

**Energy Transition in the Municipality of Utrecht:**  
**An outlook on inclusivity within public participation, the energy**  
**transition and the new Environmental and Planning Act**

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## Summary

The global climate change problems have a significant impact on nature and society as a whole. In the Netherlands specifically, rising sea levels, loss of biodiversity, extreme weather occurrences and air pollution could seriously jeopardize quality of life. One of the contributing factors towards the problem is the way society uses and produces energy in a harmful way towards the environment. The use of non-renewable sources of energy is contributing to this problem in the Netherlands. The energy transition towards sustainable energy sources by 2050 requires impactful alterations throughout European countries down to local municipalities in various states Netherlands. Within the scope of the Participatory Value Evaluation, Customer Journey model and in light of the upcoming Environmental and Planning Act (EPA) in the Netherlands, an analysis of current policy and legislature is made. The aim of this research is to assess current public participation policy and increase public involvement towards and the energy transition and achieve a higher amount of inclusivity within the communities in the municipality of Utrecht in order to hopefully be more successful in the energy transition process towards sustainable use and production of energy.

Key concepts: climate change, energy transition, Environmental and Planning Act, Participation, inclusivity.

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# 1. Introduction

## 1.1 Preface

Public participation and inclusiveness are highly valued in many policy plans related to the energy transition in various municipalities in the Netherlands, especially with the introduction of the new Environmental and Spatial Planning Act, where participation and accessibility are two of the legislation's main pillars. In essence, bottom-up initiatives should become more open and planning practice more inclusive, but the question remains how this will take shape in the future. Especially the possibility of unequal power relations between involved actors remains an uncertainty in achieving maximum inclusivity within participation. In practice, the involvement of residents in the energy transition and the use of renewable energy in general still appears to be a challenge that many municipalities and stakeholders are facing. Currently, the residents who can participate in the energy transition are those who have the financial means to switch to gas-free heating networks, solar panels or electric cars, but those with insufficient financial means are not able to contribute. The city of Utrecht is currently undergoing such an energy transition and attaches great importance to citizen participation within its planning policy and practice. The municipality is looking for ways to integrate residents as best as possible. As one of the largest municipalities in the Randstad (Amsterdam, Rotterdam, The Hague), Utrecht is projected to be the one with the highest average population growth (22.52 new inhabitants per 1000 between 2019 and 2035). Public participation can therefore play a crucial role in achieving the cities' sustainability goals within the energy transition, in light of the growing population.

## 1.2 The global significance of climate change

The environment is ever-evolving due to natural and human interference. Since the times of the industrial revolution between 1850 and 1900, the average global temperature has increased with approximately 1.09 degrees Celsius (IPCC, 2022). In addition, average sea levels have risen by about 20 centimetres (Ministerie van Infrastructuur en Waterstaat, 2022). Extreme weather has become more common in areas where this was considered unusual beforehand. Larger fluctuations in temperature and the amount and intensity of precipitation have increased. Moreover, the amount of extremely hot days per year have also increased (RIVM, 2021). The main element of climate change that can be attributed to greenhouse gas emissions such as carbon dioxide (CO<sub>2</sub>). There is a strong correlation between carbon dioxide emissions and the rising average global temperature, especially in post-industrial times (IPCC, 2022; Ritchie & Roser, 2020).

Dense urban areas where large amounts of people live in more congested areas contribute significantly to the greenhouse gas emissions (IPCC, 2014). Larger urban areas, such as megacities with a population of ten million or more inhabitants, comprise around 2 percent of the total landmass on the planet, but are responsible for approximately 75 percent of the total amount of heat-trapping greenhouse gas emissions (Kennedy et al., 2009; Satterthwaite, 2008). The 21<sup>st</sup> century also marked the tipping point where more than half of the world's global population now lives in urban areas, and that number is only expected to increase even further. The expectation is that by 2050 over two-thirds of the global population will live in dense urban areas, which would translate to approximately seven billion urban inhabitants (Ritchie, 2018). If this trend continues, it could be likely to assume that the energy demand in these urban areas would also increase further.

If the transition from fossil fuels towards renewable sources of energy does not happen fast enough, the climate could change drastically with a large environmental, social, and economic impact (RIVM, 2021). These changes will encompass increase in seawater levels, extreme precipitation, larger periods of draught and other forms of ecological, societal and economic disruption (IPCC, 2022). Realizing the Paris climate goals (2015) is necessary to prevent further global warming and its consequences as much as possible (Savaresi, 2016). This implies that the climate ambitions from the Paris agreement must be met in the short and the long term. The Paris Climate Agreement is a treaty that was signed by multiple countries where they acknowledge the deteriorating situation of the global climate and the negative side effects that are caused by the globally rising temperatures (Climate Central, 2015; Ministère de l'Europe et des Affaires étrangères, 2020).

### 1.3 Implications for the Netherlands

The global climate change also has implications for the Netherlands. These implications for nature, health and economy could prove to be detrimental and disruptive (Ministerie van Infrastructuur en Waterstaat, 2022). Some examples of implications for nature, health, society and the economy are named below. The latest example would be the floods in the province of Limburg and parts of Belgium and Germany. Estimates show that the total costs in damages caused by the floods would be approximately 43 billion euros (Kramer & Ware, 2021). The fight against water has always been relevant for the Netherlands, and the effects of climate change will put it even higher on the agenda. Moreover, the Netherlands is extra vulnerable to flooding because much of the mainland is below sea level and the construction of higher dikes is very costly. Climate change could also lead to a shortage of drinking water or food. As a result, more and more people could be migrating from one region to another or towards another country (McLeman, 2017). Moreover, climate change can also lead to a shortage of drinking water or food. As a result, more and more people could be fleeing from their homes and regions. This can have consequences for Dutch trade, which is highly dependent on the global economy (KNMI, 2021; IPCC, 2022). The shifting climate could also be detrimental to our health. An increase in respiratory problems due to air pollution is not unthinkable. Changes in temperature, humidity and precipitation can give infectious diseases more room to develop (RIVM, 2021; Ministerie van Infrastructuur en Waterstaat, 2021). Moreover, higher amounts of greenhouse gasses can in turn lead to more air pollution (D'amato et al., 2014). Due to climate change, air pollution patterns are changing in several urbanized areas of the world with a significant effect on respiratory health (Orru, Ebi & Forsberg, 2017).

As greenhouse gas emissions are the leading cause of climate change, a breakdown of these emissions is necessary to provide a comprehensive image of these emissions in the Netherlands. The production of energy in the form of electricity contributes around 17,1% of the total CO<sub>2</sub> emissions in the Netherlands, as can be seen in figure 1. Moreover, the energy supply in the Netherlands is mostly dependent on non-renewable sources of energy such as gas and coal, as in 2019 only 8,9 percent of the total energy supply was retrieved from renewable methods of energy production (Nederland-Energie, 2020; Ministerie van Algemene Zaken, 2021). This means that the Netherlands is still largely dependent on non-renewable sources of energy. Petroleum, natural gas, and coal are the main primary energy sources that provide energy for Dutch society (Centraal Bureau voor de Statistiek, 2020). The emissions of greenhouse gasses and other harmful substances from the use and processing of these energy sources contribute to a deterioration of the environment and air quality

and to climate change (PBL, 2022). Annual emissions of greenhouse gasses must therefore be reduced. This would result in a significant overhaul of the energy supply in the Netherlands. The emission of greenhouse gases would need to be greatly reduced in the period up to 2050. As a response, the Dutch government published its own climate agreement in 2019 (Ministerie van Algemene Zaken, 2019). The Netherlands wants to lead Europe in combating global warming. To be climate-neutral by 2050 at the latest, achieving the 2030 target in the Climate Act to at least a 55% CO<sub>2</sub> reduction is necessary. To achieve this goal, consensus has been reached on policy for a higher target percentage of emission reduction, which amounts to about 60% by 2030 and eventually to 95% by 2050 (Ministerie van Algemene Zaken, 2022).

The national policy for climate adaptation must be translated to the Dutch provinces and municipalities within The Dutch Climate Agreement. These new strategy implementations are written down in the Regional Energy Strategies (RES), where thirty regions in the Netherlands are each to their own assigned to derive the best possible strategy for climate adaption in light of the Climate Agreement for 2050 (Nationaal Programma RES, 2019). As mentioned earlier, dense urban areas such as industrial areas, urban centers with a high amount of public transportation, mobility and consumers of energy are responsible for the largest part of the greenhouse gas emissions (Centraal Bureau voor de Statistiek, 2021a). Therefore, the energy transition towards renewable methods of energy production in urban areas is a key factor.

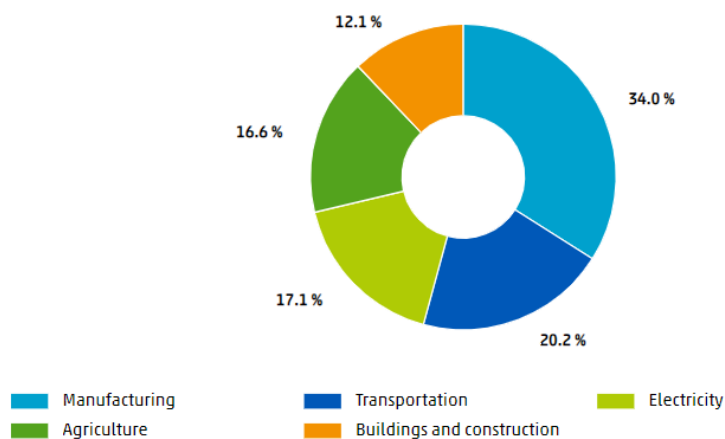


Figure 1: CO<sub>2</sub> Emissions in the first quarter of 2021 in the Netherlands per sector (Source: CBS)

Figure 1 presents a visual representation of the distribution of CO<sub>2</sub> emissions per sector in the Netherlands. The industrial and manufacturing sector is responsible for over one third of the total emission output in the Netherlands. The two other main drivers of CO<sub>2</sub> emissions are transportation and electricity. The agricultural sector contributes around one sixth of the total output. What is striking is that the most output is caused by densely populated urban areas, and areas with a higher overall congestion in relation to rural areas such as the output from the agricultural sector. The rural output from agricultural sector however, is responsible for approximately 85 percent of the total nitrogen emissions into the environment (Van der Scheer, 2021; Centraal Bureau voor de Statistiek, 2021b). Thus, the agricultural sector also contributes significantly towards the deterioration of the Dutch environment, not only in terms of emitting CO<sub>2</sub> into the environment, but largely because of harmful nitrogen oxides into the soil and the atmosphere (Rütting, Aronsson & Delin, 2018). The

main take from figure 1 is that the greenhouse gas emissions do not only encompass CO<sub>2</sub> emissions, but also nitrous oxide, methane and ozone (EPA, 2022). CO<sub>2</sub> however accounts for the largest part of the total greenhouse gas emissions. This does not only apply to the Netherlands, but also for the rest of the European Union (Gavurova, Rigelsky & Ivankova, 2021). The 17.1% CO<sub>2</sub> output caused by production of electricity can largely be attributed to the use of natural gas and coal. As mentioned in chapter 1.2, only 8.9% of the total energy that is being produced in the Netherlands stems from carbon-free and renewable sources. Therefore, a lot of ground could potentially be made if the switch from non-renewable sources of energy towards renewable sources could be accomplished.

#### 1.4 Energy transition in the Municipality of Utrecht

The City of Utrecht is a dense urban area currently undergoing an energy transition. Out of the largest municipalities in the Randstad region (Amsterdam, Rotterdam, The Hague), Utrecht is forecasted as the municipality with the largest average population growth (22.52 new inhabitants per 1000 between 2019 and 2035). Amsterdam, Rotterdam, and The Hague are expected to grow with 17.84, 14,65 and 14,33 new inhabitants per 1000 respectively (CBS, 2022). The municipality of Utrecht aims to become fully sustainable by the year of 2050, where the net input and output from renewable sources of energy is zero (Provincie Utrecht, 2021). Amongst other Dutch municipalities, the switch from gas to renewable energy sources is one of the main points in the energy transition. The municipality of Utrecht aims to become gas-free by 2050, where home heating and cooking is done with heat networks, heat pumps, and a reinforced electricity grid. Newly built homes have to meet the BENG-norms (Bijna Energieneutrale Gebouwen, or Nearly Energy Neutral Buildings). This piece of legislature aims to reduce energy loss and heat waste in newly constructed homes with a maximum amount energy use per square meter (Rijksdienst voor Ondernemend Nederland, 2022). In addition, isolation of currently existing homes and proper isolation in homes and buildings that will be constructed in the future will be implemented to reduce heat loss (Gemeente Utrecht, 2019). To reduce carbon dioxide levels further, solar-powered charging stations for electric vehicles are in an experimental phase, such as the LomboXnet in the neighbourhood of Lombok (Smart Solar Charging, 2019). In this initiative, car batteries are being used as energy storage for homes if the energy input from solar panels is not sufficient enough to power homes alone. Now, the energy from car batteries can be sent back to the grid, so energy storage and use is a two-way direction. Other initiatives such as the car-free city and the compact city are being implemented. The Merwedekanaalzone is an example of brownfield development, where unused land is being refurbished, cars are prohibited from entering the public roads and where everything is accessible by foot or by bike (Brugman, 2021). The municipality has plenty of concepts and ideas for the implementation of concepts with the aim of climate adaptation. An overview of initiatives taken by the municipality is presented in table 1 below.

<b>Initiative</b>	<b>Type</b>	<b>Location</b>	<b>Start of implementation</b>
LomboXnet	Solar powered micro grids	Lombok	2019
Merwedekanaalzone	Brownfield development/Walkable city/car-free city	Oog in Al/Westraven	2023
IRIS Utrecht	Shared mobility/Electric cars	Kanaleneiland-Zuid	2020



	and public transportation		
Utrecht Aardgasvrij	Gas-free neighbourhoods	Overvecht-Noord	2022-2030
Energiefonds Utrecht	Investment fund	Municipality of Utrecht	2020

*Table 1: clean energy and sustainability initiatives within the municipality of Utrecht*

### 1.5 Knowledge Gap & Research Questions

The urgent climate adaptation issues require sustainability solutions worldwide, in countries and in municipalities. As large urban areas are a significant contributor to environmental problems, they also have the possibility to become a significant factor in finding solutions for these problems. The municipality of Utrecht has an energy strategy to achieve the goals from the climate agreements and the implementation of the Environmental Act looks promising on theory (Brand, 2021; Energieregio U16, 2021). However, enabling residents to take part in the energy transition with less amount of financial means, affiliation, beliefs and knowledge on environmental problems could be troublesome. Participation is currently more accessible for those who possess more financial means, have a better understanding of the environmental necessity and affiliation towards the climate (Bronsvoort, Hoffman & Hajer, 2020).

In practice, the involvement of residents in the energy transition and renewable energy use in general still appears to be a challenge that many municipalities and stakeholders have to deal with. Currently, the inhabitants who are able to partake in the energy transition are those who possess the financial means to switch to solar panels or electric cars, acquire heat exchangers instead of using gas to power their homes and other methods of living and commuting which can be considered sustainable, but the residents with insufficient financial means and knowledge are less able or not yet able to contribute. (Bronsvoort, Hoffman & Hajer, 2020) And yet, these residents are needed in the energy transition towards becoming a fully sustainable municipality, because energy is consumed and needed by everyone who is a part of society. Every household is dependent on an input of energy and therefore, the higher the inclusivity rate, the higher the success rate of the energy transition as a whole (Stichting Klimaatverbond, 2022).

The lower participation rate among residents with a migration background could possibly be attributed towards a discrepancy in socio-economic status. Residents with a migration background are often less wealthy and possess less financial means and are therefore less able to contribute to the energy transition (Centraal Bureau voor de Statistiek, 2018). To sum up, the demographic group with a migration background have lower levels of affiliation, cultural and language barriers and lastly a financial disadvantaged position in the ability to participate in the energy transition. Therefore, the percentage of residents participating in spatial planning practice and specifically in the energy transition could potentially increase more. Vice versa, if the financial threshold to participate for residents who possess lower amounts of financial means could be reduced, the chances of a higher inclusivity rate in the energy transition could be achieved. The findings by Odekerken et al. (2021) also provide insight into more possibilities or so called 'building blocks' to increase the involvement and inclusion of people with a migrant background in the energy transition. These possibilities are based on the perspective of the residents with a migration background and the perspective of the professionals within the energy transition. The building blocks consist of an integral and

decentralized character of the planning practice in the energy transition, adequate information supply and a development of networking strategies and role models (Odekerken et al., 2021).

#### 1.5.1 Discrepancies in demographics and ability to participate

In order to reach these aspired climate agreement targets for 2050, public involvement and attitudes towards climate change must be tangible in order to significantly reduce the burdens for the environment caused by society (Mouter et al., 2021). Actual awareness and a feeling of urgency on the matter must be present in order to be decisive and effective in tackling the problem. This is relevant because participation in clean energy initiatives for residents is not mandatory. Currently, Dutch inhabitants with a migration background have lower feeling of personal connectiveness towards the energy transition and climate adaptation as a whole (Odekerken et al., 2021). Reasons for this are a sense of exclusion, lack of role examples and role models, cultural beliefs and habits and a lower level of language ability. If you take the socio demographic structure of the municipality of Utrecht into account, over 30 percent of the total population has a migration background (Gemeente Utrecht, 2021). Therefore, the path towards more inclusivity within participation in the energy transition can potentially still make inroads.

It could be argued that the energy transition at the moment is not fully inclusive and the participation rate can still be increased further. The EPA looks to make the participation process more accessible and efficient for local residents, but the conceptualized way in which the more open planning practice will be achieved and at the same time, aspire a certain level of quality in the participatory planning practice is understudied. The municipality of Utrecht has its own Regional Energy Strategy (RES) up until 2050, and a guideline for public participation (Gemeente Utrecht, 2021) but a clear and concise vision on how local residents can be incorporated into active participation with regards to the newly EPA within the energy transition leaves room for exploration. The relation between the participation rate and the success rate of the energy transition seems to be palpable, but concrete evidence to support this claim is understudied and leaves room for further exploration. Therefore, the research question for this thesis is as follows:

**“How does the Municipality of Utrecht incorporate inclusive participatory planning within the energy transition among its inhabitants in light of the upcoming Environmental and Planning act?”**

The main research question covers the key variables of the topic in this thesis, which are the climate adaptation objectives in the form of the energy transition, inclusivity within public participation or inclusive participatory planning practice as a means to possibly be more successful in making the energy transition, and the uncertainty around the conceptualisation of the participatory process in light of the new EPA. However, sub questions are needed to support the presented variables within the main research question. Therefore, three more sub questions are outlined below:

**Sub questions:**

**Sub question 1: “How can inclusive participatory planning best be shaped within the municipality of Utrecht?”**

**Sub question 2: “What is the function of public participation in the energy transition in the municipality of Utrecht and why is it important for residents and the municipality?”**

**Sub question 3: “What are the differences between current participation policy and implications for participatory planning within the scope of the new Environmental and Planning Act within the municipality of Utrecht?”**

## 1.7 Research Aim and Social & Scientific Relevance

The aim of this research is to examine and analyse policy on public participation, inclusivity within participation and the energy transition in the municipality of Utrecht. Moreover, public participation in the energy transition will be looked at from the context of the new EPA as participation is one of the key factors that is highlighted in the upcoming law. This new law will serve as an additional lens on how participation can be made more open and accessible in the municipality.

The implications for society are how residents can more easily interact with policy and decision making on the one hand, but also improve concrete ideas for municipalities on how to let residents actively take part in participatory processes in the field. Furthermore, for municipalities who want to include citizens into the participatory process, options will be explored on how to best reach out and include residents who want to participate. In addition, for those residents who are hardly or not reachable, less able to participate due to a lack of financial means, knowledge or personal beliefs, develop methods to include these underrepresented groups in the planning process as well. To summarize, the societal implications of this research are a better understanding of reaching out, connecting to and including residents into the field of spatial planning to increase the changes of a successful energy transition.

Lastly, the scientific implications could be helpful towards a better understanding of the added values of bottom-up participation, as it has been usually acknowledged as important in the field of science, yet not very often included as a focal point in the planning process (Axelsson et al., 2010; Callahan, 2007). In light of the new EPA, insufficient knowledge on concrete conceptualisations of residential participation leaves room for exploration (Gierveld, 2019).

## 2. Theoretical Framework

### 2.1 Theoretical Lenses

The theoretical framework will consist of two parts. The first part covers the theories and ideas about participation and including citizens in the planning process. The implementation of the EPA is a reoccurring theme within the first part. The second part provides a conceptual framework, where tools and concrete methods are discussed on how to concretely use the concepts derived from the participatory planning paradigm into actual practice.

#### 2.1.1 Participatory Planning Paradigm

The upcoming implementation of the EPA, where participation is one of the main pillars, and the way the municipality of Utrecht takes participation from residents in high regard makes a participatory planning paradigm a logical choice to incorporate into this research as a foundation throughout this thesis. Participatory planning in itself is not a singular theory, but more a collection of multiple ideas and conceptualisations of public participation into planning practices (Lane, 2005). From the 1960's onwards, public interference and collaboration has gradually increased throughout the years, where a lack of interference with policy and planning practices made way for a more collaborative form of

planning in the 1990's (Boonstra, 2015). Governmental entities and companies, stakeholders and private developers were more connected to the field of planning, which proved to be highly successful which in turn led to community self-management and participatory budgeting where residents were now able to have a degree of influence on the way the government could use its budget on developments regarding spatial planning practices (Geurtz & Van de Wijdeven, 2010; Boonstra & Boelens, 2011). On the other hand, civil society initiatives could be funded with the help of the government, thus increasing the mutual collaboration between the government and the public (Boonstra, 2015). Nowadays, online participation has given the opportunity for a more widespread form of participation as the threshold to participate is lower than before the times of online participation (Saad-Sulonen, 2012). Moreover, the upcoming EPA mentions the use of digital applications as one of the main methods for public participation (TNO, 2020). As the municipality seeks to explore ways of conceptualizing public participation in light of the upcoming law, (online) participation practices and the perspectives derived from it will function as a theoretical lens in this thesis. An elaboration of the EPA will be outlined in chapter 2.1.2.

### 2.1.2 The importance of participation and inclusivity within environmental planning practice

In many policy plans related to the energy transition in different municipalities in the Netherlands, public participation and inclusiveness are highly valued, especially with the implementation of the new EPA, where participation and accessibility are two of the main pillars of the legislature. This new piece of legislature is planned to come into effect in January 2023 (Ministerie van Infrastructuur en Waterstaat, 2021). Summarized, the new law aims to include residents at an earlier stage in the planning process, bypassing complicated and lengthy legislation and applies the principle of "Yes, provided that" instead of "No, but". In essence, bottom-up initiatives should be made more accessible and planning practice should be more inclusive, but the question remains how this will take shape in the future. Especially the possibility of uneven power relations between actors involved remains an uncertainty in achieving maximum inclusivity within participation (Brand, 2021; Van Tilburg, 2020).

In this altered form of participatory planning practice, participants and organisers of projects involving participants outside of governmental or municipal structures often maintain a 'mature-adult' relationship. This means that there will be a more equal relationship between residents and municipalities, where residents have more say into the planning practice (Gierveld, 2019). This contrasts with the previous 'paternalistic' approaches within the Wro, where the planning process was less open and accessible for residents and where municipalities themselves could decide how residents would be incorporated within the planning policy and practice. In these approaches, planners provide, do not provide, or provide partial information about a project. In participatory processes, on the contrary, complete information about the planning issues is given to the public and the interaction effect is more prevalent. Participation turns the responsibility for spaces such as the direct urban living environment into a common issue, rather than an individual responsibility for planners. If the involvement of participants within the planning practice is increased, the likelihood of an increased support base also rises. If residents are connected and integrated into the planning process, personal affiliation and connectedness towards the direct living environment could increase, therefore chances of engaging in development and preservation of the personal living environment could also become higher (Cilliers & Timmermans, 2014; Li et al., 2020). Cilliers & Timmermans (2014) also describe that the awareness of participants about issues such as sustainability,

development or the environment is also increased. Due to the input and involvement of citizens, achieving environmental goals within urban areas for the short and long term could have a higher chance of succeeding (Boonstra & Boelens, 2011).

## 2.2 Conceptual framework

The scope of this research will be presented through the lenses of a theoretical framework, which is the Participatory planning paradigm. For conceptualization, Participatory Value Evaluation (PVE) from Mouter et al. (2019) will be used as a tool to assess current participatory practice within the municipality of Utrecht. The PVE is being considered in this research as it looks promising as an efficient and inclusive tool for accessible participation. More in-depth analysis on the PVE method will be discussed in chapter 2.2.2. Alongside the PVE, the Customer Journey towards gas-free living model will be used. This is a three phase, nine-step guide that assesses the process of citizens in their decision making towards the transition from non-renewable methods (natural gas) of energy consumption to sustainable or renewable methods. The individual steps from the Customer Journey towards gas-free living transitions could serve as variables that cover the process of transitioning towards gas-free living and what residents will have to encounter in making this transition. This guide will be presented below.

### 2.2.1 The decision making process towards gas free living.

For a successful participation process, it is useful to have insight into the perception of the residents themselves about the potential benefits or pitfalls they can encounter when considering the transition towards gas free applications in the homes of residents within the municipality of Utrecht. In order to outline that personal experience, it is necessary to obtain insight into what themes are relevant for residents. Therefore, a models has been used that can offer perspective into which themes are relevant to residents which relate to the decision making behaviour of residents. This models is applied to natural gas-free homes, but also as a steppingstone the model is also relevant to other sustainable energy solutions.

This model is the Customer Journey, which describes the decision-making process that residents go through for a natural gas-free purchase. If there is insufficient reason or incentive to move on to the next step, then residents can remain stuck at that step. The Customer Journey can therefore be used as a tool for setting up a participation and communication strategy, in which the municipality guides residents through the steps (Tigchelaar, et al, 2019; de Koning, et al, 2020). Figure 2 provides a graphical representation of Customer Journey. The Customer Journey can be divided into three phases:

- Informative phase (Step 1-3); residents become aware of the issue, form an outline of their opinion on the subject based on the information available and what it means for their personal situation.
- Decision-making phase (Step 4-6); residents gather detailed information on all alternatives and make their choice for the most attractive solution.
- Execution phase (Step 7-9); residents have made their choice and are now making the necessary adjustments to their homes and adapt to the new situation.

In the steps of the Customer Journey, there are a number of factors that influence the decision of residents. These factors are described in a second model of consumer behaviour. The model consists of 3 parts (Brunsting, et al, 2018; Tigchelaar, et al, 2019):

- Attention: Are residents considering a purchase at all? And are they considering a gas-free alternative, or do they tend to continue to use what they are already used to?
- Possibility: are residents practically able to take the natural gas-free measures? Can it be technically installed in their homes? Is the investment affordable? Do they have sufficient knowledge about the various alternatives? Is there certainty about legislation and policy? And is the market able to provide enough suppliers and installers for the solutions?
- Intention: do residents see gas-free as an attractive alternative so that they want to buy the product? Are the investment costs attractive (e.g. low payback period)? Are the variable costs acceptable (e.g. do the monthly costs fit into their current energy budget)? Does this gas-free solution bring sufficient benefits, status, or do many other residents already have the innovation already? Can the transition be made without too much research and stress of choice?

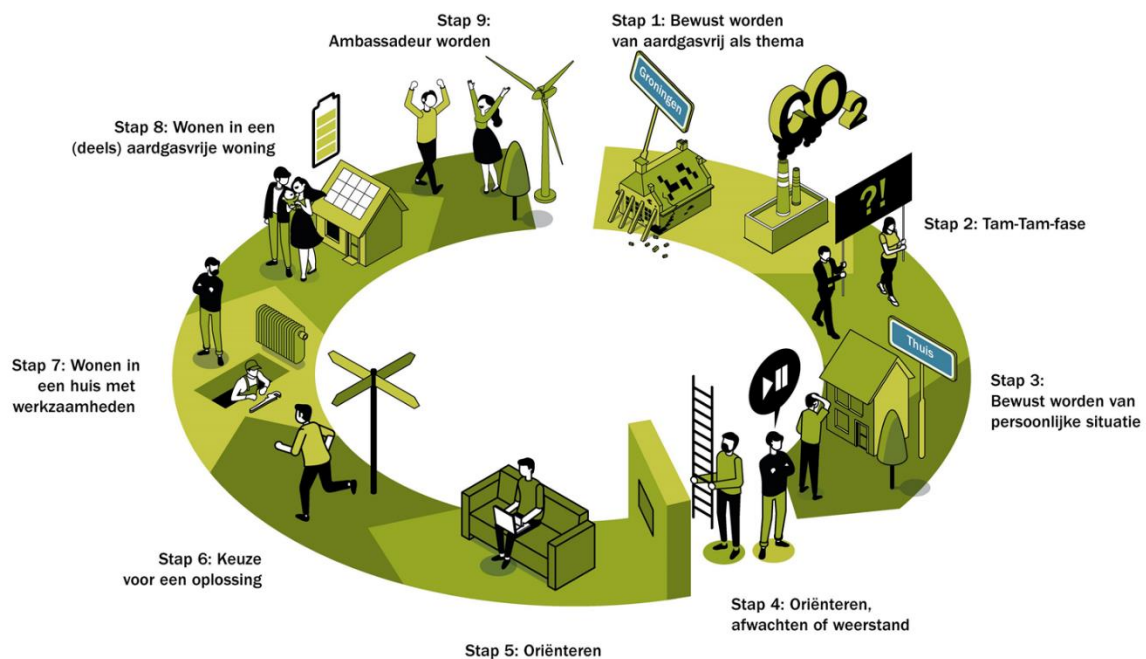


Figure 2: Customer Journey towards gas-free living (de Koning, et al., 2020)

The confidence that residents have in the organisation of gas-free living is also important. Residents must have confidence in the way they are involved, the solutions chosen, the approach and the organisations involved. The factors shown in Table 2 are important for going through a Customer Journey. By paying attention to the factors mentioned below, a municipality can support the residents to get a step further in the Customer Journey.

Attention	Possibility	Intention
Presence of reason	Practical attainability	Attractive investment costs and variable expenses
Break of habit	Sufficient knowledge	Personal gain



	Reasonable investment	Social comparison
	Market availability	Social status
	Reassurance on legislature and policy	Attractive alternatives

*Table 2: Prerequisites for making the transition to gas-free living (Brunsting, et al., 2018; Tigchelaar, et al., 2019).*

### 2.2.2 Participatory Value Evaluation

Participatory Value Evaluation (PVE) is a new method of evaluating policy options and facilitating the participation of large groups of citizens which was developed by Mouter et al. (2019). The essence of a PVE is that citizens can give their opinion on a choice issue from a government in an accessible way. They are essentially put in a policy makers position (Peuchen & Bijvoet, 2020). In an online environment, participants see what choice the government has to make. They get an overview of the concrete advantages and disadvantages (or effects) of the options the government can choose between and the limitations that exist (e.g. limited budget or a mandatory target). They are then asked what they would advise the driver to do. Finally, citizens explain their choices, which provides a clear picture of their preferences and considerations (Mouter et al., 2019). On the one hand, PVE is a method that tries to visualise the social costs and benefits of public policies as representative as possible. On the other hand, a PVE stimulates citizen participation by consulting a large group of citizens on a choice issue. Participants in the PVE see the increased involvement of citizens in decision making as a positive aspect of the method. An advantage of PVE compared to other forms of participation (e.g. sounding board groups and participation evenings) is that the threshold for participation is relatively low. While participants in focus groups have to invest a considerable amount of time, participating in a PVE takes an average of 20 to 30 minutes. Because of the low barrier, participation becomes possible to a larger group of citizens. It is possible that not only activists and people with a keen interest in participation might participate, but also the 'silent majority' might decide to participate. This can ensure that the outcome of a participation process reflects the preferences of a broad group of citizens (Mouter et al., 2019). As a result, the outcome is more widely supported. In addition, many participants see PVE as a useful awareness-raising method. By taking part in a PVE, citizens become aware of scarcity ('not everything is possible') and the challenges facing the government: what choices have to be made and what are the consequences? What choices must be made and what are the pros and cons of the various options?

## 3. Methods

The methodology that is used in this thesis is explained in this chapter. The first section will highlight the main research question and additional sub questions. The second part adds to the research objective that was briefly outlined in the introduction and how the selected methods to execute this research were chosen. The third section explains the way respondents were approached and how interviews were conducted. The fourth section of the methods chapter explains what policy documents were used and analysed. Lastly, validity within the research is discussed.

### 3.1 Research question & sub questions

This research will examine existing policy documentation on participation and inclusivity and current practices within the energy transition within the municipality of Utrecht. The main lens from which this will be done is the anticipated EPA. Therefore, the main question that will be answered in this research is as follows:

**“How does the Municipality of Utrecht incorporate inclusive participatory planning within the energy transition among its inhabitants in light of the upcoming Environmental and Planning act?”**

The sub questions for this main question are listed below:

**Sub question 1: “How can inclusive participatory planning best be shaped within the municipality of Utrecht?”**

**Sub question 2: “What is the function of public participation in the energy transition in the municipality of Utrecht and why is it important for residents and the municipality?”**

**Sub question 3: “What are the differences between current participation policy and implications for participatory planning within the scope of the new Environmental and Planning Act within the municipality of Utrecht?”**

### 3.2 Research objective

As mentioned in the introduction of this thesis, the aim of this research is to examine current policy and quality of public participation in the energy transition from non-renewable energy sources towards gas-free and sustainable energy solutions in the residencies within neighbourhoods in the municipality of Utrecht. One of the goals is to increase public participation in the energy transition as a higher participation rate might be connected to a higher success rate of successfully switching to renewable energy solutions and therefore, being more successful in the energy transition as a whole. This relation however needs to be investigated within the context of the upcoming EPA. The municipality of Utrecht has concrete ideas about public participation and the involvement of citizens in participatory planning, but a conceptualisation of inclusive planning when the new law will be implemented leaves room for exploration. Public participation and inclusivity are determining factors in the implementation of the new EPA. The new legislature could potentially be significant in achieving higher participation rates among residents, but as long as the implementation has undergone postponement until January 1<sup>st</sup> of the year 2023, the uncertainty still remains as to how the new law will alter the field of participatory planning.

Participation and inclusivity already play a major role in current policy in the municipality of Utrecht (The Making City Together campaign and the participation guide), as the importance of these factors are widely acknowledged. However, deeper understanding and conceptualisation on how to be able to take part in the energy transition and make it more accessible for those with less amount of financial means, less understanding of environmental issues and or those who do not see the need to participate. If these unreached and unincluded groups of residents are able to partake, the energy transition as a whole could become more inclusive and therefore, have a better chance of tackling the environmental issues at hand (Axelsson et al., 2010; Callahan, 2007). Therefore, a scientific underlay on participation, involvement and inclusivity are one of the main goals of this research.



Current legislature in various municipalities include environmental visions (Dutch: Omgevingsvisie) for the upcoming decades and the main focus in these environmental visions are bottom-up participation (Groen, 2018).

### 3.3 Interviews

This research uses a qualitative approach of data collection in the form of conducting interviews with respondents who work for the municipality of Utrecht with expert knowledge on participation within the municipality. Respondents who have relevant functions within the energy transition, work for energy corporations or other forms of clean energy initiatives within the municipality were included as well. A list of interviewees is presented below.

List of interviewees and date of conducting the interviews:

1. Samen Stad Maken representative (Municipality of Utrecht) (23-06-2022)
2. Energy transition consultant/expert (Municipality of Utrecht) (18-07-2022)
3. Energy and sustainability transition Expert (Over Morgen) (18-07-2022)
4. Representative energy Cooperation (Energie van Utrecht) (21-06-2022)
5. Eneco Energie representative (energy company) (13-06-2022)
6. Spatial Development Policy Advisor (Gemeente Utrecht) (24-05-2022)

The interviews were held between the 24<sup>th</sup> of May and the 18<sup>th</sup> of July 2022 and each interview was conducted via MS Teams in an online setting. The average length of the interviews was 34 minutes, all the interviews had a recording time between 23 and 42 minutes. Questions were asked about the topics listed in appendix 1. The interviewees were approached with the help of emails, phone calls or networking via personal acquaintances. Some interviewees were later approached via a snowball effect, where a respondent was able to deliver more respondents through their own professional network. The interviews were recorded, transcribed and coded in Word. The coding tree is listed in appendix B.

### 3.4 Examining current laws, policy documents and reports

The current effective legislature on Dutch spatial planning processes is de 'Wro' (Wet Ruimtelijke Ordening) or Spatial Planning Law and came into effect in 2008. Both the state, the provinces and the municipality have the authority to draw up spatial plans. Of these, the zoning plan is the most important instrument, which is also legally binding (Ministerie van Infrastructuur en Waterstaat, 2022a). How spatial plans come about and how they are amended is regulated by the Spatial Planning Act. This Act determines the tasks of the government and the rights and obligations of citizens, businesses and institutions. If several related decisions and plans are involved, it is possible to simplify the procedure by means of a coordination scheme. The central idea of the 'Wro' was "Decentralised if possible, centralised if necessary" (Wettenbank Overheid, 2012). Instead of key planning decisions, regional plans and structure plans, municipalities, provinces and central government now draw up structural concepts. In the spatial development strategy, national government describes where buildings can be built, where the greenery must remain and who has decision-making authority. Furthermore, the Government imposes few restrictions and leaves the responsibility for spatial planning to the provinces and municipalities (Kamphorst et al., 2008). Provinces indicate a strategic policy for municipalities in their structural concept. A municipality can only deviate from this if it has good reasons for doing so. Municipalities may also decide to revise a structural concept. The province uses its own spatial development strategy to test the municipal

plans against it, just as the central government tests the plans of the province against their own structural concepts (Ministerie van Infrastructuur en Waterstaat, 2022b). The intention is for the structural concepts to be coordinated and to serve as a starting point for zoning plans, embedding plans and project decisions. Essentially, the municipalities are the entities who hold the most power in planning practice decision making as the state gives freedom develop and execute plans as they see fit, as long as it is in line with the overlapping directions drawn out by the government. Additionally, the municipalities decide how participatory planning is shaped. This means that the ability for inhabitants to participate varies per municipality and its enforced legislature. Complexity in laws and regulations often hinder the accessibility for public participation. The current ‘Wro’ law can strengthen the legitimate nature of public participation, but currently lacks the capacity to organise support, improve efficiency, improvement of planning and education at the regional planning level (Hartmann et al., 2018).

Additional data is collected through document and report review on participation, inclusivity within public planning and environmental issues in the Netherlands. More documentation about the energy transition on a national, provincial and municipal level were included too. An overview of used policy documents and reports are listed in table 3.

Report or document (per row) / Theme (Per column)	Participation & inclusivity	Energy Transition	Environmental and Planning Act	Global Environmental Context & Data	National/Municipal Environmental Context & Data
Omgevingsvisie Provincie Utrecht (2021)	X	X	X	X	X
Actieplan Samen Stad Maken (2021)	X	-	X	-	X
Participatie leidraad (2021)	X	X	-	-	X
Regionale Energie Strategie U16 (2021)	X	X	X	X	X
Whitepaper Expeditie Warmte (2021)	X	X	X	X	X
Horizon Utrecht 2050 (2018)	X	X	X	X	X
TNO rapport: Participatie, RES en Omgevingswet (2020)	X	X	X	-	X

TNO rapport: Aardgasvrij (2020)	X	X	-	X	X
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Table 3: used reports and policy documents (Reports and documents per row, themes per column)

### 3.5 Validity within the research

This research aims to be valuable by combining a multitude of expert perspectives in order to draw up a comprehensive image where the aspired end result depicts a complete as possible image of reality, mainly because of the variation in experts covering different topics and themes. The aim of the interviews was to be as representative as possible towards the municipality of Utrecht. In combination with the interviews, policy documentation gives context on current inclusivity, participation and legislature and the combination of both the policy analysis in combination with the held interviews could offer a degree of external validity and the ability to generalize to the larger population within the municipality.

## 4. Results Analysis

Before analysing the results from the policy documentation review and the interviews, a brief outline of the results analysis chapter will be provided to clarify the basic structure of this chapter. The first chapter consists of analysing data collected from the semi-structured interviews. The second part of the results analysis chapter consists of analysing the results of the policy documents review. In the discussion chapter, the combined findings from first and second part of the results analysis chapter will be linked to the theoretical scope of participatory planning practice and the tools derived from this paradigm, namely the 9-step Customer Journey and the PVE. A visualisation will be presented in figure 3 in order to emphasize the connections between the paragraphs of the results analysis chapter. Lastly, the main research question and sub questions will be answered.

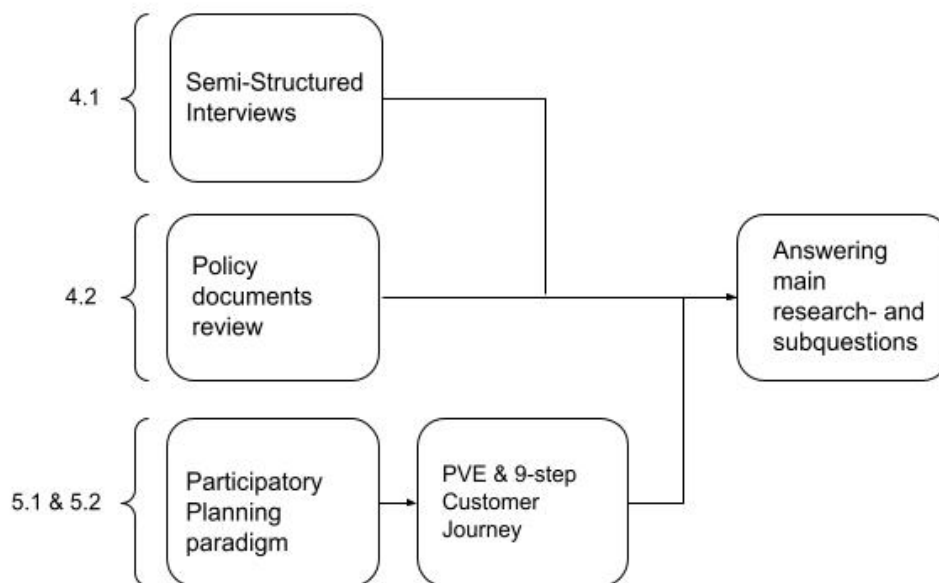


Figure 3: visualisation of the results analysis (Self-made image)

## 4.1 Main findings from semi-structured interviews

The findings from the semi structured interviews will be presented in four sub-chapters, as from the in-depth interviews, four main themes emerged. The sub-chapters will correspond with the main themes from the interviews, and these are (1) inclusive participation, (2) the energy transition, (3) laws, theories and methods and lastly (4) stakeholders.

### 4.1.1 Inclusive Participation

#### 4.1.2 Inclusivity

Within the municipality of Utrecht, inclusivity within the participation process is highly valued, as all respondents argue that residents have the ability to come up with new ideas and connect to other residents in their personal environment that are more difficult to reach out to. Therefore, the municipality aims to include residents as early as possible. The first step in the inclusion process is education as the first step of participation is knowledge. The municipality aims to achieve this by face to face interaction with residents, approaching them in their personal living environments. Online tools play a significant part in the participation process too. Platforms such DenkMee experienced a massive boost in the corona pandemic times and appealed to the adolescents and young adult population within the municipality, resulting in . Multiple respondents from the municipality explained that informal contact with residents before arriving at more serious topics helps with understanding and comprehension about their ability to think about participation and more specifically, the energy transition. In addition, the municipality aims to achieve inclusivity in the participation process as inclusivity is desirable as a means for social equality and equity among its inhabitants. However, as inclusivity in participation remains a goal of the municipality, the question remains if inclusivity is desirable as a way of best practice in the participation process. The first argument is merely a practical one, as achieving inclusivity in participation is difficult because it can be time consuming and requires lot of resources such as financial backing and manpower. Another argument is that it is in itself very hard to achieve true inclusivity in the participation process as presented in a quote from a respondent who works for the public participation department in the municipality of Utrecht.

*"It is an objective, isn't it? If you go to the site you will find that the participation policy in Utrecht has taken shape in an action programme Making City Together and inclusivity is one of the objectives. How do we achieve more? In practice this is very difficult and there is often discussion about whether you want to involve all Utrechters. That's not possible at all and that can't be the intention but you do want to call upon everyone in a certain way. That is difficult and it doesn't always really work out yet."* (Respondent 1, 23-06-2022)

To summarize this paragraph, inclusivity in the participation process starts with clear communication and education towards residents, as communication and transparency are beneficial towards public support and understanding.

#### 4.1.3 Participation process

On the topic of how the participation process could best take shape within the municipality, respondents all mentioned that one specific method or practice does not apply. A multitude of tools and methods, best suited within the context of neighbourhoods or boroughs is more important than one general participation method. In some cases an online survey could work, in other cases approaching residents on the street could work, for example. The best possible methods are complex and context dependent, but honesty, clarity and an open dialogue are prerequisites for a successful way of enabling residents to take part in the participation process. Socio-demographic varieties exist within the municipality and within its neighbourhoods and streets. Therefore, participation methods

could be argued to be 'tailor-made' and in line with the characteristics of the direct living environment and its residents.

#### 4.1.4 Difficulties in participation

The participation process undergoes multiple challenges and difficulties. As mentioned earlier in paragraph 4.1.1, participation could often be costly and time consuming and a true representation of residents from the community is hard to achieve. Those who take part in participatory practice are often the so-called 'usual suspects' and mostly represent a specific demographic age or income group. What also became apparent is that residents could potentially lose interest if the implications of the initiatives, such as the energy transition for example, are not instantly met on the short term but on the longer term. The more abstract or long term implication, chances will increase that people will lose interest and as a result, lower the participation rates among residents. The Making City Together representative also mentions that ways for residents to participate are explicitly mentioned on the online media platforms of the municipality, but this information flow often breezes past people. Sometimes residents want to participate, but lose sense of direction as people not knowing where to start with participating. Moreover, people with less amount of financial means and time available often have more urgent matters in life than to explore the possibilities of participation in the municipality. A steady foundation is required for residents in order to partake, otherwise residents will most likely not take part in the participation process.

#### 4.1.5 Activation in participation

One of the main takeaways in inclusive participation is the differentiation between actual active participation and inclusivity in participation. A respondent from Over Morgen mentions the following:

*"What is particularly important in the heat transition and also in the energy transition is more activation than participation, so people really have to do something themselves in order to be able to participate, so it's not about being for or against or maximising your opinion of the plan. You have to go and buy a heat pump and have it installed, you know, that sort of thing, and when it comes to participation, whether you're for or against wind energy or solar fields, I think inclusiveness is important, based on the principle that everyone should be able to have an opinion on it."* (Respondent 3, 18-07-2022)

The same respondent follows up on her previous quote and explains more about the relevance of activation in participation.

*"in activation, inclusiveness is extremely important because there are some people who live gas-free in a well-insulated house but that is really only a small part of the Netherlands, a lot of people have to do that and then it is extremely important to work inclusively because everyone has to be able to actively participate"* (Respondent 3, 18-07-2022)

Inclusivity in participation would mean that people are on the same page regarding their opinion and outlook on environmental matters, for instance. But inclusivity in activation is the next essential step in actually undertaking the steps to physically change the direct living environment. Participation in itself could be considered as the entire process of educating, understanding and activation. Inclusivity in participation means both collective will forming and physical undergoing of change, but the latter is what is actually going to kickstart actual physical change, and in the case of this research, the energy transition.

## 4.2.1 The Energy Transition

### 4.2.2 Energy transition strategies

The importance of contextuality in participation was briefly touched in chapter 4.1, and the same importance exists in regards to the topic of the energy transition. Within the energy transition towards gas-free living and use of clean energy, the perfect one-way practice is utopia. The respondent who is an expert on the energy transition within the municipality of Utrecht explains that the municipality was divided into clusters and sub-clusters per neighbourhood, and within those clusters the best way of approaching the switch from gas-powered homes was examined. The clustering of neighbourhoods was necessary to assess the readiness of the residencies for making the transition. Readiness among specific buildings and homes varied, therefore different approaches were important. Buildings with lower energy and sustainability labels were first to undergo the transition. In addition to the mapping of these clusters, managing relations and connections between residents, energy companies, and the municipality is important for clarity and transparency between all actors involved. Up until now, the energy transition is not mandatory. Therefore, residents have the opportunity to decide on their own if they want to partake or not. This makes the process more challenging as connecting residents at the right time and enabling residents to participate in the transition on their own time could potentially limit the pace of progression.

In the interviews, three respondents mention two core variables of being able to take part in the energy transition: Comfort and money. If the transition in the homes of residents is an infringement on their financial situation or a degradation of their living comfort, likelihood of participation may decrease. Therefore, initiatives regarding the energy transition should preferably incorporate these two factors. This could be done by subsidies within the neighbourhood funding or municipal and/or state financial backing. For the comfort part, the instalment for example a heat pump or solar panels could be an infringement of your normal living conditions at home. If residents experience this as uncomfortable, compensation will be required to overcome the absence of comfort for residents. Forms of compensation could vary between financial forms of compensation, or even in some cases facilitating a day or several days from home up until works in residencies are complete.

Working together with the municipality, the residents, energy companies and local initiatives is needed in order to make things work in the energy transition. This also touches upon the inclusivity part and the importance of inclusivity in participation between different stakeholders. As an example of energy transition initiatives, one respondent mentions *Expeditie Warmte* (Expedition Warmth) as an example of collaboration between different stakeholders within the switch towards gas-free living. This initiative was started by the municipality and basically explores possible sources for energy and home heating within neighbourhoods. Groups of residents, together with companies and the municipality, searched for heating sources in the neighbourhood, such as residual heat from rivers, canals or the sewerage system, heat from the ground or residual heat from a local company. Residents, energy companies and the municipality collectively examined how they could best heat their homes with these new forms of heat in the future. And importantly, how to keep these new forms of heating affordable. In these initiatives, the municipality took on a facilitating and coordinating role where residents used their knowledge and input to create new solutions and application within the domain of the energy transition. The energy transition expert mentioned this explicitly in the interview, as an example of using bottom-up initiatives from residents where initiatives are characterized by their direct surrounding and contextual living structures. A deeper look in the structures of the energy transition in the municipality of Utrecht will be discussed in chapter 4.2.2

### 4.2.3 Energy transition structure

The energy transition means a significant overhaul of the current financial and technical system. Moreover, different approaches in policy and attitudes are required too. The switch towards a bottom-up characterized structure of energy production and use in the municipality is palpable, but still far from being in the ending stages of development. Two respondents mention that it would be favourable if the heating networks would be in the hands of the local residents, where energy in the form of heat would be captured from local sources and distributed via a neighbourhood heating network. This entails a switch from the former centralized gas and heating networks towards decentralized form of energy- and heating supply. Transitions in technical structures are flanked by changes in the political system and different roles of stakeholders. The role of residents will increasingly become more important, as knowledge from residents will be touched upon more frequently, with the municipality more in a facilitating and coordinating role. The municipality of Utrecht already had concrete participatory plans in place with room for residents to participate, but this development could grow even further, especially with the implementation of the EPA. The municipality envisions a form of triangulation between the municipality, residents and energy companies where shared knowledge will be the focal point from where new initiatives will be developed. Five out of six respondents mention the importance of networking and stakeholders connections, with the aim of using knowledge from residents, resources from the municipality and the expertise and infrastructure of energy companies. In theory, if the transition would be solely characterized by bottom-up initiatives, the entire energy transition towards gas-free living would be achieved much faster. It goes without saying that achieving this is easier said than done. The next paragraph will explain what challenges and difficulties lie ahead of the energy transition in the municipality of Utrecht

### 4.2.4 Energy transition difficulties

The two main variables that could predict if someone has more likeliness to actively participate in the energy transitions are, as mentioned earlier in chapter 4.2.1, are money and comfort. On the financial side, people who have to deal with energy poverty or lower incomes are more challenging to include than those without these financial barriers. Without financial possibilities, residents would possibly feel a lack of achievability to participate. The uncertainties around financing and a comfortable transition process for residents are still tangible, as a main prerequisite for the energy transition is financial possibility and low burdens in terms of habitable living conditions.

*“The support base is also difficult because that is where if you start working in the neighbourhood, who is going to pay for it and the second thing we have also looked at when selecting the neighbourhoods is a factor of unpleasantness, so how much is indeed in your own house, how much do you have to adapt?” (Respondent 2, 18-07-2022)*

This quote from a sustainability and energy transition expert who previously worked for the municipality also explains the financial and comfort variable. It appears that these two factors are likely the biggest factors in the energy transition. The duality in this instance lies in the notion that residents tend to be more supportive and have more affiliation towards local initiatives of energy and heat supply if the source is coming from something familiar or surprising:

*“That is difficult, because part of that would come from biomass in waste incineration and so on. But that is very far away, and if you can then say oh, but also look at the residual heat from the ice skating ring, so the skating ring is nice, you know, and so on, then it gets closer and people have a better feeling that it is really sustainable.” (Respondent 3, 18-07-2022)*

If local initiatives that are presented and structured in something that is familiar or recognizable, people tend to become more connected towards these initiatives. The local infrastructure and the



homes of residents still need to be adapted. The personal affiliation and connectedness could enable more residents to make the switch, but the financials and comfort aspect will likely still be a hindrance. Moreover, general consensus on local initiatives is also likely to be too far-fetched, as public support, knowledge and opinions could vary. The main reoccurring theme in the energy transition difficulties remains a three-way split in public support, financing and comfort. At the end of the day, residents have to in any way, shape or form, have to make a sacrifice before making a transition. And as long as the transition remains free of choice and is not mandatory, progress could vary from neighbourhood to neighbourhood, and from house to house.

#### 4.3.1 Laws, theories and methods

##### 4.3.2 Environmental and Planning Act

As the anticipated Environmental and Planning Act (EPA) will come into effect per januari 1<sup>st</sup> 2023, the municipality of Utrecht is will be adapting to the new implications of the new legislation. In terms of participation, the municipality already had concrete ideas and policy documents on how to incorporate citizens into the planning process. The new law will open up more possibilities for residents to participate, but the most rigorous alteration within the participation process will likely be a change of attitude on how participation is being viewed at. The participation expert of the municipality mentions in the interview that the municipality of Utrecht already had guidelines for public participation and that the EPA, in terms of structure, will not greatly alter existing participation policy:

*"I am on the team for the environmental vision and data programme but also for participation, but from the start we have said that we must avoid inventing something new for participation in connection with the Environmental and Planning Act and the Quality Assurance Law. Our impression from the start was that we were already doing this because, during the first discussion of the Act, the National Government said participation and tailor-made solutions are not enough. The Government thinks that municipalities should have a participation policy in place. This already has been added, but we already had that in Utrecht." (Respondent 1, 23-06-2022)*

Current Wro laws mention that you can participate under certain conditions but with the new EPA you are free to participate provided that certain conditions are met. The transition from a "no, but..." to a "yes, provided that..." will be the main attitude change in participation policy. The municipality has explained that for certain participatory initiatives, experience and quality of earlier in participation from residents should be required in light of the EPA. The difficulty lies in the assessment if someone has enough participation experience or not, but the municipality is developing a tool that could measure, on a qualitative basis, if someone has enough knowledge and experience to participate. The municipality mentions that the implications from the EPA are not seen as a controlling organ in participatory practice, but rather a way of improving collaboration to achieve best possible results from participatory initiatives from residents. Therefore, it is essential to clearly highlight the "Yes, provided that..." per initiative.

##### 4.3.3 Participatory Value Evaluation

The municipality of Utrecht does currently not use the PVE method in its participation policy, but was considered as a tool when the method first appeared a few years ago. The reasons for this are that the municipality uses a multitude of tools and methods for participation, and that PVE should not be the sole instrument for public participation. The PVE was tested in a gas-free living initiative in several neighbourhoods, but was considered to not be entirely representative and inclusive of the community.

*"Utrecht, Rotterdam have also done this around natural gas-free warmth. I think as an inhabitant to this I think it is interesting for a certain target group. I do not, however, consider it an inclusive method. I think this could be interesting for educated people. Personally, I found it very nice to use this but well I am of course entirely representative towards the average inhabitant." (Respondent 3, 18-07-2022)*



Respondents from Over Morgen and the participation expert from the municipality also mention that the PVE, albeit a useful way of simplifying and resource distribution, may be too one-sided in its approach and lacks contextuality. Moreover, for their interpretations of PVE use, a lot of reading was required beforehand so the time efficiency was not optimal. The remaining respondents, when asked about thoughts or experiences with PVE, mentioned that they did not encounter the use of the PVE or similar method.

#### 4.3.4 Customer Journey towards gas-free living

The nine-step customer journey framework is not explicitly used in participatory planning within the energy transition, according to the results of the interviews. However, the first and second phases within the 9 steps of the Customer Journey model, the informative phase and decision making phase, are being used. Informing and education as the first steps of participation, opinion forming and general awareness of the energy transition are tangible in the municipality. The second phase, or the decision making phase has possible similarities with the way residents consider options, based on their financial situation or home comfort variable. The execution phase draws parallels with findings that mention liveable home conditions. It must be mentioned that all respondents did not use the conceptualisation of the Customer Journey model in participatory practice experiences, but the concepts of education, awareness, opinion forming, orientating, decision making, and of course the liveable home conditions did return as variables from the interviews. These variables do consist of the Customer Journey and parallels could therefore potentially be made, albeit that respondents did not mention that the Customer Journey was directly used.

#### 4.4.1 Stakeholders

##### 4.4.2 Reaching out to residents

As a means to reach out to residents in various neighbourhoods in the municipality, three out of six respondents mention that personal, face interaction in the forms of informal conversation is a good method of raising awareness and education for residents on the topics of participation and more specifically the energy transition. A mix of online tools and direct conversation in the direct livable habitat of residents proved to be the most ideal form of connecting towards the population in the neighbourhoods. Both the older and the younger generation of inhabitants were inclined to respond to informal conversations on the street, at stores, in parks, or any public place. Online tools worked especially well for the younger generations (ages 18 until 35). Since the start of the corona pandemic, online participation platforms and tools experienced more traction and usage among the inhabitants of Utrecht, as explained per this quote by the participation expert from the municipality:

*“That is, of course, already in the action programme. If we want to improve online participation, that has of course been given an enormous boost by corona, We simply have not been able to participate physically, so we have via DenkMee, but also via online participation meetings, really learned what works and what doesn't work.”* (Respondent 1, 23-06-2022)

To summarize, communication with residents is an important way to maintain relationships with residents and educate residents as the first step towards participation. Especially active participation and a variety of tools is needed to include residents with different backgrounds, age categories and financial resources. The influences of the public in terms of knowledge and outside of the box thinking could therefore be useful for the development of energy transition initiatives.

##### 4.4.3 Role of energy companies and cooperations.

Lastly, the role of energy companies cannot be understated in the process of the energy transition the municipality. At first, energy companies have a goal of maximizing profits and a secondary goal, which is reducing the amount of greenhouse gas emissions into the environment. In the interview

with the regional manager of the warmth transition process from energy company Eneco, the relation between residents, the energy companies and the energy transition is highlighted:

*“It sounds very stupid, but what is also very important to Eneco is insulating homes. You have a supply and a return pipe - you know the technology of the delta T between supply and return? The bigger it is and the more constant it is, the better the heat network functions. And if a house is poorly insulated then a lot of heat is delivered but the same heat comes back with the same speed, so to speak, so that delta T between supply and return is very important and for that you must insulate well because then the heat that you deliver is also properly converted into heat in the house and thus the return temperature is improved. Ultimately, this is beneficial for Eneco down the line.” (Respondent 5, 13-06-2022)*

This fragment clarifies the mutual benefit that residents and energy companies have economic wise. The main takeaway from the relationship between the municipality, residents and energy companies is that in some cases, triangulation between actors takes place. In this instance, it’s about insulating homes which is beneficial for residents and the energy companies, but also helping the municipality realizing its sustainability goals. If the heating networks functions properly, it could potentially help all parties that are involved, provided that the financial and comfort barriers for residents could be overcome.

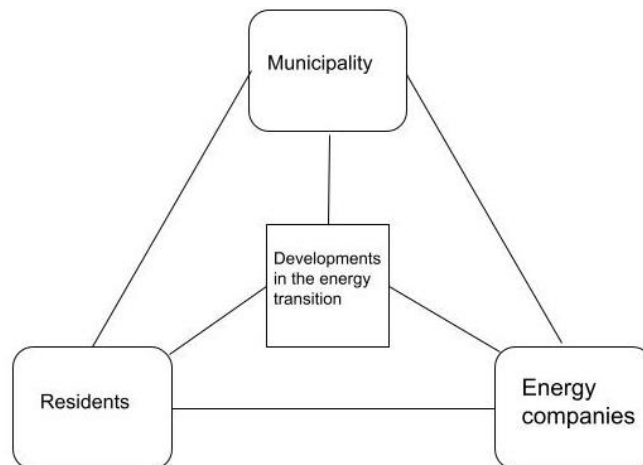


Figure 4: Triangulation between actors in the energy transition (Self-made image)

#### 4.5.1 Findings from reports and policy documents analysis

In this chapter, findings from policy documentation on the main variables of the research question will be discussed. These are participation and inclusivity, the energy transition and the EPA.

#### 4.5.2 Participation and inclusivity documentation

On participation and inclusivity, the municipality and the province of Utrecht have developed several policy documents that feature their course strategy up until the year 2050. The Horizon Utrecht 2050 report explains that residents were invited to share thoughts and ideas about future policy on various topics such as healthy living environment, circular living and economy, nature and the energy transition (Provincie Utrecht, 2018). In total, 330 residents were involved with thinking about strategies and concepts for future development within their direct living environment. 630 more residents participated online in the form of an online survey.

The two main reports on participation issued from within the municipality are the Utrechtse Participatieleidraad (or participatory guidelines within Utrecht) and the Samen Stad Maken campaign (Making City Together campaign). The participatory guidelines report explains their definition for participation as the following: *“Involving residents and stakeholders at an early stage and interactive*

*way in the creation and/or evaluation of policy and frameworks, with the aim of evaluation of policy and frameworks, with the aim of increasing control, ownership and involvement in Utrecht.”* (Gemeente Utrecht, 2021a)

On concrete steps of participation, three levels are brought forward analysis (1), approach (2) and agreements (3). The first step explains the informing and education within the participatory practice. It needs to be clear what the participation exactly entails, its goal, previous experience in participation from the residents or actors in question, the legal domain, budgeting, timeline and who to involve. This concludes the analysis part. The second step is the approach, which entails the method of participation. The approach step consists of three different methods for participation, namely counselling, asking for advice or co-creating. The third and final step are the agreements that are necessary to make clear arrangements about participation and check the expectations, so that everyone knows where he or she stands and (false) expectations can be corrected.

After the participation initiatives have been completed, a reflection needs to be made on the decisions made, involvement of actors, and the overall outcome of the process (Gemeente Utrecht, 2021a). The participatory guidelines are actually a part of the greater Making City Together campaign, which mentions the importance of tailor-made initiatives, inclusivity, involving young adolescents and online methods of participation (Gemeente Utrecht, 2021b).

#### 4.5.3 Energy Transition documentation

The main documents that cover the policy on participation within the energy transition are two TNO reports and the Regional Energy Strategy U16 (RES). The RES U16 covers the general outlines of the energy transition process up until 2050 within 14 municipalities from the province of Utrecht. The RES is an extensive approach towards the energy transition as a whole, but some key characteristics are the collaborations and working together with residents for development and realisation of energy transition initiatives (Regionale Energie Strategie U16, 2021). Moreover, the RES aims to achieve a 50 percent rate of local ownership and financing within project realisation as with every major or minor development being taken, local residents and organisations are included into the planning practice.

The TNO report on gas-free living explored the possibilities of gas-free living applications in eight different neighbourhoods pilots and concluded that the neighbourhood approaches of gas-free living pays attention to five themes of support, organisation of the living pilots, finances, gas-free solutions and realisation. Only on the theme of realisation relatively little is still being done (TNO, 2020). Almost all residents were asked about the need for the transition towards natural gas-free. Two arguments play a role in creating awareness among residents about the necessity of the gas-free transition: (1) the necessity to reduce greenhouse gas emissions and (2) the need to move away from natural gas. report pays particular attention to the second argument. Some neighbourhood residents are motivated by these arguments, but from results of the reports, resistance from residents is also experienced. Residents often point to national discussions about the about the usefulness and necessity of the gas-free transition and financial feasibility (Klösters et al., 2020).

The other TNO report about participation within the energy transition explored insights of participation in the energy transition within the municipality of Utrecht and on the basis of scientific methods and practical solutions retrieved from academic literature, explore ways to include these methods in the energy transition within the municipality of Utrecht. The main takeaways from this report are that the municipality has formulated communication objectives

that give direction to how residents can be informed and involved. It is the intention to do this dynamically, in an ongoing conversation, so that residents know where they stand and can give their wishes and ideas for the implementation of the RES. The forms chosen go beyond the standard information meetings. For example, a number of possible activities are described, such as a communication toolbox, a climate summit for young people and street conversations (Peuchen & Bijvoet, 2020). Moreover, a variety of tools for public participation was explored, two of which were the Participatory Value Evaluation method and the Customer Journey towards gas-free living.

#### 4.5.4 Environmental and Planning Act documentation

The implementation and the implications of the EPA as an overarching theme were brought forward in the Omgevingsvisie Provincie Utrecht (2021), but also highlighted in the policy reports and documents on participation and inclusivity from the municipality of Utrecht. The main implications of the upcoming EPA are explained as four pillars in the Omgevingsvisie, namely reducing of complex legislature, the direct living environment as a central basis, tailor-made and context dependent development and an increase in overall efficiency in decision making (Provincie Utrecht, 2021). The Making City Together campaign also highlights the clarity in roles for those involved in planning practice and initiative development (Gemeente Utrecht, 2021a).

## 5. Discussion

### 5.1 Implications and interpretations from the participatory planning paradigm

This research was conducted to explore the ways the municipality of Utrecht incorporates participatory planning and inclusivity into the planning process in light of the upcoming EPA. The perspective of participatory planning paradigm was used as a theoretical lens, with support from the PVE method and the Customer Journey towards gas-free living model. Participatory planning was a reoccurring theme throughout the entirety of this research. The importance of participation in planning practice was highlighted in chapter 2.1.1 and chapter 2.1.2, where the relationship between residents and the government in collaboratory planning practices meant an increase in connection to planning practice, resulting in more community self-management and more residential influence, as depicted by Geurtz & Van de Wijdeven (2010) and Boonstra & Boelens (2011). This was also in compliance with findings from interviews and reports, where, for example, the energy transition expert from the municipality mentioned that it would be desirable that the entire heating network infrastructure would be characterized by bottom up initiatives on a local scale and in hands of residents. The Samen Stad Maken campaign, Participatieleidraad and the Omgevingsvisie all mention the importance of public influence and collaboration in participatory planning practice (Gemeente Utrecht, 2021; Provincie Utrecht, 2021).

The involvement of residents into planning practice could potentially increase personal affiliation and awareness towards the personal living environment environmental issues (Cilliers & Timmermans, 2014; Li et al., 2020). 3 out of 6 respondents from the interviews mention that education and open forms of communication as the first steps of participation are a good method of reaching out to residents and creating awareness on participation and more specifically, the energy transition. If citizen involvement is increased, achieving environmental goals and energy transition goals could possibly be achieved faster (Boonstra & Boelens, 2011). This could be interpreted as being in line with findings from the interview with the spatial development policy advisor, who mentions that if the energy transition would be solely characterized by bottom-up initiatives the process of the energy transition would theoretically go much faster.

Participatory planning is mentioned very often in the EPA as well, as one of its main foundations is the more efficient method of including residents into participatory planning practice (Provincie

Utrecht, 2021). The EPA and the participatory planning theme seem to go hand in hand, and highlights residential initiatives.

## 5.2 Implications from Participatory Value Evaluation and Customer Journey Model

The PVE was generally not often used in participatory practice in general and participation in the energy transition. In theory, the PVE should be a efficient tool in guiding residents through the decision making process in planning practice (Mouter et al., 2019), but results from interviews were conflicting. One respondent explained that the PVE as a tool for participation was considered, but not put into use as the municipality has numerous tools and methods for participation. The idea of the PVE as a sole method for (online) participation was dismissed. One other respondent explained that the PVE method was, in her experience, time consuming and required a lot of reading into topic beforehand. She also mentioned that the PVE was not inclusive, as people with higher amounts of knowledge on specific topics had an advantage over residents who did not obtain a certain amount of information beforehand. In the report on participation in the Regional Energy Strategies in the municipality of Utrecht, the PVE methods was used, alongside four other methods of participation (Peuchen & Bijvoet, 2020). The PVE as an online tool could very well be used for insights into the decision making process, but possibly lacks in applicability as a method for active participation.

The Customer Journey towards gas-free living model was only used in two reports (Peuchen & Bijvoet, 2020; Klösters et al., 2020), and no respondents mentioned to have used the nine-step model in participatory practice. However, as the direct use and implementation of the model was not tangible, individual elements from the Customer Journey model were applicable towards findings from interviews and reports in this research. From the interviews with the sustainability and energy transition expert and the Energy transition consultant from the municipality, similar methods between the two phases within the nine-step model of informing, decision making and executing within the three phase model were noticeable (De Koning et al., 2020). The concepts of awareness, education, orientating, opinion forming and the liveable home conditions consideration were prevalent in the energy transition towards gas free living in the municipality of Utrecht.

## 5.3 Answering the research question and sub questions

At this point, the main research question and sub question will be answered according to the findings and the implications from the information retrieved from the interviews and the policy analysis.

**“How does the Municipality of Utrecht incorporate inclusive participatory planning within the energy transition among its inhabitants in light of the upcoming Environmental and Planning act?”**

The EPA, in theory, will make the participatory process within the municipality more accessible and efficient in terms of directness and general possibilities to take part in initiatives. The theme of participation under the EPA will be that in essence, everything could be possible provided that certain conditions are met. A major prerequisite and task for the municipality is that the “yes, provided that” part for initiatives must be very clear and straightforward and again, contextuality and tailor-made approaches per initiative are necessary in combination with sufficient knowledge and experience from residents who want to participate in a specific initiative. A variety and context dependent approach in participatory methods is desirable and viewed as the best possible way of approaching participation in the municipality of Utrecht. Moreover, inclusivity in participation and inclusivity in active participation are important to notice, as the difference between these two concepts highlights the difference between considering and doing. The municipality applies various tools, online and in real life, concepts and theories in approaching residents and informing, but steps in achieving active participation could still be made. This, however, is notoriously difficult as

currently, the energy transition is not mandatory, and residents could experience hinder in home comfort and financial burdens by participating in the energy transition.

**Sub question 1: “How can inclusive participatory planning best be shaped within the municipality of Utrecht?”**

According to the results of this research, the best approach for a more inclusive participatory planning practice is to use a multitude of instruments and tools, and use customized solutions per neighbourhood or initiative. The notion of a single perfect practice for multiple and different initiatives is too far-fetched and not realistic. The importance of inclusivity within (active) participation is important, as participatory initiative need to appeal and reflect on as much possible to the population of the municipality of Utrecht.

**Sub question 2: “What is the function of public participation in the energy transition in the municipality of Utrecht and why is it important for residents and the municipality?”**

As mentioned in the last sentence of the answer to sub question 1, public participation has a higher success rate if inclusivity within participation is higher as well. A higher amount public participation in the energy transition would mean that chances could potentially increase that municipal and national environmental targets within the Regional Energy Strategy have a higher chance of being achieved faster. Moreover, public influence in the energy transition in for example, bottom up and other local initiatives could enable more affiliation and connectedness towards the energy transition and environmental awareness. Education and awareness are the first steps towards actual active participation, and if active participation could be achieved, the process of the energy transition towards gas-free living and fully sustainable production of energy could be achieved rather sooner than later.

**Sub question 3: “What are the differences between current participation policy and implications for participatory planning within the scope of the new Environmental and Planning Act within the municipality of Utrecht?”**

In terms of participatory policies by the municipality for residents, the EPA will not change that much in terms of structure for participatory methods. However, instruments are being developed that, on a qualitative basis, can test if someone who wants to participate, has enough experience and knowledge on participation as a prerequisite for taking part in participatory initiatives. The “No, but” towards “yes, provided that” principle will be more sensible going forward with the implementation of the EPA. The Samen Stad Maken campaign and the Participatieleidraad were formed well before the EPA will come into effect, as public influences in planning practice and especially the energy transition were both highly valued before and after the implementation of the EPA. Perhaps the context dependent solutions for initiatives and tailor-made solutions will be highlighted more in the EPA than before, but local character from the municipality and also in planning initiatives have always been important in energy transition developments within the municipality.

## 5.4 Main takeaways

The notion of contextual importance and a variety of method application in participatory initiatives within the energy transition could be brought forward as the most important takeaway in this research. Respondent 1, 2 and 5 all mention the importance of contextuality in initiative development, and from policy reports, the notion of customized initiatives is regarded highly (Gemeente Utrecht, 2021; TNO, 2020; Provincie Utrecht, 2021). In addition, respondent 3 mentions



that the concepts of participation and inclusivity are often misinterpreted. Participation should be seen as the total process of informing, opinion forming and active participation. Inclusivity in participation should be achieved within the energy transition, but that must also entail inclusivity in activation within the energy transition. Gaining affiliation towards the energy transition among residents who have low interest or knowledge about environmental issues or the energy transition could activate more residents in the participation process (Odekerken et al., 2012). Active participation is the essential step in actually undergoing change, but is hard to achieve due to energy poverty or other financial hardships for residents. In addition, the infringements the energy transition could within the homes of residents in terms of heating infrastructure redevelopment or other construction activities which would entail that residents would possibly need to leave their homes is hindering too.

A surprising outcome were the findings on the PVE method, which were conflicting from findings in literature and outcomes from results of interviews. Respondent 2 and 3 have had experiences with PVE, mentioned that the method was time consuming and required a lot of reading beforehand and that it was perhaps not an inclusive method. PVE could potentially reach large groups of residents and could be done in limited time (Mouter et al, 2019). Findings from the interviews however, suggest otherwise. The main outcomes of this research are visualized in a flowchart, as seen in figure 4.

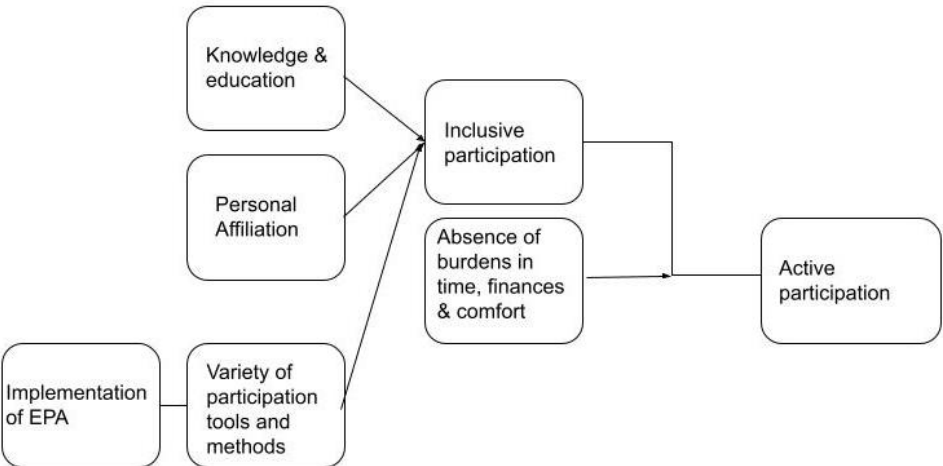


Figure 4: Participation within the energy transition flowchart (self-made image)

### 5.5 Limitations and caveats

This research is conducted with the use of policy documents analysis and with semi- structured interviews. This was deliberately chosen with the idea that the main variables of the research question were best suited for a qualitative research approach. While a qualitative approach offers good possibilities for in-depth exploration in the forms of semi-structured interviews with respondents, the amount of conducted interviews may have caused that relevant information was not completely retrieved. As a results, saturation in some topics within this research could possibly not have been reached. As an example, when respondents were asked about the PVE method or Customer Journey model, most respondents were not able to go in depth about these methods or the experiences were in contrast with findings from the literature. While this is still valuable information, possibilities in applications of these methods were now left partly unexplored. Because of the small sample size (n=6), generalizations will be difficult to be made. In addition, interviews were held with expert on sustainability, participation and the energy transition with respondents

from the municipality, environmental agencies and energy companies, but an additional residential perspective could have a given more complete image on thoughts about residential participation within the municipality.

Another possible limitation towards this research is the exclusion of geopolitical events or political orientation that may influence residents in their decision making towards the energy transition. For example, due to the limitations on natural gas supply from Russia because of the conflict in Ukraine, a potential for natural gas shortage is palpable for the European Union (Zhou et al., 2022; Halser & Paraschiv, 2022). These conditions could possibly alter the pace the energy transition process.

Moreover, as far as the Customer Journey towards gas-free living goes, the differentiation between residents who rent a house and residents who own a house was not made. Energy transition options and strategies for residents who rent homes could be different in comparison to those who own houses. As ownership of houses and other residencies differentiates, the thought process and execution phase towards gas-free living may vary because the variables of financing and home comfort infringements may vary.

### 5.6 Future recommendations

Follow up research on the topics of participation within the energy transition should consist of an elaborate look into the possibilities in active inclusive participation, strategies for reducing burdens in home comfort infringements and explore financial opportunities to include residents with lesser amount of financial means. The municipality has extensive policy strategies on how to include residents from the first part of participation, namely the education and awareness on matters within the energy transition, or any other topic within the participatory domain for that matter. Additionally, the role of geopolitical developments or political orientation in relation towards environmental issues and the energy transition among residents in the municipality would be interesting as a topic for follow up research too. Possible differences in inclusivity in active participation due to differentiating opinions, values and beliefs among residents could be valuable starting point for additional research as well.

### 5.7 Concluding remarks

To summarize, the municipality developed an extensive toolset for public participation even before the implementation of the EPA. The next challenge lies in enabling residents in more active participation and in overcoming financial and home comfort infringements. Education and knowledge are the first steps in participation, but the transition towards actual physical alteration within the direct living environment of residents leaves room for exploration. The EPA offers possibilities for residents and the municipality in togetherness with energy companies and more relevant stakeholders for a more efficient, targeted, contextual and inclusive collaboration, but the prerequisites for partaking in the (active) participation process need to be clear and concise.



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## Appendix A : Interview guide

### Semi Structured Interview – Questionnaire

Respondent : .....

Datum .....

<p>Welkom, dank u voor het deelnemen aan dit interview. Mijn naam is Alexander de Beun en ik doe voor mijn afstudeerscriptie onderzoek naar participatie en inclusiviteit in de energietransitie binnen woonwijken in de stad Utrecht. Dit interview zal ongeveer een half uur tot 40 minuten duren. Tijdens het interview kunt U te allen tijde stoppen met het interview als U dat behaagt. Ook vraag ik voor toestemming van het maken van een audio-opname van het interview, zodat ik achteraf een transcript kan maken voor data analyse. U kunt hiervoor toestemming geven middels dit informed consent formulier, waar u met het tekenen ook uw persoonlijke privacy garandeert. In de transcripten worden persoonlijke gegevens, zoals uw naam en andere informatie geanonimiseerd en na afloop van het onderzoek worden alle transcripten verwijderd. Dan kunnen we na het tekenen beginnen met het interview.</p>	
<p><b>Thema 1: vragen met betrokkenheid tot de energietransitie</b></p>	<p>Zou u uw rol kunnen omschrijven in de energietransitie in uw directe leefomgeving?</p>

	<p>Hoe kan volgens u de energietransitie zo succesvol mogelijk verlopen? Wat zijn de grootste struikelblokken waar nu tegenaan wordt gelopen?</p> <p>Zijn kleinschalige/radicale innovaties in het microklimaat (op buurtniveau) succesvol gebleken in het aanzetten tot verandering op grootschalig niveau?</p>
<p><b>Thema 2: vragen omtrent de vormgeving van participatie en inclusiviteit</b></p>	<p>Hoe worden bewoners nu bereikt?</p> <p>Hoe wordt het participatie proces nu vormgegeven?</p> <p>Is het huidige participatiebeleid nu al inclusief genoeg om alle groepen binnen de gemeenschap te betrekken? If so, how, if not, how can it be improved?</p> <p>Wordt het model van een PvE al gehanteerd? Zo ja, is dat succesvol? Zo nee, is er nagedacht tot een implementatie ervan?</p> <p>Kunt U iets vertellen over het 9-staps klantenreis model naar aardgasvrij wonen? Zo ja, heeft u daar ervaringen mee?</p> <p>Wat zijn de barrières om te kunnen participeren?</p> <p>Wat is het belang van persoonlijke affiniteit en kennis met milieuzaken en het klimaat voor de betrokkenheid van bewoners in de energietransitie?</p> <p>Zijn de personen die betrokken zijn bij de energietransitie in uw optiek op de hoogte of maken zich zorgen over de milieuproblematiek?</p>
<p><b>Thema 3: Eigen ideeën en mogelijke verbeteringen &amp; Omgevingswet?</b></p>	<p>Wat zijn uw eigen ideeën over het succesvol maken van de energietransitie?</p>



	Is in het huidig participatiebeleid de Omgevingswet een toevoeging of juist niet?
<b>Thema 4: Afsluitende vragen</b>	Heeft u zelf nog vragen of opmerkingen?

## Appendix B: Coding tree

<b>Main Codes</b>	<b>Axial Codes</b>	<b>Open Codes</b>
<b>Inclusive Participation</b>	<i>Inclusivity</i>	<p>Municipality wants to include residents as early as possible</p> <p>Appeal to the knowledge of residents</p> <p>Communication and clarity is beneficial towards public support, open forms of communication</p> <p>Informing is the first step of the participation ladder in Utrecht</p> <p>Inclusivity in participation is a goal, but questions remain about the desirability</p> <p>Inclusivity is desirable as a means for equality and social equity</p> <p>Very difficult to achieve inclusivity in participation</p> <p>Energy companies and cooperations from the public are also very important, not just the residents</p> <p>Educating residents is important. First step of participation is knowledge</p> <p>Communication and collaboration with energy companies, cooperations is essential in plan development.</p> <p>The importance of personal connections, networking, using the shared network of actors.</p> <p>Importance of education people on the energy transition</p>
<b>Inclusive Participation</b>	<i>Participation process</i>	<p>Early public participation in Utrecht</p> <p>Participation guidelines for residents and the municipality</p> <p>Ideal tools for participation do not exist, use a variety of tools and methods</p> <p>Possibilities to partake in participation are there</p> <p>Face to face approachment of people often works good for participation</p> <p>Best methods for participation are very complex, but reflection and</p>



		<p>transparency to the public are important</p> <p>People who want to participate now are required to answer if they had previously participated before</p> <p>The answer to the question of earlier participation is required but not a ground for denial in the participation process</p> <p>Decision to make previous experience in participation necessary to partake is not yet made by the counsel.</p> <p>Connecting to people personally, face to face to ask about their thoughts and opinions</p> <p>Advantages of bottom-up initiatives are the ability of shared and efficient networking</p> <p>Reaching out to those with less financial means happens more face-to-face in their direct living environments</p>
<p><b>Inclusive Participation</b></p>	<p><i>Difficulties in public support and participation</i></p>	<p>Residents have a feeling of being left out of the planning practice</p> <p>Difficulties in implementation of residential initiatives due to costs or technical difficulties, different opinions</p> <p>Normally, residents don't actively participate, and if they do, it's the usual suspects</p> <p>Participation in itself is costly, time consuming</p> <p>People are more interested in short term implications, the more long term or abstract the more people lose interest.</p> <p>Turnout for public participation in the energy transition was/is low</p> <p>Importance of people realising that participation and initiative undertaking are complex and context dependent, people need to know what they are getting themselves into</p> <p>Bureaucracy could sometimes hinder bottom-up initiatives as this can take a significant amount of time to process</p> <p>Challenges in differences between people who are interested about the topic</p> <p>Permission of residents is a deciding factor for the energy transition</p> <p>People often intertwine inclusivity and participation</p> <p>People often don't know where to start</p> <p>Information is available, but breezes past people</p> <p>Low interest loans are often possible among other options, but people could lose their overview and get 'lost'</p>

		<p>Personal connection and affiliation towards participation is determined by the burdens such as comfort or financial loads one has to endure during the process itself.</p> <p>Overvecht Neighbourhood as an example where participation is challenging because of residents with less financial means and room for decrease in comfort for participation in the energy transition</p> <p>A steady foundation is required for residents in order to partake. Otherwise residents will not participate</p> <p>When the energy transition directly has implications for your daily way of living, the methods and possibilities of participation are often more scrutinized</p>
<b>Inclusive Participation</b>	<i>Activation in participation</i>	<p>Important to let people dictate their own tempo</p> <p>Technical development in the Energy transition plays a role, but also improving higher rates in inclusivity in terms of actively participating</p> <p>Activation in the energy transition is essential, inclusivity means your personal outlook. The next step is actually participation actively in making the transition</p> <p>Inclusivity in activation is key</p> <p>Methods of achieving high rate of activation is a differentiation in approach towards people with different amounts of income.</p>
<b>Energy Transition</b>	<i>Energy transition strategies</i>	<p>Contextuality and taylor made solutions per neighbourhood are the most important thing in implementing energy transition strategies</p> <p>Proactive thinking is required</p> <p>Switch towards bottom-up character in the energy transition is required</p> <p>Municipality needs residents in the energy transition in terms of knowledge and manpower</p> <p>Connecting the 'systems world to the actual livable world'</p> <p>The transition also consists of making a relation between actors. Residents, cooperations, municipality, energy companies. Local energy initiatives also need a rethink of the relationships between those actors.</p> <p>Use of clusters to divide the municipality per neighbourhood for a contextual and taylor made solution</p> <p>Clustering of neighbourhoods was necessary to assess the status and readiness for the transition</p> <p>Managing finances, acquiring subsidies and relations with different stakeholders</p> <p>Connecting to residents on an informal way, then progressing towards more serious topics, such as the energy transition</p> <p>Start with buildings with the worst energy labels</p>
<b>Energy</b>	<i>Energy transition</i>	<p>Energy poverty, lower incomes, social problems are challenging subjects in the</p>

<p><b>Transition</b></p>	<p><i>difficulties</i></p>	<p>energy transition</p> <p>People do not have the feeling that making a switch is possible in terms of finances</p> <p>Legal issues in terms of solar-panel ownership</p> <p>A prerequisite for the energy transition is the financial possibility for residents and low living burdens.</p> <p>There are still uncertainties regarding the energy transition in terms of finances and burden-free switch for residents</p> <p>Possibilities to partake for those with less amount of financial means is still challenging</p> <p>Two main factors for making the transition: Money and Comfort</p> <p>Shortage of workers</p> <p>Currently, the switch from gas is not mandatory, but most likely will become mandatory in the future</p> <p>One of the main challenges in the energy transition is not merely the switch towards gas-free, but also the infrastructural redevelopment and technical applications that go hand in hand with the transition</p> <p>Public support varies a lot</p> <p>Affiliation towards the energy transition needs to be more represented by the community as a whole, not just specific age groups</p> <p>In the end, people would have to make sacrifices. As long as it is not mandatory, progress will always vary from neighbourhood to neighbourhood.</p> <p>Because the switch is not mandatory, people hesitate and not take a decision</p> <p>Energy poverty a main factor in the energy transition</p> <p>People have more important things on their mind than the energy transition</p> <p>Resistance against wind-turbines</p> <p>Making progress in the energy transition is often hindered because of local resistance</p> <p>People are occupied with more important things in life than making an energy transition</p> <p>Local solar initiatives are less prone from local resistance than wind-energy</p> <p>These shared initiatives likely do not reach those who experience energy poverty</p> <p>People are living from paycheck to paycheck, the sole idea of the energy transition is not on their mind, getting around financially is.</p>
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		General consensus about development in the energy transition is too far-fetched
<b>Energy Transition</b>	<i>Energy transition initiatives</i>	<p>Conditions for initiatives will vary per place</p> <p>Challenge lies in connecting the residents at the right time and on their own time. The character of the transition towards gas-free living is that it is not mandatory.</p> <p>Working together with the municipality is needed in order to financially make things work for energy cooperations and initiatives.</p> <p>Expedite Warmte as an example of collaboration between different stakeholders within the switch towards gas-free living</p> <p>Initiatives from residents where the municipality has the role of facilitator and coordinator</p> <p>Reducing Energy poverty is being investigated</p>
<b>Energy Transition</b>	<i>Energy transition structure</i>	<p>The energy transition also is an overhaul of the financial system, alongside the change of the technical system.</p> <p>Transition towards a bottom-up system, municipality has to coordinate</p> <p>Development of technical implementations on the one hand, policy development on the other hand in the energy transition</p> <p>National government wants the heat networks to be in public hands</p> <p>Changing roles, knowledge from residents is necessary in development and the municipality as a provider.</p> <p>Municipality as a supporting cast in the energy transition</p> <p>Energie U as an overarching energy cooperation within the municipality</p> <p>The heating network in hands of the residents would be ideal.</p> <p>Triangulation between residents, cooperation and companies and the municipality. Shared knowledge and education as a goal</p> <p>Decentralized methods of energy supply could transform the current net structure of energy companies. There lies an uncertainty in how this will develop over the coming years.</p> <p>If the transition would be characterized by bottom-up initiatives, the energy transition could in theory be achieved much faster.</p> <p>Importance lies in representing the whole neighbourhood in these initiatives, also for those whose voices are not heard</p> <p>Decentralized energy initiatives are feasible in theory, but need development and more capacity</p>

<p><b>Laws, Theories and methods</b></p>	<p><i>Environmental and Planning Act</i></p>	<p>Participation and EPA within the municipality of Utrecht</p> <p>EPA highlights participation AND contextuality</p> <p>In regards to the EPA, Utrecht already had a participation policy as per the wishes of the national government.</p> <p>For certain participation initiatives, experience in participation should be required in light of the new EPA</p> <p>The municipality will most likely assess the experience and quality of earlier participation of residents who want to develop initiatives for specific plans.</p> <p>Difficult to assess if someone has enough experience or not</p> <p>Municipality is developing an instrument where on a qualitative basis, someone has sufficient knowledge and experience to participate.</p> <p>Transition from 'No, but' to 'yes, provided that' needs a very clear 'provided that' section.</p> <p>The implications from the EPA are not meant as a controlling organ for participation, but a symbiotic way of achieving the best forms of participation and end results</p> <p>The requirements within the 'yes, provided that' will vary per initiative</p> <p>The new EPA will mostly involve a change in attitude towards participation</p> <p>Steps to be taken in laws and regulation within the implementation and interpretation of the EPA</p>
<p><b>Laws, Theories and methods</b></p>	<p><i>Participatory Value Evaluation</i></p>	<p>PVE is not implemented, but considered among a variety of options</p> <p>The municipality of Utrecht has its own vision on methods of participation, PVE could not be answer to everything.</p> <p>Residents in the drivers seat, ability to distribute resources like the PVE model</p> <p>PVE as a pilot in gas-free applications has been tested, but was not considered an inclusive tool or method</p> <p>PVE was required to read a lot beforehand, not time efficient</p> <p>PVE is more one-sided</p> <p>No experience with PVE</p> <p>PVE was not considered</p>
<p><b>Laws, Theories and methods</b></p>	<p><i>Customer Journey towards gas free living</i></p>	<p>Recent geopolitical developments has created more will among inhabitants to switch from gas to renewable sources</p> <p>People tend to have more affiliation towards the transition if the energy source is from somewhere surprising or has a personal connection.</p>

		Customer Journey was not considered as a concept
<b>Stakeholders</b>	<i>Reaching out to residents</i>	<p>Mix between online and in real life as the best method for participation</p> <p>Mix between real life conversations and online participation</p> <p>Combination of methods yields the best results</p> <p>Some methods are more useful in other neighbourhoods, combinations and taylor-made solutions are needed</p> <p>Useful tool for educating and awareness is short interviews or just asking people on the street</p> <p>Communication towards residents and informing is important for relationships and education.</p> <p>Reaching out to people usually is in the public space, with face to face interaction</p>
<b>Stakeholders</b>	<i>Importance of residents in participation</i>	<p>Public influence could be useful to strengthen plans within the energy transition.</p> <p>Public support as an end to the means of participation.</p>
<b>Stakeholders</b>	<i>Role of energy companies and cooperations</i>	<p>Energy companies have a goal of maximizing profits and a secondary effect of limiting CO2 emissions</p> <p>Energy company works together with residents, cooperations and also supports local initiatives in developing the heating network.</p> <p>Mutual benefit between energy companies and residents in terms of finances if the heating network functions properly</p> <p>Energy companies need the representatives within the neighbourhoods to connect personally with residents who have a language barrier or a different barrier connecting them to the energy transistion</p>