Webinar Efficiency-as-a-Service (EaaS) Heating servitisation for efficient Dutch buildings

8 February 2022, 13:00 – 14:00 CET

Questions from participants

Moderators:

> Arno Nijrolder, Business Analyst Sustainable Energy at **EIT InnoEnergy**
> Dimitris Karamitsos, Senior Energy Efficient Business Developer at **BASE**

Speakers:

> Jacqueline Feld, Attorney at Law / Senior Manager Energy & Utilities at **HVG Law**
> Sander Simonetti, Attorney at Law / Partner Energy & Utilities at **Habraken Rutten Advocaten**
> Lindsay Sugden, Head of Heat Research at **Delta-EE**

Session 1 – Perspectives on legal issues

Questions for Jacqueline Feld & Sander Simonetti:

1

Regarding the threat of losing ownership when installing equipment in buildings, does the Dutch law provide different treatments for homes or non-residential buildings? Or private owned compared to commercial building?

No, no distinction is made between the destination of the object. There could maybe be a difference if you look at it from a component formation perspective. If it is somebodies' home, this fact could be given significance in answering the question whether a home is incomplete without a certain component (e.g. kitchen).

2

On the upcoming Dutch Heat Act, what is a small collective heat system?

In the Collective Heat Supply Bill (currently no bill has yet been published, only a consultation version followed by a number of amendments) a small collective heat system is a heat system supplying heat to a limited number of consumers (maximum 500 consumers, which was extended after the consultation to 1500 consumers) or tenants and members of an owners association VvE, each with a individual supply connection of a maximum of 100 kilowatts in one specific district or neighbourhood or even in a single apartment complex.

3

What is the volatility of the heat price and how often is the ACM allowed to alter the heat price and what is the current heat price?

The maximum heat price is set by the regulator ACM once a year. So, as to volatility, the change is annual.

The maximum heat price has increased quite a lot recently (as per 2022), because of the increased gas prices (when calculating the maximum heat price, the ACM used a gas price reference, based on gas prices of the top-10 gas suppliers as per 1-1-2022). However, the price set by the ACM is only a maximum price and many suppliers stay well below the maximum price (and suppliers are also encouraged by the ACM to stay below the maximum price, to prevent excessive price increase for consumers).

The maximum heat prices are published on the ACM website (https://www.acm.nl/nl/onderwerpen/energie/afnemers-van-energie/warmte-informatie-voor-zakelijke-afnemers/warmtetarieven) and these prices differ based on such things as temperature, service level and technicalities of the relevant heat system. For an average heat system (only heating, no tap water), the maximum fixed price component is EUR 204,37 (excl. VAT) and the maximum variable price

component is EUR 44,59 per GJ (excl. VAT), as indicated in the ACM Heat Tariff Decision 2022 (https://www.acm.nl/sites/default/files/documents/tarievenbesluit-warmte%202022.pdf).

4

When the heat price tariff is no longer limited by the gas price, will there be a new maximum pre-defined, or can the ACM decide on a new maximum price by themselves?

The idea is to link the new heat price to the actual costs of the relevant heat project. The aim is to move away from the current natural gas price reference, as due to the energy transition, natural gas will no longer be the standard fuel for heating purposes.

In the Collective Heat Supply Bill a gradual transition from a gas reference based tariff to a cost based tariff is considered, consisting of the following phases. Phase 1, the tariff is still linked to the natural gas prices, but with a correction factor. Phase 2, a cost based reference tariff set by the regulator (ACM). The final picture in phase 3 is a tariff system based on of allowed revenues (*toegestane inkomsten*), possibly supplemented with a competitive benchmark.

5

Regarding annually declining CO2 emission allowances ('4 Dutch Collective Heat Supply Act' slide), how will this be effectuated?

The upcoming Collective Heat Supply Bill sets a minimum path for the maximum CO2 emissions for collective heat systems. An annual path has been set of 40 kg CO2 per GJ in 2022. Thus, the average emission of CO2 as a result of the supply of heat to consumers by a designated heat company in a heat plot is at most a maximum of 40 kilograms of CO2 per GJ heat supplied in 2022. After that, an annual decrease applies of approximately 1.9 kg CO2 per GJ down to 25 kg CO2 per GJ in 2030. The ambition is CO2 neutral in 2050. These goals can for example be achieved by heat companies by connecting low emission sources and increasing the efficiency of the heat system. The proposed amendments following the consultation, provide for an exemption of the emission allowance standard in exceptional situations.

6

In the Netherlands there is freedom of choice for the consumer for the energy supplier. How is it possible to supply the energy together with the heat pump looking at the Dutch Heat Law, or are there no restrictions?

Consumers are indeed free to choose their electricity and gas supplier. The sale of heat pumps is not regulated by the energy regulator. So it is possible for an electricity supplier to also offer heat pumps to its customers.

Session 2 – Perspectives on the business models

Questions for Lindsay Sugden:

1

How do you see heating-as-a-service differ from energy supply or performance contracting?

There are a lot of similarities. However, with Heat-as-a-service as opposed to energy supply, the customer is paying for the kWh of heat, whereas the service provider is paying for the energy (ie gas or electricity).

With performance contracting, there a few different things that could be referred to. Here the client is not paying for the kWh of heat, but perhaps for a guarantee, or what the performance will be, or a temperature, or a level of comfort. The customer may still pay for the energy.

2

Why is it estimated for France to uptake more heat pumps by 2025?

Essentially because of the current policy outlook - there are very generous subsidies as well as changes to building regulations which will drive significant growth. Also, the economics generally are more favourable for heat pumps in France than in many other markets. France is already a more mature market for electrification, so it has a different starting point from e.g. NL, DE or UK.

3

How can the provider take on the 'behaviour risk', could you give an example?

This is where the provider offers "comfort as a service" – so the customer is paying for 21 degrees in the buildings, a certain level of comfort, for example. This means that if the customer opens the windows all the time, but is paying for the temperature in the building rather than the heat produced (or energy consumed), the service provider bill could be very high.

4

In which country do you see most market traction for heat as a service, and why?

Denmark is a good example as I showed in my slides, due to government backing for a demonstration project focusing on business models, as well as funding for service providers to offer HaaS, and various other measures. It is most advanced for heat pumps in HaaS.

In Germany “heat contracting” – mainly with gas boilers, is quite well established especially in the commercial sector. This is essentially HaaS.

5

Could you give an example of how ‘to layer in future value streams’ when offering heating as a service?

One example concerns the value coming from flexibility and optimization of the heat system, requiring time of use tariffs. Here, the provider pays for the energy on a variable time, hourly or half hourly. This incentivises the provider to install optimization equipment, so that the heating system will try to operate more when the energy prices are low, and less when the energy prices are higher. This can in effect reduce the running cost of the heating system.

It can be taken one step further, as providers can trade the flexibility of such heating system on the energy market. Thereby adding another layer of value.

As heating system technology owner, you can use flexibility for either reducing your costs and for trading on the energy markets.

6

The graphs on page 41 (‘How is heating sold today, and how will this evolve?’) seem to refer to individual home heating systems only. What is the role of community/district heat networks in the context of this trend?

Yes the data we had here was focused on dwellings – though the general split of technologies is comparable to the commercial sector. I did not have the data to hand including district heating etc., but for sure this is also very important in densely populated areas. It is expected to grow fast in the coming years. We look at trends in Local Energy Systems and small heat networks e.g. shared ground loop heat pump solutions. These are all emerging. I can share specific insight if they would like to contact me.