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**PUBLIC
INTEREST
COMMENT**

ENERGY CONSERVATION PROGRAM FOR CONSUMER PRODUCTS: ENERGY CONSERVATION STANDARDS FOR HEARTH PRODUCTS

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INTRODUCTION

The Regulatory Studies Program of the Mercatus Center at George Mason University is dedicated to advancing knowledge about the effects of regulation on society. As part of its mission, the program conducts careful and independent analyses that employ contemporary economic scholarship to assess rulemaking proposals and their effects on the economic opportunities and social well-being available to all members of American society.

This comment addresses the efficiency and efficacy of this proposed rule from an economic point of view. Specifically, it considers how the proposed rule may be improved by more closely examining the societal goals the rule intends to achieve and whether this proposed regulation will successfully achieve those goals. In many instances, regulations can be substantially improved by choosing more effective regulatory options or more carefully assessing the actual societal problem.

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BACKGROUND

The proposed rule is promulgated by the Department of Energy (DOE). The rule proposes for the first time to eliminate continuously burning pilot lights from hearth products and replace them with electronic ignition. The authority for this action comes from the Energy Policy and Conservation Act of 1975. The regulation does consider three technology options in its screening analysis: electronic ignition, condensing heat exchangers, and circulating blowers.¹ However, its engineering analysis focuses only on electronic ignition,² which is a prescriptive design requirement to eliminate a continuously burning pilot light.³

From a phone interview with a manufacturer and distributor, it is clear that the market is moving away from continuously burning pilot lights. This regulation seems to be hastening what the market is doing, but compelling 100 percent compliance is unlikely to be a market solution, owing to heterogeneous preferences of the consumer⁴ (for example, the aesthetics of having unsightly cords coming from the fireplace and space constraints tied to converting wood fireplaces to gas fireplaces⁵).

This Public Interest Comment will argue that the DOE needs to include all costs in its calculations, make a compelling case for the benefits of the regulation and reconsider the baseline, and avoid benefitting large manufacturers at the expense of small manufacturers.

ANALYSIS

Issue 1. Failure to take into account all costs.

The analysis from the DOE fails to take into account all costs while accounting for standard costs (e.g., manufacturer costs, energy costs, input costs, maintenance and repair costs, etc.). The DOE should take into account at least one overlooked cost of this regulation before passing it:⁶ the cost that occurs owing to a power failure caused by natural events. The DOE's teardown analysis seeks to provide a "direct comparison between standing pilot and electronic ignition costs";⁷ however, the DOE seems to have overlooked the fact that during power failures a hearth with a standing pilot can still turn on, but an electronic ignition system requires a manual override or a backup system. Instead of considering backup systems to be a premium feature, and hence not subject to analysis, the DOE needs to incorporate this into its analysis as an added cost.

1. US Department of Energy, Energy Conservation Program for Consumer Products: Energy Conservation Standards for Hearth Products, 80 Fed. Reg. 7081 (proposed February 9, 2015), 60.

2. *Ibid.*, 66.

3. Match-lit hearths are another option, but they were not included as they are not affected by the proposed prescriptive standard.

4. Ted Gayer and W. Kip Viscusi, "Overriding Consumer Preferences with Energy Regulations," *Journal of Regulatory Economics* 43, no. 3 (2013).

5. US Department of Energy, Energy Conservation Program, 143.

6. There could be other unknown and unintended consequences that make themselves known after the fact.

7. US Department of Energy, Technical Support Document: Energy Conservation Program for Consumer Products: Energy Conservation Standards for Hearth Products (posted January 30, 2015), 5-6.

The data on natural and complex disasters in the United States are from the Emergency Events Database (EM-DAT), maintained by the Centre for Research on the Epidemiology of Disasters.⁸ From 2001 to 2010, there were a total of 229 natural and complex disasters that caused thousands of deaths and resulted in hundreds of billions of dollars in damages that affected millions of people (see table 1). For the 30-year period (the time period for the analysis found in this regulation) we can extrapolate a total of 687 disasters causing over \$1 trillion in damages. Many of these disasters have the potential to cause major power outages, with some disasters occurring in the middle of winter (e.g., Hurricane Sandy). Power outages, especially extended power outages, could result in Americans being unable to warm their homes. The hearth with a continuously burning pilot would be a backup source of heat and would be a type of insurance policy against these disasters.

Table 1. The Victims and Damage of Natural and Complex Disasters in the United States

Years	Occurrence	Total deaths	Injured	Affected	Homeless	Total affected	Total damage
2001	28	153	128,218	641	75,868	204,727	\$8,335,800,000
2002	31	443	171,024	413	3,409	174,846	\$10,816,100,000
2003	24	210	258,224	566	16,101	274,891	\$18,942,600,000
2004	23	219	5,099,724	62	1,035	5,100,821	\$55,692,000,000
2005	16	1,973	848,415	47	1,542	850,004	\$159,060,330,000
2006	29	326	82,974	296	267	83,537	\$6,422,360,000
2007	23	333	666,470	521	1,127	668,118	\$9,663,000,000
2008	22	303	13,390,150	768	300	13,391,218	\$57,762,000,000
2009	17	145	9,750	247	1,326	11,323	\$12,256,000,000
2010	16	138	12,300	271	<i>no data</i>	12,571	\$9,162,500,000
TOTAL	229	4,243	20,667,249	3,832	100,975	20,772,056	\$348,112,690,000

Source: Emergency Events Database, Centre for Research on the Epidemiology of Disasters.

Since the regulation fails to take into account a backup source to light up the hearth in case of power failure, the DOE needs to analyze the impact on vulnerable populations including the elderly, the poor, the disabled, and recent immigrants. Members of these groups who are unable to heat up their homes using the hearth would face significant discomfort and perhaps even the risk of death in winter.⁹ Complications could arise if people use alternate and unsafe methods to heat their homes, such as candles (fire hazard), gas ovens (carbon monoxide poisoning hazard), or using an outdoor barbeque grill inside. Further, unheated homes could face other types of damage, including water damage caused by bursting frozen pipes and damage to paint.

A more thorough investigation by the DOE should correct this major flaw in the regulation.

8. Emergency Events Database, Centre for Research on the Epidemiology of Disasters, accessed March 23, 2015, http://www.emdat.be/advanced_search/index.html.

9. Calculations would need to include the value of a statistical life.

Issue 2. The benefits are exaggerated: national social cost of carbon, social welfare losses, and misleading baseline.

The DOE uses global estimates in determining the benefits of social cost of carbon (SCC) instead of national estimates. OMB *Circular A-4* states, “Your analysis should focus on benefits and costs that accrue to citizens and residents of the United States. Where you choose to evaluate a regulation that is likely to have effects beyond the borders of the United States, these effects should be reported separately.”¹⁰ The agency’s justification for focusing on global benefits is that it finds the relevant statutory provisions “ambiguous”;¹¹ however, it does provide a brief discussion of national benefits and estimates that the range of national benefits is between 7 and 23 percent of the global benefits.¹² The DOE should use the national SCC benefits numbers in all the tables that concern national benefits instead of mixing national and global values. Further, the DOE needs to calculate the benefits of carbon reduction using the 7 percent discount rate. The total benefits at the 7 percent discount rate include average SCC numbers calculated at the 3 percent discount rate, which is inappropriate as it inflates the benefit numbers. Additionally, even if the DOE eliminated all emissions benefits, it finds that consumer incremental equipment costs are less than consumer operating cost savings.

The DOE finds that 23 percent of consumers¹³ will experience a net life cycle cost and the change in industry net present value ranges from a decrease of \$3.3 million to an increase of \$0.5 million.¹⁴ The decline in production workers is expected worsen from a 3.3 percent decrease to a 58 percent decrease,¹⁵ but there is an estimated overall slight increase in employment owing to energy savings that allow consumers to spend money in other areas (these numbers would look worse given the additional costs that were ignored by issue 1 above).¹⁶ The regulation does not measure the welfare loss from shutting down small businesses and the negative impact on a portion of the population working in this area who this regulation affects. The DOE would need to survey workers and find the minimum they are willing to accept in order to avoid a shutdown and compare it to the gains in other industries. It would be difficult for displaced workers to find similar work and this would cause attrition in their firm or industry-specific capital. This results in additional losses that the DOE does not take into account.¹⁷ It seems the losers in this regulation lose more than the winners gain,¹⁸ meaning there is a loss in social welfare that the net standard benefit calculation provided by the DOE fails to take into account.

10. Office of Management and Budget, *Circular A-4: Regulatory Analysis* (Washington, DC: OMB, 2003), 15.

11. US Department of Energy, Technical Support Document, 14A-12.

12. *Ibid.*

13. 26% of senior only households will experience a net loss while 21% of low-income households will experience a net loss. *Ibid.*, 11-3.

14. US Department of Energy, Energy Conservation Program, 161.

15. *Ibid.*, 138.

16. US Department of Energy, Technical Support Document, 16-3.

17. Keith Hall, “The Employment Costs of Regulation” (Mercatus Working Paper, Mercatus Center at George Mason University, Arlington, VA, March 2013).

18. Chapter 16 of the technical support document does not do a serious analysis of long-term impact on employment.

The baseline is also misleading; the baseline analysis needs to take into account the dynamics behind the market's present move away from a continuously burning pilot light. The DOE defines the baseline as units with continuously burning pilot designs, and then compares it to the electronic ignition systems.¹⁹ In its regulatory impact analysis section, the DOE states, "No new regulatory action yields zero NES [national energy savings] and an NPV [cumulative net present value] of zero dollars."²⁰ Since the market seems to be moving toward the DOE's prescriptive standard, the additional benefits from this regulation would be much smaller than what the agency states.

The agency assumes a benefit range from consumer cost savings from the regulation to be between \$1.536 billion and \$4.128 billion. These numbers would be much smaller if the DOE were to use a more realistic baseline. Since the DOE estimates that 23 percent of consumers will experience a net life cycle cost, a good starting point would be to acknowledge that the market will reach an equilibrium where about a quarter of hearths sold will have a continuously burning pilot light. If this is the case, the additional benefits from the regulation from a consumer cost savings point of view would be negative, and the net benefit would also be negative. The additional benefits from reduction in emissions would also be much smaller.

Issue 3. Disproportionate burden on small business benefiting large business.

The DOE acknowledges that this regulation will disproportionately burden small businesses and benefit large manufacturers.²¹ This regulation will become an income transfer scheme as small businesses will go out of business competing with large manufacturers, giving large manufacturers access to a larger consumer base and increasing their income.²² This is an income transfer scheme that will produce unintended consequences, including causing an industry to be dominated by a few large firms.

CONCLUSION

According to OMB *Circular A-4*, a good regulatory analysis should have three elements: "(1) a statement of the need for the proposed action, (2) an examination of alternative approaches, and (3) an evaluation of the benefit and costs—quantitative and qualitative—of the proposed action and the main alternatives identified by the analysis."²³ The DOE does not spend much time on alternative approaches as it provides a prescriptive standard, not a performance standard, for standby mode. The regulatory analysis falls short of providing a thorough analysis of costs and benefits by ignoring power outages, providing a misleading baseline, and ignoring social welfare losses.

19. US Department of Energy, Technical Support Document, 5-7.

20. *Ibid.*, 17-5.

21. US Department of Energy, Energy Conservation Program, 172.

22. See Richard A. Posner, "Taxation by Regulation," *Bell Journal of Economics and Management Science* 2, no. 1 (1971); and Sanford Ikeda, *Dynamics of the Mixed Economy* (New York: Routledge, 1997).

23. Office of Management and Budget, *Circular A-4*.