

DISTRICT HEATING



2nd QUARTER 1983
VOL. 68, NO. 4

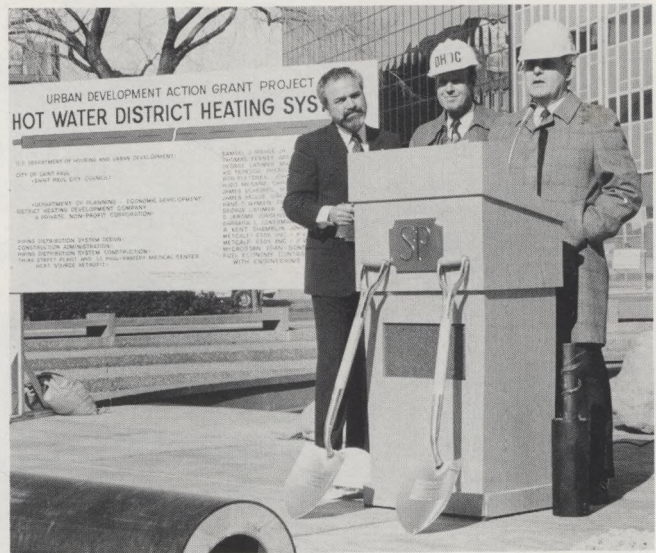
Ground Is Broken for the St. Paul Hot Water District Heating System

On March 14, 1983 St. Paul Mayor George Latimer declared war on energy waste as he and Hans Nyman, District Heating Development Company (DHDC) President, broke ground for St. Paul's hot water district heating system—the first of its size and kind in the nation. The ground breaking is the start of building a system that was first conceived in 1979 when a feasibility study by the Department of Energy and the Minnesota Energy Administration found positive indication of the effectiveness of district heating for St. Paul. DHDC was established as a non-profit corporation by business and government leaders to pursue the development of the system.

The goal of the \$45.8 million coal-based system is to save energy, lower heating costs, and reduce St. Paul's dependence on foreign energy sources. As Mayor Latimer stated, "We have fought the energy battle long enough. With hot water district heating we have truly taken a giant step forward toward a competitive edge, economic revitalization, and energy self-sufficiency." DHDC will pipe hot water heated at the Third Street Plant to downtown buildings to fulfill their space heating, domestic hot water, and processing needs.



St. Paul Mayor, George Latimer watches as DHDC President Hans Nyman opens the ground breaking ceremonies



IDHA Executive Director Norman Taylor addresses the participants at the groundbreaking ceremony in St. Paul.

The ground breaking was attended by representatives of business, industry and governmental agencies including Stuart Sloame, Deputy Assistant Secretary of Community Planning and Development for the US Department of Housing and Urban Development. HUD has provided \$7.5 million Urban Development Action Grant for the project and is also involved with the 28 Cities District Heating Assessment Study. St. Paul is the largest system to receive assistance from HUD and begin construction.

IDHA Executive Director Norman Taylor represented the association at the ceremonies. During his comments he noted that utilities often will follow a leader rather than take a new step themselves. He noted that DHDC had a tremendous responsibility because they would be watched closely. The system not only had to work but it had to work well. Any problems they encountered would be amplified, but all across the nation others would be ready to follow in their footsteps if they were successful.

Tunneling has already started from the Third Street Plant under Kellogg Boulevard. The piping system is being built by the joint venture team of McCrossan/Egan. Metcalf & Eddy of Boston and FVB served as piping design engineers and are providing construction services for the project.

Over 50,000 feet of twin piping will be laid within a 60 square block area downtown St. Paul. Each steel pipe ranging from 2 to 28 inches in diameter is insulated with polyurethane foam and covered with polyethylene pipe. Leak detection wires connected to a



The laying of the first pipe was the highlight of the days events. Participants in the event were, from left to right: Dr. Michael Karnitz, Oak Ridge National Laboratory; Norman Taylor, International District Heating Association; C.S. McCrossan, C.S. McCrossan Construction Co.; John Mullen, First National Bank St. Paul; Hans Nyman, District Heating Development Co.; George Latimer, Mayor of St. Paul; Barbara Lukermann, DHDC Board member; Stuard Sloame, U.S. Department of Housing and Urban Development; Phil Fuller, HDR; Cliff Olson, DHDC Board member; Kent Shamblin, DHDC Board member; Cliff Bowers, Metcalf & Eddy.

central computer system are imbedded in the foam to increase system reliability.

The system's main heat source, DHDC's Third Street Plant will be modified by Fuel Economy Contracting Company, using engineering design by HDR, to produce hot water energy.

System construction was made possible by obtaining sufficient long-term customer commitments last September and selling bonds to finance the system in December. This public/private partnership and commitment to the system's success has been a cornerstone in this development.

Construction and financing costs will be covered by the HUD Urban Development Action Grant of \$7.5 million, and a \$7.8 million city loan. An additional \$22 million will be borne by the customers for individual building conversions.

Over 75 buildings totaling 150 megawatts have signed up for the service. The first 24 customers will receive heat October 1 of this year. Others will be hooked up on a phased basis through 1985. Major customers include the State Capitol Complex, four major hospitals, The St. Paul Companies, First National Bank St.

Paul, Control Data Business Center, Economics Laboratories, Gillette Company, US Post Office, Northwestern Bell Telephone Company, Dayton's Department Store, two Radisson hotels, and new developments such as the Amhoist Tower, the St. Paul Hotel, Block 40 and Granada Royale Hometel. DHDC's newest customer is Straus Knitting Mills Inc.

By 1985, the system is expected to save enough gas and oil to heat 10,000 homes annually. The system is designed for expansion and plans are now being made to serve customers beyond the downtown area.