

DISTRICT ENERGY MANAGEMENT

Real-time monitoring and proactive decision making

PROVIDING RELIABLE ENERGY TO MORE THAN 100 MILLION HOMES

7T
is becoming

Schneider
Electric



**TERMIS
PUTS YOU
IN CONTROL!**

A Challenging Future

Without real-time intelligence on operational performance, network status, and customer demand, it is a challenge for district energy utilities to react swiftly to changes in these conditions.

Regulatory standards are becoming more and more complex and require extensive documentation – even contingency plans for the unexpected. District energy utilities are moreover expected to reduce energy consumption and CO₂ emission.

Another major challenge is to minimize the energy loss of energy supplied to the network. Most district energy utilities operate at a constant supply temperature despite fluctuations in demand and changing weather conditions.

Many utilities have invested significantly in SCADA systems. This allows for a partial monitoring of the network, but does not provide the option to proactively simulate the impact of changes in conditions on the distribution network.

Most district energy utilities have roughly 20% of their investment vested in the actual plant. The remaining 80% is vested in the distribution network. And most district energy utilities have little or no idea of what happens to the energy once it leaves the plant.

Protect your investment with TERMIS

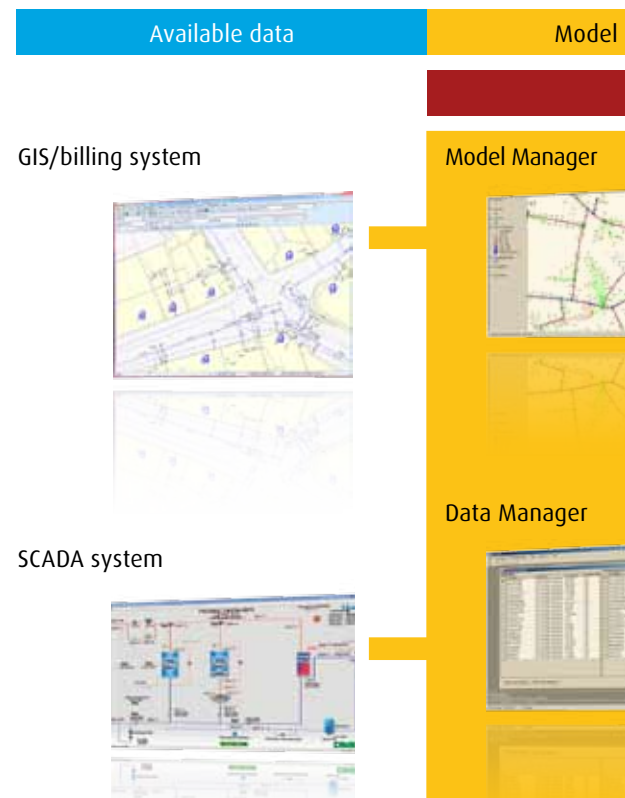
- Uses real-time data
- Easy integration
- Intuitive, easy-to-learn user interface
- Easy conversion from other modeling tools

TERMIS can help you confront those challenges

TERMIS is a hydraulic modeling tool, which simulates flow, pressure and thermal behavior in your distribution network. Unlike other tools, TERMIS uses real-time data to analyze and track the current situation. This enables operators to make better and smarter decisions and to optimize production and enhance your economic performance.

TERMIS integrates easily and cost effectively with any set of open applications, and is supported by our extensive knowledge and experience in District Energy Management (DEM).

District energy utilities typically supplies at a constant temperature into the network over long periods disregarding the daily fluctuations in consumption. TERMIS Temperature Optimization module optimizes the supply temperature, leading to a significant reduction in the loss of energy and consequently considerable savings.



Data from the SCADA system is easily imported and validated for use in TERMIS through Data Manager

Improved Network Overview

TERMIS empowers you by providing an effective and comprehensive overview of your entire network and operation.

Real-time SCADA data transforms a TERMIS model from a static planning tool into a dynamic decision making tool that is integrated in your day-to-day operation with instant, clearly identified benefits and economic advantages.

What previously took several months to complete can now be accomplished within hours. Once you have fed your data into Model Manager (the model building tool), the model is automatically generated.



How does it work?

An intuitive button interface lets you scroll back and forth and obtain data for pressure, flow and thermal conditions at any given time - in the past, in the present, or in the future, anywhere in the network.

Real-time data from the SCADA system is fed into the TERMIS model. It is possible to combine this with weather forecast data. This lets you predict future consumption - even during periods of changeable or extreme weather conditions.

TERMIS allows you to view different areas, sections, zones, and even details of the network. You can easily simulate interventions such as supply changes, opening or closing of valves, starting or stopping of pumps and plant, and assess the impact on consumer supply.

The click of a mouse does it all

The user interface can be customized to suit the individual needs and requirements of the many types of users.

All members of the staff have information at their fingertips, ready to provide instant answers to any enquiry.

Proven solution, proven results

- Improves service and reduces operating costs
- More than 20 years of experience in DEM
- ROI in less than 18 months
- Reduces energy loss with more than 10%

TERMIS – The Intuitive Operating Tool for

With TERMIS, you can unleash the potential of every employee in the utility to serve your customers better.

You can design your network to meet future demands, avoid bottlenecks, and comply with regulations. While optimizing your investment, you are also improving the service, increasing customer satisfaction, and reducing operating costs.

The staff can click on any object in the network to check data such as pressure or temperature at a specific location and can give instant answers to customer enquiries. Alarm set points for all parameters can be configured.

Like GPS automobile navigation, TERMIS will immediately warn you of future problems in the network, no matter which turn you take.

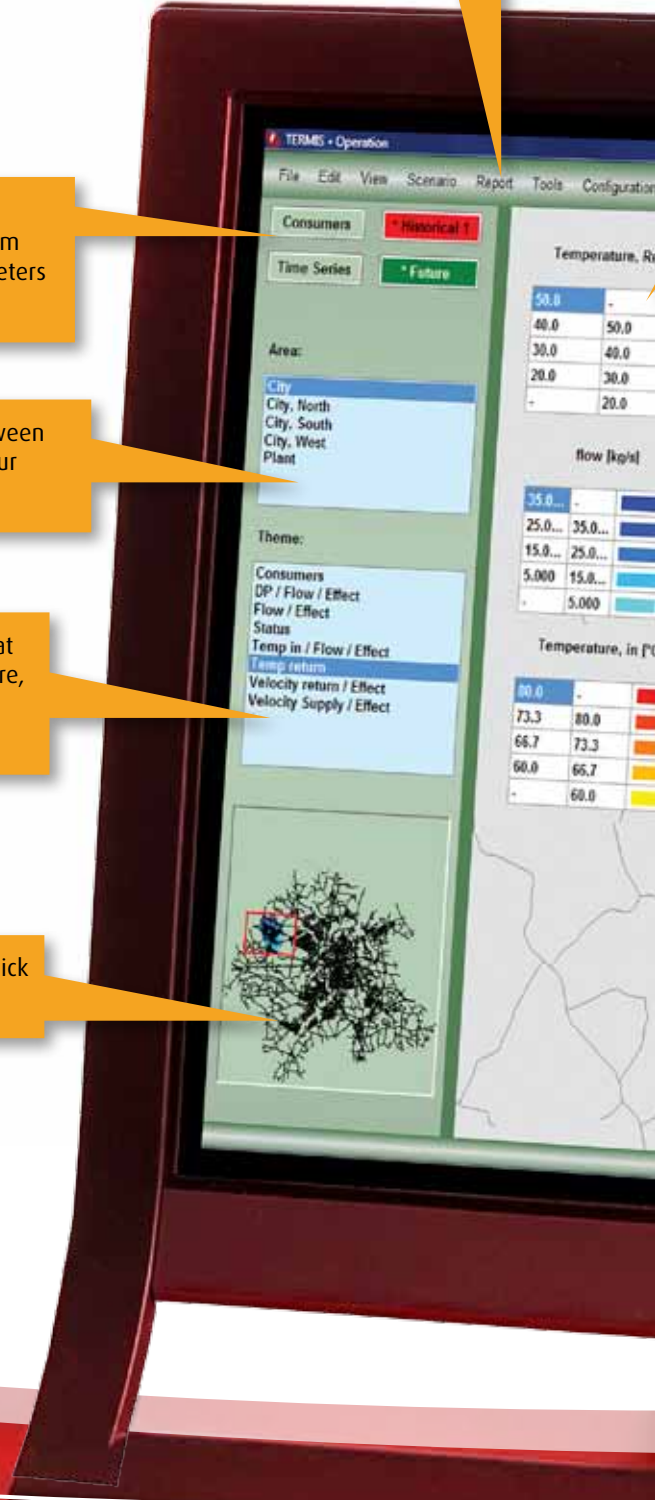
Menu access to advanced functionality such as reporting, etc.

Visual notification of alarms and events. Alarm set points for all parameters can be configured.

Quickly toggle between different areas of your network.

Quickly toggle between what you want to monitor – pressure, consumption, temperature, energy loss, etc.

Bird's eye view allows for quick maneuvering and overview.



Managing your District Energy Network

Insert custom objects such as legends to give you the information you need, when you need it.

View data from the past, the present or the future.

Search for objects in your model.

The view of your network is fully flexible, easy to navigate and can present data in any way you like.

Point and click to access data from accumulators, substations, valves, etc.



Software that Fits your Business, not the

Consumers

EASY ACCESS TO INFORMATION

- Empowered by easy access to information via the web
- Informed about any planned interruptions or irregularities in energy supply

Control Room

QUICK AND EASY ACCESS TO DATA

- Knowledge is stored in the network
- At-a-glance overview of current operational status for effective decision making

Call Center

INCREASED CUSTOMER SATISFACTION

- Easy access to consumer data improves handling and logging of complaints
- Display of planned changes, maintenance, etc. provides prompt and accurate information for consumers



Consultant Specialist

THE BEST ADVICE

- Comprehensive documentation gives basis for accurate calculation rather than trial and error
- The correct valves can be closed and optimal pipe dimensioning assessed

Management

OVERVIEW AND ACTIONABLE INSIGHT

- Provides the full picture
- Instant view of supply and return temperatures
- Better understanding of the network permits more qualified decisions

Other way Around

Field Service

ALWAYS ON...

- Overview of current operational status assists planning and testing
- Automatic customer notification saves time

Engineering and Planning

SAVE TIME

- New piping can be accurately dimensioned
- More effective planning can be achieved in connection with rerouting and service work
- Optimized contingency planning

Add-on Modules for Further Optimization

TERMIS is the basis for achieving the full overview of your network, but we also offer a number of additional features and modules, which enable you to achieve further savings on both operating costs and capital investments.

TEMPERATURE OPTIMIZATION

Minimizes the operation costs within the network by automatically advising or adjusting set points for inlet temperatures, while still ensuring that all consumers have at least the minimum guaranteed supply temperature. The accumulated energy in the network as well as changes in consumption and weather conditions are considered, and so are pumping costs and production costs. Regulation of the inlet temperature is done dynamically. Temperature Optimization typically reduces energy loss with a minimum of 10%, and consequently results in tangible ROI as well as reduction in CO₂ emission.

PUMP OPTIMIZATION

Helps you determine how the pumps in a distribution/transmission network should operate at any given time in order to minimize the total pumping and energy costs for the network, while still supplying sufficient energy to consumers. TERMIS Pump Optimization can result in savings of up to 20% of the pumping costs by combining pump efficiency, energy costs and energy consumption.

PRODUCTION OPTIMIZATION

Combines knowledge about the energy producers within the district energy network with hydraulic constraints and energy supply. You can subsequently identify the most economical way of operating the utility with the added benefit of a significant reduction in cost.

For a Cleaner Tomorrow

TERMIS support from 7-Technologies

Armed with practical experience and in-depth knowledge of hydraulics, thermodynamics and our software, our engineers provide assistance in case of problems while implementing or running our software.

Our annual customer surveys rate our support function as superior in its class. Additional information can be found on our website under Frequently Asked Questions (FAQ).

About 7-Technologies

7-Technologies was founded in 1984 and is an independent software company with a strong track record of profitable growth. Through our philosophy of overview and actionable insight, we provide District Energy Management solutions for any kind of district energy utility, any type of user, and any budget.

Our business is built on a strategy whereby software is sold and implemented through a network of more than 200 global partners and system integrators, or sold directly to the district energy utility.

Our software solutions ensure reliability, efficiency, and cost reduction for our clients, and we serve customers around the globe.

The original TERMIS software solution has been on the market since 1987. TERMIS is in daily operation in more than 500 cities and supplies reliable energy to more than 100 million homes.

7-Technologies is represented in North America, Europe and Asia.

