DISTRICT ENERGY MANAGEMENT

Real-time monitoring and proactive decision making

CUSTOMER CASE

7T is becoming Schneider Electric

TERMIS

Real-time TERMIS for District Cooling

Customer	
The University of Texas at Austin (UTA)	
Country	
USA	
System Integrator	
7T	
Application	
TERMIS and TERMIS Operation v2.1 Real-time	
Data	
Number of students and staff	
>50,000	
Number of campus buildings	
160	
Number of plants and chillers	
11/4	
Piping	
9.7 km ~ 6 miles	
Temperature	
3.9 °C ~ 39 °F	

UTA is the 3rd largest university in the USA and is renowned for its engineering and law faculties.

UTA has grown over the years into one of the nation's largest research-oriented universities. In the expansion process UTA has built a very reliable utility system to ensure that the mission of the university is not disrupted by energy system failures.

The Challenge

Keeping the energy consumption as low as possible

The UTA district energy system is one of the largest in North America and continues to grow as the campus expands. As the University's energy needs increase, the utilities department is adding to its available capacity to ensure that it can continue to provide the same high level of reliability it does today. However UTA works very hard to decouple campus expansions from increased energy demand and keep the energy consumption curve as flat as possible.

The Solution

TERMIS Real-time provides unique benefits for efficiency and optimization

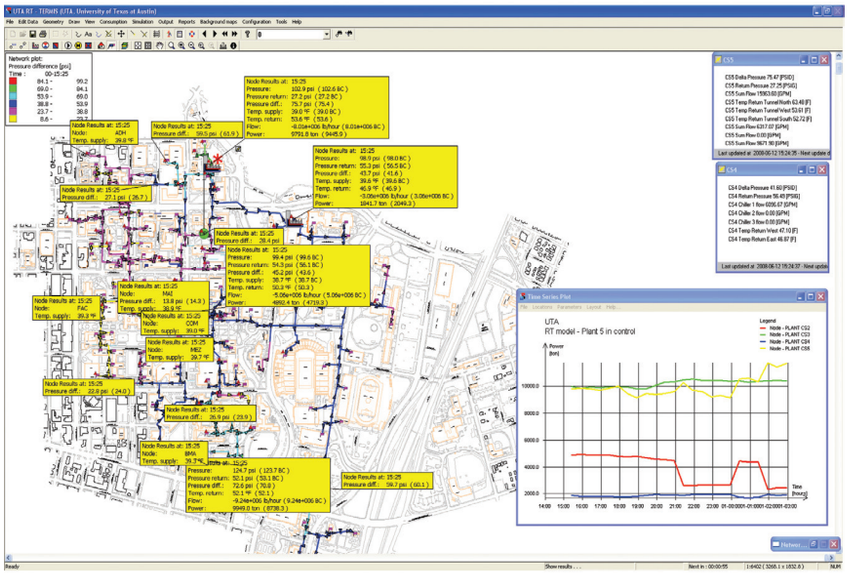
TERMIS optimizes the system pressures and temperatures according to the demand of each of the buildings. TERMIS makes it possible to set the priorities for the production plants, the thermal energy storage tanks and pumping stations in real time and thereby cut the production and pumping overhead to virtually zero.

The Result

TERMIS Real-time provides unique benefits for UTA operators

The real-time capability provides the UTA district energy system operators with a complete overview of the operational conditions and thermal dynamical values. At the same time, it allows the operators to simulate "What if scenarios" before executing a command.

CUSTOMER CASE



"We chose TERMIS as our backbone optimization and efficiency software tool not only for hydraulic modeling, but also for identification and quantification of strategies for increasing efficiencies and reducing operating costs as well as cutting emission. Our goal is to use TERMIS to provide decision-ready information that allows all UTA utility staff to make the best possible decisions. Not only for master planning and engineering design, but also for the system implementation, commissioning, operation, maintenance, overhauls, retrofits and expansions. In addition, TERMIS provides good reporting to management and external authorities."

Juan M. Ontiveros, Executive Director of Utilities and Energy Management at University of Texas at Austin

In addition TERMIS Real Time can help identify potential problems before they happen and help the operator to quickly determine and solve chilled water or steam distribution operational problems.

Other benefits

Benefits of TERMIS for engineering design and maintenance

UTA uses TERMIS to determine the optimal routing and sizing of new piping, when planning and performing expansions. The historical velocity profiles allow UTA to determine what areas of the campus should have new piping.

In terms of maintenance, TERMIS lets UTA determine the effects of closing off parts of the system, whether for a few hours or several months. TERMIS can also easily determine where new valves should be placed.

UTA finds that modifications to the hydraulic models are very easy to perform. They consider it one of the major advantages that proposed load additions can easily be added to the system and simulated to see their effect. TERMIS Real Time ensures the hydraulic model is updated at all times.

Benefits for the environment

The use of TERMIS will have a positive effect on the environment. Each of the four (4) UTA primary chilled water pumping stations consume up to 4 MW of power. Reducing the system pressure brings substantial savings to UTA. These savings cut the emissions proportionally and benefit the environment.