

**CHAPTER 9. TRIAL STANDARD LEVELS**

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## CHAPTER 9. TRIAL STANDARD LEVELS

### 9.1 INTRODUCTION

DOE generated NES and NPV results based on trial standard levels (TSLs). The TSLs are based on the following: (1) candidate standard (efficiency) levels identified in the Advance Notice of Proposed Rulemaking (ANOPR) published in November 15, 2007,<sup>1</sup> (2) the candidate standard level identified with the maximum efficiency, and (3) a combination of candidate standard levels for different equipment classes that have potentially positive impacts on consumers and the Nation.

The technical support document (TSD) for DOE's notice of proposed rulemaking (NOPR) covered conventional cooking products (i.e., cooktops and ovens), microwave oven energy factor (EF), microwave oven standby power consumption, and commercial clothes washers (CCW).<sup>2</sup> DOE has already completed its standards rulemaking for conventional cooking products and microwave oven EF and has published both a final rule<sup>3</sup> and corresponding TSD.<sup>4</sup> This chapter presents information and results pertaining solely to CCWs. The impact of more-efficient equipment on microwave oven standby power will be addressed in a subsequent TSD.

### 9.2 TRIAL STANDARD LEVELS

Table 9.4.1 shows the TSLs for commercial clothes washers. TSLs consist of a combination of modified energy factor (MEF) and water factor (WF). In all, DOE has considered five TSLs. TSL 1 corresponds to the first candidate standard level from each equipment class and represents the efficiency level for each class with the least significant design change. TSL 2 represents the second candidate standard level for front-loading washers while keeping top-loading washers at its first candidate standard level. Over 95 percent of the front-loading washer market either meets or exceeds the second candidate standard level for front-loading washers. In contrast, the second candidate standard level for top-loading washers corresponds to the maximum efficiency level for this class and represents approximately one percent of the top-loading washer market. Therefore, TSL 2 corresponds to the candidate standard levels for each equipment class that still represent a significant share of the market. TSL 3 represents the second candidate standard level for top-loading washers (the maximum efficiency level for this class) while keeping front-loading washers at its second candidate standard level. For TSL 3, front-loading washers were held to the second candidate standard level in order to minimize the equipment price difference between the two equipment classes. For TSL 4, top-loading washers are retained at their maximum efficiency level while front-loading washers are incremented to their third candidate standard level. Finally, TSL 5 corresponds to the maximum technologically feasible level for each equipment class. In progressing from TSL 1 to TSL 5, the LCC savings, NES, and NPV all increase. TSL 5 represents the level with the minimum LCC and maximum NES and NPV.

**Table 9.2.1 Trial Standard Levels for Commercial Clothes Washers**

	<b>Trial Standard Levels</b>				
	<b>TSL 1</b>	<b>TSL 2</b>	<b>TSL 3</b>	<b>TSL 4</b>	<b>TSL 5</b>
<b>Top-Loading</b>					
MEF	1.42	1.42	1.60	1.60	1.60
WF	9.5	9.5	8.5	8.5	8.5
<b>Front-Loading</b>					
MEF	1.80	2.00	2.00	2.20	2.35
WF	7.5	5.5	5.5	5.1	4.4

## REFERENCES

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- <sup>1</sup> U.S. Department of Energy-Office of Energy Efficiency and Renewable Energy, Energy Conservation Program: Energy Conservation Standards for Certain Consumer Products (Dishwashers, Dehumidifiers, Electric and Gas Kitchen Ranges and Ovens, and Microwave Ovens) and for Certain Commercial and Industrial Equipment (Commercial Clothes Washers); Advance Notice of Proposed Rulemaking and Notice of Public Meeting. *Federal Register*, 2007. 72(220): pp. 64432-64515.
- <sup>2</sup> U.S. Department of Energy-Office of Energy Efficiency and Renewable Energy. *Technical Support Document: Energy Efficiency Program for Consumer Products and Commercial and Industrial Equipment: Residential Dishwashers, Dehumidifiers, Cooking Products, and Commercial Clothes Washers*, September, 2008. Washington, DC.  
<[http://www1.eere.energy.gov/buildings/appliance\\_standards/residential/home\\_appl\\_tsd.html](http://www1.eere.energy.gov/buildings/appliance_standards/residential/home_appl_tsd.html)>
- <sup>3</sup> U.S. Department of Energy-Office of Energy Efficiency and Renewable Energy, Energy Conservation Standards for Certain Consumer Products (Dishwashers, Dehumidifiers, Microwave Ovens, and Electric and Gas Kitchen Ranges and Ovens) and for Certain Commercial and Industrial Equipment (Commercial Clothes Washers); Final Rule. *Federal Register*, 2009. 74(66): pp. 16040-16096.
- <sup>4</sup> U.S. Department of Energy-Office of Energy Efficiency and Renewable Energy. *Technical Support Document: Energy Efficiency Program for Consumer Products and Commercial and Industrial Equipment: Residential Dishwashers, Dehumidifiers, Cooking Products, and Commercial Clothes Washers*, March, 2009. Washington, DC.  
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