



Bundeskartellamt

Final Report Sector Inquiry District Heating

Summary

August 2012

Bundeskartellamt
Kaiser-Friedrich-Straße 16
53113 Bonn

Courtesy translation. Only the German version is authentic.

Executive summary

- 1 District heating is used to heat approx. 14 % of housing stock in Germany and is therefore of considerable economic importance. Whilst liberalisation in the electricity and gas markets has had a positive impact on competition and consumer prices, there has been little structural change in the district heating sector. District heating networks are closed circuit systems for local supply based on water or steam, which offer little option for third-party access or transmission into other network areas. The incumbent local heat supplier is therefore usually the only provider within the respective network area. Against this background the aim of the Bundeskartellamt's sector inquiry was to find out what impact this monopolistic supplier structure and hence lack of competition between district heating suppliers within a network has on competitive behaviour and market outcome. In the inquiry, 74 companies were asked about their district heating business. In total, data was collected on networks, heat generation and sales structures in approx. 1,200 network areas, covering approx. 38 TWh (thousand Gigawatt over one hour) of heat supplied to household and small business customers (hereafter: private customers), which corresponds to approx. 80 % of total heat supplies to these customers throughout Germany.
- 2 Traditionally, district heating suppliers are vertically integrated companies, i.e. they operate the heat distribution network and supply (usually self-generated) heat to customers connected to the network. These companies are therefore active on several markets. Firstly, they operate on the market for the transport of heat through the network and secondly, on the markets for the supply of heat to industrial/commercial customers, large distributors and household and small business customers. The sector inquiry focused mainly on the second market area. However, aspects of network access were also examined and the role of the local authorities in granting rights of way analysed.
- 3 In the opinion of the Bundeskartellamt and Federal Court of Justice, the market for the supply of district heating to customers constitutes a separate product market and is not part of a general heating market. From the moment a consumer decides on a certain heating system, he automatically becomes a customer on the market for the supply of the respective heating fuel, be it gas, oil or district heat. A certain amount of competitive pressure is exerted by the respective neighbouring heating fuels markets. This opinion is supported by the fact that prices in network areas where district heating is mandatory are on average higher than in other areas where the customer can decide against district heating as a form of heating at the time of the initial connection or

(under more difficult conditions) at a later date. However, once a decision in favour of a heating system has been made, the effort involved in switching to another system prevents competitive pressure from neighbouring markets from effectively limiting the scope of the respective district heating supplier for setting prices. In geographic terms the market is limited to the local district heating network because, unlike in the electricity and gas markets, supra-regional transmission to other district heating network areas is not possible.

- 4 The supply of heat via so-called contractors can be defined as a separate product market from the classical supply of network-based district heating. In the case of contracting, a service provider acting on his own account supplies customers with heat for one or several objects over a specific period against regular payments. From a consumer viewpoint, a changeover from classical district heating to the supply of heat by a contractor may be less complicated and perhaps cost less than a changeover to another form of heating such as oil or gas. However, the switch over to a contracting solution requires considerable planning and time, which raises serious doubts about defining the market as a uniform product market.
- 5 The incumbent provider holds a dominant position on the market for the supply of private customers with district heating, i.e. his scope for action is not controlled by competition. Until the customer's initial choice of a heating system has been made, the district heating supplier competes with suppliers of oil, gas or other fuels in a so-called competition between heating systems. However, once the choice has been made, substitutability with other heating fuels ceases because they cannot be used for the customer's heating system. The long contract periods which are common in district heating strengthen the dominant position of the incumbent supplier because its customers cannot be won for an alternative form of heating for many years. If connection to and the use of the municipal district heating system is compulsory in a certain district or there is a similar obligation under private law enforcing this, competition between the different heating systems can no longer take place. In this respect the district heating supplier has a legally protected monopoly position. The sector inquiry has shown that on average slightly higher revenues are achieved in such districts. Third party access to a district heating network, which could weaken the incumbent's market position, has proved difficult on account of the closed circuit system. Such transmission possibilities will probably remain the exception in the long term and therefore have little influence on competition.
- 6 The Bundeskartellamt has examined the sales proceeds (total revenue) earned by the district heating providers in their individual network areas from sales to private customers. Its findings show that the existing scope for price-setting is not necessarily

used to the disadvantage of these customers. On first examination it could not identify a generally excessive price level in the district heating sector. On the contrary, the results give a very differentiated picture of price levels. The difference in revenue earned from the supply of heat to private customers is substantial depending on the network area.

- 7 To facilitate comparison, the Bundeskartellamt divided the network areas into different categories depending on the length of the network (and accordingly, size of the network area). One major factor established from the sector inquiry is that larger network areas tend to be considerably cheaper for the consumer. In 2008 the average net revenue in the small network group (1 to 10 km) was 10.1 cent/kWh, in the medium-sized network group (10 to 100 km) 8.9 cent/kWh and in the large network group (larger than 100 km) only 7.0 cent/kWh.
- 8 The differences in revenue and prices between the individual network areas are substantial: The most expensive network areas were more than one third higher in price than average prices in the respective comparison group; in the small and medium-sized networks, the difference in price to the cheapest network areas in the comparison group was well over 100%, and in the large networks still above 50%. These differences are considerably greater than those established in the gas or electricity end consumer markets, which are characterized by competition. These figures certainly gave grounds for an initial suspicion of abusively excessive pricing.
- 9 The Bundeskartellamt examined to some extent whether structural factors in a network area could be the cause of the higher prices. A relevant factor here could be the capacity utilisation rate in the respective sales area because network costs for the supplier amortize more quickly in areas where the revenue per meter of pipeline is higher. In addition to the network infrastructure, the procurement of fuel is another major cost factor in the supply of district heating. Here again, there are considerable differences. Coal has proved to be the lowest cost fuel, whereas the use of gas or oil involves much higher costs. In cases where suppliers themselves procure district heating from third parties, prices are roughly at the same level as gas. In view of this, it is astonishing that, at least during the examination period, there seemed to be no direct correlation between the fuel used and revenue levels. This would mean that end consumer prices did not necessarily develop parallel to fuel prices. One reason for this could be the contractual cost escalation clauses, which are often based on the price development of other fuels than on the one which is being used.
- 10 As of 2013 costs for the acquisition of CO₂ certificates are also expected to have an effect on consumer prices. Small heat generation plants producing up to 20 MW will

still be exempted from emissions trading. Large heat generation plants, on the other hand, will require CO₂ certificates from 2013, which will cause them considerable additional costs. In the Bundeskartellamt's view this is an unjustified discrimination which will place the large district heat generation plants at a disadvantage compared to oil and gas heating systems.

- 11 District heating suppliers generally have a right under competition law (§ 19 (1) in conjunction with (4) sentence 4 of the Act against Restraints of Competition (*Gesetz gegen Wettbewerbsbeschränkungen, GWB*) to use the network of the incumbent district heating network operator and supplier to supply heat to their own customers. However, this right of access to the incumbent's network remains within the bounds of what is technically feasible and can be reasonably expected from the network operator. Unlike electricity and gas, district heating is provided in a closed circuit system with flow and return pipes, into which the input of water or steam by third parties is technically difficult. An inquiry conducted by the Bundeskartellamt within the European network of competition authorities (European Competition Network) has shown that the transmission of district heating by third party heat generators plays practically no role within Europe; in contrast to electricity and gas, there is no special transmission system for district heating, even in regions in which the district heat supply level is much higher than in Germany. In all probability, cases of transmission will remain the exception in future because of the complexity of the operation of heat networks and the difficulty posed by the integration of new generation plants.
- 12 The installation and operation of heat networks usually requires the use of municipal land. District heating suppliers and network operators therefore have to acquire the necessary public rights of way from their municipality. The municipality, in turn, is the dominant supplier on the market for the allocation of the necessary rights of way and as such also has to observe the provisions governing abusive practices under competition law.
- 13 This means, firstly, that the fees for the allocation of rights of way should not be abusively excessive. Although the sector inquiry has shown that, in comparison to gas, for example, fees have more or less stayed at a low level, it remains to be seen whether this will change with the re-allocation of rights of way. However, there are also considerable deviations between the individual municipalities, which could be an indication of abusive pricing.
- 14 Secondly, municipalities must grant all district heat suppliers rights of way in a non-discriminatory manner. If with the assignment of the rights of way a heat supplier has gained an exclusive position as the only heat distributor, the municipality has to

allocate the rights of way in a transparent and non-discriminatory selection process. This is the case, for example, if an applicant is granted the exclusive right to supply heat in a particular district in addition to the right of way, for instance, by way of a restricted easement. In such cases, abuse proceedings would also be conceivable.

- 15 All in all, the sector inquiry has revealed only a few cases of abusively excessive pricing and revenue earned from district heating which would require further action. However, there are some substantial differences in price to the average of the companies surveyed in the respective comparison group. Naturally, in a sector inquiry investigation cannot be carried out to the same depth as in specific abuse proceedings. Cases of abusively excessive prices should therefore not be automatically assumed in those network areas in which revenue is well above average. Irrespective of whether structural features of a network area may fully explain the difference in revenue, a comprehensive evaluation has to be made of all the positive and negative factors affecting the supplier in question.
- 16 The Bundeskartellamt now plans to examine more closely those network areas with the highest revenue in 2007 and 2008 and to promptly initiate abuse proceedings against the respective district heat suppliers. It will need to establish data for 2009 to 2011 for this purpose. Discussions are to begin in good time with the companies concerned in order to clarify important aspects at an early stage. Should the evaluation of the information confirm the initial suspicion of abusive practices, the Bundeskartellamt will inform the public accordingly.
- 17 The competitive situation in the district heating sector will not change significantly in the foreseeable future. The Bundeskartellamt therefore assumes that due to insufficient competitive control in the market itself, random checks and proceedings against companies demanding very high prices will be necessary. In order to facilitate abuse control, it would therefore be useful to include district heating as an area of application under § 29 of the GWB. However, the Bundeskartellamt does not consider it advisable to unbundle and regulate district heating networks. Unlike gas and electricity, heat cannot be transported from one regional network to another. Also, heating networks are basically designed as closed circuit systems with demand-specific heat generation. The access of third parties to existing networks for the transmission of heat to their own customers will therefore at best remain the exception in future. Against this background a general unbundling of network operation, heat generation and distribution would only marginally improve competitive conditions in this sector. At the same time, it would involve considerable administrative costs and possibly synergy losses.

18 An intensification of competition between different systems would also be desirable since this would exert pressure on pricing in the district heating sector. To achieve this, greater transparency in district heating prices should be aimed at by publishing these on the Internet and shortening the periods of contracts with private end consumers. It is also important that a level playing field be created for competition between heating systems. Compulsory connection to the district heating system should remain the exception rather than the rule. District heating suppliers should also be exposed to competition from small and highly efficient combined heat and power plants (CHP) to a greater extent than required by the Combined Heat and Power Act (*KWKG*). On the other hand, larger district heat generation plants should not be placed at a disadvantage in the competition between different systems as regards the obligation to purchase CO₂ certificates.