

This report examines the processes by which R&D results funded by one federal program have generated successful commercial applications. In particular, it focuses upon the process by which R&D results funded by the Office of Buildings and Community Systems (OBCS) of the U.S. Department of Energy (DOE) have been put to use by various public- and private-sector "beneficiaries."

Our examination of these processes is designed to accomplish three goals:

- 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.

Through its R&D programs and regulatory activities, the federal government has an important role to play in efforts to design, construct, manage, and operate more energy-efficient buildings. Rapid increases in the energy-efficiency of buildings can be enhanced by carefully designed technology transfer efforts aimed at moving OBCS innovations into the marketplace. This study contributes to the improvement of such technology transfer efforts by focusing on the lessons to be learned from 12 case studies of the commercialization process. These case studies highlight some of the complexities inherent in developing strategies to transfer publicly-sponsored research results.

1.2 THE TECHNOLOGY TRANSFER PROCESS

Broadly defined, technology transfer is the application of available knowledge or technology by a new user and, in some cases, to a new use (Glaser et al., 1983). In the context of this report, it is more specifically