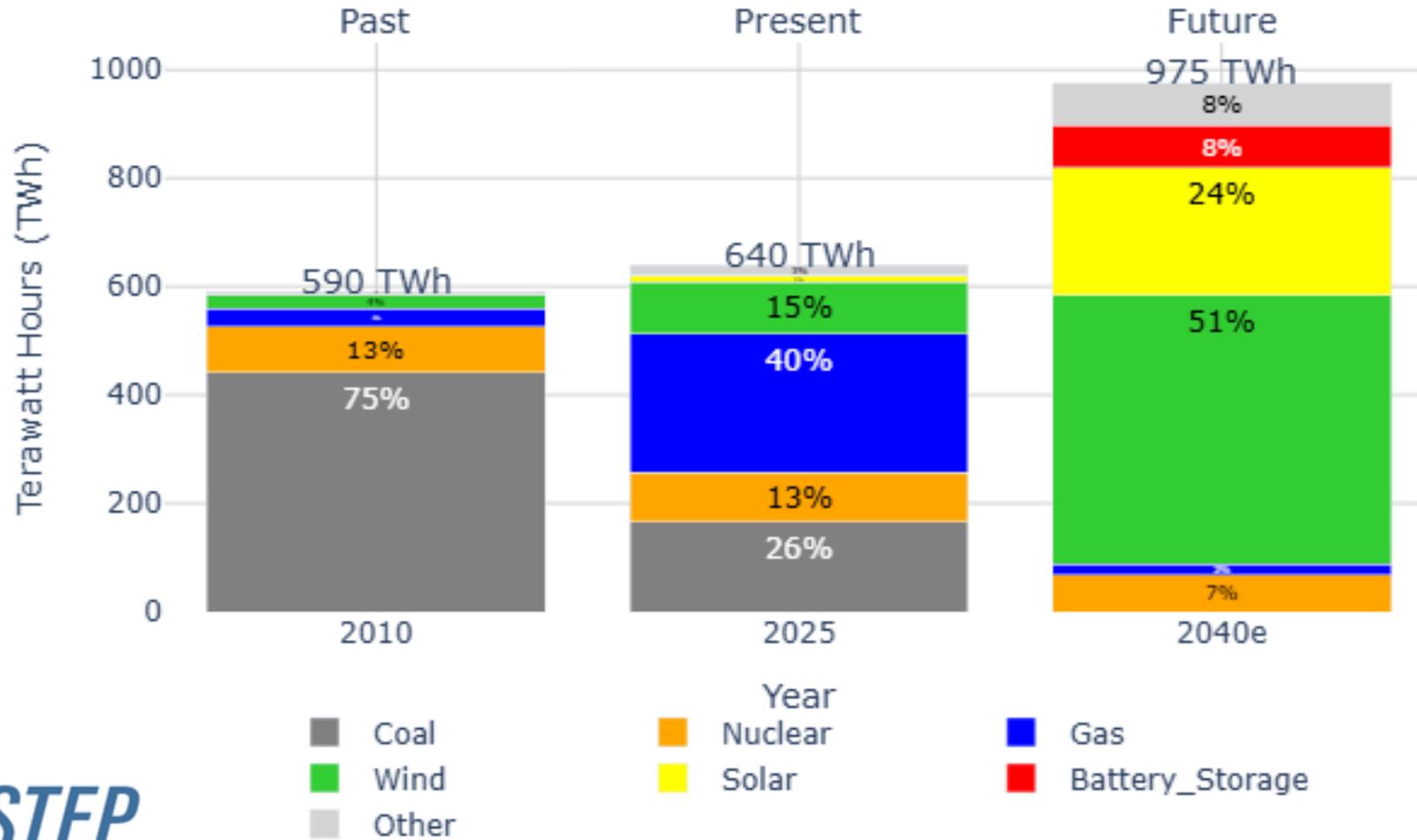
Electric Reliability Council of Texas (ERCOT)

REGIONAL TRANSMISSION ORGANIZATIONS

THIS MAP WAS CREATED USING ENERGY VELOCITY, NOVEMBER 2015

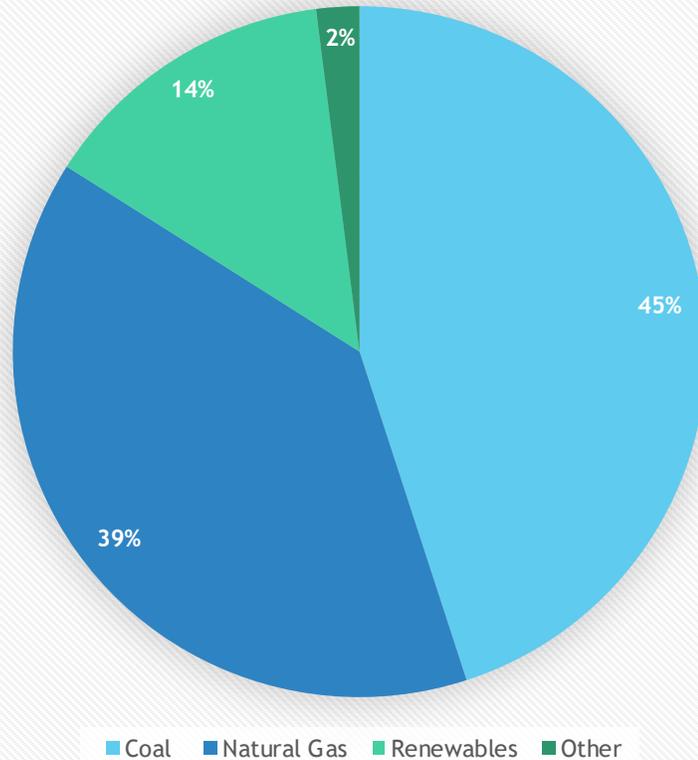
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Electricity Production in MISO Service Territory



Energy Generation in Indiana

Indiana's Energy Mix 2023*



Indiana is 10th in the US in total energy use per capita (2023).

Indiana has used more electricity than we produce since 2012.

Indiana consumes approximately 3x more energy than the state produces.

Approximately 5,000 megawatts of coal-fired capacity in Indiana have retired since 2013, and another almost 3,900 megawatts of coal-fired capacity are scheduled for retirement by the end of 2028.

Source: U.S. Energy Information Administration (eia) Indiana State Profile and Energy Estimates Oct 17, 2024

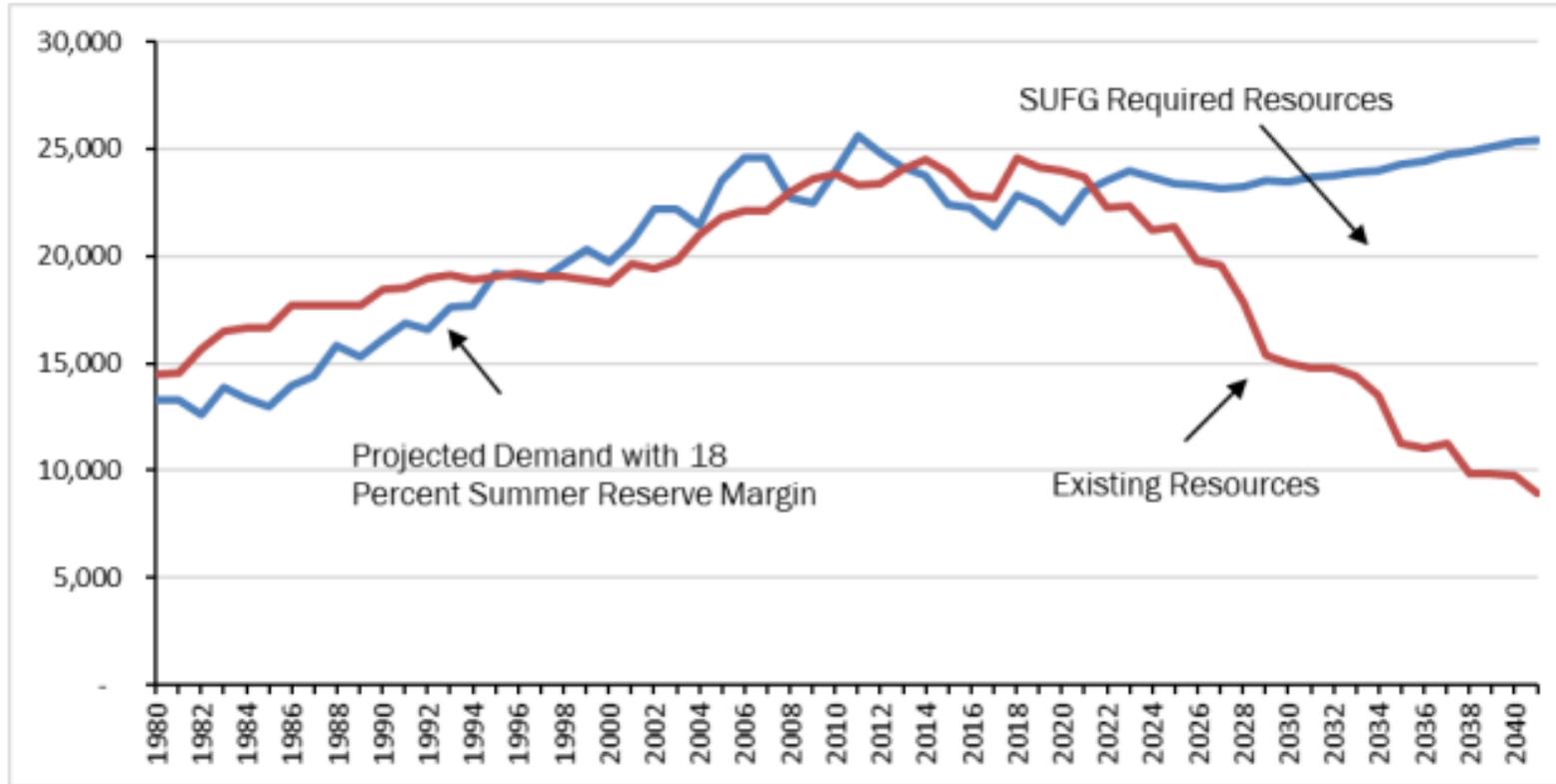
Growing Demand for Renewable Energy

Key Drivers

- Demand for Energy
- Cost competitiveness
- Federal & state policies
- Utility decarbonization
- Corporate renewable procurement

Energy Demand and Supply

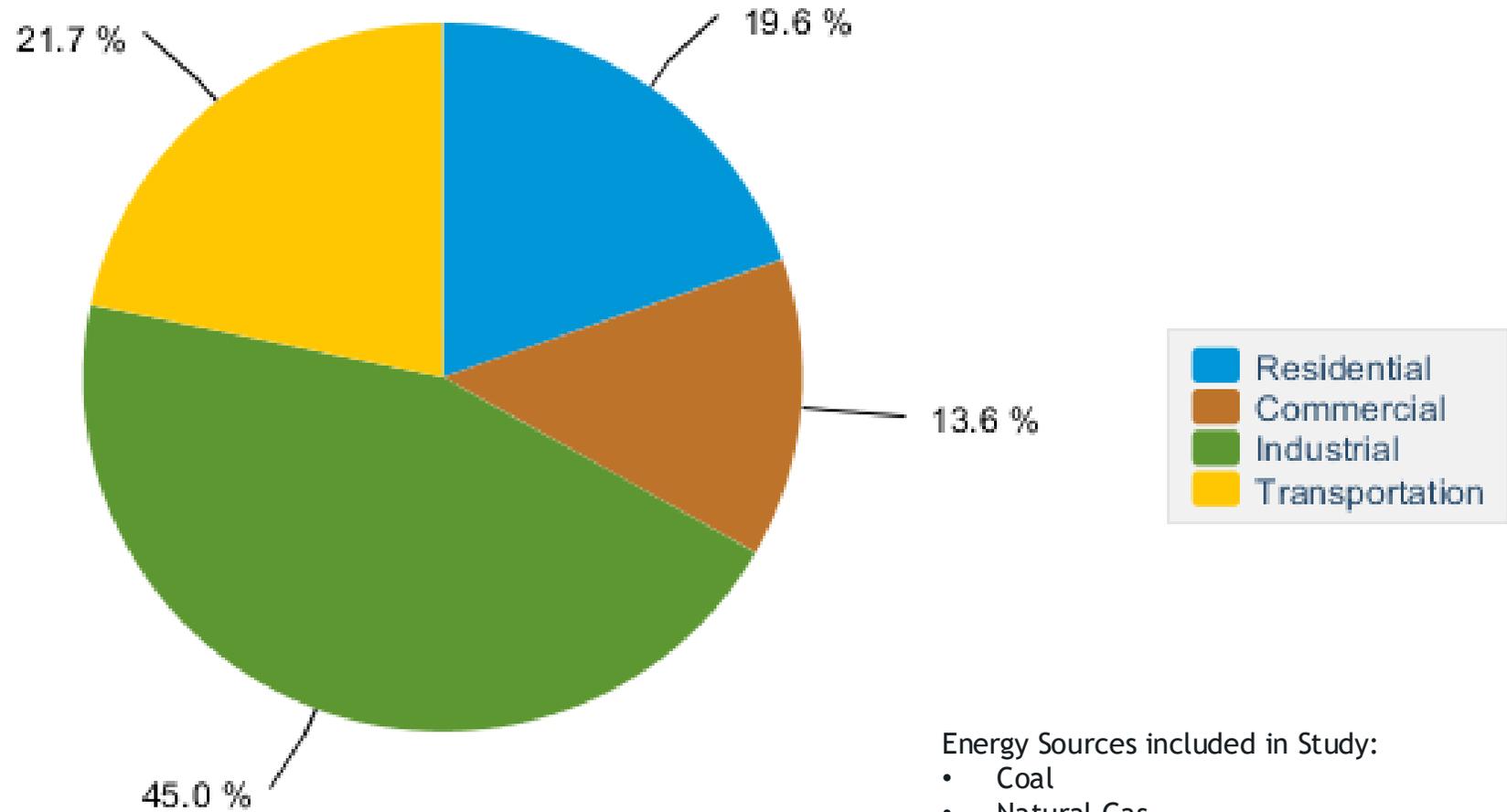
Figure 1-3. Indiana Total Demand and Supply in MW (Summer Season) (SUGF Base)



Due to data availability restrictions at the time that SUGF prepared the modeling system to produce this forecast, the most current year with a complete set of actual historical data was 2021.

Therefore, 2022 and 2023 numbers represent projections.

Energy Demand



Energy Sources included in Study:

- Coal
- Natural Gas
- Petroleum
- Renewable Energy (variable)



Source: Energy Information Administration, State Energy Data System

Energy Demand

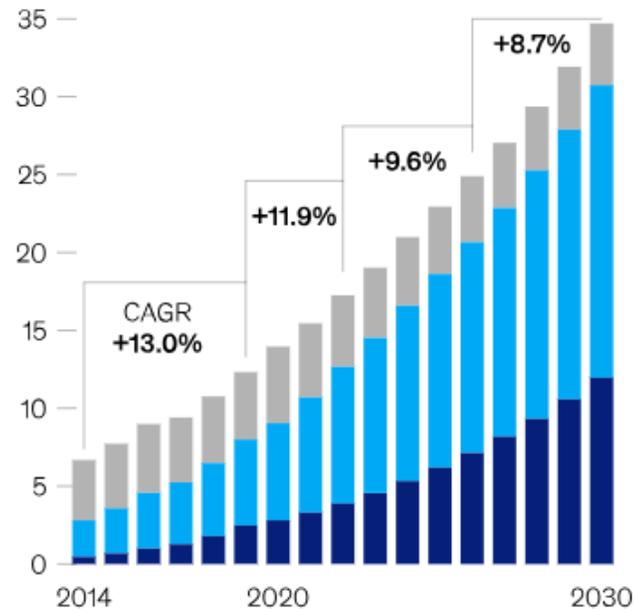
According to a report by Goldman Sachs, a ChatGPT query needs nearly 10 times as much electricity as a Google search query.

“One query to ChatGPT uses approximately as much electricity as could light one light bulb for about 20 minutes,” he says. “So, you can imagine with millions of people using something like that every day, that adds up to a really large amount of electricity.” senior research analyst at the Allen Institute for AI.

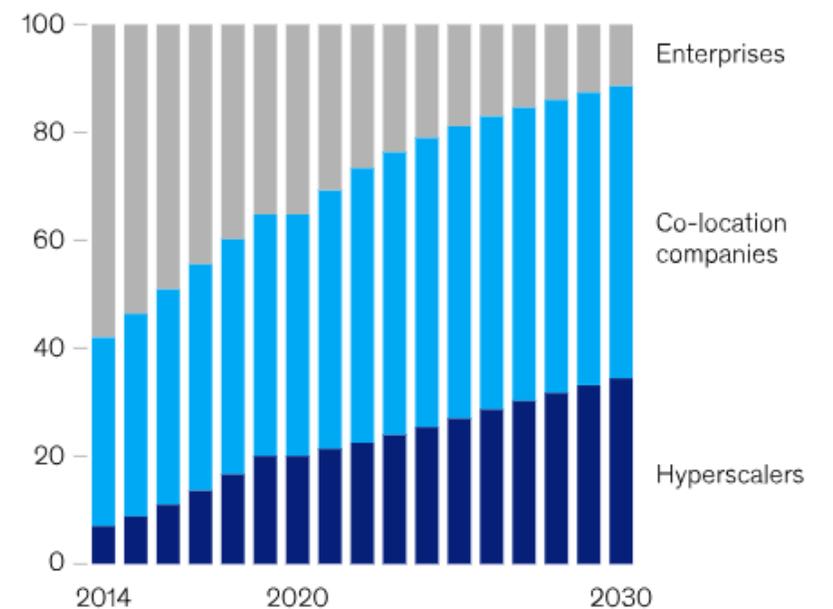
Exhibit 1

US data center demand is forecast to grow by some 10 percent a year until 2030.

Data center power consumption, by providers/enterprises,¹ gigawatts



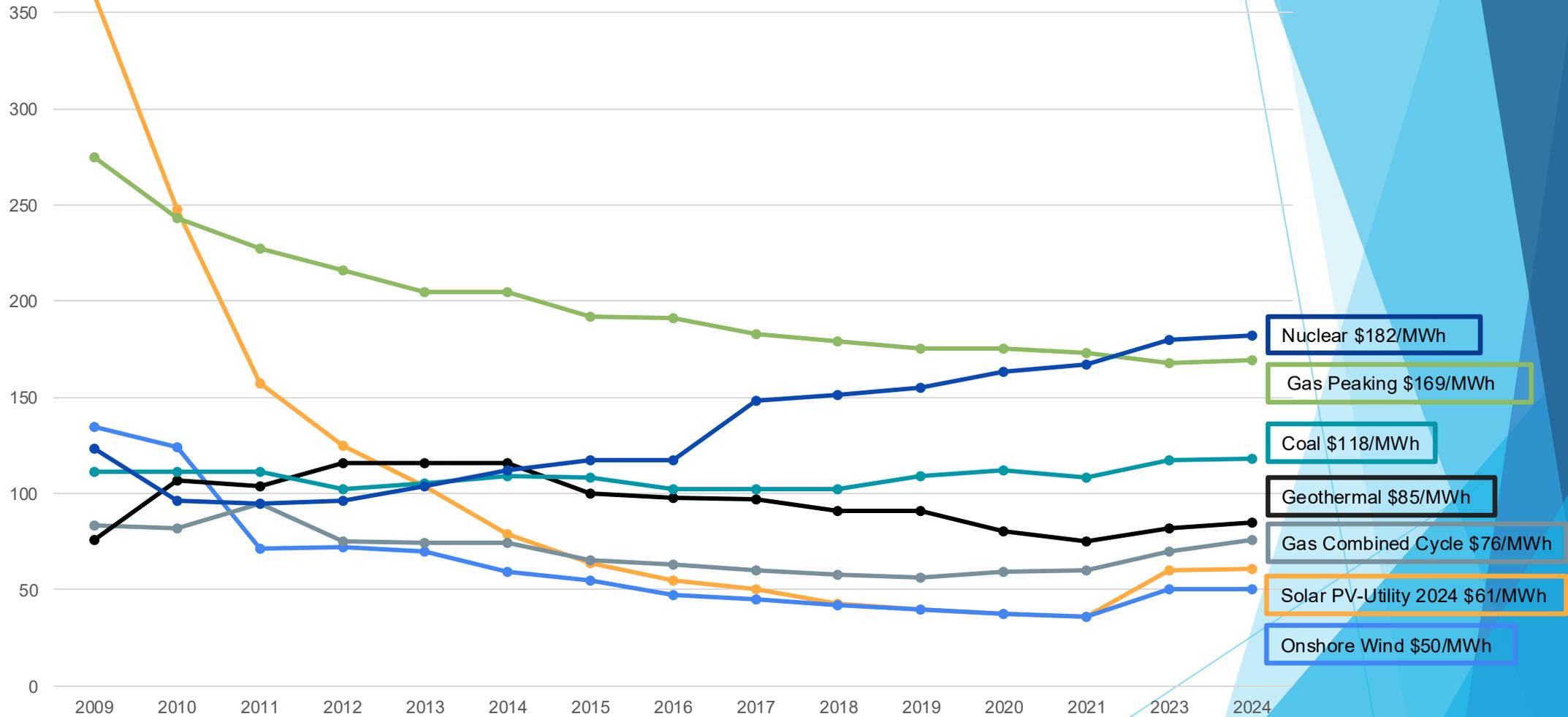
Data center power consumption, by providers/enterprises,¹ % share



¹Demand is measured by power consumption to reflect the number of servers a data center can house. Demand includes megawatts for storage, servers, and networks.

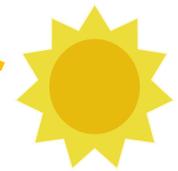
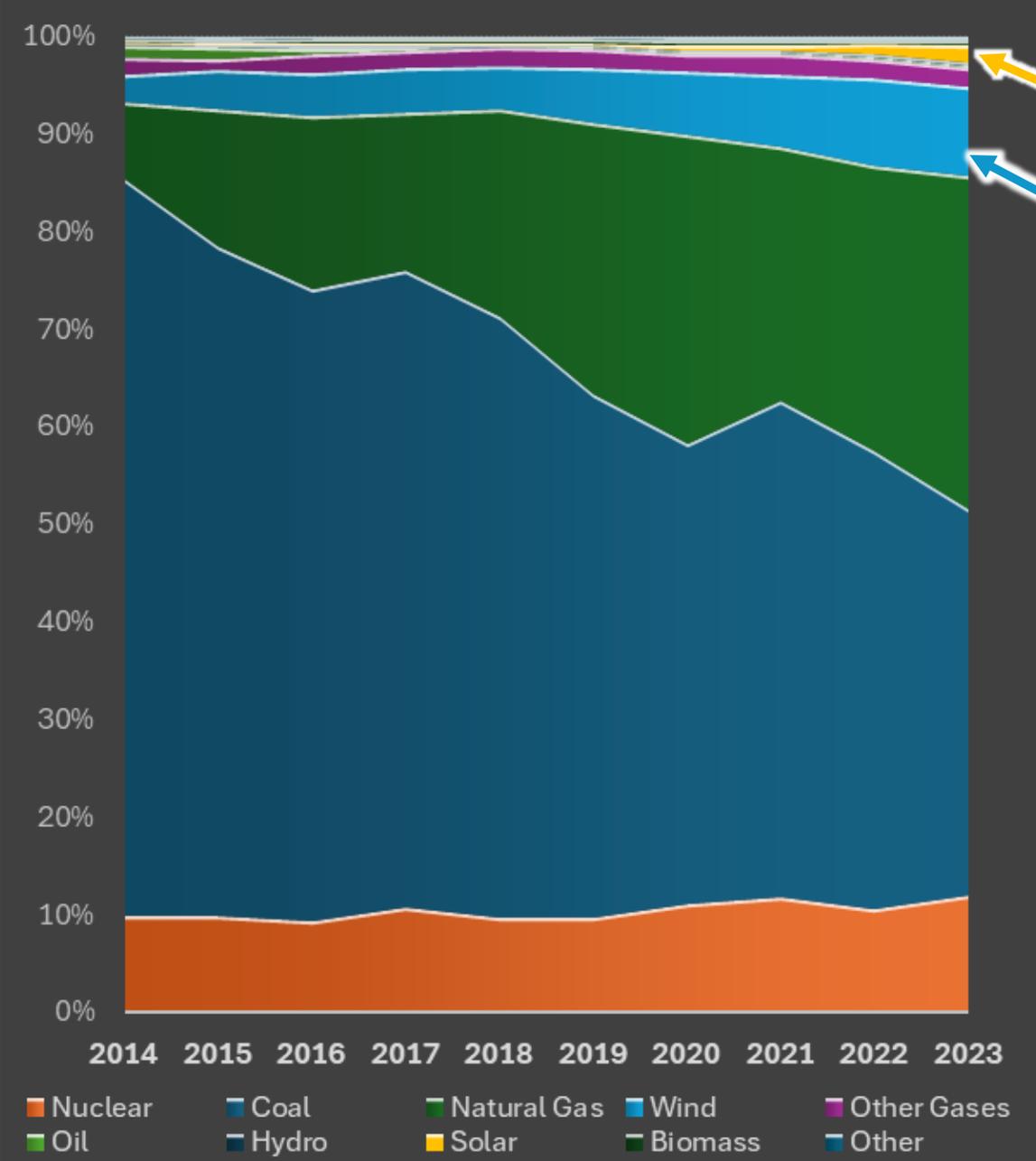
Levelized Cost of Energy

Levelized Cost of Energy Comparison, Unsubsidized from 2009-2024



Data Source: Lazard LCOE+ 2024

Generation of Electricity by Fuel Type for Indiana Consumers



Solar is emerging, with room to grow



Wind has more than tripled its share over the past decade; now nearly 10% of mix

Statewide Renewable Activity

INDIANA MERCHANT RENEWABLE ENERGY PROJECTS				
	WIND		SOLAR	
	Capacity in MWac	No. of Facilities	Capacity in MWac	No. of Facilities
Operating	3,666	20	1,051	7
Under Construction	-	-	2,129	9
Order Issued, but Construction Not Started	1,003	5	6,331	34
Total	4,669	25	9,511	50

SOURCE: Indiana Utility Regulatory Commission 2024 Annual Report

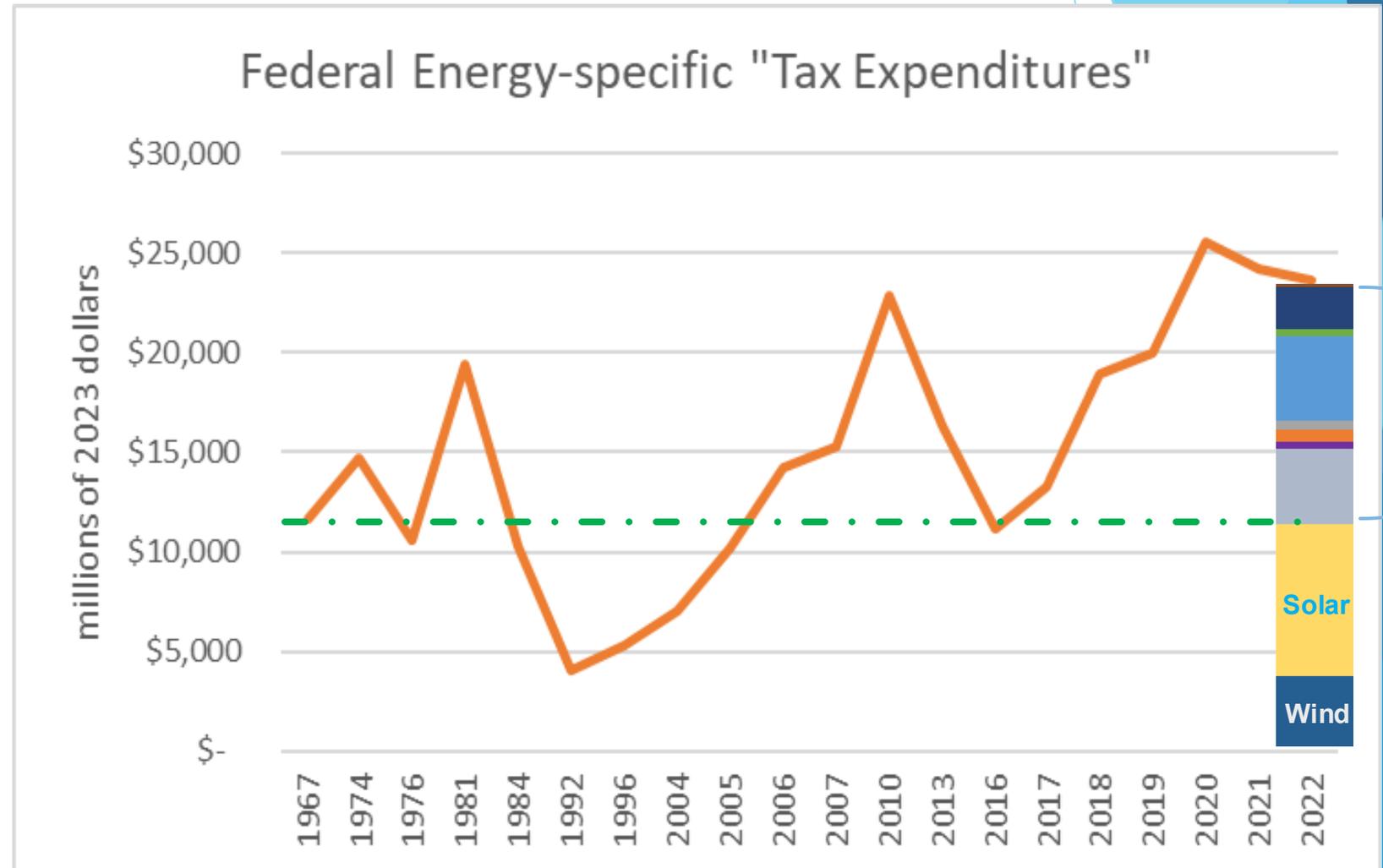
Additional projects in the RTO queues.

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Capex in Indiana to-date: \$6.8B wind + \$1.7B solar

Federal Support for Energy

- Current level of federal support for wind & solar = level of support for coal & gas in 1967
- Wind & solar represented less than half of the total federal support in 2022
- USDA Direct Farm Payments exceeded wind & solar support by \$4.7 billion in 2022



All Else, incl coal, nat gas, nucl, bio, geo, grid

“Our ability to access power from renewable resources through our utilities is essential to our energy strategies.”

December 2022

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Coca-Cola

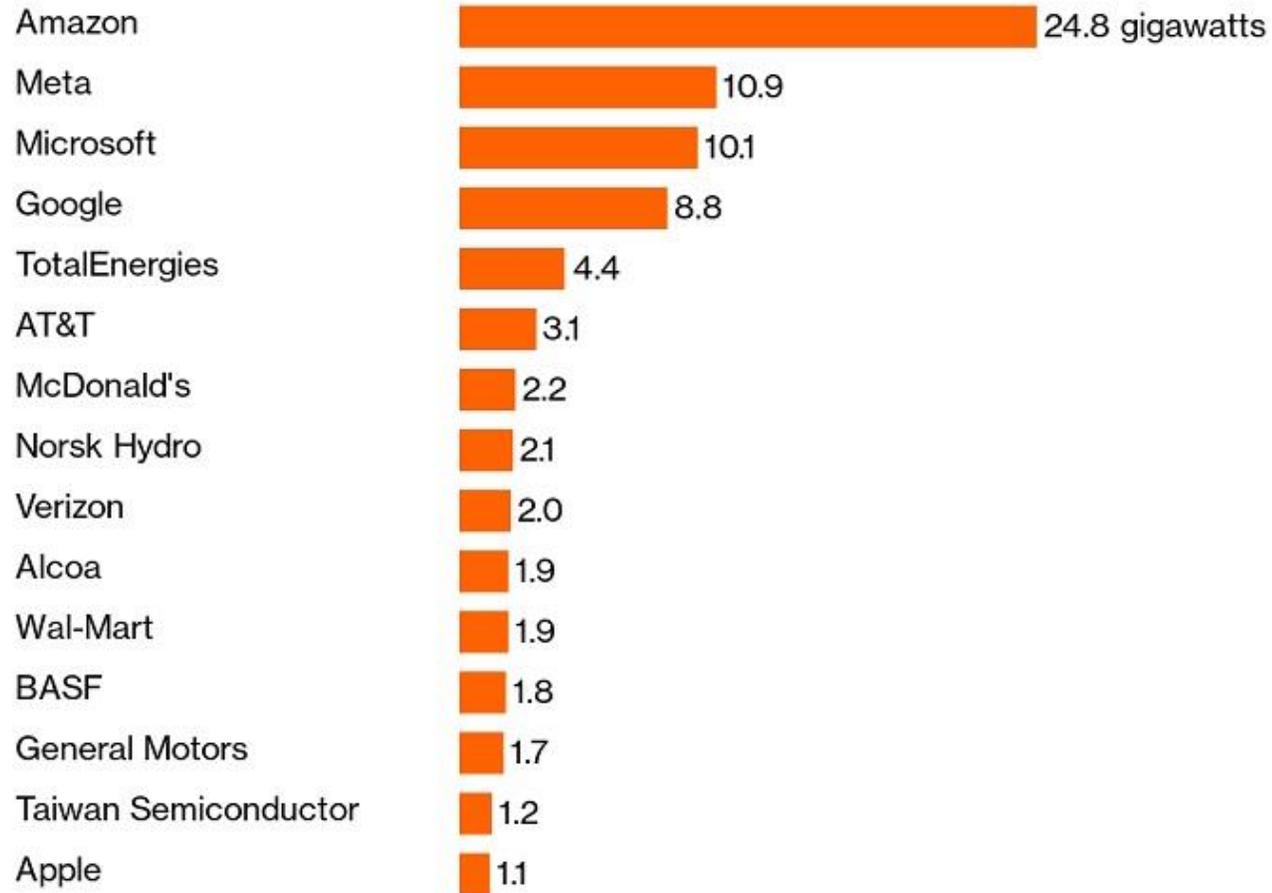


RIVIAN

Walmart 

Energy Demand

US Firms Are Top Buyers of Clean Energy Globally

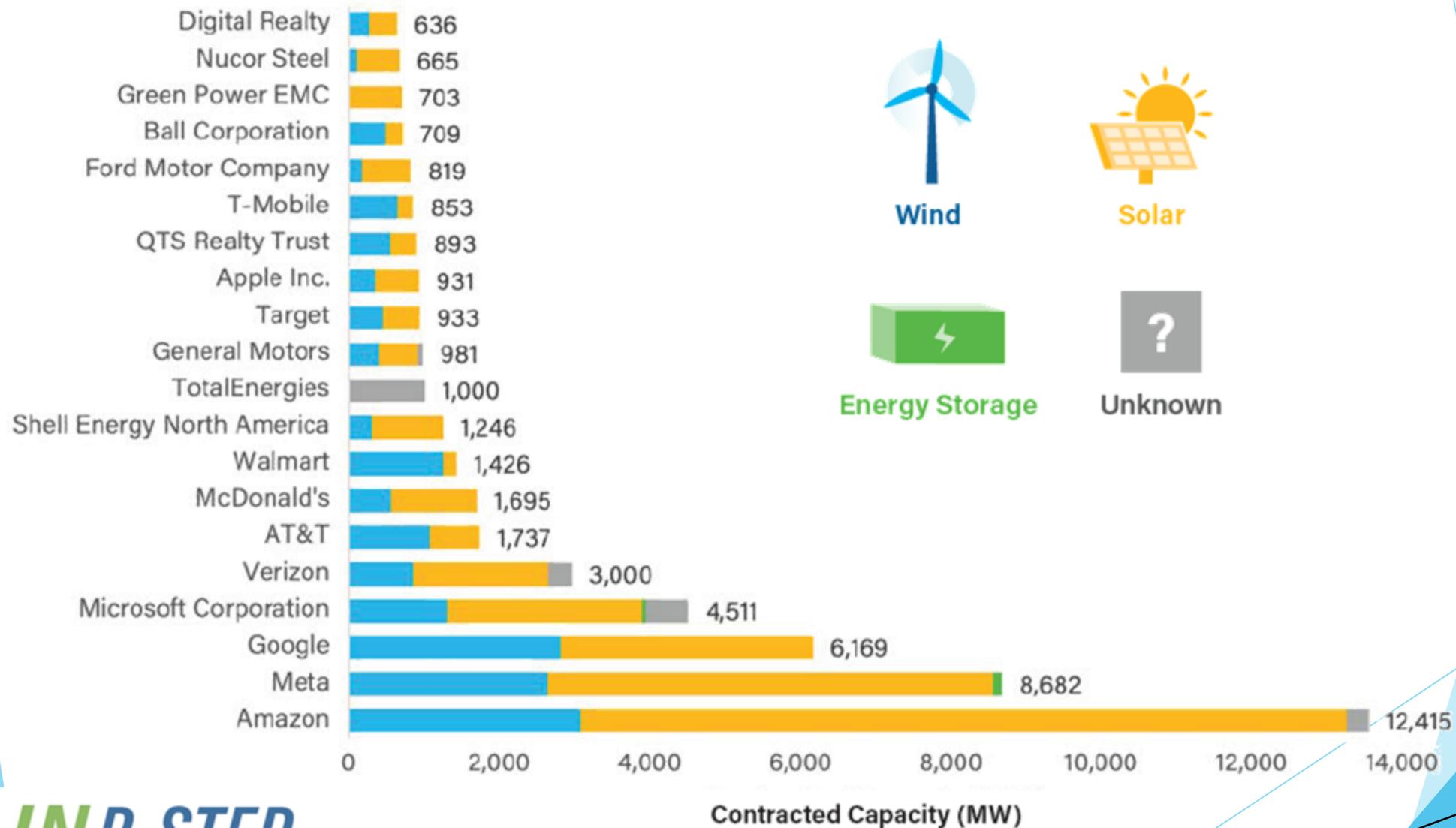


Source: BloombergNEF

Note: Cumulative purchases up to Feb. 15, 2023

BloombergNEF

Top 20 Purchasers of U.S. Clean Energy by Technology 2022



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Thank You!