

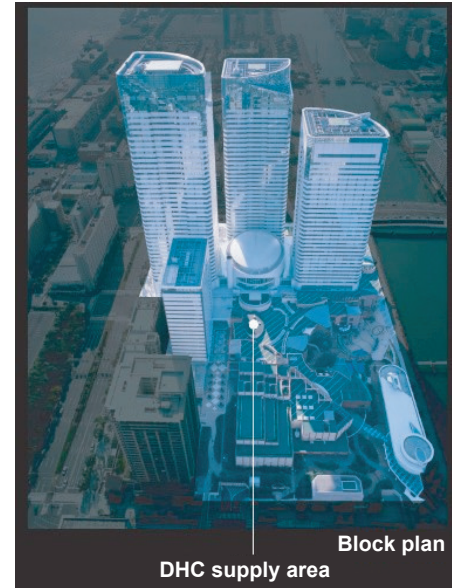
Sustainable Urban Design & Management System - District Heating and Cooling System using Large Water Thermal Storage Tanks -

Features

The Harumi DHC reduces environmental loads and achieves low heat charges.

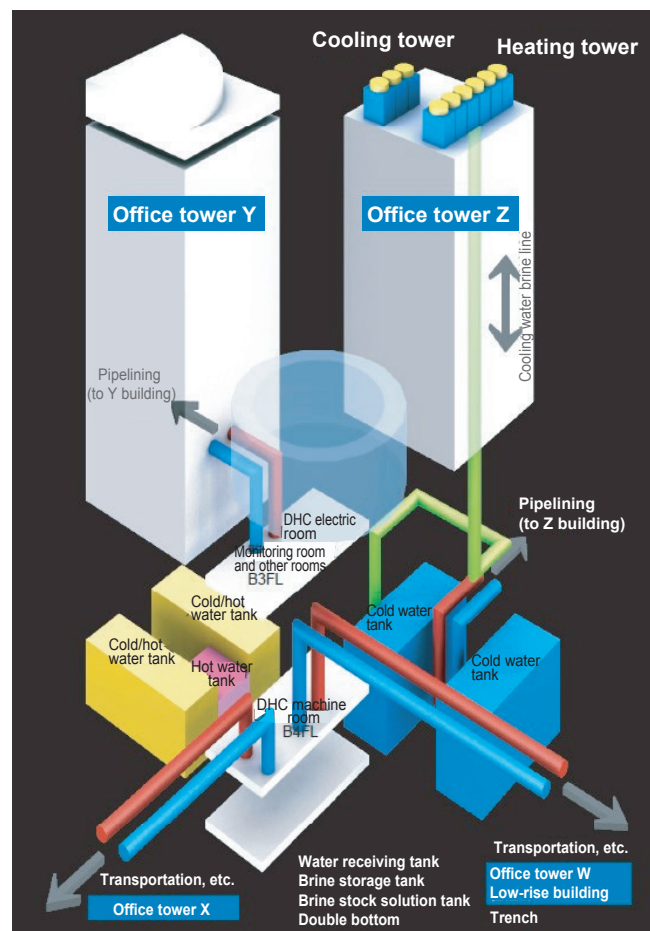
In consideration of load distribution in a district, a plant was installed at a reasonable position, the center of loads.

A temperature-stratified water thermal storage tank with Japan's largest capacity was built as the basis for developing a high-efficient and cost-effective district heating and cooling system.

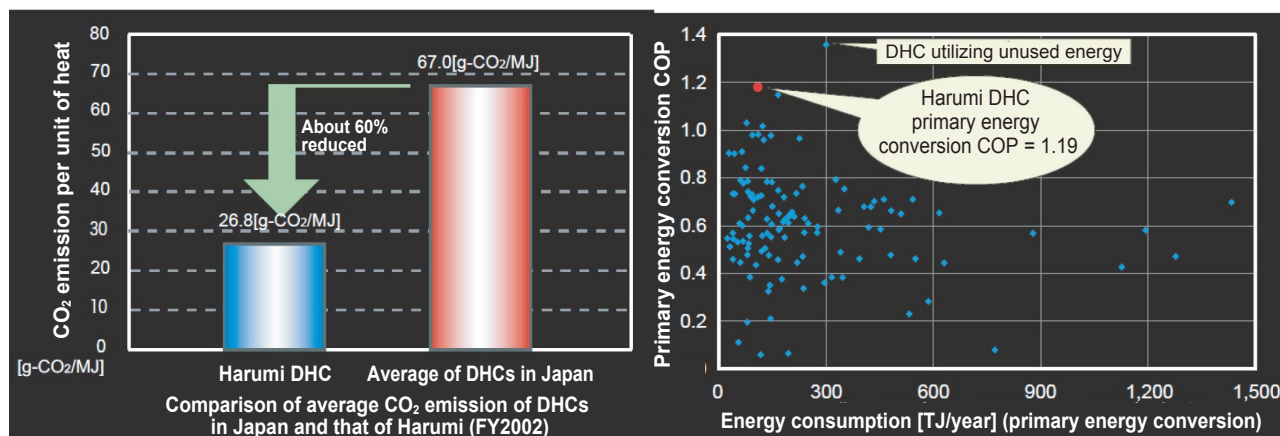


Basic Concept or Summary

A large heat storage tank of 2000 m² (ten times as large as a 50 m swimming pool) is utilized to achieve a Top Runner level record for a DHC plant.



The Harumi DHC has achieved a significantly reduced carbon dioxide emission per unit of heat, which is about 60 % lower than the average emission of the DHC systems in Japan. Having a primary energy conversion COP of 1.19, this DHC system has the highest efficiency in Japan among the DHC systems not utilizing unused energy (temperature differences of seawater, river water, and sewage water, etc.).



■ Major awards received

The 10th Environment and Energy Conservation Building Award – IBEC Chairman's Award: Institute for Building Environment and Energy Conservation (IBEC)

The 42th Awards of the Society - Award of Technology: The Society of Heating, Air-Conditioning and Sanitary Engineers of Japan (SHASE)

The 5th Electrical Load Leveling Devices and System Award - Agency for Natural Resources and Energy Director-General's Prize: Heat Pump and Thermal Storage Technology Center of Japan (HPCJ)

Installation in Practice or Schedule

Domestic The district heating and cooling system (DHC) in Harumi Island Triton Square (Tokyo, completed in 2001)



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