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Wind energy needs gas partnership to expand, renewables group says

By [Bryan Schutt](#)

The American Wind Energy Association has once again reached out to the natural gas industry in hopes of solidifying what it believes is a natural alliance.

Speaking to the Natural Gas Roundtable on Sept. 13, AWEA CEO Denise Bode said opportunities abound for wind and gas to partner. And while both have become a central part of most utility generation planning, Bode said, both should rely on each other to continue their upward trajectory.

"We can't [continue to expand] without the support and the partnership with natural gas," Bode said. "There's a little gnashing of teeth from some folks in the gas industry about the impact of wind, but overall, if you look at it on a national basis, we can be an incredible partner. The country needs both of us."

Twisting a common mantra of the gas industry, Bode said the U.S. is also "the Saudi Arabia of wind." And by adding wind and natural gas to a generation portfolio, utilities are committing to the long-term security of the country and security for consumers, she said.

"I wanted to ... reach out, put our hand out, to see how we could work together as a team," she said. "The country needs an energy policy ... and that doesn't mean that we have to create massive new regulation or legislation. It means we need to work together to offer it up."

To date, however, there has been too much separation within the energy sector, Bode said. While not directly referencing the [March dust-up](#) between AWEA and the Interstate Natural Gas Association of America, Bode said both sides need to put any animosity behind them. The first leader of the American Clean Skies Foundation, Bode said she has worked with current CEO Gregory Staple on what the groups can accomplish together.

"It's about having a partnership that we don't have to say, 'I see wind as a competitor ... and I'm going to basically lobby against anything they want and add costs to them.' Because frankly, having a diversified portfolio solution as we're shutting down more coal generation in this country is something people want," she said. "They want to be secure."

Bode said people also want to know that the generation portfolio is not going to switch from all coal to all gas. "They like the idea of the diversity in a portfolio," she said. "Generation from coal has dropped significantly, new generation build-out has dropped dramatically, and it's really been wind and natural gas, and we gain so much more from working as a team."

Staple agreed that the two could find ways to work together because gas-fired and wind generators have a mutual interest in policies that provide for cost recovery of new investments. "But wind has to realize that means there must be an equitable mechanism for recovering the standby or capacity costs associated with having quick-start facilities that can back up intermittent resources. And network reliability must be a shared concern, not just something for regulated utilities," Staple said.

"On the other hand," he continued, "natural gas has to acknowledge that, while some wind generators may compete for peak demand in the near term, if the regulatory incentives are right, wind can help to grow the overall base of gas-fired power over the longer run and, on the regulatory side, may provide an additional fuel hedge."

The business case

Expanding on the relationship between gas and renewables, the American Clean Skies Foundation published a [study](#) in June that speaks to the changes coming to the nation's electric generating mix.

According to the study, completed by Joel Swisher, a consulting professor at Stanford University, a confluence of factors has created an opportunity to replace the "obsolete coal-fired" fleet with gas and renewable demand-side resources.

"Environmental rules will soon make old coal-fired generators very costly to run; using available gas-fired generation to replace coal has modest costs and risks; [and] increased gas generation enables renewable sources to replace coal on a large scale," according to the study. "The synergy between flexible natural gas-fired generation and renewable generation can benefit utilities' generation portfolios and allow generators to avoid high compliance costs of continued reliance on coal."

To further enable the renewable-and-gas balanced fleet, the report calls for advancements in the flexibility in ramping ability of combined-cycle generation, a renewed use of long-term gas contracts and new long-term contract vehicles to reward generators for services that improve flexibility.

Addressing the specific economic comparisons between retrofitted coal versus gas-fired generation, Swisher said natural gas generation stacks up quite well. At the time of the study, Swisher concluded that \$3.60/MMBtu is the break-even natural gas price at which the variable costs of power from gas-fired

combined-cycle gas turbine and coal-fired units are equal, assuming average heat rates of 7,500 Btu per kWh for CCGT and 10,500 Btu per kWh for coal. Compared against coal-fired units likely to face retrofit or retirement, the break-even gas price is about \$4.10/MMBtu. Assuming a heat rate for retrofitted units of 11,750 Btu/kWh, the break-even natural gas prices range from \$5/MMBtu to \$7/MMBtu.

The study, however, did acknowledge one variable that could "change the game": higher and volatile gas prices. Still, the study said the expectation of stable future gas prices is "realistic" as suggested by recent trends. And, since renewable sources have zero fuel cost with no volatility or emissions cost exposure, fuel-related price risk is moderated.

"All in all, given the prospect of compliance with the full spectrum of pending EPA regulations, existing and potential CO2 emission limits, and spreading RES/RPS requirements, extending the life of obsolete coal-fired steam plants would be a step in the wrong direction," according to the study. "All of these present and future trends demand much greater use of renewable generation, which in turn demands greater flexibility in the generation fleet, not less, and therefore greater reliance on gas-fired generators to reduce emissions and balance the growing share of renewable sources in the generation fleet."