

**DEVELOPMENT OF THE CO₂ REFRIGERANT HEAT PUMP WATER HEATER
FOR RESIDENTIAL USE**

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Abstract

Measures to cope with global warming issues are becoming increasingly important, and energy saving efforts and CO₂ emission reduction in the residential sector are also becoming urgent and important in Japan. Particularly, in a field of “hot tap water supply” that accounts for about 36% of final energy consumption in the residential sector, and that depends largely on combustion of fossil fuels such as gas and oil, the emission reduction has become one of the major issues.

For the solution to this issues, in January of 2001, The Tokyo Electric Power Co., DENSO CORP., and Central Research Institute of Electric Power Industry have reported the practical use of the CO₂ refrigerant heat pump water heater for residential use, which can save more than 30% of energy compared to conventional combustion type water heater. And in May of 2001, the world’s first the CO₂ refrigerant heat pump water heater for residential use (we named “Eco Cute”) has been put on the market.

In this report, the feature, the evaluation of the CO₂ emission reduction and the present status of the spread in Japan of the Eco Cute are discussed.