

In the early and mid 1990s The Results Center produced 126 case studies of the most successful energy efficiency and renewable energy programs in the United States and around the world. With the support of the John D. and Catherine T. MacArthur Foundation, Ted Flanigan directed a research team at Colorado-based IRT Environment to produce and distribute these exceptional examples.

#47 EXECUTIVE SUMMARY

ALASKA HOUSING FINANCE CORP, ALASKA CRAFTSMAN HOME PROGRAM

The Alaska Craftsman Home Program (ACHP) is a non-profit corporation that was formed through a cooperative arrangement between the University of Alaska Cooperative Extension Service, the State government, and the Alaska Homebuilders' Association. The program's goal is to improve the energy efficiency of new residential construction in Alaska by educating Alaskan builders and purchasers about the benefits of energy efficiency.

ACHP has both an educational component and a home certification element. ACHP conducts intensive workshops for builders, contractors, and engineers. The workshops provide comprehensive training on the design and construction of energy-efficient homes, retrofitting techniques, and the design and installation of mechanical ventilation systems.

A building manual forms the centerpiece of the educational program, providing information to builders about adaptations necessary to optimize energy efficiency in different regions of Alaska where climates may vary tremendously. For example, Ketchikan has about 7,065 heating degree days each year, while Barrow has 20,265! Thus, insulation standards for the relatively warm and very rainy Southeast are inadequate in the North. The Building Manual and ACHP curricula address these regional differences.

The home certification element is implemented with the use of the HOT-2000 computer program. New homes or retrofit projects that meet the HOT-2000 energy usage goal for the home type and location are certified as Alaska Craftsman Homes save up to 80% of the energy usage over conventional homes. Additionally, Alaska Craftsman Homes receive "five star plus" ratings, the highest available from Energy Rated Homes of America, and thus are eligible to receive rebates of up to \$2,500, which can be applied to buy-down the home's mortgage.

Since 1986, ACHP has operated on a budget of approximately \$2.4 million and has certified more than 2,500 builders and over 100 homes. Currently ACHP has 45 active builder members and approximately 1,600 subscribers to its bimonthly newsletter, "Northern Building Science." Participation in the ACHP increased dramatically in 1992 when 48 Alaska Craftsman Homes were certified.

To date most of the program activity has been focused on rather large and expensive custom-built homes. Now ACHP is trying to focus its attention on lower and middle income homes, and on retrofit projects as well, and in 1992 made several steps toward reaching these markets. First, five homes in Barrow, located on the Arctic Ocean coast, have been certified as Alaska Craftsman Homes. The homes are 1,200-1,500 square feet and are fabricated in Washington by certified ACHP builders, then shipped to Barrow where the homes are assembled. Since there is no road access to the bush community of Barrow, the northernmost community in the United States.

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ALASKA HOUSING FINANCE CORP. Alaska Craftsman Home Program

Sector: Residential

Measures: Building envelope, ventilation systems and equipment, combustion equipment, appliances and other energy efficiency improvements for new homes and home retrofits.

Mechanism: A certification process for energy-efficient home construction. Builders and homes are certified through ACHP.

History: Started in 1985 as a program of the Alaska Cooperative Extension Service; incorporated in 1987 as a non-profit corporation overseen by the Department of Community and Regional Affairs; later brought under the jurisdiction of the Alaska Housing Finance Corp.

PROGRAM DATA

of homes certified: > 100

of builders certified: ~ 2,500

Total expenditures: \$2,367,200

CONVENTIONS

For the entire 1993 profile series all dollar values have been adjusted to 1990 U.S. dollar levels unless otherwise specified. Inflation and exchange rates were derived from the U.S. Department of Labor's Consumer Price Index and the U.S. Federal Reserve's foreign exchange rates.

The Results Center uses three conventions for presenting program savings. Annual savings refer to the annualized value of increments of energy and capacity installed in a given year, or what might be best described as the first full-year effect of the measures installed in a given year. Cumulative savings represent the savings in a given year for all measures installed to date. Lifecycle savings are calculated by multiplying the annual savings by the assumed average measure lifetime. Caution: cumulative and lifecycle savings are theoretical values that usually represent only the technical measure lifetimes and are not adjusted for attrition unless specifically stated.