

ABSTRACT

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

- 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 have received OBCS support.

Twelve successfully-commercialized innovations are discussed here. The methodology employed involved a review of the literature, interviews with innovation program managers and industry personnel, and data collection from secondary sources. Six generic technology transfer strategies are also described. Of these, contracting R&D to industrial partners is found to be the most commonly used strategy in our case studies.

The market penetration achieved to date by the innovations studied ranges from less than 1% to 100%. For the three innovations with the highest predicted levels of energy savings (i.e., the flame retention head oil burner, low-E windows, and solid-state ballasts), combined cumulative savings by the year 2,000 are likely to approach 2 quads. To date the energy savings for these three innovations have been about 0.2 quads. Our case studies illustrate the important role federal agencies can play in commercializing new technologies.