

The Detroit Thermal VOICE

SPRING 2008



DETROIT THERMAL, LLC IS A THERMAL VENTURES II, LP COMPANY

WELCOME

Victor Koppang brings unique mix of skills to general manager position

Victor (Vic) Koppang credits the success he's had in his career to his underlying philosophy: "Take care of your customers and your employees, and your business will prosper."

And that's just what Koppang says he intends to do as the new general manager of Detroit Thermal.

"We have an excellent team, and working together we are ready to take Detroit Thermal to the next level, for the benefit of our city, our customers, and our company," Koppang said.

Jeffrey P. Bees, chief executive officer of Detroit Thermal and its parent company, Thermal Ventures II,

announced Koppang's appointment on March 25.

"Vic's background includes a unique skill mix that will be of great benefit as Detroit Thermal moves into the next phase of its development," Bees said. "He not only can grasp the details of improving operating efficiency, he also understands how to make best use of the great talent we have at Detroit Thermal to meet and even exceed customer expectations."

The company recently completed a \$22 million capital improvement program. "We will continue to pursue strategies that improve operating efficiency," Bees said, "and we are now well-positioned to further enhance our involvement with the business community of downtown Detroit."

Koppang says he is looking forward to working closely with customers

and community leaders. "The long-term prosperity of our city is one of our most important priorities," Koppang said. "Detroit Thermal has an important role to play in moving the city forward."

Koppang comes to Detroit Thermal from Koppang Enterprises, LLC, a business consulting firm he founded to help companies increase sales by focusing on customer needs. Before that, he built Koppang Franchise Development Company into a highly successful organization. Earlier in his career he served as vice president and general manager of Pagenet of Michigan, a \$45 million wireless communication company.

"Vic Koppang's experience with various industries, his entrepreneurial approach and his deep commitment to the City of Detroit will be great assets to Detroit Thermal," Bees said. "We are delighted to have him on board." ■



Vic Koppang,
general manager
Detroit Thermal

After five years, significant progress – and more to come

Detroit Thermal celebrated its fifth anniversary at the beginning of this year. When Thermal Ventures II took over in 2003, it assumed responsibility for a system that was integral to the health of the city, a system with 100 years of history in

downtown Detroit, a system that serves almost every type of building imaginable – historic structures and new projects, public facilities and private commercial and residential space.

continued on page 2

Cheryl Garrison, Detroit Thermal accounts representative points out system improvements.



In a church basement, pipes – and a piece of American history

The basement of Second Baptist Church is home to a lot more than steam valves and traps.

It also holds an important part of American history, for a small room here once was used to hide slaves on their way to freedom in Canada.

The church was an important station on the Underground Railroad, the network of hiding places that helped fugitive slaves make their way north. In the Second Baptist basement, escaped slaves were given food, clothing and a place where they could rest before completing their long and dangerous journey by crossing the Detroit River to safety.

A historic plaque outside the church reminds visitors that the congregation was founded in 1836 by 13 former slaves and has been at its current site since 1857. But Second Baptist is more than a historic edifice; it is also home to a dynamic organization and the site of weekly church services, a regular Sunday school and other activities. It is a building that is well-used, well-loved and warm.

INEFFICIENT LINE CLOSED

For its physical heat, Second Baptist depends on Detroit Thermal steam, which it used to receive via an old 1,300-foot low-pressure line that served only the church.

“The length of the pipe resulted in significant radiant heat loss,” said Paul Razo, Detroit Thermal distribution manager. “It was an expensive and inefficient situation.”

Last summer, Razo and his group developed and implemented a new way to get steam service to the church that increased efficiency and did not interfere with any of the building’s space or interrupt any of its activities.

“There is a high-pressure line that goes from the Beacon Plant to the Renaissance Center that feeds lots of customers in the central business district,” Razo explained. That line runs just 60 feet from the church.

NEW PIPE INSTALLED

Detroit Thermal ran new pipe off the high-pressure line directly to the church and installed a pressure-regulating valve in an existing manhole outside the building. The new line is well-insulated and encapsulated in concrete, so radiant heat loss has been all but eliminated. The long, inefficient low-pressure line has been closed down.

A long-distance pressure monitor at Beacon allows plant engineers to track steam pressure at the church. “We can detect upward or downward drifts in pressure and take action before problems develop,” Razo said.

All the excavation work for the new line was done at night so it did not interfere with businesses in the area.

“This project allowed us to close an inefficient, expensive-to-run line and replace it with a fuel-saving alternative,” Razo said. “In the long run, this effort will help stabilize rates for the customer.” ■

The doors to Second Baptist Church open on a dynamic institution as well as a historic landmark.

UPDATE

AN OUNCE OF PREVENTION FOR FOUR MAJOR HOSPITALS

Avoiding service interruptions is even more important than fixing problems, especially when four major hospitals are depending on you for critical functions.

That’s why Detroit Thermal recently completed installation of a connection between two main feeder lines that run from the Beacon Plant to the Willis Plant and supply customers at the north end of the system.

The Detroit Medical Center (DMC) campus, including Harper University Hospital, Detroit Receiving Hospital, Children’s Hospital of Michigan and Hutzel Women’s Hospital, relies on Detroit Thermal steam for heat, hot water and sterilization. That steam is supplied by one of the high-pressure feeder lines and is reliable and efficient. Although there were no problems on the line, Detroit Thermal distribution staff still were concerned that if a problem should develop and a part of the line had to be shut for repairs, the DMC might be inconvenienced.

To avoid even the possibility of that happening, the distribution and plant staffs collaborated and devised a plan for linking the two north-south lines.

“The lines run parallel to one another, and both come into Willis, where the pressure is reduced before the steam goes into customers’ systems,” explained Paul Razo, distribution manager. “But they were completely separate.

By installing a pipe between the two high-pressure lines, we can shut down part of either line for preventive maintenance and still have an uninterrupted supply of steam for customers, including the DMC, at that end of the steam distribution system.”

The new pipe adds redundancy to the system – and improved reliability to the DMC. ■



After five years, significant progress – and more to come

continued from page 1



Replacing old valves has improved the efficiency of the steam distribution system.

Thermal Ventures II focused its expertise and the extensive experience it had acquired in operating other thermal energy systems on the unique challenges of Detroit's system.

"Our top priorities at that time were – and in fact still are – safety, reliability and efficiency," says Jeffrey P. Bees, chief executive officer of Detroit Thermal and of its parent company, Thermal Ventures II. "I'm very proud to say we have made great strides in all areas."

LOCAL CHALLENGES

Taking over one of the largest steam systems in the country and a business that was more than 100 years old posed some problems, and Detroit Thermal met them head on.

"We worked closely with a transition team to understand the past, present and future operating conditions of the system," Bees said, "and we quickly established investment priorities that would bring about the greatest improvements."

Five years later it is clear that Detroit Thermal has made changes that will benefit customers for decades to come. The company's recently completed \$22 million capital improvement program included re-tubing boilers Nos. 1 and 2; demolishing huge, inefficient boiler No. 5 and replacing it with two smaller, more efficient models; and upgrading boiler operating controls from old pneumatic systems to state-of-the-art computer-based systems.

"All these changes improve the long-term efficiency and reliability of our steam generation operations."

"All these changes improve the long-term efficiency and reliability of our steam generation operations," said Ron Kentala, lead shift supervisor, who manages the steam generation department. "We have seen tremendous improvements due to the physical changes we have made to our system and to the dedication of our whole team."

PREVENTION PAYS OFF

The distribution system also has received a great deal of attention. Many non-functioning or poorly functioning isolation valves have been replaced, pipes have been insulated in more than 300 man-holes, and more than 75 percent of the traps that take water out of the pipes have been replaced.

"We have implemented an aggressive preventive maintenance program, and all this effort is paying off for the company and for our customers," said Paul Razo, Detroit Thermal distribution manager. "We

are proud of what we have accomplished, and of our ongoing focus on efficiency improvements."

Razo points to recently installed innovative high-temperature foam insulation that cuts down on radiant heat loss. Also, he is currently testing a paint that contains corrosion inhibitors and should keep equipment in good shape for longer periods.

"Our accomplishments extend to more than the physical aspects of the system," Razo said. "They include the cooperative team approach we have developed, which means employees with many different responsibilities work closely together on improving the system. We value the talent, attitude and enthusiasm of everyone on the team."

Detroit Thermal still faces challenges, but the vision that marked its first five years will continue to guide the company under the leadership of the new general manager, Vic Koppang.

"Vic's management expertise and his extensive experience in team building and organizational development will be of great value to Detroit Thermal as it moves to the next phase of its development," Bees said.

"We see Detroit Thermal becoming even more important in the economic development of the City of Detroit. The energy alternative the company provides can be an attractive factor in the retention or development of businesses in the downtown area. And that is only one of the ways in which we anticipate playing an even greater role in the future of Detroit," Bees said. ■

Century-old biosciences firm carries a steady partner into its future growth

BD (Becton, Dickinson and Company) has a long history with Detroit's steam system, and "the reliability of Detroit Thermal steam was key" in the company's decision to make Detroit Thermal part of the plant's recent expansion, says Lee Bowling, operations manager of BD, Detroit.

The plant was opened in 1895 as Ray Chemicals and became Difco Laboratories in the early 1900s. In 1997, Difco Laboratories became part of BD, a leading global medical technology company headquartered in Franklin Lakes, N.J., that serves health care institutions, life science researchers, clinical laboratories, industry and the general public.

The Detroit plant, known as the BD Peptone Manufacturing Facility, manufactures bacteriological peptones that pharmaceutical companies and laboratories incorporate into the culture media used to grow bacteria and other organisms for medical and research use. This is a highly exacting, multi-step process, and each step requires heat.

"All the heat we use in the process comes from Detroit Thermal," Bowling said.

In fact, the facility, located on Henry Street, has used thermal energy in its processing operations from day one, and steam continues to be its best source of heat as it grows. The plant's latest expansion, a 25,000-square-foot building on the Henry Street site, is no exception. The new facility will allow the plant to double its production capacity.

"We had to undertake the expansion to meet growing customer demand," Bowling explained.

In planning the expansion, the company looked at alternative sources of heat, including the installation of steam generators, but decided that increasing its load with Detroit Thermal was the best way to go.

"It was not in our best interest to go through the infrastructure changes that having our own steam generators would have entailed," Bowling said. "Furthermore, it would have been a headache for us to support and maintain an energy system."

Before construction of the new facility began, BD personnel, their engineering firm and their contractor met with Detroit Thermal representatives to determine what would be needed to meet the plant's increased steam need.

"There was a three-inch line going to the site, but that wasn't nearly big enough to handle the increase in load," recalled John Kozar, the Detroit Thermal senior accounts representative who headed up the Detroit Thermal side of the project. "We had to extend and reroute a nearby eight-inch line, and we had to make sure that our construction schedule coordinated with BD's schedule."

That coordination paid off, and the new plant is now up and running.

"We have a reliable source of heat and a good working relationship with Detroit Thermal. It makes good business sense to continue with them," Bowling said.

Detroit Thermal also calls it a win-win situation.

"We are pleased to have the opportunity to help one of our customers grow," Kozar said. ■



From left: John Kozar; Jeff Smigielski-McHenry, BD facilities engineer; and Lee Bowling examine a section of the company's new steam equipment.

IMPROVING EFFICIENCY: WHAT YOU CAN DO

Building improvements help control energy costs

Steam consumption is affected by many factors, from the weather outside, which we can't control, to conditions inside buildings, which we can.

"There are many aspects of a building that impact the efficiency of the steam system," said Thomas Munro, Detroit Thermal project coordinator. "Some are directly tied to the steam system itself, such as traps that function properly and insulation on valves and fittings. But other areas of building construction and maintenance also impact steam use and therefore energy costs."

Munro has spent more than 35 years in the thermal energy business and says that he has seen many buildings in which steam consumption has been reduced through a combination of proper maintenance and structural changes.

INSULATE YOURSELF FROM EXCESSIVE COSTS

"Not having enough insulation in roofs and walls wastes a lot of heat," Munro said. Typically the largest heat loss is through the ceiling into the "attic" space, he said. Increasing ceiling insulation and, if possible, insulation in walls can make a big difference in energy efficiency.

Windows and doors also may contribute to heat loss.

"The best windows are those with double-pane glass," Munro

explained. While replacing old single-pane windows is the best solution, kits that allow for covering windows with clear plastic, mounted with double-sided tape and then "shrink-wrapped" with a hair dryer, can help. "Having a dead air area between the window and the inside of the room cuts down on drafts and reduces heat seepage," Munro said.

New doors, especially insulated metal doors, can also help. Many exterior doors now come with a magnetic seal around the frame, similar to the seal on a refrigerator door.

Adequate moisture in the air also helps reduce steam use. "Moist air captures and holds more heat so the space can be heated with less steam," Munro explained. He recommends maintaining humidity of about 50 percent in the winter.

"Large buildings that use Detroit Thermal steam have or should have humidifiers built into their air-handling units," Munro said. "The humidifiers allow steam to enter the air stream through pinhole-sized openings — not enough steam to significantly raise the temperature but enough to allow the humidity to do its job." Proper humidity also makes the space more comfortable and prevents the buildup of static electricity.

CEILING FANS AREN'T JUST FOR SUMMER

Ceiling fans can be as helpful in winter as they are in summer. In

winter, the fans pull cooler air up from the floor, which forces the warm air near the ceiling to flow down the walls to the floor. "They keep the warmth off the ceiling and down where the people are," Munro said.

Thermostats that are in good working order are essential to sound energy management. All thermostats, even new ones, should be calibrated to make sure they are reporting temperatures correctly.

Large buildings that are divided into zones so that the whole building doesn't get the same amount of heat allow for steam-saving adjustments.

"The north side of a building generally gets less sun than the south, east or west sides, so it's cooler and needs more heat," Munro said. "The same amount of heat on the warmer sides of the building would make the space too warm and waste energy."

Buildings in which Detroit Thermal steam is used to heat domestic water have another opportunity to reduce steam consumption, through the use of economizers that take advantage of the heat in condensate to preheat city water before it goes into the water heater.

"Building improvements, from simple measures such as calibrating thermostats to large projects such as installing new windows and increasing ceiling insulation, go a long way toward helping control energy cost," Munro said. ■

"There are many aspects of a building that impact the efficiency of the steam system."

Help for low-income households



Detroit Thermal helps keep the city warm throughout the heating season, not just by providing efficient steam but also by contributing to THAW – The Heat and Warmth Fund. THAW is an independent non-profit agency that provides emergency energy assistance to low-income households.

“Our business is dedicated to keeping Detroit warm,” said Cheryl Garrison, accounts representative, “and we are pleased to be able to build on that dedication by helping THAW prevent suffering through assistance with heating bills.”

THAW helped many Detroit seniors stay warm through Michigan’s long cold winter.

Since its inception in 1986, THAW has provided assistance to more than 115,200 Michigan households, including elderly, unemployed and disabled individuals.

During the 2006-2007 heating season, THAW helped more than 8,600 households. In many cases, THAW’s assistance meant residents did not have to choose between heat and food, or did not use dangerous heat sources that could have led to fires.



- Youngstown Thermal, LLC
- North River Road, LLC
- Detroit Thermal, LLC
- Akron Thermal Cooling, LLC
- Akron Thermal, LLC
- District Energy Systems**
- Thermal Ventures II, LP**

Detroit Thermal, LLC
 541 Madison Avenue
 Detroit, Michigan 48226
 Phone 313.963.3844
 Fax 313.963.7285