

Amsterdam

1. Background

Amsterdam is the largest city in the Netherlands and is located in the western part of the country (the province of North Holland). In 2021, it had 873,338 inhabitants (CBS, 2022a). In 2021, Amsterdam had 449,989 housing units, of which owner-occupied homes made up about 29%, and rental properties made up 71%. Housing corporations owned 56% of residential rental properties, and private landlords owned the remaining 44% (CBS, 2022b). In terms of the age of the housing stock, 42% of the dwellings were built prior to 1945; 15% were built after 2005. Single-family homes made up 12% of the housing stock, while multi-family homes made up 88% (CBS, 2022c).

In 2021, 74% of homes in Amsterdam had an individual natural gas boiler; 16% of homes were heated through district heating; 6% block heating; 1% electricity (there is no data on the rest of the 3% of homes). The share of homes h595.32 841..93 513.91 Tm0 g0 G[(block h)-7(e)4(a)4(ti)-3

Over

e ngmpa red

erthrahe(a)4nc(e)4(r)-6(a)4g(e)4(s)-10(a)4(re)7(in t)-3(he)4(h)-7(e)4(ther)5(lands(.93 513.91 Tm0 g0 G[(block h)-7(e)

comments on the draft heat transition vision. Another social media survey was sent in January 2020 (received 3,395 responses) and asked Amsterdam residents about any preferred ways to be involved in heat transitions. Half of the respondents (51%) suggested that a small representative group of residents should participate in the planning and selection of solutions for heat decarbonisation (Amsterdam Municipality, 2020).

The draft heat transition vision was developed by the Over Morgen consultants with the input of a working group consisting of representatives of the gas and electricity network operator Liander, the Amsterdam federation of housing corporations, Ymere – the largest housing corporation in Amsterdam

the residents on heat transition solutions in these neighbourhoods (Amsterdam Municipality, 2020).

To identify a preferred heating solution for each neighbourhood, the consultants in partnership with the stakeholders developed the criteria for navigating trade-offs between different heating solutions. The criteria included the following: lowest social costs; availability of and proximity to sustainable heat sources; sustainability of heat sources

association of tenants and homeowners !WOON. YmereTf1 0 0 1 523.42 (owns the)-8m(tejectory)-2(of the)

availability, openness, and nuisance) of heating alternatives, including high-temperature district heating, individual heat pumps, local heat networks with underground heat storage and heat extraction from surface water (EnergyGO, 2020).

As a result of conducting the joint study, the distance between the municipality and residents got smaller (PAW, 2020b). However, the housing corporations chose not to get involved in supervising the study, which decreased the importance of the study given that the housing corporations are the major stakeholder in heat transitions (PAW, 2020a). A heat transition plan

housing of three more housing corporations, and privately owned housing, has not been finalised as of this writing (January 2023) (Amsterdam Municipality, n.d.-b).

The municipality underscored the tension between early citizen engagement and its limited ability to answer some detailed questions regarding costs and other specifics of sustainable heating options. Another lesson is that municipal employees needed to spend a significant amount of time discussing with residents how to tailor sustainable heating solutions to the specifics of their homes. This required significant capacity on the part of the municipality and raised concerns over the scalability of heat transition techniques (PAW, 2020a). Another potential tension in the heat transition is between steering residents toward the most efficient solution based on financial-technical modelling and deciding on the solution based on

3.2. Wilhelmina Gasthuis, Amsterdam (grant from PAW)

municipality of Amsterdam for a pilot area in the Wilhelmina Gasthuis (WG) neighbourhood. WG is a former hospital converted into a residential area and located in Amsterdam-West. The pilot focusses on insulation measures, the creation of a medium-temperature heat

The municipality

EnergyGo. (2020). *Op weg naar een aardgasvrije Van der Pek buurt*. Online: https://amsterdam.raadsinformatie.nl/document/8609301/1/2_Warmtescenarios_vanderPekbuurt_v04 [Accessed 18.01.2023].

KetelhuisWG. (2022). *Het eerste startcontract is getekend!* Online: <https://www.ketelhuiswg.nl/het-eerste-startcontract-is-getekend/> [Accessed 18.01.2023].

PAW. (2020a). *Van der Pekbuurt, Gemeente Amsterdam. Verslag reflectieve monitor*. Online: <https://open.overheid.nl/repository/ronl-9c844d37-1f53>