

Power Sources DIVERSIFY

The mix of electricity generation sources changed drastically over the past 50 years, both in the U.S. and worldwide.

BY LOUISE POIRIER

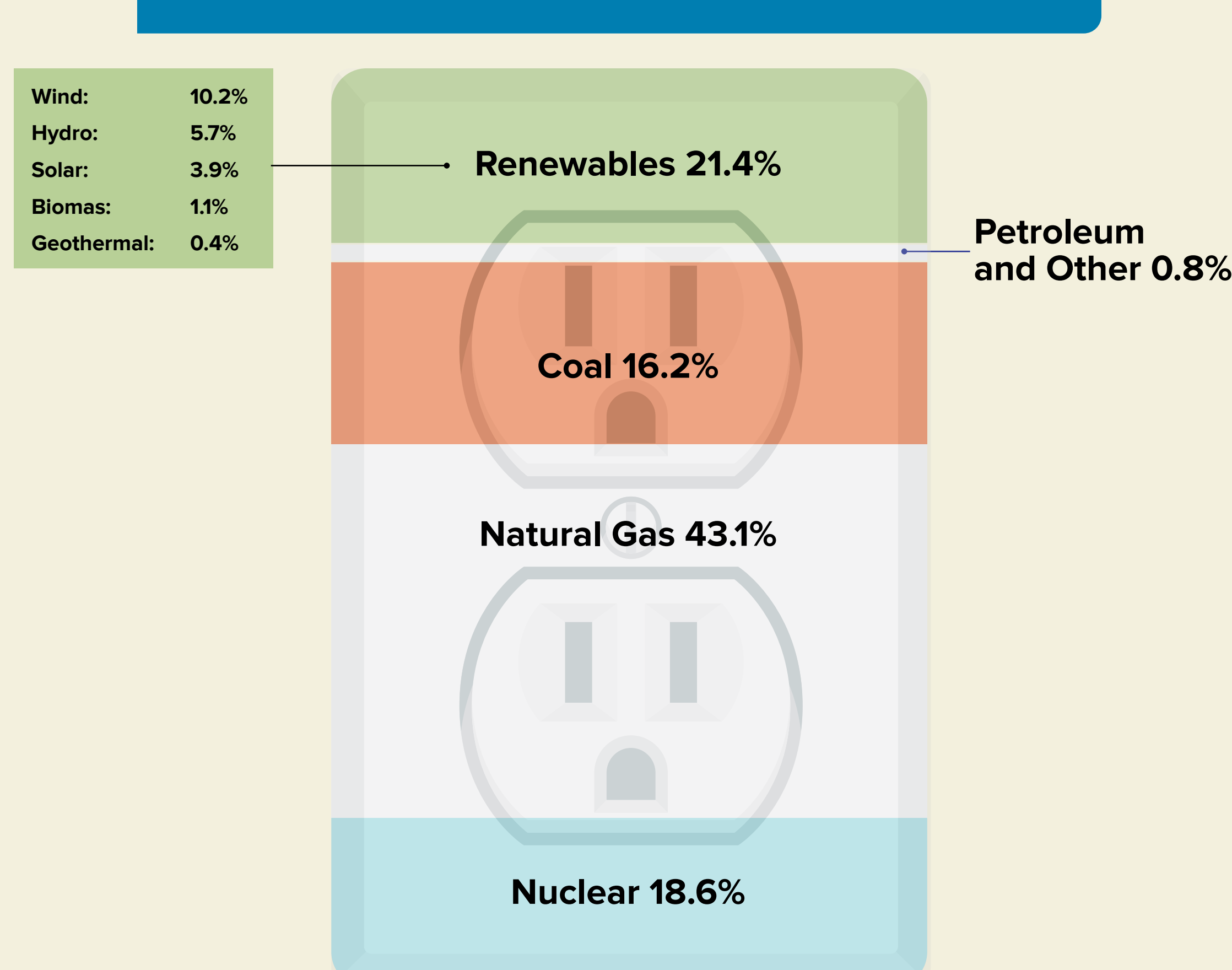
As of 2023, 60 percent of U.S. power is still produced using fossil fuels, 19 percent with nuclear power, and 21 percent with renewables, according to the U.S. Energy Information Administration. All told, those sources generated a combined 4.18 trillion kilowatt-hours (kWh) in 2023, the majority of that by utility-scale facilities (at least 1 megawatt of electricity generation capacity), with another 73.62 billion kWh from small-scale solar photovoltaic systems.

In the renewables mix, solar is leading in new generating capacity, according to a new report from the Solar Energy Industries Association (SEIA) and Wood Mackenzie, *Power & Renewables U.S. Solar Market Insight Q2 2024*. About 55 percent of all new electric capacity in 2023 was solar, and SEIA expects that trend to continue through 2024.

Meanwhile, worldwide electricity production totaled 29,479 terawatt-hours (TWh) in 2023, reported the International Energy Agency. Similar to the situation in the U.S., about 60 percent was generated by fossil fuels (or 17,718 TWh). Nuclear-generated power only accounted for about 9 percent (or 2,685 TWh), but renewables were responsible for about 30 percent (or 8,911 TWh) of total worldwide electricity generation.

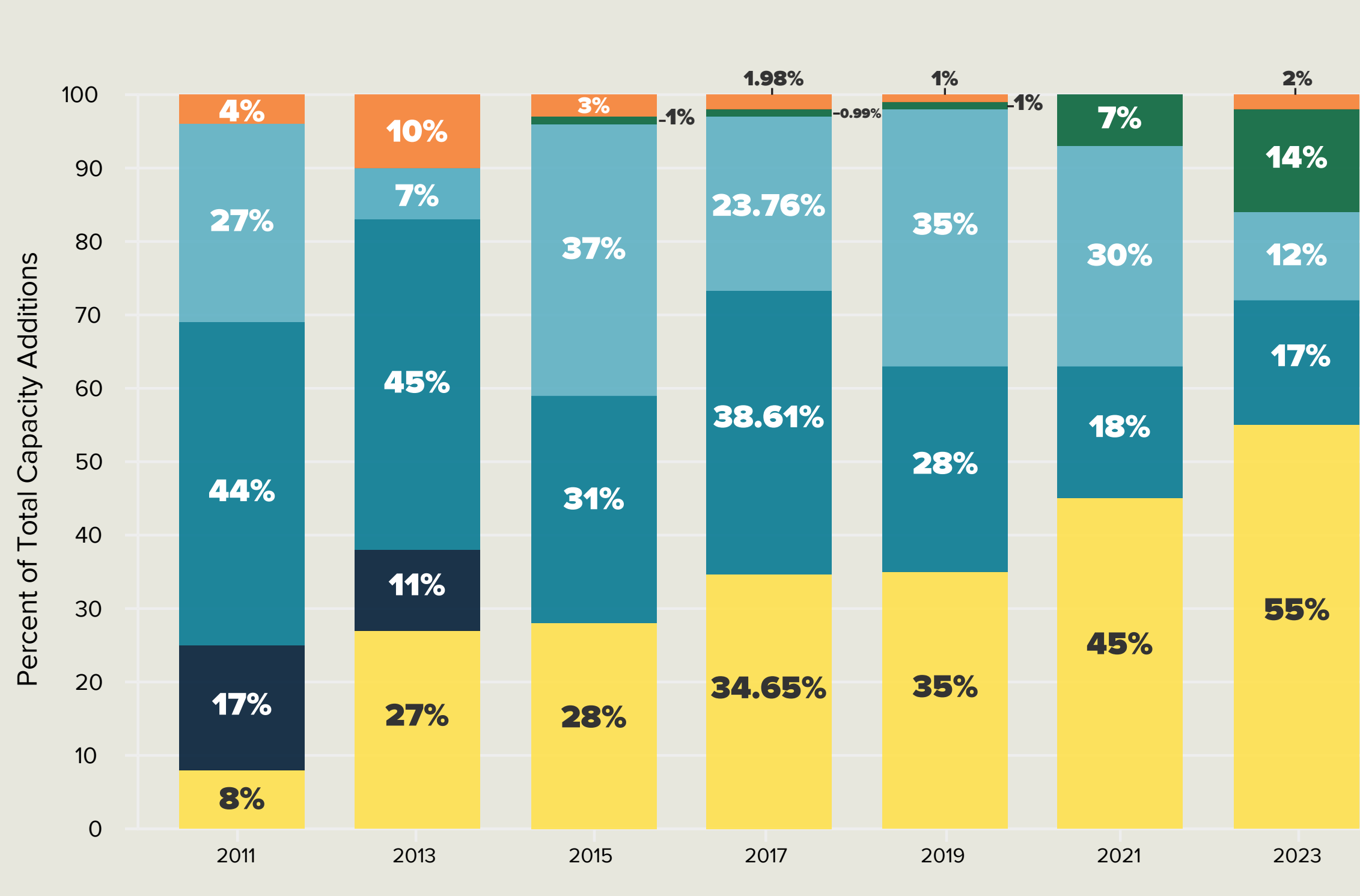
SOURCES OF U.S. ELECTRICITY GENERATION 2023

Total = 4.18 Trillion Kilowatt-hours



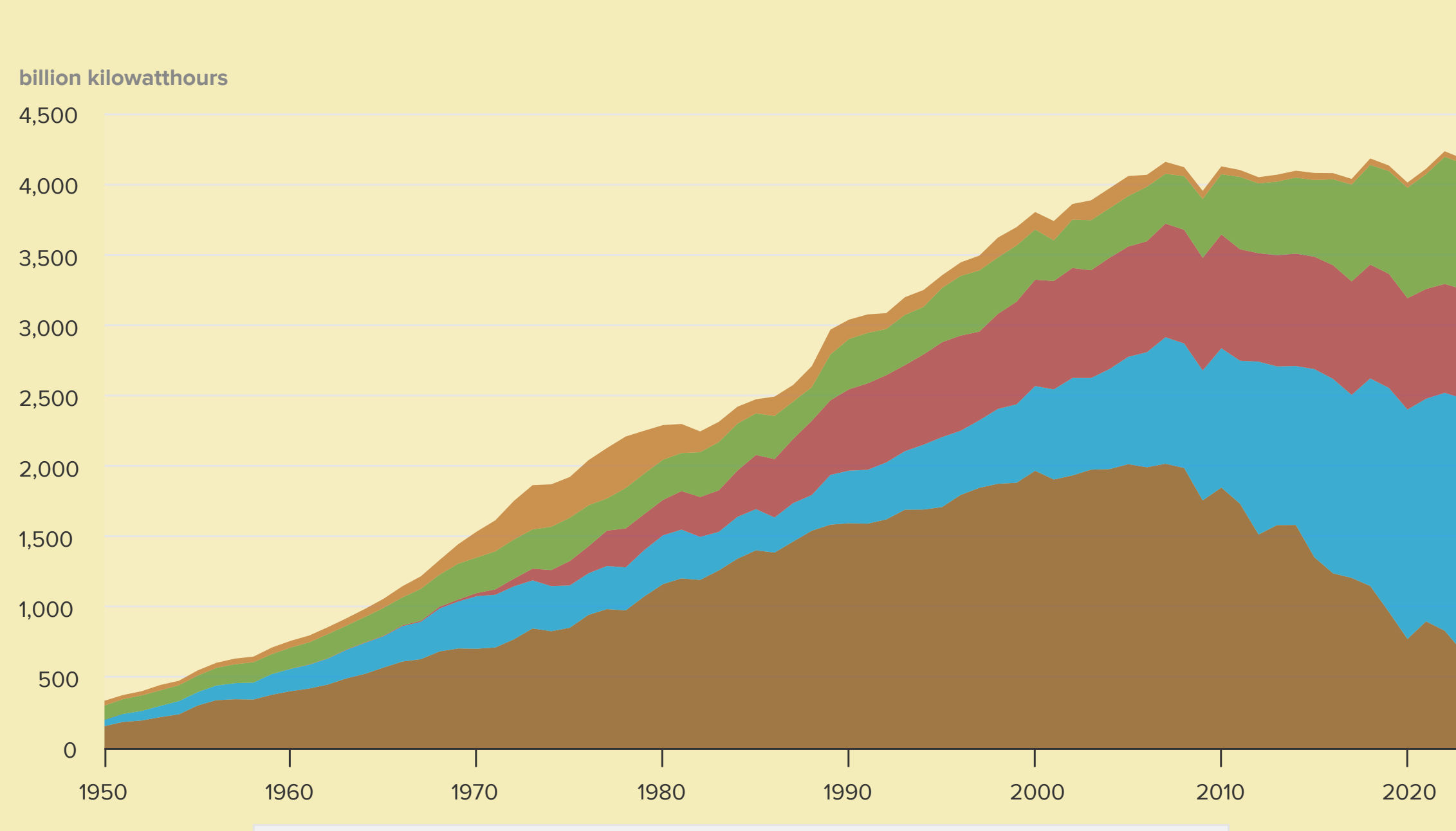
Source: U.S. Energy Information Administration, *Electric Power Monthly*, February 2024; preliminary data

U.S. ANNUAL ADDITIONS OF NEW ELECTRIC GENERATING CAPACITY



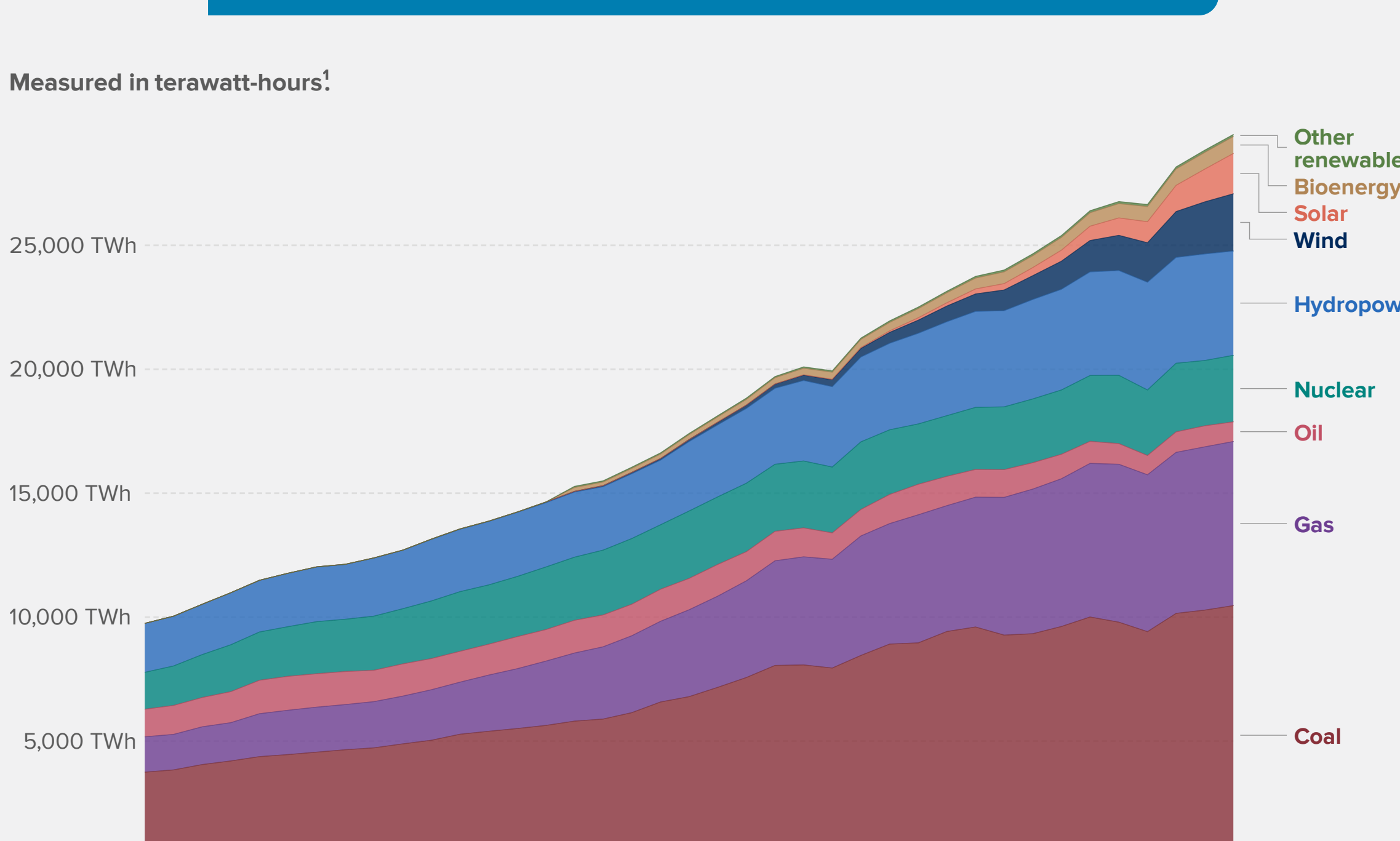
Source: SEIA/Wood Mackenzie, *Power & Renewables U.S. Solar Market Insight Q2 2024*; EIA

U.S. ELECTRICITY GENERATION BY MAJOR ENERGY SOURCE, 1950-2023



Source: U.S. Energy Information Administration, *Monthly Energy Review and Electric Power Monthly*, February 2024; preliminary data for 2023.
Note: Includes generation from power plants with at least 1 megawatt electric generation capacity.

ELECTRICITY PRODUCTION BY SOURCE, WORLD



Source: OurWorldInData.org, citing Ember (2024); Energy Institute - *Statistical Review of World Energy* (2024)
Note: "Other renewables" include waste, geothermal, wave, and tidal.