

Utilizing Existing Pipeline Infrastructure Will Spur Our Clean Energy Transition



New Jersey Resources is a Fortune 1000 energy infrastructure business with headquarters in Wall Township, NJ. As the parent company of New Jersey Natural Gas, one of four regulated natural gas utilities in the state, we're focused on building the clean energy future and putting our infrastructure to work delivering on climate and emissions reduction goals.

\$17 BILLION

Amount of ratepayer investment made in building, maintaining, and securing NJ's existing pipeline network

75%

Number New Jersey residents who rely on natural gas

ZERO-CARBON HYDROGEN

Being produced from renewable electricity and blended into existing natural gas distribution system for New Jersey Natural Gas (NJNG) customers today.

New Jersey's already existing, reliable pipeline network can integrate and deploy increasing levels of zero carbon energy, such as Renewable Natural Gas and hydrogen. This technology works, is available today, and is already being used here in New Jersey on a modern, upgraded distribution system at NJNG.

As we are demonstrating, transporting zero carbon fuels through appropriately upgraded natural gas infrastructure is a realistic way to help achieve climate and emission reduction goals **more affordably, more quickly at large scale** and with **greater reliability** than electrification alone.

»»» MORE QUICKLY AND AFFORDABLY

An Already-Built, Deeply Penetrated Energy Delivery Platform Ready to Deliver Zero Carbon Fuels. More than 75% of residents depend on the natural gas system for home heating. This deep penetration provides a strong platform for the rapid delivery of zero-carbon fuels without new, costly infrastructure permitting and construction, or reliance on customer appliance conversions.

And, Upgraded Existing Natural Gas Infrastructure is Ready to Deploy Zero Carbon Fuels Today. Hydrogen is already being safely carried in pipeline delivery systems today and has been for decades. For example, about 12% of Hawaii Gas' supply is hydrogen. Other renewable gas sources from landfills and food waste can also be injected into the pipeline infrastructure to achieve even further reductions in greenhouse gas emissions in the residential and building sectors.

Helping Deploy Greater Amounts of Solar and Wind. As the State pursues aggressive targets for solar and offshore wind, existing gas infrastructure can be used as a storage solution during times when supply doesn't match demand, complementing New Jersey's renewable electricity resources. By capturing this excess power through technologies like green hydrogen production, New Jersey would avoid zero carbon electricity being curtailed at ratepayers' expense while further reducing greenhouse gas emissions.

Avoiding Billions in Additional Costs to Build Out a Single, Electrified Energy Delivery System.

New Jersey relies on a dual energy system with different capabilities and different, independent sets of infrastructure. The gas system is designed to operate and meet peak demand on the coldest days of the winter, when energy consumption is the highest. Meanwhile, an entirely electrified home heating system during a peak winter day would essentially double the amount of energy consumed, doubling power generation needs and the infrastructure required to reliably deliver it – an expense estimated to cost billions.

»»» MORE RELIABLE

A Proven Reliability Record with 70x Fewer Outages than the Electric System. New Jersey's gas network is designed to handle peak energy load on the coldest days of the year, when demand for home heat energy is highest. It does so with 70x fewer outage events than the electric system in a given year.

Providing a Solution for Intermittent Renewables' Reliability Challenge. Higher percentages of renewable electricity resources in New Jersey's generation mix means a greater need for long duration and seasonal energy storage due. The pipeline network can help readily solve the existing reliability gap of needing large-scale, viable batteries to complement intermittent renewables. It has the capability to store wind and solar energy at times when it is over produced, so it's readily available at scale when consumers need it most.

Growing Recognition of Need to Leave Pathways Open for Zero-Carbon Fuel Innovation for U.S. Gas Pipeline Network. Federal policymakers, including the Biden Administration's Department of Energy, have increasingly recognized the long-term value of deploying zero-carbon fuels through the existing gas network to achieve clean energy goals. On June 7, 2021 the USDOE announced the Hydrogen Shot, seeking to bring down the cost of clean Hydrogen by 80% over the next decade and the bipartisan infrastructure bill allocated more than \$9 billion to the advancement of hydrogen technologies.

KEY TAKEAWAYS:

- ▶ With policy support, existing gas pipeline infrastructure can drive a faster, more affordable, more reliable, and more equitable energy transition.
- ▶ Important to leave pathways open for innovation and competition in zero-carbon technology.
- ▶ Too early to pick winners and losers, or for the state to close itself off from the future benefits of investment, innovation, and competition happening around low-carbon gas fuels today.