

EXECUTIVE SUMMARY

FOCUS AND GOALS

This report examines the commercialization and use of R&D results funded by DOE's Office of Buildings and Community Systems (OBCS), an office dedicated to improving the energy efficiency of the nation's buildings. Three goals guided the research described herein:

- to improve understanding of the factors that hinder or facilitate the transfer of OBCS R&D results,
- to determine which technology transfer strategies are most effective and under what circumstances each is appropriate, and
- to document the market penetration and energy savings achieved by successfully-commercialized innovations that were developed with OBCS support.

RESEARCH DESIGN

Our overall research approach was to conduct case studies of successful OBCS-supported innovations in order to examine the technology transfer activities leading to commercialization. Five fully-commercialized innovations and seven semi-commercialized innovations were examined. Market penetration of at least 4% characterizes the former; lower levels of market penetration characterize the semi-commercialized innovations. The fully-commercialized innovations are:

- solid-state ballasts for fluorescent lighting,
- low-emissivity coatings for windows,
- unequal parallel compressor systems for supermarket refrigeration,
- flame retention head oil burner, and
- DOE-2.

The semi-commercialized innovations are:

- dielectric coatings,
- heat pump water heater,
- radiant barriers,
- Wisconsin audit,