

CHAPTER 11. LIFE-CYCLE COST SUBGROUP ANALYSIS

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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 that 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 life-cycle cost and payback period analysis (described in the preliminary Technical Support Document (TSD) chapter 8) focuses on all business and institutional users of walk-in equipment. DOE can use the LCC spreadsheet model to analyze the LCC for any subgroup by sampling only that subgroup. Model inputs used by the Department to determine LCC and PBPs are described in detail in the life-cycle cost and payback period analysis (see preliminary TSD chapter 8).

In the case of walk-ins, some possible business subgroups include businesses in colder regions, low-margin businesses, and small businesses.

11.2 GENERAL APPROACH

For the walk-ins LCC subgroup analysis, DOE will estimate LCC savings and PBPs for consumers in the commercial and industrial sectors at the regional level.

DOE will use the LCC spreadsheet model to evaluate impacts on consumer subgroups, especially small-business consumers. 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.

In the LCC subgroup analysis, DOE will examine a variety of consumer sub-populations. This analysis will determine whether any particular group of consumers would be adversely affected.