



Metro Nashville DISTRICT ENERGY SYSTEM

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Constellation Energy Hosts Fourth Annual NDE Golf Tournament



Constellation Energy Projects and Services Group hosted its fourth annual Nashville District Energy golf tournament on July 21 at Pine Creek Golf Course in Mt. Juliet, Tenn. Sixty-four people participated, including CEPS and NDE staff, customers, contractors, vendors and friends.

General Manager's Corner

By: *Tim Hestle*

Since spring of this year, Nashville and Metro DES have experienced unprecedented cooling challenges from the weather. The city of Nashville had its hottest and driest



Tim Hestle

August since record-keeping began 137 years ago. Many weather-related records were set during the month:

- Sunday, Aug. 26, marked 32 consecutive days with a temperature above 90 degrees, breaking the previous record of 31 days set in June 1952 and tied in June 1954.
- The high temperature on Aug. 26 was 94 degrees, which ended an unprecedented heat wave of temperatures at or above 95 degrees for 24 consecutive days. The old record was 19 days, again from the hot summer of 1952.
- There were 15 days of 100-degree or above temperatures recorded in August. This was more than double the 1954 record of seven.
- On Aug. 16, the record-high for the month was set at 106 degrees. This is the highest temperature recorded in Nashville in the past 55 years. The highest all-time temperature recorded was 107, set July 27-28, 1952.

Along with record-breaking temperatures, Nashville also experienced a severe drought this summer. Rainfall is 10 inches to 18 inches below normal in Middle Tennessee. Crops have been lost, and many communities have implemented water-use restrictions. Rainfall in Nashville for the first 27 days of August was only .08 of an inch. Total rainfall increased slightly after recording a 10th of an inch on Aug. 28 and a little more than 1.1 inches on Aug. 29.

With the extreme conditions witnessed this summer, especially in August, the energy-generation facility and its staff continued

Many DES customers, contractors, vendors and friends generously sponsored holes and donated prizes. In addition, DES was honored that Greg Jarosinski, the president and CEO of CEPS, came all the way from Baltimore, Md., to participate in the tournament. CEPS sponsored a hole-in-one contest on all of the par-three holes, as well as the barbecue luncheon immediately following the tournament.

The first place team finished at 9-under par and included Solomon Stevens of United Parcel Service, Harry Ragsdale of Thermal Engineering, Inc., Jay Lannin of Auto Owner Insurance and DES general manager Tim Hestle. Lannin also won the contest for the longest drive on the 18th hole, and Pat Smith of John Bouchard & Sons won the contest for getting closest to the pin on hole six. The event was a tremendous success, and everyone had a great time.

Customer Spotlight: Nashville City Center



The Nashville City Center is a 27-story office tower and is one of the more than 40 buildings that DES cools in downtown Nashville. The building, located at the corner of Sixth Avenue and Union Street, was designed by Hugh Stubbins, the architect for the Citicorp Center in New York City, and

to provide reliable and efficient chilled-water service to DES customers. Another record set during the month was the plant's peak chilled-water load to date: 17,400 tons/hour on Aug. 7. At that time, we ran seven of nine chillers, four of six chilled-water distribution pumps, three of five condenser water pumps and 16 of our 18 cooling towers. The plant's maximum allowable load is 20,800 tons, while the maximum contract capacity to the customers is 29,714 tons. What does this mean? During this record heat wave, we had plenty of excess capacity even after serving all of our current customers' needs.

The severe heat wave and drought took its toll on the Tennessee Valley Authority as well. According to Nashville Electric Service, TVA's fuel cost adjustment (FCA) for the first quarter of fiscal year 2008 (October to December) will result in a substantial increase from the previous quarter. The FCA for July to September was \$0.0087, or almost nine-tenths of a cent per kilowatt-hour. For October to December, the FCA will increase by more than 3 cents to \$0.0432. This is an approximately 6 percent increase over the previous quarter's average wholesale rates. The adjustment is due primarily to extremely low rainfall levels across the Tennessee Valley resulting in decreased hydroelectric generation, TVA's least expensive form of power production. The lack of normal reservoir levels for hydroelectric generation has caused TVA to purchase more power from the market, as well as to use more costly forms of replacement generation.

With increasing energy costs, it is more important than ever for customers and their tenants to be more conservative, and to pursue energy-saving opportunities.

Metro DES Customer Meeting Recap

A Metro DES customer meeting was held on Thursday, Oct. 18, in the conference room at the Nashville Downtown Partnership, located at the corner of Fourth Avenue and Commerce Street.

At the meeting, a financial report was given on fiscal year 2007, and the budget for fiscal year 2008 was presented. Other topics of discussion included reviews of capital projects, operations monitoring for fiscal year 2007, the unit costs for DES and customer contract capacity.

Customers were especially interested in the contract capacity discussions, which included ways to keep demand charges under control, as well as methods of avoiding thermal inefficiency fuel surcharges (TIFS). The meeting was intended to be a forum for customers to gain valuable information about their partnerships with DES.

During the meeting, the fiscal year 2008 customer survey form was also available for those who had not yet completed it. This feedback will be particularly helpful to Metro DES staff and partners as they seek to provide customers with the best quality services.

local architect Gresham, Smith and Partners.

NCC has relied on DES for cooling since the new energy-generation facility opened in 2003. Before that, NCC had been a customer of the old Nashville Thermal Transfer Corporation since 1988, when the building opened.

Richard Fletcher, the NCC's owner, has been very pleased with the service DES has provided.

"We've had a great experience working with them," Fletcher said. "Since the new plant opened, we've have almost no service interruptions, which has been a big help to our tenants."

David Duke, the chief engineer for NCC, added that the staff at NCC has never really considered installing standalone cooling units.

"We have had talks about using a self-contained unit to serve as a backup, but the costs always outweigh the benefits," Duke said. "It is much simpler and more affordable for us to just rely on DES."

In addition, Duke noted that Chuck Tucker, DES customer service representative, has been helpful with the new metering panels.

"Chuck has been great to work with," Duke said. "When the new metering panels were installed, he came over and set up our computers and showed us how to monitor our building's energy usage. We're happy with our experience with him and the entire DES team."

If customers have any questions about the topics that were discussed at the meeting, they are encouraged to call Harry Ragsdale, the project administrator for Metro DES, at (615) 264-2611.

New Metering Panels Give Customers More Accurate Data

Since April, all DES customers have been able to more accurately monitor their buildings' energy consumption through the use of the new metering panels. These panels provide the ability for real-time energy data to be sent and downloaded to customers' building energy management systems. This is an especially convenient option for monitoring energy usage during severe weather, such as this summer's heat wave. This feature also assists customers in modifying facility operations to control peak demand.

Data acquisition allows building owners to identify and eliminate undesirable trends in energy consumption even sooner. Being able to more accurately forecast consumption is a key way that customers can mitigate rising energy costs.

Metro DES Paying Dividends, Subsidies Continue To Shrink

The Metro Finance Department recently reported that the Metro DES facility provides the city with significant value. An audit released by the department found that the facility's value comes from declining subsidy and solid waste costs, combined with a more efficient energy source.

The audit, administered by independent consulting firm The A Consulting Team, Inc. (TACT), indicated a continual decrease in the amount of subsidies DES receives annually. For example, the old thermal plant received a \$7.8 million subsidy from Metro in 2000. In contrast, DES received \$2.4 million during the last fiscal year.

David Manning, former Metro finance director, said the city's subsidy has decreased on an annual basis, and should continue to decline until the plant won't need a subsidy.

The DES plant opened in 2004 as a replacement for the old thermal plant that burned in 2002. Instead of burning solid waste to create energy, as the old thermal plant did, the DES uses natural gas to provide cold water and steam for customers. It cost Metro considerably more to process waste at the old thermal plant than it does to have it dumped by a private company. As a result, Metro has seen a decrease in solid waste disposal expenses in addition to the reduced subsidy.

The majority of the plant's budget comes from state, Metro and private customer revenue. The facility operated on an approximately \$21 million budget in the 2006-2007 fiscal year, \$18.6 million of which was customer revenue.

The audit also pointed out the increased reliability DES offers in comparison to the thermal plant. Boiler reliability at the thermal plant had dropped to 61.9 percent in 2002. However, in 2006, DES steam reliability was 99.86 percent, and chilled water was 99.82 percent. Furthermore, DES received the 2006 System of the Year Award from the International District Energy Association (IDEA). Only eight district energy service plants have received this award in IDEA's 100-year history.

Employee Spotlight: Operations Supervisor Ben Alig

As the operations supervisor for Metro DES, Ben Alig is responsible for overseeing day-to-day operations of the plant. This includes monitoring all of the boilers and chillers, ensuring routine maintenance and rotation of equipment, managing employee scheduling and maintaining the safety of the



facility and employees. He is an employee of Constellation Energy Projects and Services Group (CEPS), the contractor that manages DES for Metro. Alig worked for Metro Nashville at the Thermal Transfer Corporation for 29 years before joining CEPS in 2004. His start in the district energy business was as a crane operator. He later became an auxiliary operator, and worked his way to operations supervisor when the DES plant opened. An Orange County, Calif., native, Alig has lived in Middle Tennessee since 1969. He has been married to his wife, Lynn, for 35 years. They have two children, Adam, 31, and Tonya, 29, and four grandchildren. "The day-to-day plant operations are generally smooth," Alig said. "We have new equipment, and it's really just a matter of keeping things running. My main goal is to help everyone do their jobs. If I do that, we shouldn't have any problems."

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