

## British Columbia Hydro & Power

### Refrigerator Buy-Back Pilot Program

British Columbia Hydro's Power Smart Refrigerator Buy-Back Program provides utility customers with an environmentally-sound means of disposing of "second" refrigerators, alleviating restricted landfill capacity, the uncontrolled release of chlorofluorocarbons into the atmosphere, and inefficient electricity use. Each year in British Columbia over 30,000 refrigerators are landfilled, and their CFCs, embedded in refrigerants and in the insulation of the refrigerators, are released harming the ozone layer.

Many consumers keep old, second refrigerators in their garages and basements -- often stocked with little more than a six of beer! A market research study found that 60% of these second refrigerators are full-sized, and that 55% of them are more than 12-years old. To pull these "hulks" out of service, B.C. Hydro implemented a pilot buy-back program during fiscal years 1990 and 1991 and offered a \$50 bounty for customers who would allow the utility to come and take the refrigerator away. The pilot has been B.C. Hydro's most successful residential program and has received more press coverage than any other program including those offered province wide.

The Refrigerator Buy-Back pilot program is a logical complement to B.C. Hydro's New Refrigerator Rebate Program. The latter was effectively influencing consumers' buying behavior in favor of efficient new refrigerators, but often the customers did not how to properly dispose of their old units. The pilot program operated for two years, picking-up more than 16,000 refrigerators saving an estimated 119 GWh over the calculated remaining life of the second refrigerators. For a total cost of \$2.8 million (1990 U.S.\$) the pilot has also resulted in peak capacity savings of 1.36 MW. Now B.C. Hydro is in the process of expanding the Buy-Back Program to offer service to its customers province-wide.

Of the most profound results of the pilot is the existence of a state of the art dismantling facility for refrigerators just outside the City of Vancouver. There, old refrigerators are sorted by refrigerant and the refrigerants are carefully removed and recovered. The remains are then dismantled and their components recycled. As a result of the success of this facility, and the marketing and delivery mechanisms developed by Power Smart for the program, Power Smart Inc. is making the program guidelines available to its members around the world and several Power Smart member utilities in Canada plan to implement the program this year.

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#### BRITISH COLUMBIA HYDRO & POWER Refrigerator Buy-Back Pilot Program

**Sector:** Residential/Commercial

**Measures:** Removal of second refrigerators

**Mechanism:** Free refrigerator pick-up, \$50 rebate to the owners, education

**History:** The pilot program began in March of 1990 and ended in March of 1992. A province-wide program began in March of 1992

#### FISCAL 1991/92 PROGRAM DATA

Annual energy savings: 7,933,280 kWh  
 Lifecycle energy savings: 79,332,800 kWh  
 Capacity savings: 0.91 MW  
 Cost: \$1,908,779

#### FISCAL 1990/91 - 1991/92 DATA

Energy savings: 11,948,608 kWh  
 Lifecycle energy savings: 119,486,080 kWh  
 Capacity savings: 1.36 MW  
 Cost: \$2,821,094

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](mailto:TFlanigan@EcoMotion.us)