

from 150 of the nation's engineering schools. Although the energy benefits associated with this project are difficult to quantify, surveys and testimonials from participants indicate that the institutes have resulted in increased attention to energy-efficient design in the curricula of the architecture and engineering schools which educate this nation's future building and equipment designers.

### Building Foundation Design Manual

A 1985 DOE study found that over 95 percent of existing and 70 percent of new residential buildings lack foundation insulation. The DOE/Industry Foundations Review Panel suggested that clear information on the cost-effectiveness of foundation insulation in most U.S. climates was not readily available to builders and designers. With the help of extensive industry review and technical support provided by the DOE/Industry Foundations Review, DOE prepared the *Building Foundation Design Manual*, a comprehensive handbook for architects and engineers. The *Manual* covers energy-efficient building foundation design and recommends practices for structure, drainage, waterproofing, radon mitigation, and termite control. The volume includes a simplified method to estimate cost-effectiveness for foundation insulation in all regions of the United States. Although the manual focuses on new residential construction, the information also pertains to small commercial buildings and retrofit applications. Adoption of designs recommended in the handbook could save the nation as much as one-half quad per year.

### NORDAX: Least-Cost Utility Planning in the Northeast

In recent years heightened public concern about the consequences of utility planning decisions has led state regulatory commissions to increase their scrutiny of utility decision-making processes. Many

of these regulatory commissions now require that utilities include demand-side considerations -- e.g., energy conservation, load leveling and cogeneration -- along with traditional evaluations of the need for additional sources of energy such as new power plants. Least-cost utility planning (LCUP) is an approach to utility resource planning that evaluates both supply- and demand-side options for their potential contribution to providing adequate supplies of energy safely, reliably, and at the least cost. State regulators and utilities in thirty-seven states are presently conducting some form of LCUP. In recent years DOE has supported research on least-cost planning in order to provide a national perspective on the many independent LCUP efforts. Of particular note in DOE's LCUP program is the Northeast Region Demand-Side Management Data Exchange (NORDAX). The primary objective of the NORDAX project is to enhance integrated least-cost planning by utilities in the Northeast through the exchange of information on demand-side management programs and technical options. During Phase I of the project, data on over 110 conservation and load management programs are being collected and entered into a high-quality, user-oriented, relational database. As a result, utilities, utility regulators and other interested parties in the Northeast now have access to a large body of information on utility characteristics, technical option costs and load impacts, program costs, marketing methods and market penetration. In addition, the NORDAX project has created a national directory of demand-side management planners, researchers, evaluators and implementors. The NORDAX project has attracted financial support from the Edison Electric Institute, the New York State Energy R&D Authority, and 17 major utilities in the Northeastern U.S. Phase I of the project has been so successful that participating utilities are proceeding with Phase II at their own expense, without additional federal funding. Phase II involves the establishment of an organization to continue development and enhancement of the database as well as other information exchange activities.