



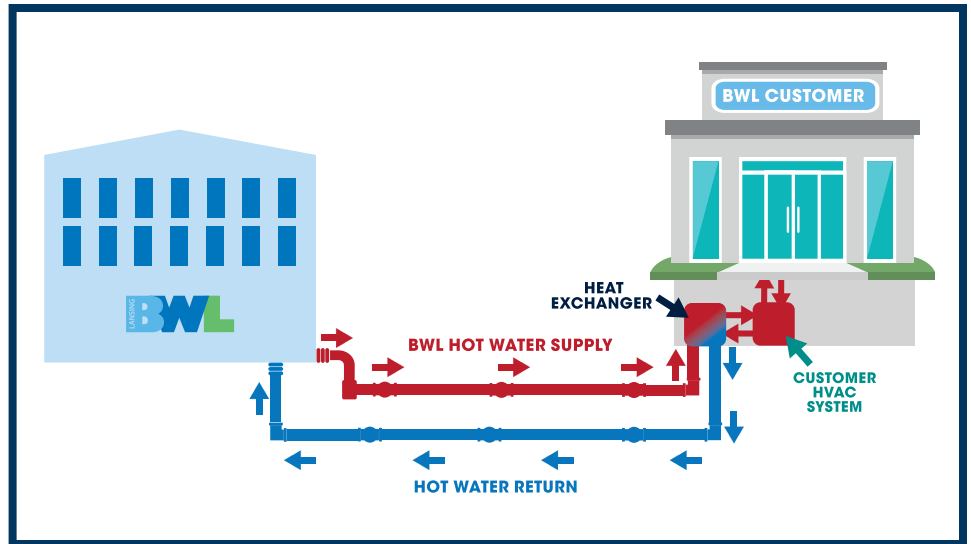
Hometown People. Hometown Power.

STEAM^{to} Hot Water

Transforming the Future of Lansing's Heating System

Modern Energy Solutions for Downtown Lansing Customers

The Lansing Board of Water & Light (BWL) is enhancing system reliability and efficiency by converting its downtown Lansing steam system to a closed loop hot water network, resulting in higher efficiency gains to customers. A portion of this project was supported by a grant from the State of Michigan.



Customer Benefits

Operating the hot water system at lower temperatures saves energy, enhances efficiency and conserves resources. Each phase of the conversion is projected to save water and energy while reducing customer's energy consumption. The new infrastructure resets and extends system longevity by 50 years, lowers maintenance costs and improves pedestrian safety by eliminating steam vent stacks from Lansing streets.



System Redundancy

New redundancy

measures including mobile boiler connections and an advanced leak detection system, enabling faster recovery from unplanned outages and limiting customer downtime.



Resource Efficiency

Transitioning to hot water saves both energy and water by using a closed loop system - reducing energy loss and recovering energy by returning warm water to the plant to be reheated and recirculated.



Simplified Operations

Eliminates

the need for steam traps and steam conversion station management, reducing building maintenance requirements.



Saves Space

Efficient use of space since the building does not need on-site production equipment.

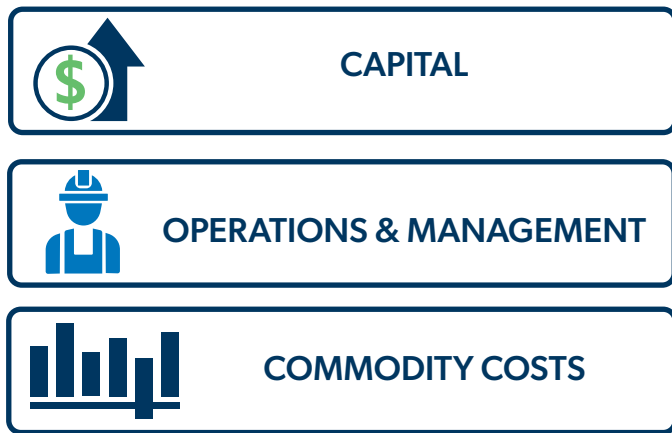


Cost Savings

Increased energy efficiency translates to

lower service costs for customers.

ON-SITE ENERGY GENERATION



BWL HOT WATER SERVICE

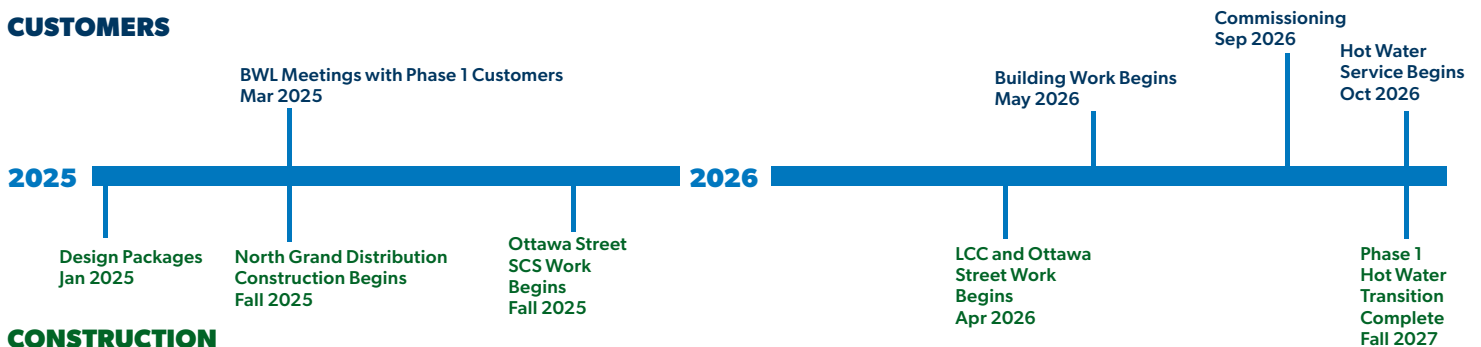


How It Works

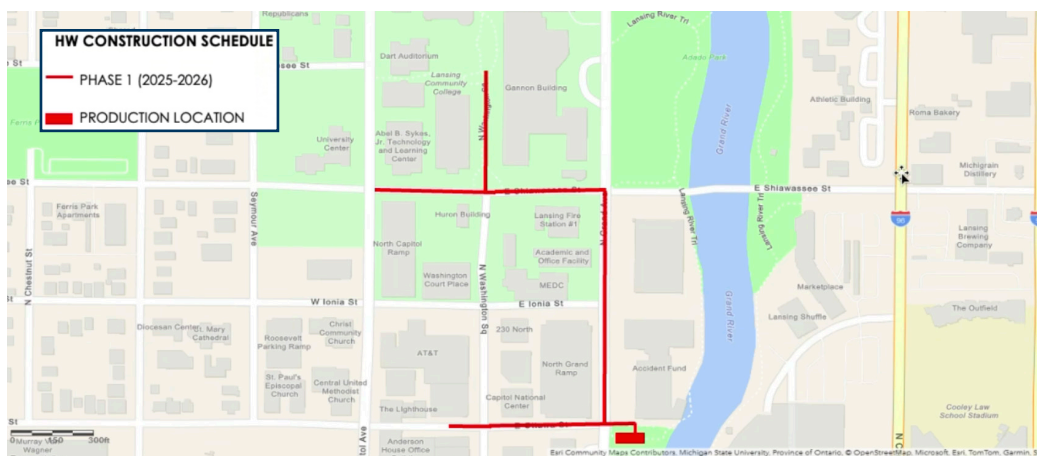
Hot water systems are designed for efficiency. BWL will produce hot water for customers to use to heat their interior spaces, domestic hot water (faucets, showers, appliances), and for industrial processes.

Hot water will be pumped through a network of insulated, underground pipes to customer buildings. Once the hot water reaches the customer building, it flows through a hot water heat exchanger that transfers heat to the building's HVAC system. The building's hot water flows through the building's loop to terminal units (i.e. air handlers, fan coil units, radiators, etc.) for space heating. The hot water can also be used to generate domestic hot water at faucets and appliances. BWL water goes through the heat exchanger and, as energy is exchanged to the building loop, the temperature is lowered and the cooler water is returned to the BWL to be reheated and recirculated, continuing the closed-loop system.

CUSTOMERS



CONSTRUCTION



For questions or to learn more about how the new energy system benefits you, visit lbwl.com/steamhotwater.

