

Using Green Hydrogen to Heat Homes Would Waste Clean Electricity with Little Climate Benefit

Gas utilities are proposing to blend green hydrogen, made from wind and solar, with natural gas to heat Massachusetts homes. A new report demonstrates that this plan will consume 120% of the Commonwealth's procured offshore wind energy for 2030, preventing Massachusetts from using that renewable energy to decarbonize the grid, jeopardizing our climate goals. The report recommends policy guidelines for using offshore wind energy more effectively and limiting the distribution of green hydrogen.

Impact of Green Hydrogen Production on the Availability of Clean Electricity for the Grid answers the question:

How much wind capacity is needed to produce enough green hydrogen to heat buildings in Massachusetts?

Simply put, much more than we have.

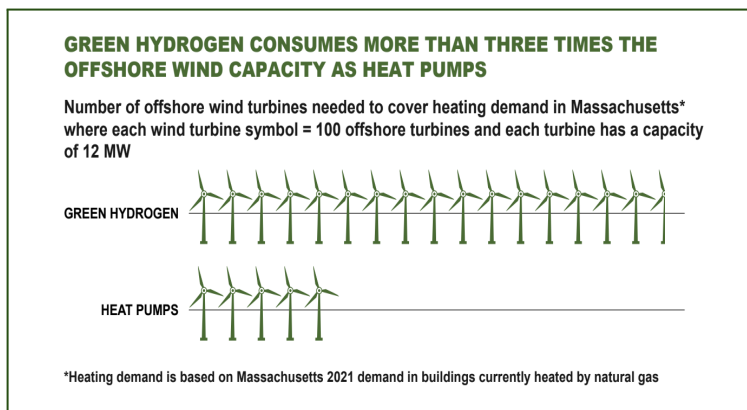
Key Findings

- Heating with green hydrogen will require more than three times as much wind energy than air source heat pumps.
- **3.9 GW** (gigawatts): The capacity of offshore wind turbines needed to generate enough electricity to make green hydrogen to replace just 20% of methane used to heat buildings.
- **3.2 GW**: Predicted offshore wind capacity in Massachusetts in 2030 — if green hydrogen is used for heating, there will be no remaining offshore wind capacity to decarbonize the grid or meet increased electricity demands from other sectors.

Green hydrogen for home heating is not only the wrong choice for decarbonizing buildings; it puts at risk Massachusetts' plans to decarbonize other sectors like transportation that depend on a clean electric grid.

Conclusion

We have the technology to efficiently decarbonize home heating: heat pumps. These highly efficient appliances provide reliable heating and cooling at a fraction of the electricity demand compared to current plans by utilities to blend green hydrogen with methane to heat homes. Regulators should limit the use of highly resource-intensive green hydrogen to applications where the direct use of electricity is not feasible, such as high-heat industrial processes.



More information on the report and policy recommendations: bit.ly/GH2Report