

**CHAPTER 11. LIFE-CYCLE COST SUBGROUP ANALYSIS**

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## **CHAPTER 11. LIFE-CYCLE COST SUBGROUP ANALYSIS**

### **11.1 INTRODUCTION**

The life-cycle cost (LCC) subgroup analysis evaluates impacts on any identifiable groups or customers who may be disproportionately affected by any national energy efficiency standard level. The U.S. Department of Energy (DOE) will conduct this analysis as one of the analyses for the notice of proposed rulemaking. DOE will accomplish this, in part, by analyzing the LCC and payback periods (PBPs) for those customers who fall into identifiable affected groups. DOE plans to evaluate variations in regional energy prices and variations in energy use that might affect the net present value of a standard to customer subpopulations. To the extent possible, DOE will obtain estimates of each input parameter's variability and will consider this variability in its calculation of customer impacts. DOE plans to perform sensitivity analyses to consider how differences in energy use will affect subgroups of customers.

DOE will determine the impact on customer subgroups using the LCC spreadsheet model, which allows for different data inputs. The standard LCC and PBP analysis (described in the preliminary technical support document (TSD) chapter 8) focuses on all business and institutional users of automatic commercial ice makers. DOE can use the LCC spreadsheet model to analyze the LCC for any subgroup by sampling only that subgroup. Model inputs used by DOE to determine LCC and PBPs are described in detail in the LCC and PBP analysis (see preliminary TSD chapter 8).

### **11.2 GENERAL APPROACH**

DOE will use the LCC spreadsheet model to evaluate impacts on consumer subgroups, especially small business customers. DOE can analyze the LCC for any subgroup by applying the LCC spreadsheet model to only that subgroup within individual regions. DOE is particularly sensitive to increases in the consumer price of the considered products, wishing to avoid a negative economic impact on any identified consumer subgroup with limited capacity to absorb price increases. The impacts on subgroups will be compared to impacts on the overall population.