Building a Sustainable Future



Natural Gas Utility: Safe, Reliable, Affordable & Energy Efficient

Mark G. Kahrer

Senior Vice President – Regulatory Affairs, Marketing & Energy Efficiency

Northeast Gas Association Regional Market Forum

May 2, 2023



New Jersey Natural Gas

- Largest Subsidiary of New Jersey Resources (NJR)
- Founded in 1952
- Nearly 575,000 customers across five counties
- Over 7,500 miles of distribution and transmission pipeline



Past JD Power Awards Residential Large East Business Large East Environmental Champion



Past Escalant Awards Most Trusted Brand Environmental Champion Easy to Do Business With





The Value of our Natural Gas Infrastructure An asset in the clean energy transition

Today, our pipeline network can integrate and deploy low and zero carbon fuels, such as **Renewable** Natural Gas and hydrogen, driving lower emissions without a massive, costly buildout of new infrastructure





Sources: 1 - Aggregated from 2020 NJ gas utility annual reports filed with BPU 2 - US Dept of Transportation; Pipeline and Hazardous Materials Safety Administration database 3 - EIA, New Jersey State Energy Profile, Accessed 11/12/21

The Importance of Reliable Supply

During the outage, NJNG saw a 53% increase in gas sendout due to home generators.





Pathways to reducing GHG emissions in the future





Optimizing Renewable Resources

- New Jersey's energy goals call for a substantial increase in wind and solar renewable generation
 - 11,000 MW of offshore wind capacity by 2035
 - 14,000 MW of additional solar capacity by 2035
- Significant energy supply-demand imbalances and excess renewable power expected
- Excess power could be converted to hydrogen avoiding waste and benefitting customers



Partnering with renewable electric suppliers to fully leverage every clean electron and deliver long-term clean, reliable energy to customers is the correct pathway to the Clean Energy Future that customers expect

Howell Green Hydrogen Project

Project Details

- Commercial operation reached in October 2021
- Entire project located within NJNG's Howell facility
- Converts renewable electricity to zero-carbon hydrogen, blended into natural gas distribution system
- System expected to offset ~180 US tons
 of CO2 per year

NJNG Howell LNG Facility



Electrolyzer will source solar power from a 416 kw DC array on site

Electrical current will split water molecules into hydrogen and oxygen

Hydrogen initially stored in onsite vessel before being blended into distribution system

New Jersey's RGGI Legislation enabled Electric and Gas Public Utilities to invest in and earn a return on investments in Energy Efficiency and Renewable Assets. The Howell Project was approved in Rate Base in December 2021

Renewable Natural Gas (RNG) and Green Hydrogen can reduce net carbon emissions and lessen reliance on fossil natural gas



NJNG is privileged to have been selected as the Preferred Vendor to work with the Monmouth County Reclamation Center on the development of a landfill gas RNG processing plant

Federal Policy: Pursue all technology innovations to find the best solution for customers

For the first time ever, the Inflation Reduction Act establishes Make it in America provisions for the use of American-made equipment for clean energy production. The law provides expanded clean energy tax credits for wind, solar, nuclear, clean hydrogen, clean fuels, and carbon capture, including bonus credits for businesses that pay workers a prevailing wage and use registered apprenticeship programs. -The White House 8/19/22

- Bipartisan Infrastructure Law
 - 60 new DOE programs move economy toward low carbon future.
- Inflation Reduction Act
 - Funds carbon reductions across technologies:
 - Clean hydrogen;
 - Renewable natural gas;
 - Solar and Wind;
 - Carbon capture and storage;
 - Energy efficiency.

Federal Policy through the DOE and legislation recognize that an "all of the above" strategy will provide the best outcome for customers and environment



Key Takeaways

Let's not lose sight that emissions reductions is the goal. Complementary energy delivery systems that provide resilience our state.

Decarbonized fuels through gas infrastructure offer a better way forward for customers and the climate: faster emissions reductions, safety and reliability at lower cost.

The federal government recognizes that advancements on all fronts is the best way to find the solution to achieve long term climate goals and the initiatives of the DOE and the IRA will help drive innovation in a more economical way for customers.

NJR is confident that by working with the electric sector, we can achieve long term climate objectives: FASTER, more AFFORDABLY and with the same great RELIABILITY that our customers demand from us today

