

National Grid unveils plan to run carbon-free gas through its pipes by 2050

By **Jon Chesto** Globe Staff, Updated April 19, 2022, 12:01 a.m.



National Grid CEO John Pettigrew. CHARLES KRUPA/ASSOCIATED PRESS

National Grid is set to unveil a plan on Tuesday to decarbonize its US natural gas pipeline system by 2050, a move that dovetails with broader state efforts to ensure Massachusetts is net-zero with regard to carbon emissions by that date.

The goal is to augment electric heating with two forms of “clean” gas in the utility’s pipes:

renewable natural gas — drawn from decomposing materials at farms, landfills, and sewage treatment plants — and “green” hydrogen, created from water by using electricity produced by offshore wind farms. The British utility will also look at ways to incorporate geothermal heating systems in certain neighborhoods or for specific properties.

The announcement — which included some details already spelled out in recent filings with state regulators — coincides with a company effort to team up with other utilities to seek federal funds for a regional “clean hydrogen hub.” They hope to tap into an \$8 billion pot of funds included in the \$1 trillion Infrastructure Investment and Jobs Act that Congress passed last fall. The hubs would involve regional clusters of hydrogen producers and distributors, storage facilities, and end users. National Grid officials declined to name the other companies involved, other than to say the hub would go beyond its core states of Massachusetts and New York.

Natural gas now provides about half of the heat for buildings in Massachusetts, according to National Grid, making it a major source of carbon emissions. The utility’s plan calls for roughly half of the state’s building heat to come from electricity by 2050, with the rest coming from renewable natural gas or “green” hydrogen, or a hybrid mix of electricity and those cleaner gas sources. Natural gas also fuels about half of the region’s electric grid, but the hope is that by 2050, nearly all of New England’s power will come from carbon-free sources, particularly as offshore wind farms are built in the coming years.

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National Grid's announcement is sure to draw criticism from environmentalists who say the big utilities — National Grid, Eversource, and the like — are trying to justify pouring more money into their existing pipeline infrastructure by touting a clean future for it. Renewable natural gas is in short supply around New England, and making hydrogen from water is currently considered an expensive process.

Stephen Woerner, National Grid's New England president, said that he expects the calculus will change once public policies are used to develop a significant market for the fuels. "There's nobody telling anybody they have to use it [today]," Woerner said.

Woerner said his company's approach takes into consideration the difficulties inherent with getting permission to build substations and other electrical facilities; the gas network, he noted, is already in the ground. And "clean" gas can provide a good backup for electric heat in the winter during times when severe storms cause widespread outages, he said. He expects National Grid will eventually import most of the renewable natural gas from outside New England, just as the utility imports all of its natural gas from other places today.

"The most important thing to do is to [ensure buildings] are energy efficient," Woerner said. "After that, we want to make sure there is fossil-free natural gas available to leverage the gas network where it makes sense, [particularly] for difficult-to-electrify areas."

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