

# SCIENTIFIC AMERICAN™

Permanent Address: <http://blogs.scientificamerican.com/plugged-in/2013/06/12/in-texas-electrical-grid-natural-gas-and-renewables-complement-each-other/>

## In Texas electrical grid, natural gas and renewables complement each other

By David Wogan | June 12, 2013

ADVERTISEMENT



A drilling rig in Texas' Eagle Ford shale play.



There is concern that low natural gas prices will crowd out renewable electricity generation, but in the long run, natural gas and renewables make better partners than adversaries. Whether the goal is reduced pollution, fewer carbon emissions, renewables

and natural gas work better together than against each other.

This relationship is building in Texas, which has abundant natural gas and wind resources. Thanks to resources in the Eagle Ford and Barnett shale plays and advanced extraction techniques like horizontal drilling and hydraulic fracturing, the state is now the leading natural gas producer in the United States, providing well over a quarter of the nation's output.

Meanwhile, Texas continues to increase its wind power generation capacity – now approaching 12 gigawatts – aided by a production tax credit and plentiful Panhandle and Gulf coast wind resources.

But do these resources compete against each other, or are they complementary?

A new report by the Brattle Group discusses how natural gas and renewables both compete and complement each other in the Texas grid ([PDF here](#)). The report finds that low natural gas prices could compete with renewables in the long term, but on the whole, the relationship is mutually beneficial.

The report suggests that co-developing and integrating these resources is a smart policy decision because natural gas generation is well-suited to filling in the intermittency of renewable resources, particularly wind. Because wind cannot be dispatched to the grid at will (without some form of storage), wind power is prioritized over other fuel sources when it is available, where natural gas generating units can fill in the blanks.

The low fuel costs of natural gas and wind in Texas are far more disruptive to coal, leading to more fuel switching (dispatching natural gas instead of coal) while some electric utilities are offloading coal assets completely.

The result of this odd couple relationship has been a less carbon-intensive electricity generation sector in Texas – without carbon pricing or climate legislation.

The full report is available at the Texas Clean Energy Coalition’s [website](#).

Image: AP



**About the Author:** An engineer who explores the relationships between energy, technology, and policy. Based in Austin, TX. Follow on Twitter [@davidwogan](#).

[More »](#)

*The views expressed are those of the author and are not necessarily those of Scientific American.*

## TRY A RISK-FREE ISSUE

**YES!** Send me a free issue of Scientific American with no obligation to continue the subscription. If I like it, I will be billed for the one-year subscription.



Email Address

Name

Scientific American is a trademark of Scientific American, Inc., used with permission

© 2013 Scientific American, a Division of Nature America, Inc.

All Rights Reserved.

[Advertise](#)

[Special Ad Sections](#)

[Science Jobs](#)

[Partner Network](#)

[International Editions](#)

[Travel](#)

[About Scientific American](#)

[Press Room](#)

[Site Map](#)

[Terms of Use](#)

[Privacy Policy](#)

[Use of Cookies](#)

[Subscribe](#)

[Renew Your Subscription](#)

[Buy Back Issues](#)

[Products & Services](#)

[Subscriber Customer Service](#)

[Contact Us](#)