



Insight

Regulation Review: Regulating How You Stay Warm

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Timing is everything for two of the most active regulatory agencies. In the heart of winter, the Department of Energy (DOE) recently released a proposed rule that would set efficiency standards for hearth products, or gas-fueled fireplaces. Also, the Environmental Protection Agency (EPA) is finalizing its rule on heating devices that it proposed during last year's Polar Vortex.

The DOE proposal would disallow the use of continuously-burning pilot lights in these products, thus pushing the market towards intermittent pilot systems. This rulemaking would be the first set of standards for this kind of product. The EPA rule sets performance standards for “wood heating appliances such as pellet stoves, forced air furnaces, single burn rate stoves, and hydronic heaters.” The unofficial, pre-publication version of [the former](#) is 198 pages; [the latter](#) is 344 pages.

BREAKDOWN

- Hearth Proposal:
 - Total Costs: \$1,004 Million
 - Annualized Costs: \$61.1 Million

- EPA Heater Rule:
 - Total Costs: [\\$286.1 Million](#)
 - Annualized Costs: \$45.7 Million
 - Paperwork Burden: 5,284 hours

Total Combined Costs: \$1.29 Billion

ANALYSIS

The hearth proposal's main feature is the \$1 billion dollar price tag. However, upon official publication, it will only be the second most expensive rule published this year. Depending on the official publication of an EPA rule regulating coal ash (released more than a month ago), the top three most expensive rules of 2015 could all be DOE efficiency standards. The American Action Forum (AAF) previously examined the other two [here](#).

For the EPA rule, while its total and annualized cost figures are significantly lower, there are still curious aspects to its cost estimates. Despite delaying certain requirements on masonry heaters and agency [claims](#) of

how public input lead to a more flexible version, the annualized costs essentially tripled from the [proposed version](#). This increase is due to updated data that show drastically different annualized cost estimates for forced-air furnaces and hydronic heaters. For the former, the final estimate is roughly \$15 million annually, a seven-fold increase from its proposed rule estimate. The latter product category has a five-fold increase, going from roughly \$4.5 million annually to nearly \$25 million.

While the rules come from different agencies and seek different objectives, their requirements affect fairly similar manufacturers. Using Census data on the distribution of heating equipment companies, the following states could bear the highest share of costs under both of these rulemakings.

Most Affected States

State	Total Cost Share (\$ Millions)
California	\$156.36
Texas	\$113.55
Pennsylvania	\$77.25
Florida	\$62.36
Ohio	\$56.77

Beyond the macro level impacts, these rules will substantially raise consumer prices. For the hearth efficiency rule, the proposed elimination of standing pilot systems means that new hearth products must include intermittent systems that often involve more complicated electronic components. As DOE clearly demonstrates, this will translate into a roughly \$100 per-unit price increase.

Table 8.2.11 Average Total Installed Cost for Hearth Product Ignition Devices (2013\$)

Product Class	Efficiency Level	Total Installed Cost 2013\$	Incremental Cost 2013\$
Hearth Products	Standing Pilot	\$166.46	-
	Intermittent Pilot	\$267.67	\$101.21

EPA gives information on the per-unit costs that manufacturers would face under its emission standards rule. Forced-air and hydronic units will see their respective costs rise by thousands of dollars per unit.

Table 9. Summary of Unit Costs (Appliance prices in 2013 \$)

Appliance Type	Cost At Baseline (2014)	Total Cost During NSPS model development (2015-2020)	Incremental Cost Increase (to recover amortized costs)
Certified Wood Heaters	\$1,259	\$1,307	\$48
Single Burn Rate Heaters	\$271	\$410	\$139
Pellet Heaters/Stoves	\$1,384	\$1,430	\$46
Forced-Air Furnaces	\$974	\$3,225	\$2,251
Hydronic Heating Systems	\$4,923	\$10,287	\$5,364

More information is available in the RIA.

Although EPA does note the potential for these costs to pass on to consumers, they cannot conclusively determine that amount. In their own words:

While we are unable to estimate price and output changes, we note that the high increases in unit costs for some affected appliances could lead to potential nontrivial increases in market price to wood-burning appliance consumers and potential decreases in output for such appliances if supply elasticities are determined to be low.

It seems fairly reasonable to assume that making a product two or three times more expensive to produce will certainly factor into the price consumers see.

Since EPA is unable to conclusively determine the full impact on supply and demand, they also largely punt on the rule's implications for employment. However, DOE describes the impacts its rule could have on employment.

Table V.8 Potential Changes in the Total Number of Production Workers in the Gas Hearth Industry in 2021

	Base Case	Standards Case
Domestic Production Workers in 2021	1,565	657 to 1,514
Potential Changes in Domestic Production Workers in 2021*	-	(908) to (51)

* DOE presents a range of potential employment impacts. Parentheses indicate negative values.

The overall numbers are not particularly eye-popping against the overall economy, but the basic trends illustrate two important points. First, DOE acknowledges that, whatever the degree, this rule would have a negative effect

on employment in this industry. And second, such a contraction could equal roughly 60 percent of that industry. It is all too rare to see an agency admit that net employment effects would lead to the elimination of a majority of an industry's workforce.

The irony of presenting these rulemakings in the middle of winter is one thing. But the actual effects of these rules are the most chilling parts: more than \$1 billion in overall costs, sticker price increases of at least \$100, and the potential decimation of an industry.