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March 2, 2022

Attn: Laniya Thompson
U.S. Environmental Protection Agency
ENERGY STAR Program
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: AGA Comments on EPA Proposed ENERGY STAR NextGen Certification for Buildings

Dear Ms. Thompson:

The American Gas Association (AGA) appreciates the opportunity to comment on the Environmental Protection Agency's (EPA) proposed ENERGY STAR NextGen Certification for Buildings, and we respectfully submit the following comments on the ENERGY STAR® Nextgen™ Certification For Existing U.S. Commercial And Multifamily Buildings.[1]

The American Gas Association, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. More than 77 million residential, commercial, and industrial natural gas customers in the U.S., of which 95 percent—more than 73 million customers—receive their gas from AGA members. Today, natural gas meets more than one-third of the United States' energy needs. According to the Energy Information Administration (EIA), approximately 58 million, 47% of U.S. households, utilize natural gas for water heating.

AGA strongly supports the EPA ENERGY STAR program's mission to provide "simple, credible, and unbiased information" on a product's energy efficiency. Consumers rely on the program to make well-informed decisions around building energy performance and support the transition to a clean energy economy by fostering jobs and economic development, greater competitiveness, and a healthy environment.[2] AGA members are doing their part to create a more efficient energy economy. Natural gas utilities administer over 132 natural gas

[1] Proposed ENERGY STAR NextGen Certification for Existing Commercial and Multifamily Buildings. While EPA posted the request for comments on its webpage, processes such as this benefit from robust stakeholder involvement. EPA should have published its request for comment in the Federal Register thus providing a wider dissemination of the request in order to ensure a high level of meaningful stakeholder comments. *See Gov't of Guam v. U.S.*, 744 F.2d 699, 701 (9th Cir. 1984) (holding that publication in the Federal Register "constituted formal notice to the world . . . ").
[2] Energy Star Overview. https://www.energystar.gov/about.

efficiency programs across 42 states, which collectively invest more than $4.2 million per day, in part to assist customers with the purchase and installation of these efficient gas appliances.[3]

AGA encourages EPA to recognize the critical role that natural gas and its infrastructure play in meeting the nation's energy needs and ambitious energy efficiency and greenhouse gas reduction targets, including the President's goal of a net-zero emissions economy by no later than 2050. The ability of gas infrastructure to store and transport large amounts of energy to meet seasonal and peak day energy use through efficient gas-end use applications in commercial and multi-family buildings, represents an important and valuable resource that must be considered. The peak space heating load currently served by natural gas is significantly higher than that of the electric system in most regions of the country. The primary reason is that the existing gas energy storage and delivery infrastructure was designed to reliably serve customers through spikes in consumption during cold winters, while the electric infrastructure was generally designed for lower peak demand levels, driven mainly by summer air conditioning loads. Over the last five years, the combined demand for natural gas during the coldest winter month has been about 58% higher than the demand for electricity during the peak summer month within the buildings sector and about 84% higher than the demand for electricity for all end-uses, including space and water heating. In some areas of the country, natural gas peak energy deliveries are more than five times larger than what the electricity system delivers.

AGA and its members will continue to invest in reliable and resilient energy systems that can help accelerate emission reductions economy-wide and particularly commercial and multifamily buildings for this case. Through continued innovation, investments in energy efficiency, and a transition to lower-carbon fuel sources, gas utilities and their customers can contribute to economy-wide decarbonization targets, including net-zero emissions.

AGA respectfully requests that EPA consider the following recommendations on the ENERGY STAR® Nextgen™ Certification For Existing U.S. Commercial And Multifamily Buildings.[4]

I. General

1. Will there be any unintended consequences of the NextGen certification as proposed?

As proposed, the NextGen program could result in providing information that is counter to its purpose of providing technically sound information on greenhouse gas (GHG) emission determinations on buildings that is based on site energy usage when such GHG emissions must be determined on source energy usage. Clearly, EPA recommends using source energy. Specifically, EPA has stated on the record in its Energy Star building program that *"EPA has determined that source energy is the most equitable unit of evaluation for comparing different*

[3] American Gas Association. Natural Gas Efficiency Programs Report (2020). https://www.aga.org/globalassets/aga-ngefficiency-report-py2018-5-2021.pdf
[4] Proposed ENERGY STAR NextGen Certification for Existing Commercial and Multifamily Buildings

buildings to each other. Source energy represents the total amount of raw fuel that is required to operate the building. It incorporates all transmission, delivery, and production losses. By taking all energy use into account, the score provides a complete assessment of energy efficiency in a building."[5]

In addition, the NextGen program is focusing on promoting electrification for all buildings and thus assumes buildings that only use electricity will use less energy and produce less GHG emissions then buildings that use mixed energy sources such as natural gas and electricity. The NextGen program must be fuel neutral, recognizing that depending on the specific application, buildings that utilize both fossil fuels and electricity can use less "source" energy and produce less GHG emissions than an all-electric building. Failure to recognize the benefits of applications that use mixed energy sources i.e., natural gas and electricity, and provide less energy use and GHG emissions can result in promoting buildings that have a NextGen certification that would result in higher energy consumption and GHG emissions.

2. Are there different NextGen criteria you recommend? Please describe and provide a rationale for your recommendations.

The use of source or total energy consumption instead of only on-site energy to evaluate energy efficiency and environmental impact would be consistent with other federal agency approaches to similar issues—including EPA's own Energy Star. For example, EPA's Energy Star program focuses on source energy instead of site energy in evaluating the energy efficiency of buildings because it "takes *all* energy use into account . . . [and] provides a complete assessment of energy efficiency in a building." "EPA has determined that source energy is the most equitable unit of evaluation for comparing different buildings to each other."[6] As outlined above, EPA has stated on the record in its Energy Star building program is in support of "source energy" thus the NextGen criteria off-site energy usage should stay consistent and needs to be based on source energy.

II. Criteria - Demonstrate Top Energy Efficiency

1. Is this criterion appropriate? Why or why not?

AGA is committed to reducing greenhouse gas emissions through smart innovation, new and modernized infrastructure, and advanced technologies that maintain reliable, resilient, and affordable energy service choices for consumers. AGA's members have been instrumental in advancing the deployment of highly efficient end-use products for heating and water heating through the energy efficiency programs they offer their customers including rebates/incentives to offset the first cost premiums of these products. These programs have encouraged millions of

[5] https://www.energystar.gov/buildings/benchmark/understand_metrics/source_site_difference *See* https://www.energystar.gov/buildings/benchmark/understand_metrics/source_site_difference (last visited March 2, 2023).

[6] https://www.energystar.gov/buildings/benchmark/understand_metrics/source_site_difference

existing gas customers to install the most efficient products available, which has helped to significantly drive down energy consumption, emissions, and costs for customers that participate in these programs.

Substantial amounts of renewable and low-carbon electricity and gases, and negative emissions technologies, will be required to meet an economy-wide 2050 net-zero target. Gas heat pumps using low-carbon gas resources provide further opportunities to significantly reduce emissions in the US building sector at levels comparable to electric heat pumps while avoiding the massive buildout of the electric grid and customer complexities associated with the electrification of end-use equipment.

The challenge of meeting net-zero emissions goals should not be understated. Reaching economy-wide net-zero emissions targets will require transformational changes in producing, transporting, storing, and consuming energy (gas, electricity, and other forms). All options should be on the table to ensure a cost-effective, reliable, resilient, and equitable transition to a net-zero emissions energy system, and gas and electric utilities both have roles to play to support this transition.[7] AGA strongly recommends that EPA does not limit the ENERGY STAR® Nextgen™ Certification to only electric technologies. Instead, the program should also include low-carbon gas technologies to accelerate game-changing breakthroughs, widespread applicability, and adoption of this clean energy technology. EPA needs to define what it means by cost-effective energy efficiency as well. AGA believes that with EPA's leadership, the U.S. can enable net-zero carbon technologies and support sustainable development to the benefit of all Americans.

2. Is the requirement for an ENERGY STAR score of 75 or higher appropriate, or should the required score be higher or lower? Please provide a rationale for any alternative recommendation

AGA recommends that EPA provide the metrics on how a building can acquire 75 points? Why is the program limited to only a Professional Engineer or a Registered Architect to verify and assign points? Is the process economical to administer? AGA is concerned that, as written, the process seems very subjective, and depends on the viewpoint of the Professional Engineer or Registered Architect.

Additionally, the use of total energy consumption instead of only on-site energy to evaluate energy efficiency and environmental impact would be consistent with other federal agency approaches to similar issues—including EPA's own Energy Star. For example, EPA's Energy Star program focuses on source energy instead of site energy in evaluating the energy efficiency of buildings because it "takes *all* energy use into account . . . [and] provides a complete assessment of energy efficiency in a building." "EPA has determined that source

[7] AGA Net-Zero Emissions Opportunities for Gas Utilities, https://www.aga.org/wp-content/uploads/2022/02/aga-net-zero-emissions-opportunities-for-gas-utilities.pdf

energy is the most equitable unit of evaluation for comparing different buildings to each other."[8]

III. Criteria - Use Renewable Energy

1. Is this criterion appropriate? Why or why not?

The greenhouse gas emissions intensity (GHGi) is based on heating only, and if a factor is to be developed, it needs to include more than heating energy usage including water heating, cooling, cooking clothes dryers etc., to obtain a more complete and all-encompassing assessment of offsite energy usage and GHG emissions.

EPA needs to also define renewable energy, and the definition should include renewable gases and hydrogen blends. Tall, narrow buildings and others that have limited roof space or shading may not have feasible options for onsite renewable energy but can procure renewable energy from nearby installations, from other renewable energy projects, or via renewable energy certificates. As part of the criteria, the ENERGY STAR NextGen certification states that, "The building obtains at least 30% of the total energy it consumes (on a site basis) from renewable sources. Renewable energy sources can include onsite renewable electricity, offsite green power procurement, renewable fuels, and/or renewable thermal certificates." The term "renewable fuels" is listed in the proposal, but it is not clear if this term is intended to include renewable natural gas (RNG) or hydrogen blended natural gas as a renewable fuel. Both RNG and hydrogen blended natural gas should be included as energy sources that improve energy efficiency and reduce GHG emissions.

AGA believes that policies that advance the production and deployment of clean, renewable fuels in America's existing natural gas distribution infrastructure are key to meeting the Administration's climate goals while ensuring a just energy transition. Large amounts of renewable and low-carbon electricity and gases, and negative emissions technologies, will be required to meet an economy-wide 2050 net-zero target.[9] A study prepared for AGA by ICF in 2021 regarding net zero pathways shows that large amounts of renewable and low-carbon electricity and gases, along with negative emissions technologies, will be required to meet an economy-wide 2050 net-zero target.[10] RNG and Hydrogen are an essential piece of this puzzle.

Biogas and RNG technologies and projects should be prioritized to meet the goals listed above. The technology is fully demonstrated by successful projects deployed across the country as documented for example by EPA's methane reduction partnerships.[11] These projects capture methane that would otherwise contribute to GHG emissions from municipal landfills, sewage

[8] https://www.energystar.gov/buildings/benchmark/understand_metrics/source_site_difference
[9] https://www.aga.org/wp-content/uploads/2022/02/aga-net-zero-emissions-opportunities-for-gas-utilities.pdf, at p. 18
[10] https://www.aga.org/wp-content/uploads/2022/02/aga-net-zero-emissions-opportunities-for-gas-utilities.pdf, p. 18.
[11] See EPA's Voluntary Methane Programs for the Oil and Natural Gas Industry | US EPA.

and wastewater treatment facilities, food waste, and rural farm manure management. Some projects use the raw or somewhat purified biogas to power onsite distributed electricity generation, while many apply a package of clean up technologies to produce pipeline quality RNG for injection in existing natural gas distribution and transmission infrastructure for delivery to industrial, commercial, and residential customers. Programs such as the ENERGY STAR® Nextgen™ Certification For Existing U.S. Commercial and Multifamily Buildings that advance the production and deployment of clean, renewable fuels in America's existing natural gas distribution infrastructure are key to meeting the Administration's climate goals while ensuring a just energy transition.

Towards that effort, many AGA members have already begun demonstrating their commitment to integrating hydrogen into their existing gas networks. For example, AGA members, such as Southern California Gas Company, Pacific Gas and Electric Company; Hawai'i Gas, New Jersey Resources, National Grid, and Dominion Energy, to name a few, have:

- Initiated hydrogen production pilot programs,[12]
- Researched hydrogen blending,[13] and
- Researched the impact of hydrogen on end-use appliances.[14]

Programs like the EPA's ENERGY STAR NextGen certification could help advance these low-carbon gas resources.

As mentioned in the background and RFI document

> *"Total GHG emissions include both direct emissions from onsite fuel use as well as indirect emissions that occur at the power plant generating electricity used in the building. Indirect emissions intensity varies significantly based largely on the fuels used at the power*

[12] *See "*History of Hawaii Gas' Hydrogen Activities," available at https://www.hawaiigas.com/clean-energy/hydrogen/; Southern California Gas, "Power-To-Gas Technology," available at https://www.socalgas.com/smart-energy/renewable-gas/power-to-gas; "Dominion Energy advances hydrogen as next frontier of clean energy," (April 19, 2021), available at https://news.dominionenergy.com/2021-04-19-Dominion-Energy-advances-hydrogen-as-next-frontier-of-clean-energy.

[13] *See*, PG&E Gas R&D and Innovation Whitepaper Pipeline Hydrogen, available at https://www.pge.com/pge_global/common/pdfs/for-our-business-partners/interconnection-renewables/interconnections-renewables/Whitepaper_PipelineHydrogen.pdf; Southern California Gas 2019 Annual Report Research, Development and Demonstration Program, available at https://www.socalgas.com/sites/default/files/2020-04/2019%20SoCalGas%20RDD%20Annual%20Report.pdf; National Grid, "Accelerating Hydrogen Blending to Decarbonize Heat, " (Dec. 18, 2020), available at https://www.nationalgridus.com/News/2020/12/Accelerating-Hydrogen-Blending-to-Decarbonize-Heat/; "New Jersey Resources plots new strategy focused on renewable energy," S&P Global (Nov. 30, 2020), available at https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/new-jersey-resources-plots-new-strategy-focused-on-renewable-energy-61510875.

[14] *See Id.; see also* Air-Conditioning, Heating, and Refrigeration Institute, "Assessment of Hydrogen Enriched Natural Gas, Jan. 2021, available at https://ahrinet.org/App_Content/ahri/files/RESEARCH/Technical Results/AHRI-8024_Final Report.pdf. Furthermore, the Testing Hydrogen Admixture for Gas Applications ("THyGA") project intends to develop and communicate a detailed understanding of the impact of blends of natural gas and hydrogen on end use applications, specifically in the domestic and commercial sector. *See* https://thyga-project.eu/about-thyga/.

plant, which is outside the control of the building owner. To establish a total GHG emissions criterion, EPA would not be able to rely on a single, national emissions factor and would have to propose multiple thresholds, which would vary not just geographically but also over time. This would be very complex and, depending on the regional grid, might discourage electrification in some regions. [13]"

AGA recommends performing a full analysis regardless of the complexities it may entail to ensure the proper criterion are addressed for energy-efficient, low-carbon buildings in the ENERGY STAR NextGen™ certification.

2. Should EPA allow both onsite renewable energy and offsite green power to contribute to the requirement, as proposed? If not, please explain your reasoning.

The use of total energy consumption instead of only on-site energy to evaluate energy efficiency and environmental impact would be consistent with other federal agency approaches to similar issues—including EPA's own Energy Star. For example, EPA's Energy Star program focuses on source energy instead of site energy in evaluating the energy efficiency of buildings because it "takes *all* energy use into account . . . [and] provides a complete assessment of energy efficiency in a building." "EPA has determined that source energy is the most equitable unit of evaluation for comparing different buildings to each other."[15]

IV. Criteria - Meet a Direct Emissions Target

1. Is the methodology for this criterion as proposed appropriate? Please explain and include any suggestions for alternative approaches.

The use of total energy consumption instead of only on-site energy to evaluate energy efficiency and environmental impact would be consistent with other federal agency approaches to similar issues—including EPA's own Energy Star. For example, EPA's Energy Star program focuses on source energy instead of site energy in evaluating the energy efficiency of buildings because it "takes *all* energy use into account . . . [and] provides a complete assessment of energy efficiency in a building." "EPA has determined that source energy is the most equitable unit of evaluation for comparing different buildings to each other."[16] Source energy represents the total amount of raw fuel that is required to operate the building. It incorporates all transmission, delivery, and production losses. By taking all energy use into account, the building certification will provide a complete assessment of energy-efficient, low-carbon buildings in the sectors. [17]

[15] https://www.energystar.gov/buildings/benchmark/understand_metrics/source_site_difference
[16] https://www.energystar.gov/buildings/benchmark/understand_metrics/source_site_difference
[17] The Difference Between Source and Site Energy | ENERGY STAR

V. Other

1. Do you have any other comments you'd like to share?

The background and RFI documents do not go into the level of detail that is needed to substantially analyze the certification program and AGA urges EPA to continue to provide non-biased efficient certification options as it is important to utilities, their consumers, the market, and the ENERGY STAR® brand to have economically feasible certifications to align with EPA's goal "to provide simple, credible, and unbiased information that consumers and businesses rely on to make well-informed decisions for commercial and multifamily NextGen buildings.

Thank you again for the opportunity to submit comments on the EPA Proposed ENERGY STAR NextGen Certification for Buildings. Deploying fuel-neutral energy efficiency technologies for the certification for buildings provides an immediate reduction in emissions, and decreases utility costs, through smart innovation, new and modernized infrastructure, and advanced technologies that maintain reliable, resilient, and affordable energy service choices for consumers.

If you have any questions, please do not hesitate to contact us at RMurphy@aga.org or Sgheewala@aga.org.

Respectfully Submitted,

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