



The Daily Dish

Checking in on the Clean Energy Revolution

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Prior to the Biden Administration, the Energy Information Administration's (EIA's) [2019 Annual Energy Outlook](#) (AEO) anticipated that

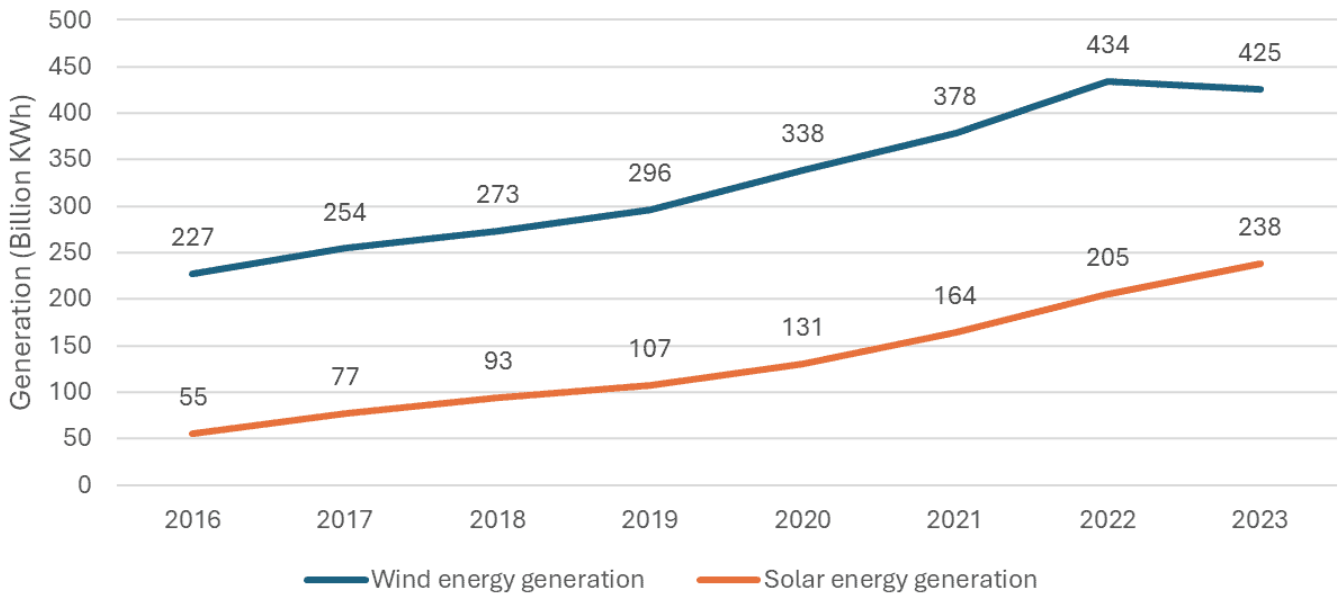
...the United States adds 72 gigawatts (GW) of new wind and solar photovoltaic (PV) capacity between 2018 and 2021, motivated by declining capital costs and the availability of tax credits. New wind capacity additions continue at much lower levels after production tax credits expire in the early 2020s. Although the commercial solar Investment Tax Credits (ITC) decreases and the ITC for residential-owned systems expires, the growth in solar PV capacity continues through 2050 for both the utility-scale and small-scale applications because the cost of PV declines throughout the projection.

Obviously, the administration's heavy regulatory push and massive taxpayer subsidies to force adoption of electric vehicles and other electrification of the U.S. economy, along with additional subsidies for investment and generation, were intended to transform the electricity generation footprint.

As a result, the 2023 AEO projected that wind and solar capacity additions would jump to 32GW in 2023, 40GW in 2024, and 60GW in 2025. The question on the ground is whether reality is matching these projections.

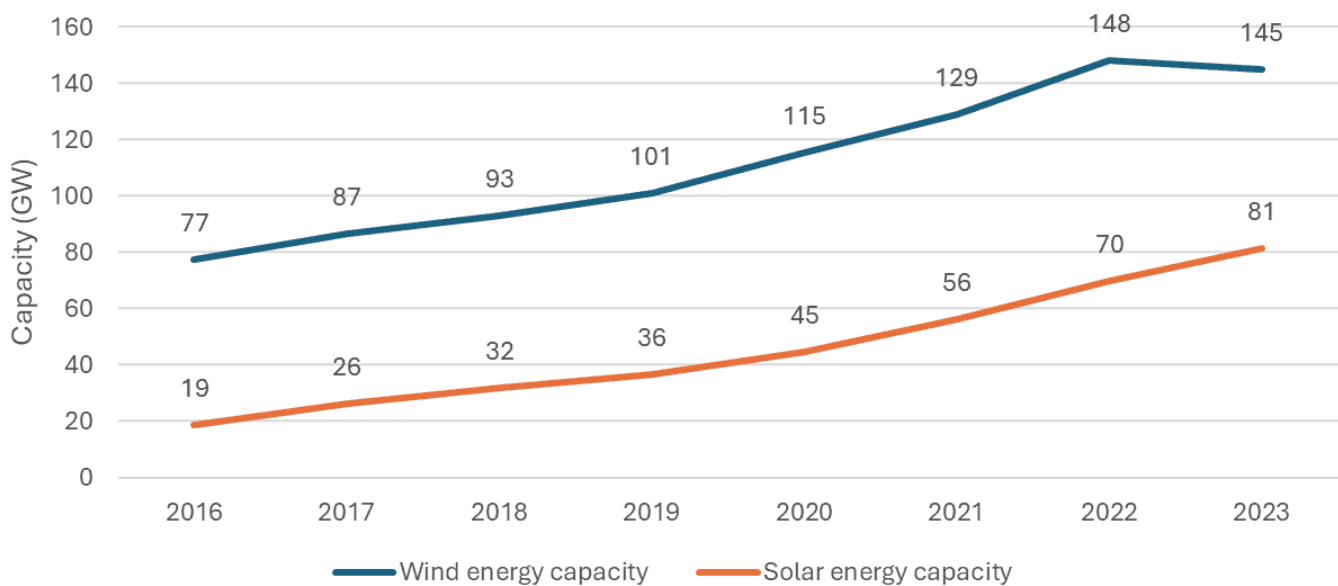
Notice that it makes sense to look at wind and solar as a package. In crude terms, wind can provide base load capacity at times when the sun does not shine, aka night. The results to date - and it is important to emphasize "to date" since little time has passed - do not support this vision.

Wind and Solar Energy Generation in the U.S.
(billion kilowatthours)



As seen in the graph (above) on wind and solar electric power generation, solar power has continued to grow steadily. In contrast, generation of wind power tailed off in 2023. Now, one possible explanation was that 2023 was simply a relatively calm year, at least wind-wise. But looking at the capacity to generate wind and solar (below) tells the same story. At least in the very early returns, the envisioned wind power generation is not materializing.

Wind and Solar Energy Capacity in the U.S.
(gigawatts)



What explains the difference between wind and solar? In earlier [work](#), AAF noted that in some areas the best place for wind power generation is offshore and there are significant regulatory headwinds to installing wind capacity. Put simply, it is probably significantly less difficult to site a solar power facility than it is for wind power. That also makes it less easy to choose among the advantageous grid and regulatory environments.

The final issue is whether the significant uncertainty - from the presidential election if nothing else - of the future clean energy policy portfolio driving this investment is having a larger impact on the wind sector.

Time will tell. At present, the revolution continues at a slow and uneven pace.