



PHILADELPHIA GAS WORKS

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September 23, 2014

Mr. John Cymbalsky
U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
Building Technologies Office, EE-5B
1000 Independence Avenue SW
Washington, DC 20585-0121

Dear Mr. Cymbalsky:

Philadelphia Gas Works (PGW), the largest municipally-owned gas utility in the United States, is concerned about the impact that a new furnace efficiency rule could have on PGW, its customers, the City of Philadelphia and the air quality of this region. The concern is that the new rule, if it adopts a condensing standard without recognition that non-condensing furnaces are a separate product class under the statute, instead of promoting greater efficiency, would make continued use of gas-fired heating so expensive because of purchase and installation costs that it would, for a significant number of consumers, cause fuel switching and hence the diminished use of natural gas for heating (and hot water). The same concern was expressed in a face-to-face meeting with DOE officials that was hosted by Senator Robert Casey's staff on April 11, 2012, as well as in PGW's comments on the DFR in 2011 and in a May 1, 2012 PGW affidavit filed in the United States Court of Appeals for the District of Columbia Circuit, a copy of which is attached

It is our understanding that DOE has cited PGW's demand side management program ("DSM") as somehow being supportive of DOE's past position that adopting a condensing standard would not cause fuel switching. To the contrary, PGW's program demonstrates that intervention to override the normal operation of the marketplace is required for high efficiency furnaces to achieve significant penetration in Philadelphia and elsewhere. Unfortunately, without the kind of substantial financial intervention provided by a DSM program like PGW's, such equipment will not be broadly installed in places like Philadelphia where the old housing stock and customer socio-economic status create barriers. While PGW's voluntary DSM does assist customers in selecting high-efficiency gas-fired furnaces, this program should not be viewed as a standard

component of the marketplace as it is voluntary, approved only through August 31, 2015, and limited in nature, as further discussed below.

PGW previously provided information supporting these statements during the meeting in Senator Casey's office and in the above-referenced comments and affidavit. DOE has apparently misunderstood the reason for providing this information as well as what it reveals. It was not provided to demonstrate that high efficiency furnaces will likely be installed should the condensing standard be adopted. The information provided by PGW demonstrates that that will not likely be true. PGW, a municipally-owned utility, described the DSM work that we do to demonstrate that PGW strongly supports energy efficiency and reduction of greenhouse gases. We did not want any misunderstanding that our opposition to the DFR was a reflection of a broader opposition to energy efficiency. We support energy efficiency and have invested considerable dollars to that end.

PGW's DSM program is really seven different programs for different customer segments. The largest program is open only to low income customers who participate in PGW's low income payment program, the Customer Responsibility Program. Customers in the Customer Responsibility Program pay only a percentage of income each month regardless of actual gas consumption. These customers typically live in homes that are the worst housing stock in the City and are energy inefficient. All other residential customers bear the burden of the subsidy provided to these low income customers. This low income energy efficiency program was designed to reduce the burden of the subsidy by targeting opportunities for substantial energy savings through comprehensive residential weatherization measures. Customers in this low income program do not pay for any of the work performed, and PGW's program is not strictly limited by short-term project cost comparisons. For these reasons, the comprehensive projects can include measures, such as HVAC replacements, which are expensive and may not necessarily be cost-effective even over full lifetime payback periods on their own.

Six market rate programs with drastically smaller budgets serve other customers, providing incentives covering a portion of incremental costs of high efficiency equipment purchase and installation. Even given the PGW rebates, customers are still responsible for a portion of the high-efficiency equipment's incremental costs. Program survey results indicate that the incremental costs are the greatest barrier to participation: many customers are still likely to elect not to purchase high-efficiency equipment despite access to PGW rebates.

The fact that Philadelphia's climate is warmer than many areas in the southern region and not nearly as cold as those included in the northern region provides further disincentive to buy and install the high efficiency furnace. Cost recovery and payback take much longer in Philadelphia's climate. Thus, up-front costs are critical to the decisions made by homeowners that must replace an existing furnace.

High-efficiency furnaces present barriers to installation, such as the high price of the equipment and the high cost of venting the condensing furnace, particularly in row homes and twins that have at least one common wall with another home. Eliminating the option for affordable natural gas equipment would force many residents, who either could not access PGW's incentives or would still be unable to afford the higher

costs even given PGW rebates, towards making decisions contrary to DOE's (and PGW's) intended goal of fuel efficiency. The short-term concerns of affordability would likely outweigh other considerations, even given the potential long-term benefits. This situation is especially troubling in Philadelphia, given the City's demographics and housing stock:

- In Philadelphia, 26.3% of the population is at or below 100% of the federal poverty level, 38.6% are at or below 150% of the poverty level and 49.3% are at or below 200% of the poverty level. All have very low income and struggle. They do not have the resources to pay the higher prices for purchase and installation of condensing equipment even though, over the lifetime of the equipment, the cost of heating will be substantially lower than other alternatives.
- As described in the attached affidavit, Philadelphia is a city of row homes and twin homes which share at least one common wall with neighbors. These common walls make side venting of a high efficiency furnace difficult and expensive. Venting through a chimney would require major modification of the flue in the chimney, particularly when the water heater currently shares a flue with the furnace. Such modifications make the venting costly.
- 45% of Philadelphians rent their homes and pay the utility bills. The landlord would be indifferent to the cost of the monthly utility service, but would be sensitive to the price of purchase and installation, making purchase of high efficiency equipment much less likely.

For those people, if the condensing standard were to become law, the only alternative available would be electric heating, easy and cheap to install, but inefficient and much more expensive to the customer in an area that relies heavily on coal-fired generation of electricity,¹ much more damaging to the environment than natural gas. If DOE proposes a new furnace efficiency rule that adopts a condensing standard, it must, in our view, also provide that non-condensing furnaces are a separate product class if it wishes to avoid wholesale fuel switching and to promote fuel efficiency.

PGW's EnergySense Program changes the normal operation of the market through bulk installation of high efficiency equipment without charge (the low income program) and by offering direct incentives for installation of energy efficiency measures such as high efficiency furnaces, which skews installation decisions from what would otherwise naturally occur. Furthermore, these market interventions should not be relied

¹ Coal was used to generate 44.3% of electricity in PJM during 2013.

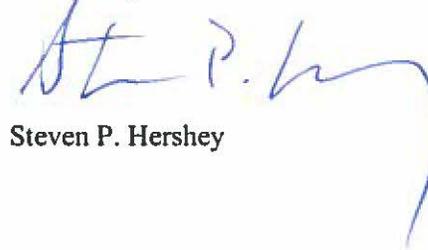
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upon for assisting all customers who would be impacted by a furnace rule that adopts the condensing standard. The voluntary PGW programs are only approved through August 31, 2015, and during this time period are limited in budget.

We would appreciate an opportunity to meet with you to discuss these matters and to clear up any misunderstandings as to the PGW DSM program and its implications for the adoption of a new furnace rule. In the meantime, if you have any questions, please contact us.

Yours truly,



Steven P. Hershey

Attachment

cc: Senator Robert P. Casey, Jr.
Bert Kalisch, President and CEO, American Public Gas Association
Dave McCurdy, President and CEO, American Gas Association