CUSTOMER CASE

TERMIS

7T is becoming Schneider Electric

University of New Mexico

Real Time TERMIS for District Heating and Cooling

USA

UNM

University of New Mexico (UNM) chose TERMIS as the district engineering tool, when their utility systems needed a comprehensive renovation.

UNM's utility systems supply district heating and cooling to more than 30,000 students faculty and staff.

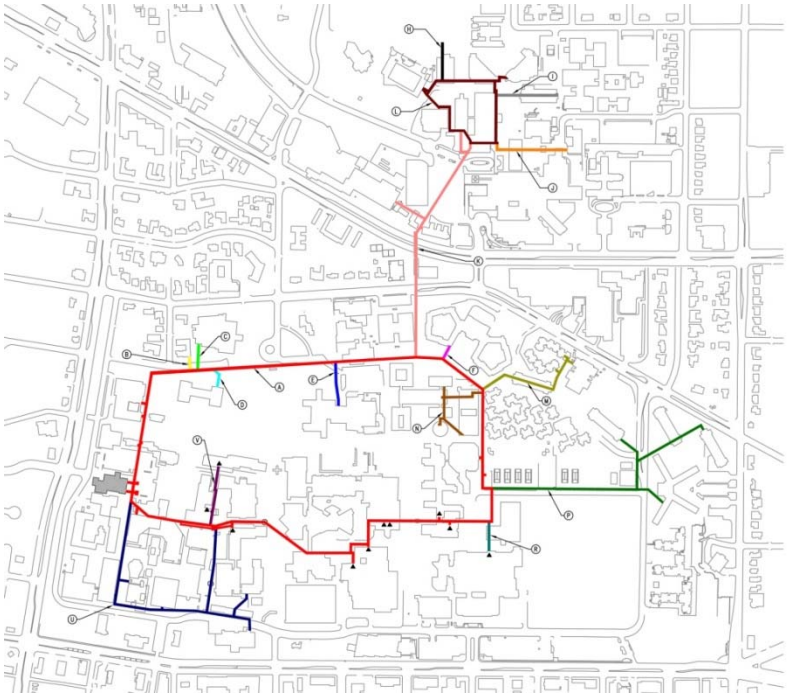
Technical data:

Chilled water network:

- 11,200 Tons (40 MW)
- 15,000 gpm (3,400 m3/h)
- 95 buildings as consumers
- 11 miles (18 km) main pipe
- Supply pressure 60 psig (4 bar)
- Supply temperature 40 F (4 C)

Steam network:

- 192 million BTU/hr (56 MW)
- 160,000 lbs/hr (56 m3/h)
- 100 buildings as consumers
- 6 miles (9.5 km) main pipe
- Supply pressure 120 & 40 psig (3 & 8)
- Supply temperature 350 F (175 C)



The ability to perform real-time simulations was decisive to UNM's choice of TERMIS. Larry Schuster, the utilities engineer for UNM, explains: "TERMIS will enable us to monitor the entire system and see a continuous data output, some of which is simulated, in various ways as opposed to the discrete data that comes from our real-time data gathering system. This allows us to actually detect problem areas without having to guess what might be going on between discrete data points."

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FACTS:

Chilled Water produced:	24,222,603	ton-hours
Steam produced:	388,572,279	pounds
Domestic Water consumed:	322,073,770	gallons
Electricity Consumed:	130,379,035	kilowatt-hours
Natural Gas consumed:	755,258	million BTU

Securing the future

In terms of expansion of plants, one of the major advantages is the ease by which proposed load additions can be added to the system and simulated to see their effect on the system. Based on future growth and projected additions, UNM can plan their capital additions with greater efficiency and effectiveness.

Elaborating on this, Larry Schuster comments:
"Considering maintenance and overhauls, some mayor advantages TERMIS has given us are the ability to predict leakage areas and problem areas of piping. We are now able to view the system parameters using various visual tools allowing us to determine the most likely areas where problems might occur. The historical velocity profiles we will develop will allow us to determine what areas of the campus should have piping replaced.

Energy Efficiency Paying Off

Essentially completed, the project has already begun generating the energy savings required to finance the improvements. This has been accomplished through a combination of production system efficiency upgrades, demand reductions and reduced rates for outside utility purchases.

Support across the Atlantic

Larry Schuster was initially expecting that support could be a problem due to the distance and difference in time. But his experience was another: "While we had only one face-to-face contact with our project manager, we coordinated very effectively by weekly phone teleconferences, remote terminal sessions, and email. I am feeling very confident of continued support as we enter the operations phase of the project."