PEOPLES GAS® | NORTH SHORE GAS®

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North Shore Gas
200 East Randolph Street
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U.S. Environmental Protection Agency

1200 Pennsylvania Ave., NW

Washington, DC 20460

RE: ENERGY STAR Version 5.0 Furnaces Draft 1 Specification

Thank you for the opportunity to comment on the proposed updated ENERGY STAR furnace specification. Peoples Gas, North Shore Gas and ENERGY STAR® share the desire to decarbonize and lower emissions. Energy efficiency is an important part of our approach to decarbonization in Illinois, and we recognize the influential role ENERGY STAR® labeling plays in both the development and adoption of high efficiency technologies.

We commend ENERGY STAR® for considering previous comments on sunsetting the gas furnace specification and instead proposing updates to the specification. Our comments below highlight how the ENERGY STAR® program and our customers can benefit from adding additional tiers to the specification, and the negative consequences of not adding additional tiers.

<u>Comments</u>

1. **Gas heat pumps should be included in the ENERGY STAR® Version 5.0 specifications.**

We recommend ENERGY STAR® create an advanced tier that would enable gas heat pumps (GHPs) to qualify for given their high efficiency. While GHPs have the capability of both space and water heating, forced hot air space heating is their primary use. We recommend a Gas-Fired Forced Hot Air specification.

We believe that GHPs have an important role in our efforts to lower our carbon emissions. Providing customer choice is critical for consumers to be able to select appliances that best meet their needs.

We suggest following the Consortium for Energy Efficiency's (CEE) method to create test methods. In particular, we suggests using the ANSI Z21.40.4 Performance Testing and Rating of Gas-Fired, Air Conditioning and Heat Pump Appliances. There is a precedent to using ANSI standards to certify measures, and we recommend utilizing this established and tested standard to simplify and streamline the specification. CEE also engaged with stakeholders to develop the Gas-Fired Forced Hot Air specification, including utilities, manufacturers and industry groups. They reached consensus through using this approach, and the CEE Advanced Tier is now 120% AFUE for gas-fired forced hot air heating equipment. Similarly, a separate Gas-Fired Boiler (Hydronic) specification can be a separate specification that does not lie under the same ENERGY STAR Version 5.0 specification.

The creation of both a Gas-Fired Forced Hot Air specification (for GHPs) and a Gas-Fired Boiler (Hydronic) specification would also assist states and energy efficiency programs in developing gas heat pump savings measures for their local statewide Technical Reference Manuals (TRMs). These categories are easily used to encompass new technologies like gas heat pumps and could allow for standardization between state and federal specifications. These specifications also allow for gas-fired forced hot air systems like gas heat pumps to be easily added to the TRM, rather than creating a completely new specification. ENERGY STAR® has already recognized other standards to certify other product categories, such as with electric heat pumps. Additionally, the ANSI ICC 700 National Green Building Standard® provides compliance incentives for the installation of natural gas heat pumps.

2. **Gas heat pumps (GHPs) provide highly efficient, reliable, and low emissions options for customers, which aligns with ENERGY STAR® objectives.**

GHPs align with the intent of ENERGY STAR to "increase market awareness and promote innovation" in highly energy efficient products. GHPs are highly efficient products, and the nascent residential gas heat pump market would benefit from increased market awareness. An ENERGY STAR® specification for gas heat pumps would also promote innovation among gas heat pump manufacturers, driving further efficiency gains and cost reductions that will ultimately benefit the consumer.

Like other heat pump technologies, gas heat pumps have efficiencies of over 100%. In fact, current GHPs can be up to 140% efficient. This is a large efficiency jump from the proposed 97% AFUE. Unlike electric heat pumps, gas systems use refrigerants with no global warming potential (GWP), thereby rendering gas heat pumps even more climate-friendly than some alternative technologies.

In Chicago and in other parts of our service territories, natural gas heated homes today consume less energy than homes with high-efficiency electric air source heat pumps. While electric appliances can have a higher "site" rated energy efficiency, the full-fuel cycle energy requirements—the energy used or lost in energy extraction, processing, transportation, conversion, and distribution, including the generation and transmission of electricity—are often lower for natural gas than electric appliances, including cold climate air-source heat pumps.[1,2] Shifting consumers to highly efficient gas equipment, including GHPs, enables immediate GHG emissions reductions without relying on the source energy and full fuel cycle emissions of the electric grid to incrementally improve over time. Because of this, and because the amount of low carbon fuels in the gas networks continues to increase, gas heat pumps and efficient gas equipment in our region have the potential to offer the quickest, least-cost path to net zero emissions. Gas heat pumps also avoid emissions from the high

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[1] American Council for an Energy Efficient Economy. 2022 Summer Study on Energy Efficiency in Buildings. Natural Gas and Decarbonization—The Powerful and Hidden Role.

[2] National Research Council. 2009. Review of Site (Point-of-Use) and Full-Fuel-Cycle Measurement Approaches to DOE/EERE Building Appliance Energy-Efficiency Standards: Letter Report. Washington, DC: The National Academies Press.

global warming potential (GWP) refrigerants found in electric heat pumps. Finally, fuel diversity and multiple decarbonization pathways are important for a safe, affordable and reliable future. Allowing options for customer choice is critical for consumers to be able to select appliances that best meet their needs.

3. **Not including gas heat pumps under the ENERGY STAR® label would negatively affect low and moderate income households.**

Not applying the ENERGY STAR® label to gas heat pumps would harm efforts to provide consumers with an affordable choice in meeting their heating needs and could lead to lower adoption rates of this highly efficiency equipment among low and moderate income customers. Consumers may opt for lower efficiency options due to high first cost burdens. ENERGY STAR® certification will make gas heat pumps eligible for Inflation Reduction Act of 2022 (IRA) incentives.[3] GHPs are already eligible for the Energy Efficient Home Improvement tax credit, and IRA incentives will further reduce the first cost burden. This is especially important considering gas heat pumps offer the lowest operating cost space heating option in our region. Even the highest efficiency cold climate electric heat pump is nearly 2.5 times more expensive to operate in our service territory compared to an efficient gas heat pump.[4]

Thank you for your consideration. Please feel free to contact me with any questions regarding our comments.

Sincerely,

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[3] Public Law No. 117-169.
[4] American Council for an Energy Efficient Economy. 2022 Summer Study on Energy Efficiency in Buildings. Natural Gas and Decarbonization—The Powerful and Hidden Role.