

Public Hearings Statement
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Good afternoon, my name is Don Chahbazzpour. I am making this statement on behalf of National Grid and I'm here to tell you there is a better way. I am one of the authors of Pathways to Carbon-Neutral NYC, a study that was commissioned by the NYC Mayor's Office of Sustainability, Con Edison and National Grid. The study took two years to complete and published in spring 2021.

National Grid operates electric and gas utilities throughout New York State. In Western New York we are an electric only utility, in Downstate New York we operate a gas distribution network, and in Central and Eastern New York we distribute both gas and electricity. In all we provide energy to over 4.2 million customers. All told, our business in the state is approximately 70% electric and 30% gas distribution.

Winning the fight against climate change requires that we achieve emissions reductions across multiple sectors -- how we generate electricity, fuel our vehicles, and heat our buildings -- all while ensuring safety, security, reliability, equity, and affordability.

Electrification will play a crucial role, however we also need to offer a practical and diverse range of clean heating solutions so customers can choose what best addresses their needs for performance and cost, without endangering the climate goals we all believe in.

A **coordinated gas and electric** decarbonization strategy, utilizing a diverse set of technologies and strategies, is a **better way to manage the costs and feasibility risks** of decarbonization than relying almost exclusively on single technologies or strategies. **A hybrid pathway, where we decarbonize both electricity and gas networks, was not considered by the Climate Action Council.**

A hybrid approach to heat decarbonization through an integrated clean gas and electric system can more affordably and practically achieve net zero through:

- 1) **Widespread energy efficiency** - Prioritizing building envelope improvements
- 2) **Fossil Free Gas** - Renewable Natural Gas from sustainable biogenic sources and Green Hydrogen
- 3) **"Dual-fuel" heating** - Customers with heat pumps for cooling, heating in the shoulder months, and fossil free gas for the coldest periods
- 4) **Targeted Electrification/Geothermal** - Targeted electrification where cost-effective, employing air-source heat pumps and/or networked geothermal heat pumps

A distinction needs to be made between natural gas and the gas network. Much like we decarbonized the electricity network through the adoption of renewables, we can also decarbonize the gas system through adoption of clean fuels, like renewable natural gas and clean hydrogen. It

important to recognize that 15 years ago, wind and solar were in their infancy—costs for such technologies were high and penetration was extremely low. Wind and solar generation technology is now cost competitive with traditional generation sources and is becoming commercially scaled. We expect the same type of advances from RNG and hydrogen in the next few years.

All net zero pathways must maintain the safety, security and reliability of the gas networks, but overall energy system reliability and resilience can be quite different between scenarios. For example, utilizing both a decarbonized gas system and electric network can reduce the risk of relying on a single energy system for the region's heating capacity, and the fundamental health, security, and safety issues that result from heating service interruptions.

New York should drive decarbonization of gas by establishing renewable gas procurement standards for utilities.

Eliminating fossil fuels from our networks also includes a role for hydrogen produced from renewable electricity. Hydrogen when burned produces no carbon dioxide, and as such can play an important role in decarbonizing heat. Customer appliances and gas networks can accommodate up to 20% blend of hydrogen by volume without significant upgrades. Our approach goes beyond this, envisioning dedicated 100% hydrogen clusters in areas where high levels of gas demand will be required. We also envision a future where synthetic low carbon fuels can be produced above the 20 percent blend threshold by combining hydrogen with other gases. These technology solutions are real and will play a critical role in closing the carbon loop across the economy.

Hydrogen production also complements the growing offshore wind industry in the Northeast, of which National Grid is playing a big part.

So in closing, I urge the CAC to model and consider a **hybrid pathway**. Thank you.

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