LAKE WATER COOLING

→ Utilizing naturally cold lake water for district cooling saves Torontonians money and reduces damage to the environment.

ECONOMIC

Enwave Energy Corporation provides clients with competitive energy rates and saves them the upfront cost of installing and maintaining expensive chillers.

ENVIRONMENTAL

The system removes 79,000 tons of CO2 from the atmosphere annually, equivalent to removing 15,800 cars from the road.

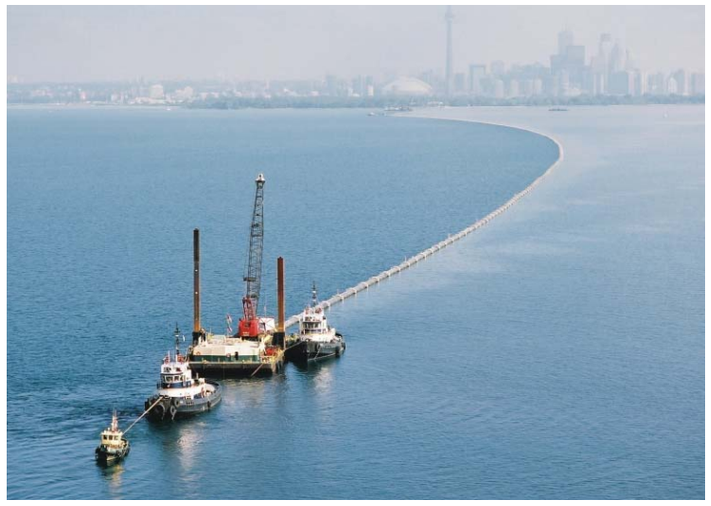
THE SOLUTION

! Naturally cold water deep below the surface of Lake Ontario is an untapped source of clean, reliable, cost-competitive, and 100% renewable energy for cooling. Using this water to cool Toronto's buildings provides businesses with a sustainable solution to their cooling needs. It respects the environment by saving electricity, eliminating noisy air chillers on roofs and saves them money.

Three intake pipes carry cold water through 12 kilometers of pipe running under the roads of Toronto. The water is used to cool over 25 million square feet of offices, hospitals, and government buildings. Since the cost of providing this service is independent of rapidly fluctuating electricity costs, Enwave can guarantee its rates for up to 20 years. After Enwave uses the water for space cooling, it is transported to a high-level pumping station and added to the city's drinking water supply.

WHY A SUSTAINIA100 SOLUTION?

? Municipalities around the world are constantly looking for ways to keep energy costs down even as their infrastructure expands. For eight years, Toronto's Deep Lake Water Cooling system has provided a solution to this problem, without forsaking economic sustainability. Installed in new buildings and added to old ones, the technology is a feasible alternative for property owners searching for sustainable cooling solutions. In cities across the world like Stockholm, Barcelona and Copenhagen cold seawater is contributing to improve the efficiency of district cooling systems.



www.enwave.com

CURITIBA – BUS RAPID TRANSIT

→ Seventy percent of Curitiba's commuters use public transport. The reason is a redesign of the city's existing bus system into a bus rapid transit (BRT) system.

ECONOMIC

Citizens of Curitiba spend only about 10% of their income on travel – much below the national average.

SOCIAL

Low-cost and efficient public transportation allows all citizens to utilize the extensive system.

ENVIRONMENTAL

Curitiba uses about 30% less fuel per capita than the rest of Brazil, resulting in one of the lowest rates of air pollution in the country.

THE SOLUTION

! In 1966, Curitiba's city planning team formulated several principles that have guided the city's planning ever since. These included promoting public transportation over private means, supporting human needs over corporate interests, and meeting the needs of the poorest.

The bus rapid transit system resembles a metro, but is instead a low-cost, ground-level solution. Buses run frequently, some every 90 seconds, carrying up to 20,000 passengers an hour. Buses have exclusive driving lanes, and bus drivers control the traffic lights to insure flow. Fare collection takes place prior to boarding, ensuring quick passenger loading and unloading.

WHY A SUSTAINIA100 SOLUTION?

? Curitiba's BRT triggered a modal shift from car to bus travel. The city has one of the most heavily used, yet low-cost, transit systems in the world. The majority of Curitiba commuters use the BRT to travel to work, resulting in reduced congestion air pollution for the 2.2 million inhabitants of greater Curitiba.

www.curitiba.pr.gov.br