

Super Efficient Refrigerator Program (SERP)

The Super Efficient Refrigerator Program (SERP) is a model energy efficiency program for many reasons. First and foremost, SERP has proven that utilities working together can transform the market for energy-efficient refrigerators, accelerating the adoption of CFC-free sealed refrigeration system units, while simultaneously promoting energy efficiency. Backed by a solid program design crafted by the U.S. Environmental Protection Agency, Natural Resources Defense Council, Pacific Gas & Electric, and Southern California Edison, twenty-four utilities committed a total of \$30 million to push the market for super-efficient refrigerators using a winner-takes-all competition. The manufacturer that could create the most efficient, CFC-free refrigerator, coupled with the ability to manufacture, distribute, and track its sales, won the contract under which incentives would be paid as units were sold in SERP members' territories.

The program's spin-off effects have been huge. As a result of technology developed for the SERP RFP, Whirlpool's entire line is now made up of CFC-free sealed refrigeration system refrigerators. In addition to producing the winning SERP model in record time, as per terms of their bid, Whirlpool has now developed three new SERP sizes for its 1995 series each of which is even more efficient than the original.

The direct energy savings effects of SERP refrigerators are quite dramatic, while the indirect effects will be fantastic. In terms of direct sales, 25,000 SERP refrigerators are forecast to be sold during 1994 which would provide annual energy and capacity savings of 7.1 GWh and 1.6 MW conservatively, based on the margin between the DOE 1993 appliance standard and the efficiency of the SERP model. When the program's complement of 250,000 refrigerators enter the market as planned, the program will result in direct annual energy savings of 96 GWh and 22 MW. The program will result in lifecycle savings of 1,831 GWh. It is the indirect effects of the market transformation, however, that will create the greatest benefit. Because of the program Whirlpool's competitors are now also focused on developing super-efficient refrigerators which is a clear indication of the program's market transformation success.

While SERP provides a potent model of market transformation, the program has fallen short of some of its participating utilities' expectations. Both SERP and Whirlpool were remarkably successful with their initial program responsibilities, but sales information has been slow to reach SERP member utilities. This has apparently been due to a lack of clear communication between Whirlpool, its distributors, and retail vendors as well as the link between participating utilities and SERP's administration. Nevertheless, SERP provides a strong platform and a template for subsequent programs for other end-uses. While it is unclear how this program design will fit into the re-regulated U.S. utility environment, and the design may not be applicable in the transition, SERP has demonstrated that it is possible to provide a win-win solution for utilities, their customers, manufacturers, and the environment.

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SUPER EFFICIENT REFRIGERATOR PROGRAM

Sector: Residential

Measures: Super efficient refrigerators

Mechanism: Twenty-four utilities presented an RFP to manufacturers for a refrigerator that was to be 25-50% more efficient than 1993 standards. The Whirlpool Corporation won the winner-takes-all competition based on energy savings and its ability to produce, market, and deliver on a national scale in a timely manner

History: First Super Efficient Refrigerators became available in member utilities service territories in January of 1994

1994 PROGRAM DATA

Energy savings:	7,125 MWh
Capacity savings:	1.63 MW
Lifecycle energy savings:	135,375 MWh
Cost:	\$2,634,600

CUMULATIVE DATA

Energy savings:	192,750 MWh
Lifecycle energy savings:	1,831,125 MWh
Capacity savings:	21.95 MW
Costs:	\$26,345,800

The Results Center produced 126 profiles of the most successful energy efficiency and renewable energy programs in the United States and around the world in the early and mid 1990s. 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. Thanks to strong demand for solid case studies, The Results Center was supported by dozens of major utilities and energy associations worldwide. Today, The Results Center is managed again by Ted Flanigan, now at California-based EcoMotion Incorporated, a firm focused on strategic consulting, information dissemination, program design, outreach services, and aggressive implementation. To nominate highly successful programs, contact: The Results Center, c/o EcoMotion, 15375 Barranca Parkway, F-104, Irvine, CA 92618, (949) 450-7155, or TFlanigan@EcoMotion.us