

NJNG'S GREEN HYDROGEN PROJECT



“By the year 2050, we believe New Jersey Natural Gas (NJNG) will be able to serve its customers with a carbon neutral fuel supply, by transitioning to carbon-neutral and zero emission fuels like RNG and green hydrogen.

“In doing so we will help reach **NJ’s climate goals more quickly, more affordably, with greater reliability** and in a way that complements our state’s clean energy ambitions.”

—**Steve Westhoven**
President and CEO

▶▶▶ GREEN HYDROGEN – A CRITICAL TOOL IN A MORE AFFORDABLE AND RELIABLE CLEAN ENERGY TRANSITION

Carbon-free hydrogen – known as green hydrogen – is made through processes powered by **renewable solar or wind power**. This clean fuel can then be blended directly into gas distribution systems or used in other applications like heavy industry, transportation or power generation, helping achieve climate goals more quickly, more affordably and more reliably.

The Biden Administration has taken a proactive stance on the importance of green hydrogen as a zero-carbon energy source for the clean energy future. In June 2021 the USDOE of the Biden Administration 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.

NJNG believes a clean energy New Jersey starts here, with us. We are uniquely positioned to integrate with state’s large solar and offshore wind ambitions. A meaningful portion of the state’s ambitious 7,500 MW offshore wind goal is likely to come ashore in our service territory. Excess wind power during periods of low demand can be converted to green hydrogen to ensure the full value of intermittent clean energy is captured and utilized.

▶▶▶ NJNG'S GREEN HYDROGEN PROJECT: FIRST OF ITS KIND ON THE EAST COAST

NJNG has placed into service a green hydrogen production facility in Howell, New Jersey. This effort demonstrates the real-world potential of the hydrogen opportunity before us.

It is the first green hydrogen production project on the East Coast to blend zero-carbon hydrogen directly into an existing gas distribution system, directly powering homes and businesses.

This renewable hydrogen project reached commercial operation in October 2021.

NJNG HOWELL, NJ SITE W/ HYDROGEN FACILITIES (ANNOTATED)



NJNG'S HOWELL FACILITY GREEN HYDROGEN PROJECT DETAILS

- ▶ Construction initiated in Summer 2021
- ▶ Project completed and placed in-service in October 2021
- ▶ The system offsets 180 US Tons of CO₂ per year
 - Equivalent to 407,000 miles driven by car, 18,456 gal. of gasoline or 90 tons of coal burned.
- ▶ The entire project is located within the existing NJNG Howell facility fence line, requiring no disturbance to wetlands or trees.
- ▶ A byproduct of the facility is oxygen, that is vented directly into atmosphere.
- ▶ The 175 kW electrolyzer was supplied by Nel Hydrogen, and manufactured in Wallingford, CT.
 - is producing 65 kg/day of hydrogen.
- ▶ Nel is a global organization centrally focused on hydrogen solutions.
- ▶ The electrolyzer will source electricity from a 414kW DC solar array on site, but is currently powered by certified renewable electricity from wind power.
- ▶ A hydrogen buffer vessel is located onsite to control the injection rate into the NJNG system.
- ▶ Injection is received in an 8" 60psi distribution line.