Lighting Efficiency Technology Report

This describes the study in general as well as the basic contents of the other files in this archive.

A comprehensive look at the state of lighting efficiency in California during the period 1994-1996, and recommendations about where there is the greatest potential for improvement in lighting efficiency.

Extensive data sets were analyzed to produce some of the most detailed information available anywhere about the characteristics of lighting energy use patterns in the residential and commercial building sectors. This baseline information was then used to populate a computer model of lighting energy use in the state. The computer model enabled analysis of the energy impacts of various lighting efficiency policy scenarios over a 15-year period. As a companion to the computer model, market research was conducted to identify the most significant market barriers to various policy alternatives. The results of these studies, along with input from the Lighting Efficiency Advisory Group (LEAGue), produced five sets of recommendations for action, prioritized by the magnitude of their perceived potential benefits and costs.

Volume I: California Baseline -- Provides detailed graphs, charts and descriptions of the characteristics of existing lighting equipment and use in both the residential and commercial sectors in California during the 1994-1996 period. Energy Commission Publication No. P400-98-004VI.

Volume II: Scenarios -- describes the structure and inputs of the California Lighting Model, the selection of policy scenarios modeled, the specific assumptions made for each scenario, and the energy impacts of each scenario. Energy impacts are reported by both yearly energy savings and installed load reductions. Energy Commission Publication No. P400-98-004VII.

Volume II Appendix: Description of the California Lighting Model and its Inputs -- The California Lighting Model (CLM) is a tool to evaluate and compare alternative lighting efficiency policy options in California. It provides

a means to quantify lighting energy use on the basis of building type, space type, lighting application, fixture type, lamp/ballast type and control type. It calculates the baseline lighting energy use for these parameters and projects them up to statewide estimates. This section describes the development and characteristics of the CLM. Energy Commission Publication No. P400-98-004VIIA.

Volume III: Market Barriers Report -- Describes the methodology and finding of six separate market research efforts. 1) detailed interviews with 40 luminaire manufacturers nationwide 2) telephone surveys with 26 residential contractors 3) telephone surveys with 23 residential lighting retailers 4) telephone surveys with 48 commercial lighting professionals 5) detailed interviews with 13 lighting designers and program managers on certification of lighting professionals 6) detailed interviews with 16 lighting designers and program managers on market barriers to increased use of skylighting. Energy Commission Publication No. P400-98-004VIII.

Volume IV: Recommendations Report -- Describes the rationale and specifics of five major sets of recommendations for actions that could advance lighting efficiency in California, based on the findings of the previous reports and discussions with LEAGue members. It provides the most succinct overview of where lighting efficiency policy could go in the state of California. Energy Commission Publication No. P400-98-004VIV.