

**UNITED STATES OF AMERICA  
BEFORE THE  
DEPARTMENT OF ENERGY**

**Department of Energy’s Supplemental )  
Notice of Proposed Rulemaking on Clean )  
Energy for New Federal Buildings and )  
Major Renovations of Federal Buildings )**

**EERE–2010–BT–STD–0031  
RIN 1904-AB96  
87 Fed. Reg. 78,382**

**COMMENTS OF  
THE AMERICAN GAS ASSOCIATION**

**Dated: February 21, 2023**

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## **ATTACHMENTS**

Attachment A - Net-Zero Emissions Opportunities for Gas Utilities, AGA, February 2022

Attachment B - Implications of Policy-Driven Residential Electrification, AGA, July 2018

Attachment C - Building a Resilient Energy Future: How the Gas System Contributes to U.S. Energy System Resilience, AGF, January 2021

## **I. Introduction.**

The American Gas Association (“AGA”) respectfully submits these comments on the Department of Energy’s (“DOE” or “Department”) supplemental notice of proposed rulemaking (“2022 SNOPR” or “proposal”) regarding clean energy for new federal buildings and major renovations of federal buildings. *Clean Energy for New Federal Buildings and Major Renovations of Federal Buildings*, EERE–2010–BT–STD–0031, RIN 1904–AB96, 87 Fed. Reg. 78,382 (December 21, 2022).

AGA, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are 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. AGA is an advocate for natural gas utility companies and their customers and provides a broad range of programs and services for member natural gas pipelines, marketers, gatherers, international natural gas companies, and industry associates. Today, natural gas meets more than one-third of the United States’ energy needs.<sup>1</sup> As AGA members continue to meet these needs, AGA is committed to improvements in energy efficiency, consumer energy affordability, access to reliable energy, and greenhouse gas emissions reductions.

AGA supports the federal government’s overall goal of reducing greenhouse gas (“GHG”) emissions through building and appliance energy codes and standards that are technologically feasible, economically justified, and follow statutory requirements. As discussed below, natural gas utilities have a proven track record of reducing emissions. In fact, AGA and its members complement those codes and standards by pursuing a customer-centered approach to energy

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<sup>1</sup> For more information, please visit [www.aga.org](http://www.aga.org).

efficiency improvements, focusing on those most vulnerable to energy costs. Indeed, AGA and its members have been at the forefront of efficiency gains, from the delivery of natural gas to its end use, achieving significant benefits for consumers, environmental improvements, and economic contributions. These industry efforts have led to tangible results: as the number of natural gas consumers has grown, natural gas use in the residential, commercial, and industrial natural gas sectors has been virtually unchanged. This is the direct result of energy efficiency improvements, including tighter building envelopes, more efficient appliances and equipment, behavioral changes in energy consumption, and the effectiveness of natural gas utility efficiency programs. As explained below, this continual improvement in energy efficiency has led to a decline in overall carbon dioxide emissions as consumers, including the federal government, use natural gas more efficiently.

The design of new federal buildings and those undergoing major renovations can play a role in continuing to improve energy efficiency in the United States and further reducing GHG emissions. However, the Department's role in setting the energy efficiency and environmental goals for those buildings must adhere to the directions and limitations provided by Congress. As explained in more detail below, the 2022 SNO PR steps outside of those carefully chosen bounds, relies on flawed analyses and data, and would fail to achieve the statutory objectives and DOE's goals. Thus, the Department should address the legal, economic, and technical issues identified in these comments or withdraw the proposal.

## **II. Natural Gas Providers Have a Proven Track Record of Reducing GHG Emissions.**

Local Distribution Companies have a proven track record of reducing GHG emissions. AGA and its members are committed to reducing GHG emissions through smart innovation, new and modernized infrastructure and advanced technologies that maintain reliable, resilient, and cost-effective consumer energy service choices. With direction and guidance from policymakers and

regulators, the natural gas utility industry continuously invests in modernizing the nation’s natural gas delivery infrastructure to distribute safe, reliable, and cost-effective energy and improve customer efficiency.

Climate change is a defining challenge across the globe, and natural gas, natural gas utilities, and the delivery infrastructure play an essential role in meeting our nation’s GHG emissions reduction goals. As companies continue to modernize natural gas infrastructure and connect homes and businesses to the system, new opportunities arise to achieve low-cost GHG emissions reductions by leveraging new and existing natural gas infrastructure, advanced technologies, and the nation’s abundant natural gas resources.

In February 2022, AGA published a study titled “*Net-Zero Emissions Opportunities for Gas Utilities*”<sup>2</sup> (“AGA’s Net-Zero Study”) to provide a comprehensive and rigorous analysis demonstrating the multiple pathways that exist to reach a net-zero future, and the role natural gas, gas utilities and delivery infrastructure will play in advancing decarbonization solutions. The study presents a national-level approach that leverages the unique advantages of gas technologies and distribution infrastructure and the foundational role of natural gas energy efficiency. The study underscores the range of scenarios and technology opportunities available as the nation, regions, states, and communities develop and implement ambitious emissions reduction plans. The key findings in the study include:

- Pathways that utilize natural gas and the vast utility delivery infrastructure offer opportunities to incorporate renewable and low-carbon gases, provide optionality for stakeholders, help minimize customer impacts, maintain high reliability, improve overall energy system resilience, and accelerate emissions reductions.
- The ability of natural gas infrastructure to store and transport large amounts of energy to meet seasonal and peak day energy use represents an important and

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<sup>2</sup> “Net-Zero Emissions Opportunities for Gas Utilities,” AGA, February 8, 2022, available at [aga-net-zero-emissions-opportunities-for-gas-utilities.pdf](#) (last visited February 21, 2023). The study is appended at Attachment A (AGA’s Net-Zero Study”).

valuable resource that needs to be considered when building pathways to achieve net-zero GHG emissions goals.

- Continued utilization of natural gas and the vast utility delivery infrastructure can increase the likelihood of successfully reaching net-zero targets while minimizing customer impacts.
- The U.S. can achieve significant emissions reductions by accelerating the use of tools available today, including high-efficiency natural gas applications, renewable gases, methane reduction technologies, and enhanced energy efficiency initiatives.
- 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.
- Supportive policies and regulatory approaches will be essential for natural gas utilities to achieve net-zero emissions.

Natural gas and its direct use in homes and businesses has been a cornerstone of America's energy economy for more than a century and will be needed in the future. Today, hundreds of millions of Americans rely on natural gas to heat their homes, power their businesses, and manufacture goods. An emphasis on climate change and reducing emissions has complemented the natural gas utility industry's focus on safety and reliability and enabled a steep decline in methane emissions. These commitments continue, and as our nation moves towards a lower-carbon economy and embraces new fuels and technologies, the natural gas utilities are ready to meet these changes and will remain foundational to the country's future.

### **III. DOE Lacks Authority to Finalize the 2022 SNOPR's Proposed Standards.**

In the Energy Conservation and Production Act ("ECPA"), as amended by the Energy Independence and Security Act ("EISA") of 2007, Congress directed DOE to establish, "by rule," "revised Federal building energy efficiency performance standards" for both new federal buildings and federal buildings undergoing major renovations, "[n]ot later than 1 year after December 19, 2007." 42 U.S.C. § 6834(a)(3)(D). In other words, Congress gave the Department a strict and

precise deadline to act by December 19, 2008. *Id.* Not only did DOE fail to act by the Congressional deadline of December 19, 2008, but the Department has yet (in the over 14 years since the expiration of its deadline) to establish the required standards by rule.<sup>3</sup> Because the 2022 SNOPR was published more than 14 years later than “December 19, 2008,” and Congress said the Department “shall” act “[n]ot later than” that date, DOE has no authority to promulgate the standards it proposes in the 2022 SNOPR. Under the plain language of § 6834(a)(3)(D), DOE’s authority to establish the standards has lapsed.

Agencies derive their authority from Congress and have no independent power to act. As the Supreme Court repeatedly has clarified, an “administrative agency’s power to regulate in the public interest must always be grounded in a valid grant of authority from Congress.” *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 161 (2000); *La. Pub. Serv. Comm’n v. FCC*, 476 U.S. 355, 374 (1986) (“[A]n agency literally has no power to act . . . unless and until Congress confers power upon it.”). Because of this, “[a]gencies may act only when and how Congress lets them.” *Cent. United Life Ins. Co. v. Burwell*, 827 F.3d 70, 73 (D.C. Cir. 2016). Here, Congress specifically addressed both “when and how” the Department was to act. Because Congress’s grant of authority to the Department to promulgate federal building performance standards came with a specific timeline, and DOE failed to meet that timeline, it no longer has authority to pass the proposed standards. This is simply the “consequence of the proposition that the scope of an agency’s power is determined by the text of the statutory grant of authority.” *See Barnhart v. Peabody Coal Co.*, 537 U.S. 149, 175 n.1 (2003) (Scalia, J., dissenting).

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<sup>3</sup> Although DOE issued a proposed rulemaking in 2010, a supplemental notice of proposed rulemaking in 2014, and the current supplemental notice of proposed rulemaking, it has never finalized a rule promulgating the revised standards and thus has clearly failed to meet its Congressional mandate in 42 U.S.C. § 6834(a)(3)(D).



Even if an agency maintains authority to act in some instances of missing a deadline, the Department’s failure to act here is distinguishable from prior cases in which courts have condoned post-deadline action. For example, in *Monroe Energy, LLC v. EPA*, 750 F.3d 909, 919 (D.C. Cir. 2014), the D.C. Circuit held that the Environmental Protection Agency’s (“EPA”) failure to publish renewable fuel obligations until a few months after its deadline did not deprive the EPA of authority to do so. There, the EPA repeatedly published the obligations year after year, and, on this particular occasion, published a few months late. *Id.* at 920. While the EPA missed its deadline by a few months, yet still published the standards “during the compliance year,” DOE has missed its deadline in this proceeding by over 14 years (and counting). *Id.* DOE’s failure to act here shows the absurdity of not treating statutory deadlines as mandatory: agencies can apparently act “into perpetuity” despite clear and mandatory language in their congressional authorizations limiting their authority to a particular time. *Barnhart*, 537 U.S. 149, 175 n.1 (2003) (Scalia, J., dissenting) (“Because [the statutory grant of power to the agency] is *prefaced* by the phrase “before October 1, 1993,” the statutory date is intertwined with the grant of authority; it is part of the very definition of the Commissioner’s power.”).

Ignoring the plain text of DOE’s congressionally mandated timeline in this instance also leads to unfair and impracticable results. In § 6834, Congress expressed its intent for fossil fuel-generated energy consumption to gradually improve over time (building on improvements made to meet prior standards to reach each additional fiscal year target). *See* 42 U.S.C.A. § 6834 (a)(3)(D)(i)(I).<sup>4</sup> In contrast to this “gradual improvement” model, DOE’s failure to promulgate

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<sup>4</sup> Specifically, the energy consumption must be reduced “as compared with such energy consumption by a similar building in fiscal year 2003 (as measured by Commercial Buildings Energy Consumption Survey or Residential Energy Consumption Survey data from the Energy Information Agency), by the percentage specified in the following table[.]” 42 U.S.C. § 6834(a)(3)(D)(i)(I).

<b>Fiscal Year</b>	<b>Percentage Reduction</b>
2010.....	55

standards until after the first three fiscal year targets (2010, 2015, 2020) have come and gone, has led it to now propose standards that are impractical, if not impossible, to meet in order to catch up to the required percentage reduction for fiscal year 2025. It is contrary to Congress’ intent for DOE to require federal buildings to suddenly hit a 90% reduction requirement shortly after promulgation, where the statute had required incremental progress.<sup>5</sup>

Moreover, DOE’s failure to promulgate standards by the deadline has rendered the statute impossible to comply with. When properly read, § 6834’s requirements apply to all fossil-fuel-generated energy consumed by a building. *See* Section IV below. It is simply not possible for all new and federal buildings undergoing major renovations to reduce their energy consumption by the specified amounts, rendering the statutory requirements void. *See Hughey v. JMS Development Corp.*, 78 F.3d 1523, 1530 (11th Cir. 1996) (“Lex non cogit ad impossibilia: The law does not compel the doing of impossibilities.” (citing Black’s Law Dictionary 912 (6th ed. 1990)); *In re Grand Jury Proceedings*, 744 F.3d 211, 213 (1st Cir. 2014) (repeating this maxim and noting it is “venerable”).

Due to DOE’s failure to enact regulations implementing the standards by the statutory deadline assigned by Congress, the Department lacks authority to promulgate standards under 42 U.S.C. § 6834(a)(3)(D).

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2015.....	65
2020.....	80
2025.....	90
2030.....	100

*Id.*

<sup>5</sup> Any energy transition requires sufficient planning and technological advancement to ensure reliable and affordable access is maintained for all. DOE must consider alternative approaches, and alternate timelines and/or requirements if technology is not available, especially for cold climates.

**IV. The 2022 SNO PR Misinterprets “Fossil Fuel-Generated Energy Consumption of the Buildings” in 42 U.S.C. § 6834 to Mean Only On-Site Fossil Fuel-Generated Energy Consumption.**

Even if a Court were to find that DOE still has the authority to promulgate standards under 42 U.S.C. § 6834(a)(3)(D) despite missing its statutory deadline, DOE cannot promulgate standards that are contrary to the plain text of the statute’s requirements. Congress, in requiring DOE to establish “revised Federal building energy efficiency performance standards,” provided specific guidance to DOE. The standards must ensure that “[t]he buildings shall be designed so that the fossil fuel-generated energy consumption of the buildings is reduced” by certain percentages by certain fiscal years. 42 U.S.C. § 6834(a)(3)(D)(i)(I). For the first time since § 6834(a)(3)(D)(i)(I) was passed, DOE, despite previous pronouncements to the contrary, attempts to reinterpret the phrase “fossil fuel-generated energy consumption of the buildings” to mean only fossil-fuel generated energy consumed from on-site sources, which is contrary to the plain text, context, and history of the statute. *See* 2022 SNO PR, 87 Fed. Reg. at 78,430 (defining “fossil fuel-generated energy consumption” as “the on-site stationary combustion of fossil fuels that contribute to Scope 1 emissions for generation of electricity, heat, cooling or steam”). This distorted reading in the 2022 SNO PR cannot stand.

**A. The plain meaning of “fossil fuel-generated energy consumption of the buildings” encompasses the total energy consumption of the buildings.**

When interpreting statutory phrases, the Department and the courts must “begin[] with the plain language of the statute.” *United States v. Braxtonbrown-Smith*, 278 F.3d 1348, 1352 (D.C. Cir. 2002) (citing *Estate of Cowart v. Nicklos Drilling Co.*, 505 U.S. 469, 474 (1992)). “Where the language is clear, that is the end of judicial inquiry ‘in all but the most extraordinary circumstances.’” *Id.* And although courts give deference to “a reasonable statutory interpretation by an administering agency,” a court will “not defer to an agency position which is contrary to an

intent of Congress expressed in unambiguous terms.” *Estate of Cowart*, 505 U.S. at 474; *see also King v. Burwell*, 576 U.S. 473, 486 (2015) (“If the statutory language is plain, we must enforce it according to its terms.”).

The key phrase in § 6834(a)(3)(D)(i)(I), “fossil fuel-generated energy consumption of the buildings,” means just that, all fossil fuel-generated energy consumed by a building, not just the consumption from on-site energy sources. The statute does not say, as the 2022 SNOPR would suggest, “on-site energy consumption,” or energy consumption “from fossil fuel sources within the buildings” or “at the building site.” Because the plain meaning of “consumption of the buildings” includes the total consumption of the building—both on-site and off-site fossil fuel-generated energy consumption—the 2022 SNOPR’s new interpretation of the phrase is contrary to the text of the statute.

As discussed further below, DOE itself has repeatedly interpreted this phrase to mean total energy consumption. And the fact that more years have passed without DOE fulfilling its charge from Congress to set the performance standards does not give the Department authority to reinterpret the statutory mandate in an atextual way. Again, agencies only have the power that Congress gives them. *La. Pub. Serv. Comm’n*, 476 U.S. at 374. Had Congress wanted DOE to set standards for only some of the “fossil-fuel generated energy consumption of the buildings,” it would have said so.

Congress, and the Department, have generally taken the position of fuel neutrality. *See, e.g.*, 42 U.S.C. § 6295(f)(1)(B)(iii). However, DOE’s recent proposal is a shift away from fuel neutrality which ultimately would hinder achieving emission reductions. A fuel neutral approach that maximizes the electric and gas systems to achieve efficient, cost-effective, and reliable GHG reductions for the building sector should be the focus of DOE’s efforts. A fuel neutral approach

would permit flexibility and allow the inclusion of different energy sources, such as renewable gases and hydrogen, as discussed below. In addition, a fuel neutral approach permits the use of existing infrastructure, while minimizing the impacts created by a fuel neutral approach. There are many circumstances in which the use of on-site natural gas can help with the reduction of a building's fossil fuel-generated energy consumption<sup>6</sup>

Not only is the reinterpretation contrary to DOE's previous pronouncements on neutrality, but it is further contrary to the plain text of the statute. The phrase "fossil fuel-generated," is actually best understood to refer *only* to electricity, because that is the form of energy "generated" by fossil fuels. The energy supplied by natural gas providers for heating, cooking, and other on-site uses requires no "generation" for use. The Merriam-Webster dictionary defines "generate" as "to originate by a vital, chemical, or physical process: produce" as in "generate electricity."<sup>7</sup> In any event, *excluding* the consumption of electricity that is generated by fossil fuels off-site cannot be substantiated by the text of the statute.

The Department is incorrect to the extent that it believes the statute is ambiguous, that the Department's delay in implementing the schedule justifies its proposed atextual interpretation of the statute, or that the courts would defer to DOE's its interpretation. Because the statute speaks in unambiguous terms, the courts will not defer to DOE's contrary interpretation. *Estate of Cowart*, 505 U.S. at 474. Even further, interpreting a statute that directed DOE to implement regulations addressing fossil fuel-generated energy consumption at federal buildings to effectively mean only eliminating the use of natural gas appliances at those buildings would constitute an issue of "vast

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<sup>6</sup> Center for Climate and Energy Solutions, Natural Gas, ("The source-to-site efficiency of natural gas averages 92 percent; that is, 92 percent of the energy contained in extracted natural gas is useful energy that can directly fuel appliances, as compared to about 30 percent efficiency for electric appliances."), available at <https://www.c2es.org/content/natural-gas/> (last visited February 21, 2023).

<sup>7</sup> *Generate*, <https://www.merriam-webster.com/dictionary/generate> (last visited February 21, 2023).

economic and political significance” for which Congress must speak clearly. *See West Virginia v. EPA*, 142 S. Ct. 2587, 2605 (2022).

**B. The context and history of § 6834 further support that “fossil fuel-generated energy consumption of the buildings” encompasses the total energy consumption of the buildings.**

The 2022 SNOPR’s reinterpretation of the phrase “fossil fuel-generated energy consumption of the buildings” also ignores its statutory context and history. While these tools of interpretation aren’t necessary given that the plain text of the statute unambiguously refers to the total “fossil fuel-generated energy consumption of the buildings” rather than only a segment of the energy consumption of the buildings, this meaning is only reinforced when the phrase is read in context and with an eye towards the history of the statute. *Wells Fargo Bank, N.A. v. FDIC*, 310 F.3d 202, 206 (D.C. Cir. 2002) (Courts “consider [statutory] provisions . . . in context, using traditional tools of statutory construction and legislative history.”).

The use of total—rather than only on-site—energy consumption of the buildings is supported by: (1) the key phrase, “fossil fuel-generated energy consumption of the buildings,” surrounding statutory language; (2) the stated purpose of Congress and the legislators passing the Acts requiring DOE to set federal building performance standards; and (3) DOE’s own approaches, and the approaches of other federal agencies, using source energy in other, similar contexts.

(1) Surrounding language: The language surrounding the key phrase, “fossil fuel-generated energy consumption of the buildings,” confirms its broader meaning. For example, § 6834(a)(3)(D)(i)(I) starts out by requiring that “[t]he buildings shall be designed” so the fossil fuel-generated energy consumption of the buildings is reduced. This language focuses on the buildings’ overall design to conserve energy and not the origin of the energy. A building can be designed to reduce overall energy consumption through a variety of techniques. For instance, a building can add more insulation or more energy efficient windows to increase the overall

efficiency of the building and therefore reduce its consumption (regardless of the origin of the energy source). Under the current proposal, building designers are essentially required to reflexively cut out all gas appliances and energy uses to meet the standards, regardless of whether doing so would increase a building's overall fossil fuel-generated energy consumption.

(2) Purpose of the standards: When the key phrase, “fossil fuel-generated energy consumption of the buildings” is read in the context of § 6834(a)(3)(D)(i)(I) and with an eye on the purpose for which it was passed, the 2022 SNOPIR's interpretation, which only considers a segment of a building's fossil fuel-generated energy consumption is even less convincing. The original act that established energy conservation requirements for federal buildings (but did not include the precise requirement for reductions in fossil fuel-generated energy at issue in this proposal), Section 305 of the ECPA, focused on providing “energy conservation standards for new buildings” and, as its name suggests, focused on energy conservation as a whole. *See* Pub. L. No. 94-385, § 305. When Congress added the precise language at issue in the proposal, through EISA in 2007, it was focused on moving “the United States toward greater energy independence and security,” “increas[ing] the efficiency of . . . buildings,” and “increase[ing] the production of clean renewable fuels.” Pub. L. No. 110-140, 121 Stat. 1492 (preamble discussing purpose of legislation). By proposing the overly narrow view of “fossil fuel-generated energy consumption of the buildings” to include only the fossil fuel-generated energy consumed from onsite sources, DOE distorts the Act's very purpose—and Congress's intent—to increase energy efficiency overall and reduce the need to rely on foreign fossil fuels for energy in our federal buildings. Again, the current proposal creates a perverse incentive for building designers to decrease only on-site consumption, even at the expense of the building consuming more fossil fuel-generated energy overall.

Indeed, DOE’s past interpretation of the relevant statutory text belies the notion that it is reasonable to believe Congress meant for the Department to consider only a portion of a building’s energy consumption. DOE itself has interpreted “fossil fuel-generated energy consumption” to mean total energy consumption of the buildings, rather than only on-site energy, since the statute was passed. *See* Notice of Proposed Rulemaking, *Fossil Fuel-Generated Energy Consumption Reduction for New Federal Buildings and Major Renovations of Federal Buildings*, 75 Fed. Reg. 63,404, 63,4077 (Oct. 15, 2010) (“Fossil fuel-generated energy consumption = Direct consumption of fossil fuels in the building plus the amount of electrical energy consumption that is generated from fossil fuels.”); *see also* Supplemental Notice of Proposed Rulemaking, *Fossil Fuel-Generated Energy Consumption Reduction for New Federal Buildings and Major Renovations of Federal Buildings*, 79 Fed. Reg. 61,694, 61, 711 (Oct. 14, 2014) (“DOE continues to believe that source energy is the correct metric to use for this rulemaking.”).

The Department’s reinterpretation of the phrase, which limits the evaluation of energy consumption of a building to only energy consumed on site, distorts Congress’s chosen language (and its overall intent in choosing that language). Ironically, under DOE’s current interpretation of the phrase, a passible building design could actually increase the *overall* fossil fuel consumption of a building (by reflexively shifting on-site consumption to off-site consumption) and still meet its “reduction” targets.

(3) Approaches in similar contexts: The use of total energy consumption instead of only on-site energy to evaluate energy efficiency and environmental impact also is consistent with other federal agency approaches to similar issues—including DOE’s own actions. 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.”<sup>8</sup>

Similarly, DOE has repeatedly rejected the overly narrow use of only on-site energy to evaluate energy measures, in the context of this statutory provision and others. For example, although DOE previously used on-site energy consumption for national impact analyses and environmental assessments using the National Energy Modeling System (“NEMS”) developed by DOE’s Energy Information Administration (“EIA”), DOE has announced its commitment to use full fuel-cycle measures of energy use for GHG and other emissions in these analyses and assessments for future energy conservation standards rulemakings. *See Energy Conservation Program for Consumer Products and Certain Commercial and Industrial Equipment: Statement of Policy for Adopting Full Fuel-Cycle Analyses Into Energy Conservation Standards Program*, 76 Fed Reg. 51,281 (2011) (“using the [full fuel-cycle] measure . . . will provide more complete information about the total energy use and GHG emissions associated with a specific energy efficiency level than the primary (or site) energy measures currently used by DOE”). Further, as mentioned above, DOE has focused on total energy consumption in proposing building performance standards under § 6834(a)(3)(D)(i)(I) in both its 2010 proposed rulemaking and 2014 supplemental notice of proposed rulemaking. *See Fossil Fuel-Generated Energy Consumption Reduction for New Federal Buildings and Major Renovations of Federal Buildings*, 75 Fed. Reg. 63,404, 63,407 (2010) (“2010 NOPR”); *see also Fossil Fuel-Generated Energy Consumption Reduction for New Federal Buildings and Major Renovations of Federal Buildings*, 79 Fed. Reg. 61,694, 61,711 (2014) (“2014 SNO PR”). It is only now for the first time seeking to change that

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<sup>8</sup> *See* EPA, The Difference Between Source and Site Energy (“EPA has determined that source energy is the most equitable unit of evaluation for comparing different buildings to each other.”). [https://www.energystar.gov/buildings/benchmark/understand\\_metrics/source\\_site\\_difference](https://www.energystar.gov/buildings/benchmark/understand_metrics/source_site_difference) (last visited February 21, 2023).

interpretation. Even in the current interpretation, DOE considers off-site fossil fuel consumption for cogeneration facilities that provide thermal energy and electricity to federal buildings. *See* 2022 SNOPR, 87 Fed. Reg. at 78,392-93.

Each of these pieces of context and history only support what the plain text of § 6834(a)(3)(D)(i)(I) provides: the standards DOE was required to promulgate should consider the total “fossil fuel-generated energy consumption of the buildings,” not only a particular segment of that consumption.

#### **V. The 2022 SNOPR Would be Arbitrary and Capricious if Finalized in its Current Form.**

A reviewing court will hold unlawful and set aside agency action that is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. 706(2)(A). An agency action is arbitrary and capricious if it is not “reasonably explained,” *Jackson v. Mabus*, 808 F.3d 933, 936 (D.C. Cir. 2015), or if the agency “entirely failed to consider an important aspect of the problem.” *George v. Bay Area Rapid Transit*, 577 F.3d 1005, 1010 (9th Cir. 2009). The 2022 SNOPR is arbitrary in several ways.

First, the 2022 SNOPR’s decision to disregard energy consumption produced with fossil fuels off-site, in addition to being contrary to the plain text of the statute, is an arbitrary decision because it fails to consider an important aspect of the problem it is trying to solve and fails to reasonably explain its choice. The 2022 SNOPR acknowledges that the proposal, by evaluating only on-site fossil fuel-generated energy consumption of the buildings, would not increase the overall energy efficiency of the buildings and would not result in a reduction of harmful environmental emissions. *See, e.g.*, 87 Fed. Reg. at 78,410 (“DOE acknowledges exchanging on-site fossil fuel generated energy for reliance on the electric grid, which may still be generating energy with fossil fuels, doesn’t necessarily lead to an immediate reduction in emissions of GHGs and SO<sub>2</sub>.”).

What is more, the 2022 SNOPR acknowledges that the increase in overall emissions that will result from its current interpretation will have negative health consequences,<sup>9</sup> without explaining why those consequences are justified. The proposal does not even attempt to explain why the increase in overall energy consumption (by incentivizing building designs that reflexively shift energy consumption away from on-site fossil fuel use) would be a policy outcome desired by Congress.

One of the only explanations DOE gives for this new interpretation is that it is relying on the assumption that the U.S. will have a zero emissions electric grid in the future. However, it fails to explain the basis for that assumption, when it assumes that transition will take place, and fails to even model the energy consumption and emissions implications over time. Nor does it calculate the energy implications from alternative scenarios that are based on actual and current conditions. Because of this, the 2022 SNOPR fails to adequately consider the negative implications for energy consumption that would be caused by designing federal buildings to only meet that extra-statutory rule of reducing on-site fossil fuel-generated energy use.

Second, and similarly, the 2022 SNOPR fails to adequately explain why it diverged from its prior views, and the view of EPA's Energy Star approach, in considering total energy consumption. *See Encino Motorcars, LLC v. Navarro*, 579 U.S. 211, 221 (2016) ("Agencies are free to change their existing policies *as long as* they provide a reasoned explanation for the change." (emphasis added)); *Nat'l Cable & Telecommunications Ass'n v. Brand X Internet Servs.*, 545 U.S. 967, 981 (2005) ("Unexplained inconsistency is . . . a reason for holding an interpretation to be an arbitrary and capricious change from agency practice under the Administrative Procedure Act.").

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<sup>9</sup> 2022 SNOPR, 87 Fed. Reg. 78,414 ("Net health disbenefits total \$1.47 million per year.").

As noted above, DOE has repeatedly interpreted § 6834(a)(3)(D)(i)(I) as requiring the consideration of total energy consumption and has expressed a preference for full fuel cycle measures of energy efficiency in other contexts. *See* 75 Fed. Reg. at 63,4077; 79 Fed. Reg. 61,694, 61,711; 76 Fed Reg. 51,281. EPA has explained that source energy is the most “equitable unit of evaluation for comparing different buildings to each other,” in evaluating fossil fuel-generated energy consumption.<sup>10</sup> Again, it seems the real motivation behind DOE’s new approach is making the Congressionally required targets (what remains of them) easier to hit. This is not an adequate reason to change the most “equitable” way of evaluating energy efficiency.

Finally, the costs of the proposal, if implemented, would outweigh the benefits, which makes it both arbitrary and capricious and contrary to the statute’s requirement that the standards be “technologically feasible and economically justified.” Section 6834, which required DOE to establish the original federal building energy standards, mandates that the energy efficiency measures promulgated for new federal buildings be “technologically feasible and economically justified.” 42 U.S.C. § 6834(a)(1). Further, § 6834 requires that the Secretary shall periodically review the federal building energy standards and “upgrade such standards” to include new energy efficiency measures that are “technologically feasible and economically justified.” *Id.* at § 6834(c). Thus, DOE’s standards must grapple with these requirements.

DOE’s own explanations of the proposed standards do not demonstrate that they are economically justified, especially when considering the estimated costs to public health that will result from the increase in emissions predicted to result because of the reinterpretation of the phrase “fossil-fuel generated energy consumption of the buildings.” *See* 87 Fed. Reg. at 78,411 (table

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<sup>10</sup> *See* EPA, The Difference Between Source and Site Energy, available at [https://www.energystar.gov/buildings/benchmark/understand\\_metrics/source\\_site\\_difference](https://www.energystar.gov/buildings/benchmark/understand_metrics/source_site_difference) (last visited Feb. 21, 2023).

explaining increased costs and disbenefits that will result from increases in emissions). Furthermore, as discussed below, there are various cost-related items that DOE failed to address or has not addressed fully that relate to the economic justification of the proposal. Similarly, DOE has failed to establish that the standards are “technologically feasible.” As noted below, there are various concerns related to the technical issues raised by the 2022 SNO PR. In short DOE has failed to show that the 2022 SNO PR is technologically feasible and economically justified.

## **VI. The 2022 SNO PR is Inconsistent with Current Codes and Standards.**

Congress instructed the Department to base federal building energy efficiency standards on consensus-based building codes and standards that best promote energy efficiency. More specifically, the U.S. Code requires DOE to evaluate revisions of the relevant ANSI, ASHRAE, and IESNA standards and adopt them no later than 1 year after approval if those revisions were technologically feasible and economically justified. 42 U.S.C. § 6834(a). Congress’s directive that the Department later set standards that would further reduce the “fossil fuel-generated energy consumption of the [federal] buildings” arose in the context of updating those standards that adopted the ANSI/ASHRAE/ IESNA standards. *Id.* § 6834(d). As such, while DOE has authority to make improvements to the standards, they must actually be improvements to, not an outright departure from, the standards.

The 2022 SNO PR, however, is completely inconsistent with current codes and standards. For commercial applications, the 2022 SNO PR references the ANSI/ASHRAE/IESNA 1 Standard 90.1–2019, and for residential applications, it references the 2021 International Energy Conservation Code (“IECC”). Both the ANSI/ASHRAE/IESNA 1 Standard 90.1–2019 and the 2021 IECC are fuel neutral and offer various paths forward to meet compliance. They offer methods including prescriptive programs, *e.g.*, that the building has very specific types of windows, wall insulation, appliances, *etc.* to meet the requirements. They also offer performance

requirements that permit builders, architects, and designers the flexibility to choose different approaches to meet the requirements of the standard or code. This flexibility is important to address various differences that the homes and buildings encounter including climactic conditions, energy sources and cost, and specific building requirements. Notably, while the standards promote state of the art efficiency, they do not attempt to eliminate onsite fossil fuel usage. Instead, the ASHRAE 90.1 Standard and IECC recognize that in some instances, selecting a combination of natural gas and electricity for a home or building is the most appropriate energy selection for the specific application from an energy consumption, emissions reduction, and energy cost, compared to an all-electric application and vice versa. But the critical point is these codes and standards promote efficiency by encouraging designs that select the best form of energy or energy combination based on the application under consideration. The 2022 SNOPR, while providing some pathways to seek relief from the overall goal of first reducing then eliminating fossil fuels in the structures covered by the proposal, does not provide the flexibility needed to help ensure reductions in energy consumption and GHG emissions. In fact, there can be an increase in energy consumption and GHG emissions in some applications if natural gas is prohibited from being used.

**VII. The 2022 SNOPR Relies on Inaccurate Assumptions and Incomplete Data which Deprived AGA of a Meaningful Opportunity to Comment.**

As explained in the below subsections, the 2022 SNOPR has failed to provide complete information or explanations for its choices in the proposal. Without this material, AGA’s ability to comment is unlawfully limited. The opportunity for public comment on proposed regulations must be a “meaningful opportunity.” *Rural Cellular Ass’n v. FCC*, 588 F.3d 1095, 1101 (D.C. Cir. 2009). AGA was deprived of the ability to meaningfully comment because it did not have all of the information necessary to understand DOE’s calculations.

DOE could have avoided these mistakes (and its other arbitrary decisions in the 2022 SNOPR) if it had engaged in the procedures outlined in its own process rule, which, among other things, is meant to ensure robust stakeholder engagement. *See* 10 C.F.R. Part 430, Subpt. C, Appendix A. Although the process rule is not mandatory in this context, it serves as best practice for DOE decisions, such as this one, that have a vast impact on energy providers nationwide. For instance, DOE’s process provides that it should “use qualitative and quantitative analytical methods that are *fully documented* for the public and that produce results that can be explained and reproduced, so that the analytical underpinnings for policy decisions on standards are as sound and well-accepted as possible.” *Id.* at (f). Without the models and any relevant underlying data specifically requested by AGA in its formal request and the information and explanations noted below, stakeholders cannot reproduce the calculations performed by DOE that underpin this proposal or fully understand DOE’s reasons for the proposal.

**A. DOE should provide adequate construction first cost data.**

Neither the 2022 SNOPR nor the Technical Support Document (“TSD”) provide an adequate explanation of construction first costs for this proposal. First costs are reported as \$/sq ft (average of \$197.62) per building type;<sup>11</sup> however, DOE does not provide the additional details required to properly evaluate the cost of replacement and installation of new equipment. The analysis in the 2022 SNOPR also lacks a similar table for each building type for fossil fuel options that would be installed provided no final rule is in place in 2030. The only finding associated with the baseline fossil fuel first cost is the average savings per sq ft of \$1.86/sq ft or \$8.62 million per year total. 2022 SNOPR, 87 Fed. Reg. at 78,401. The support for this conclusion is missing from the

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<sup>11</sup> 2022 SNOPR, 87 Fed. Reg. at 78,402.

2022 SNOPR and the TSD and should have been provided to stakeholders as part of this rulemaking process.

In addition to the average cost per building type, DOE should provide cost estimates for each type of end use, including space heating, water heating, drying, cooking, and cooling, as well as combined heat and power and power generation applications that will be impacted by the rule. Providing the full model file (with any underlying data) used to develop the 2022 SNOPR and TSD would grant stakeholders the opportunity to evaluate and comment on the first and operating costs as well as any potential energy efficiency benefits associated with those costs. AGA requested this model and any underlying data on January 23, 2023; however, it was not provided, denying stakeholders the opportunity to review and comment.

**B. There are inconsistencies with DOE’s annual construction volumes.**

The reported annual savings of \$8.62 million and an incremental savings of \$1.86/sq ft suggest that 4.63 million sq ft would be impacted per year. Table 1.1.2 “Annual Construction Volumes by Building Type and Year Constructed” found on pages 1-3 of the TSD outlines the total number of sq ft used in the LCC analysis which shows a combined total of 14.67 million sq ft/year for buildings in 2030-2054 and 2.63 million for buildings between 2025 and 2030.

**Table 1.1.2 Annual Construction Volumes by Building Type and Year Constructed**

	New Construction	Major Renovation	Combined Total
SF Building / year 2030–2054	13,317,707	1,357,055	14,674,762
SF Building / year 2025–2030	2,230,380	404,411	2,634,791

The total volume footprint of all federal buildings in FY 2009,<sup>12</sup> just after the EISA was enacted, was 3,388,922,000 sq ft. By comparison, a current total rule-impacted volume, which includes mostly new buildings, is 365,368,243 sq ft or 10% of the existing footprint. Major

<sup>12</sup> See [https://www.gsa.gov/cdnstatic/FY2009\\_FRPR\\_Statistics.pdf](https://www.gsa.gov/cdnstatic/FY2009_FRPR_Statistics.pdf) (last visited February 21, 2023).



renovation projects include only 34,591,375 sq ft of rule-impacted volumes, or 1% of all existing buildings in FY 2009. Two-thirds, or 2,117,469,000 sq ft, of all FY 2009 volumes were associated with the major branches of the military, though an unknown portion of this would be rule affected as well. Without including the major branches of the military, 3% of all existing volumes would be rule-impacted based on buildings accounted for in FY 2009. If the life-cycle cost (“LCC”) analysis is a reasonable estimate, DOE has not explained in the 2022 SNO PR why so few buildings see an impact compared to the full list of federal buildings. DOE should provide a full explanation of why it believes so few buildings will be impacted by the proposal.

Furthermore, DOE’s analysis only accounts for the minimum existing square feet of federal government buildings with projects “known” to meet the size and cost criteria. Compared to all existing sq ft volumes of federal buildings, DOE’s analysis in the SNO PR only looks at 1% of all existing government buildings, based on the 2018 EIA Commercial Buildings Energy Consumption Survey. However, it is reasonable to assume that a significantly larger portion of the federal government’s buildings will need to be renovated during their useful life. The 2022 SNO PR does not provide the expected and high-end total costs to retrofit the entire federal government building stock and eliminate on-site fossil fuel usage. Nor does it explain whether and why some portion of the government’s buildings would never need renovation (or be subject to the proposal). A complete analysis is critical because natural gas is used across 62% of surveyed federal square footage, and the number is even higher if all fossil fuels are considered.

**C. DOE should explain why specific types of technology were analyzed in some buildings but not others.**

DOE has not explained how it chose certain space heating equipment for its analysis. The 2022 SNO PR provided a summary of proposed minimum space heating equipment without an explanation of why specific types of technology are available in some buildings but not others.

2022 SNO PR, 87 Fed. Reg. at 78,401. For example, the 2022 SNO PR projects that only 17.7 percent of buildings will utilize heat pumps as a minimum standard, but there are many other building types that could also benefit from heat pumps as a proposed minimum. The SNO PR does not provide a reasoned explanation for why some but not other buildings would be expected to adopt heat pumps. Similarly, the “primary school” building prototype is unique in that it has a split efficiency standard (meaning that the efficiency mandate is split between heat pumps and replacement furnaces) that is shared with no other type of building. Other building types listed in the 2022 SNO PR could benefit from a similar split mandate, but the 2022 SNO PR includes no explanation for why they are treated differently than primary schools. In addition, mandating heat pumps in some but not all prototypes is inconsistent with existing commercial minimum efficiency standards which allow for electrical resistance furnaces and boilers. All buildings should either be required to meet existing minimum efficiency standards, or all buildings should be required to use heat pumps based on the reasoning used by DOE for only a select few prototypes in the SNO PR.

**D. DOE has not provided essential evidence to evaluate the impact of the proposal.**

As noted above, DOE’s findings related to energy savings show an *increase* in energy usage of 0.482 TBtu per year and 0.018 quads between 2025 and 2054. TSD at 1-18. Importantly, DOE’s analysis did not provide information on how much on-site fossil fuel usage would be reduced based on a no-rule forecast. Without this detail, it is impossible to compare total efficiency gains/losses from the proposal, as well as validate findings on energy cost savings.

**Table 1.4.1 Annual Energy Savings**

Category	Results – Clean Energy Rule Building Compared to the ASHRAE 90.1-2019 Baseline*
Annual Site National Energy Savings (Trillion Btu)	-0.502 TBtu
Annual Upstream National Energy Savings (Trillion Btu)	0.020 TBtu
Annual FFC National Energy Savings (Trillion Btu)	-0.482 TBtu

\* Negative values represent an increase in energy use.

**Table 1.4.2 Cumulative Energy Savings (30-Year Analysis Period)**

Category	Results – Clean Energy Rule Building Compared to the ASHRAE 90.1-2019 Baseline*
Cumulative Site National Energy Savings (quads)	-0.019 quads
Cumulative Upstream National Energy Savings (quads)	0.001 quads
Cumulative FFC National Energy Savings (quads)	-0.018 quads

\* Negative values represent an increase in energy use.

**E. DOE should report the true cost of the proposal.**

DOE’s analysis in the 2022 SNO PR relies on the average usage per prototyped building based on more recent ASHRAE energy codes to determine the cost/carbon benefit from the rule. Because government buildings represent a larger share of the total aging commercial building stock within the U.S., the reported cost to retrofit buildings may be under-reporting the true cost of the proposed rule. With only 1% of all existing federal buildings accounted for in this analysis, potentially 62% using natural gas and more with other fossil fuels, the share of buildings modeled likely does not match the average prototype used by DOE. Older buildings in need of retrofits not included in the General Services Administration (“GSA”) project database are more likely to have higher budgeted costs and thus fall under the proposal. Therefore, the 2022 SNO PR does not reflect an accurate estimate of the cost of the proposal and DOE should conduct a more detailed analysis.

**F. DOE should provide more transparency as to appliance costs.**

More transparency is needed for individual end-use first costs and the relative shares of appliances per building type. Most estimated first costs shown in the 2022 SNO PR are within a range of \$198 and \$225 per sq ft without a breakdown of what contributed to these costs. 2022

SNOPR, 87 Fed. Reg. at 78,402. Other research on space heating/cooling has shown very different equipment costs per sq ft than the values presented in the 2022 SNOPR.<sup>13</sup>

Building type	Square feet per ton (cooling)
Small/medium office	350
Large office	325
Laboratory	200
Nonrefrigerated warehouse	400
Food sales	300
Public order and safety	300
Outpatient healthcare	200
Refrigerated warehouse	400
Religious worship	225
Public assembly	225
Education	450
Food service	175
Inpatient healthcare	275
Nursing	275
Lodging	375
Strip shopping mall	250
Enclosed mall	250
Retail other than mall	250
Service	200
Other	400

Smaller numbers indicate more space conditioning. Source: Bell and Angel 2015.

Space heating is likely the most expensive and universally required end use, followed by water heating. Both are very dependent on the type of building and size. Knowing how these estimates were developed would help explain the assumptions behind the LCC analysis and allow for further analysis of what higher energy efficiency would cost and if there are other paths toward decarbonization. DOE, however, has not provided this information, and a full analysis cannot be conducted.

**G. DOE should update emissions analysis in the SNOPR.**

In the TSD, DOE includes an alternative emissions forecast based on National Renewable Energy Laboratory’s (“NREL”) most recent Cambium model. TSD at 1-22. This forecast is not based on an expected outcome. It is an assumed scenario where emissions from the electric sector

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<sup>13</sup> See Bell and Angel 2015.

will be reduced by 95% by 2035. This is not a real-world forecast because it has several economically unconstrained factors such as land use, transmission, and manufacturing output to meet new renewable generation demand by 2035. Moreover, this projection is inconsistent with other elements of DOE's proposed analysis. DOE should incorporate a more realistic and consistent emissions forecasts into the proposal. Also, while DOE used NREL's Cambium model, it did not include NREL's wholesale price forecast as part of the 2022 SNOPR's LCC analysis. This may present higher electricity costs than the default Annual Energy Outlook ("AEO") forecast used. DOE should analyze whether the use of NREL's wholesale price forecast is appropriate or if another realistic forecast should be utilized.

#### **H. DOE should fully assess the impacts of the proposed rule on utilities.**

DOE's own Process Rule requires DOE to conduct a utility impact analysis in its standards rulemakings.<sup>14</sup> Specifically, the Process Rule requires DOE's utility impact analysis to "include estimated marginal impacts on electric and gas utility costs and revenues."<sup>15</sup> While the Process Rule may not be expressly applicable in this instance, DOE should conduct a utility impact as part of this process, as it would be beneficial to the administrative process. DOE should assess whether the proposal will negatively impact utilities that serve federal buildings. Such an analysis quantifies and evaluates the marginal impacts on gas utility costs and revenues of a reduction in gas deliveries due to the proposal. In addition to its analysis of impacts on gas distribution utilities, DOE should analyze whether its proposal would have adverse impacts on retail natural gas consumers, including consumers of utility pipeline gas. DOE should also analyze the impact of the proposal on existing service agreements that federal facilities have entered to receive service. For

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<sup>14</sup> See 10 C.F.R. part 430, subpart C, App. A § 6(e)(4)(iv) (Factors to be considered in selecting a proposed standard include an "analysis of utility impacts will include estimated marginal impacts on electric and gas utility costs and revenues.").

<sup>15</sup> *Id.*

example, DOE should analyze if federal buildings would have to breach contracts or if energy infrastructure would be stranded to effectuate the proposal, all of which will impact costs to the federal government and ratepayers in the area. These missing analyses are particularly important in the context of this rule because many federal buildings are located in communities that are sensitive to utility cost impacts including low income and rural communities.

**I. DOE should fully consider the potential impacts of the SNOPR on the entire energy system and customers.**

DOE should examine the impacts its proposal will have on the entire energy system, including utilities, end-use residential customers, and the industrial sector.<sup>16</sup> Removal of natural gas, via the proposal, from a large segment of federal buildings, will impact existing and future natural gas and electric utility customers. For example, electrifying buildings can lead to additional infrastructure costs if it becomes necessary to add additional generation capacity, electric transmission, and distribution infrastructure to meet new peaks in demand. The SNOPR fails to address how the fuel switching from natural gas end-use equipment to electric will significantly impact the peak day electric demand and the infrastructure requirements to serve the new peak day demand. Furthermore, the need for the significant build out of the electric grid has not been fully considered or addressed in the electric rate forecast DOE uses in the SNOPR. Moreover, DOE has not recognized the cost impacts for those federal facilities that are exempted from the rule due to resilience needs that will still rely on natural gas service. If federal buildings are forced to fuel switch, the cost of maintaining a safe and resilient natural gas system will have to be funded by fewer customers which is not considered in the LCC of the proposal.

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<sup>16</sup> A large segment of the country's industrial base relies on natural gas. *See Natural Gas Expected to Remain Most-Consumed Fuel in the U.S. Industrial Sector*, Energy Information Administration (May 1, 2018), available at <https://www.eia.gov/todayinenergy/detail.php?id=35152> (last visited February 21, 2023).

In 2018, AGA engaged a cross-functional team of experts to evaluate policy-driven electrification of the U.S. residential sector. While not directly addressing federal buildings, the study, “Implications of Policy-Driven Residential Electrification,”<sup>17</sup> appended as Attachment B, identified numerous challenges to policies, such as those proposed by DOE in the 2022 SNOPR, including:

- Cost-effectiveness
- Consumer impacts
- Transmission capacity constraints on the existing electrical system
- Current and projected electric grid emissions levels
- Requirements for new investments in the power grid to meet new growth in peak generation demand during winter periods

The study finds that a policy targeting widespread electrification of the U.S. residential sector would result in only a small fraction of greenhouse gas emissions reductions; could be financially burdensome to consumers; could have profound impacts and costs on the electric sector; and could be a very costly approach to emissions reductions. Specifically, the study notes that the U.S. Energy Information Administration projects that by 2035 direct residential natural gas use will account for less than 4 percent of total greenhouse gas emissions, and the sum of natural gas, propane, and fuel oil used in the residential sector would account for less than 6 percent of total greenhouse gas emissions. The study concludes that reductions from policy-driven residential electrification would reduce greenhouse gas emissions by 1 to 1.5 percent of U.S. greenhouse gas emissions in 2035. The potential reduction in emissions from the residential sector would be partially offset by an increase in emissions from the power generation sector, even in a case where all incremental generating capacity is renewable. Furthermore, the study found that policy-driven electrification would increase the average residential household energy-related costs

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<sup>17</sup> Implications of Policy-Driven Residential Electrification (July 2018) available at <https://www.aga.org/research-policy/resource-library/implications-of-policy-driven-electrification/> (last visited February 21, 2023).

(amortized appliance and electric system upgrade costs and utility bill payments) of affected households by \$750 to \$910 per year, or about 38 percent to 46 percent.<sup>18</sup>

Additionally, the impacts of fuel switching on the reliability and resilience of the energy system must be fully examined. DOE should consider in a comprehensive and systematic manner the challenges and unknown factors of comprehensive building sector electrification as it pertains to the proposal.

AGA's Net-Zero Study discussed the challenges and unknown factors related to building sector electrification. AGA's Net-Zero Study at 42-44. While careful analysis is required to understand the full extent of any challenges in a specific region, electrifying buildings can spur additional infrastructure costs if it's necessary to increase available generating capacity and upgrade the electricity grid to meet a new peak in electricity demand. Adding significant levels of electric space heating often shifts the electric grid from summer peaking to winter peaking. Many local power distribution grids would require significant upgrades to handle the additional load from comprehensive building electrification. In addition to implications on the electric system infrastructure, electrification of residential and commercial buildings can have potentially costly ramifications or technical limitations that will impact current gas customers. For example, retrofitting commercial buildings in major urban centers can be extremely difficult.

Some additional factors that will affect the impact of building electrification include:

- The region's existing generation capacity and outlook for new generating capacity coming online.
- The region's adoption rate of EVs, how much that will shift energy demand from gasoline to electricity, and whether there are policies and incentives in place to shift EV charging out of peak demand periods.

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<sup>18</sup> The study did not assess the incremental costs required to expand the electric distribution system.



- The efficiency of the building stock in a region. The cost of all forms of energy is expected to go up in pursuit of carbon-neutral targets. Energy efficiency is often the least expensive strategy and, therefore, should be the first action taken in many cases. Before pursuing building electrification, DOE should prioritize and incentivize energy efficiency upgrades, such as building envelope upgrades.
- Natural gas distribution systems design. Natural gas distribution systems are designed to provide service reliably with a plan to serve firm customers without disruption during peak winter periods, often called a “design day.” Winter load fluctuations (the difference between peak design day and an average winter day) tend to be much higher than fluctuations in summer loads, creating additional challenges associated with reliability. It is critical to understand the expected performance of end-use equipment on peak cold days when air source heat pumps may rely on electric resistance back-up and to understand electric system requirements to meet design day peak demand for electrified end uses.
- Decommissioning costs. Most decarbonization studies have not addressed the cost of decommissioning the gas system if all customers were to electrify fully.

The challenges and opportunities for electrification will also depend on the scale, speed, and sectors being electrified. Not all forms of electrification will have the same costs or impacts, and some gas uses, like space heating will pose a particular challenge to electrify.

**J. The gas system is reliable and resilient; however, DOE does not consider these characteristics as part of the proposal.**

The resilience characteristics of the U.S. gas system allow it to contribute to the overall resilience of the U.S. energy system, and such attributes should be recognized. DOE should not lose sight of the fact that the gas system is currently providing substantial reliability and resilience benefits to the entire U.S. energy system. The fuel switching contemplated by the proposal could undermine a system that provides energy directly to customers and indirectly as a fuel source for generating electricity. The strength of the current system resilience is a byproduct of a regulatory environment that has valued investment in a reliable, ratable, and safe set of assets designed around a legacy demand forecast and historical heating degree day planning. A resilient energy system is essential to the operation of nearly every critical function and sector of the U.S. economy as well

as the communities that depend upon its services. Disruptions to the U.S. energy system create widespread economic and social impacts, including losses in productivity, health and safety issues, and—in the most extreme cases— loss of life.

The American Gas Foundation issued a report in January 2021 “Building a Resilient Energy Future: How the Gas System Contributes to U.S. Energy System Resilience,” (“AGF Resilience Report”)<sup>19</sup> appended as Attachment C, which provides a framework for regulators, policymakers, and other stakeholders to examine energy system resilience and the role of the natural gas system. The AGF Resilience Report highlights the gas system’s ability to support resilience through its inherent, physical, and operational capabilities that enable it to meet the volatile demand profiles resulting from resilience events. AGF Resilience Report at 13-24. The AGF Resilience Report found that the gas system supports a quick response to events and provides long-duration storage resources to meet peak and seasonal energy demand. *Id.* at 3-4 and 36. Large, catastrophic failures of the energy system have been few and far between, but they do occur, and the gas system has performed well, overcoming periods of high stress that have threatened its resilience. *Id.* at 3. These high stress events are becoming more frequent due to the increase in the frequency and severity of extreme weather events associated with climate change. *Id.* at 11.

To successfully build for the future and invest in the right set of resilience solutions, it is important for stakeholders to understand how the energy system has performed under recent resilience events. To that end, the AGF Resilience Report analyzed the U.S. energy system’s potential vulnerabilities and resilience attributes.<sup>20</sup> In short, the multitude and diversity of

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<sup>19</sup> American Gas Foundation, “Building a Resilient Energy Future: How the Gas System Contributes to U.S. Energy System Resilience” (January 2021) available at <https://gasfoundation.org/2021/01/13/building-a-resilient-energy-future/> (last visited February 21, 2023) (“AGF Resilience Report”).

<sup>20</sup> AGF Resilience Report at 24-45. The report exams Polar Vortex (January 2019), Polar Vortex (February 2014), Hurricane Isaias (August 2020) and Heat, Drought, and Wildfires (August 2020).

resilience assets that already exist as part of the energy system have made the difference—facilitating energy flows to customers and critical services. AGF Resilience Report at 24-45. Driven by changes in cost and availability of new technologies and the increasing political and social pressure to decarbonize our nation’s energy system is transforming. This transformation has brought to light an issue of energy system resilience related to the growing interdependency of the gas and electric systems. AGA is concerned that requiring fuel switching as a preferred path forward for the energy system ignores the benefits provided by the gas system and could undermine the resilience of the energy system.

As DOE considers fuel switching, in this context and others, it should fully consider resilience and reliability. Part of that process should include defining energy system resilience in a measurable and observable manner that includes a set of metrics, similar to how reliability is considered. Resilience solutions must be considered from a fuel-neutral perspective and across utility jurisdictions, requiring electric, gas, and dual-fuel utilities to work together to determine optimal solutions. Furthermore, methodologies need to be built for valuing resilience, such that it can be integrated into a standard cost-benefit analysis. The value must consider the avoided direct and indirect costs to the service provider, customer, and society.

#### **VIII. DOE’s Proposal Should Fully Embrace the Use of Renewable Gases and Hydrogen.**

The 2022 SNO PR requires use of non-fossil fuel appliances, and at the same time it excludes energy generation or Scope 1 emissions associated with biomass fuels from the proposal. *See* 2022 SNO PR, 87 Fed. Reg at 78,386-87. DOE should revise the proposal to ensure that it does not hinder the current and future use of renewable gases and hydrogen in federal buildings. DOE should ensure the greatest amount of flexibility possible for achieving emission reductions. AGA strongly supports expanding access to renewable gases in an effort to accelerate widespread accessibility and adoption of renewable and low-carbon energy sources. The natural gas system

can store and deliver renewable energy derived from various sources and be a critical tool for reaching GHG reduction goals. DOE is also supportive of renewable gas and hydrogen.<sup>21</sup> Many AGA members have already begun demonstrating their commitment to integrating renewable gases into their existing pipeline networks. To date, at least fifteen AGA member companies in the United States have established or are in the process of developing voluntary renewable natural gas (“RNG”) program offerings for their customers, also referred to as “green tariffs” for retail service. Many gas utilities have begun investing in RNG to lower their gas throughput emissions and to offer customers a low-carbon and renewable energy option. AGA closely tracks all state legislative and regulatory actions nationwide related to the use of RNG in the building sector, and activity has increased significantly over the last several years. Over twenty-eight states across the United States have taken some form of action to promote the use of renewable gas in the residential or commercial sector. Moreover, dozens of gas utilities now have experience blending RNG into their pipelines and many are working to deliver RNG to their customers. Furthermore, utility investment in hydrogen is increasing, from piloting hydrogen production technologies to evaluating the impacts on direct-use gas equipment. Beyond technical engagement, many gas utility companies have begun to incorporate hydrogen into their emission reduction strategies while educating policymakers, regulators, and customers on their plans for a hydrogen-enabled gas system. The development of these program offerings is a direct reflection of growing customer demand for renewable energy sources and gas utilities’ continued commitment to reducing GHG emissions.

Due to the environmental benefits of renewable gases, DOE should ensure that such gases are fully leveraged to achieve decarbonization goals for federal buildings. In fact, the federal

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<sup>21</sup> See e.g., <https://www.hydrogen.energy.gov/> and [https://afdc.energy.gov/fuels/natural\\_gas\\_renewable.html](https://afdc.energy.gov/fuels/natural_gas_renewable.html). See also, <https://www.epa.gov/lmop/renewable-natural-gas>.

government's utilization of renewable gases could spur the advancement of these resources in the private sector. Moreover, using RNG and hydrogen in the existing gas distribution system could mitigate the need to site, permit, and build electric infrastructure near federal buildings. RNG use can also increase the resilience of the energy system by providing a locally sourced supply of clean energy. As DOE is aware, permitting, approving, and building energy infrastructure projects is not a simple task. DOE should seek ways to utilize existing natural gas infrastructure and not assume that the siting and permitting of an expanded electric transmission grid, needed to replace the gas system, would be any easier than the current approval process for natural gas facilities. An efficient alternative is to maximize existing pipeline infrastructure and permit the expansion of RNG and hydrogen over time to achieve carbon emissions reduction goals.

As part of its analysis, DOE should contemplate future scenarios where the gas system incorporates lower carbon fuels, such as RNG and hydrogen.

#### **IX. The Implementation of ECPA § 305(a)(3)(D) Should Provide Flexibility.**

DOE's implementation of ECPA § 305(a)(3)(D) should provide as much flexibility as possible and should include efficient on-site use of natural gas. Consistent with the purposes of the ECPA, AGA supports initiatives to enhance the energy efficiency of federal buildings, including promoting sustainability principles in the design of federal buildings. *See* 42 U.S.C. § 6834(a)(3)(D)(III). AGA believes that a blanket requirement to eliminate the use of fossil-fuels in new and renovated federal buildings by 2030 is not a wise policy. Such a policy threatens to deprive the federal government of the option to use cost-effective, high-efficiency natural gas systems to provide critical building services.

Recognizing that DOE is seeking to implement a policy established in statute, and in light of ECPA's purpose to "assure that reasonable energy conservation features" are incorporated into buildings receiving federal assistance, 42 U.S.C. § 6831(b), AGA urges DOE to reasonably and

thoughtfully implement ECPA's requirement that federal building energy efficiency performance standards be revised to reduce fossil fuel-generated energy consumption in new federal buildings and federal buildings undergoing major renovations. Specifically, DOE should implement the requirements with as much flexibility as possible, to avoid counterproductive effects. Further, DOE's implementation of the statutory requirements should be consistent with other established Administration policies, including policies encouraging the use of hydrogen. The 2022 SNO PR is fundamentally at odds with the Administration's stated goals of promoting greater use of alternative fuels by federal agencies. Enforcing a phase-out of natural gas at federal buildings would send a clear signal to natural gas suppliers that the use of hydrogen and renewable natural gas is discouraged. Furthermore, as previously noted, phasing out the use of natural gas at federal buildings undermines a "fuel neutral" approach.

#### **X. DOE Should Refine the Petition Process.**

While AGA does not support the proposal, any final rule that is established as part of this proceeding should have a robust petition process to allow for adjustments to the ultimately established requirements. Under section 433 of EISA, agencies other than GSA may petition DOE for an adjustment to the fossil fuel-generated energy consumption requirement with respect to a specific building if meeting the requirement is technically impracticable in light of the agency's functional needs for the building. AGA appreciates the fact that DOE included a petition process in the 2022 SNO PR, and the Department should further streamline the process. A streamlined approach such as a general group petition, rather than a case-by-case approach, should be provided based on, *e.g.*, building type and climate zones. Furthermore, the impact on the gas and electric systems and any cost implications should be considered as part of the petition process.

## **XI. DOE's Actions Should be Coordinated with Other Federal Actions.**

DOE's efforts in this proceeding should be coordinated with other federal actions in order to avoid conflicting rules and regulations. Several agencies are undertaking various initiatives. For example, the Department of Defense, the GSA, the National Aeronautics and Space Administration, together with the Office of Management and Budget, comprising the leadership of the federal Acquisition Council ("FAR Council"), issued a proposal to amend the Federal Acquisition Regulation to require federal contractors to report their GHG emissions and to set and disclose science-based targets for reducing their emissions consistent with U.S. goals to achieve net-zero GHGs across the economy. While the extent of overlap with the Federal Acquisition Regulation update is unclear, DOE should ensure that its actions are not inconsistent with the actions of the FAR Council, as well as other pending actions. Additionally, DOE's proposal appears to be inconsistent with the timeline set forth in Executive Order ("EO") 14057. EO 14057 provides for a net-zero emissions building portfolio by 2045, including a 50 percent emissions reduction by 2032. This timeline is different than DOE's in the 2022 SNO PR which will lead to confusion.

## **XII. DOE has a Duty to Respond to Comments.**

In these comments, AGA has raised issues regarding DOE's assumptions and data, as well as legal concerns with the 2022 SNO PR. AGA has raised concerns about crucial parts of DOE's analysis, and the Department must respond to those concerns with a cogent and reasoned response supported by substantial evidence. Failure to provide a reasoned, evidence-based response to these comments will render any final version of the proposal vulnerable to challenge.

### **XIII. Conclusion.**

The American Gas Association respectfully requests that the Department of Energy consider these comments in this proceeding and not implement the 2022 SNOPR as proposed for the reasons stated herein. If you have any questions regarding this submission, please do not hesitate to contact the undersigned.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "M. J. Agen".

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