VEKS

Annual Review 2020

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The gallery of the year is based what architecture means to VEKS and our surrounding world. At the same time, it offers an insight into where the district heating to VEKS comes from. The present photo spread shows the waste-to-energy facility ARGO in Roskilde. On the front page you see VEKS' bio-mass-fired CHP plant in Køge

FOTO: Claus Peuckert Photography

Let's get started!

We are busy if the climate objectives of a 70% reduction in the CO_2 emission are to be reached in 2030

With the Climate Law of 6 December 2019, a great majority of the Danish Parliament's parties set the goal for the climate and energy policy for many years to come. Now, Denmark has a binding climate law where the first sub-goal is a reduction of 70% in the CO_2 emission in 2030 compared to the 1990 level. In the long term, the goal is climate neutrality not later than 2050. A prerequisite in the Climate Agreement is that the government in power must determine climate goals every fifth year with a ten-year perspective.

2020 became a busy "climate political" year in the Danish Parliament. Especially, two specific sector plans and agreements have an impact on VEKS: "The climate plan for a green waste industry and circular economy" from 16 June 2020 and "Climate agreement for energy and industry, etc." from 22 June 2020.

Climate plan for a green waste industry and circular economy

The goal of the waste plan is to reduce the present incineration capacity by 30% leading up to 2030 – with the purpose, among other things, to minimise the import of waste. Local Government Denmark was requested to prepare a concrete plan for adjusting the capacity and right before Christmas 2020, they presented the so-called Closing List. On this list, the waste-to-energy facility in Roskilde, ARGO, appeared, which covers 35% of VEKS' heat requirements. However, Local Government Denmark's plan was subsequently rejected by the Danish Environmental Protection Agency, the Danish Utility Regulator, and the Danish Energy Agency.

Without the Closing List they had to examine the possibility of liberalization the waste industry. However, it is not clear yet how to oblige the EU rules of government aid and the free movement of goods regarding the present financing of waste-to-energy facilities as well as the political wish of limiting the import of waste. To VEKS, a higher-priced financing will mean increasing waste heat prices. It will hardly give the desired green transition of society.

Climate treaty for energy, industry, etc.

It gives food for thought that the fact that the Danish district heating sector in all modesty covers the heating demand in 64% of all Danish households is only mentioned under "etc." in the agreement. The district heating plays a crucial role when it comes to ensuring the capture and storage of CO_2 (CCS) and enhancing the utilisation of surplus heat (the tax is removed on electricity based surplus heat from e.g., data centres). Moreover, we are ready to phase out oil and natural gas boilers and we already live up to the sustainability requirements for biomass.

We support these initiatives 100% which is reflected in VEKS' Strategy 2025.

VEKS' Strategy 2025

In the cross field between the Climate Law, "Climate plan for a green waste industry...", and "Climate agreement for energy, industry, etc." you find VEKS' Strategy 2025. Despite the Corona crisis where many of the employees were sent home during all of 2020, the strategy got off to a positive start.

The strategy is based around four topics – worded as four questions:

- The future green energy system – where does the green heat come from in the future?
- Efficient core operation - how do we utilise the digitalisation for optimisation purposes?
- Green image - how and where can we enhance the position in the green transition debate?
- Cooperation with the customers - how can an ongoing customer focus help ensure that we keep on being attractive as suppliers to our distribution companies?

The strategy will ensure the transformation of VEKS. In 2020, we were a district heating company whose primary heat production was based on a few, central "traditional" production facilities (waste and biomass). In 2030, we will be a company which in a close dialogue with the customers base our heat production on a wider range of different technologies than in 2020. This could for instance be an integration of the electricity system by way of large heat pumps and electric boilers, geothermal energy, surplus heat from

VEKS' strategic development concentrates on strategic topics – formulated as four questions:

Green image - how and where can we enhance the position in the green transition debate?

Efficient core operation - how do we utilise the digitalisation for optimisation purposes?

Cooperation with the customers - how can an ongoing customer focus help ensuring that we keep on being attractive as suppliers to our supply companies?

The future green energy system - where does the green heat come from in the future?

data centres, decentralised heat production, "traditional" production facilities (waste and biomass), and surplus heat from CCS and Power to X production.

District heating – a prerequisite for the "2030 CO_2 goal" to be reached
A well-functioning district heating sector is a prerequisite for reaching the ambitious political goal of reducing the CO_2 emission by 70% in 2030. It IS ambitious as we have to reduce the CO_2 emission by the same amount within the next 10 years as we have obtained within the previous 30 years!

District heating is not a stand-alone solution, but we are impossible to ignore!

The CO_2 emission of a district heating customer in VEKS' supply area has been reduced by more than 75% in the period 1990 to 2020. The natural gas customer still has the same emission in 2020 as the district heating customer had in 1990. Therefore, the conversion of natural gas customers to district heating is an essential and entirely necessary element on the way to a climate- friendly society in 2030.

The district heating sector is ready to take our share of the responsibility. However, it calls for the fact that district heating is looked at as infrastructure. It requires:

- A stable, long-term subsidy and indirect-tax policy for the whole energy sector
- Respect to ensure already existing investments in the green transition. Here, we could mention defrayed – but not amortised – investments in our conversion from coal/natural gas to biomass as requested in the political agreement from 2012.
- framework enabling and offering an incentive to long-term, green investments.

Alternatively, we risk having failed societal or consumer related investments. Or no investments at all.
It must not end in a situation where the goal of a 70% CO_2 reduction only was a dream from 2020.

Steen Christiansen
Chairman

Information about the company

Object and main activity

VEKS, Vestegnens Kraftvarmeselskab I/S, is an inter municipal general partnership which is operated as a non-profit enterprise. VEKS includes production, transmission and distribution of district heating in Vestegnen (Western Copenhagen) in the capital area. 12 municipalities in Vestegnen with a total of 482,000 inhabitants are jointly and severally liable to VEKS' economy. The 12 municipalities are: Albertslund, Brøndby, Glostrup, Greve, Hvidovre, Høje-Taastrup, Ishøj, Køge, Roskilde, Rødovre, Solrød and Vallensbæk. VEKS was founded in 1984 and the primary objective of the company is to utilize heat from the CHP plants and surplus heat from waste incineration, major industrial enter-prises, etc.

VEKS' district heating system

A total of 135km twin pipes have been laid with 62 heat exchange stations and 18 pumping stations transmitting heat to the local district heating systems. The majority of the heat is supplied to VEKS from Avedøre CHP plant and the other CHP plants in Copenhagen and from the waste-to-energy facilities ARGO and Vestforbrænding. The transmission system is controlled, adjusted and monitored from a 24-hour manned operations centre located in VEKS' headquarters in Albertslund. The reliability of supply is high in the area, with 26 local boiler stations being used as reserve and for peak load during particularly cold periods.

Finances and organisation

VEKS consists of five separate areas within the same legal entity.

The name VEKS covers the consolidated activity within the given areas which are fully separated financially under the same CVR number.

Transmission

VEKS Transmission supplies 19 local district heating companies with heat in Vestegnen. The local district heating companies manage the redistribution to private customers, business customers and institutions. The heat supplied is equal to the consumption of 170,000 families.

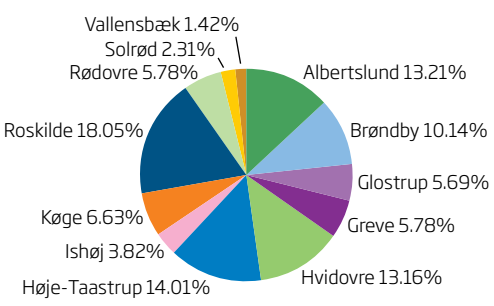
Together with CTR and HOFOR, VEKS participates – each with an owner's share of 1/3 - in HGS (Hovedstadens Geotermiske Samarbejde - the Geothermal Cooperation of Greater Copenhagen) which operates a geothermal energy test plant in Amager.

Production

Køge CHP Plant (KKV) produces electricity for the grid, steam for Junckers Industrier A/S and sells (internally) district heating to VEKS Transmission.

VEKS Gasmotor in Solrød was established in December 2015 and produces electricity for the grid and district heating for VEKS Transmission based on biogas delivered from Solrød Biogas A/S.

The ownership interest of the partners



In 2019, VEKS' "Lindebo station" in Høje-Taastrup near City2 was completed. The small building leads down to a new underground building which VEKS constructed in connection with a large urban development project.

Distribution

Køge District Heating (KFV) handles the distribution of district heating to private consumers, business customers and institutions in Køge. The heat is purchased from VEKS Transmission.

Tranegilde District Heating (TFV) handles the distribution of district heating to customers in Tranegilde's industrial area in Ishøj and Greve. The heat is purchased from VEKS Transmission.

Legislation

VEKS is governed by §60 of the Danish Act on Local Government (Lov om kommunernes styrelse). For instance, this means stricter terms for taking up loans, etc. than those applicable to both consumers and sole municipally owned heat supply companies. As a collaborative heat supply company, VEKS must observe the regulations provided in the Danish Heat Supply Act when carrying out its business, including pricing.

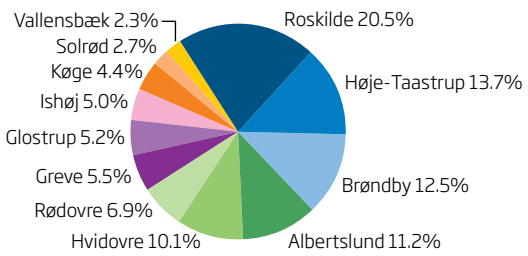
This means that VEKS is subject to a financial non-profit principle which implies that VEKS in its pricing of heat must allow for income and expenses of the partnership to balance over a number of years.

Key Figures

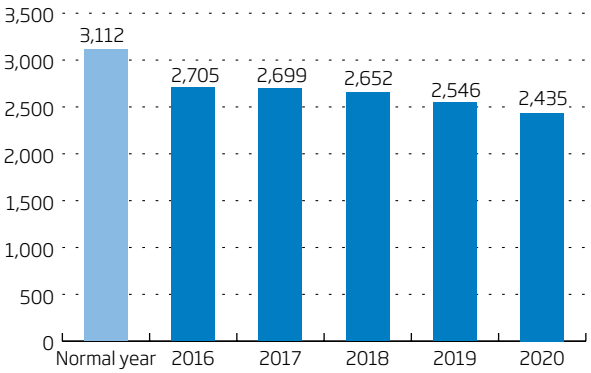
The company's development over the past five years can be described as follows:

(DKK million)	2020	2019	2018	2017	2016
Net turnover	1,199	1,317	1,255	1,353	1,237
Operating profit or loss	-21	30	-14	18	37
Financial income and expenses, net	4	-19	-28	-22	-12
Net profit or loss for the year	14	23	-34	4	32
Equity, end of year	103	79	133	119	121
Assets, total	2,329	2,333	2,236	2,202	2,133
Fixed assets	1,897	1,854	1,858	1,777	1,623
Number of employees, as at 31.12	86	82	77	74	71
Net finance costs compared to fixed assets in %	1.0	1.1	1.6	1.3	0.9

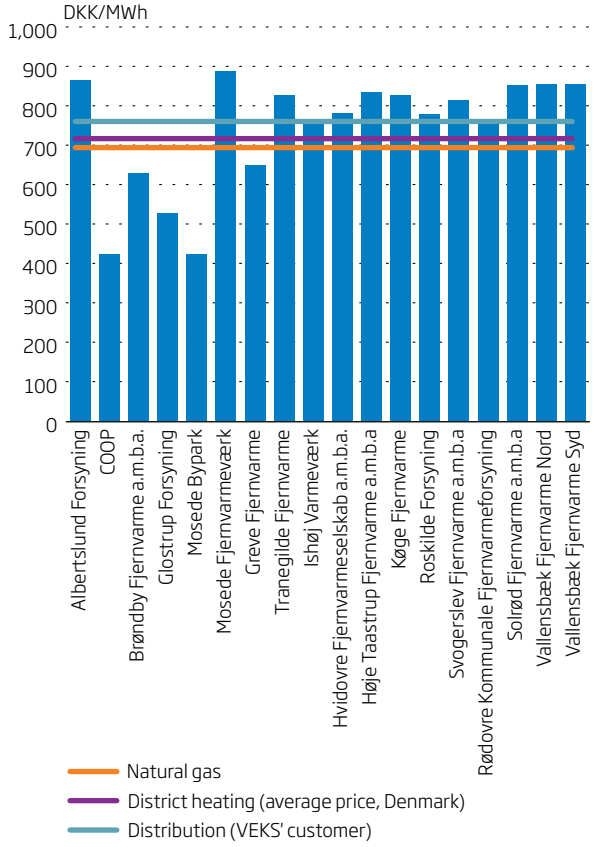
Purchase of heat in the municipalities



Degree days



Heating prices paid by the customer

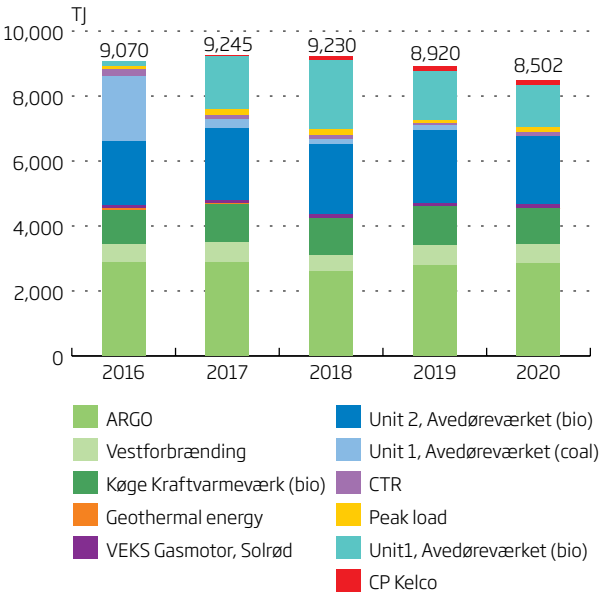


Heating prices paid by
the district heating customers in Vestegnen

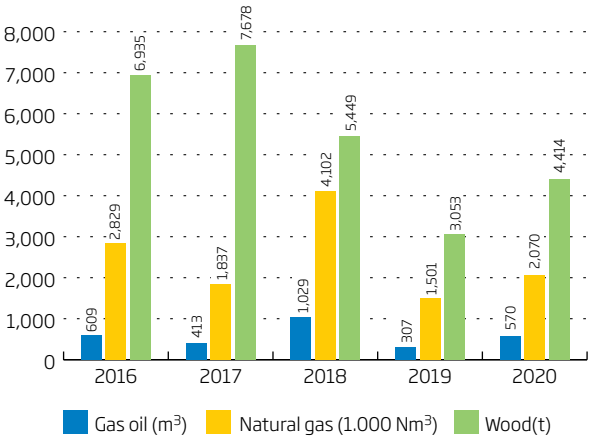
Pre-requisites:

- Prices according to the price statistics of the Danish Energy Regulatory Authority reported by the local district heating companies, December 2020. If the prices were not reported, the public prices are used – stated in the district heating comapnies respective websites.
- The average heating price is based on calculations made by the Danish District Heating Association for a "standard home" of 130m² with an annual consumption of 18.1MWh.
- There is no guarantee that all companies supply the type of "standard home" mentioned.
- The price is exclusive of connection fees.
- The supply point between district heating company and customer may vary from company to company.
- The price of heating with natural gas is provided by the Danish District Heating Association.
- The prices are inclusive of VAT.

Development in heat production (TJ)



Peak load



Contracts

Ørsted

In 2020, no new agreements were made with Ørsted on delivery of heating from Avedøre CHP Plant. Both units of the plant are as a starting point totally based on certified, sustainable biomass, however, both units still have 100% backup on fossil fuel in the form of coal in unit 1 (until 2023) and natural gas in unit 2. VEKS has stipulated that the phasing out of coal must not affect the security of supply for the heat supplies from unit 1.

The agreement between Ørsted and VEKS about heat supplies from Avedøre CHP Plant unit 2 will expire in 2027, whereas the agreement about heat supplies from unit 1 will expire in 2033.

As a consequence of the projected, significant reduction of the subsidy to the biomass-based electricity production (the so-called "15 øren"), Ørsted requested renegotiation of the Avedøre CHP Plant unit 2 agreement in 2019. This unit is the first to be affected by the reduced subsidy. The negotiations have taken place in 2020, however, without reaching an agreement on the future basis for contract for the unit.

To obtain greater flexibility as to the operation of Avedøre CHP Plant's unit 2, negotiations were initiated in 2020. The purpose was to create possibilities for the straw-fired boiler at the plant to produce district heating without the main boiler at unit 2 being in operation - so-called mono-operation. In 2020, such agreement has been negotiated and it is expected to be in place in the middle of 2021.

VEKS' Board has adopted renovating and modernising the head office at Roskildevej in Albertslund. Work is expected ready by the end of 2022.

Vestforbrænding

No new agreements were made with Vestforbrænding in 2020.

ARGO

In 2015, ARGO and VEKS signed an allonge to the existing agreement secu-ring a stable heating price in the long run. This has resulted in a total average heating price from ARGO in 2020 of DKK 77.62/GJ which can be compared to a price cap of waste heat of DKK 94.00/GJ.

Since 2017, they have worked on a model facilitating a diversified monthly heating price. At the same time, the heating price is divided into a fixed contribution expressed in "DKK/month" – irrespective of the heat purchase – and a variable contribution expressed in "DKK/GJ". The new model was implemented with effect as from 1 January 2019 and the experience in 2020 has been positive. However, the resulting heating price will always be on or below the price cap of the waste heat on an annual basis.

VEKS Gasmotor, Solrød

Each year, VEKS takes approx. six million cubic metres biogas from Solrød Biogas A/S. The biogas is primarily burned in a gas engine producing green electricity for the grid and district heating. Secondarily, the biogas is used in a gas boiler for the production of district heating. The operation in 2020 has been stable and the heating production has followed the budget.

The price of biogas is fixed in such a way that it will start by indicating a consequential district heating price corresponding to the price ceiling of the waste heat less 10%. However, the reduction for the period 2015-2020 does not apply due to the economy of Solrød Biogas A/S the first operating years.

CP Kelco

In December 2016, VEKS and CP Kelco signed an agreement on utilising the surplus heat from CP Kelco's production of pectin, etc. In 2017, the project was realised with the first deliveries in December 2017.

VEKS purchases the heat from CP Kelco and sells it to Køge District Heating on the exact same terms which apply to the other distribution customers of VEKS. The heat is delivered to the distribution system at Skandinavisk Transport Center in Køge and will – when the district heating network in Køge is fully developed – cover approx. 25% of the district heating requirement in Køge. In 2020, the surplus heat from CP Kelco covered approx. 51% of the heat demand of Køge District Heating.

The agreement ensures that VEKS will receive the district heating at a price corresponding to VEKS' substitution price from Køge CHP Plant and Avedøre CHP Plant the first years and until the investments of both parties have been depreciated after an expected period of 7 years. Subsequently, the parties will share the gain which implies that VEKS' purchase price will be lower than the substitution price. Thereby, the project will benefit all VEKS' distribution customers.

All things considered the business economics was better than budgeted for 2020 which had a positive impact on the depreciation period of the paid investments. The overall amortisation period for the paid investments will therefore be less than the seven years forming the basis of investment decisions with the two parties.

Geothermal

Throughout 2020, VEKS has continued the negotiations with AP Møller Holding regarding signing a Letter of Intent (LOI) for the exploitation of geothermal energy within VEKS' supply area. The negotiations have not yet resulted in signing a LOI, however, the negotiations have been positive and constructive.

At the moment, one of the barriers for utilising the geothermal energy is partly the present legislative frames and partly the fact that the technology is not fully developed and thus requires public subsidies for a period of time.

Junckers Industrier

VEKS has two agreements with Junckers Industrier. One agreement is for delivery of process steam – and purchase of wood chips, sawdust and dust – for the period of 1 May 2012 to the end of 2027.

The other agreement which may be terminated at six months' notice concerns mutual purchase of services. In 2020, only minor adjustments of VEKS' purchase of certain services have been made.

The heat supply agreements between VEKS and the local distribution companies

Since 2016, the VEKS Administration and representatives from the distribution companies in VEKS' supply area have worked on preparing new heat supply agreements between VEKS and the company's customers.

The agreements handle a number of complicated and compiled problems. The new agreements will, among other things, consider the fact that an increased decentralised heat production is expected in the future. Likewise, the agreements should be able to handle a cost genuine district heating tariff; a variable heating price on a monthly basis.

Such great progress has taken place in 2019 that in the end of 2020 an administrative agreement on the wording of the new agreements was obtained. The agreements have now been sent for approval in all the distribution companies and the hope is that the Board of VEKS will hereafter approve the agreements during the first six months of 2021. In the agreements, it is provided that they come into force on 1 January 2022.

Expectations for 2021

Heat supply agreements

As mentioned above, the aim is that the new heat supply agreements between VEKS and the distribution companies in VEKS' supply area should be signed by all parties in the first six months of 2021.

The new agreements will not least handle the decentral heat production and find models for how the overall operations optimisation in the Greater Copenhagen area's district heating system should be handled in order to avoid sub-optimisation.

The Climate Law

Together with the rest of the district heating sector VEKS expects to contribute to the adopted, ambitious Climate Law which is to reduce the CO_2 emission by 70% in 2030 relative to the level in 1990.

The target can only be reached if the district heating gets to play a pivotal role in future energy systems where a close integration between the electricity and district heating systems is required. VEKS is already involved in a number of projects such as heat pump in connection with geothermal energy, pit heat storage in Høje-Taastrup, surplus heat, etc.

"The extraction of CO_2"

In December 2020, the companies ARC, ARGO, BIOFOS, CTR, Copenhagen/Malmø Port (MCP), HOFOR, VEKS, Vestforbrænding and Ørsted established the cooperation with Carbon Capture Cluster Copenhagen (C4).

The purpose of the cooperation is to examine the possibilities of reducing the CO_2 emissions in the Copenhagen metropolitan area by – put informally – "CO_2 capture" at the main sources in the Copenhagen metropolitan area.

Realistically, it is possible to create CO_2 reductions of up to three million tonnes a year with CO_2-capture. This corresponds to approx. 17% of the total Danish need for reaching the ambitious national goal of a 70% CO_2 reduction in 2030.

More than half the CO_2 reduction from sources in the Copenhagen metropolitan area will be biogenic CO_2. Thus, it is possible that the energy sector in the Danish capital may not only contribute to the CO_2 neutrality, but can actually become CO_2- negative.

HGS (Hovedstadsområdets Geotermiske Samarbejde)

In recognition of the fact that geothermal energy is complicated, HGS delivered the part of their exclusive right to utilise geothermal energy lying outside the existing geothermal demonstration plant (GDA) at Margretheholmen (GDA) on Amager back to the Danish Energy Agency in the summer of 2019. At the same time, the Danish Energy Agency accepted a temporary closedown on GDA.

Handling back of the exclusive right implied that other players could hand in an application to the Danish Energy Agency which took place at the closing date for the application on 1 September 2019. A total of two players - AP Møller Holding and GEOOP - handed in an application within the supply area of VEKS.

The Danish Energy Agency has still not decided how to handle the two applicators. However, since the autumn of 2019 VEKS has been in dialogue with both operators to learn more about the current business models.

VEKS cooperates in a positive way to further develop geothermal energy – provided that the immediate frame conditions are present – compared to capital expenditures, socio-economics and corporate economics. However, the political decision to reduce the electricity charges has a positive impact on the operating costs of electricity powered heat pumps which can also improve the economy for geothermal energy.

Heat pumps

Already in 2014, VEKS, CTR and HOFOR initiated a research and development project regarding the large electric heat pumps in the Copenhagen metropolitan area's district heating system. The project received support from EUDP (the Energy Technological Development and Demonstration Programme). A demonstration plant in Sydhavnen with a heat pump of 5MW with sevage- and/or seawater as an energy source was officially opened on 2 April 2019. Experience shows that large heat pumps are still an immature technology where a number of "children's diseases" must be eliminated before the technology is stable and financially attractive.

Sustainable biomass

In accordance with the political wishes in 2012, Ørsted reorganised the heat production at Avedøre CHP Plant from fossil fuel to certified, sustainable biomass in accordance with VEKS' requests.

Biomass must be considered a temporary solution in relation to the long-term target regarding a CO_2 neutral society. However, in the short run, i.e. the next 10-15 years, there is no alternative. There are simply no other technologies which can take over here and now.

This fact will necessitate that the biomass utilised is actually sustainable. In October 2020, a political agreement about stringent requirements to the sustainability of biomass was made in the Danish Parliament – requirements which VEKS could back up 100% and will carry on to the suppliers in 2021.

The small staircase building facing Roskildevej at Røde Vejrmølle in Glostrup does not disclose that one of VEKS' large exchange stations is hidden underground.

Four cases

The first case uses the new VEKS Strategy 2025 as a starting point. The following cases are group interviews about a Corona-hit operation centre and about VEKS Customer Forum. Finally, VEKS' CO_2 emission over time.

Case 1

Green district heating for you describes the key elements in VEKS' Strategy 2025 and four new strategic topics. These topics give rise to 11 initiatives which convert strategy to action. Furthermore, focus is on VEKS' role in a longterm perspective.

Case 2

How was it to maintain the district heating supply as mechanical engineer totally segregated from the world? Case 2 *Life in the operation centre during Corona* illustrates the huge change which the mechanical engineers experienced in the year of Corona – based on a virtual conversation between three of the heroes of everyday life.

Case 3

The expectations of the customers is about VEKS' Customer forum which in its present form has existed for well over five years. How does it work and is there room for improvements? In case 3, the arrangements were made for a group interview about VEKS' Customer forum with four participants: Two customers and VEKS' Executive Board.

Case 4

Has VEKS' contribution to reduced CO_2 come to a standstill? Case 4 *District heating is still the key to a green transition* describes the various phases of VEKS' life which have each in their own way saved enormous amounts of resources and thus contributed to constantly making VEKS' district heating even greener.

In Roskilde, the waste-to-energy facility ARGO's primary job is to ensure that the waste is converted into resources.

Green district heating for you

New strategy and new initiatives adjusted to new frames – not least VEKS' role in the green transition. The Board gave the green light to the development of VEKS up to 2025 but also to the long-term strategic lines of sight.

The development of VEKS' Strategy 2025 is based on the previous Strategy 2020 where vision, mission and 19 strategy projects were realised, and some projects were continued. This time, the task was to a higher degree aimed at adjusting VEKS' new strategy to the requirements of the surrounding world but also to establish a direction (as this is what strategy is all about) for VEKS' role in the green transition.

A strategy development course was launched in the autumn of 2019 coincident with the fact that the Executive Board hired an external strategy consultant to facilitate the process. A number of workshops with selected key employees and VEKS' management group resulted in a presentation for VEKS' Board which was involved in the process on an ongoing basis by way of strategy seminars and as a permanent item at the ordinary meetings.

The UN's Sustainable Development Goals

The Board of VEKS expressed a distinct demand that VEKS' strategy had to take the UN's Sustainable Development Goals as their starting point when acting as a sustainable enterprise demonstrating social responsibility. The goals open for new possibilities and moreover expresses a common language mastered by the population and politicians all over the world.

More specifically, it means that VEKS must speed up the green transition by making sustainable priorities signalling climate considerations and social responsibility relative to the customers, potential new employees, and cooperative partners – and the surrounding world of VEKS in general.

VEKS' Mission and Vision

Mission - why are we here?
VEKS delivers secure, efficient and environmentally sound district heating

Vision - what we strive for:
VEKS will speed up the green transition and deliver efficient and sustainable energy solutions through partnerships to the benefit of our customers.

VEKS and the 17 Sustainable Development Goals

VEKS has selected five of the 17 Sustainable Development Goals (SDG) as a basis for VEKS Strategy 2025

Many establishments have faced enormous challenges when complying with the green transition requirements and living up to the national goal of reducing the CO_2 emissions by 70% in 2030. However, VEKS is privileged to be part of the solution to the large climate challenges which our society is facing (please find more information in Case 4). In its almost 40 years long life, VEKS is facing its most ambitious decade, technologically and climate-wise. The Board of VEKS is updated on an ongoing basis at the Board meetings when it comes to progress in connection with the strategy. In the middle of 2023, a strategy seminar will probably be arranged for the Board where they can discuss progress, partial results, further plans and the need for adjusting VEKS' Strategy 2025.

Strategic topics

The strategic work is naturally based on a stable, efficient and environmentally sound operation of the heat supply.

VEKS' strategic development concentrates on strategic topics – formulated as four questions:

- **The future green energy system** – where does the green heat come from in the future?
- **Efficient core operation** - how do we utilise the digitalisation for optimisation purposes?
- **Green image** - how and where can we enhance the position in the green transition debate?
- **Cooperation with the customers** - how can an ongoing customer focus help ensuring that we keep on being attractive as suppliers to our supply companies?

The future green energy system – where should the green heat come from in the future?

Sustainable energy plays an important central role with VEKS. With the Danish Climate Law in 2019, the government formulated an ambitious goal to reduce the CO_2 emissions in Denmark by 70% up to 2030 compared to the level in 1990. The district heating sector plays an important role in this transition.

VEKS' goal is to supply CO_2 neutral district heating in 2025 which is primarily based on the CHP plants' transition from fossil coal and natural gas to sustainable biomass. At the same time, VEKS searches for potential new surplus heat projects and efficiency improvements, however, also analyses new production technologies which may supplement and replace the biomass over time. This is primarily carried out in the strategic collaborative project "The future district heating supply in the Copenhagen metropolitan area 2050 (FFH50)". In the spring of 2021, the first conclusions and scenarios will be published which will form the basis of how VEKS will deliver green, safe and effective district heating in the best possible way thus supporting the future green, sustainable energy system.

Gender equality

One of the goals of Sustainable Development Goal 5 (Gender equality) is to ensure women full and effective participation and equal opportunities when it comes to leadership at all levels of the decision-making within politics, economy and public life.
In VEKS' controlling body and management they strive to obtain an equal gender representation.
The Board of VEKS has adopted a zero-tolerance policy regarding abuse, harassment, etc. resulting from the current debate about sexism. A practical offshoot of equality is that a number of VEKS' male employees have chosen the long paternity leave.

Efficient core operation - how do we utilise the digitalisation for optimisation purposes?

In the years ahead, VEKS will play an important role when it comes to the fact that the district heating system is to be integrated and operated with greater data performance across the Copenhagen metropolitan area interactively with the district heating companies.

More projects have been introduced to check how to collect and process large amounts of data which by way of algorithms can increase intelligent management and optimisation of operation and maintenance.

Flexibility is becoming of greater and greater value in an energy system with an increasing amount of sustainable energy in the electricity network and new decentralised types of green technologies in the heating system (heat pumps, electric boilers, surplus heat, etc.). It requires that VEKS will be able to analyse and control the operation of the transmission system with greater power and precision.

Therefore, VEKS will take the first steps towards using data intelligently to optimise the control and surveillance of the transmission system and to establish a dedicated analytics teams across the establishment to ensure the right focus. The work must be prioritised – step by step – by establishing an outline and ensuring sufficient quality of the data applied.

- **Green image** - how and where can we enhance the position in the green transition debate?

Together with the rest of the district

heating sector VEKS contributes to informing others about district heating the aim of which is to increase the knowledge of district heating. For instance, it is specified thanks to press and news training together with a revised communication policy and strategy which were adopted by The Board of VEKS in December 2020. The key message is that "District heating is the key to green transition" and VEKS should seek influence within:

- The integrated energy system
- Development and innovation
- Adjustments

Moreover, VEKS wants a clear green, sustainable profile by making demands to our own actions in the daily actions as well as to our suppliers, customers and cooperative partners. More initiatives have been initiated by preparing a catalogue with initiatives which can be realised in the individual departments. Moreover, a CSR policy, an overview of relevant labelling schemes and possible certifications schemes are to be prepared. To act "Green for real" is also about working out a simple environmental and financial model as a decision tool and documentation for the choices we make – to live up to VEKS' purchasing policy.

Cooperation with the customers - how can an ongoing customer focus help ensuring that we keep on being attractive as suppliers to our supply companies?

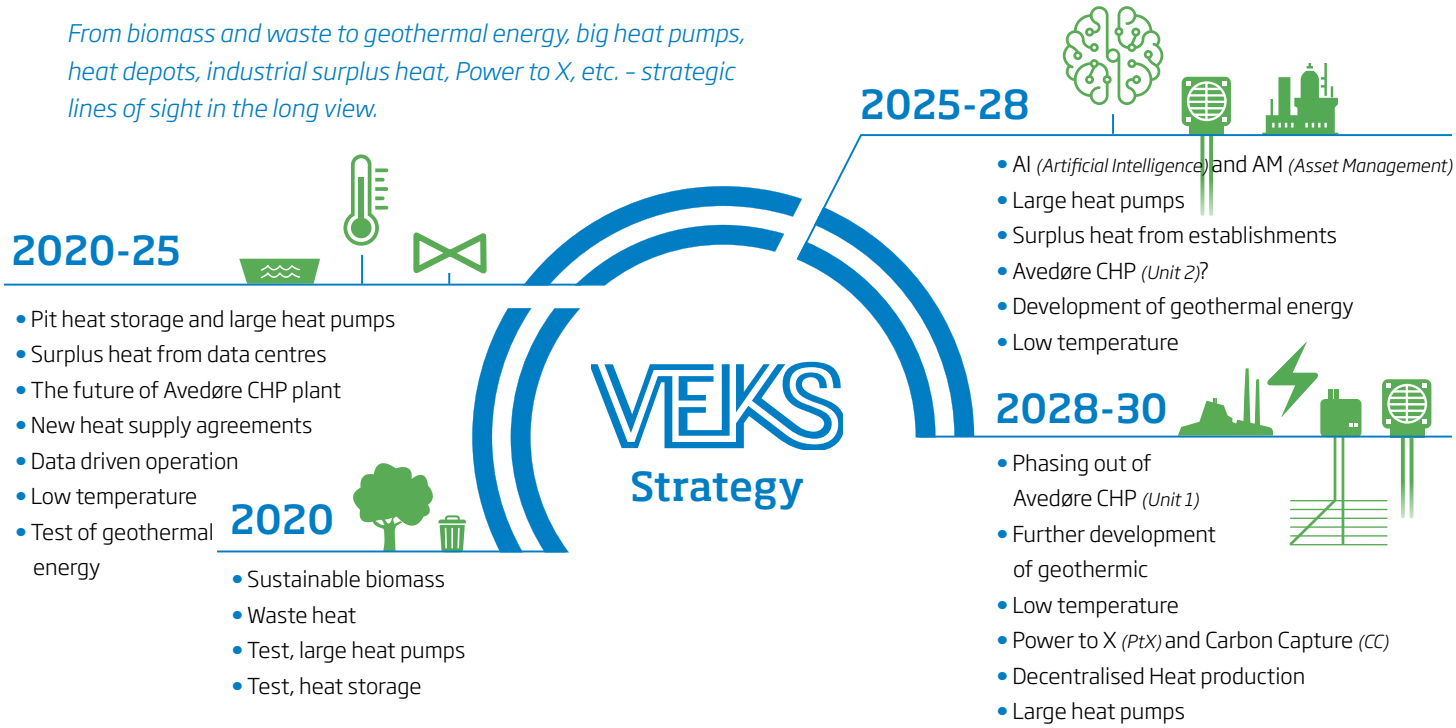
New heat supply agreements – made between VEKS and the customers – were finished at the end of 2020. The new agreements secure the basis for continuing the green transition and at the same time maintaining the reliability of supply at the lowest possible heating price.

A key element in the new agreements is a model which is motivating the local district heating company to find surplus heat – especially the heat production in the winter period when there is a need for heat. It increases the local co-determination as people also help influencing their local district heating price.

The role of VEKS Customer Forum was also widened upon the establishment of a Planning and Development Committee which consists of administrative employees from seven companies

11 strategic initiatives put VEKS' Strategy 2025 into action.

From biomass and waste to geothermal energy, big heat pumps, heat depots, industrial surplus heat, Power to X, etc. – strategic lines of sight in the long view.



– large and small – appointed by Customer Forum, apart from VEKS' Executive Board *(for more information please see Case 3)*.

VEKS contributes to diffusing green, sustainable district heating by supporting the customers in their conversion from fossil heating to green district heating.

In the long view

Just as the rest of the district heating sector, VEKS considers sustainable biomass as a transition fuel. Therefore, VEKS is involved in a number of projects and collaborations on future technologies which may supply the green district heating system in the future. More specifically, projects about large efficient heat pumps, geothermal energy, expanded heat storage, local surplus heat, etc., already exist. However, the green transition does not stop here. On the long run, the following is being looked into – again in collaboration with other actors: the possibilities of CCS (Carbon Capture and Storage – capturing and storing CO_2) and surplus heat from PtX (Power to X – production of eco-friendly fuels for the transport sector based on low-cost power production) which could be relevant technologies after 2030. An even longer perspective up to 2050 includes expectations where a large part of the district heating comes from technologies which are not mature, not fully developed or do not even exist today.

Therefore, VEKS keeps considerable focus on introducing and further developing new green sustainable production technologies – preferably local solutions in collaboration with the district heating companies – which can satisfy the requirements to environment, efficiency and economy.

The UN's Sustainable Development Goals

The UN's Sustainable Development Goals were adopted by the world's heads of state and government at the UN Summit in New York in 2015. It marked an unprecedented ambitious and transformative development agenda. The goals became effective on 1 January 2016 and up to 2030 they will set the course for us towards a more sustainable development for humanity as well as the planet we inhabit. The Sustainable Development Goals are 17 specific goals with a number of sub-goals implying that all 193 UN member countries are obliged to end poverty and hunger in the world, reduce inequality and improve health for all, decent jobs and a more sustainable financial growth.

VEKS' new slogan: GREEN DISTRICT HEATING FOR YOU

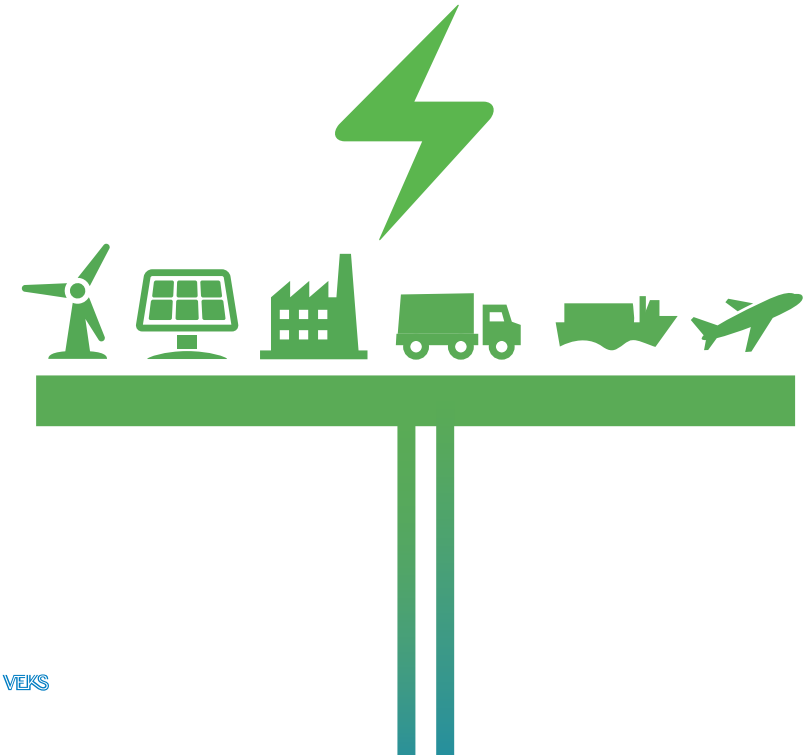
For various reasons, VEKS decided to find a replacement for the existing slogan "Energy for you in Vestegnen". The slogan has been used since 2006 and several of VEKS' owner municipalities did not consider themselves part of Vestegnen (Western Copenhagen). Moreover, VEKS is going through a development which to a great extent is governed by the green transition.

A competion was arranged where VEKS' Board Members and employees were urged to come up with suggestions to a new slogan. All in all, there was a total of 63 suggestions – distributed on 15 contributors – among others three Board Members.

VEKS
Grøn fjernvarme til dig

All 63 suggestions were presented to VEKS' Executive Board and communication employee. Each suggestion was made anonymous, so the slogan committee only had to relate to the wording and not the author.

Having narrowed it down and making a prioritisation – and where some suggestions are concerned a slight editing – the field was reduced to five suggestions. Among these five suggestions, VEKS' Chairman Steen Christiansen chose: GREEN DISTRICT HEATING FOR YOU. Together with a vignette and a logo, the new slogan "GREEN DISTRICT HEATING FOR YOU" has now been converted into professional graphical elements which have been manifested on signs, website, vehicles, reports, etc.



Virtuel conversation: The life in the operation centre during Corona

How is work life as mechanical engineer when you are suddenly secluded from the world?

VEKS' boiler Station i Solrød. In the background the chimney from VEKS Gasmotor.

On 11 March 2020, Denmark received the following message: National lockdown – everybody go home! However, the meeting place for the mechanical engineers on duty at the 24-hour manned operation centre at Roskildevej remained unchanged. The boiler attendants at Køge CHP Plant also continued their work in the control room, however, the plant was not depopulated to the same degree as Roskildevej.

Almost a year after the world changed, the stage was set to a conversation between the two mechanical engineers Henrik Lynggaard and Mogens Christensen together with team leader Benjamin Adamsen – of course by use of Teams meeting and its limitations.

Crucial employees

The mechanical engineers on duty work in rotation between eight colleagues and have continued showing up for duty every day 24/7. In general, the crucial employees of the utilities sector – including the mechanical engineer of VEKS – were protected and often isolated from the few colleagues showing up to work as the majority of them worked from home. Monitoring and adjustment of the transmission system had to be maintained which succeeded: Despite Corona everything has been running without interruption for almost a year now. However, how is it to work as an invisible army which had to hold the fort when the rest of the society is shut down?

The mechanical engineers were not surprised as everyone had watched how things developed, especially in Italy. At first, they were hesitant.

– Should we stay or leave? Could we attend work from home? Quickly, we agreed that the watch had to be carried out at the head office at Roskildevej, Mogens recalls. To many employees the physical limitations impeded organising home offices. VEKS' transmission system is 132km long and covers an area from Roskilde to Hvidovre and down south to Køge. Monitoring and controlling such a large system requires monitors (a lot of monitors) and who has room for six large monitors in their private home? At the same time, it required considerable broadband capacity which not all have at their disposal as a private person.

Mogens, Henrik og Benjamin

Mogens Christensen. Mechanical Engineer, has been employed with VEKS since 2007.

Henrik Lynggaard. Mechanical Engineer, has been employed with VEKS since 2018.

Benjamin Adamsen. Team leader, Operation, regulation, and monitoring), Mechanical Engineer, has been employed with VEKS since the middle of February 2020.

Besides the lack of room at home, other physical obstacles were also in the way. Children, for instance! – Our children were also sent home and it would simply be impossible to practise home schooling combined with managing VEKS' district heating, Henrik states. Good colleagues stepped in as we were about to coordinate "the watch" on the home front. Our usual private network was also shut down.

New at the post

In the middle of February 2020, the mechanical engineers got a new team leader, Benjamin Adamsen. – I hardly managed to meet the mechanical engineers in person before everything shut down, Benjamin recalls. In Spring 2020, it was a premise that society neither had personal protective equipment, test capacity, information about Corona nor vaccines. – And here I was having to manage, inspire and motivate a team which I had barely said hello to and nor could we be in the same room, Benjamin points out. Everything had to take place at a distance which undeniably was a difficult start.

The relation to the mechanical engineers was established by daily telephone conversations and info mails.
– It was a rather frustrating time for us all. We were supposed to be self-propelled, Benjamin states. At the same time, it was imperative that I, in my role as team leader, gained as much knowledge as possible about the mechanical engineers' tasks, routines, challenges, and not least their well-being in these new times.

– Nor did I have a network in VEKS' organisation which was slowly established by way of Teams meetings with managers and the other team leaders, Benjamin explains. The operation centre was completely isolated apart from the managers on duty, and this was not changed until June where Benjamin could start working in the control room again and was able to work on coordination and collaboration tasks.

Communication

The mechanical engineers were "privileged" by having their own entrance whereas the shift change/rotation took place outside. – It was difficult to get to know the system – we missed the monitors outside at the parking place! When you entered the sanitized operation centre and read VEKS' E-log, it was often necessary to call the person on duty before you. Otherwise, you risked missing something, Mogens stresses.

As mentioned, the communication tool is an E-log which is the most important internal tool, between the mechanical engineers. Here, very summarised information is given about e.g., drop-outs, breakdowns, oil orderings, start/stop of local boilers, call-outs of the operations manager on duty or a service engineer, etc. Moreover, it includes the daily activity report with the heat consumption, settlements, net loss, deviations, etc. The tool documents important incidents and irregularities to which colleagues in VEKS can subscribe. Thus, it contributes to a strengthened communication between control room and the rest of the house.

Deserted

But one thing is the physical settings, another is how you react psychologically/mentally. – During weekends, we were always alone at work. So we, the mechanical engineers, probably are rather special when it comes to thriving when working alone. Here, the difference was that it was suddenly an everyday occurrence. It became a requirement to be alone and at every watch, Henrik tells. The mechanical engineers missed their colleagues – it affects the job satisfaction which also affects the private life.

– I found the isolated work in the deserted house during the spring to be very frustrating. It was really mentally challenging but none of us ended in deep water, Henrik establishes. Usually, we work closely together with the other people in the department and often colleagues dropped by the operation centre. In previous times, the mechanical engineers also had their regular meetings in the team, and they walked around in the house during which many problems were discussed and solved. Often, this happened in connection with informal conversations, spontaneous meetings or at the specialist talk by the coffee machine. – You are bit more reserved than usual when the primary communication takes place via email. You could no longer just open the door as usual to discuss big or small problems. We really missed the cooperation with our colleagues, Mogens says.

Source of irritation

The mechanical engineers' job function has not seemed to change during the Corona period. There have still been hectic days, more quiet days, lots of conversations with manufacturers and Varmelast as well as monitoring of transmission systems and district heating companies in Køge, Tranegilde,

VEKS' district heating - day and night

District heating has been monitored 24/7. An SRO system at the operations centre is the tool used to control, regulate, and monitor the delivery of heat from Avedøreværket and the two waste-to-energy plants ARGO and Vestforbrænding. Here, the direction of the district heating water is controlled through double pipes, exchange stations and pumping stations.

The SRO system collects data from more than 6,000 readings and 10,000 signals, which are important operation mechanisms on a daily basis. The data collected may trigger alarms which e.g., indicate changing pressure, temperature, amount of water in the system. Other alarms indicate if one of the local district heating companies is not receiving the necessary individual flow temperature.

All pipes also have alarm wires installed, which immediately register humidity, ruptures, or penetrating water - and set off an alarm in the operation centre. Pumps and valves in the piping system are usually adjusted automatically, but the mechanical engineers can control them manually from the operations centre if they need to act fast.

Through the SRO system the mechanical engineers can start one or more of the 26 local boiler stations if the heat demand cannot be covered by the basic load from waste and CHP plants.

and Mosede. Business as usual? Yes and No.

The monitoring of intruder alarms, fire alarms, video surveillance, and key returns at the head office have been happening like normal– naturally including extra Corona cleaning. Practically, there was an extreme cause of irritation: Packages! Within regular work hours, the reception has always handled delivery of goods as VEKS receives a lot of large and small parcels for operation and maintenance jobs. – The parcels continued arriving in a steady stream even though everybody had gone home, Mogens states, so suddenly we had an extra function 24/7. It may sound like a trivial problem, however, it was rather challenging. Especially, when we had to sign for the receipt and still respect the distance. Fortunately, this procedure has changed today.

Improvements

All in all, much has changed since the very sudden shut-down and unfortunately also the information lockdown in spring of 2020. Since the second wave of Corona in autumn, the mechanical engineers have found work less isolated. Now, the night watch participates in Teams meetings together with the servicemen every morning which will probably continue when the world normalises again. Furthermore, there are now two weekly Teams meetings for all the employees in the transmission department which besides the mechanical engineer team consists of Maintenance and Quality and Service. – So we do not only watch our own "shop" but once again get the feeling of being part of something bigger, Henrik establishes.

Internally, the E-log will remain an important communication tool. Other procedures to receive information and relevant summaries have also been improved during the Corona year.
– Not to forget the packages! Now, the reception is manned during the day which really is a great improvement, Mogens stresses.

Do you consider yourselves everyday heroes?
– No, we are no more heroes than all the others! We have managed the operation of the district heating smoothly and everybody has received their heat through the amazing infrastructure that is VEKS' system, Henrik concludes.

Interview participants

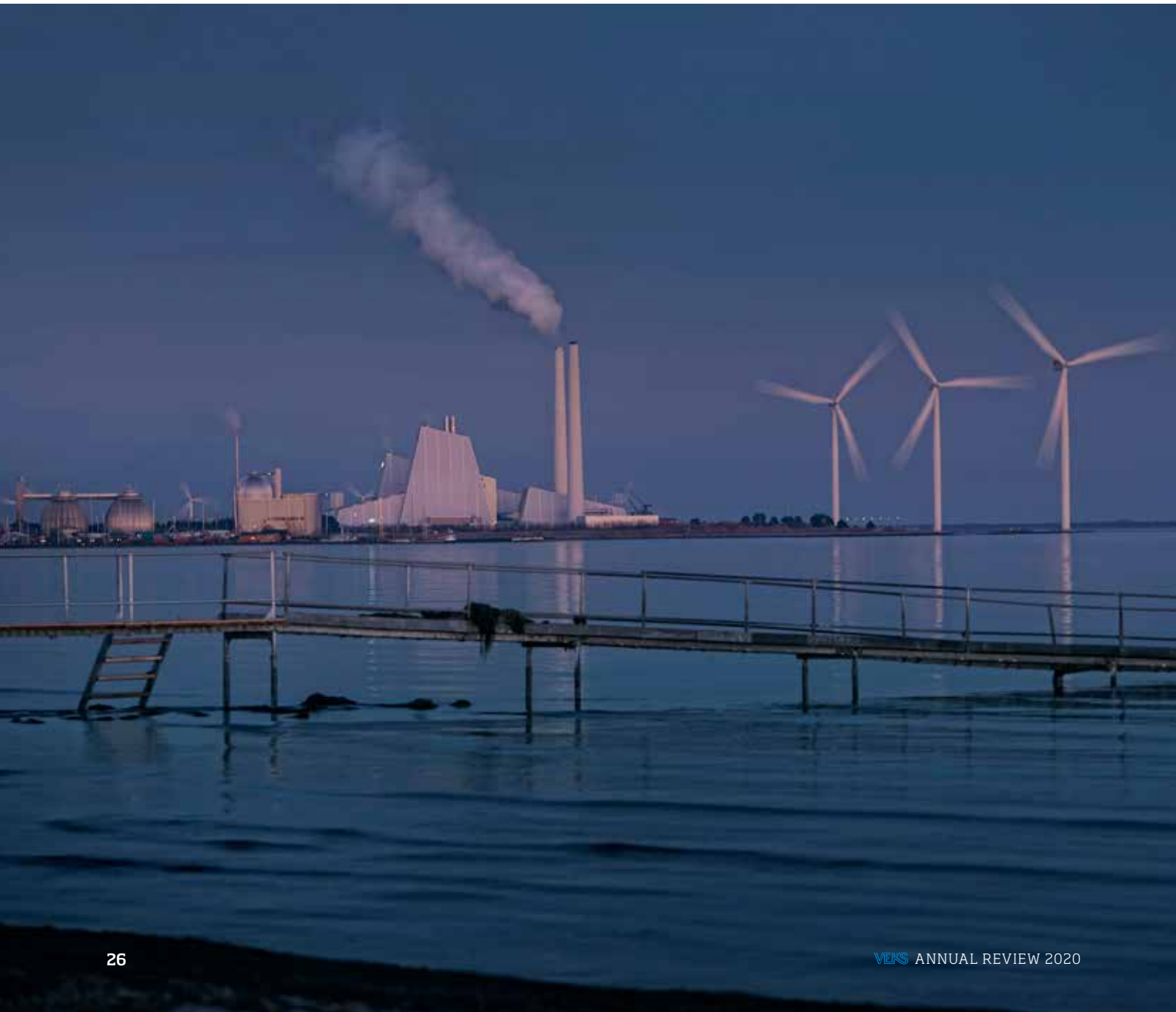
Astrid Birnbaum, CEO Høje Taastrup Fjernvarme, employed in 2016

Bo Nørbjerg, CEO Glostrup Forsyning, employed in 2010

Lars Gullev CEO VEKS, employed in 1992

Morten Stobbe, Vice President VEKS, employed in 2016

Avedøre CHP Plant, produces green energy based on sustainable biomass.



Group interview: The expectations of the customers

VEKS' Customer forum has existed in its present form for well over five years. How does it work and is there room for improvements?

Has VEKS succeeded in revitalising their relationship to the most important actors - viz. the customers?

The stage was set for a group interview about VEKS' Customer forum which replaced the User council – closed five years ago. As the name indicates, Customer forum consists of VEKS' customers and it is very wide- ranging: From large multi supply enterprises to small district heating companies. At the same time, the ownerships from consumer owned companies to municipality owned companies vary – either as part of the management or as company transformed limited companies.

The participants of the interview (in a Teams meeting, naturally) were Astrid Birnbaum, CEO of Høje Taastrup FJernvarme, Bo Nørbjerg, CEO of Glostrup Forsyning and VEKS' Executive Board Lars Gullev and Morten Stobbe.

The customer's choice

– As I see it, the purpose of the Customer forum is for us to gain insight and a more close and open dialogue plus a trusting cooperation, Astrid states. In the sector we – each and every one - invest large sums in future energy solutions. However, it requires that we mutually offer each other greater insight in future projects – with VEKS and locally. You see, we all help developing the district heating system! Bo adds: – The Customer forum works far better than the former User council which functioned more as a reading of the points on the agenda for the next Board meeting. The present model is based on dialogues between VEKS and the customers. As you know, we have a special customer relationship as we cannot buy heat from other sources. However, by watching us as if we have a choice, our experience is that we participate as important cooperative partners who are treated with equality and respect.

– I am a bearer of history in this discussion, Lars comments. In the former User council, the purpose was to brief the Board and vice versa. Unfortunately, it developed into a political discussion platform which sometimes had a toxic tone and where dialogue and cooperation were not prioritised during the meetings. Now, we have an agenda which is released from the Board meetings of VEKS and has revitalised the dialogue of the customer relations. We are inseparably linked, and I can only repeat Bo's point about customers being treated as if they have an alternative.

– We have revitalised Customer forum, Morten states. In 2015, we decided to start all over – with inspiration from a cooperation model which AffaldVarme Aarhus employed with success. A delegation went to Aarhus where Astrid also participated. We took the best from here and created our own version of VEKS' Customer forum. The first meeting was held on 30 November 2015.

Big brother/little brother

Is there a big brother/little brother relationship between VEKS and the customers?

– It can actually be a considerable advantage having a big brother when the little brother does not have the resources, Bo maintained. For instance, our professionally qualified employees do not fight the battles from the point of view of national politics. We can follow the slipstream when VEKS - with their competences and knowledge of policy-making processes – takes up the fight on behalf of VEKS' customers. The effect is different than if I had called out on behalf of Glostrup Forsyning, Bo says.

– We are not at all the little brother as we are all to a far greater extent focused on integrating the whole system today, Astrid establishes. We do not sub-optimise, however, support each other – our local production is for instance being integrated into VEKS' district heating system. We do not have room enough for it all ourselves.

Specific examples

– The heat supply agreements have taken up a lot of our time but NOW we are drawing to a close, Morten says. The working group behind the agreements represents Customer forum and the cooperation has been very productive and constructive even though it took time.

Specific examples of discussions in Customer forum are the peak and reserve load strategy (e.g. an electric boiler in Hvidovre) and the pit heat storage which is constructed by VEKS and Høje-Taastrup Fjernvarme in cooperation. It is a project which benefits the whole system. Moreover, Customer forum has focused on the calculations of the socio-economic district heating prices. In this regard, VEKS has received really useful input from the customers via Customer forum, Morten stresses.

– In Glostrup, we were in close dialogue with VEKS in the beginning of the twenty-tens when we expanded the district heating from 30-65%. VEKS invested in a new heat exchanger station, Glostrup were involved in large construction works, and together we made strategic decisions, including shutting down peak load boilers. A surplus heat project from Copenhagen Fur was handled locally – with VEKS' acceptance! - Bo recalls. – The fact that VEKS in practice brings along a strong expert team, besides their executive board, at each meeting of the Customer forum is at the same time an indication of respect for our customers. Moreover, we have had contributions from external guests when it so required, Bo adds.

Green transition

– If we climb on board the helicopter, it is obvious that transparency is a keyword. In our complex sector, heavy investments in large units are often required. This calls for openness from both sides of the heat exchange to avoid unsuccessful investments. In the end, the customers are the ones, the only ones, to pay the bill. Therefore, we must live up to the population's expectations, viz. that we all contribute to the green transition, stresses Lars. – In the long run, district heating will convert from a central to a more local production. We all have to collect the heat where it is and also develop alternative solutions to reduce CO_2 emissions, Morten says (see Case 4 for more information). – The coming data centre in Høje-Taastrup is the most recent example of VEKS and a local district heating company cooperating on utilising surplus heat. The data centre will supply 50MW to the local supply system as well as to VEKS. The surplus heat can heat up 20,000 residences, Astrid adds.

Planning Committee

A Planning and Development Committee is associated with the Customer forum. Among other things, the Committee brings suggestions to the agenda. The members of the Committee are appointed by Customer forum and VEKS. – The Planning Committee has no powers of decision, however, ensures understanding. We geek out when it comes to details, offer mutual inputs, and have expert, in-depth discussions, Morten explains.

– The Planning Committee elaborates on the projects and makes the participants in Customer forum feeling reassured, Astrid says: It functions well and offers background and insight. Bo confirms the important functions of the Committee as not all district heating companies have the professional qualifications in the organisation.

More energy

Both Bo and Astrid go through the agenda of the next meeting together with several professionally qualified employees. – However, I already know most of the cases. I spend a lot of time on VEKS, Astrid states.

Everybody agrees that virtual meetings in general are more dull than face-to-face meetings and they kill the dynamic.

– This is not only the case for Customer forum meetings, but it is a very common phenomenon that people do not want to make a fool of themselves by posing "stupid questions" in a large assembly. If there are fewer participants at the meeting, a more free and lively discussion occurs, Lars notes. Astrid adds: – In general, it would be nice to have more active participants. We are all obligated to contribute, and I would like to hear more from the other companies. Often, our challenges are the same.

A typical agenda, Customer forum

- News from the Planning and Development Committee
- Process for approval of heat supply agreements
- Conversions – How can VEKS offer support/contribute?
- Responses to hearing requests regarding the executive order of projects (Projektbekendtgørelse) and problems as to requirements to district heating/ heat pumps
- Status action plan for peak and reserve load
- Future Board meetings of VEKS
- Involvement of the customers in important decisions
- Surplus heat from local projects, e.g. the data centre in Høje-Taastrup, Copenhagen Fur in Glostrup
- Surplus heat to local systems and the transmission system
- Permissions and regulatory processing
- Status agreement discussions with Ørsted
- Status pit heat storage Høje-Taastrup + area reserved in Roskilde
- Status Future District Heating in Copenhagen metropolitan area 2050 - FFH50
- Request from Kalundborg regarding surplus heat
- Financial reporting
- Cases in the Danish Utility Regulator/the Danish Energy Board of Appeal

– To a great extent, I experience that VEKS supplies us with information whereas the other customers are less active Bo states. A more dynamic atmosphere would be nice. What are the other district heating companies doing? How do you handle the development of district heating? Do you have interesting cases to share?

Room for improvement

Everybody agrees that the concept and content of Customer forum are far better than the former User council, however, trees do not grow into the sky!

There is room for improvement when it comes to creating an even better Customer forum. Do you have any pieces of good advice for the Executive Board and vice versa?

There is great potential for expanding the cooperation. Are we actually hiding? Are we open enough? For instance, have we shared our experiences with surplus heat from Nordea? How do we in general handle project applications? Where and how do we convert 1,800 natural gas customers? We could also, with great advantage, discuss rate structures, subscription solutions, etc., Astrid suggests.

– Maybe we should work on creating a Customer forum, version 2.0? Today, the group consists of very different segments. Are we too varied in our composition? Perhaps, the topics could be targeted, and new, different forums could be created in Customer forum. A forum could facilitate the strategic agenda on future district heating. A CEO forum could also be an idea. Here, VEKS could help us "understand" the Danish Parliament and go through parts of the legislation that require extra attention from the management of the district heating companies. A third forum could make room for sharing operational experience, Bo recommends. Like Astrid, Glostrup Forsyning faces natural gas conversion offering district heating to 2,700 new customers. – In VEKS' supply area we are perhaps a bit too focused on separate project applications. We call for mutual experience sharing and inspiration, Astrid ponders.

And Morten adds: Soon, we will arrange expert feature days with special target groups offering transverse inspiration. This totally complies with our new heat supply agreements where we are committed to mutual briefing.

– As quickly as possible, we transform the good proposals to items on the agenda and we also like to discuss the role and function of Customer forum with the overall forum. I would also like to appeal to the fact that the members of Customer forum contribute with inputs to topics. We need to be better at discussing relevant legislation and the strategic decisions as required by the green transition, Lars concludes.

After one hour we had to end the Teams meeting. VEKS left the meeting and Bo and Astrid seized the chance to arrange a bilateral meeting. The need for discussing a number of matters was present.

District heating is still the key to green transition

Throughout its entire life, VEKS has saved resources and has thereby had a constant focus on reducing the CO_2 emissions

Surplus heat, CHP, waste heat, CO_2 neutral district heating, climate friendly heat...
Many terms – but what characterises VEKS' district heating?

CHP

When VEKS "started operation" on 1 October 1987, the purpose was to save resources. The fewer resources the less environmental impact. Back then with the new transmission system, VEKS could together with CTR utilise the surplus heat partly from waste incineration, partly from the large central CHP plants – VEKS primarily used Avedøre CHP Plant. The first big step was to connect the local district heating companies in VEKS' supply area to the transmission system. Thus, fuel oil, coal, and natural gas, which until then had been fuel in the local boilers, could now be replaced by district heating from VEKS – a process which was realised in 1990.

Surplus heat from waste incineration and CHP alone has resulted in an annual CO_2 reduction of approx. 500,000 tonnes compared to if the district heating companies had used oil or natural gas for heating.

From 1990 to 2000, VEKS aimed to reduce the emissions of CO_2 where the focus was first and foremost on replacing fuel oil with light gas oil or natural gas at the peak and reserve load centrals. Secondly, VEKS' energy consultancy focuses on lowering the return temperature in the transmission system. A lower return temperature reduces heat loss and power consumption from pumping but also ensures an improved efficiency at Avedøre CHP Plant.

Moreover, 1990 is the year which is subsequently used as reference year to calculate the CO_2 emission to which the district heating customers in VEKS' supply areas have given rise.

Sustainable biomass

In 2001, unit 2 of Avedøre CHP Plant was commissioned. The heat production of the new unit was based on natural gas and wood pellets which played a crucial role in connection with the CO_2 emissions in the years ahead.

The Danish Energy Agreement from 2012 legislatively opened up - for Ørsted as the owner of Avedøre CHP Plant as well as VEKS - to adapting Unit 1 of Avedøre CHP Plant from coal to sustainable biomass, rendering it a financially attractive solution.

VEKS' boiler and heat exchange stations are positioned in connection with DTU Risø Campus by Roskilde Fjord.

"The fact that we at VEKS already reached the goal of 70% reduction in 2020 is something we can be proud of - proud of being part of a community whose focus has constantly been on green transition the last 30 years. We have come across the finish line - and we will do even better in the years to come."

Lars Gullev, CEO, VEKS

The same year, VEKS purchased the biomass-fired CHP plant in Køge which covers more than 10% of VEKS' present overall heat requirements.

Since 2016, Denmark's largest CHP plant, Avedøre CHP Plant, has produced heat from both units based on 100% sustainable biomass and thus replaced the fossil fuels, coal, and natural gas.

The biomass conversion at Unit 1 alone has resulted in an annual CO_2 reduction of approx. 100,000 tonnes compared to if the heat production were based on coal.

VEKS' customers have reached the goal

With the Climate Treaty from June 2020, a large majority in the Danish Parliament decided that Denmark should reduce their CO_2 emissions by 70% in 2030 compared to 1990.

And what is VEKS' stance considering this goal?

The national goal to reduce the CO_2 emissions by 70% in 2030 has already been reached in VEKS' supply area.

In 1990, the CO_2 emissions from a district heating customer in VEKS' supply area was 58.22kg/GJ whereas it was reduced to 14kg/GJ in 2020. This corresponds to a reduction of 75.9% since 1990. Thereby, district heating customers in VEKS' supply area have reached the goal when it comes to the national goals which do not apply until 2030.

As a natural gas customer, the emissions from the residence is still 56.5kg CO_2/GJ. On the whole, it corresponds to the CO_2 emissions of a district heating customer in VEKS' supply area in 1990!

By converting natural gas to district heating, you can all at once surpass the national CO_2 reduction goals of 70%.

Drop - nationally

In 2019, Denmark reduced its CO_2 emissions by approx. five million tonnes from 51.6 to 46.7 million tonnes corresponding to well over 9%. The primary explanation to this is that coal to an increasing extent has been replaced by biomass since the coal consumption of the CHP plants dropped by 44% in 2019.

The statement shows that Denmark lacks a reduction of 23 million tonnes from 2019 level to reach the goal of the climate goals of 2030.

Source: Altinget 10 February 2021 based on figures from Aarhus University which is responsible for Denmark's climate calculations for the UN and the EU (https://www.altinget.dk/artikel/204490-)

VEKS' projects

VEKS is involved in a number of projects where all their goals contribute to the green transition – you save resources and thus reduce the CO_2 emissions.

CP Kelco

Together with VEKS, CP Kelco has developed a project where surplus heat covers the heat requirements of 2,200 households – connected to Køge District Heating.

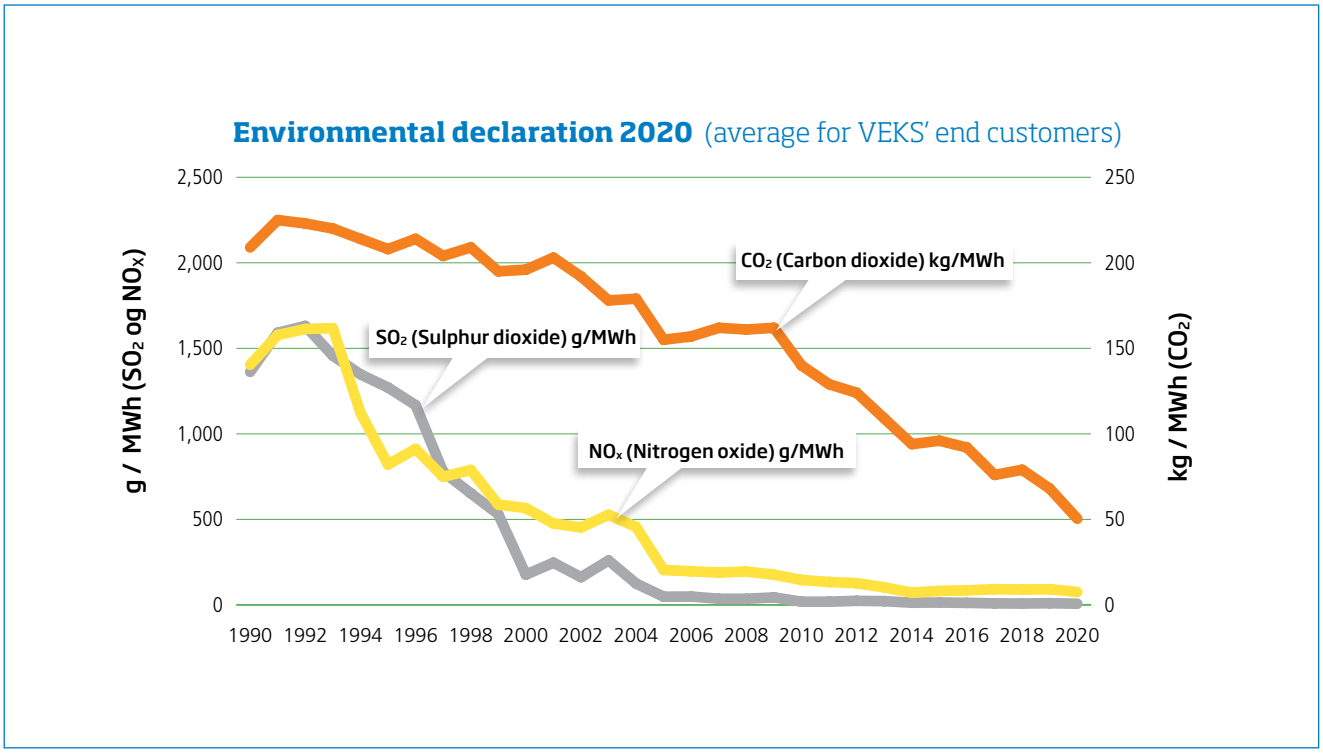
Originally, the focus was on lowering the noise level from CP Kelco's cooling towers whose fan heaters produced noise when the surplus heat was blown away. A stressful noise problem was transformed into a surplus heat project where VEKS utilises the present surplus heat in the local district heating system instead of sending the heat up in the air in a noisy manner as it used to.

The effect of the CP Kelco project represents approx. 1.5% of VEKS' total heat purchase and was officially opened 9 April 2018 by Lars Christian Lilleholt, the former Minister in power.

The surplus heat project alone has resulted in an annual CO_2 reduction of approx. 10,000 tonnes compared to if the customers still used natural gas for heating.

VEKS Gasmotor

In the summer of 2015, Solrød Biogas A/S started producing gas. The annual production of biogas is approx. six million cubic metres for VEKS' gas engine



in Solrød. VEKS is involved in the project as the taker – the buyer of the biogas. At the heating plant in Solrød, VEKS has constructed a building for the purpose. It contains a gas engine which produces green electricity for the grid through a generator and at the same time it transforms the cooling water to district heating for VEKS' system.

VEKS' gas engine generates around 25,000MWh (25 million kWh) green electricity a year. The heat from the gas engine covers 1% of VEKS' total sale of heating.

More coming up

Through the years, VEKS has "collected heat" where it made sense. And more is on the way.

At present, experiences from a collaborative project about large heat pumps also involving VEKS are reaped concurrently with large-scale geothermal energy in the Copenhagen metropolitan area being a highly prioritised development area.

Together with Høje-Taastrup Fjernvarme, VEKS will put a pit heat storage of 70,000m³ into service in 2021/2022. The project has received EUDP aid which is the Danish Energy Agency's funds to support development projects.

The pit heat storage will utilise the district heating even better, as the district heating will be deposited when it is low-cost to produce – reversely, the stored heat will be used when it is expensive to produce. Therefore, the new pit heat storage will benefit the total power and heat production in the entire Copenhagen metropolitan area and will thus also benefit the green transition – especially because the local peak load production based on fossil oil or natural gas can be reduced.

The pit heat storage alone will result in an annual CO_2 reduction of up to 15,000 tonnes.

Accounts

One of VEKS' latest erected building is Trangilde Vekslercentral at Brentevej in Ishøj.

VEKS - Profit and loss account

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Net sales	1,199,131	1,215,906	1,316,598
Production and heat purchase costs	-1,096,652	-1,145,847	-1,164,435
Gross profit	**102,479**	**70,058**	**152,163**
Transmission costs	-62,955	-65,829	-62,809
Distribution costs	-32,592	-34,327	-28,874
Administrative costs	-27,722	-30,648	-30,324
Result from primary operations	**-20,789**	**-60,747**	**30,156**
Other operating income	54,851	60,412	32,701
Other operating expenses	-24,430	-23,242	-20,810
Result before financial items	**9,632**	**-23,578**	**42,047**
Financial income	23,930	22,757	1,023
Financial costs	-19,525	-21,813	-19,800
Year-end result	**14,037**	**-22,634**	**23,270**

Statement of profit or loss balance pursuant to the Danish Heat Supply Act

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Year-end result			
VEKS Køge CHP Plant, production	0	0	0
VEKS Køge District Heating, distribution	-2,846	-4,320	-869
VEKS Tranegilde District Heating, distribution	452	-3,283	-305
VEKS Gas Engine, Solrød	0	0	0
VEKS Transmission	16,432	-15,031	24,444
	14,037	-22,634	23,270
Adjustments			
Reversal of small acquisitions recognised as an expense in accordance with the above-mentioned information	784	1,319	1,015
Reversal of operating depreciation	103,925	110,289	92,016
Reversal of profits from the sale of assets	-122	0	0
Reversal of financial items in accordance with the above-mentioned information	-4,405	0	18,777
Reversal of allocated holiday pay, flex time and public servant pension	933	0	1,049
Depreciation under the Danish Heat Supply Act	-129,421	-129,422	-63,101
Financial items under the Danish Heat Supply Act	4,405	0	-18,777
Year-end result pursuant to the Danish Heat Supply Act	**-9,864**	**-40,448**	**54,248**
Surplus/deficit transferred from previous years	54,695	448	446
Profit or loss balance, year-endpursuant to the Danish Heat Supply Act	**44,831**	**-40,000**	**54,695**

VEKS - Comments on the profit of the year

The net profit for the year in VEKS amounts to DKK 14 million which is DKK 37 million better than expected.

The revenue amounted to DKK 1,199 million which is DKK 17 million less than budgeted. The reduced sale is primarily due to the fact that 2020 was a hot year and sales in VEKS Transmission amounted to DKK 41 million under budget. At the same time, the low power prices have resulted in the fact that income from the sale of electricity with Køge CHP Plant ended at DKK 14 million under budget. In return, the sale to CTR was DKK 42 million higher than budgeted which is due to the fact that new production units with CTR have not produced as much as expected. The sale to CTR has no impact on VEKS Transmission's customers as the sale is at cost and the production and costs related to heat purchase are thus correspondingly higher than budgeted. In overall terms, the gross profit is DKK 32 million better than budgeted. The primary reason is that the fixed production costs with the producers were DKK 17 million lower than budgeted. Moreover, the variable production and heat purchase costs in VEKS Transmission amounted to DKK 67.94/GJ relative to a budget of DKK 69.29/GJ which improves the gross profit with DKK 11 million. All in all, the operating expenses are DKK 8 million under budget of which a reduced number of amortisation and depreciation constitute DKK 3 million of the reduced expenditure. The remaining reduced consumption distributes in many different areas.

Other operating income is DKK 6 million under budget. This is due to the fact that VEKS has decided only to sell for DKK 23 million. CO_2 quotas against a budgeted sale of DKK 30 million.

In 2020, the financial income was DKK 3 million better than budgeted which was due to an interest rate level that was lower than expected.

VEKS in total 2020 compared to 2019

The net profit for the year is DKK 9 million lower than the result in 2019. In 2020, an amount of DKK 40 million has been repaid in surplus from 2019. In return, CO_2 quotas have been sold for DKK 23 million in 2020, whereas no quotas were sold in 2019. Likewise, interest-bearing contributed capital of DKK 23 million was repaid in 2020 which accounting-related is a financial income which improves the accounts in 2020 compared to 2019.

Insecurity in connection with recognition or measuring

During the last 15 years, VEKS has participated actively in the development of geothermal heat and is co-owner of a geothermal test plant in Amager (HGS). For various reasons, the plant has been on hold since 2018, however, although the plant is put on hold, it is expected that the plant may contribute to test and development of geothermics in the future. At the moment, there is ongoing dialogue with interested parties that may be interested in taking over the plant. Therefore, there is some uncertainty about the value at which the plant is entered in the accounts.

Expectations for 2021

VEKS budgets with an overall loss of DKK 4 million in 2021.

Balance sheet as at 31 December

	2020 DKK ´000	2019 DKK ´000
Assets		
Tangible fixed assets		
Intangible fixed assets		
Captacity rights	358,240	374,564
Ongoing projects	314	192
Intangible fixed assets, total	**358,554**	**374,756**
Tangible fixed assets		
Land and buildings	7,425	7,425
Production facility	249,797	234,904
Transmission facility	538,552	505,640
Administration facility	4,094	4,646
Distribution facility	748,053	768,030
Projects in progress	100,473	90,281
Tangible fixed assets, total	**1,648,393**	**1,610,925**
Financial fixed assets		
Securities	25	25
Long-term debts, VEKS' loan scheme	7,436	8,229
Financial fixed assets, total	**7,461**	**8,254**
Fixed assets, total	2,014,408	1,993,936
Current assets		
Stocks		
Fuel stocks	14,345	17,108
Spare part stocks	1,567	1,727
Stocks, total	**15,912**	**18,834**
Debtors		
Amounts owed from sales and services	227,226	278,436
Other debtors	47,621	32,435
Prepaid costs	23,593	9,069
Debtors, total	**298,440**	**319,940**
Cash at bank and in hand	**0**	**0**
Current assets, total	314,352	338,775
Assets, total	2,328,760	2,332,710

	2020 DKK ´000	2019 DKK ´000
Liabilities		
Capital and reserves		
Invested capital	9,875	9,875
Operating capital reserve	87,727	87,727
Net loss for the year (profit or loss balance) pursuant to the Danish Heat Supply Act	-44,832	-54,695
Accumulated profit in relation to the Danish Financial Statements Act	50,089	36,053
Capital and reserves, total	**102,859**	**78,960**
Provisions		
Public servant pension liabilities	4,181	5,896
Provisions, total	**4,181**	**5,896**
Creditors		
Long-term liabilities		
Holiday pay obligation, freezed	5,617	1,916
Loan capital and construction credit	1,357,094	1,331,223
Long-term liabilities, total	**1,362,710**	**1,333,139**
Short-term debts		
Loan capital and construction credit, short-term share	539,535	523,464
Credit institutions	16,684	57,178
Suppliers of goods and services	234,504	234,097
Provisions for holiday allowance and flex time	14,347	9,783
Payments of profits for the year - consumer accounts	44,832	77,665
Other creditor	9,107	12,527
Short-term debts, total	**859,009**	**914,715**
Creditors, total	2,221,720	2,247,854
Liabilities, total	2,328,760	2,332,710

VEKS Transmission - Profit and loss account

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Transmission, fixed tariff	398,132	400,769	382,782
Transmission, variable tariff	683,411	690,836	814,944
Revenues, in total	**1,081,543**	**1,091,605**	**1,197,726**
Production costs, excl, depreciation	-51,273	-59,585	-44,275
Production costs, depreciation	-37,784	-40,183	-30,143
Heat purchase costs	-935,030	-963,953	-1,013,036
Production and heat purchase costs	**-1,024,088**	**-1,063,722**	**-1,087,454**
Gross profit	57,456	27,883	110,272
Transmission costs, excl, amortisation	-39,790	-40,322	-40,226
Transmission, amortisation	-23,107	-25,507	-22,412
Administrative expenses	-22,240	-25,728	-25,579
Net profit or loss for the year	**-27,681**	**-63,674**	**22,055**
Other operating income	54,191	59,932	32,158
Other operating expenses	-24,296	-23,063	-20,522
Result before financial items	**2,214**	**-26,805**	**33,691**
Financial income	23,919	22,835	834
Financial costs	-9,701	-11,062	-10,081
Year-end result	**16,432**	**-15,031**	**24,444**

Statement of profit or loss balance pursuant to the Danish Heat Supply Act

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Year-end result	**16,432**	**-15,031**	**24,444**
Adjustments			
Reversal of small acquisitions recognised as an expense	547	950	659
Reversal of operating depreciation	62,390	66,981	53,665
Reversal of profits from the sale of assets	-122	0	0
Reversal of allocated holiday pay, flex time and public servant pension	-241	0	969
Depreciation under the Danish Heat Supply Act	-94,190	-94,190	-29,508
Year-end result pursuant to the Danish Heat Supply Act	**-15,185**	**-41,291**	**50,229**
Surplus/deficit transferred from previous years	51,520	1,291	1,291
Profit or loss balance, year-end pursuant to the Danish Heat Supply Act	**36,336**	**-40,000**	**51,520**

VEKS Transmission - Comments on the profit of the year

The net profit for 2020 was a surplus of DKK 16 million which is DKK 31 million better than expected. The outcome is DKK 8 million lower than in 2019.

The sale to VEKS Transmission's customers was 8,296 TJ against the budgeted 8,980 TJ and a sale of 8,605 TJ in 2019. The decrease is due to a very warm year. The sale to CTR was DKK 42 million higher than budgeted which is due to the fact that new production units at CTR have produced less than expected. The sale to CTR has no impact on VEKS Transmission's customers as the sale is at cost and the production and costs related to heat purchase are thus correspondingly higher than budgeted.

The revenue of VEKS Transmission's customers was DKK 50 million lower than budgeted.

The variable production and heat purchase costs of VEKS Transmission's customers amounted to DKK 67.94/GJ in 2020 relative to a budget of DKK 69.29/GJ which improved the gross profit with DKK 11 million. The improvement is primarily due to the hot weather so the need to buy heat from the most expensive production units was less. In return, the power prices have been very low which implied that the production units selling power and from which the income affects the heating prices have been more expensive than budgeted. Therefore, the price has also increased compared to 2019 where the price was DKK 61.6/GJ.

The fixed heat purchase costs from producers were DKK 15 million lower than budget and DKK 4 million lower than in 2019.

In overall terms, the gross profit was DKK 30 million better than budgeted in 2020. The total production and heat purchase costs amounted to approx. DKK 103/GJ per GJ sold compared to a budgeted price of approx. DKK 105/GJ. In 2019, the total price was corresponding DKK 98/GJ.

Transmission and administrative expenses, excl. amortisation and depreciation, amount to DKK 4 million under budget in 2020 and likewise DKK 4 million lower than in 2019. The reduced expenditure must also be found in a number of areas such as attorney and consultancy expenses, IT expenses and more hours transferred from operation to plant.

Other operating income/operating expenses are DKK 7 million under budget which is due to the fact that VEKS Transmission has chosen to sell CO_2 quotas for an amount of DKK 23 million CO_2 quotas against a budgeted sale of DKK 30 million. Compared to 2019, there is an improvement of DKK 18 million which is due to the fact that no CO_2 quotas were sold in 2019. On the contrary, the income of hot water was higher in 2019 than in 2020.

The financial income was DKK 2 million better than budgeted which was due to an interest rate level lower than expected. Compared to 2019, the result is DKK 23 million better which is due to interest-bearing contributed capital of DKK 23 million being repaid in 2020 which accounting-related is a financial income improving the accounts in 2020 compared to 2019.

Køge CHP plant - Profit and loss account

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Sale of electricity	29,856	43,396	42,539
Sale of heating, fixed tariff	51,238	49,184	49,953
Sale of heating, variable tariff	82,120	65,626	77,061
Revenues, in total	**163,214**	**158,205**	**169,553**
Fuel	-104,778	-100,496	-112,921
Amortisation	-11,547	-11,958	-10,912
Other production costs	-42,524	-41,352	-41,730
Production and heat purchase costs	**-158,848**	**-153,806**	**-165,563**
Gross profit	4,367	4,399	3,990
Administrative costs	-2,558	-2,462	-1,845
Result from primary operations	**1,808**	**1,938**	**2,145**
Other operating income	692	608	588
Other operating expenses	-110	-166	-285
Result before financial items	**2,390**	**2,379**	**2,448**
Financial income	6	0	0
Financial costs	-2,395	-2,379	-2,448
Year-end result	**0**	**0**	**0**

Statement of profit or loss balance pursuant to the Danish Heat Supply Act

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Year-end result	**0**	**0**	**0**
Adjustments			
Reversal of small acquisitions recognised as an expense	227	350	306
Reversal of operating depreciation	11,547	11,958	10,912
Reversal of allocated holiday pay, flex time and public servant pension	1,078	0	132
Depreciation under the Danish Heat Supply Act	-12,654	-12,654	-11,366
Year-end result pursuant to the Danish Heat Supply Act	**197**	**-347**	**-16**
Surplus/deficit transferred from previous years	331	347	347
Profit or loss balance, year-end pursuant to the Danish Heat Supply Act	**528**	**0**	**331**

Køge CHP Plant - Comments on the profit of the year

The net profit for the year for Køge CHP Plant is always 0 as the earnings from VEKS Transmission and Junckers are always adjusted in relation to the amount of expenses available for producing the heating sold. A decreased/additional consumption of fixed expenses will be adjusted in the regular charging to VEKS Transmission and a deviation of the variable costs/income will be adjusted in the variable contribution.

In 2020, the sale of electricity was 79,503MWh compared to a budgeted sale of 90,700MWh and a sale of 90,510MWh in 2019. The low production was due to the fact that the power prices were very low primarily in the beginning of 2020 and therefore it was prioritised to produce heat instead. The average heating price of the sale of power was DKK 364/MWh in 2020, including DKK 150/MWh in biomass subsidy which is DKK 114/MWh less than budgeted in 2020 and DKK 87/MWh less than in 2019. All in all, this resulted in the fact that the revenues on selling power were DKK 14 million lower than budgeted and DKK 13 million lower than in 2019.

The sale of heat to VEKS Transmission was 1,246TJ which is 167TJ more than budgeted, however, 271TJ less than in 2019. The changes are due to the fact that the plant has been prioritised more by Varmelast in 2020 than expected, however, less than in 2019.

In 2020, the fuel costs per sold GJ amounted to DKK 74.7/GJ compared to a budgeted price of DKK 80.7/GJ and DKK 74.6/GJ in 2019. Minus electricity earnings, the fuel costs per sold GJ amounted to DKK 53.4/GJ in 2020 compared to a budgeted price of DKK 45.8/GJ and DKK 46.5/GJ in 2019.

Other production costs were as budgeted and as in 2019.

The administration costs are as budgeted but has increased by DKK 0.7 million since 2019. The increase is due to increased costs for salary, IT and insurance.
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VEKS Gasmotor, Solrød - Profit and loss account

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Sale of electricity	31,137	26,683	24,021
Sale of heating, variable tariff	8,864	8,981	8,168
Revenues, in total	**40,001**	**35,665**	**32,189**
Fuel	-35,999	-31,512	-26,228
Amortisation	-1,578	-1,582	-1,582
Other production costs	-1,556	-1,761	-3,560
Production and heat purchase costs	**-39,133**	**-34,854**	**-31,370**
Gross profit 868	810	819	
Administrative expenses	-347	-312	-307
Profit from operating activities	**521**	**498**	**512**
Other operating expenses	-56	-42	-32
Result before financial items	**465**	**456**	**480**
Net finance costs	-465	-456	-480
Year-end result	**0**	**0**	**0**

Statement of profit or loss balance pursuant to the Danish Heat Supply Act

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Year-end result	**0**	**0**	**0**
Adjustments			
Reversal of operating depreciation	1,578	1,582	1,582
Depreciation under the Danish Heat Supply Act	-1,332	-1,332	-1,582
Year-end result pursuant to the Danish Heat Supply Act	**246**	**250**	**0**
Surplus/deficit transferred from previous years	-250	-250	-250
Profit or loss balance, year-end pursuant to the Danish Heat Supply Act	**-4**	**0**	**-250**

VEKS Gasmotor, Solrød - Comments on the profit of the year

The power earnings are positively affected with approx. DKK 4 million due to a higher subsidy than expected from the Danish Energy Agency. Compared to 2019, the improvement of DKK 7 million is primarily due to a higher subsidy. In addition, the gas engine had 30,000 hours servicing in 2019 which resulted in a lacking revenue totalling approx. DKK 2 million from the sale of electricity and heat.

The operating expenses have been as budgeted in 2020. Compared to 2019, the costs are DKK 2 million lower which is due to the fact that it cost DKK 2 million for the 30,000 hours of servicing the engine in 2019.

Both the lower revenues and the extra cost will be counterbalanced by a lower settlement price to Solrød Biogas for the purchase of fuel. Compared to the budget, the settlement was thus DKK 4 million higher in 2020 and the settlement was DKK 10 million higher compared to 2019.

Tranegilde District Heating - Profit and loss account

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Net sales	24,443	24,351	22,869
Production and heat purchase costs	-11,603	-13,308	-12,012
Gross profit	**12,840**	**11,043**	**10,857**
Distribution costs	-1,260	-1,554	-822
Administrative costs	-1,108	-740	-971
Depreciation	-7,530	-8,433	-6,905
Result from primary operations	**2,941**	**317**	**2,159**
Other operating income	0	0	0
Other operating expenses	-73	-63	-78
Result before financial items	**2,869**	**254**	**2,081**
Financial income	293	5	325
Financial costs	-2,711	-3,541	-2,711
Year-end result	**452**	**-3,283**	**-305**

Statement of profit or loss balance pursuant to the Danish Heat Supply Act

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Year-end result	**452**	**-3,283**	**-305**
Adjustments			
Reversal of operating depreciation	7,530	8,433	6,905
Depreciation under the Danish Heat Supply Act	-4,288	-4,288	-5,750
Year-end result pursuant to the Danish Heat Supply Act	**3,694**	**862**	**850**
Surplus/deficit transferred from previous years	-11	-861	-861
Profit or loss balance, year-endpursuant to the Danish Heat Supply Act	**3,683**	**0**	**-11**

Tranegilde District Heating - Comments on the loss of the year

The net profit for 2020 was a profit of DKK 0.5 million which is DKK 3.7 million better than budgeted and DKK 1 million better than in 2019.

The year 2020 was yet another warm year. Consequently, sales ended at 39,037MWh compared to a budgeted sale of 40,000MWh and 39,425 MWh in 2019. Despite a reduced sale, the revenue in 2020 was on a par with the budgeted revenue which is due to the fact that the average selling price was higher than budgeted. Compared to 2019, the revenue was DKK 1.6 million higher which is primarily due to the fact that the selling prices have been increased by 2% from 2019 to 2020.

The heat purchase costs are DKK 1.8 million lower than the budget. This is the result of the reduced sale as well as the receipt of repaid surplus of DKK 0.8 million from VEKS Transmission from 2019. Compared to 2019, the expenses have decreased by DKK 0.4 million which is primarily due to a repaid surplus.

In 2020, the operating expenses were DKK 0.8 under budget which is the result of a lower amount of amortisation and depreciation than budgeted. Compared to 2019, the expenses increased by DKK 1.2 million which is due to an increase in the number of amortisations and depreciation.

In 2020, the financial income and expenses turned out to be DKK 1.1 million better than budgeted and at the same level as in 2019 which is due to a continued low interest rate level.

Køge District Heating - Profit and loss account

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Net sales	51,844	56,191	51,917
Production and heat purchase costs	-24,888	-30,269	-25,750
Gross profit	**26,957**	**25,922**	**26,167**
Distribution costs	-2,922	-3,005	-2,195
Administrative costs	-1,468	-1,407	-1,622
Depreciation	-20,880	-21,336	-18,952
Result from primary operations	**1,687**	**174**	**3,398**
Other operating income	67	0	23
Other operating expenses	-60	-36	-76
Result before financial items	**1,695**	**138**	**3,345**
Financial income	0	15	0
Financial costs	-4,540	-4,473	-4,214
Year-end result	**-2,846**	**-4,320**	**-869**

Statement of profit or loss balance pursuant to the Danish Heat Supply Act

	2020 DKK ´000	Budget 2020 DKK ´000	2019 DKK ´000
Year-end result	**-2,846**	**-4,320**	**-869**
Adjustments			
Reversal of small acquisitions recognised as an expense	11	20	50
Reversal of operating depreciation	20,880	21,336	18,952
Reversal of allocated holiday pay, flex time and public servant pension	96	0	-52
Depreciation under the Danish Heat Supply Act	**-16,957**	**-16,957**	**-14,895**
Year-end result pursuant to the Danish Heat Supply Act	1,184	79	3,185
Surplus/deficit transferred from previous years	3,106	-79	-79
Profit or loss balance, year-end pursuant to the Danish Heat Supply Act	**4,290**	**0**	**3,106**

Køge District Heating – Comments on the loss of the year

The net loss for 2020 amounted to DKK 2.8 million which is DKK 1.5 million better than budgeted and DKK 2.0 million worse than in 2019.

The year 2020 was yet another warm year. Consequently, sales ended at 92,894MWh compared to a budgeted sale of 103,000MWh and 96,668MWh in 2019. The reduced sale compared to the budget means that the revenue is DKK 4.3 million lower than budgeted and on a par with 2019 which is due to the fact that the selling prices have increased by 2% from 2019 to 2020.

The heat purchase costs are DKK 5.4 million lower than budgeted. This is the result of the reduced sale as well as the receipt of repaid surplus of DKK 1.7 million from VEKS Transmission from 2019. Compared to 2019, the expenses have decreased by DKK 0.9 million which is primarily due to a repaid surplus.

In 2020, the operating expenses were DKK 0.5 under budget which is the result of a lower amount of amortisation and depreciation than budgeted. Compared to 2019, the expenses increased by DKK 2.5 million which is due to an increase in the number of amortisations and depreciation.

In 2020, the financial income and expenses, net, were as budgeted and DKK 0.3 million higher than in 2019 which is due to increased borrowings.

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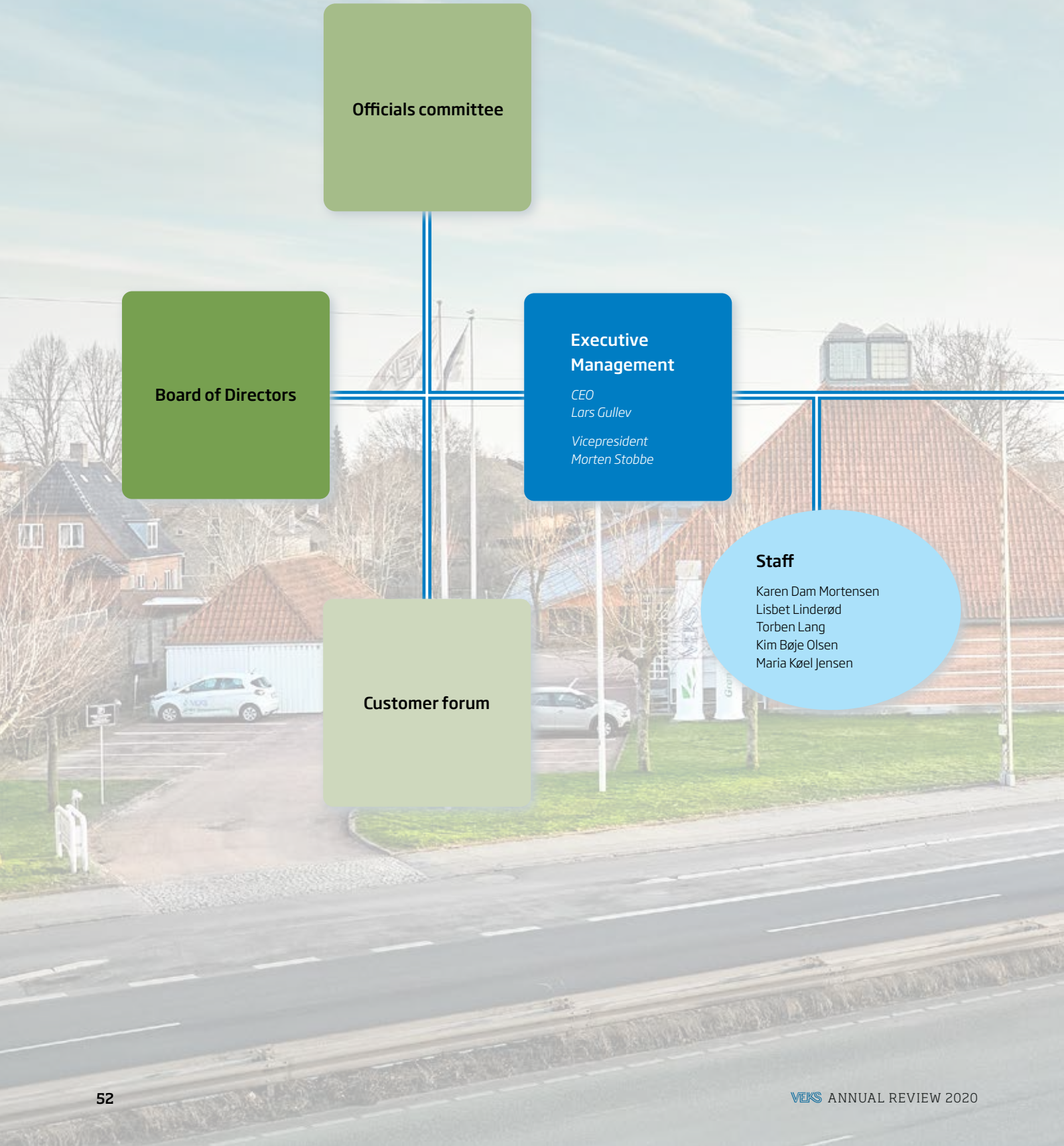
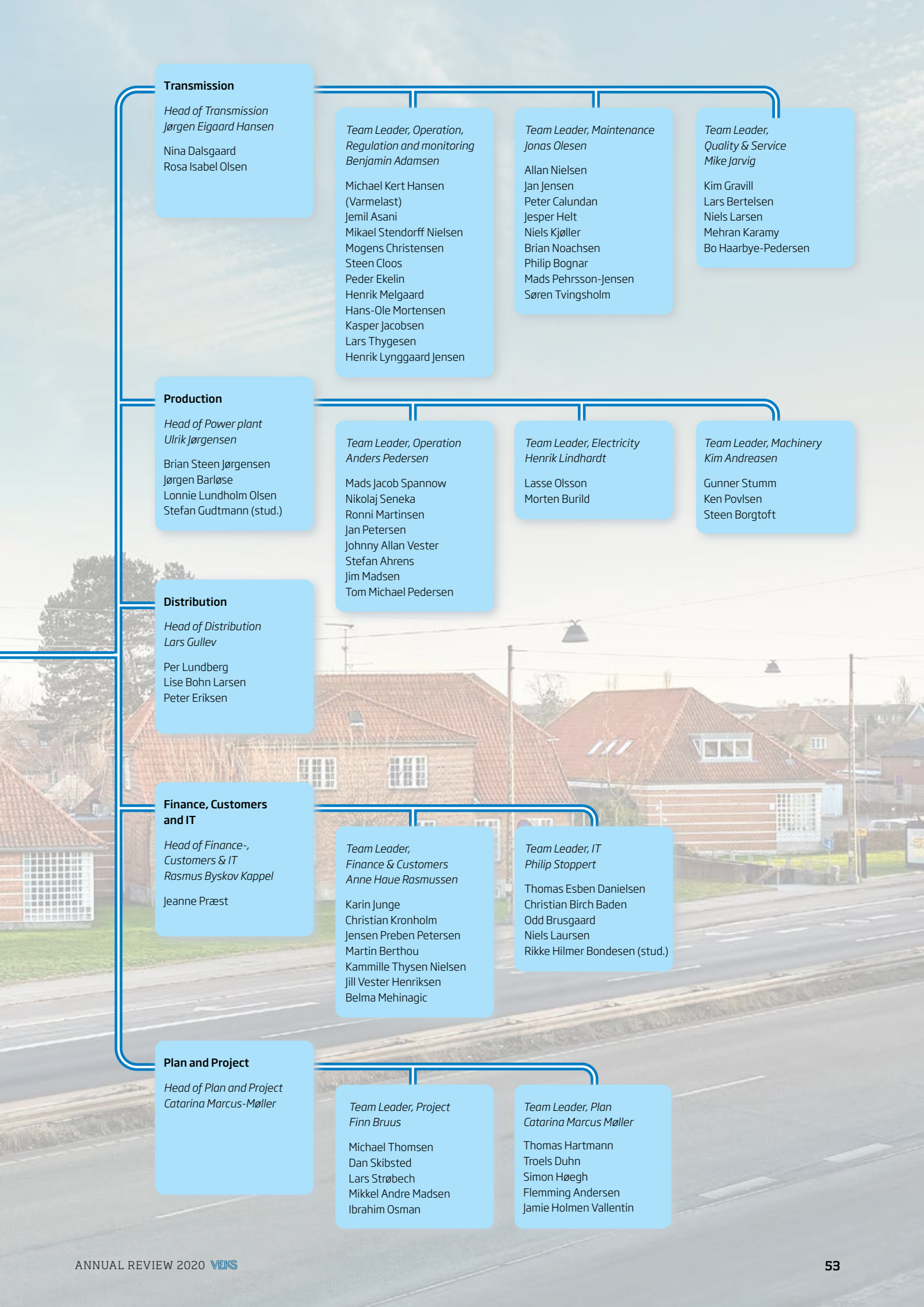
Svogerslev Fjernvarme a.m.b.a.:
Lars Ejstrup
Jakob Henke

Vallensbæk Fjernvarme Nord a.m.b.a / Vallensbæk Fjernvarme Syd a.m.b.a.:
Ruth Slot Frederiksen
Mogens Wilbert
Finn W. Carlsen
Niels Okstoft

VEKS April 2021





Transmission

Head of Transmission
Jørgen Eigaard Hansen

Nina Dalsgaard
Rosa Isabel Olsen

Team Leader, Operation, Regulation and monitoring
Benjamin Adamsen

Michael Kert Hansen (Varmelast)
Jemil Asani
Mikael Stendorff Nielsen
Mogens Christensen
Steen Cloos
Peder Ekelin
Henrik Melgaard
Hans-Ole Mortensen
Kasper Jacobsen
Lars Thygesen
Henrik Lynggaard Jensen

Team Leader, Maintenance
Jonas Olesen

Allan Nielsen
Jan Jensen
Peter Calundan
Jesper Helt
Niels Kjøller
Brian Noachsen
Philip Bognar
Mads Pehrsson-Jensen
Søren Tvingsholm

Team Leader, Quality & Service
Mike Jarvig

Kim Gravill
Lars Bertelsen
Niels Larsen
Mehran Karamy
Bo Haarbye-Pedersen

Production

Head of Power plant
Ulrik Jørgensen

Brian Steen Jørgensen
Jørgen Barløse
Lonnie Lundholm Olsen
Stefan Gudtmann (stud.)

Team Leader, Operation
Anders Pedersen

Mads Jacob Spannow
Nikolaj Seneka
Ronni Martinsen
Jan Petersen
Johnny Allan Vester
Stefan Ahrens
Jim Madsen
Tom Michael Pedersen

Team Leader, Electricity
Henrik Lindhardt

Lasse Olsson
Morten Burild

Team Leader, Machinery
Kim Andreasen

Gunner Stumm
Ken Povlsen
Steen Borgtoft

Distribution

Head of Distribution
Lars Gullev

Per Lundberg
Lise Bohn Larsen
Peter Eriksen

Finance, Customers and IT

Head of Finance-, Customers & IT
Rasmus Byskov Kappel

Jeanne Præst

Team Leader, Finance & Customers
Anne Haue Rasmussen

Karin Junge
Christian Kronholm
Jensen Preben Petersen
Martin Berthou
Kammille Thysen Nielsen
Jill Vester Henriksen
Belma Mehinagic

Team Leader, IT
Philip Stoppert

Thomas Esben Danielsen
Christian Birch Baden
Odd Brusgaard
Niels Laursen
Rikke Hilmer Bondesen (stud.)

Plan and Project

Head of Plan and Project
Catarina Marcus-Møller

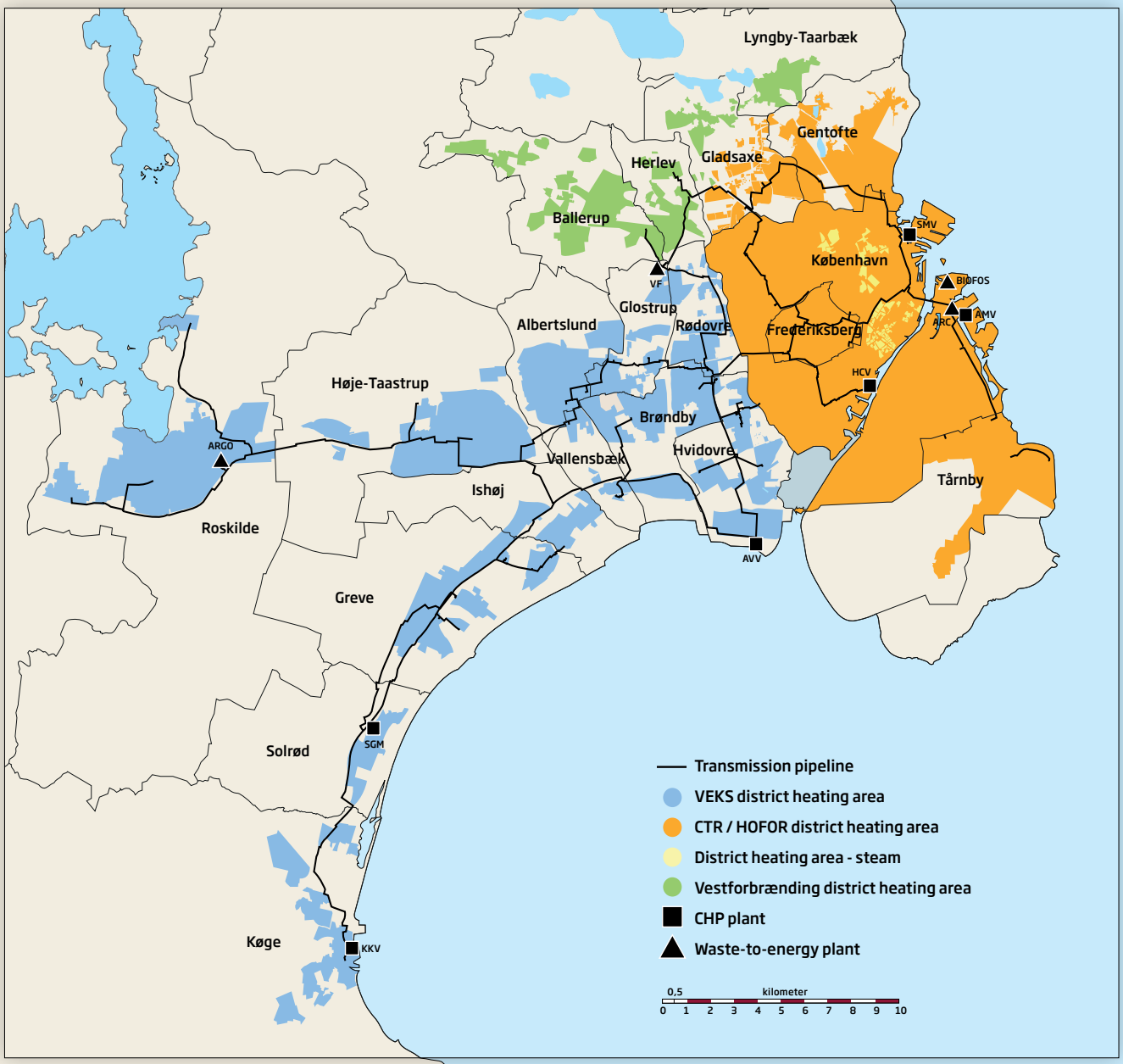
Team Leader, Project
Finn Bruus

Michael Thomsen
Dan Skibsted
Lars Strøbech
Mikkel Andre Madsen
Ibrahim Osman

Team Leader, Plan
Catarina Marcus Møller

Thomas Hartmann
Troels Duhn
Simon Høegh
Flemming Andersen
Jamie Holmen Vallentin

DN in the Copenhagen Area



Units and definitions

TJ	= Terajoule
GJ	= Gigajoule
MWh	= Megawatt hour
1 TJ	= 1,000 GJ
1 MWh	= 3.6 GJ
MJ/s	= Megajoule per second (heat output)
MW	= Megawatt (power output)
1 MJ/s	= 1MW = 1,000 kW

Average energy consumed for heating and hot water amounts to approximately:

- 60 GJ/year for single-family houses (120 m²)
- 40 GJ/year for apartments in multi-storey buildings (75 m²)

Degree days

Degree days are applied in connection with the assessment of the heat required in buildings. The number of degree days per 24 hours is an indication of how cold it was and thus how much energy has been needed for space heating.

Degree days are calculated as the difference between mean outdoor temperatures and the 17 degree Celsius indoor temperature. Days during which the temperature exceeds 17 degrees Celsius are not included. The degree days of a normal year are established on the basis of the average of degree days throughout a number of years.

In VEKS' system, the number of degree days is, for instance, 3,112 per year.

Degree days and heating consumption are interlinked, ie the higher degree days, the higher consumption. The degree day summation for one year can be compared with the normal year. This renders it possible to assess for the year in question whether heating consumption has been high or low irrespective of the climatic conditions of the year.

Emissions

CO_2 (carbon dioxide) is a greenhouse gas released from the burning of fuels.

SO_2 (sulphur dioxide) is released from the burning of coal and oil.

NO_x (nitrogen oxide) is released when nitrogen in the air and oxygen are combined on burning of fuels.

VEKS

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Roskildevej 175
DK-2620 Albertslund
+45 43 66 03 66

www.veks.dk