



Department for
Business, Energy
& Industrial Strategy

INTERNATIONAL HEAT NETWORKS

Market frameworks research – Regulatory
document review

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1 Introduction

BEIS has commissioned CAG Consultants, working with Nordic Heat and Robin Wiltshire, to review contemporary market frameworks for heat networks. Phase 1 is a literature review of international experiences, with recommendations on key lessons for the UK. Focusing on markets and issues of UK relevance identified in Phase 1 and seeking to plug knowledge gaps in the literature review, Phase 2 is an in-depth regulatory document review and series of semi-structured interviews with stakeholders.

This report summarises the results from the Phase 2 regulatory document review.

2 British Columbia

British Columbia cedes regulation of municipally owned schemes to the municipality. “Public utility” privately owned schemes are subject to Provincial regulation. District Heating domestic customers, and consumer metering, are usually if not always at building level – often “Stratas” (communally owned and maintained residential buildings). The regulatory framework in its current form is still evolving but reasonably well established. The main challenges are around securing investment capital and cost competitive decarbonisation.

2.1 Key documents

Regulatory framework
Regulators remit, duties and powers
BCUC is governed by the Utilities Commission Act and has responsibilities under the Administrative Tribunals Act
Regulatory framework for District Heating
Thermal Energy Systems Framework ¹
Licenses / permits
Certificate of Public Convenience and Necessity Application Guidelines ²
Resource planning
Resource Planning Guidelines ³

Municipal scheme bylaws – examples
Separate municipally-owned entity
Alexander District Energy Utility. Bylaw no. 8641 ⁴
Oval Village District Energy Utility. Bylaw no. 9134 ⁵
City Centre District Energy Utility. Bylaw no. 9895 ⁶

¹ BCUC, 2015. [Thermal Energy Systems Framework. Order G-27-15.](#)

² BCUC, 2015. [Certificate of Public Convenience and Necessity Application Guidelines. Order G-20-15.](#)

³ BCUC, 2003. [Resource Planning Guidelines.](#)

⁴ City of Richmond, 2010. [Alexander District Energy Utility. Bylaw no. 8641.](#)

⁵ City of Richmond, 2014. [Oval Village District Energy Utility. Bylaw no. 9134.](#)

⁶ City of Richmond, 2018. [City Centre District Energy Utility. Bylaw no. 9895.](#)

Private schemes – bi-party agreements
Infrastructure agreement – example
Infrastructure agreement by and between the University of British Columbia and Corix Multi-utility services Inc ⁷
Energy services agreement – example
Energy services Agreement between building developer and Corix ⁸

Technical codes – examples
For District Heating-ready buildings
A design guide for connection to District Energy. District Energy in Richmond Oval Village ⁹
A guide for connection to District Energy. Alexander District Energy Utility ¹⁰
British Columbia Step Code to incentivise buildings energy efficiency beyond the basic standard
Leadership in Energy and Environmental Design – a green building certification scheme
For DH providers
Certification for boilers, heat exchangers, pumps, various standards, overseen by Technical Safety BC

Rate setting process
For municipal schemes – example
False Creek Neighbourhood Energy Utility (“NEU”) 2019 Customer Rates – analytical report to council for approval ¹¹
For private schemes - example

⁷ 2014. [Infrastructure agreement by and between the University of British Columbia and Corix Multi-utility services Inc.](#) BCUC filing copy.

⁸ 2014. [Energy Services Agreement](#). Draft.

⁹ Lulusland Energy Company, Corix Utilities, undated. [A design guide for connection to District Energy. District Energy in Richmond Oval Village.](#)

¹⁰ Richmond, undated. [A guide for connection to District Energy.](#) Alexander District Energy Utility.

¹¹ City of Vancouver, 2018. [False Creek Neighbourhood Energy Utility \(“NEU”\) 2019 Customer Rates.](#) Administrative report.

Rate setting process

Revenue Requirements and Cost of Service Rates Application for the Thermal Energy Service to Delta School District No. 37¹²

2.2 Regulatory framework

Private schemes

In British Columbia private schemes (called a “public utility”) fall under the remit of the British Columbia Utilities Commission (BCUC). Municipally-owned schemes serving customers within its administrative boundaries are self-regulating – this is described in the following section.

BCUC is an independent agency of the government of British Columbia. It regulates energy utilities, as well as within-Province pipelines, reliability of the electricity transmission grid and the insurance body for BC’s compulsory car insurance. Its costs are covered by a levy on regulated businesses.

BCUC’s regulation of District Heating is tiered, light touch for smaller and communally-owned schemes, more comprehensive for larger schemes. Privately-owned but self-supplied and geothermal schemes are exempt from BCUC oversight.

There are also exemptions from parts of the Act for smaller systems, as defined by capital construction costs and for Strata Corporations – that divide buildings or land into common and individually owned parts – that self-supply. These projects have no requirement to register with or report to BCUC. BCUC will only investigate complaints for exempt systems if it determines they are not exempt.

Stream A and Stream B schemes are designated by their capital costs.

Stream A are exempt from the permitting system, the Certificate of Public Convenience and Necessity (CPCN), from rate regulation and from long term resource planning. But they do have an obligation to provide safe and reliable service, and to set out clearly Terms and Conditions and consumer charges in a long-term contract. Complaints can only be determined in these areas. Strata corporations must complain on behalf of members. Stream A schemes must register with BCUC, which in turn leads to an Order of exemption from CPCN. They must also submit annual reports which are used amongst other things to calculate their BCUC levy.

Stream B need to register and report annually to BCUC. They must apply for both CPCN and rates approval. CPCN needs to be in place before construction begins and is also needed for purchasing or extending a scheme. Rates must be approved before billing any customers. Amendments to rates must also have approval. Rates applications are reviewed in a public process where stakeholders can register as “interveners”. It is an involved process where rates need to be justified and set so as to avoid rate shock (an increase greater than 10%). There are obligations to maintain capital reserves for essential maintenance and back-up supplies.

¹² FortisBC Alternative Energy Services Inc. 2018/2019 [Revenue Requirements and Cost of Service Rates Application for the Thermal Energy Service to Delta School District No. 37](#) ~ Project No. 1598949.

Municipal schemes

Municipal schemes are self-regulated, although sometimes there may be an appointed independent panel to oversee schemes and approve rates.

Scheme-specific bylaws establish the service area and, as far as the literature indicates, always mandate new buildings to connect. They also establish key responsibilities for the District Heating provider and connectees, as well as rates, metering and billing.

A typical process for developing and operating municipal schemes, with commentary on key legal agreements and permissions, is described by Lulu Island Energy at the 2018 IDEA conference.¹³ This encompasses the use of bylaws for compulsory connection, establishing access to land, mechanical design and approval requirements and setting rates and fees; establishing energy services, O&M and land use agreements; and management of risks through contractual documentation and co-ordination for on-time delivery.

Codes, agreements, specifications

An Energy Services Agreement will provide detailed rights and obligations between the District Heating provider and the customer (building). This includes:

- Asset ownership and ownership boundaries
- Rights and responsibilities for the provider
- Rights and responsibilities for the customer (maintain and repair customer assets, provide access, pay rates)

Building codes take on a particular significance for District Heating. British Columbia commentators talk about the Leadership in Energy and Environmental Design (LEED) code, an international green building certification which has certified projects in more than 167 countries. It is point-based and energy performance is worth more than any other category¹⁴. There is also a voluntary Provincial level Step Code that builds on existing mandatory energy efficiency standards, and credits District Heating as an alternative to improved energy efficiency.

¹³ Rina Thakar, Kevin Roberts, 2018. [Municipal DE systems. Managing issues through legal documentation](#). IDEA 2018, Vancouver.

¹⁴ Jennifer Sanguinetti, 2018. [LEED and District Energy](#). IDEA 2018, Vancouver.

3 Norway

Norway operates light touch regulation via a licensing regime that is administered by a departmental body sitting under the Ministry of Oil and Energy. Mandatory connection, price and planning-type conditions are the main focus of regulation, with some additional scrutiny over security of supply, emergency preparedness and decarbonisation. The licensing regime is well established but is currently under internal review.

3.1 Key documents

Regulatory framework
Regulator
The Energy and Water Resources Department ¹⁵ of the Ministry of Oil and Energy ¹⁶
Rates and complaints
The Energy Act, mostly Chapter 5 ¹⁷
Licenses / Permit Requirements
Provided for in The Energy Act, mostly Chapter 5
Example licenses ¹⁸
Mandatory Connections
Planning and Building Act, Section 27-5, 2008 ¹⁹

Technical codes – examples
For District Heating-ready buildings
Old regulations TEK 10 ²⁰ required DH adaptation, but no longer in new regulations, TEK 17 ²¹

¹⁵ [Water Resources and Energy Directorate. Licensing.](#)

¹⁶ Ministry of Petroleum and Energy, [Section for energy use and energy certificates.](#)

¹⁷ Energy Act (Lov om produksjon, omforming, overføring, omsetning, fordeling og bruk av energi), [Kap. 5. Fjernvarmeanlegg](#), 1990.

¹⁸ [Choose "Fjernvarme."](#) Most licensees are longstanding and documents relate to license extensions and other changes.

¹⁹ [The Planning and Building Act \(Lov om planlegging og byggesaksbehandling\), Section 27-5, 2008.](#)

²⁰ Regulations on technical requirements for building works ("Byggteknisk forskrift - TEK10"), 2010.

²¹ [Regulations on technical requirements for construction works](#) ("Byggteknisk forskrift - TEK17"), 2017.

3.2 Regulatory framework

Rates

Chapter 5 of the Energy Act regulates the licensing of District Heating plant, mandatory connections and delivery, rates and regulations around shut downs. The Act leaves certain matters to be decided by the Ministry of Oil and Energy such as size thresholds for a license.

Rates for district heating are regulated in Section(s) 5.5, which states that *“The charge for district heating can be calculated in the form of a connection fee, a fixed yearly charge and a charge for the heat that is used. The charge for district heating shall not exceed the charge for electrical heating in the same supply area.”*

Licensees must submit prices and changes to prices to the Ministry of Oil and Energy.

Where a customer is subject to mandatory connection under Section 27-5 of the Planning and Building Act 2008, a customer can appeal against prices to the Ministry of Oil and Energy. Where subject to Section 27-5, a customer must pay connection and fixed fees irrespective of whether heat is used.

Licences and licence conditions

According to the Energy Act s5.1, a district heating plant has to have a license to be built and operated, rebuilt or expanded. The energy act does not specify clearly which requirements are to be fulfilled in order to be granted a license; but leaves this up to the Ministry of Oil and Energy. It is also up to the Ministry of Oil and Energy to decide for which size of plant (by output or number of customers) the provisions in the Energy Act are applicable.

The current threshold is 10MW. Plant below this size wishing to avail of mandatory connection also need a license. A typical license has around 3 pages of conditions, including:

- Duration of license, commissioning date
- Reporting obligations including “the accrued investment costs in heat production and district heating networks and annual heat sales.”
- A requirement to use in-house staff “The licensee must have their own employees to manage the company daily.”
- Appearance and environmental protections
- Emergency preparedness
- Renewable energy, for example: *“The licensee must account for renewable share in its annual district heating production in 2019 and 2026. A report shall then be presented showing consumption of different energy products, including quantity consumed biogas and natural gas, which are included in the total heat / energy supply from the plant. For renewable share below 95%, a plan for how the licensee plans to phase out fossil fuels must be submitted. The NVE may, after a specific assessment, impose measures that increase the renewable share in the district heating plant.”* This information must also be sent to affected municipalities.

The Ministry of Oil and Energy may allow license-exempt supplies to public buildings, industrial, commonly owned properties / housing co-operatives.

According to s5.3, if a district heating plant has a heating system that can be connected, the Ministry may order the plant to connect with other district heating plants.

Through s5.4 the licensee is required to supply customers with district heating, either themselves or through agreements with other suppliers in accordance with the plan or as agreed upon with the customers. The Planning and Building Act provides rules regarding a building's connection to infrastructure, including connection to district heating networks.

Mandatory connections

S27-5 of the Planning and Building Act 2008 states that if a building is to be built within a license area for district heating, it may be defined in plans. Plans, in this context, refers to plans pursuant to the Planning and Building Act 2008. These are:

- Central government planning regulations (s6.3)
- Regional planning regulations (s8.5)
- Municipal planning regulations (s11.1)

If building work is to take place within a licensing area for district heating, and a connection obligation is determined in a plan, the building work needs to be linked to the district heating plant. The municipality may make partial or total exemptions from the obligation to join, where it is documented that use of alternative solutions for the measure will be environmentally better than affiliation.

Municipalities are responsible for decisions regarding mandatory connection to district heating. The Ministry of Oil and Energy is, through s27-6, allowed to issue additional regulations regarding connection to district heating and District Heating-ready building adaptation.

Where a s27-5 Planning and Building Act mandatory connection is applied, the District Heating Network can be ordered by the Ministry to provide backstop supplies if a scheme is late. In any event the licensee has duty to provide heat to customers, notwithstanding extreme circumstances.

Technical standards

District Heating was before 2016 more closely regulated in the Regulation on technical requirements for buildings - TEK10. In s4.8 it is stated that buildings with mandatory connection to district heating are required to have heating systems adapted for connection to district heating. This requirement was removed in the new Regulations on technical requirements for construction works - TEK17 and there are no longer specific requirements for heating systems adapted for connection to DH.

TEK10 also included minimum requirements for alternatives to electric heating, stating in s14-7 that buildings are to be built so that minimum 40% (60% for buildings over 500 m²) of the heat demand can be covered by alternative heating sources than direct electricity. This requirement was also removed in TEK17. There are therefore no current regulations specifically concerning the connection and adaptation to district heating, but there is still a requirement in s14-4

concerning flexible heating systems and adaptation to use of low temperature heating for buildings over 1000 m².²²

²² [Regulations on technical requirements for construction works](#) ("Byggteknisk forskrift - TEK17"), Chapter 14, Section 14.4, 2017.

4 Finland

Finland has no District Heating regulatory regime. The Competition Authority has investigated the sector, recently ruling that mandatory connection anti-competitive. The industry trade body Finnish Energy has a voluntary, quasi-regulatory function, developing industry-standard recommendations on technical codes, customer supply conditions, certification and registering and publishing third party heat sales.

4.1 Key documents

Regulatory framework
Mandatory Connections
Obligation to join district heating network until January 2019, s57a of the Building Law 1129/2008. ²³ S57a repealed from January 1st, 2019 through L 9.11.2018 / 873. ²⁴
Supply conditions
Provisions on billing and information contained in bills in the 2014 Energy Efficiency law ²⁵
Competition Authority
Regulation review, DH as a case study ²⁶
Investigation into DH pricing ²⁷
Example investigation, connection costs ²⁸
For Finnish Energy, consultant's interpretation of competition law with respect to DH abuse of dominant position when purchasing third party production ²⁹

²³ [Amendments to Building Law 1129/2008](#) (Lag om ändring av markanvändnings- och bygglagen), section 57a, 2008. (Translated from the published Swedish version- not verified).

²⁴ L 9.11.2018 / 873, [Lag om upphävande av 57 a § i markanvändnings- och bygglagen](#), 2019..11.2018-873

²⁵ [Energy Efficiency Act 2014](#).

²⁶ FCA, 2011. [Wise regulation – a functioning market](#) (translated).

²⁷ FCA, 2012. The FCA closed its [report on the district heating sector](#) at this stage

²⁸ FCA, 2012. [Connection fees for district heating network in Oulu](#) (translated).

²⁹ Finnish Energy, 2019. [Kaukolämpöyhtiöiden lämmön ostaminen ja määrävän markkina-aseman asettamat kilpailuoikeudelliset reunaehdot](#).

Industry recommendations
Supply contracts
Energy Markets Committee of Finnish Energy approves ‘General Terms of Contract for District Heat’ ³⁰ which should be followed, or any deviation justified
Technical codes
Numerous ³¹ , but for example for DH-ready buildings: District Heating of Buildings, Regulations and Guidelines, published by Finnish Energy. ³² These regulations relate to technical standards and are applied on a voluntary base.
Industry information
Information for members of Finnish Energy, including notification of TPA energy trades ³³

4.2 Regulatory framework

Energy efficiency law

The 2014 Energy Efficiency law has rules on:

- Metering: all “end users” must be metered accurately, including information on timing of use, and advice given on efficient use
- Billing: must be billed at least four times a year, based on actual consumption, with information provided on consumption and price. Information must also be provided on historical consumption. Bills must be electronic if requested.

The Finland Euroheat country report states that these provisions have not altered the behaviour of retailers.

Finnish Energy

The trade association Finnish Energy has been central to establishing the accepted framework for the industry, establishing a self-governed framework where there is no official regulation. This is in almost every area of the business, from publishing prices to technical codes, customer supply conditions, certification, to registering and publishing third party heat sales.

A list of technical codes, supplied by Finnish Energy, is as follows (only K1 is available in English):

- L6/1998 Hot tapping of pressurised DH pipes during operation
- L14/2005 Building of DH pipes under rail roads

³⁰ [General terms of contract for district heat Recommendation T1/2017](#) (Suositus T1, kaukolämmön yleiset sopimusehdot 2017), 2017.

³¹ Found by scrolling through [Recommendations here](#)

³² [District heating of buildings Regulations and guidelines](#) Publication K1/2013, 2013.

³³ We believe [information on trades is posted here](#), but this cannot be verified due to the need for a log-in

- L15/2005 Building of DH pipes on public road areas
- L9/2006 Documentation of DHC networks
- L2/2010 Joints of pre-insulated DH pipes
- L22/2011 Environment and waste treatment in DH network construction and maintenance
- L10/2011 Pumping arrangements in DH networks
- L11/2013 DH network design, construction and installation
- L5/2014 Tender and contract documents for DH network projects
- L5B/2015 Tender and contract documents for DH network projects, turnkey projects
- L3/2015 Chambers in DH networks
- L1/2016 Preinsulated DH pipes
- L4/2016 Shut-off valves and valve fittings in DH networks
- L7/2016 Systematic renovation of DH networks
- L8/2017 Surveillance systems and wires in DHC networks
- L12/2018 Control, inspections and work supervision of joints in DHC networks
- KK3/2007 DH water treatment
- KK11/2010 Operational design of shut-off valves in DH networks
- KK2/2018 Maintenance of DH networks
- KK6A/2015 Guidelines of safety at work, operation and maintenance of DH networks
- KK5/2015 Technical quality of DH
- K1 District Heating in buildings

The “General Terms of Contract for District Heat” are additionally produced in co-operation with consumer groups. A working group consisting of members of Finnish Energy presents recommendations for the general terms of contract for District Heating. Comments are then made by a wide range of stakeholders including consumer organisations, operators, the Energy Authority and the Finnish Competition and Authority. The Energy Markets Committee of Finnish Energy then approves these before publication.

The recommendation is meant as a support and guideline for the member companies when drawing up their own company-specific terms of contract. However, when deviating from the recommendation, it must be ensured that the company’s own terms will also take into account, e.g. the requirements of the Consumer Protection Act, the Competition Act, the Interest Act, the Debt Collection Act, and the Energy Efficiency Act.

Customer complaints are dealt under general customer protection legislation and in case of substantial complaints, the Finnish Competition Authority may initiate to intervene.

Mandatory connections

Until January 2019, there was an obligation to join the district heating network in certain circumstances, under the Building Law Amendment 129/2008, s57a (Obligation to join the district heating network):

In a detailed development plan, provisions can be issued regarding the connection of buildings to the district heating network, if the provision is necessary in view of efficient and sustainable energy use, the desired air quality or other goals for the detailed development plan. The provision is applied to a building for which building permits are sought whilst the district heating network is being expanded, so that connection is possible in the immediate vicinity of the building site.

However, the provision is not applied to:

1. a building whose estimated heat loss is at most 60% of the comparable heat loss determined for the building,
2. a building whose main heating system provides low emissions and is based on renewable energy sources;
3. repairs, modifications or extensions of an existing building, or
4. the extension of an existing residential building.

S57a has been repealed by L 9.11.2018 / 873, which came into force on January 1, 2019.³⁴ Our understanding is that this was driven by the idea that the provision was 'anti-competitive'.

Decarbonisation

There is support for CHP schemes linked to District Heating. According to the International Energy Agency 2018 Finland Review:³⁵

“In 2018, the Finnish government reformed the renewable support scheme towards competitive tenders (for a targeted production of 1.4 TWh for 2018-20). Subsidies are focused on district heating companies that commit to phase out coal by 2025 and as a part of energy aid for new technologies, public support of EUR 90 million is made available to support biomass CHP, with EUR 45 million dedicated to non-combustion technologies, such as heat pumps (which are for instance used in Denmark at CHP plants to increase performance) or storage.”

³⁴ L 9.11.2018 / 873, [Lag om upphävande av 57 a § i markanvändnings- och bygglagen](#), 2019.

³⁵ International Energy Agency, [Energy policies of IEA Countries, Finland Review](#), 2018.

5 The Netherlands

Regulation of District Heating is premised on the Heat Act, supervision of which sits with the Authority for Consumers and Markets. The main focus is on price regulation for small customers which is currently capped at the price of gas heating. There are provisions on the terms of heat supply and monitoring of District Heating profitability. ACM also licenses large heat suppliers, through which it checks on financial and technical capabilities. The Heat Act is currently under Parliamentary review and there is an expectation that it will move away from gas as a price benchmark.

5.1 Key documents

National Regulatory framework
Regulator
The Netherlands Authority for Consumers and Markets (ACM) is the designated regulator for the supply of heat and the supervision regime is set out in the Heat Act (1.0) (De Warmtewet). ³⁶
The Heat Act is due to be updated to Heat Act 1.1 ³⁷ in summer 2019. A Heat Act 2.0 is under development.
Heat Act 2.0 is under development, informed by reports on alternatives to the current price cap ³⁸ and unbundling ³⁹
Rates
ACM monitors and regulates prices ⁴⁰ and reviews profits biennially ⁴¹
Complaints
Consumer information is provided by the ACM through the 'consuwijzer'. ⁴²
Licenses / Permit Requirements

³⁶ [Heat Act \(Warmtewet\)](#), 2013.

³⁷ [Law of 4 July 2018](#) amending the Heat Act (Wet van 4 juli 2018 tot wijziging van de Warmtewet (wijzigingen naar aanleiding van de evaluatie van de Warmtewet)), Staatsblad, 2018.

³⁸ SiRM, 2019. [Tariefregulering warmtebedrijven voor kleinverbruiker](#) (Tariff regulation for small customers of het companies)

³⁹ SEO Economisch Onderzoek, 2018. [Belang bij splitsing in de warmtemarkt](#) (Interest in splitting the heat market).

⁴⁰ Autoriteit Consument & Markt, [Delivery of Heat, Heat Rates](#)

⁴¹ Autoriteit Consument & Markt, Performance Monitor: [Financial returns for heat in 2015 and 2016](#) (Rendementsmonitor: financiële rendementen warmte 2015 en 2016), 2017.

⁴² <https://www.consuwijzer.nl/over-consuwijzer>

National Regulatory framework
Licences required for schemes delivering more than 10,000 GJ to more than 10 customers (there is an exemption for self-supply, including supply to buildings owned collectively). The ACM produces the rules around obtaining a licence. ⁴³
Mandatory Connections
On April 9, 2018, the Energy Transition Act (wet VET) ⁴⁴ was adopted to amend the Electricity Act (E-Act) from 1998 and the Gas Act, in which the legal obligation to connect newly built houses to gas is dropped.
Energy planning
The Climate Agreement, key points in English ⁴⁵ and draft sections in Dutch ⁴⁶ – due to be adopted in summer 2019 provides for district-wide heat strategies.

Technical codes
Building Regulations
If you plan to refurbish, build, demolish or occupy a building, you must comply with the Building Decree 2012. ⁴⁷ A Guidebook for the Building Decree 2012 has also been published. ⁴⁸

5.2 Regulatory framework

The Heat Act

The current Heat Act entered into force on 1 January 2014. It applies to small-scale consumers. Small-scale customers are consumers and small and medium-sized businesses with connections up to and including 100 Kilowatts. Customers with connections larger than 100 Kilowatt must negotiate the price and conditions for heat themselves. These larger users can fall back on the Dutch Civil Code. For customers with connections up to and including 100 Kilowatts, the Heat Act regulates:

- maximum rates;
- when the heat supplier is allowed to switch off heat;
- when a customer is entitled to compensation in the event of a disruption;
- minimum requirements for customer heat supply agreements (for example about the quality of the heat and services to be supplied);

⁴³ Autoriteit Consument & Markt, [Apply for a heat supplier license](#) (Vergunning als warmteleverancier aanvragen), 2019.

⁴⁴ [Energy Transition Act](#) (Wet Voortgang Energietransitie - Wet VET), 2018.

⁴⁵ [Proposal for key points of the Climate Agreement](#), Climate Change Conference, 2018.

⁴⁶ <https://www.klimaataakkoord.nl/gebouwde-omgeving>

⁴⁷ [Building Decree](#), Bouwbesluit, 2012.

⁴⁸ [Guidebook Building Decree 2012](#) (Praktijkboek Bouwbesluit 2012), 2012.

- customer rights and obligations when measuring heat consumption;
- a requirement for all heat suppliers to be affiliated with a Disputes Committee that acts as an arbiter in the event of a dispute between customer and heat supplier.

The maximum price is based on what an average customer who uses gas pays per year. Customers should pay no more for heat than if they were to use gas.

The Netherlands Authority for Consumers and Markets (ACM) is the designated regulator for the supply of heat and the supervision regime is set out in the Heat Act.

ACM monitors profits – returns are currently deemed acceptable to low at around 6%. ACM could ask for action to be taken if profits were deemed too high but would need to request the necessary powers from Parliament.

ACM also runs a licensing regime. Permits are used to check that applicants have organisational, financial and technical qualities necessary for meeting its obligations under the Heat Act. About 30 licenses have been granted (and another 2 withdrawn).

At present the 2014 Heat Act is still in effect. A Bill to amend this Heat Act has already been adopted by Parliament and the Senate and is referred to as Heat Act 1.1. The larger part of the amended Heat Act will enter into force as of July 1st, 2019. This will improve consumer protections and Heat Law 1.1. It retains the 'no more than gas' principle but changes the formula for the calculation.

Changes in tariff regulation – an alternative to capping at the gas price – have been postponed until January 1st, 2020, due to the fact that the relevant secondary legislation has not yet been adopted – the Ministry is still working on the calculations around allowable fixed price elements of the heat price.

The Netherlands has a similar profile to the UK in that there is significant private sector participation in the market. This means it faces a more serious question around the potential for insolvency or other failure of a district heating company as they might not be backed by municipal or sovereign credit as they are in most Scandinavian district heating companies. The Heat Act 1.0 contains an obligation on the Minister to arrange for an alternative supply to be put in place in such circumstances. We have been told by a stakeholder that this power has hardly been called upon.

There is an increasingly clear distinction in the Netherlands between 'block' heating and 'district' heating including some changes in Heat Law 1.1 to take block heating out of ACM regulation. Customers served by block heating have redress to the rent commission (Huurcommissie) which will mediate on costs including those for utilities and can issue binding decisions on both parties⁴⁹. In addition, apparently all service providers in the Netherlands must allow service users access to a complaints committee which includes independent members. We have not located any documents in relation to rent commissions or complaints committees.

The Netherlands Government is presently drafting a Heat Act 2.0 that aims to provide a legal framework for the rapid extension of district heating in the energy transition. Focus is on tariff structures, market structure and sustainability. One feature is likely to be a de-coupling of the cap on heat prices from a gas counterfactual.

⁴⁹ <https://www.huurcommissie.nl/over-de-huurcommissie/about-the-rent-tribunal-in-english/>

Mandatory Connections

There are limited circumstances where connections are mandated. Those circumstances appear to be similar to where a local authority in the UK might mandate a system through planning permission, although it appears in the Netherlands the justification must also be linked to the overall municipal energy plan. There may also be circumstances where a type of mandatory connection is presumed through an inability to demonstrate a lower carbon alternative. We have not been able to locate any specific documents on the point. However, this point is, according to one stakeholder, a big theme in the discussion around Heat Law 2.0.

A customer is allowed to disconnect from or refuse connection to the heating grid and install an alternative sustainable system.

Technical Codes

The Building Decree contains the technical regulations that represent the minimum requirements for all structures in the Netherlands. The requirements relate to safety, health, usability, energy efficiency⁵⁰ and the environment. For new built housing and offices, the requirements as set out in the Buildings Decree apply. The Energy performance (Equivalent Generation Efficiency) of the specific district heating system is used to assess if these requirements can be met and at what costs compared to other technical alternatives.

Other than this there is no legal obligation to comply with any specific technical codes, just general codes. Various codes like NEN norms, EU norms, DIN norms are used in the business. We have not been able to identify specific documents on the point, other than that this might feed into licences granted by the ACM.

Decarbonisation

There is no legal obligation to adopt a particular approach to fuel mix or efficiency. Most heat is provided from efficient plant; CHP tends to be large scale.

Decarbonisation is a key area of discussion in relation to Heat Law 2.0. One government agency is currently undertaking an exercise by which energy simulation modelling will take place for each municipal area and will include identification of the role of district heating. There is an expectation that decarbonisation standards will be tightened over time as part of the expected shape of Heat Law 2.0.

The new Climate Agreement requires heat roadmaps to be produced for municipalities, which will include plans for mandatory DH connection to extend to existing buildings. One stakeholder informed us that this would have a large impact on DH.

Otherwise the main incentive for decarbonisation is the SDE+ incentive scheme. 2019 is the end of it operating in its current form, SDE++ will widen out and provide an “operating subsidy” to cover the difference between renewable energy and the market price. SDE +(+) does not appear to be available to commercial renewable energy producers.

⁵⁰ <https://business.gov.nl/regulation/saving-energy>

6 Germany

Like Finland, there is no District Heating regulatory regime in Germany. The Competition Authority can and has intervened on market power issues. There are laws governing basic terms for supply of heat, and these have been leveraged for legal challenges from consumer groups in cases of bad practice. Also like Finland, the trade association has filled a regulatory gap in producing a suite of technical codes which form the industry standard.

6.1 Key documents

Regulatory framework
Conditions of supply
Ordinance on general conditions for district heating (AVBFernwärmeV) ⁵¹
Ordinance on the consumption-based billing of heating and hot water costs (HeizkostenV) ⁵²
Legal challenges on conditions of supply, re publication of terms ⁵³ and prices increases ⁵⁴
Competition Authority
Bundeskartellamt DH sector inquiry into DH ⁵⁵ , ⁵⁶
Building Regulations
The Energy Saving Ordinance or the Energieeinsparverordnung (EnEV). ⁵⁷ First published in 2001, a series of amendments were made until the latest version in 2009. ⁵⁸
Decarbonisation
Renewable Energies Heat Act (EEWärmeG) ⁵⁹ which sets a target of 14% final energy consumption for heat and cooling from renewables by 2020.
Mandatory connection
The Renewable Energies Heat Act provides for mandatory connection to DH, and Federal states legislation also provides for Municipalities to use their powers to mandate connection.

⁵¹ [Ordinance on General Conditions for the Supply of District Heating](#), Verordnung über Allgemeine Bedingungen für die Versorgung mit Fernwärme (AVBFernwärmeV), 1980.

⁵² [Verordnung über die verbrauchsabhängige Abrechnung der Heiz- und Warmwasserkosten](#), 1981.

⁵³ VZVB, 2017. [Modernize district heating regulations](#).

⁵⁴ VZVB, 2019. [District heating: OLG prohibits unilateral price increase](#).

⁵⁵ Bundeskartellamt, [Final Report Sector Inquiry District Heating](#), 2012.

⁵⁶ Bundeskartellamt, 2012. [Sektoruntersuchung Fernwärme](#).

⁵⁷ [Energy Saving Ordinance](#) (Energieeinsparverordnung -EnEV), 2009.

⁵⁸ [Energy Savings Ordinance](#), all versions 2002 to 2009.

⁵⁹ [Renewable Energies Heat Act](#) (Gesetz zur Förderung Erneuerbarer Energien im Wärmebereich (Erneuerbare-Energien-Wärmegesetz – EEWärmeG)), 2008.

Industry Recommendations

Technical codes

Voluntary “technical rules and standards” produced by AGFW. The codes are published as worksheets⁶⁰ and need to be purchased. AGFW provides an English language compendium⁶¹ of those available, around 260+

6.2 Regulatory framework

National level

Similar to Finland, there is very little regulation of DH in Germany. One Federal-level regulation is the Ordinance on General Conditions for the Supply of DH (AVBFernwärmeV). It is a government-mandated set of rights and responsibilities of DH suppliers and customers. Deviations are allowed only with the express agreement of the customer.

The “normal” framework for the relationship between customers and companies was deemed inappropriate to handle the specific technical and economical features of DH supply on the one hand and customers’ needs on the other. Therefore, the ordinance sets a general framework for standard business conditions for the supply of DH to residential customers, regardless of whether these customers are consumers or businesses. It covers, amongst other things, pricing structure, connection costs and price escalation clauses.

Supply of industrial customers with DH does not fall under the scope of the ordinance.

The DH industry sees the ordinance as an important part of the legal framework; therefore no review is needed from their perspective. According to the DH industry preserving the ordinance and its regulations is important for the envisioned development of DH in Germany.⁶²

Customer groups may not all feel the same. One has challenged the Ordinance in court, specifically a clause that requires DH prices to be published in a “reasonable manner.” One, the Federation of German Consumer Organisations (VZVB), unsuccessfully sued Stadtwerke Weimar for not publishing all supply conditions on the internet. The court found that although internet publication was “desirable”, its omission is not unlawful. The same group has successfully challenged two DH providers who increased prices unilaterally, justifying this through publication of the increase but not respecting price escalation rules.

A second Ordinance covering consumption-based billing includes a requirement for building owners to record the proportion of heat consumed by each household.

Also like Finland, the Competition Authority (Bundeskartellamt) has taken an interest in DH – and conducted a rates investigation in the same year, 2012, that The Finnish authorities did the same. The report found that, due to insufficient competitive control in the market itself,

⁶⁰ [AGFW Codes of Practice](#), AGFW, 2014.

⁶¹ AGFW, 2018. Acknowledged rules of technology for district heating, cooling and CHP. Summary. Pdf copy provided by AGFW.

⁶² Basrec, [Best Practice Survey, District Heating and Cooling, Combined Heat and Power and Renewable Energy Sources](#), 2014.

random checks and proceedings against companies demanding very high prices will be necessary. However, the Bundeskartellamt did not consider it advisable to unbundle and regulate district heating networks because, 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.

Energy planning

We have been told that District Heating companies are working to cities requirements which are in line with national and regional planning conditions but have not been able to locate specific documents on the point.

Mandatory Connections

The Bundeskartellamt inquiry describes the background to mandatory connection. It paints a complex legal picture where municipalities (at the time) used different powers, variously pollution control and planning, to mandate connection and use of DH. The report also states that the Renewable Energies Heat Act (EEWärmeG, 2008) allows for mandatory connection without the need for any further local legislation.

The EEWärmeG stipulates renewable energy use for space and water heating in new buildings and allows municipalities to make additional regulations for existing buildings. “Alternative” measures to meet this requirement include the use of DH. A translation of the relevant sections is:

“Connection and use compulsion: the municipalities and associations of municipalities may make use of a provision under provincial law, which authorises them to establish a connection and use obligation to a network of public local or district heating supply, also for the purpose of climate and resource protection.”

And

“The use of heat from a network of local or district heating supply only applies as a substitute measure in accordance, if the heat is a) a substantial proportion of renewable energy, b) at least 50% of waste heat recovery installations; c) at least 50 percent from CHP plants or d) at least 50% is derived from a combination of the measures referred to in points (a) to (c).”

Technical Codes

Energy saving Ordinance (building code)

The ordinance defines structural and heating system standards for buildings and specifies the energy efficiency for new builds and the refurbishment of existing buildings.

AGFW codes

Voluntary but widely adopted technical codes are produced by AGFW, the German Energy Efficiency Association for District Heating, Cooling and CHP. It has approximately 400 members, including district heating utilities, industrial companies, manufacturers and research institutes. AGFW represents the interests of 92 % of the total connected district heating load in Germany (about 57,000 MWth) on a political level and has been doing so for almost 40 years.

The codes comprise over 260 detailed worksheets on all aspects of technical design around district heating and cooling, organised as:

- District heating in general (basic principles, terms, definition).
- Heat metering and billing (sensors, heat meters, calculation)
- Heat generation (heating plants, operation, maintenance, certification)
- Heat distribution (piping systems, construction, operation, maintenance)
- Customer installations (regulators, valves, radiators)
- Qualification requirements (tests, examination)
- Urban Development
- Operational safety and security

Where appropriate the standards are developed collaboratively with joint development with FGW, the Austrian Heat & Power Association, TÜV, the German Technical Control Board, PTB, the German Calibration Institute DVGW - German Technical and Scientific Association for Gas and Waste and FNN The Forum for network technology and network operation in the VDE technology association.

Decarbonisation

In addition to the Renewable energy heat law, DH providers can access funding through the Wärmenetze 4.0 programme, covering feasibility (up to 60% of costs) and construction (up to 50% of costs).⁶³ The programme has been running since 2017 and promotes renewable, efficient waste utilisation and low temperature heat networks.

⁶³ https://www.bafa.de/DE/Energie/Energieeffizienz/Waermenetze/waermenetze_node.html

7 Sweden and Denmark

Both Sweden and Denmark have District Heating legislation, overseen by an energy regulator. Neither regulates prices, opting for voluntary initiatives instead – a price dialogue in Sweden and price benchmarking in Denmark. Sweden has grappled with unbundling and third party access, with the government looking into this twice (in 2003 and 2011). Despite recommendations for greater separation this has not happened, on the grounds of cost.

7.1 Key documents

National Regulatory framework
Regulator
Sweden: Energimarknadsinspektionen (The Swedish Energy Markets Inspectorate) ⁶⁴
Sweden: Energy Markets Inspectorate evaluation of industry-led price dialogue ⁶⁵ and decision on taking no regulatory action on pricing ⁶⁶
Denmark: Until June 2018, The Danish Energy Regulatory Authority, DERA, now the Danish Utility Regulator. ⁶⁷ Publishes DH prices ⁶⁸
Competition Authority
Sweden: Konkurrensverket (Swedish Competition Authority) ⁶⁹
Government
Sweden: Energimyndigheten (Swedish Energy Agency) ⁷⁰
Sweden: In 2002, the Minister for Enterprise ordered an Inquiry on DH, 'Fjärrvärmeutredningen' which played a key role in shaping the current regulatory framework in Sweden. Three reports were published: Enhancing the security of district heating consumers – Greater transparency and separation of electricity and district heating operations (SOU 2003:115). ⁷¹ Reasonable price for district heating (SOU 2004:136). ⁷²

⁶⁴ <https://www.ei.se/>

⁶⁵ Energimarknadsinspektionen, 2015. [Utvärdering av branschinitiativet Prisdialogen](#).

⁶⁶ Energimarknadsinspektionen, 2016. [Utvärdering av branschinitiativet Prisdialogen. Slutrapport](#).

⁶⁷ <http://forsyningstilsynet.dk/tool-menu/english/>

⁶⁸ Forsyningstilsynet, [Varemepristatistik](#)

⁶⁹ <http://www.konkurrensverket.se/>

⁷⁰ <http://www.energimyndigheten.se/>

⁷¹ [Enhancing the security of district heating consumers – Greater transparency and separation of electricity and district heating operations](#) (SOU 2003:115) (Tryggare fjärrvärmekunder ökad transparens och åtskillnad mellan el- och fjärrvärmeverksamhet (SOU 2003:115), Regeringskansliet, 2003.

⁷² [Reasonable Pricing for District Heating](#) (SOU2004:136) (Skäligt pris på fjärrvärme), Regeringskansliet, 2004.

District heating and cogeneration in the future (SOU 2005:33) ⁷³ which contained conclusions on the inquiry.
Sweden: On April 7 2005, a follow-up enquiry was ordered by the government, driven by several bankruptcies of district heating companies at the turn of the year 2004/2005: Safer deliveries - District heating after bankruptcy (SOU 2005:63). ⁷⁴
Sweden: Four years later, the Government ordered another enquiry (TPA-utredningen N 2009:02), which was published in April 2011. District Heating in Competition (SOU 2011:44). ⁷⁵
Consumers
Sweden: The District Heating Board (Fjärrvärmenämnden) ⁷⁶ (for customers) Sweden: The Swedish consumer energy markets bureau (Konsumenternas energimarknadsbyrå) (for consumers)
Denmark: The Energy Appeal Board ⁷⁷
Regulatory framework
Sweden: The District Heating Act (SFS 2008:263). ⁷⁸ Series of edits between 2011 and 2018. ⁷⁹
Denmark: Heat Supply Act. ⁸⁰
Investment
Denmark: the regulator currently allows companies to build up reserves for future investment. ⁸¹ The Danish Parliament voted in 2017 to repeal this power but the necessary legislation has not yet been put in place.
Mandatory connections
Denmark: recently repealed the ability to force mandatory connections. ⁸²

Industry

Supply contracts

⁷³ [District heating and cogeneration in the future](#) (SOU 2005:33) (Fjärrvärme och kraftvärme i framtiden), April 2005

⁷⁴ [Safer deliveries - District heating after bankruptcy](#) (SOU 2005:63) (Tryggare leveranser - Fjärrvärme efter konkurs, Regeringskansliet, 2005.

⁷⁵ [District Heating in Competition](#) (SOU 2011:44) (Gov Enquiry: Fjärrvärme i konkurrens), Regeringskansliet, 2011.

⁷⁶ <http://www.energimyndigheten.se/om-oss/organisation/fjarrvarmenamnden/>

⁷⁷ Danish Energy Agency, [Regulation and Planning of district heating in Denmark](#), 2015.

⁷⁸ [The District Heating Act](#), Fjärrvärmelagen (2008:263), 20008.

⁷⁹ Governmental Legal Database (Regeringskansliets rättsdatabaser), [Archive with regards to the District Heating Act](#). <http://rkrattsbaser.gov.se/sfsr?bet=2008:263>

⁸⁰ [Heat Supply Act](#) (no. 347 of 2005) (Bekendtgørelse af lov om varmforsyning), 2005.

⁸¹ Forsyningstilsynet, [Guidance on recognition of depreciation and allocations in the heat price](#) (Vejledning om indredning af afskrivninger og henlaeggelser I vræmepriisen), 2018.

⁸² Danish Parliament (Folketinget), L 97 [Proposal for a law amending the Act on Heat Supply and Planning Act](#). (L 97 Forslag til lov om ændring af lov om varmforsyning og lov om planlægning), 2018.

Sweden: Voluntary general contract terms for business customers ⁸³ , agreed between central associations for housing companies and property owners and the trade association Energiföretagen ⁸⁴
Consumer complaints
Denmark: Private consumers' complaints about DH companies for complaints not covered by specific regulation, but are handled by the energy supplies complaint board. ⁸⁵
Price comparisons
Denmark: Danish District Heating Association ⁸⁶ report on pricing ⁸⁷ which attempts to correct for size of company and fuel source.
Quality Assurance
Sweden: REKO quality guidelines for DH ⁸⁸ which are not actively updated but still in use by some DH companies.

7.2 Regulatory Framework

Sweden

District Heating in Sweden is supervised by the Energy Markets Inspectorate (Energimarknadsinspektionen), which also regulates electricity and natural gas markets. It ensures that district heating companies comply with the District Heating Act (SFS 2008:263). It also analyses the development of the district heating market and suggests changes to the regulatory framework. It does not supervise DH prices.

The Swedish District Heating Act covers matters such as pricing transparency, mediation on pricing and contractual provisions, minimum terms for customer agreements, provision for vulnerable customers, obligations relating to interruption in services, compensation, third party access and reporting obligations.

The Swedish Competition Authority may investigate suspected abuse of dominant position, as district heating companies are considered natural monopolies in their respective areas.

The District Heating Board mediates negotiations between district heating companies and district heating customers about prices and other conditions. The District Heating Board cannot make any binding decision that the company or the customer must follow.

Energiföretagen Sverige (the association for energy companies in Sweden) is an industry organisation formed by the previous organisations Svensk Energi (Swedish Energy) and

⁸³ [General contract terms for consumers for the supply of district heating for individual use](#) (Allmänna avtalsvilkor för konsument för leverans som används för enskild bruk), Konsumentverket, 2018.

⁸⁴ <https://www.energiforetagen.se/>

⁸⁵ [Energy Supplies Complaint Board](#):

⁸⁶ <https://www.danskfjernvarme.dk>

⁸⁷ Dansk Fjernvarme, [Varmeprisstatistik](#)

⁸⁸ <https://www.energiforetagen.se/sa-fungerar-det/fjarrvarme/for-dig-som-ar-fjarrvarmekund/reko-fjarrvarme-satter-kunden-i-fokus/>

Svensk Fjärrvärme (Swedish District Heating Association). It represents companies that produce, distribute, sell and store electricity, heat and cooling.

The District Heating Act came about as a result of a 2002 inquiry into district heating, and specifically the report:

District heating and cogeneration in the future (SOU 2005:33)

Amongst other things this:

- Weighs pros and cons of introducing third party access to District heating networks.
- Evaluates the need for a concession obligation for building and using pipes utilised for the transport of district heating
- Submits proposals for how the Directive 2004/8/EC should be implemented in Sweden

Key proposals were:

- Limited exemption from the municipal siting principle in the Local Government Act. The exemption entails that the district heating operation can be conducted beyond the municipal boundaries. However, an exemption will only be considered if the municipality's purpose is to achieve efficiency in the district heating operation.
- Rejects introduction of third-party access, except for utilisation of surplus heat (industrial waste heat, heat from refuse incineration). The report proposes a negotiation for access to the district heating system in those cases, under the mediation of the District Heating Board (Fjärrvärmenämnden).
- Repeal the concession obligation for district heating pipes so far included in the Pipeline Act.
- Puts forward the District Heating Act.

The Government included the extended limited exemptions from the municipal siting principle in the District Heating Act, which entered into force 1 July 2008. From 1 July 2006 the concession obligation for DH transmission pipes was repealed⁸⁹.

Denmark

The Danish Energy Regulatory Authority, now DUR, oversees the DH sector and handles complaints on tariffs and terms for heating delivery. All DH and CHP units have the obligation to submit information to the Danish Energy Regulatory Authority on prices and conditions, so that the authority can deal with complaints and objections.

⁸⁹ <https://www.regeringen.se/49bba0/contentassets/633fde26b8b64fa59bb3b0323eb643ca/ursprungsgarantier-for-hogeffektiv-kraftvarmeel-m.m>

7.3 Pricing

Sweden

Prices are not regulated in Sweden. However, the District Heating Act states that a DH company must ensure a company's prices (for heating and connection, as well as how price is determined), are easily available for customers and the general public. DH providers must also justify, in the same way as its prices, any price differentials between categories of customers. All price information must be accurate and clear.

The Act contains a mediation mechanism in case a district heating company and customer cannot agree on a change to rates.

Price statistics are collected yearly by Energiföretagen. These are also used by a collaboration of customer organisations called “Nils Holgerssongruppen” whose ambition is to compare prices in different cities which is hoped will motivate the companies to lower their prices (heating, electricity, garbage collection, tap and wastewater are all compared).

Government inquiry - Reasonable price for district heating (SOU 2004:136).

The report looks at the competitive situation of district heating on the heating markets, proposes measures to improve consumer protection, and examines the need for and ways to criminalise bypassing of heat meters in district heating systems. Specific proposals to be included in the District Heating Act were:

- Unbundling of the accounts of district heating and cooling operations with mandatory reporting of key figures to the Swedish Energy Market Inspectorate.
- Standard contract terms for delivery of district heating and cooling which would be drafted by the Swedish Energy Market Inspectorate and the Swedish Consumer Agency (Konsumentverket) after consultation with the concerned sectors.
- The right to negotiation for customers which should be provided for in the above-mentioned standard contract, but should also be guaranteed by law.
- Negotiation and contractual disputes to be submitted to a third, neutral party for settlement with the creation of the District Heating Board (Fjärrvärmenämnden), which would also be empowered to adjudicate price issues.
- Criminalisation of heat theft

All but the last of these provisions were included in the District Heating Act. Adjustments to treatment of heat theft were made elsewhere.

Industry Initiatives: Prisdialogen & REKO.

The former Swedish District Heating Association, the Swedish Association of Public Housing Companies (SABO) and Riksbyggen AB initiated a voluntary Price Dialogue (“Prisdialogen”) between customers and district heating companies in 2013. The price dialogue aims to discuss the fair principles for district heating pricing and the envisaged price changes with customers, by so doing increasing transparency, required in the District Heating Act, and acceptance related to pricing towards customers.

As a member in the Price Dialogue the DH company is required to invite customers to yearly consultation meetings where the local price change model and the price changes for the coming years and an outlook for the following two years are announced before the 15th of September each year. In 2019, 75% of supplied district heat was included in the dialogue. The Price Dialogue was evaluated by the Energy Markets Inspectorate in March 2015, indicating that customers believe that the Price Dialogue has led to increased predictability of price development – something which was especially valuable to customers who are passing on these price changes to their own tenants. Customers choosing not to join the dialogue were concerned that suppliers were neither compelled to participate nor sanctioned for failing to meet their promises. However, neither the industry nor the customers thought it would be better with regulated prices. The Price Dialogue is also evaluated yearly by an independent consultancy firm, on the initiative of the parties to the dialogue.

In May 2016, the Energy Markets Inspectorate further stated that:

“the Price Dialogue [has] contributed to predictability and stability regarding price developments in the district heating market and to increased confidence in the district heating industry..... All in all, with the presentation of the industry's revenue and cost development, which shows that revenue development follows the cost development that is basically determined by the fuel price trend, Ei does not consider there to be any reason to propose further measures to strengthen the customers' position in the district heating market at present.”

Denmark

The heating supply law defines which expenses can be included in the heating price, and only these expenses can be included. Furthermore, it is a prerequisite that the expense is a “necessary expense”. Heat is provided on a not-for-profit basis, although underlying activity within the DH company can be carried out on normal commercial terms.

DH companies are voluntarily benchmarked against each other on an annual basis.

7.4 Investment & ownership models

Sweden

Enhancing the security of district heating consumers – Greater transparency and separation of electricity and district heating operations (SOU 2003:115)

The report looks into the need for special provisions to regulate the unbundling of grid operations and electricity operations, as well as district heating operations. It assesses the need for more stringent regulations and supervision of the unbundling of the accounts of district heating operations with a view to avoiding cross-subsidisation and price discrimination.

It proposed the introduction into the Swedish Electricity Act (1997:857) of a regulation requiring the separation of district heating operations and electricity market operations, with the Swedish Energy Agency as appointed regulatory authority. Supervision costs incurred would be financed by charging district heating operations a fee which would be proportional to the quantity of thermal energy sold.

These proposals were not implemented, on the grounds of cost.

District Heating in Competition (SOU 2011:44)

The report looked at how to create conditions for competition in the district heating market as part of the heating market in the long term. It highlighted that further measures may be required to fully meet the environmental objectives in particular. In particular it looked at third party access to district heating networks and a regulatory framework to facilitate this.

Key proposals were:

- Legal separation of distribution, production and trading which will only apply when a competitive situation occurs.
- Introduction of a new District Heating Act which includes price regulation and the introduction of a compulsory regulated third party access.

The Government concluded that the proposed TPA legislation would not benefit consumers. The reasons were that it could lead to higher prices and would be complicated to introduce for more than 500 DH networks where, in most cases, it would not be possible to create the conditions for well functioning competition. The Energy Market Inspectorate then investigated simplified TPA regulations,⁹⁰ which formed the basis for an amendment to the District Heating Act on 1 August 2014.⁹¹

Denmark

The regulator currently allows companies to build up reserves for future investment. The Danish Parliament voted in 2017 to repeal this power but the necessary legislation has not yet been put in place. It is understood that the rationale is the district heating companies can borrow any necessary funding and that funding is available sub-1% to district heating companies.

7.5 Consumer protection

Sweden

Standard terms

The District Heating Act contains minimum provisions to be included in a customer agreement for heat. Consequently, General contract terms for business customers (the most common users of DH) have been drafted by the Swedish Consumer Agency and the DH trade association Energiföretagen. These are not mandatory whereas minimum terms within the District Heating Act are mandatory.

Quality Assurance

Although no longer actively updated, there has been a system for quality assurance of the relationship between a district heating customer and a supplier that further increases the district heating market transparency. The system, REKO, was based on customer

⁹⁰ https://www.ei.se/Documents/Publikationer/rapporter_och_pm/Rapporter%202013/Ei_R2013_04.pdf

⁹¹ <https://www.regeringen.se/rattsliga-dokument/proposition/2014/03/prop.-201314187/>

requirements and expectations. The DH company issued a number of public promises that could be tested by an independent third party – the Quality Board.

REKO heating means that the customer gets clearer and more accessible information. The customer gets better insight into the business including financial information and price changes and has the ability to easily compare the district heating company with competing alternatives. REKO is open to all district heating suppliers that are members of the Swedish District Heating Association. Participation in the REKO quality assurance system is voluntary.

Government Inquiry Safer deliveries - District heating after bankruptcy (SOU 2005:63).

The purpose of the enquiry was to investigate and submit proposals to the Government for the purpose of guaranteeing supplies of thermal energy to district heating customers in the event of an insolvency situation.

The main proposal was the creation of a district heating fund to maintain supply (at least SEK 5 million, to be financed by fees to operators). The Energy Agency would be appointed as the reviewing authority. Assets would be managed by the Legal, Financial and Administrative Services Agency (Kammarkollegiets).

These proposals were not acted upon. There have not been any bankruptcies since 2005.

Denmark

The Energy Appeal Board handles complaints concerning the DUR's decisions in individual cases and any possible misinterpretation of the law. Appeals can be made to the Ministry of Energy, Utilities and Climate, the Danish Energy Regulation Authority and the individual municipalities.

This publication is available from: www.gov.uk/government/publications/international-heat-networks-market-frameworks-review

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