

# FACTSHEET 1

HOW TO DESIGN THE OBLIGATION TO

CARRY OUT HEATING AND COOLING

PLANS FOR MUNICIPALITIES?

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THE CASE OF SCOTLAND, THE NETHERLANDS  
AND BADEN WÜRTTEMBERG

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## 1. TIMELINE AND SCALE TO SET UP THE OBLIGATION

The introduction of mandatory heating and cooling plans is recent in the 3 case studies: 2021 in Baden Württemberg (BW) with the revision of the Heating Climate Protection Act; 2019 in The Netherlands with the Dutch National Climate Agreement; and in May 2022 in Scotland with the Local Heat and Energy Efficiency Strategies (LHEES) statutory order<sup>[1]</sup>. Local authorities have, in general, about 18 months to prepare the plans after their introduction. Many Dutch municipalities have already submitted the first part of their plans in 2021.

### An obligation for whom?

While all the 32 local Scottish authorities and all the Dutch municipalities are concerned, the threshold is set to 20 000 inhabitants in BW, which corresponds to about 50% of its state population. Below this threshold, German municipalities are encouraged to carry out heating and cooling plans and can access financial and technical support. Municipalities of this size and larger are obligated to collect and publish energy-related data ([see factsheet 2](#)). Regarding geographical scale, it is important to note that cross municipality plans are also encouraged in the Netherlands. Scottish local authorities can also be very large and include multiple towns and rural areas within one authority. This inter-municipal level can favour the pooling of resources and can be relevant in some local contexts to create an integrated territorial planning.

“It would be very impactful that all EU municipalities do heat and cooling planning. Based on the Danish experience, it is much easier and quicker to transition from gas to renewable technologies, especially via district heating, when the municipality already have a comprehensive plan of their future heating and cooling systems”

Per Alex Sørensen, Plan Energi Denmark.

## 2. CLEAR TARGETS AND OBJECTIVES IN THE LOCAL PLANS

One key factor of success is to provide clear objectives to municipalities. The overarching objective should be precise, include milestones, and list the mandatory components of the plans.

In our three case studies, the targets of the plans and the timeframes are quite similar:

- Climate neutral building stock and heat supply by 2040 in BW
- Natural gas free building stock by 2050 in the Netherlands, with a first milestone for the first plans to be submitted in 2021 which is 1/5 of the building stock, or 1.5 million homes to be gas free by 2030.
- Net zero emissions building stock in 2045 for Scotland, and intermediate milestones for heat networks and buildings according to the categories of buildings as designed in the Scottish heat and building strategy. Certain local authorities have adopted more ambitious targets.

[1] In Scotland the Heat in Buildings Strategy (2021) provides the overall Strategy for net zero buildings by 2045 under which the LHEES statutory order fall.

Regarding the content of the plan, the State of Baden-Württemberg is a good example as they gave clear instructions regarding the 4 core elements that should be included in the plans[2]. The Dutch government gave clear instructions to municipalities advising them to use a neighbourhood approach when designing their “heat vision”. This implies that the most appropriate renewable heat solution is analysing district per district.

### 3. LEGAL MANDATES TO MUNICIPALITIES

Local governments often face barriers to ensuring demand for a district heating system, hindering the implementation of local heat and cooling strategies. This can be overcome with well-designed local legal mandates. In Scotland, the Heat Network Act[3] was adopted in 2021 to support the development of communal district heat networks. It encompasses numerous provisions helping local authorities secure their investments in district heating networks (Heat network permits, demand assurance, transfer schemes...) while providing consumer protections, targets, and guidelines. It enables local governments “to require the installation of zero or very near zero emissions heating systems in existing buildings off the gas grid from 2025 and on the gas grid from 2030”[4].

In Germany, the “Anschluss- und Benutzungszwang”[5] is a long-established legal framework to regulate the accessibility and usage of public goods and services from water to cemeteries and district heating. It is set up via municipal law and is subject to street rules (general necessity, individual reasonableness) to avoid abuses. In Baden Württemberg, it became a tool for municipalities to employ District heating and cooling networks as a means for climate protection, facilitating the extension of networks and compulsory connection.

Therefore, local experiences in implementing heating and cooling plans show that it is essential to give power and a legal mandate to local authorities to implement their plans.

[2] 1. Analysis of the current energy demand and existing infrastructures 2. Assessment of the potential of energy savings, renewable and alternative energy and waste heat 3. Development of a target scenario 4. Heat transition strategy with the recommendations. Guidelines in German [here](#).

[3] More info on the Scottish Act [here](#).

[4] [Heat Networks Act \(Scotland\) 2021](#)

[5] More info on the German law and application to energy matters [here](#)

|  | Baden Württemberg   | The Netherlands  | Scotland   |
|--|---|--|--|
| Legal Act: drafting of planning & legal mandates | Baden-Württemberg Climate Protection Law (KSG BW 2021)<br>Compulsory connection and use of district heating (adopted at municipal level in the municipal code "Fernwärmesatzung") | Dutch National Climate Agreement (2019)                                    | Heat and building national strategy (2021); Local Heating and Energy Efficiency Strategies (LHEES) statutory order (May 2022)<br>Heat Network Act (2021) |
| Threshold  | > 20 000 inhabitants, all municipalities are supported and encouraged   | All municipalities   | All local authorities  |
| Deadline for plans submission                    | End of 2023; from 2024 on mandatory rolling planning (updates) all 7 years the latest   | 2021 (submitted)   | December 2023 to prepare a LHEES which will include consideration of potential heat network suitability/feasibility                                      |
| Objectives                                       | Fossil-free building stock and heat supply <sup>[6]</sup> by 2040   | Natural gas free building stock by 2050 and intermediate milestone in 2030 | Net zero emissions building stock 2045 and address energy efficiency to tackle energy poverty  |

**Figure 1: The features of the heating and cooling plans in Baden-Württemberg (Germany), The Netherlands and Scotland**

**Check our Factsheet 2: [What support to provide municipalities with when introducing mandatory heating and cooling plans](#)**

[6] Heat supply encompasses room heating, warm water, room cooling, process heat and cooling