

Executive Summary

Project Scope

This publication presents the results of a search of the “Research and Development in the United States” (RaDiUS) database. The search sought to identify all federally funded research and development (R&D) activities related to the fields of construction, building, and housing in fiscal year 1999.

This search was jointly requested by the National Science and Technology Council’s (NSTC) Subcommittee on Construction and Building (C&B) and the Partnership for Advancing Technology in Housing (PATH).

This report and the corresponding data file transmitted to the C&B Subcommittee and PATH are intended to increase understanding of the federal governments’ R&D portfolio related to construction and building, as well as the subset of R&D related to housing.

Motivation

Investments in new construction and building typically represent 8 to 10 percent of the nation’s GDP, with more than 40 percent of this investment being for new housing. (BEA, 2001). These new investments combined with the nation’s existing facilities and infrastructure, provide the nation with its homes, workplaces, roadways, electricity, and sewers, etc. Despite the importance of these investments and the limited funds typically available to design, build, operate, and maintain them, this industry is generally believed to invest less than 0.5 percent of the value of its sales in R&D, whereas the national average is close to 3 percent (NIBS, 1996; NSB, 1998).

This report and the corresponding data file transmitted to the C&B Subcommittee and PATH are intended to increase awareness and understanding of the federal governments’ R&D portfolio for construction, building, and housing. This information should help:

- public and private sector R&D sponsors manage their portfolios,
- researchers and businesses find and learn about federal R&D,

- increase the coordination and leveraging of public and private R&D efforts.

This report should be of interest to government managers, the private sector, and academic researchers.

Results

The overall results of this study were that in FY99, the federal government funded more than 1,600 projects representing roughly \$545 million in construction and building related R&D. Energy supply and transportation-related infrastructure represented just under 50 percent of the total dollar investment. Of the total, more than 500 projects representing roughly \$236 million were potentially relevant to housing. Of housing-related R&D investments, energy supply and energy efficiency represented roughly 65 percent of this funding

These activities were performed by nine departments and three independent agencies. For the broader construction and building portfolio, the Departments of Energy and Transportation together represented roughly 64 percent of the dollar investment. Of the R&D related to housing, the Department of Energy represented 71 percent of the total.

Other departments sponsoring R&D for construction, building, and housing-related research included Agriculture, Commerce, Defense, Health and Human Services, Housing and Urban Development, Interior, and Veterans Affairs. The independent agencies funding relevant R&D included the Environmental Protection Agency, the National Aeronautics and Space Administration, and the National Science Foundation.