

# Why nuclear power is superior to wind and solar

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Center of the American Experiment

Nuclear Power  
is superior to  
wind and solar  
in four main  
areas

National security.

Reliability.

Affordability.

Carbon dioxide emissions.

# National Security

- Nuclear supply chain could be entirely fulfilled with domestic production if there were the political desire to do so.
- 80 percent of solar panels are made in China, many are made by enslaved Muslim Uighurs in Western China.
- The vast majority of rare earth metals and other metals needed for wind, solar, and battery storage are refined in China.

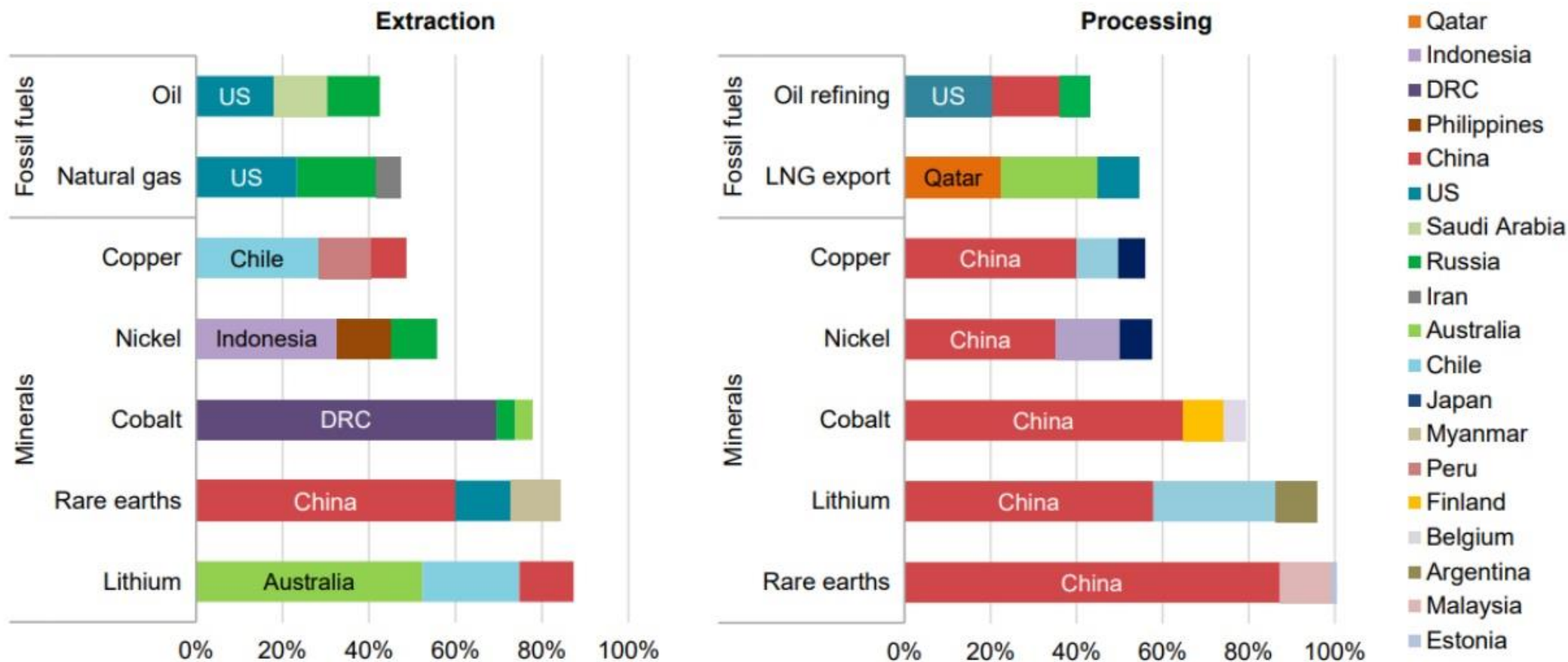
**The New York Times**

## ***Chinese Solar Companies Tied to Use of Forced Labor***

A new report shows some of the world's biggest solar companies work with the Chinese government to absorb workers from Xinjiang, programs that are often seen as a red flag for forced labor.

# Production of many energy transition minerals today is more geographically concentrated than that of oil or natural gas

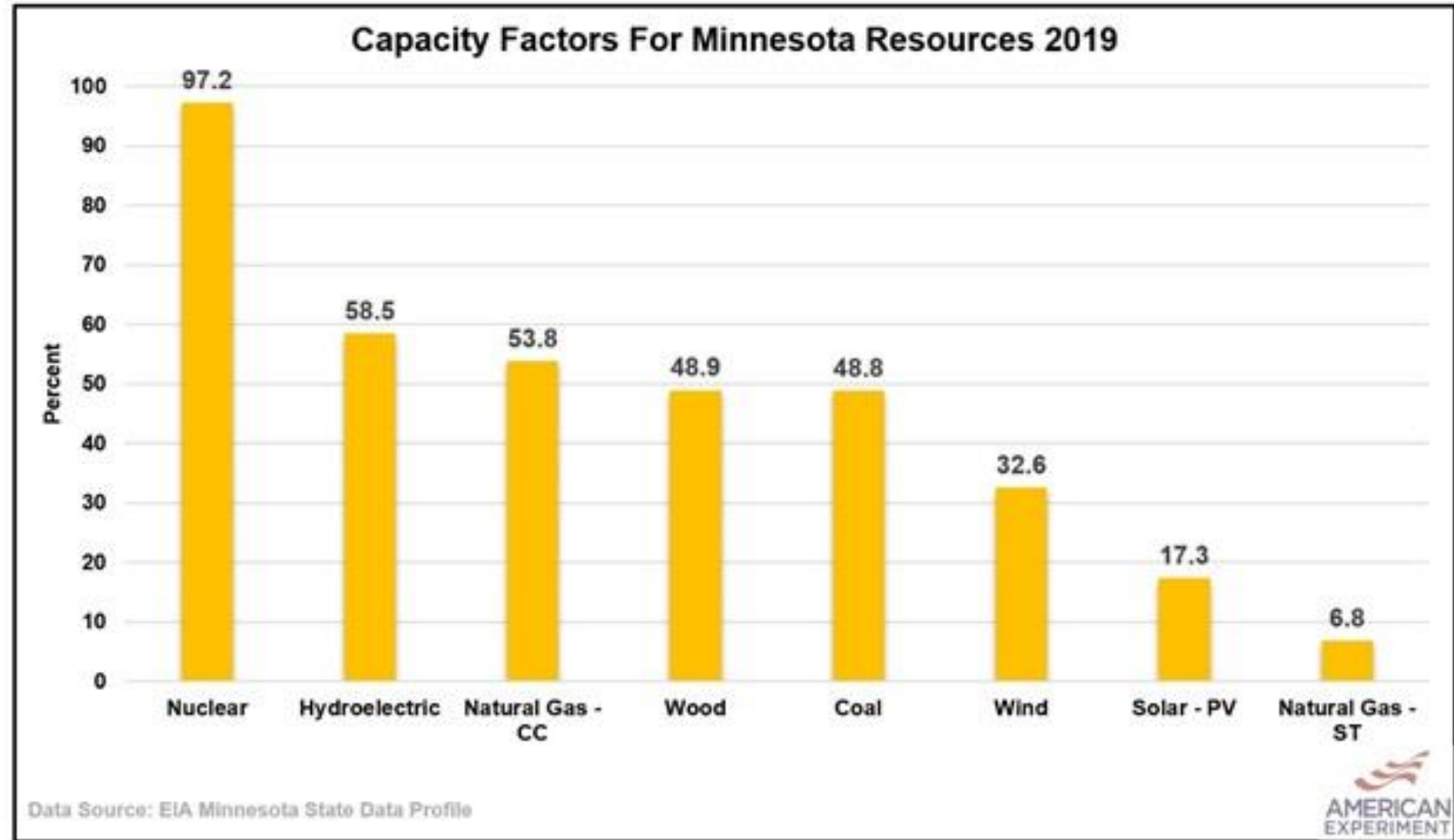
Share of top three producing countries in production of selected minerals and fossil fuels, 2019



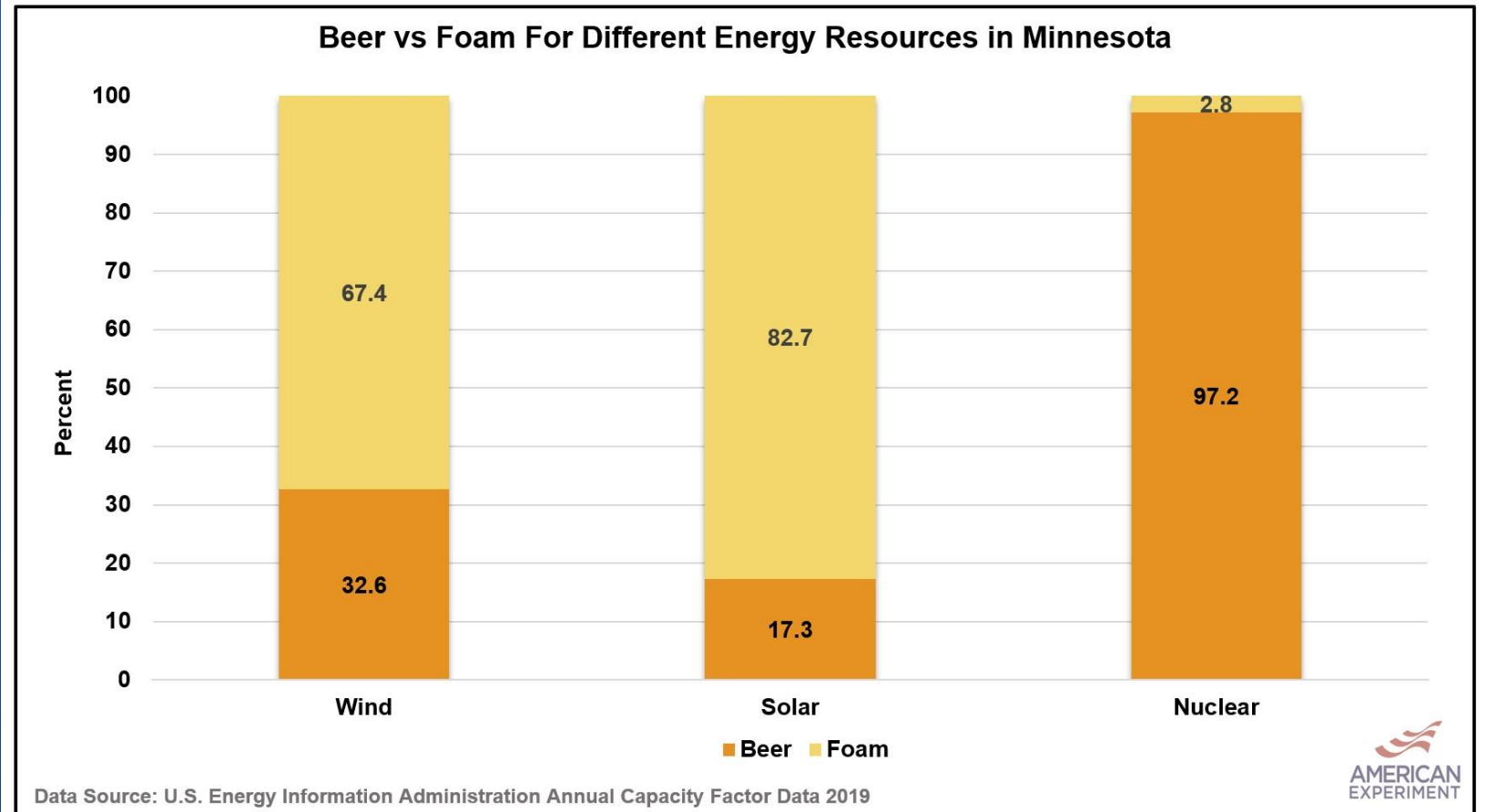
IEA. All rights reserved.

Notes: LNG = liquefied natural gas; US = United States. The values for copper processing are for refining operations.  
Sources: IEA (2020a); USGS (2021), World Bureau of Metal Statistics (2020); Adamas Intelligence (2020).

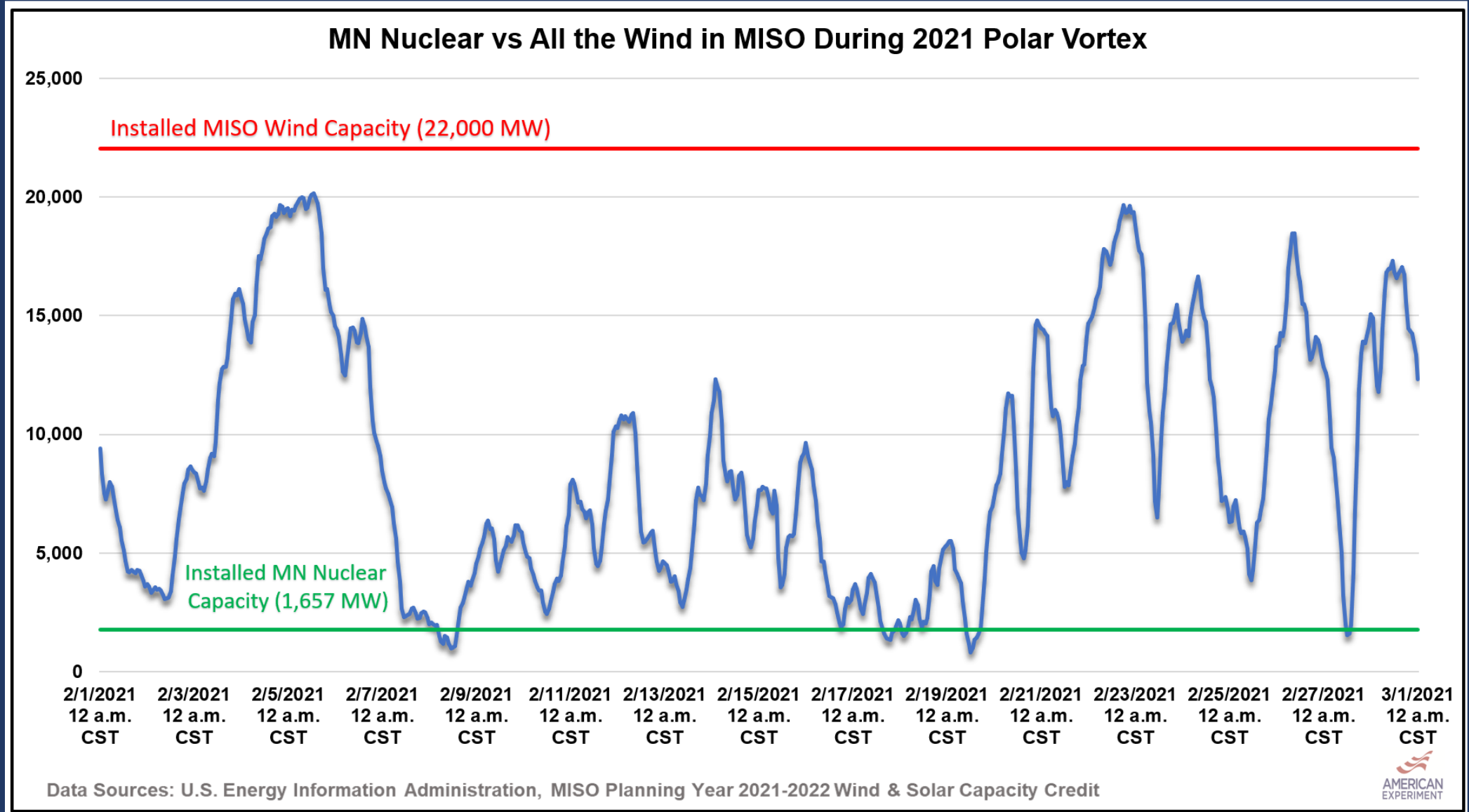
# Reliability



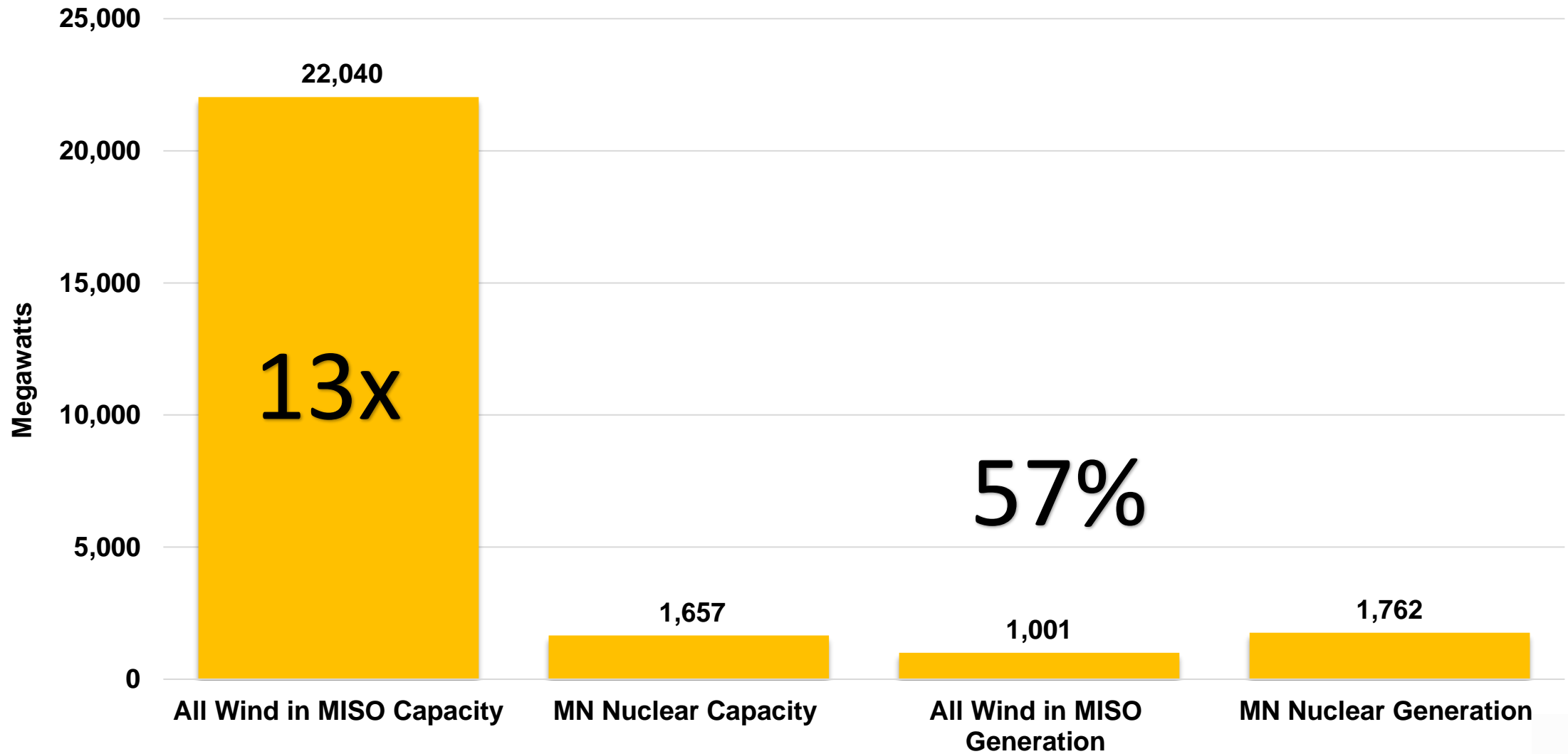
# Reliability



# Reliability: Extreme weather edition



# Capacity and Electricity Generation on February 8th, 2021 at 12pm CST

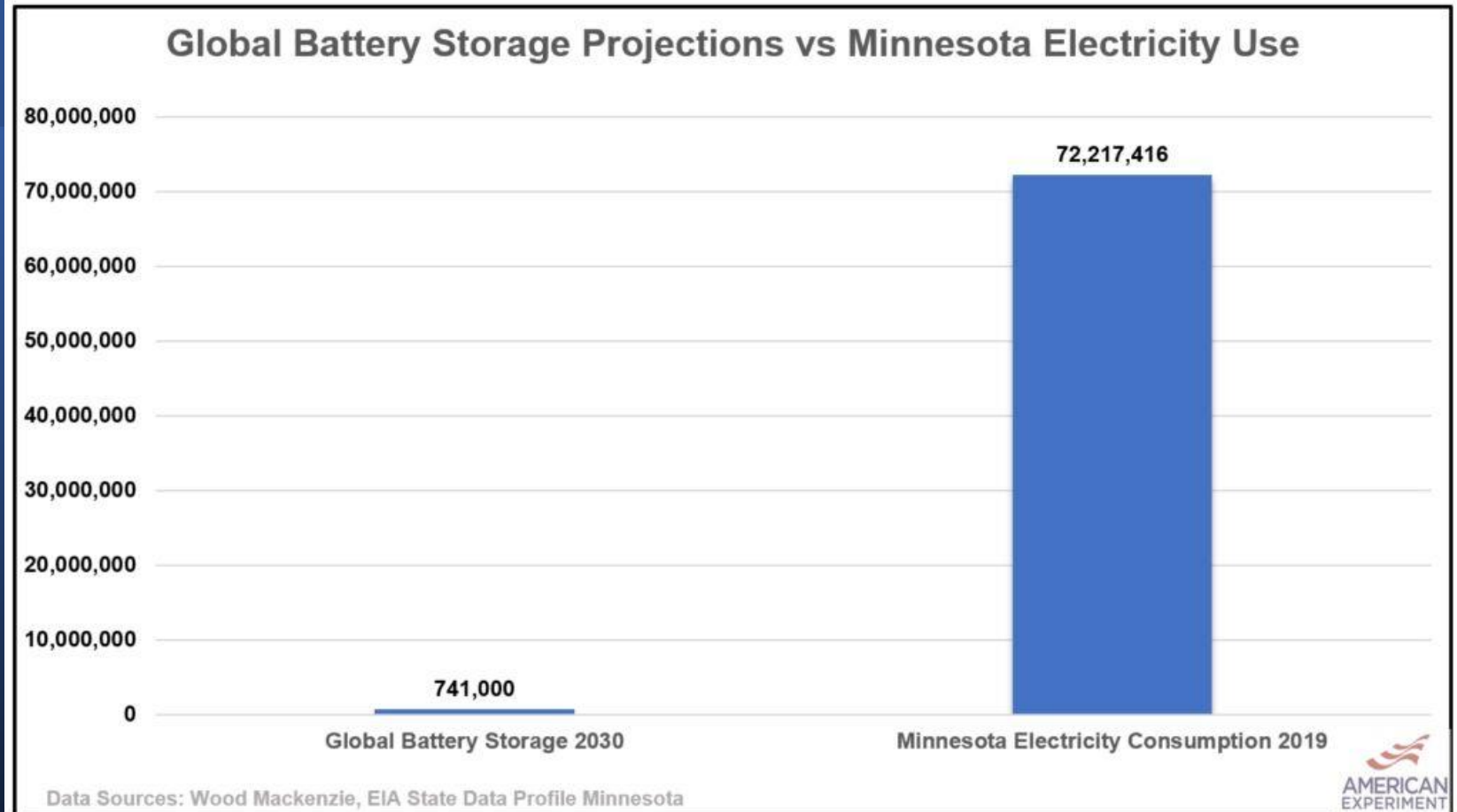


Data Sources: U.S. Energy Information Administration, MISO Planning Year 2021-2022 Wind & Solar Capacity Credit

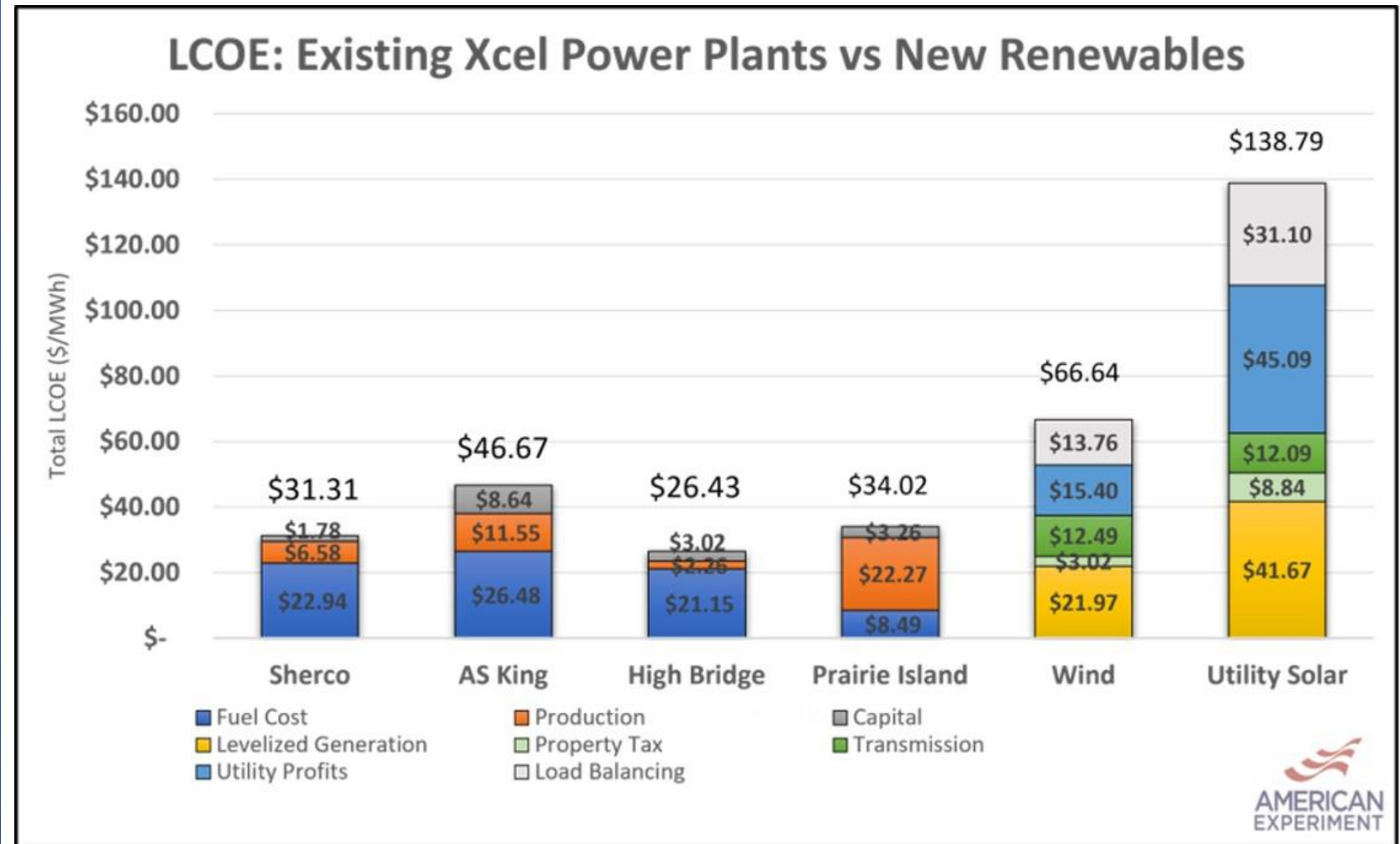




What about storage?



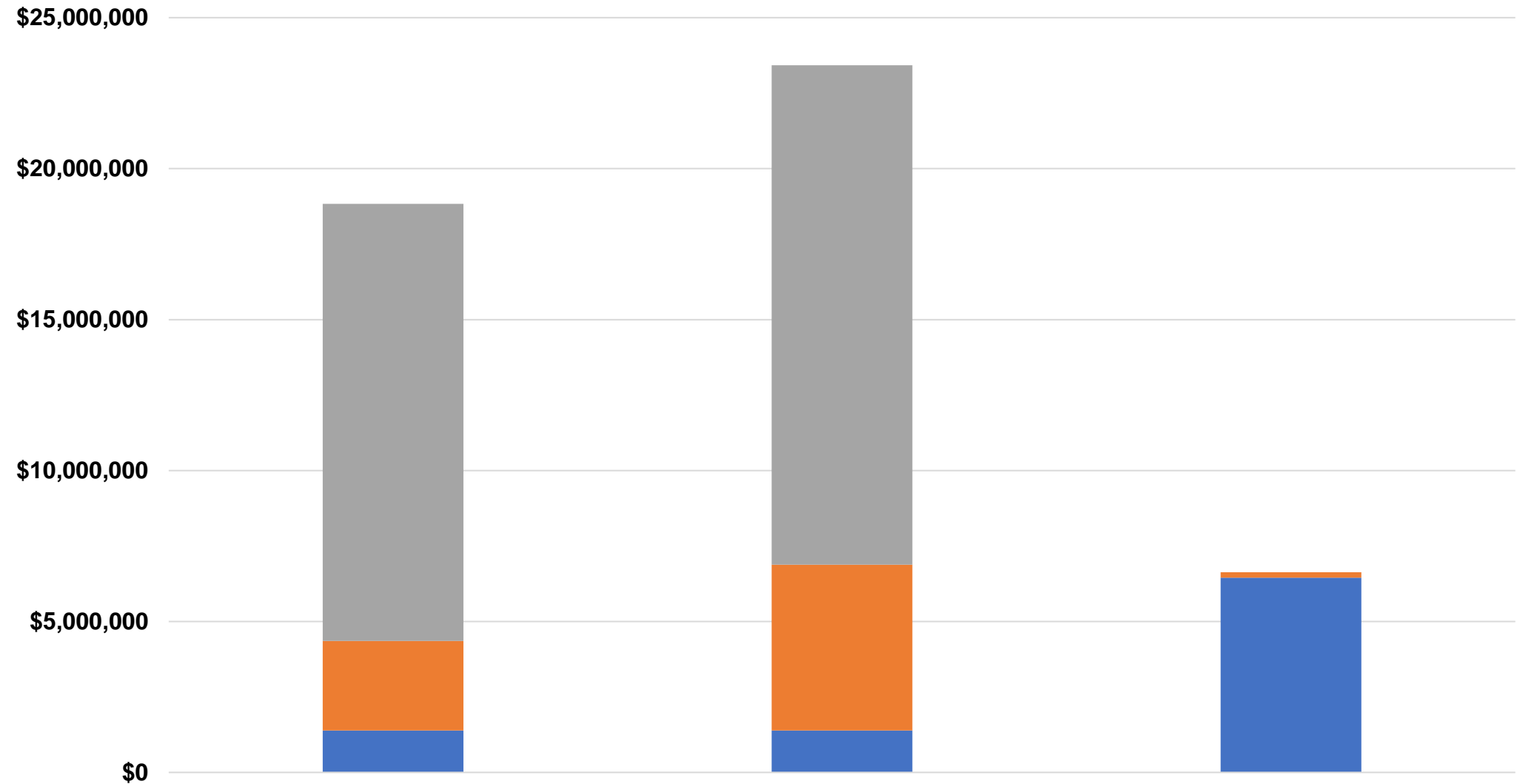
# Affordability



# Nuclear provides superior value than solar or wind

- Wind plants generate 1/3 that of a nuclear plant.
- Solar facilities 1/5 the power.
- You would need to build 3 MW of wind and 5 MW of solar to equate to the output of 1 MW of nuclear.
- Wind turbines last 20 years.
- Solar facilities last 25 years.
- Nuclear plants can last 80 years.

# Capital Cost of Wind, Solar, and Nuclear Over 80 Years

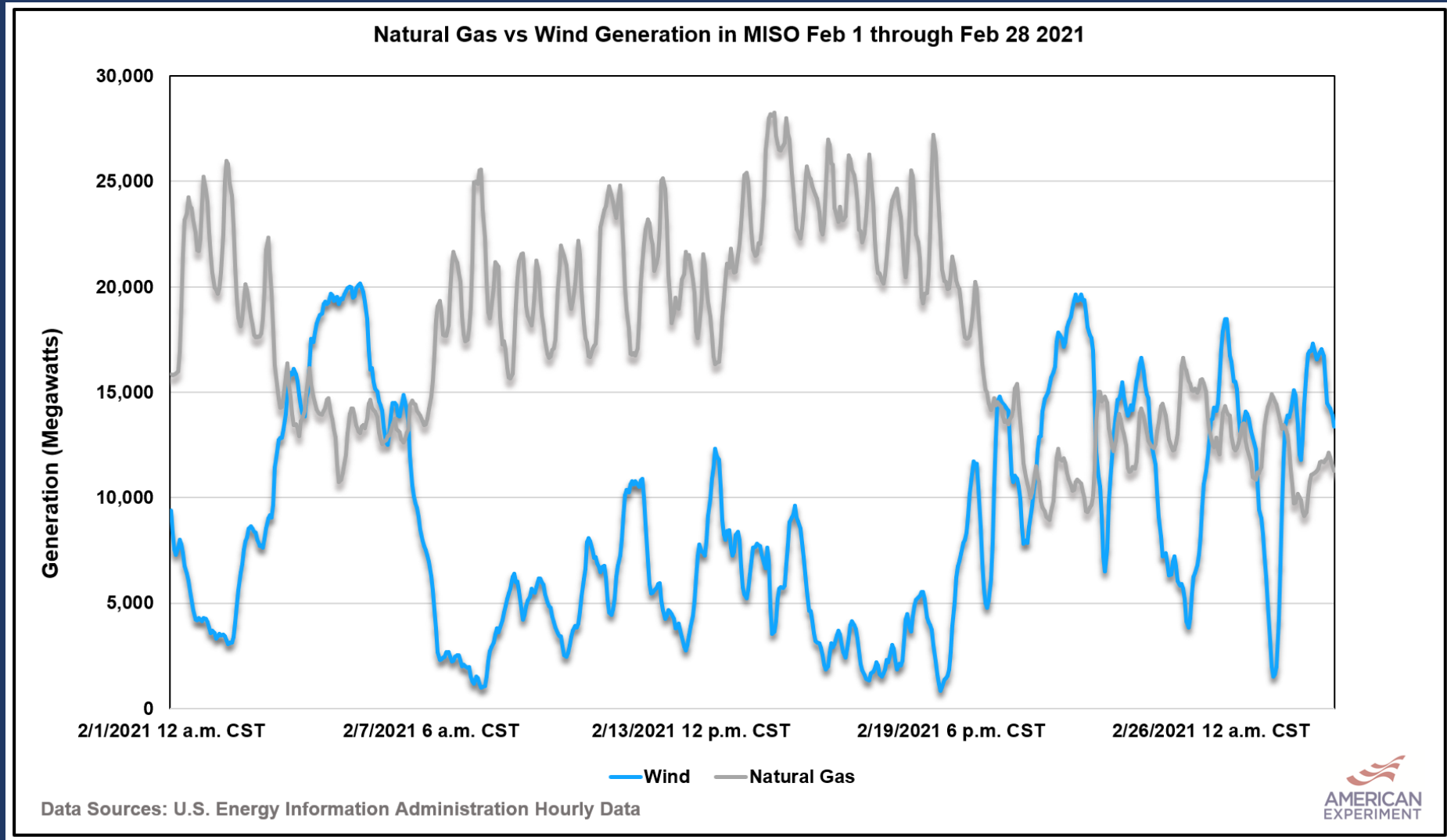


■ 1 MW ■ Cost of "Overbuilding" ■ Cost Over 80 Years

Data Source: U.S. EIA Annual Energy Outlook Electricity Market Module, Minnesota State Data Profile



# Emissions



# Nuclear should have unanimous support

Nuclear is the common-sense compromise candidate for conservatives who prioritize the reliability and affordability of energy, and liberals, whose main priority is often reducing greenhouse gas emissions.

Nuclear allows all parties to have their cake and eat it, too.

Questions?

