

Impact of Any Lessening of Competition

Concerns of Spire Inc.

For

Department of Energy Proposed Energy Conservation Standards for Commercial Water Heating Equipment 81 Fed. Reg. 34440 (May 31, 2016)

Docket Number EERE–2014–BT–STD–0042

The Energy Policy and Conservation Act of 1975 (EPCA) requires the Department of Energy (DOE) to consider any lessening of competition that is likely to result from the adoption of proposed energy conservation standards, as determined in writing by the Attorney General of the United States. [42 U.S.C. 6313\(a\)\(6\)\(B\)\(ii\)\(V\) and \(C\)\(i\)](#). Spire Inc. (Spire), through its utility subsidiaries, provides natural gas distribution services to over 1.5 million residential, commercial and industrial customers in Missouri and Alabama, many of whom rely on the appliances and equipment subject to the energy efficiency standards established by DOE.

Spire understands that the U.S. Department of Justice (DOJ) is currently reviewing the DOE proposed rule entitled [Energy Conservation Standards for Commercial Water Heating Equipment](#) (the Proposed Rule), and urges DOJ to consider the lessening of competition in the energy market that would result from adoption of the Proposed Rule.¹ The Proposed Rule is just one of a series of proposed DOE regulations that would effectively price natural gas appliances out of the market, with the apparently intended result of shifting energy demand from natural gas to electricity, thereby systematically restricting consumer appliance and energy choices, thereby lessening competition between electricity and natural gas. Specifically, DOE is increasingly seeking to limit consumer appliance and energy choices by adopting energy conservation standards for gas heating equipment that can only be achieved through the use of condensing technology. Condensing technology imposes significantly higher product costs and severely disadvantage non-condensing gas products in the replacement market – which accounts for the vast majority of product sales – by making them incompatible with the vent systems provided in a substantial percentage of the existing buildings in which non-condensing replacement products must be installed.

In addition to the Proposed Rule, this trend is evidenced by the following additional proposed rules:

- [Energy Conservation Standards for Commercial Packaged Boilers](#)
- [Energy Conservation Standards for Residential Furnaces](#)

¹ Spire views “lessening of competition” broadly; as does [42 U.S.C. 6313\(a\)\(6\)\(B\)\(ii\)\(V\) and \(C\)\(i\)](#). Consequently, DOJ should not constrain itself to potential matters of concentration of manufacturing according to [Herfindahl-Hirschman Index](#) (HHI) analyses.

If consumers are denied the choice of non-condensing natural gas-fueled heating equipment as a result of minimum efficiency mandates, there will be a lessening of competition as manufacturers (both small and large) are denied the opportunity to build equipment to supply such consumer choices. In addition, there will be a lessening of competition in the energy market generally as high up-front equipment and disproportionate installation costs systematically force consumers to switch from natural gas to electricity despite higher electric energy costs. Gas-only utilities, manufacturers of gas appliances, and the consumers who lose their energy choices will all bear the costs of reduced competition as DOE continues to use efficiency regulation to put its thumb on the scale of competition in the appliance and energy markets.

Underlying Factors

DOE (through its “national labs”) has publicly endorsed the concept of making America “all-electric.” Examples include:

1. Lawrence Berkeley National Lab (LBNL):
[“Aggressive Efficiency and Electrification Needed to Cut California Emissions”](#)
2. LBNL Pacific Northwest National Laboratory (PNNL):
[“Policy Implications of Deep Decarbonization in the United States.”](#)

The following graphics, excerpted from the “Deep Decarbonization” study, clearly illustrate the plan to phase-out natural gas direct use:

Figure 2. U.S. Energy System in 2014

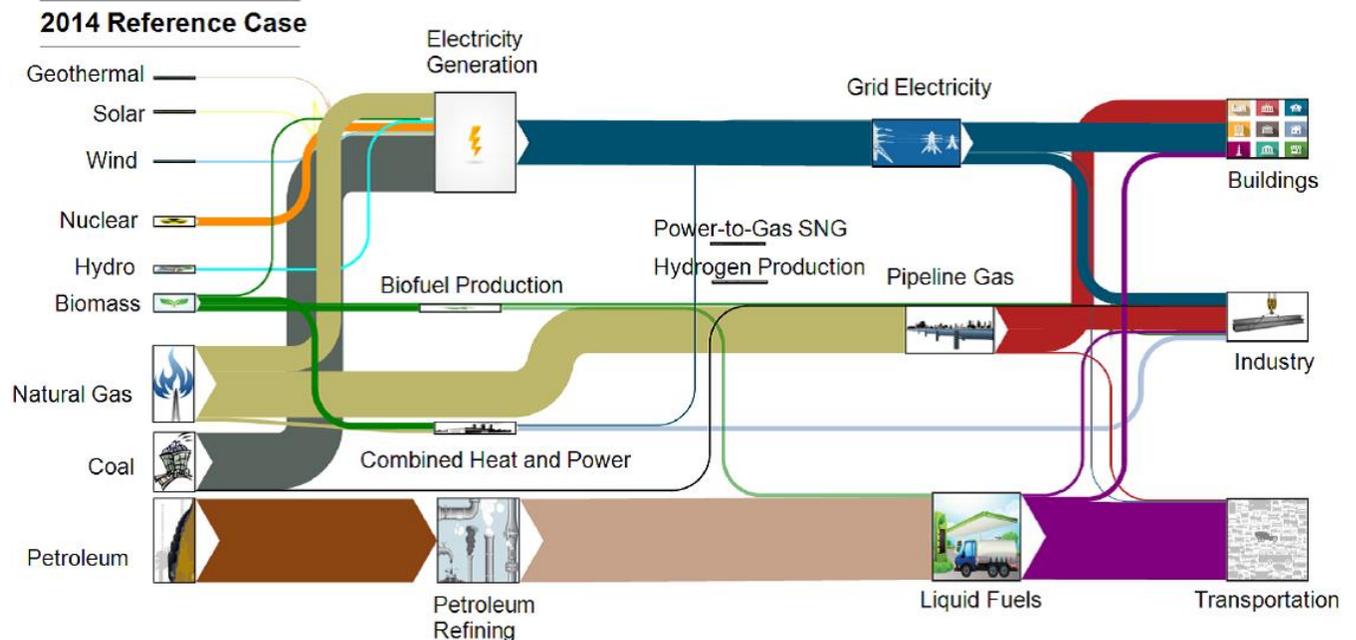
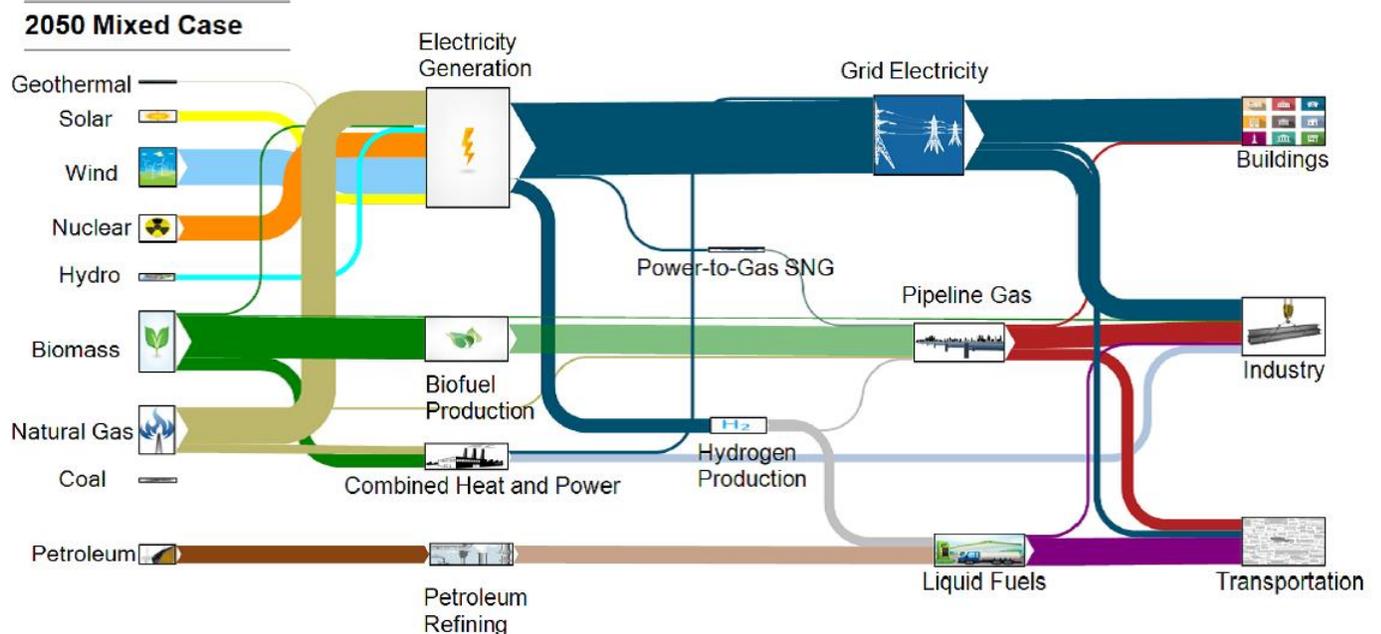


Figure 3. Deeply Decarbonized U.S. Energy System in 2050 (Mixed Case)



The essence of the above two figures is that natural gas markets for residential, commercial and industrial users will be substantially reduced or eliminated by conversion of residential, commercial and industrial gas consumption to electric consumption. The SNL News also summarized this study in an article titled: [Natural gas' role in low-carbon future is limited, study argues](#). The following are excerpts from that article:

- The changes in the power generation fleet would underpin the impact of electrifying a number of energy applications that currently directly use fossil fuels, such as vehicles, boilers and furnaces.
- Under the deep de-carbonization scenario, 90% of final energy use in residential and commercial buildings would come from electricity, compared to about 50% today, the report stressed.

DOE has also demonstrated its support of the United Nations COP-21 (a.k.a. the "Paris Agreement") and has many pages discussing this "agreement" on its website. See e.g. DOE's [International Partnerships on Display in Paris](#)

According to numerous media reports, this "agreement" represents a pledge to wean the world off fossil fuels (which includes the direct use of natural gas). Examples include:

- [COP21: Paris climate change deal is end of fossil fuels - CNN.](#)
- [Paris climate deal: nearly 200 nations sign in end of fossil fuel](#)
- [COP21 deal signed, ending fossil fuel era](#)

Impact of the Proposed Standards

DOE declined to consider the potential for the Proposed Rule to contribute to fuel-switching (i.e., the substitution of electrical products for natural gas products) in its regulatory analysis, asserting that the average consumer could eventually be expected to enjoy benefits as a result of the standards proposed. 81 Fed. Reg. at 34494. However, the Technical Support Document (TSD) provided in support of the Proposed Rule admits that – even under DOE’s own analysis – fuel switching from natural gas products to electrical products will actually occur, noting that:

there is apparent switching away from gas-fired storage units, and because the shipments model links HWSB shipments to the growth in gas-fired storage water heater shipments, there is apparent switching away from the HWSB equipment class as well. Based on the historic data, there is apparent switching toward electric storage water heaters, and a marked shift toward instantaneous tankless equipment. The apparent switching for each equipment class is shown in Table 9.3.13. Also shown are simple ratios to translate shipments into commercial gas-fired storage water heater equivalents based on first hour rating in terms of gallons.

TSD, Chapter 9 at pages 9-13 and 9-14, and Table 9.3.13. This should come as little surprise, because – as DOE’s own analysis also admits – purchasers will not experience the average costs and benefits DOE claims for the proposed standards; instead, the proposed standards would impose net costs on a substantial percentage of purchasers. 81 Fed. Reg. 34505-34509. As a result, these purchasers will not face purchasing decisions that trade short-term investment for long-term benefits; instead, they will face purchasing decisions in which gas appliances have been rendered completely uneconomical. In fact, DOE’s analysis grossly understates the extent to which this would be true by underestimating the extent of the costs many purchasers would experience. In particular, DOE fails to give adequate consideration to the fact that the proposed standards would effectively require all gas products to employ condensing technology.

Efficiency mandates that effectively limit gas equipment to condensing technology impose significantly higher product costs, and severely disadvantage gas equipment in the replacement market – which accounts for the vast majority of equipment sales – by making them incompatible with the vent systems provided in a substantial percentage of the existing buildings in which replacement products must be installed. The basic venting issue is illustrated in the attached graphic. While the graphic illustrates the venting problem in the context of residential furnaces, the basic issues are the same for residential furnaces, commercial water heaters and commercial boilers, all of which – as noted above – are currently the subject of proposed energy conservation standards that effectively target non-condensing gas appliances and equipment for elimination.

In each case, equipment with condensing technology is significantly more expensive to purchase and maintain than similar equipment with non-condensing technology. Even more importantly, most existing residential and commercial structures were designed with a vertical venting systems designed for appliances or equipment with sufficiently high exhaust temperatures to minimize the potential for condensation to occur before exhaust gasses are vented through the roof of the structure (i.e., non-condensing equipment). Condensing equipment has lower exhaust temperatures, which would cause excessive condensation – leading to corrosion and vent failure – in vent systems not designed for them. Building safety codes prevent this result by requiring that condensing equipment be installed with more exotic vent systems that typically require relatively short intake and exhaust vents penetrating the exterior wall of the building. As a result, existing non-condensing gas equipment cannot simply be replaced with equipment that uses condensing technology, because – at a minimum – a new vent system would be required, existing venting would need to be removed, and the facility to discharge

condensation would need to be provided. In many cases, natural vent gas products are located too far below grade – or too far from an exterior wall – to accommodate condensing equipment, in which case building modifications to relocate the equipment would be required. This is particularly a problem in the case of equipment (such as commercial water heaters) located in centrally-located basement utility rooms. As a result, the installation and associated demolition and construction costs required to replace non-condensing gas equipment with condensing gas equipment can be so excessive as to move purchasers away from natural gas entirely. Spire has demonstrated this to DOE in numerous appliance efficiency rulemaking proceedings to no avail.

Summary & Conclusions

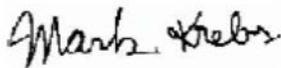
In short and at a minimum, by requiring gas appliances to become incrementally more efficient than their electric counterparts and establishing efficiency standards effectively requiring the use of condensing technology, DOE is systematically making gas appliances more expensive to purchase, install, and operate, and – in many cases – is making them incompatible with the vent systems provided in the existing buildings in which they must be installed. These effects skew the market towards electric products, lessening competition in both the equipment and energy markets, and the cumulative impact multiple DOE rules and proposed rules of similar effect would be substantial.

Spire understands and fully respects the importance of the regulatory process in addressing matters of critical national importance. Spire also believes, however, that regulatory powers must be exercised in an informed and economically supportable manner and that, on many occasions, the better public policy choice is to allow consumers and the private sector to function within a free-market economy as the best means for achieving efficiency and optimal consumer outcomes. This is one of those occasions. For that reason, as well as the other consideration stated in these comments, Spire respectfully requests that DOJ intercede to prevent a lessening of competition in the appliance and energy markets and to preserve consumer choice.

Finally, Spire is not alone in our concerns regarding this form of lessened competition. On June 6, 2016, DOE held its public meeting for this docket. In that meeting, the representative from the Appliance Standards Awareness Project (ASAP), Chris Grada, expressed his concern that the market was shifting to electricity. Apparently, DOE forgot to post the transcript of that meeting. Consequently, Spire cannot point DOJ to ASAP's exact statement.

Respectfully submitted,

SPIRE INC.



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