

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.

#30 EXECUTIVE SUMMARY

BONNEVILLE POWER ADMINISTRATION (BPA), MANUFACTURED HOUSING ACQUISITION PROGRAM

The Manufactured Housing Acquisition Program (MAP) is one of the most elegant DSM programs that The Results Center has reviewed, yet its apparent simplicity shrouds the years of program development, research, and the consensus building process that ultimately led to the program's fruition. MAP is the result of a collaborative effort of the Northwest Power Planning Council, Bonneville Power Administration, the region's public and investor-owned utilities, and 18 housing manufacturers. These parties reached an agreement whereby all new electrically-heated manufactured homes in the Pacific Northwest will be built to standards that exceed the new proposed Housing and Urban Development (HUD) code by nearly 50%.

The program encompasses the states of Washington, Oregon, Idaho, and Montana, where 10,000 to 13,000 manufactured homes are constructed and sited each year, about 30% of all electrically-heated single family detached homes in the region. Program planners estimate that over 90% of newly-purchased manufactured homes will comply with the MAP program specifications for efficiency. The groundwork for the program began in 1986. Under the auspices of a working group, 150 demonstration manufactured homes were constructed, sited, and monitored for savings throughout the 1989/1990 heating season. Using data generated by these demonstration homes, technical specifications, acquisition payment amounts, and administrative and tracking procedures were developed and agreed upon.

The program that finally resulted is straightforward: all 18 home manufacturers in the region, four more located outside the region who ship into the region, and five of the six investor-owned utilities in the region are participating in the program. Manufacturers voluntarily contracted to build homes to the required specifications; BPA reimburses each manufacturer \$2,500 for each home built.

Both savings and costs are presented in this profile as predicted by BPA since the program has been "on the street" for less than a year. Program savings are based on a comparison to manufactured homes typically constructed in the region. Savings are estimated to be 6,000 kWh/year/home. Since approximately 12,000 homes will be sited each year, the program's annual savings are estimated to be 72 GWh annually resulting in total program lifecycle savings of 12,960 GWh.

MAP is a prototype for DSM programs that seek to transform a market. By aggregating the purchasing power of multiple utilities, MAP has shown how a market can be transformed at the wholesale level. This approach to DSM acquisitions reduces administrative cost and increases program penetration. The successful implementation of MAP demonstrates the importance of negotiation and collaboration in program design. Many different organizations, with highly diverse needs, pulled together to bring MAP into a reality that can be effectively transferred, with slight modifications, to other regions of the country.

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BONNEVILLE POWER ADMINISTRATION Manufactured Housing Acquisition Program

Sector: Residential

Measures: Building envelope

Mechanism: In a unique collaborative, home manufacturers agreed to include energy-efficiency measures in their home designs, in return for a \$2,500 acquisition payment.

History: Planning began in 1986. 150 demonstration manufactured homes constructed and monitored for savings throughout 1989/1990 heating season. First acquisitions made in 1992.

PREDICTED ANNUAL PROGRAM DATA

Energy savings: 72 GWh

Lifecycle energy savings: 3,240 GWh

Demand savings: 8.22 aMW

Cost: \$35,000,000

CONVENTIONS

For the entire 1992 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. Dept of Labor's Consumer Price Index and the International Monetary Fund's International Financial Statistics Yearbook: 1991.

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.