

## CUSTOMER CASE



# Odense Municipal DH

## District Heating

Denmark

Odense Municipal District Heating (OMDH) is one of the largest district heating companies in Denmark. OMDH was established in 1929. The goal of OMDH is to supply heat to its customers with the highest possible service level at the lowest possible prices, while creating an increased energy and environmental awareness in its customers. More than 95 % of all buildings in Odense (i.e. more than 80,000 residences) are supplied by heat from OMDH. Also plants, shops, sports facilities, hospitals, schools and other institutions are supplied from OMDH.

OMDH uses TERMIS from 7-Technologies as its real-time management system and has realized significant savings in the operation, planning and maintenance of the district heating system by using TERMIS.

### Odense Municipal District Heating

"We have saved approximately USD 7 mill, since we started implementing the TERMIS real-time management system in 1990. All this, from a total investment of approximately USD 1.5 mill. Savings that benefits our customers."

Per Rimmen,  
Managing Director, OMDH



### Quantification of savings

During the last 12 years, OMDH has invested in a TERMIS real-time management system that intercommunicates with SCADA, GIS, Billing and other corporate systems. The TERMIS real-time management system also includes online optimization of the operation of pumps based on weather forecast and consumption prognosis for the near future.

OMDH's expenses for the pump optimization module were recovered in less than three months by realized savings on the operation. The investment in the pump optimization module was approximately USD 45,000, and OMDH realizes annual savings of around USD 200,000 on pump operations alone.

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Due to using TERMIS to optimize the operation of the network and analyze different operational scenarios, OMDH shut down a peak load plant in 1993. This alone has contributed to savings of approximately USD 2 mill.

During a five-year period it has been possible to reduce the number of employees at OMDH from 91 to 82. This contributes to annual savings of approximately USD 300,000.

OMDH estimates that they have been able to reduce the time spent on building and maintaining hydraulic models by around 50%. This is also a contributing factor to being able to reduce the number of employees and thereby reduce wages.

Finally, OMDH has realized a very important improvement that cannot be quantified; namely a considerable amount of customer goodwill. OMDH is able to react much faster and more precisely to eliminate operational disturbances within the network via the TERMIS real-time management system. In addition, TERMIS contributes to improving the information level towards the citizens of Odense regarding the actual situation in the district heating network.

The philosophy at OMDH is that all employees are to have access to all relevant data, independent of their position in the organization. At OMDH, 7-Technologies has installed a browser version of TERMIS, which presents all relevant data in a very user-friendly manner.

From the browser all OMDH's corporate information systems can be accessed, including:

- GIS/maps
- Design, planning and maintenance
- Process models and simulation tools
- Consumer data and meter information
- Supplier catalogues and data
- SCADA system and operational parameters
- Real-time process optimization
- List of disconnected customers

The overall goal of OMDH is to use the latest technology within simulation software and related applications, and to distribute information across the entire organization, which includes:

- Combining static and operational data in a real-time environment
- Using one graphical user interface for all systems; TERMIS
- Maintaining investments by being at the forefront of the latest technology
- Providing access for all employees to all corporate information systems – currently, 80 out of 82 employees at OMDH are able to log on to all corporate information systems via the TERMIS browser.

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### Technical data

~	Max. consumption	800 MW
~	Yearly production	2.2 mm MWh
~	Temperature	82-95 °C
~	Max. pressure	
○	Transmission	25 bar
~	○	Distribution 6 bar
	Pipeline network	
○	Transmission 120 km	120 km
~	○	Distribution 1500 km
	Peak load stations	
○	No of stations	20
○	Boilers	56
~	Capacity	750 MW
~	Coverage	
○	District heating	95 %
○	Natural gas	3 %
○	Other	2 %

For further information, please visit [www.fjernvarmefyn.dk](http://www.fjernvarmefyn.dk).