

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

Energy Conservation Program:)	
Procedures, Interpretations, and Policies)	
for Consideration of New or Revised)	EERE-2017-BT-STD-0062
Energy Conservation Standards for)	RIN 1904-AD38
Consumer Products)	
)	

**COMMENTS OF THE
AMERICAN GAS ASSOCIATION**

Pursuant to the Notice of Data Availability (“NODA”) and request for comments issued by the Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy (“Department” or “DOE”) in the above referenced proceeding and published in the Federal Register on July 26, 2019,¹ the American Gas Association (“AGA”) respectfully submits these comments.² The NODA seeks comment and information that will aid in the Department’s decision-making process with respect to its consideration of potentially setting a threshold for significant energy savings. AGA appreciates the opportunity to provide the Department with feedback on the NODA.

I. INTRODUCTION

AGA previously filed comments generally supporting the Department’s effort to revise and clarify the current Procedures, Interpretations, and Policies for Consideration of New or Revised

¹ *Energy Conservation Program: Procedures, Interpretations, and Policies for Consideration of New or Revised Energy Conservation Standards for Consumer Products; Notice of Data Availability*, 84 Fed. Reg. 36037 (July 26, 2019).

² *See Energy Conservation Program: Procedures, Interpretations, and Policies for Consideration of New or Revised Energy Conservation Standards for Consumer Products; Notice of Data Availability*, 84 Fed. Reg. 42830 (Aug. 19, 2019) (extending the comment date to August 30, 2019).

Energy Conservation Standards for Consumer Products (“Process Rule NOPR”).³ As explained in the Process Rule NOPR Comments, AGA is supportive of energy efficiency standards that are established through a transparent collaborative process and justified by verifiable data and objective methodologies. AGA supports an administrative process that aids the Department in pursuing reasonable, fact-based efficiency standards and a process that evolves to reflect today’s economy.

In response to the NODA, and as discussed in more detail below, AGA requests that the Department use the full-fuel-cycle measure of energy consumption instead of the proposed site measure of energy consumption for developing energy savings thresholds and for calculating energy savings projections for a new or amended energy conservation standard. AGA also requests, among other things, that the Department refine its proposal to permit the use of both a specific quad and a percentage reduction in energy consumption to satisfy the statutory significant conservation of energy requirement, as discussed in more detail below.

II. IDENTITY AND INTERESTS

The American Gas Association, founded in 1918, represents more than 200 local energy companies that deliver clean natural gas throughout the United States. There are more than 74 million residential, commercial and industrial natural gas customers in the United States, of which 95 percent — more than 71 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,

³ See *Energy Conservation Program for Appliance Standards: Proposed Procedures for Use in New or Revised Energy Conservation Standards and Test Procedures for Consumer Products and Commercial/Industrial Equipment*, 84 Fed. Reg. 3910 (Feb. 13, 2019) (“Process Rule NOPR”). See also Prepared Statement of the American Gas Association (March 15, 2019), *available at*, <https://www.regulations.gov/document?D=EERE-2017-BT-STD-0062-0083>; Comments of the American Gas Association (May 8, 2019), *available at*: <https://www.regulations.gov/document?D=EERE-2017-BT-STD-0062-0114> (“Process Rule NOPR Comments”).

international natural gas companies and industry associates. Today, natural gas meets more than one-fourth of the United States' energy needs.⁴

AGA's members serve residential and commercial customers, the majority of which use natural gas furnaces, boilers and/or water heaters, and therefore have a direct and vital interest in both the minimum efficiency standards for these products and the procedures used by DOE to adopt these standards. The establishment of thresholds is an integral part of the Department's rulemaking process, therefore any reforms can and will have meaningful impact on the establishment of new standards. AGA encourages DOE to adopt efficiency standards only after consideration of all relevant full-fuel-cycle energy savings data.

III. COMMENTS

In the Process Rule NOPR, the Department stated it was proposing to modernize processes in various ways, including how it defines "significant energy savings threshold that must be met before DOE will update an energy conservation standard."⁵ As DOE explained in the Process Rule NOPR, the Energy Policy and Conservation Act of 1975 ("EPCA") provides, among other things, "that the Secretary may not prescribe an amended or new standard that 'will not result in significant conservation of energy.'"⁶ However, Congress did not define the statutory term "significant conservation of energy."⁷ DOE noted in the Process Rule NOPR that the United States Court of Appeals for the District of Columbia Circuit provided its understanding of the term in *Natural Resources Defense Council v. Herrington*, 768 F.2d 1355 (D.C. Cir. 1985). In examining the court's ruling in *Herrington*, the Department stated that it has "a degree of latitude with respect to

⁴ For more information, please visit www.aga.org.

⁵ Process Rule NOPR at 3911; *see also* Process Rule NOPR at 3921 – 3925.

⁶ Process Rule NOPR at 3921, *quoting and citing* 42 U.S.C. § 6295(o)(3)(B).

⁷ Process Rule NOPR at 3922.

determining whether a given level of energy savings constitutes ‘significant’ energy savings for purposes of satisfying the requirements under EPCA.”⁸ In summary, *Herrington* permits DOE to apply a specific numeric threshold, *i.e.*, total quads saved, or a relative threshold, *i.e.*, a percentage, or a combination of both.⁹ The purpose of the threshold is to “ensure that limited agency resources are devoted to the analysis of those standards rulemakings that are most likely to yield substantial benefits to consumers and the Nation.”¹⁰ Moreover, as stated in the Process Rule NOPR, DOE is concerned with the “direct economic impacts that are likely to flow from imposing standards that are projected to yield relatively lower energy savings—standards that may produce little in overall benefits in energy and cost savings for consumers when compared to the costs related to the manufacture and purchase of products and equipment meeting these kinds of standards.”¹¹

In the NODA, the Department proposes to adopt energy savings thresholds proposed in the Process Rule NOPR, *i.e.*, a threshold of 0.5 quad in energy savings or a 10 percent reduction in energy consumption over a 30-year analysis period.¹² However, since EPCA, according to the Department, uses a household energy consumption metric as a threshold for setting standards for new covered products, DOE proposes site energy as the most appropriate metric for setting an

⁸ *Id.*

⁹ *Id.*

¹⁰ *Id.*

¹¹ *Id.* (Explaining that DOE’s first step will be to the projected energy savings from a potential maximum technologically feasible (“max-tech”) standard would be evaluated against a given numerical threshold and it will evaluate it is economically justified.); *Id.* at fn.10 (“there are a number of variables that may come into play depending on the product/equipment at issue that may not be readily apparent during the max-tech analysis but appear in the more comprehensive economic justification analysis. For example, fuel switching (e.g., in the context of furnaces) may affect the projected energy savings from a standard and result in lower than expected savings when performing the relevant economic analysis.”).

¹² NODA at 36038. Due to the overall disagreement with the proposal to use site energy as the metric for the threshold, AGA will not comment specific threshold of 0.5 quads in energy savings or a 10 percent reduction in energy consumption. As discussed herein, there are problems with how DOE developed and justified the proposed threshold.

energy saving threshold across rulemakings.¹³ In the following sections AGA provides its comments on each proposal and provides further comments on other issues related to the NODA.

A. A REVIEW OF FULL-FUEL-CYCLE ENERGY SAVINGS DATA IS ESSENTIAL TO DETERMINING SIGNIFICANT ENERGY SAVINGS THRESHOLDS

In the NODA, the Department states that “site energy would be the most appropriate metric for evaluating energy savings across rulemakings,”¹⁴ and thereby proposes to not use source and full-fuel-cycle¹⁵ energy savings data when analyzing a threshold for significant conservation of energy. AGA, over the years, has consistently advocated before the Department¹⁶ and in other issuances and reports that an essential component of any efficiency analysis is a proper accounting of the relative efficiencies of various energy sources. Therefore, as discussed herein, AGA requests that the Department use full-fuel-cycle energy savings data as the metric for evaluating energy savings across rulemakings.

1. THE DEPARTMENT HAS ALREADY DETERMINED THAT IT IS APPROPRIATE TO USE FULL-FUEL-CYCLE ENERGY SAVINGS DATA AND ITS USE IS CONSISTENT WITH EPCA

The Department has the latitude to set thresholds and prioritize its efforts so that it focuses on rulemakings that result in significant energy savings, and that process can use full-

¹³ NODA at 36038.

¹⁴ *Id.* AGA interprets the use of the term “site” to be a point-of-use measure energy consumption reflects the use of electricity, natural gas, propane, and/or fuel oil by an appliance at the site where the appliance is operated, based on specified test procedures. National Research Council, *Review of Site (Point-of-Use) and Full-Fuel-Cycle Measurement Approaches to DOE/EERE Building Appliance Energy Efficient Standards*, (May 15, 2009) at p. 6 (“2009 NAS Study”), available at: <https://www.nap.edu/catalog/12670/review-of-site-point-of-use-and-full-fuel-cycle-measurement-approaches-to-doeere-building-appliance-energy-efficiency-standards>.

¹⁵ “Full-fuel-cycle” is the measure of energy consumption that includes, in addition to site energy use, the energy consumed in the extraction, processing, and transport of primary fuels such as coal, oil, and natural gas; energy losses in thermal combustion in power-generation plants; and energy losses in transmission and distribution to homes and commercial buildings. 2009 NAS Study at p. 6.

¹⁶ See Process Rule NOPR Comments at p. 32-33; see also Joint Comments of the American Public Gas Association and the American Gas Association at p. 17 (March 5, 2018), available at: <https://www.regulations.gov/document?D=EERE-2017-BT-STD-0062-0061>.

fuel-cycle information. As discussed by DOE in the NODA, EPCA may require the “use of a household energy consumption metric as a threshold for setting standards for new covered products (42 U.S.C. 6295(l)(1)).”¹⁷ However, pursuant to 42 U.S.C. § 6295(o), the Department can use “other factors the Secretary considers relevant” in its analysis;¹⁸ therefore, the use of full-fuel-cycle data as a measure of energy use is permitted to be part of DOE analyses and prioritization determinations. DOE even acknowledges in the Process Rule NOPR when summarizing *Herrington*, as discussed above, that it has a degree of latitude with respect to determining whether a given level of energy savings constitutes “significant” energy savings.¹⁹ Therefore, the statute does not require or mandate the use of only site energy data.

Further, the Department has issued a policy statement in 2011 (“2011 Policy Statement”)²⁰ which discusses DOE’s statutory authority to create and use full-fuel-cycle energy efficiency metrics as part of its analysis of the likely impacts of prospective energy conservation standards, the basis of which is the 2009 NAS Study recommending DOE use full-fuel-cycle measures, which is discussed in Section III(A)(3), *infra*.²¹ More specifically, in 2011, DOE published a policy statement on the use of full-fuel-cycle measures of energy use and greenhouse gas (“GHG”) and other emissions, instead of primary energy measures, in the national impact analyses and environmental assessments included in future energy conservation standards rulemakings, *i.e.*, the 2011 Policy Statement.²² The Department explained that using the full-fuel-cycle measure in these analyses would provide more complete information about the total

¹⁷ NODA at 36038.

¹⁸ 42 U.S.C. § 6295(o)(B)(VII).

¹⁹ Process Rule NOPR at 3922.

²⁰ 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. 51281, 51285 (Aug. 18, 2011).

²¹ 2009 NAS Study.

²² See 2011 Policy Statement, *supra*, fn.20.

energy use and GHG emissions associated with a specific energy efficiency level than site energy measures.²³ While DOE would continue to set energy conservation standards for covered products based on energy consumption at the point-of-use, per its interpretation of EPCA,²⁴ DOE explained in the 2011 Policy Statement that it has the statutory authority²⁵ to create and consider extended site or full-fuel-cycle energy efficiency metrics as part of its analysis of the likely impacts of prospective energy conservation standards.²⁶

AGA has, and continues to request that DOE use its authority to analyze full-fuel-cycle information in establishing thresholds, consistent with its use of said information in its national impact analyses and environmental assessments.²⁷ Similar to the 2011 Policy Statement, DOE should permit any thresholds to reflect complete information about the total energy use.

2. FULL-FUEL-CYCLE PROVIDES A BETTER COMPARISON ACROSS FUEL TYPES

In the NODA, the Department is proposing a threshold for the significant conservation of energy which would be applied across rulemakings for various covered products and even for products where there is a choice of fuel.²⁸ A side-by-side comparison of energy consumption across fuel types would be useful to the Department in determining an appropriate threshold and better allow for coherent standards setting to increase energy savings. Use of site energy metrics alone across fuel types provides misleading comparisons because upstream energy savings impacts of standards are ignored. Furthermore, comparisons of energy consumption across fuel types would help illuminate the relative effectiveness in terms of total energy savings of

²³ *Id.* at 51282.

²⁴ 42 U.S.C. § 6291(4)-(6), § 6311 (3)(4).

²⁵ *See* 42 U.S.C. § 6295(o)(2)(B)(i)(VII).

²⁶ *See* 2011 Policy Statement at 51285.

²⁷ *See* Comments of the American Gas Association in response to the proposed 2011 Policy Statement (Oct. 19, 2010), *available at*: <https://www.regulations.gov/document?D=EERE-2010-BT-NOA-0028-0004>.

²⁸ NODA at 36038.

proposed efficiency standards. The comparison of standard levels across fuels is particularly important where new standards for appliances can influence consumers' appliance purchasing decisions.²⁹ Failure to consider such comparative analyses could result in standards that drive consumers to engage in significant fuel switching that would be counterproductive from an energy consumption and emissions perspective.

The site energy analyses proposed in the NODA omits all upstream energy consumption and associated emissions required to deliver the fuel to its point of use. More importantly, under site energy analyses not all energy forms are equivalent, creating advantages and disadvantages for certain kinds of energy sources. For example, for appliances that use natural gas, most of the energy losses and emissions occur at the point of use. The overall natural gas delivery system, from extraction and production, through processing, transportation, and delivery to end use is relatively efficient – approximately 92 percent of the energy produced reaches the consumer as usable energy. Further, according to Energy Information Administration (“EIA”), site use of natural gas and electricity in buildings in 2017 totaled 7.6 and 9.3 quadrillion Btu’s (Quads), respectively – a sum of 16.9 Quads. However, losses associated with electricity production and delivery were 18.3 quads of energy – an amount greater than total site energy use and almost two times greater than the total site electricity use.³⁰ Natural gas appliances appear less efficient on a site energy basis than on a full-fuel-cycle basis and are thus at a disadvantage since the efficiency of the production and delivery system upstream of the site is ignored. Due to the magnitude of source-to-site energy impacts, it is critical that any proposed thresholds and the amount of energy savings associated with future efficiency standards account for this information accurately. If the

²⁹ See 2009 NAS Study at p. 12 (Recommendation 3), discussed *infra*.

³⁰ Gas Technology Institute, *Full-Fuel-Cycle Energy and Emission Factors for Building Energy Consumption – 2018 Update* at p. 7 (Jan. 2019).

Department was to analyze only site energy consumption when setting thresholds, it would ignore the complete picture provided by examining the broader range of energy requirements. In order to provide a fair basis for comparison in establishing the thresholds for rulemakings that may concern different fuels, the Department should use full-fuel-cycle data.

It is important for thresholds used to evaluate energy savings associated with energy efficiency standards to account for total energy use accurately. To support this premise, cited in these comments are reports and analysis tools that discuss and illustrate the benefits of using source and full-fuel-cycle data, notably a National Academies' report on the specific subject is discussed below. Additionally, AGA and the Gas Technology Institute have published extensive reports and tools that address and illustrate the energy impacts of energy use and how it requires an examination of site energy use and source or full-fuel-cycle energy consumption and related emissions.³¹ For these and other reasons discussed below, the Department should update the NODA table comparisons to reflect and compare full-fuel-cycle energy savings.³²

3. THE NATIONAL ACADEMIES AND ENVIRONMENTAL PROTECTION AGENCY SUPPORT THE USE OF FULL-FUEL-CYCLE ENERGY SAVING DATA

Other organizations and agencies, including the National Academies and the Environmental Protection Agency (“EPA”) support using the source and/or full-fuel-cycle measure of energy consumption. The National Academies (comprising the National Academy of

³¹ See, e.g., AGA Natural Gas Codes and Standards Research Consortium, *Full-Fuel-Cycle Energy and Emission Factors for Building Energy Consumption* (Aug. 2009), available at: <https://www.aga.org/sites/default/files/legacy-assets/SiteCollectionDocuments/KnowledgeCenter/OpsEng/CodesStandards/0008ENERGYEMISSIONFACTORS RESCONSUMPTION.pdf>; see also AGA, *Full-Fuel-Cycle Energy and Emission Factors for Building Energy Consumption – 2018 Update*, (Jan. 2019), available at: <https://www.aga.org/globalassets/research--insights/reports/22433-ffc-final-report-2019-01-14.pdf>; Gas Technology Institute, *Energy Planning Analysis Tool*, (last visited Aug. 30, 2019), available at: <http://epat.gastechnology.org/Default.aspx> (the tool allows users to compare key metrics for alternative consumer energy products including site and source energy consumption).

³² NODA at 36038.

Sciences, the National Academy of Engineering, the Institute of Medicine and the National Research Council) issued a report recommending DOE use full-fuel-cycle measures, *i.e.*, the 2009 NAS Study,³³ which resulted in DOE implementing some of the concepts in the 2011 Policy Statement, as discussed above. The National Academies stated that “using that metric could provide the public with more comprehensive information on the impacts of energy consumption on the environment.”³⁴ While the 2009 NAS Study recommended that for single-fuel appliance end-uses, such as residential clothes washers, DOE should retain the practice of “basing energy efficiency requirements on the site measure of energy consumption and should also continue to keep product classes separate when setting efficiency standards for appliances for which fuel choice is an option.”³⁵ The 2009 NAS Study further recommends that:

For appliances for which there is a choice of fuel, such as storage water heaters and heating equipment, efficiency ratings should be calculated using the extended site measure of energy consumption until DOE/EERE can consider and complete a transition to the use of the full-fuel-cycle measure of energy consumption.³⁶

While the Department adopted certain recommendations from the 2009 NAS Study in its 2011 Policy Statement, the implementation of the National Academies’ recommendations, and in particular Recommendation 3 quoted above, have largely been ignored by DOE for purposes of developing minimum efficiency proposals.³⁷ Instead, DOE has used full-fuel-cycle savings as an accounting basis for quantifying national energy savings benefits of standards alternatives. Unfortunately, with respect to end-use options using competing fuels, this approach will likely fail

³³ 2009 NAS Study.

³⁴ *Id.*

³⁵ *Id.* at p. 12 (Recommendation 2).

³⁶ *Id.* at p. 12 (Recommendation 3) (footnote omitted). The term “extended site” used in the context refers to source energy, *i.e.*, full-fuel-cycle energy less extraction and other production losses. DOE later issued its decision to move to full-fuel-cycle energy as a metric for these broader characterizations. *See* 2011 Policy Statement.

³⁷ *See also* the discussion of 2009 NAS Study Recommendation 5, below.

to produce minimum standards outcomes that produce the combinations of minimum standards that represent the highest levels of savings that are technologically feasible and economically justified, consistent with DOE’s statutory mandate.³⁸

Other federal agencies also support the use of source energy data. For example, the EPA has stated:

The purpose of the conversion from site energy to source energy is to provide an equitable assessment of building level energy efficiency. Because billed site energy use includes a combination of primary and secondary forms of energy, a comparison using site energy does not provide an equivalent thermodynamic assessment for buildings with different fuel mixes. In contrast, source energy incorporates all production, transmission, and delivery losses, which accounts for all primary fuel consumption and enables a complete assessment of energy efficiency in a building.³⁹

“Source energy” is similar to full-fuel-cycle; however, source energy as a metric excludes extraction and production losses in developing primary energy fuels. Updating source energy quantities to a full-fuel-cycle measure of energy consumption is a relatively minor conversion calculation and is used in a variety of federal programs and tools, such as the GREET model to, among other things, assess life cycle emission impacts across competing motor vehicle fuels.⁴⁰ Energy efficiency must be viewed through the lens of full-fuel-cycle analyses and account for source energy data to ensure that regulators and consumers are accurately informed about the real consequences of the direct use of natural gas versus other sources of energy. For the rulemakings summarized in the table in the NODA,⁴¹ rulemakings using source energy in its national impacts

³⁸ 42 U.S.C. 6295(o)(2)(A).

³⁹ See Environmental Protection Agency, Energy Star Portfolio Manager Technical Reference, *Source Energy* (last visited Aug. 30, 2019), available at: <https://portfoliomanager.energystar.gov/pdf/reference/Source%20Energy.pdf>.

⁴⁰ Argonne’s GREET, *Taking Life Cycle Analysis to the Next Level* (last visited Aug. 30, 2019), available at: <https://greet.es.anl.gov/greet/gettingstarted/wtw.html>.

⁴¹ NODA at 36038.

analysis can be easily updated to full-fuel-cycle energy savings to make the comparison “apples-to-apples.”

As AGA summarized in its Process Rule NOPR Comments,⁴² in measuring the impact of energy efficiency measures on total energy savings, the Department uses a conversion factor called “site-to-source” to convert site energy consumption, at the home or building, into primary or source energy consumption, and the energy input at the energy generation station required to convert and deliver the energy required at the site of consumption.⁴³ These site-to-source conversion factors account for the energy used at power plants to generate electricity and for the losses in transmission and distribution, among other things.⁴⁴ Because of this effort, DOE should be commended for recognizing the benefits of utilizing source energy as it contemplates critical energy policy decisions.⁴⁵ In the NODA, however, the Department proposes to implement a process whereby it only analyzes site data and not full-fuel-cycle energy savings when evaluating if a new or amended standard would meet the significant conservation of energy threshold, seemingly ignoring the benefit of accounting for a broader range on energy impacts and departing from its past practice.⁴⁶

⁴² See Process Rule NOPR Comments at p. 32.

⁴³ *Energy Conservation Program: Energy Conservation Standards for Automatic Commercial Ice Makers*, 80 Fed. Reg. 4645, 4705 (Jan. 28, 2015). *Energy Conservation Program: Energy Conservation Standards for Standby Mode and Off Mode for Microwave Ovens; Final Rule*, 78 Fed. Reg. 36316, 36346 (June 17, 2013); *Energy Conservation Program: Energy Conservation Standards for Residential Clothes Washers; Final Rule and Proposed Rule*, 77 Fed. Reg. 32308, 32345 (May 31, 2012). See the discussion below regarding the conversion factors used in the NODA.

⁴⁴ *Id.*

⁴⁵ AGA’s Process Rule NOPR Comments at p. 32 (discussing that there are various methods that can be used to determine energy values and it is important to link the method used to the purpose for which the analysis is undertaken so that there is not a mismatch and, therefore, skewed and unreliable outcomes).

⁴⁶ *Motor Vehicle Mfr.’s Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 42-43 & 50 (1983) (explaining that an agency must “examine the relevant data and articulate a satisfactory explanation for its action.”); *Friedman v. Federal Aviation Administration*, 890 F.3d 1092, 1097 (stating that the court will not supply a reasoned basis for the agency’s action that the agency itself has not given); *Fla. Power & Light Co. v. Lorion*, 470 U.S. 729, 744, (1985) (“If the record before the agency does not support the agency action, if the agency has not considered all relevant factors, or if the reviewing court simply cannot evaluate the challenged agency action on the basis of

4. THE PUBLIC WOULD BENEFIT FROM KNOWING THE TOTAL ENERGY SAVINGS OPPORTUNITIES

While this proceeding concerns the Department's thresholds and processes and how it evaluates efficiency standards, one critical element of the overall process is the consumer and ensuring that any process ultimately provides that consumer with the information needed to make appropriate product choices. In the context of the NODA and within the minimum efficiency rulemaking process, the public would be best served by knowing what the total energy savings opportunities are with sets of proposed minimum efficiencies and clearer information on why specific alternatives might not meet minimum criteria for energy savings. Full-fuel-cycle energy metrics and data can be directly and effectively communicated while providing the most efficient and equitable characterizations, particularly across competing fuels. Notably, the EPA in its discussion of its Energy Star for Commercial Buildings program and tools already uses full-fuel-cycle energy data,⁴⁷ and there is no indication that the public is any less informed on the issue. Full-fuel-cycle numbers can be directly and most easily related to national and international economy-wide estimates of energy consumption, in contrast this cannot be done with "national site energy savings" numbers. Thresholds based on full-fuel-cycle energy data can be related to economy-wide energy consumption and can better characterize "significance" of energy efficiency standard options. Furthermore, the 2009 NAS Study (Recommendation 5) states that:

DOE/EERE and the Federal Trade Commission should initiate a project to consider the merits of adding to the Energy Guide label an indicator of how an appliance's total energy consumption might affect levels of greenhouse gas emissions. Such a project would include development of specific data on greenhouse gas emissions associated with the appliance's operation, formulation of pertinent information for addition to the appliance's energy

the record before it, the proper course, except in rare circumstances, is to remand to the agency for additional investigation or explanation.").

⁴⁷ See Environmental Protection Agency, Energy Star Portfolio Manager Technical Reference, *Source Energy* (last visited Aug. 30, 2019), available at: <https://portfoliomanager.energystar.gov/pdf/reference/Source%20Energy.pdf>.

efficiency label, and research with a sample of consumers to test various options for encouraging consumers' understanding and use of information on full-fuel-cycle energy consumption and its impacts.⁴⁸

The establishment of thresholds based upon full-fuel-cycle energy would be consistent with the forgoing and would give consumers a clearer picture of an appliance's total energy consumption.

B. AGA SUPPORTS THE UTILIZATION OF SIGNIFICANT SAVINGS OF ENERGY THRESHOLDS, HOWEVER THE THRESHOLDS SHOULD BE NON-TRIVIAL AND EACH CANDIDATE STANDARD SHOULD RESULTS IN SIGNIFICANT ENERGY SAVINGS

In the NODA, the Department proposes either a specific quad or a percentage reduction in energy consumption to satisfy the significant conservation of energy requirement in EPCA.⁴⁹ As AGA discussed in its Process Rule NOPR Comments, AGA supports DOE's efforts to establish thresholds for significant conservation of energy in its rulemaking process.⁵⁰ AGA supports the premise, as summarized by DOE in the Process Rule NOPR, that a significant conservation of energy threshold should be non-trivial and that each candidate standard consider results in significant energy savings.⁵¹ Accordingly, thresholds must be set in a manner that quantifies and illustrates a problem is large enough to justify a new or revised regulation or rule. AGA reiterates its recommendation that thresholds for significant energy savings consider a combination of the anticipated overall energy consumption savings along with the percentage reduction of energy consumption for the covered product compared to the existing standard.⁵² Reviewing a proposal from two angles would be a more appropriate approach for determining whether to proceed with a rulemaking for modifying a standard.⁵³ For example, one potential way for DOE to utilize the

⁴⁸ 2009 NAS Study at p. 12 (Recommendation 5) (footnote omitted).

⁴⁹ NODA at 36038.

⁵⁰ Process Rule NOPR Comments at 18.

⁵¹ Process Rule NOPR at 8.

⁵² Process Rule NOPR Comments at 20.

⁵³ *Id.*

combination of the two would be if DOE established a threshold of 0.5 quads of energy savings and a 10 percent reduction in the energy consumption of the covered product, as referenced in the NODA, and if a new standard was projected to save 0.25 quads of energy (a level below the energy savings threshold) but result in a 20 percent reduction in energy consumption for the covered product (two times the percent threshold), the rulemaking process could proceed since the two thresholds were proportionately achieved. However, if in the above example, the new standard would have only achieved a 10 percent reduction in energy consumption for the covered product, it would not proportionately meet the combined thresholds and the rulemaking process would not proceed. The Department should take into account a combination of the possible quad reductions and the anticipated percentage reduction of energy consumption so that it is not one or the other.⁵⁴

C. OTHER MATTERS RELATED TO THE NODA

In the NODA, DOE seeks comment on “other matters relevant to DOE’s consideration of the data related to this NODA” because “[t]hese comments and information will aid in DOE’s decision with respect to its consideration of potentially setting a threshold for significant energy savings.”⁵⁵ Pursuant to the forging, AGA provides the following proposals:

- **Documentation and Public Review** - All DOE calculations of benefits associated with proposed minimum efficiency standard options, including those to be used in setting thresholds and in technical support documents (“TSDs”), should be fully documented, subject to public review prior to use in rulemaking analysis, and peer reviewed prior to final publication. In addition to the full disclosure of benefit calculations, cost-related assumptions and calculations should be similarly

⁵⁴ See Process Rule NOPR at 3922.

⁵⁵ NODA at 36039.

documented and disclosed for public review. It is critical that in the development of energy savings, consumer costs and benefit calculations, national energy savings and benefits, and important intermediate calculations be transparent. Stakeholders should have an opportunity to review the information for legitimacy, accuracy, and appropriateness. Furthermore, analysis assumptions and inputs should be subject to public review and there should be efforts to achieve consensus among stakeholders. AGA views that any additional burden upon DOE would be small in meeting this request since most of the activities implied in this recommendation are already undertaking within staff decision making of the Department.

- **Consistent National Full-Fuel-Cycle Conversion Factors** - The Department should work with the EIA to establish consistent national average full-fuel-cycle energy conversion factors that reflect consensus views of transitions to renewable electricity generation operating contribution, “captured energy” from renewables, and more realistic electricity grid considerations. Specifically, the Department should consider modifying its national full-fuel-cycle energy conversion factors to be consistent with its actual use of source energy conversions such as use of the grid electricity factor of 2.95 and natural gas factor of 1.09 published by Pacific Northwest National Laboratory (“PNNL”) in its May 2019 report, “Preliminary Energy Savings Analysis: 2018 IECC Residential Requirements,”⁵⁶ and calculated by PNNL from 2017 data from the EIA’s Annual Energy Outlook (AEO). PNNL used EPA Energy Star Publication, “Energy Star Portfolio Manager Technical Reference: Source Energy,” as its source for conversion factors for other primary

⁵⁶ See Tables 5 and 6 in the PNNL report and compare with fn.2 in the NODA.

fuels. PNNL applies these source energy factors to calculate source energy consumption to its 30-year analysis period, or approximately to Year 2050, which is consistent with the forecasting period of the AEO. PNNL's use of the national average conversion factor for grid electricity may not provide regional or local granularity for analysis of specific impacts of minimum standards proposals or durable conversions over to long time periods if and when the grid electricity mix changes, but it does provide a statutory- and policy-driven use of site-to-source energy conversions. AGA is committed to continue working with federal data sources, chief among them EIA, to refine these conversion factors to support better policy making decisions.

- **Competing Product Analysis** - Analysis of specific products should include analysis of competing product markets and penetrations as a result of minimum efficiency standards proposals, particularly across competing fuel types. This competitive analysis should include estimated responses among manufacturers and their competing product lines, including fuel choice considerations, more realistic fuel switching considerations, and public review of fuel choice and switching methodologies.
- **Baseline Decisions** - Consumer "baseline" decisions regarding covered products should presume rational decision making, just as rational decision making is presumed in life cycle cost analysis to achieve the highest consumer surplus under proposed minimum standards. In this model of consumer behavior, consumer decisions should be for the highest consumer surplus options among all models of

the covered product that are currently available and in the absence of new minimum efficiency standards.

- **End-User Markets** - At the initiation of covered product analysis, end-user markets should be more fully characterized. These markets should be defined in public workshops directed at identifying important customer classes and building types and at achieving consensus on how analysis of minimum efficiency standards would apply to these differentiated markets. For example, there should not be a presumption the end-user market, or consumer class, is composed solely of single-family, owner-occupied residential occupancies because this would miss multi-family occupancies, which have different cost considerations and other factors.

With respect to these “other matters,” AGA recommends that DOE initiate a limited set of stakeholder workshops on Process Rule reform to review these issues in greater detail. To date and upon review of stakeholder comments on the Process Rule NOPR, AGA observes that specific activities for reform of DOE’s minimum efficiency standards setting process have been neglected even while stakeholders in specific rulemakings have long objected to DOE’s current process implementation. While this recommendation goes beyond the purpose of the NODA, it is clear that more substantive reforms are needed and require deliberation outside of the NOPR and NODA steps. AGA is prepared to work with DOE to help build out the workshop recommendation as a path forward.

IV. CONCLUSION

For the reasons stated above, the American Gas Association respectfully requests that the Department consider these comments in this proceeding.

Respectfully submitted,

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