

Local Success Stories	
Country	Germany

#	Name of Example	Location
1	District Heating Development Project Mannheim	Mannheim

The Initiative

MVV Energie AG (MVV Energy plc) wants to significantly develop the District Heating supply in the area of Mannheim, Germany. The current market share of District Heating in Mannheim is at around 59 %. MVV Energie wants to raise that share to 70 %. This translates to 4.000 buildings with 20.000 apartments being connected to the District Heating network.

In close cooperation with the city of Mannheim the concept was approved after extensive analysis. The extensive analysis comprised the company as a whole, factoring in declining sales of natural gas among other things (MVV Energie also sells natural gas) and the market potential in the region of Mannheim. Driving forces behind the initiative was the incorporation of the District Heating development project into the climate protection programme of the city of Mannheim and the contribution of District Heating based on CHP for climate change goals on all levels, regional, federal and European. For the company the fact that it can operate in a liberal, unregulated market was another criteria since such an environment leaves room for the expected growth of District Heating, all while providing secure, environmental friendly and reasonably priced heating for the customers. The favourable legislative framework, described in detail before, was another driving force behind the initiative.

The project consists of different measures to achieve the main goal of raising the market share of District Heating to 70 %. The concept marks a change in the basis of decision-making. There is a transition from network-based decision processes to area based decision processes. Existing networks are being intensified in the whole area of Mannheim. On top of these intensification measures the network is also extended in different areas of the city. In a first step the areas of Rheinau, Neckarstadt and Käfertal will be developed on a large scale. Around 30 km of new heating pipelines will be laid. In order to convince customers to switch from their current heating solution to District Heating an incentive programme is introduced by MVV Energie. There is a bonus paid for each kW of the connected load and there is a lump sum being paid if an old oil tank needs to be disposed of. On average all buildings falling under the incentive programme's criteria are paid a bonus of EUR 2.700 with a maximum of EUR 5.500 if a central heating system (based on oil or gas) is already in place, EUR 10.500 if no central heating system is installed and EUR 1.260 for buildings with a connected load below 30 kW. This incentive programme is accompanied by a marketing and communication campaign, informing customers about the benefits of District Heating and CHP and how heating with District Heating is beneficial for fulfilling legal criteria on energy efficiency and the use of renewable energy sources in buildings. The marketing and communication strategy also involves a contribution towards the city of Mannheim's climate protection programme and a combination of efforts to help the city of Mannheim to reach its climate change goals.

Nature of the impact

District heating is currently reducing CO₂-emissions in Mannheim by approximately 300,000 t annually. The District Heating Development Project Mannheim will reduce CO₂-emissions by an additional 17,600 t annually. Likewise primary energy savings attributed to District Heating amount to 1,955,000 MWh annually in Mannheim, with the District Heating Development Project Mannheim adding an additional 115,000 MWh of primary energy saved per year.

On top of these ecological benefits the District Heating Development Project Mannheim also has a positive

effect on society, especially in the region itself – contributing to the regional value creation. The investment volume of the District Heating Development Project Mannheim amounts to EUR 50 M, whereas most of the contractors are located in the Mannheim region. The District Heating Development Project Mannheim initiates further investments in the renovation and retrofitting of heating systems, which account for another EUR 120 M. Accompanying refurbishment measures in the building stock for heat insulation and other measures add up an additional EUR 30 M.

The effect on employment translates to 4,000 man-years. Over 50 % of the effect on employment will affect the Mannheim region.

The general design characteristics of the District Heating system in Mannheim are as follows:

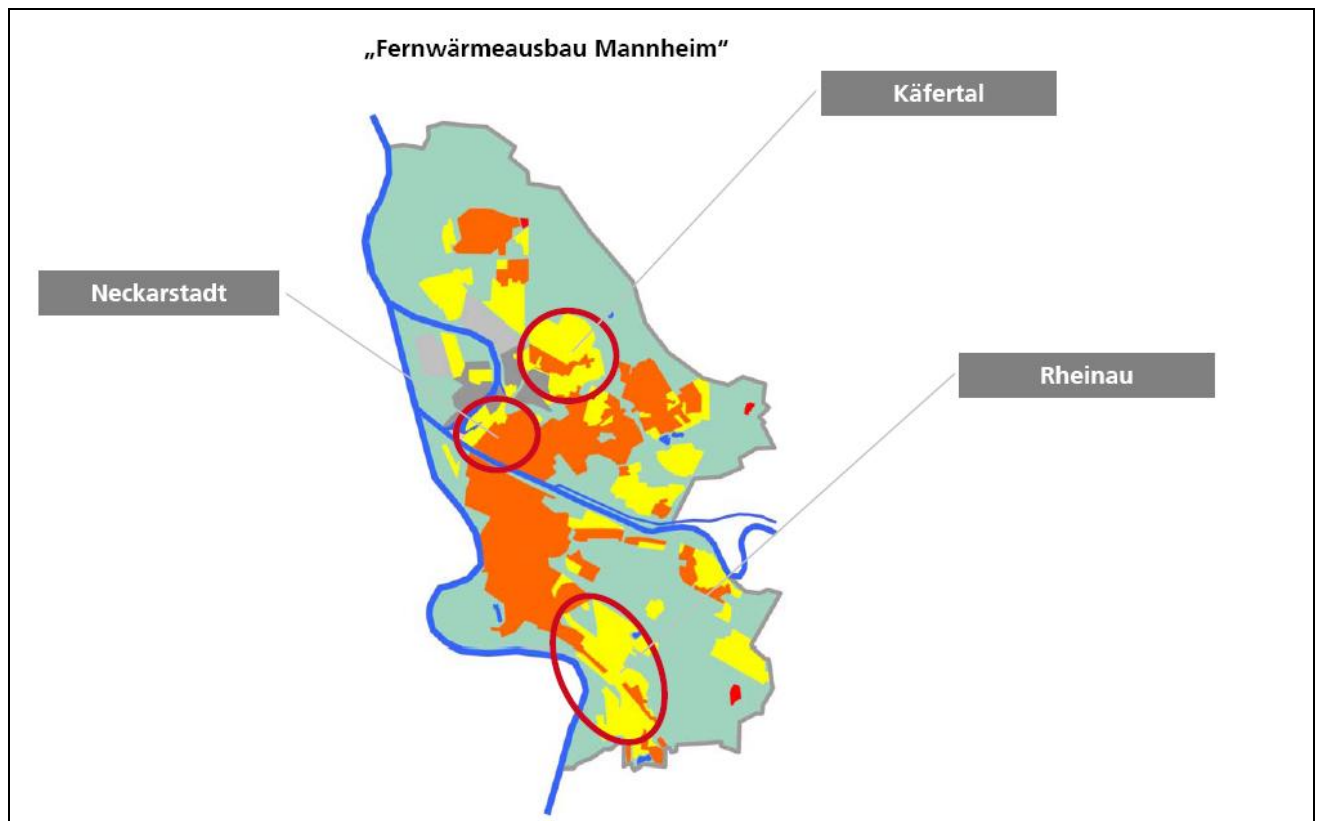
Number of apartments connected to District Heating in Mannheim	98,000
Connected load	1,884 MW
District Heating grid (including a connection to Heidelberg, consisting of 7 km)	509 km
Heat peak load (21 December 2007)	829 MW
Number of plants	3
Heat delivery	1,677 M kWh

These figures are based on 2007/08 and do not include the process steam business, which is part of MVV Umwelt's business.

The three plants supplying the District Heat to the network are:

Mannheim Large Scale Power Plant	1,000 MW _{th}
Northern Feed-In (reserve and peak demand)	100 MW _{th}
Heat Plant Vogelstang (reserve and peak demand)	100 MW _{th}

The initiative will help the city of Mannheim to achieve their climate change goals while still maintaining a secure, environmentally friendly and reasonably priced supply of heat for the city.



Main Barriers

Due to the efforts undertaken in communicating the ideas of the District Heating Development Project Mannheim the project has faced no resistance. Depending on the circumstances and the framework in place additional stages of expansion are being considered for the future (after 2014).