
THE GEORGE WASHINGTON UNIVERSITY

WASHINGTON, DC

Public Interest Comment¹ on
The Department of Energy's Regulatory Burden Request for Information

“Reducing Regulatory Burden”

Document No.: 2016-10956
Subject: Regulatory Burden RFI

July 11, 2016
Sofie Miller, Senior Policy Analyst²

The George Washington University Regulatory Studies Center

The George Washington University Regulatory Studies Center improves regulatory policy through research, education, and outreach. As part of its mission, the Center conducts careful and independent analyses to assess regulatory proposals from the perspective of the public interest. This response to the Department of Energy's request for information on reducing regulatory burdens does not represent the views of any particular affected party or special interest, but is designed to improve DOE rulemakings and enhance DOE's retrospective review efforts.

Introduction

We appreciate the Department of Energy's (DOE) steps toward involving the public in its ongoing retrospective review efforts. As DOE notes in its Request for Information (RFI), the public has access to dispersed information that can inform the Department's efforts,³ and this comment attempts to bridge that gap by providing DOE with insights from the public interest perspective.

¹ This comment reflects the views of the author, and does not represent an official position of the GW Regulatory Studies Center or the George Washington University. The Center's policy on research integrity is available at <http://regulatorystudies.columbian.gwu.edu/policy-research-integrity>.

² Sofie E. Miller is a Senior Policy Analyst at the George Washington University Regulatory Studies Center, 805 21st St. NW, Suite 609, Washington, DC. She can be reached at sofiemiller@gwu.edu or (202) 994-2974. The author thanks Summer Fellow Lili Carneglia for her analytical research and other substantial contributions to this comment.

³ 81 FR 28736

Through its RFI, DOE is seeking comment from the public on how to effectively review its existing regulations, pursuant to Executive Order 13563. This comment addresses three of DOE’s questions for commenters:

(1) How can the Department best promote meaningful periodic reviews of its existing rules and how can it best identify those rules that might be modified, streamlined, expanded, or repealed?

(2) What factors should the agency consider in selecting and prioritizing rules and reporting requirements for review?

...(9) How can the Department best obtain and consider accurate, objective information and data about the costs, burdens, and benefits of existing regulations? Are there existing sources of data the Department can use to evaluate the post-promulgation effects of regulations over time?⁴

In addressing the above questions, this comment offers four recommendations to DOE to further its retrospective review efforts:

- To evaluate the outcomes of its biggest rules, DOE should incorporate plans for retrospective review into its economically significant or major rules.
- DOE should allow enough time between its energy efficiency standards to allow for an effective review of each rule’s effects before increasing the stringency of its standards.
- When possible, DOE should encourage surveys or other measures of actual consumer behavior to ensure that its assumptions about household appliance energy use are accurate.
- DOE should use existing measures—such as the Herfindahl-Hirschman Index—to assess whether its existing energy efficiency standards have had negative effects on competition in the regulated industries.

Incorporation of Retrospective Review into NPRMs

In his implementing memo on retrospective review, former Administrator of the Office of Information and Regulatory Affairs, Cass Sunstein, stated that “future regulations should be designed and written in ways that facilitate evaluation of their consequences and thus promote

⁴ 81 FR 28737-8

retrospective analyses and measurement of ‘actual results.’”⁵ This emphasis is repeated in Sunstein’s June 14, 2011 memo, “Final Plans for Retrospective Analysis of Existing Rules.”⁶

In its 2015 Report to Congress on the Benefits and Costs of Federal Regulations, the Office of Management and Budget (OMB) states that such retrospective analysis can serve as an important “corrective mechanism” to the flaws of ex ante analyses. According to that report:

The aim of retrospective analysis is to improve understanding of the accuracy of prospective analysis and to provide a basis for potentially modifying rules as a result of ex post evaluations. Rules should be written and designed to facilitate retrospective analysis of their effects, including consideration of the data that will be needed for future evaluation of the rules’ ex post costs and benefits.⁷

As a part of its Retrospective Review Comment Project, in 2014 the GW Regulatory Studies Center examined significant proposed regulations to assess whether agencies proposed retrospective review as a part of their regulations, and submitted comments to provide suggestions on how best to incorporate plans for retrospective review into their proposals. Our research indicated that many agencies—including DOE—are not complying with EO 13563 and OMB’s direction to write and design their rules so as to facilitate retrospective analysis of their effects. Further efforts in this direction would improve both the design of future rules and regulatory outcomes themselves.⁸

Because of their magnitude and the frequency with which DOE updates their stringency, DOE should write plans for retrospective review into the text of its energy efficiency standards. Although DOE is currently required by statute to review its efficiency standards every six years and determine whether updated standards are necessary, this review is limited to technical capacity for increased stringency and does not extend to the actual effects of these rules on consumers and the marketplace. These reviews currently fall short of the requirements of EO 13563 to “measure, and seek to improve, the actual results of regulatory requirements.” The

⁵ United States. Office of Management and Budget. Office of Information and Regulatory Affairs. *MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES: Retrospective Analysis of Existing Significant Regulations*. By Cass Sunstein. April 25, 2011.

⁶ United States. Office of Management and Budget. Office of Information and Regulatory Affairs. *MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES: Final Plans for Retrospective Analysis of Existing Rules*. By Cass Sunstein. June 14, 2011.

⁷ United States. Office of Management and Budget. *2015 Report to Congress on the Benefits and Costs of Federal Regulations and Unfunded Mandates on State, Local, and Tribal Entities*. March 10, 2016. Page 6. https://www.whitehouse.gov/sites/default/files/omb/inforeg/2015_cb/2015-cost-benefit-report.pdf

⁸ Sofie E. Miller. “Home Appliance Energy Efficiency Standards under the Department of Energy– Stakeholder Perspectives.” *Testimony before the U.S. House Energy and Commerce Subcommittee on Energy and Power*, June 10, 2016. <https://regulatorystudies.columbian.gwu.edu/home-appliance-energy-efficiency-standards-under-department-energy%E2%80%93stakeholder-perspectives>

provisions of EO 13563 and existing statutory authority provide DOE with a good opportunity to regularly review the effects, intended and otherwise, of its energy efficiency standards.

Below are five key components that DOE should incorporate into its rules to improve its prospects for “maintaining a consistent culture of retrospective review and analysis”⁹:

- DOE should identify the problem that its proposed rule is intended to solve.
- DOE should provide clear, measurable metrics that reviewers can use to evaluate whether the regulation achieves their policy goals.
- DOE should commit to collecting information to assess whether its measurable metrics are being reached.
- DOE should provide a clear timeframe for the accomplishment of its stated metrics and the collection of information to support its findings.
- DOE should write its proposed rules to allow measurement of both outputs and outcomes that enable review of whether the standards themselves directly result in the outcomes that the Department intends, and the extent to which mediating factors (such as energy prices and usage patterns) contributed to these outcomes.¹⁰

Review of Previous Efficiency Standards

DOE regularly promulgates energy efficiency standards for residential and commercial appliances, pursuant to the Energy Policy and Conservation Act (EPCA). These standards apply to microwave ovens, dishwashers, clothes dryers, air conditioners, and other home and commercial appliances that consume energy. As such, these standards affect a broad swath of the American public, businesses and consumers alike.

At intervals, EPCA requires DOE to determine whether updated energy efficiency standards are necessary. However, on more than one occasion DOE has determined that such updates are necessary very shortly after implementation of its previous standards without allowing time for a retrospective review of the standards’ effectiveness. This does not allow the Department to learn from implementation of past standards before issuing new rules.

DOE’s ex ante analyses of its energy efficiency standards rely heavily upon assumptions about future prices of energy and other goods, opportunity costs, and producer and consumer preferences, and behavior. When DOE initiates new standards before the effects of previous standards are known, its ex ante analysis will suffer from uncertainty in baseline assumptions, as well as uncertain predictions of future effects.

⁹ 81 FR 28736

¹⁰ For further reading, see Sofie E. Miller, “Learning from Experience: Retrospective Review of Regulations in 2014.” *The George Washington University Regulatory Studies Center*. November 2, 2015. <https://regulatorystudies.columbian.gwu.edu/learning-experience-retrospective-review-regulations-2014>

Below are two recent examples of how retrospective review of previous efficiency standards can be useful prior to the promulgation of updated standards.

Automatic Commercial Ice Makers

On January 28, 2015, DOE published a final rule updating energy efficiency standards for automatic commercial ice makers.¹¹ At publication of DOE's proposed rule in 2014, DOE already regulated energy and water use rates for 13 of the 25 equipment classes covered by the proposed rule.¹² While DOE was statutorily required to make a determination by January 1, 2015 as to whether updating these standards was "technically feasible and economically justified,"¹³ it would have made the most sense for DOE to first review the efficacy of its existing standards, including unintended consequences and effects on consumers, in order to course-correct if necessary before issuing a new rule.¹⁴

General Fluorescent Lamps

On January 26, 2015, DOE published a final rule increasing the stringency of energy efficiency standards for general service fluorescent lamps (GSFLs), which are fluorescent tubes that are generally installed in ceilings.¹⁵ DOE had already prescribed certain energy efficiency standards for GSFLs, most recently in its 2009 Lamps Rule, which went into effect as of July 14, 2012. For certain GSFL product classes, many manufacturers were granted a stay of enforcement of the 2009 Lamps Rule and, as a result, the standards had not yet been fully implemented at the time that the 2015 rule was proposed.¹⁶

When updates to the GSFL rule were proposed, commenters expressed concern that the limited span of time between the rulemakings would have a severe and negative impact on manufacturers, who may not be able to recover investments in new technologies or to develop products meeting even higher standards than those in the 2009 Lamps Rule.^{17,18} Further, some manufacturers argued that "the market has not fully shifted to reflect the impacts of the July 2012

¹¹ 80 FR 4645

¹² 79 FR 14866

¹³ 42 U.S.C. 6313(d)(3)(A)

¹⁴ For example, as noted in a previous comment submitted to DOE, manufacturers were still uncertain as to the effect of DOE's 2010 standards when DOE published the proposed rule that would revise them. In the text of DOE's proposed rule, some manufacturers argued that updating the standards again so soon "would negatively impact both manufacturers and end users." (79 FR 14866) One manufacturer reported that the previous efficiency standards had required nearly all of the company's engineering resources for between 1 and 2 years, a significant commitment of resources. (79 FR 14904) Additionally, manufacturers were still analyzing the effects of the 2010 standards on equipment repair costs (79 FR 14894), and the lack of this information hampered DOE's analysis of potential changes in these costs as a result of its proposed standards.

¹⁵ http://www1.eere.energy.gov/buildings/appliance_standards/product.aspx/productid/70

¹⁶ 79 FR 24082

¹⁷ 79 FR 24082

¹⁸ 79 FR 24136

standards and there is little to no accurate information available regarding future market shares and technology capability.”¹⁹ This lack of information hampers DOE’s efforts to construct an effective rule based on sound analysis.

Instead of proceeding with new rulemakings before the results of previous standards are known, DOE should retrospectively review its previous standards to assess the validity of its ex ante analysis before using the same models and assumptions to issue new energy efficiency rules.

Going forward, it would be reasonable for DOE to review the effects of any existing energy efficiency standards before pursuing updated, more stringent standards. This will allow DOE to measure the efficacy of its assumptions and to use actual (rather than hypothesized) baselines in its ex ante analyses, improving the quality of analysis and regulatory outcomes.

Promulgating updates to the existing standards so soon may not give DOE the chance to evaluate how effective its standards were in reducing energy consumption, which is the primary goal of these rules. DOE should also consider mitigating factors that could have accomplished or undermined reductions in energy consumption absent the rule (e.g. energy prices, potential rebound effects, unintended consumer behaviors, etc.). DOE should measure the environmental benefits of its previous rules to improve its ex ante analyses of energy efficiency standards going forward.

Verifying Assumptions about Consumer Behavior

The best course of action for the Department would be to resist updating its efficiency standards until after the effects—intended or not—are known. DOE tends to conduct detailed ex ante analyses of the costs and energy savings associated with its proposed rules, but these (necessarily) are heavily dependent on assumptions about producer and consumer behavior and product lifespans. If these assumptions are incorrect, these rules create burdens for many households instead of the forecasted benefits. To ensure that the large cost savings that DOE forecasts actually materialize for consumers, the Department should consider ways to collect information on consumer behavior, such as via surveys or other instruments.

For example, in 2001 DOE finalized an energy conservation standard for residential clothes washers that relied on questionable assumptions about appliance usage. To calculate cost savings in this instance, the Department assumed that households used their clothes washers 392 times per year, or more frequently than once per day. While this assumption was based on survey data from Proctor & Gamble,²⁰ it doesn’t necessarily reflect the experiences or behaviors of most households. In fact, a subsequent Rasmussen Research survey of 1,997 consumers found that only 15% of respondents used their clothes washer as frequently as DOE assumed, and nearly

¹⁹ 79 FR 24082

²⁰ 65 FR 59561

70% of respondents did not use their appliance frequently enough to break even on DOE's proposed standards.²¹ This survey, which was initiated by an independent university-based research center, may provide a blueprint for how DOE can collect data on consumer behavior to inform its future rules as part of its retrospective review efforts.²²

DOE frequently makes use of survey data from the Residential Energy Consumption Survey (RECS), a recurring data collected conducted by the Energy Information Administration. Where these data are not available or when DOE chooses to normalize these data to fit its specifications, they may not represent actual consumer behaviors. Below are three examples of assumptions about consumer behavior and energy usage that could be measured ex post by survey data or other measures to ensure that regulatory burdens on consumers and households are minimized.

In setting its 2011 standards for residential furnaces, air conditioners, and heat pumps,²³ DOE relied on an assumption that households will heat or cool their households relative to a threshold of 65 degrees Fahrenheit.²⁴ For example, DOE derived annual energy use for these appliances based on the idea that they would be running on days below/above this temperature threshold for any region. In reality, many households likely use very different heating and cooling thresholds depending on insulation, energy prices, and time of day, among other considerations. For example, many households may turn off the heat or the air conditioning during the day while the occupants are at work, regardless of temperature. If households respond differently than DOE's equation suggests, the result may be lower appliance usage—and a lower payoff from increased efficiency—than DOE's analysis assumes. In such cases, an ex post analysis can verify which assumptions were accurate, which helps in turn to improve future ex ante analysis of consumer behavior and energy use.

On the other hand, DOE's 2011 standards for residential clothes dryers had access to survey data on the frequency of clothes washer use from the RECS (295 annual wash cycles, a significant decrease from the 392 annual wash cycles that DOE projected in 2001).²⁵ Despite the fact that RECS data indicate that about 84% of all washed loads are dried, the Department assumed 283 dryer cycles per year rather than ~250 ($295 \times 0.84 = 247.8$). In this case, even with survey data available DOE used other assumptions on consumer behavior that could alter whether many households benefit from increased standards.

²¹ For example, see the survey results in: *Addendum to Public Interest Comment on the Department of Energy's Proposed Clothes Washer Efficiency Standards*. Docket No. EE-RM-94-403. Arlington, VA: Mercatus Center Regulatory Studies Program. 2000.

(http://mercatus.org/sites/default/files/publication/Clothes_Washer_Standards.pdf)

²² This independently-commissioned survey was later confirmed by the findings of the Residential Energy Consumption Survey, which estimated that consumers on average use 295 wash cycles per year.

²³ 76 FR 37407

²⁴ U.S. Department of Energy (DOE), "Technical Support Document: Energy Efficiency Program for Consumer Products: Residential Air Conditioners, Heat Pumps, and Furnaces," June 2011, page 7-7, 7-15.

²⁵ U.S. DOE, "Technical Support Document: Energy Efficiency Program for Consumer Products and Industrial Equipment: Residential Clothes Dryers and Room Air Conditioners," April 2011, page 7-4.

In another case, the fundamental analytical assumptions on which the benefit-cost analysis hinged pertained to product lifespan. In its 2012 direct final rule setting energy efficiency standards for dishwashers, DOE estimated that the average product lifespan of a residential dishwasher was 15.4 years,²⁶ despite the availability of RECS and manufacturer data which put the estimated product lifespan at 9 – 10 years.²⁷ This discrepancy is particularly notable because these increases in energy and water efficiency do not pay off for consumers for 11 years, at which point RECS and industry data indicate that many appliances are no longer functioning.

In each of the cases listed above, ex ante verification of these behavioral assumptions would have been ideal. Retrospective review provides an opportunity for the Department to revisit these assumptions ex post and identify areas where incorrect assumptions created burdens for regulated households by projecting a higher, less realistic payoff from more efficient appliances.

Anti-Competitive Effects

As noted in a recent *Regulatory Insight* by the GW Regulatory Studies Center, regulations have had a significant influence on marketplace competition since the formation of the U.S. federal regulatory system.²⁸ Recognizing the importance of this relationship, on April 15th President Barack Obama signed Executive Order 13725 instructing federal agencies to identify and address barriers to competition. This Executive Order provides DOE with a valuable opportunity to reevaluate existing rules that create barriers to competition pursuant to both EO 13563 and EO 13725.

According to the new EO 13725, promoting competitive markets can ensure that “consumers and workers have access to the information needed to make informed choices.” The new Executive Order encourages executive branch agencies such as DOE to contribute to this goal by engaging in “pro-competitive rulemaking and regulations, and by eliminating regulations that create barriers to or limit competition.”²⁹

Pursuant to the Energy Policy and Conservation Act, DOE is required to consider “the impact of any lessening of competition, as determined in writing by the U.S. Attorney General, that is likely to result from the imposition of the standard” before finalizing a new energy efficiency

²⁶ U.S. DOE, “Technical Support Document: Energy Efficiency Program for Consumer Products and Industrial Equipment: Residential Dishwashers,” May 2012, page 8-21.

²⁷ U.S. Energy Information Administration (EIA), “Home Appliance Characteristics by Type of Housing Unit,” 2005 RECS Survey Data, <http://www.eia.gov/consumption/residential/data/2005/hc/pdf/tablehc2.9.pdf>.

²⁸ Sofie E. Miller, Daniel R. Pérez, Susan E. Dudley, & Brian Mannix. “Regulatory Reforms to Enhance Competition: Recommendations for Implementing Executive Order 13725.” The George Washington University Regulatory Studies Center. May 11, 2016.

²⁹ Executive Order 13725. “Steps to Increase Competition and Better Inform Consumers and Workers to Support Continued Growth of the American Economy.” April 15, 2016. Available at: <https://www.whitehouse.gov/the-press-office/2016/04/15/executive-order-steps-increase-competition-and-better-inform-consumers>

rule.³⁰ This evaluation is conducted by the Antitrust Division within the Department of Justice (DOJ). While this prospective evaluation is finalized before the rule goes into effect, it is also important to measure anti-competitive effects after a standard is implemented to determine whether the standard is economically justified, as required by statute. DOE may want to consult with DOJ in this process, and should consider applying the Herfindahl-Hirschman Index (HHI), which DOJ uses to evaluate the anti-competitive effects of mergers, to measure concentration in the regulated industries pre- and post-enforcement of these standards.³¹

As it plans for retrospective review of each of its economically-significant efficiency regulations, DOE should commit to measuring any anti-competitive effects, and to examining changes in the HHI upon implementation of its standards. In some cases, it may be appropriate to use other measures or proxies to evaluate the effects of efficiency standards on competition.³² Understanding the regulations' effects on market structure will be important to understanding whether the rules achieve their stated objectives, and the benefits and costs associated with implementation. This should inform the public about any unintended, anti-competitive effects of DOE's energy efficiency standards, and improve DOE's analysis of future standards.

Recommendations

To maintain “a consistent culture of retrospective review and analysis,” DOE should incorporate plans for retrospective review into its major rules to facilitate transparency, public accountability, and measurement of the success of its rules.

Additionally, DOE should review the efficacy of its existing energy efficiency standards before making a determination that further standards are necessary. The Department has an excellent opportunity to institutionalize review as part of its existing statutory review process. After conducting review, DOE should incorporate any lessons learned or unintended consequences and consumer behavior into its future standards, both to improve ex ante analysis and to improve rulemaking outcomes.

Energy consumption is driven both by technology and consumer behavior. In setting efficiency standards, DOE relies on certain assumptions about American households and their energy consumption, such as the frequency or duration of appliance usage. If these pervasive assumptions do not reflect actual consumer appliance usage, many of DOE's efficiency rules pose net burdens on the regulated public. To ensure the validity of its assumptions, DOE might consider collecting or using existing survey data to measure actual consumer behavior.

³⁰ 42 U.S.C. 6295(o)(2)(B)(i)(V). <http://www.gpo.gov/fdsys/pkg/USCODE-2010-title42/pdf/USCODE-2010-title42-chap77-subchapIII-partA-sec6295.pdf>

³¹ “Herfindahl-Hirschman Index.” *Antitrust Division: Public Documents: Merger Enforcement*. U.S. Department of Justice. Last updated July 29, 2015. <https://www.justice.gov/atr/herfindahl-hirschman-index>

³² For example, in cases where DOE rules shift production from an entire market segment (e.g. from gas equipment to electric), the HHI may not be an appropriate measure of changes in competition.

These retrospective reviews should include evaluation of the effects of DOE's efficiency standards on competition, especially for standards that DOJ has determined would have anti-competitive effects on the regulated industries. In conducting this evaluation, DOE may consider using existing measures such as the Herfindahl-Hirschman Index to measure any potentially anti-competitive effects. In some cases, the HHI may be inadequate to measure all effects on competition, and in such cases DOE might consider other methods as well.