

compressor system, low-E windows, and the solid-state ballast) is for a national laboratory to issue a Request for Proposals for prototype development in hope of attracting a major manufacturer who will cost share. Only small firms respond. Through a subcontracting arrangement to the national laboratory, the selected small company is supported (with some cost-sharing) to develop a prototype. The national laboratory evaluates the prototype and either the laboratory or the small firm completes a market study. Field tests and demonstrations are conducted jointly by the laboratory and the small firm.

At this point the DOE involvement typically ends. The small firm that developed the prototype begins commercial production. After a few years, the innovation is then added to the product line of one or more major manufacturers, either through the purchase of patent rights or through imitation.

In each of the four case studies that followed this pattern, interviews with industry spokespersons indicate that the DOE role was significant. Either the technology would not have been developed without DOE support, or at the very least, the pace of technology development, market entry, and market penetration would have been significantly slower.

Despite the dominance of this one technology transfer strategy, three of the other strategies were shown in the case studies to be effective in specific situations: working with broker organizations, influencing key decision-makers, and generating end-user demand. DOE's valuable role as a source of information about the performance of new technologies is illustrated throughout our case studies in conjunction with efforts to promote technological change via these audiences.

DOE's ability to stimulate commercialization through a training program for service personnel was vividly illustrated in one case study. Examination of