



Regulation Review

Regulation Review: Final Microwave Efficiency Standards

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On Monday, the Department of Energy (DOE) formally published its energy efficiency standards for microwave ovens. The official publication comes more than two weeks after DOE actually released the rule. The rulemaking primarily focuses on a microwave's standby and off modes. The unofficial pre-publication [version](#) is 198 pages.

The standards are yet another installment of energy regulations on the manufacture of household items. The rule only covers a microwave's standby and off modes, not its active or cooking mode. According to DOE, standards for the active mode were not "technologically feasible and economically justified."

The rule sets different standards for different types of microwaves. It imposes a stricter level of constraints on countertop, stand-alone devices than on those that are either built-in or over-the-range. The distinction was made because over-the-range devices usually have auxiliary items such as range fans and lights that necessarily consume more energy.

Breakdown:

- Proposed Rule Annualized Costs: \$25.48 million
- Final Rule Annualized Costs: \$67.8 million
- Difference: \$42.32 million (166% increase)
- **Total Costs: \$1.3 billion**

Analysis:

The final version of the rule represents a significant increase in costs. While DOE did not list a commensurate estimate in the proposed rule, the agency estimates the gross total costs will exceed \$1.3 billion. However, the increase is a result of updated assumptions.

In its discussion of the rule's impact on consumers and manufacturers, DOE explains how it has updated the pricing indices from 2010 dollars to more recent figures. The shift in assumptions comes from the period of analysis beginning in 2016, rather than 2014. Due to this shift, consumer benefits also increase a modest amount, but do not keep up with the increase in costs. Rather, DOE finds its economic justification in another adjusted set of assumptions.

This rule is the first to use an updated set of [estimates](#) on the "Social Cost of Carbon (SCC)." The updated figures peg a higher "cost" for each ton of carbon emitted. The rule lists the reduction of carbon emissions as one of its primary benefits. Thus, under the new assumptions, estimated net benefits increase at a relatively higher level.

The range of net benefits varies across different discount rates and assumptions regarding the amount of carbon

actually eliminated. However, the impact of the updated SCC figures is clear. DOE applies the previous SCC figures (from 2010) to this final rule's cost-benefit calculations, and their estimates present a decrease across the board in net-benefits relative to the proposed version. Under the new SCC estimates, the high-end estimates produce relative increases in net benefits.