



The District LAB offers extensive experimentation and testing opportunities for grid operators and energy suppliers as well as system planners and component manufacturers of future-oriented innovative heating grids.

YOUR BENEFITS

- Highest flexibility through »hardware in the loop« units
- Mapping of the real behaviour of components in heating grids
- Validation of control concepts, control systems and simulation models
- Testing of operating models without consideration of a supply order

SERVICES AND OFFERS

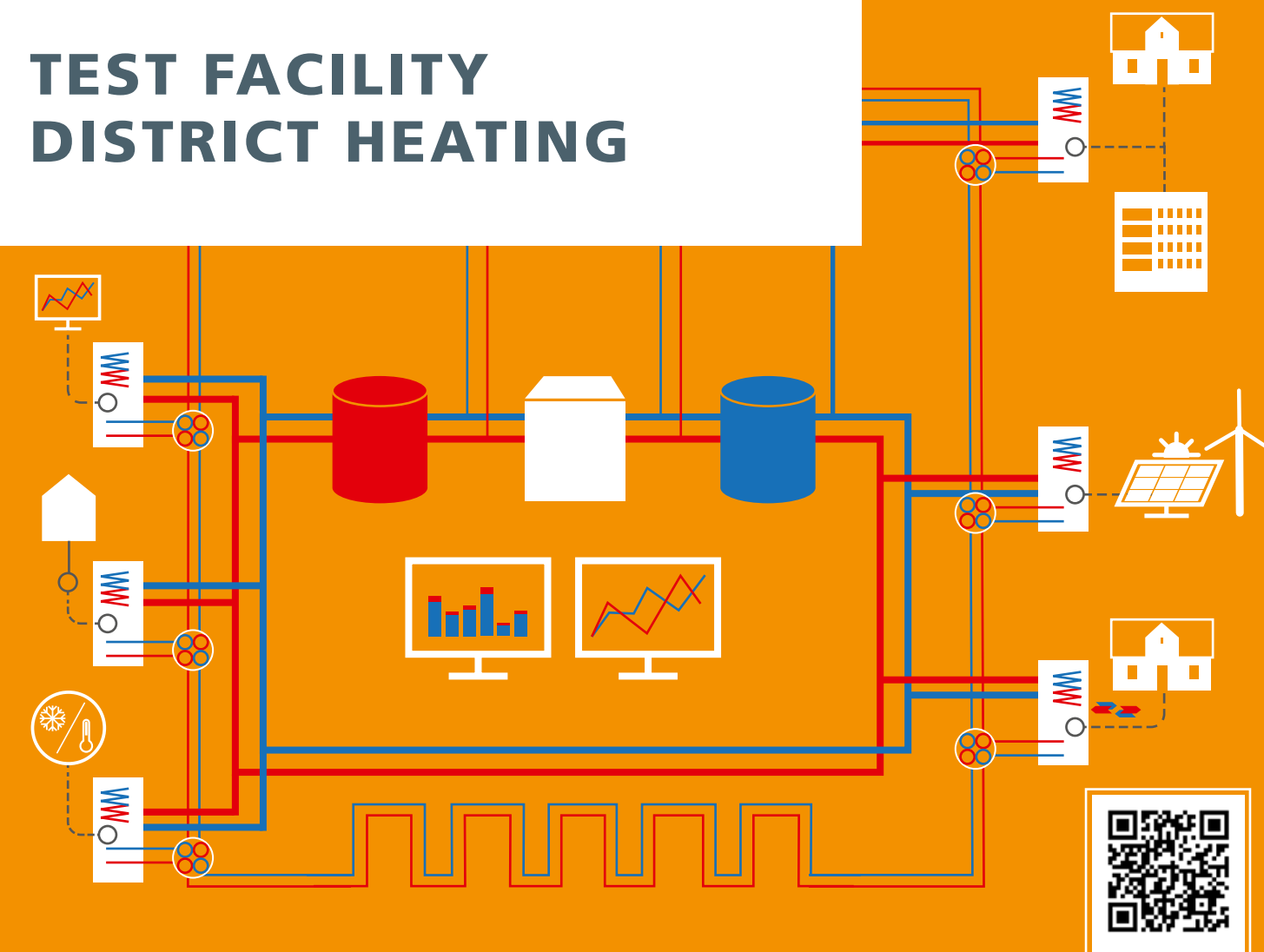
- Validation, measurement and optimization of customer-specific components under the conditions of realistic supply scenarios
- Thermal-hydraulic real-world tests for the evaluation of district heating supply strategies
- Real tests of the technical service life of pipelines (incl. bedding and installation technology)
- Development and validation of new operation and control concepts
- Simulation of district heating systems
- Consulting, training and knowledge transfer



District LAB

»Develop and test products and concepts for the district heating supply of the future!«

TEST FACILITY DISTRICT HEATING



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District LAB

DISTRICT HEATING SUPPLY ON A DISTRICT SCALE

»LOW-TEMPERATURE DISTRICT HEATING IS A KEY TECHNOLOGY FOR THE EFFICIENT INTEGRATION OF RENEWABLE ENERGIES AND WASTE HEAT INTO OUR ENERGY SYSTEMS.«*

Reliably develop and test new technologies for district heating supply

Due to the intended decarbonization of the heat supply, the district heating systems are subject to strong changes through necessary transformations and expansions, especially in the urban context.

To support these developments, Fraunhofer IEE is building and operating the District LAB test center.

The main components of the District LAB are a flexible test network with connected experimental and test benches for heat generators for the district scale as well as a test bench for pipeline tests.

Through several hardware-in-the-loop units, as well as through a digital control and control system, operating conditions can be accurately set and measured at any point in time. The flexible and modular design of the District LAB allows custom-fit test setups for different requirements.

Together with the field-proven experience of Fraunhofer IEE researchers and technicians, the District LAB enables transparent and consistent experimental development, development, investigation and validation of solutions, products and operating models in grid-based heat supply.

*Final Report International Cooperative Project » IEA DHC Annex TS1: Low Temperature District Heating for Future Energy Systems«

