

# Wind, solar do not harm power grid reliability-draft U.S. study

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Snow is seen on the San Geronio Mountains behind a windmill farm in Palm Springs, California, January 7, 2016. Sam Mircovich

The growth of renewable power, including wind and solar, has not harmed the reliability of the U.S. electricity grid, according to a draft U.S. Department of Energy study, echoing the findings of grid operators across the country.

The conclusion of the draft, dated July and viewed by Reuters, could ease fears in the renewable energy industry that the widely anticipated study would be used by President Donald Trump's administration to form policies supporting coal plants at the expense of wind and solar.

"Numerous technical studies for most regions of the nation indicate that significantly higher levels of renewable energy can be integrated without any compromise of system reliability," the draft says.

It added that growth of renewables could require the building of more transmission lines, advanced planning, and more flexibility to balance generation and meet demand. But it said that baseload power - coal and nuclear power - "is not as necessary as it used to be" given advances in grid technology.

Shaylyn Hynes, an Energy Department spokeswoman, said the draft was "outdated" and had not gone through "any adjudication" from career or political staff. The final report had been slated for release in early July, but is now expected within a couple of weeks, she said.

The draft can be seen at [tmsnrt.rs/2v9PJ9l](https://www.tmsnrt.rs/2v9PJ9l). Bloomberg first reported on it on Friday.

Energy Secretary Rick Perry had called in April for his department to examine whether regulations backing renewable energy use imposed by former president Barack Obama and other administrations "threaten to undercut the performance of the grid well into the future."

Critics of wind and solar energy have argued that those technologies leave the U.S. power system vulnerable to shortages when the sun is blocked or the wind does not blow-meaning that coal, nuclear, and natural gas plants that do not depend on weather should remain the bulk producers.

Renewable energy is seen by many state and local government as a cost-effective way to reduce emissions linked to climate change. Nuclear energy is virtually emissions-free but poses potential safety risks and the thorny issue of disposing radioactive plant waste.

Renewables and natural gas have displaced a slew of coal and nuclear plants in recent years, due to lower prices, environmental regulations and government subsidies. The draft said this is "not yet a problem for grid reliability and resilience - but further study is needed," to determine how much of this "baseload" power can be lost while still ensuring reliability.

## **GRID OPERATORS SEE NO THREAT**

Officials at four grid operators, serving about 133 million customers, agreed renewables do not harm energy security or reliability.

"I don't see them as threatening, no," said Woody Rickerson, vice president of the Electric Reliability Council of Texas. "We can perform reliably with renewable generation; there are just things you have to do with renewables that you don't have to do with (conventional) power generation."

ERCOT said Texas got about 15 percent of its power from wind generation in 2016, and the region's solar power will grow quickly.

Grid operators said that as renewables become more common they depend more on weather forecasting. Storm fronts and cloud covers sometimes require grid operators to ensure that conventional power is readily available as solar and wind power generation waxes and wanes.

Stu Bresler, senior vice president for operations at PJM Interconnection, which coordinates the movement of power in all or parts of 13 states from New Jersey to Tennessee, said renewables have not harmed reliability in his region. Steven Greenlee, senior spokesman at the California Independent System Operator, said on one day in May wind and solar served 67 percent of CALISO's demand.

"We don't see the security at risk," he said.