The Power Gap

Third in a series

Increases in data centers, electrification, new manufacturing and other sectors of the economy are expected to drive up U.S. peak demand for electricity by more than 38 gigawatts over the next four years. While meeting that demand will likely require a combination of new power plants, grid upgrades, energy storage and demand management, here's a look at how much generation would be needed to fill the gap.

Firm Power

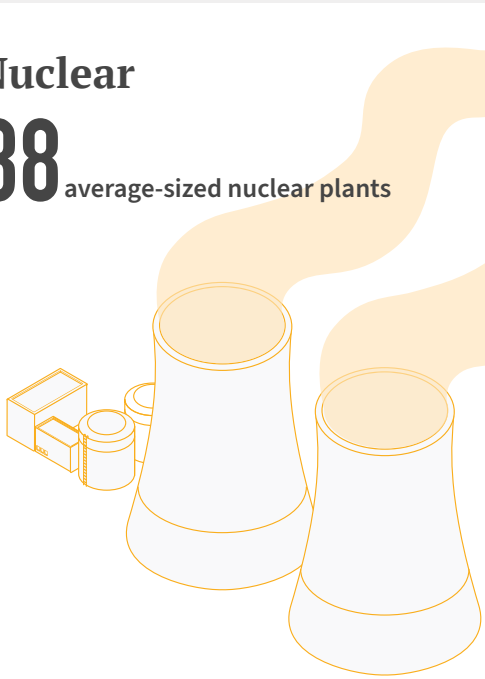
Fossil Fuel Plants

50 average-sized coal plants

75 average-sized gas plants

Nuclear

38 average-sized nuclear plants

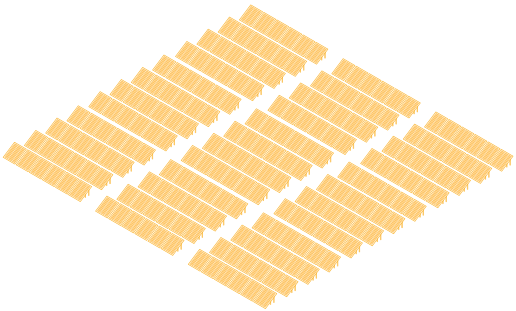


Intermittent Power

Solar

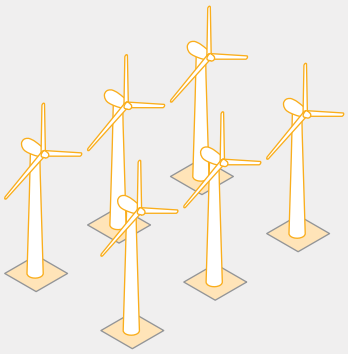
127,000,000 solar panels*

At ~6 acres per megawatt, this would require 228,000 acres (or 356 square miles) of land.



Wind

15,000 modern wind turbines*



** Low capacity factor for solar (15-30%) and wind (30-40%) means facilities would need to be significantly overbuilt and incorporate large amounts of storage to preserve reliability.*

Source: NRECA and Grid Strategies; Design: Jen Wheeler and Jerry Mosemak