



# A Mismatch in Future Narratives? A Comparative Analysis Between Energy Futures in Policy and of Citizens

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In the Netherlands, one of the goals of the energy transition is to expand the energy neutrality of houses up to 1.5 million houses until 2030. Citizens are expected to play an important role in this process, but the implementation is hampering, as citizens do not take up this role, for example, installing solar panels. Policy documents tend to anticipate futures changes from an economic rationale, which tends to align more clearly with the anticipated futures of higher educated, financially wealthy households. So, in a broader perspective, it is unclear how the future desires and expectations of citizens are represented in policy. Often, policies focus on the implementation of best-practices, in contrast, this study investigated in the potential mismatches between futures of citizens and environmental policies. As (policy) narratives of the future are performative, excluding certain stakeholders' perceptions might lead to energy injustice and could jeopardize the implementation of the energy transition. Indeed, expectations and desires of citizens seem not to be considered as they are based on different rationales (e.g., clean, green, safe living environment). This paper aims to analyse the future "narrative mismatches" (Ottinger, 2017) in the context of the energy transition in the Netherlands. Therefore, we combine a futures perspective, which distinguishes between expected, desired, and strategic future; and an energy justice perspective as we want to analyse how different issues of energy justice are recognized in these future narratives. Our research question is "How do policy future narratives on energy relate to future narratives that are important to citizens' everyday life in the Netherlands?" A narrative approach had been chosen to conduct a comparative analysis between a set of policy documents and the narratives of 30 local citizens. We identified several future narrative mismatches, which can be distinguished in two main types: (1) opposing mismatches, where policy narratives and narratives of citizens anticipate antagonistic futures, and (2) disconnected mismatches, where the mismatch emerges because narratives do not engage with each other and focus on different issues. These mismatches of anticipated futures might create challenges for the implementation of the energy transition characterized by just decision-making and a fair distribution of burdens and benefits.

**Keywords:** futures, energy, energy justice, narratives, policy, citizens

## INTRODUCTION

In the Netherlands, one of the goals of the energy transition is to increase the number of energy-neutral houses up to 1.5 million houses by 2030 and to have a full carbon-neutral system in the built environment by 2050 (Rijksoverheid, 2018). Although at first the impression might suggest that the energy transition is designable and straightforward in its implementation, the energy transition is initiated and influenced by a complex and messy combination of contradicting visions and ideas of the future. This shows in the hampering implementation of the policy of the energy transition in built environment in the Netherlands. The implementation has been difficult so far (Netherlands Court of Audit, 2020). The policies guiding this societal transformation are dominated by the expected and desired futures of policymakers. However, because adjustments in houses are needed, active involvement of citizens in the energy transition process is crucial. Citizens have different images and ideas of the future related to energy than policymakers (see Skjølsvold, 2014). These images might overlap, contradict, be ambiguous, oppose or affirm (Voros, 2003; Malone et al., 2017). Although it has been stressed that all actors are necessary to participate in the energy transition, in practice, this seems not to go easily, as not all citizens show interest or have the capability to participate. Therefore, it remains questionable whose futures are acknowledged and taken into account in the policies guiding energy transition processes and whether this will be a just process.

Narratives of citizens and other peripheral actors in the policy making process circulate less and hence, they will not, or barely, be taken into consideration. Yet, narratives, or stories, play a pivotal role in the process of creating energy futures, being the bridge between the past, the present, and the future (Holmes, 2009), also in the energy transition (Janda and Topouzi, 2015). Stories about the future are constitutive or performative (Borup et al., 2006) in the sense that they constrain and/or expand the range of possible futures while closing down others (Veenman, 2013; Beckert and Bronk, 2018). Soutar and Mitchell (2018) emphasize the importance of who is telling the narratives within the energy transition (p. 134): “the development of narratives of engagement is increasingly important for actors seeking to describe and prescribe futures in which they play key roles.” Currently, the stories that matter in the creation of energy futures are mostly told by policymakers, front-line activists, scientists, and other highly educated.

This could lead to energy injustice, namely that not all citizens participate and, hence, can be provided with “safe, affordable, and sustainable energy” (McCauley et al., 2013, p. 1). Our thinking about energy justice is inspired by Bouzarovski and Petrova (2015) in three ways. First, they stress the importance of thinking in terms of energy services (e.g., cooking, washing, heating, cleaning). If citizens are deprived of these domestic energy services, they are prevented from participating in societal lifestyles, customs, and activities (Buzar, 2007). Second, they stress the importance of probabilistic energy vulnerability thinking. Households that are currently not considered to be energy service poor can become energy service poor in the future, and vice versa. Third, Walker and Day (2012) and Bouzarovski

and Petrova (2015) argue that several factors influence whether households become energy service poor: low household income, high energy prices, energy efficiency, social practices of energy use, institutional factors, energy needs [e.g., elderly having a higher energy demand, (remaining) increase of persons working from home due to COVID-19]. Due to rising pricing of energy and governmental taxes to stimulate households to become self-sufficient, there is a group in society who cannot afford to make these investments, or are not the one in charge of making the investment, and pay literally the price of the energy transition.

The aim of this exploratory paper is to map future narratives of citizens and to analyse whether there are, what Ottinger (2017) calls, “narrative mismatches” between citizens and policy. These mismatches might create challenges in the implementation of a just energy transition, which may jeopardize the success of the energy transition in general. In contrast with most studies (DeCarolis et al., 2017; Woolcock, 2018; Blake et al., 2020) that focus on best-practices of environmental policies where the future narratives of citizens meet the futures described in policies, this study focusses on the mismatches between futures narratives of citizens and as described in policies. In situations of narrative mismatch, citizens may be “unable to mobilize information that could help to demonstrate the harms they suffer” (Ottinger, 2017, p. 42). Where Ottinger focuses particularly on the stories that give meaning to data, analyzing policy and communities, and stresses the importance of a further hermeneutic focus, and so this paper focuses on the future narratives expressed in policy documents and by citizens. We will analyse how both policy and citizens imagine and anticipate futures within the lived environment and related to energy transition processes, and how issues of energy justice are reflected in these future narratives. As a case study, we take the Netherlands. The Netherlands introduced a new governance structure called the Regional Energy Structure (RES), to lawfully include citizens through participation within the energy transition. This RES structure is built to downscale national policies and help municipalities to facilitate a custom neighborhood approach, specifically made for its inhabitants. Our corresponding research question is “*How do policy future narratives on energy relate to future narratives that are important to citizens’ everyday life in the Netherlands?*”

This paper adds to the literature on futures and climate justice. In the literature on energy and futures, which is large and diverse, the focus is on different national socio-technical imaginaries (Jasanoff and Kim, 2013; Burke and Stephens, 2018), regional visions (Levenda et al., 2019), the use of scenarios (see for example Grunwald, 2011), etc. These are mainly policy futures, aiming to “making futures” (Inayatullah, 1993). In this paper, we are investigating the “use of futures” (Miller, 2012): future that are anticipated in future narratives (of citizens). This will be more elaborated in section Materials and Methods. The literature on energy justice focuses on the intersection between energy demands and poverty in different international case studies (e.g., Chester and Morris, 2011; Harrison and Popke, 2011; Petrova et al., 2013); the injustices arising from a globalized energy system (Sovacool et al., 2017), and conceptual contributions that combine insights from social justice and environmental justice (Walker and Day, 2012; Jenkins, 2018). In this paper, we do

not analyse the unequal access to energy services by vulnerable groups, but focus on how issues of justice are anticipated in future narratives, which might eventually contribute to understanding the emergence of energy injustice. Although lots have been written on energy futures (see for example Heinonen et al., 2017; Ruotsalainen et al., 2017; Huh et al., 2019), also in combination with justice (Sovacool et al., 2019; Williams and Doyon, 2020), not often an explicit link between the two bodies of literature is made. This paper contributes to filling this gap by explicitly connecting these two strands of literature.

To answer the research question, section Materials and Methods presents the theoretical framework that is used to analyse different kinds of futures in narratives. Section Results presents the methodological choices that are made in the research. Section Discussion and Conclusion gives an overview of the most important findings and finally section 5 discusses the findings and adds concluding remarks.

## MATERIALS AND METHODS

### Futures and Recognition, Procedure, Distributive Justice

#### Futures in the Energy Transition

Futures play an important role in the daily choices we make and in the narratives we tell. Not only are we in the process of “making futures” (Inayatullah, 1993) by aiming at visions such as the Energy roadmap 2050, we are also “using futures” (Miller, 2012). Apart from investigating the different futures that are told in the energy transition, it is crucial to see which futures are anticipated, as they shape actions and choices. Referring to Selin (2008): “the future is always active, even in the most mundane of decisions, expectations, and stories about the future are not always immediately obvious or easy to discern” (p. 1886). The “use of futures” refers to anticipation literature, being described as “*work below the threshold of consciousness (...) active within the system without the system itself being aware of them.*” (Miller and Poli, 2010, p. 12). How futures are used is the focus of this paper.

Futures studies have a long tradition in systematically studying the future in a broad sense, distinguishing between expected, probable, and preferable futures (Amara, 1981; Inayatullah, 2013). In this study we take this classic categorization to identify different types of futures that are anticipated. The first category of futures studies is the expected future, presenting one image of the future. Often, the expected future can be seen as the logical result of the past. It extends past and present patterns and trends into the future, implying a smooth transition between the past, present, and the future (Nowotny, 2010). In other words, the expected future often explores a “surprise-free future” (van Asselt et al., 2010). For this approach, past-based scientific knowledge and models are considered a reliable basis for making statements about the future. In the energy transition, expected futures are, for example, anticipated within the debate on security, in which the continuity of the extraplication of foreign dependence on

energy and the turbulent international relations in the world (Groves, 2017) is assumed.

The second category is the possible future, dealing with multiple possible and plausible futures. Possible futures are often presented in a scenario study as a rich and detailed portrait of a plausible future world, or as future states of a system (Berrogi, 1997). A scenario is not an expected future but a plausible description of what *might* occur (Enserink et al., 2013). Considering possible futures, future images are never given as single scenarios, but they always come with two or more (Goodwin and Wright, 2010). Because multiple, alternative futures are considered to be possible, it is uncertain which trends develop, continue or stop, and which unexpected events might happen. In the energy transition, for example the Shared Social-Economic Pathways (SSP), which take different scenarios concerning regional rivalry, inequality, fossil-fueled development, and middle-of-the-road development into account (Riahi et al., 2017).

The third category of future studies is the preferred or desired future. In contrast to the first two approaches, expected and possible futures, the desired future favors normativeness instead of trying to be “neutral.” It aims to develop a single image of a desirable future (utopia) and, from there, to reason backward in time in order to explore how this desirable future may be achieved. Within the energy transition, this type of future was for example anticipated in the development of grassroots initiatives, who anticipated a desired future of a CO<sub>2</sub> neutral energy use in 2050 (Oteman et al., 2017).

Besides these three types of futures, over time, critical futurists (Massini, 2007; Sardar, 2010) gained more attention. Critical futures “*emphasize that images of possible futures are not neutral but represent particular desires, values, cultural assumptions and worldviews*” (van Asselt et al., 2010). They analyse futures from a normative point of view, referring to pluralistic futures (Inayatullah, 2008), and stress the importance of taking alternative futures into consideration by acknowledging different worldviews that underlie each future. These researchers stress the point that dominant visions or narratives of the future serve as a guideline for (future) action. Without leaving room for alternative future narratives, dominant narratives limit the openness and hence colonize the future (Sardar, 2010). This view stresses the argument that ignoring narratives of citizens may not only jeopardize transition processes, but may also lead to (energy) injustice and vulnerability (Gupta et al., 2019, p. 30).

#### Energy Justice in Future Narratives

The literature on energy justice has the potential to advance the debate in critical futures and *vice versa*. Both focus on issues of injustice: the critical futurists stress the importance of considering alternative futures (e.g., of marginalized groups), and the literature on energy justice analyses how citizens might have an unequal access to energy services by analyzing three different dimensions: Justice of recognition, procedural, and distributive justice (Walker and Day, 2012; Jenkins et al., 2016). We analyse the three justice dimensions not in a classical manner (i.e., evaluating cases in terms of energy justice), but focus on how issues of justice are recognized in future narratives.

First, recognition justice focuses on (mis)recognition of or (dis)respect for particular *groups* (e.g., elderly, low-income households, ethnical minorities, gender, etc.) (Walker, 2012). Recognition justice acknowledges the rights, needs, desires of particular (vulnerable) groups (Walker and Day, 2012). For example, elderly or people suffering from illnesses might have a different demand for energy services, such as heating, than younger or healthy people. Similarly, low-income households or households with lower-level education might have different capacities to contribute to the energy transition. Whereas, wealthier households may have the financial capacities to invest in low-emission technology, low-income households might already have a smaller CO<sub>2</sub>-footprint (see Lévy et al., 2019 for an analysis in Belgium), because they already adapted their behavior due to limited financial resources. That means groups are contributing differently to the problem (CO<sub>2</sub>-emissions) but have also different capacities to change their behavior. Recognition justice stresses that social differences exist and are attached to both privilege and oppression. Hence, similar to the critical futures position, it calls for an acknowledgment of the divergent perspectives, aims, desires, and expectations present within a community. Stakeholders that are not even recognized to be affected cannot stress their concerns, hence their perspectives are unlikely to be considered during policy formulation and implementation (Young, 2000; Walker, 2019).

Second, procedural justice, in turn, evaluates the fairness of *decision-making process* (Walker and Day, 2012), focusing on the availability of appropriate, sufficient, and accurate information for all participants; the access to legal processes of appeal; and the extent that different participants' opinions, suggestions, and concerns are considered in the decision-making process (Walker, 2012; Simcock, 2016). Different forms of public participation can be distinguished based on the influence of the participants. Reed et al. (2018) distinguish a communication mode, which is a one-way flow of information from public authorities to stakeholders; a consultation mode, where stakeholder provide feedback to the plans of public authorities, and finally a co-productive mode, where goals and outcomes are jointly formulated. Procedural justice is closely linked to recognition justice (see also Simcock, 2016, see Schlosberg, 2001 for a discussion). A lack of recognition, or misrecognition (for example of different energy needs within a community) is considered to be part of the reason for unjust procedures and unjust distribution of burdens and benefits (see distributive justice below) (Young, 1990; Schlosberg, 2001; Miller, 2003).

Third, distributive justice describes the allocation, or fair distribution of, (future) *burdens and benefits*, stressing the importance to consider interacting distributional inequalities when talking about energy related justice (Walker, 2012; Walker and Day, 2012) and focusing on the re-distribution to minimize these negative consequences, for example, through subsidies (Jenkins et al., 2016). In the context of energy, distributive justice focuses often on the unequal distribution of the access to energy services, e.g., heating or cooling (Jenkins et al., 2016), the increased costs due to the energy transition (Jenkins et al., 2016), loss of jobs, nuisance during the (re)construction processes, or caused by new energy sources, e.g., windmills

or heat pumps, etc. The distribution of burdens and benefits takes place on different levels: between communities or within communities, or for example, between different socio-economic or demographic groups.

## Methods

### Narrative Approach

In this exploratory paper, a narrative approach had been chosen to conduct a comparative analysis between a set of policy documents and the narratives of local citizens. Concerning the former, stories reflect discourses: “ensembles of ideas, concepts, and categories through which meaning is given to social and physical phenomena, and which is produced and reproduced through an identifiable set of practices” (Hajer, 1997, p. 44). In this context, we follow Soutar and Mitchell (2018, p. 133), arguing that to analyse policy making processes, “the ‘narrative’ concept offers rather more scope for understanding issues of societal engagement in energy systems” and “narratives can be understood as ‘vehicles of meaning’, which help us to make sense of the world, or in this case, the energy system” (see also Szarka, 2004; Tozer and Klenk, 2018). Hence, the different narratives in policies and from citizens can be more encompassing than only the energy transition. In order to collect narratives from the perspective of local citizens, this study made use of a biographic, narrative approach. Recently, there is the recognition of knowledge filtered through individual biographies, lived experience, the “embeddedness [of knowledge] in practice” and that this has drawn academic attention to the meaning of the position of the researcher (Gawlewicz, 2016). This method is concerned with understanding the cultural environment and social worlds through personal accounts and narratives; with life history or biographical interviews covering an individual's whole life; oral history approaches concentrating on specific events or periods.

We presented our findings, i.e., the mismatches we identified between policy narratives and narratives of citizens, in a workshop with policymakers and other stakeholders from the provincial and municipal levels. This workshop enabled us to validate and fine-tune our findings to increase the internal validity.

### Studying Policy Documents

We analyzed 10 policy documents from a national, regional, and city level (see **Table 1**). Futures as described in policy documents indirectly create the framework in which citizens have to position their own futures. Our analysis included high level policy documents (like the National Climate Agreement) and more low level policy documents used for implementation (like regional and city policy documents) to understand how abstract guidelines are translated into neighborhood specific content. The comparison between these various levels of policy documents and the narratives of citizens can be made, as regardless of the source, all narratives are embedded in the same lived spaces. The policy documents were analyzed using qualitative content coding, combining both inductive and deductive approaches. The numbers in the results below are only a visualization of the qualitative interpretation of the data. By doing so, we

**TABLE 1** | Policy documents analyzed.

#	Name	Year	Scale
1	<b>Nijmegen Heating vision</b> (Dutch: Nijmegen Warmtevisie)	2018	Local
2	<b>Arnhem Programme NEMIA 2020-2030</b> (Dutch: Arnhem Programma NEMIA 2020-2030)	2020	Local
3	<b>Arnhem's approach to a neighborhood orientated energy transition</b> (Dutch: Arnhemse aanpak wijkgerichte energietransitie)	2018	Local
4	<b>Nijmegen Application for Living lab natural gas-free Dukenburg</b> (Dutch: Nijmegen Aanvraag Proeftuin aardgasvrij Dukenburg)	2018	Local
5	<b>Nijmegen Sustainability Agenda 2011-2015</b> (Dutch: Nijmegen Duurzaamheidsagenda 2011-2015)	2011	Local
6	<b>Heating vision Nijmegen, in short</b> (Dutch: Warmtevisie Nijmegen, in het kort)	2018	Local
7	<b>Gelders Energy Agreement</b> (Dutch: Gelders Energieakkoord)	2017	Regional
8	<b>Implementation Gelders Energy Agreement</b> (Dutch: Uitvoeringsplan Gelders Energieakkoord)	2016	Regional
9	<b>Energy Saving Covenant Rental Sector</b> (Dutch: Convenant Energiebesparing Huursector)	2012	National
10	<b>National Climate Agreement</b> (Dutch: Klimaatakkoord Nederland)	2019	National

built on the already established analytical dimensions in the relevant literature in futures (expected, desired, and possible future) and energy justice (recognition, procedural, distributive justice). More specification according to the different themes in which these dimensions were placed, i.e., economy, environment, social issues, politics, and technology, were based upon existing literature (Veenman et al., forthcoming; Hielscher and Kivimaa, 2019).

During the different rounds of analysis, we added *strategic futures* as an extra category to the futures dimension, describing strategic actions to achieve a certain goal, for example “*Making more private home owners realize that global warming is urgent and asks for a fast energy transition. Urgency could be increased by indicating in which neighborhoods gasnetworks are outdated and so this transition could urge itself*” (GEA, execution, p 17). In this example, the future is a strategic act, namely increasing the awareness of homeowners by informing them about the quality of the gas network, rather than an desired or expected future. The final coding scheme with explanations can be found in Annex 1 (**Supplementary Material**).

In terms of process, by means of a pre-study, an indicative coding scheme was established based on analytical dimensions from prior literature. In practice this meant a list of keywords with short description presumed to be useful. The coding took place in three rounds. In the first round, we gathered key words for each of the different dimensions (expected, desired, plausible and strategic futures, and recognition justice, procedural justice, distributive justice burdens) for autocoding in Atlas t.i. These keywords were made together with experts, both in the field of futures and justice. In the second round, we checked the autocoding and by reading text around the codes, we refined the autocoding by adding some more keywords and deleting others. These two rounds each took several joint workshops. To safeguard reliability and validity of the generated

coding scheme, the members of the coding team discussed the coding approach to align members' independently coded samples until any remaining differences in coding were resolved. Then, in the final round, each coder worked independently on checking all the auto-codes and one-by-one clarified and specified the autocoding.

### Studying Citizen Narrative in Two Neighborhoods

For the citizens' narrative, a qualitative approach was chosen to analyse the narratives of citizens. Between June and Dec 2020 we maintained walk-along interviews (on 1.5 m distance due to the current Corona-measures) with 30 inhabitants in two neighborhoods in two middle-sized cities in the province of Gelderland, the Netherlands. The two cases were chosen in agreement with the municipalities, social housing corporation, and province and the main criteria was that no intervention regarding the energy transition of the neighborhood had taken place yet. Both middle large neighborhoods have between 2,000 (Neighborhood A) and 3,000 (Neighborhood B) inhabitants. In terms of housings types, both neighborhoods have 46% of social housing, but differ in percentage of house-owners and private renting (allecijfers.nl, 2020). The average income of the inhabitants in these two neighborhoods is relatively low, between 21.000 (B) and 25.000 (A) in 2020. However, the largest age category is between 25–45 in neighborhood A, and between 45–65 in neighborhood B. The respondents were recruited by flyering in every mailbox, addressing them directly on the streets and by snowballing. We created a broad scope of men, women, older, and younger persons, persons living in rental places and those who own property, persons with high and low income, vulnerable persons and persons with a migration background. This resulted in respondents with a great variety of characteristics. This variety is based on housing situation, 12

lived in social housing and 18 owned a property themselves. Gender, as there participated 17 men and 13 women. Age, 30–39 (1 respondent), 40–49 (13 respondents), 50–59 (11 respondents), 60–79 (3 respondents), 80–99 (2 respondents). But also in terms of education and job occupations, family situations. After 30 walk-a-long interviews for the purpose of this study, to explore the most dominant futures, these 30 narratives gave a representative overview of ideas and futures alive in these two neighborhoods.

Mobile methods, especially those that are based on walking through the neighborhood research participants during either routine daily activities or during unique events (Kusenbach, 2003), have a set of advantages compared to interviews or (digital) surveys that make them particularly useful to gain insight into neighborhood-based experiences and practices of marginalized groups (Anderson, 2004). During the walk, most questions started with “could you tell me more about your experiences of being an inhabitant of this neighborhood; your relation with neighbors; why you choose this neighborhood; etc.?” This interview strategy specifically encourages respondents to tell stories. Additionally, during the walk respondents decided on the route and could walk to specific areas related to events that happened in the past and take the interviewer back in their memory. The rest of the interview developed like a dialogue between two equal persons. In contrast with the systematic analysis of the policy documents, due to the richness of the stories of the citizens, these narratives were analyzed by using our analytical concepts on futures and energy justice as sensitizing concepts to filter and interpret the empirical material (Blumer, 1969). To emphasize and contextualize the narratives, the results refer to text fragments rather than codes.

## RESULTS

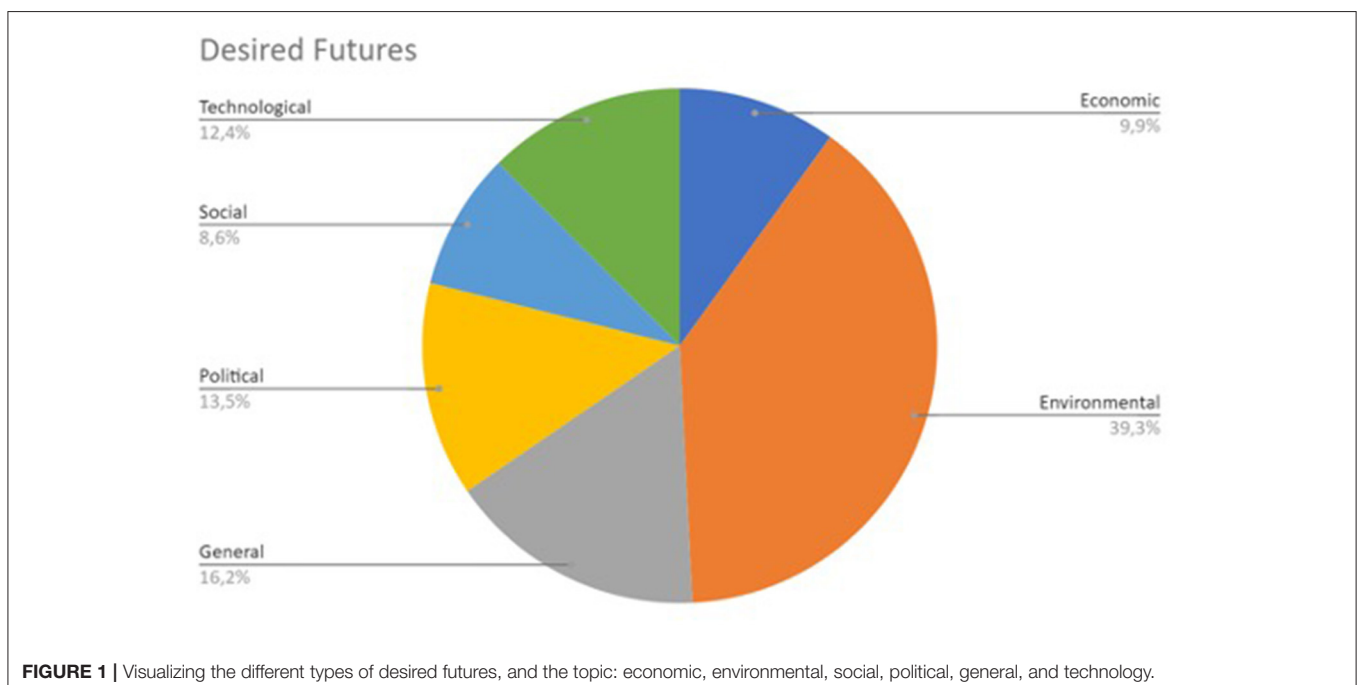
### Policy Documents

The policy documents show clear dominant narratives with considerable differences according to the desired, expected and strategic futures. Several justice issues emerge in these future narratives. Of course, the types of futures and justice issues are sometimes interrelated. Because of the small role that plausible futures played (Desired futures 832, Expected: 1.112, Plausible: 86, Strategic: 1441), this category is left out of the analysis. At the end of each analysis, a visual representation of the qualitative data is presented in a figure.

### (Un)desired Future

Analyzing the desired future within the policy documents, the dominant narrative is, not surprisingly, the environmental future (see **Figure 1**), in particular the carbon free environment in 2050: “This is one of the boundary conditions to fully generate carbon free energy in the future” (Nijmegen warmtevisie, p. 24). This goes from the local scale: “In the heat transition, the municipality council formulates a time path for neighborhoods to become gas free” (Municipality of Arnhem, 2019, p. 9), to the regional scale: “In 2050, they [business park] all have to be carbon neutral (Gelders Energie akkoord, 2017, p. 11), up to the national scale the [Dutch] cabinet has one central goal in the “Klimaatakkoord”: to reduce “greenhouse gases in the Netherlands with 49% compared to the levels of 1990.”

In this desired future narrative, issues of distributive justice are mainly discussed in terms of economic burdens: “All sectors focus on cost-efficient measurements to make sure that the energy transition is affordable for society. The transition also needs to be affordable on an individual level” (Rijksoverheid, 2018, p. 216). This is not only stressed on the national level, but also on the local



level: “Affordability and reliability for the user are prioritised. The heating transition will cost money and shall not be free. However, for Nijmegenaren (people living in Nijmegen) the energy bill needs to be affordable at all times” (Nijmegen, Warmtevisie, p. 8) and “the starting point is that every Arnhemmer can keep up with the energy transition, and that the spread of societal costs is fair and sustainable” (NEMIA, p. 9).

Energy poverty, in particular, is mostly considered as an undesirable future. Interestingly, it is only mentioned in the analyzed municipal policy documents (30 times). It is stated that “the emergence of energy poverty is undesirable” (Nijmegen, p. 8) or “The energy transition must not in any way lead to (an increase of) energy poverty and debt problems, and preferably should be used as an instrument against energy poverty” (Arnhem, p. 20). Hence, in Arnhem, a successful energy transition process is combined with social issues: “Many Arnhemmers [persons who live in Arnhem] experience energy as a fixed burden that has to be paid every month and even might lead to energy poverty. To relate energy awareness and sustainable decision-making to themes that play a role in the daily lives of citizens, like poverty, loneliness, and health, it is more likely that things will change” (Arnhem, p. 23).

### Expected Future

In the expected future, the environment is less prominently anticipated. It strikes the attention that economic and technological futures are the most anticipated: “the expectation is that in the future, innovative heat pumps will be on the market that can also efficiently heat houses,” (Nijmegen warmte visie, p. 23). This holds for all governmental levels. The narrative concerning the economic expected future addresses that the energy transition should be cost-efficient “Because just the sustainability in existing buildings requires an investment of over 20 billion euros over the coming 20 years” (Gelders Energieakkoord Uitvoeringsplan, p. III). Also at the local level the expected economic future is central: “Nijmegenaren will (...) will get the opportunity to make profitable investments” (Nijmegen Warmtevisie, p. 8). In terms of distributive justice, this suggests that the policy narrative expects that the energy transition will offer benefits for all citizens.

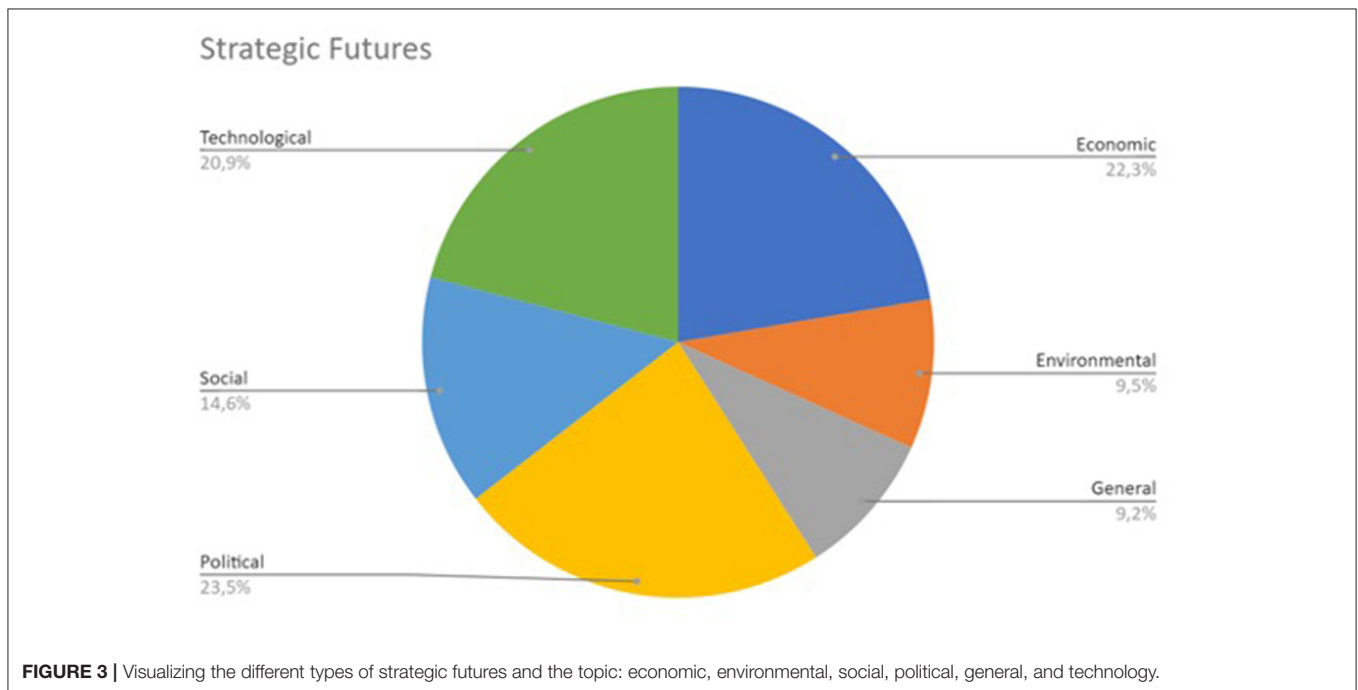
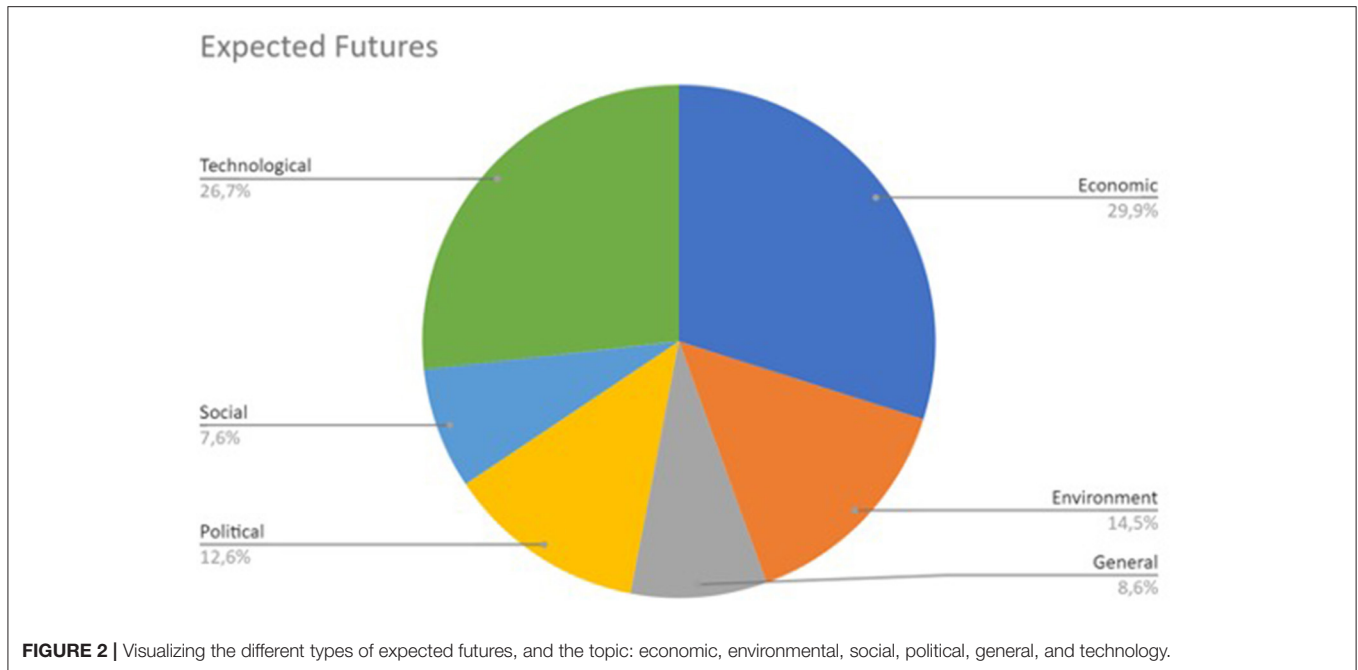
Another strong narrative is the great optimism in what technology can do for the energy transition: “a full electric public transport concession will be cost-increasing, but also significantly impact the city in terms of sustainability” (NEMIA, p. 63). There are important expectations of technology that will make the desired environmental future possible, for example: “For the neighborhoods that are planned to be gas-free before 2030, the potential energy sources and energy infrastructure should be known in 2021” (Municipality of Arnhem, Arnhem, 2019, p. 9), or “for the realization of the climate targets of 2030 and 2050, we see a great potential for wind energy at sea” (Rijksoverheid, 2018, p. 159). This technological optimism is, as a narrative, combined with an economic perspective: “Based on international agreements and developments, it could be said that a global hydrogen market will arise. The Netherlands has a good starting positioning to take a leading role in this” (Rijksoverheid, 2018, p. 91). The technological futures together with the expected economic futures cover more than half all expected futures anticipated.

Despite these optimistic aspects, the expected future narratives, particularly on the local level, also anticipate greater economic burdens for citizens on the short-term (distributive justice). On the one hand, the economic burden is related to the energy itself: “It is expected that the prices for energy and gas will increase seriously in the upcoming years” (Arnhem, p. 2). On the other hand, it is also related to the technology that has to be installed: “The costs to adjust a property is highly dependent on the type, year and if there have been previous investments, and additionally in what sense new investments could be combined with upcoming maintenance” (Nijmegen warmtevisie, p. 56).

### Strategic Future

In the strategic futures, the social futures appear as a clear narrative (Figure 3). The future success of the energy transition depends on citizens. Citizens “have to get active and need to make their homes and lifestyles more sustainable” (GEA, p. 22). Therefore, the local authorities adopt a so-called neighborhood approach: “The aim of the neighborhood approach is to enter into dialogue with the residents of all neighborhoods in Arnhem about: What residents can do themselves to save energy, generate energy and prepare their homes for transition with small and larger measures” (Arnhem AAN, p. 39). The strategic social future often goes hand in hand with the dominant environmental desired future and is visible at different scales. At the local scale the narrative is: “To prepare a city for an era without gas, it is essential to reach out to all its inhabitants and to activate them to take action” (Warmtevisie Nijmegen p.2). At the regional and national scale, it is stated for example that: “The goal is that in 2025 more than 125.000 households are a member of an energy-coöperation” (Gelders Energie akkoord, 2017, p. 13). Interestingly, these social issues that stress a central role for citizens have hardly been considered in the narratives on desired and expected futures (see Figures 1, 2). It seems that the goals were already set, in which the social aspect is barely taken into account. Social issues, i.e., the involvement of various stakeholders and particularly citizens, seem to gain importance when it comes to actually implementing the energy transition. One might say they function as a means to an end.

The strategic future does not only stress the importance of citizens, but also implies how these citizens and other stakeholders should be involved in the neighborhood approach. In this approach, the economic expected future and the environment desired future can be seen: “the energy transition is about citizens and their living environment, we involve inhabitants, both tenants and house owners, to participate in the development and realization phases” (Nijmegen warmtevisie, p. 9), “[w]e go into the neighborhoods, in which residents and other building owners are also involved” (Nijmegen warmtevisie, p. 3), or “we actively go into the neighborhoods to look for ways to save energy and find alternatives to natural gas, together with residents and businesses” (NEMIA, p. 35). The government sees itself as “a cooperating government focuses on conducting the dialogue. We take on the role of broker: facilitate, connect and share information. Together we tackle projects and enable initiatives by residents, companies and others” (NEMIA, p. 24). From a procedural justice perspective, this suggests a participatory, even



co-creative approach is envisioned in the policy documents, where citizens and local authorities cooperate on a relatively equal basis. The policy documents describe different possibilities on how to engage citizens, e.g., citizen representatives in project groups or information facilities in the neighborhoods. However, it is questionable who will be represented or who has access to these facilities. In the analyzed policy documents, it is not discussed how the governmental authorities aim to ensure an

inclusive participation procedure. It also remains unclear how injustices between neighborhoods might be compensated.

The policy documents stress the importance of involving all citizens. From a climate justice perspective, this raises the question in how far the idiosyncrasies of citizens and neighborhoods are recognized. In this regard, there are three main aspects recognized that may be different within or between neighborhoods and citizens, yet mainly on the local



level. First, the technical feasibility and economic viability to implement alternative sources of energy differs between neighborhoods. It is stated that: “the alternatives for a boiler differ in cost-efficiency per neighborhood. For this reason, we choose a neighborhood-orientation” (Nijmegen Warmtevisie, p. 9). Second, even though it is less prominently discussed, it is recognized that neighborhoods differ in their socio-cultural profile: “Inhabitants have different priorities and concerns. During the energy transition it is important to include the different wishes and opportunities of all its inhabitants, to make sure all inhabitants can go through this transition in a fair and suiting manner without unwanted consequences for their personal situation” (Arnhem AAN, p. 21). Details about the desired futures (wishes) and the opportunities (expected futures) are hence not mapped or discussed. Third, it is recognized that citizens have different capacities. For example, the limited practical capacities of tenants in comparison to property owners is recognized: “Differently from house-owners, tenants do not have the freedom to choose how their property has been made suitable for the minimum requirement of an alternative heating source. In order to give landlords and social housing corporations a perspective for action and to protect tenants against high energy costs, the standard will therefore be mandatory in 2050 for homes intended for rental” (Rijksoverheid, 2018, p. 20). Also the different financial capacities of citizens are to some degree recognized, also in combination with a danger of energy poverty: “We have an explicit focus to make this transition possible Arnhemmers who are already struggling to pay their energy bills” (NEMIA, p. 2 & see 4.1.1). Needless to say, the anticipation of the economic and environmental future leads to these issues.

## Narratives of Citizens

Our analysis showed that the policy documents stress an important role for citizens in the energy transition process in terms of dominance in the strategic future. But how do citizens themselves experience responsibilities regarding the energy transition, and which futures do they anticipate?

### (Un)desired Future: Quality of the Neighborhood

An issue that mobilizes people is a (un)desired future concerning the comfort of the neighborhood. The serious concerns of people we spoke to became explicitly clear when we asked them what they would wish for the future. We walked with a lady, Susan, a middle aged woman living in social housing for almost 20 years as due to her circumstances she is not able to work. She takes care of a dog walking place and who feels responsible for the neighborhood. Due to various events in the past, she is not able to have a paid job any longer, but is very keen in investing her time in taking care of the neighborhood. As she walks her dogs twice a day and loves to be outdoors and get a fresh breath and some exercising, she knows exactly what is happening at every corner of the neighborhood. She speaks about the physical deterioration, or waste dumping, that becomes increasingly visible in the area, particularly in the streets with rental housing.

*Those [people living in rental houses] let the gardens run wild. The stones are all loose. They put pieces of wood outside the garden and leave it there. Will come once, but that will never come. So all those*

*children are going to carry it around. Are they going to make huts, and then you already have that rubbish lying among the bushes again. All of that sort of thing -Susan.*

The quote shows that she does not expect for physical deterioration to be improved soon or that this trend will change “Will come once, but that will never come.” Living in the same neighborhood, almost everyone who walked with us shared their serious concerns regarding various aspects of deterioration of the area, an undesired future. Truus, an older lady of 80 years old who already lived in this neighborhood over 40 years in the property she bought together with her husband. Her husband died years ago, and now she has to manage live on her own. She addressed how this deterioration of the neighborhoods affects her quality of life in a negative manner:

*Look at that neighbor. Look, I'm not going to ring the bell, he's only been living for 5 years. Apparently he thinks it's okay now. But I don't like it. I'm just tired of those leaves, that rubbish now and then. If I'm going to sell my house in a couple of years from now then someone will come and see that and think I should live here now? I just want this area to be clean, not perfect. But actually, I am just going to lose my enjoyment of living. I no longer enjoy living here because of the maintenance. - Truus*

The neighborhood where they are living is especially known due to its green and organic structure, in Dutch known as Cauliflower neighborhood. This also came to the fore during a walk with David. Wessel is 30 years old and works as a social worker elsewhere in the region. He lives in a flat he bought a couple of years ago, which is was former property of a social housing corporation:

*However, because I love nature a lot, I do think that a lot of waste is dumped when I look around me like that. That is one of the areas for improvement in the neighborhood. This too (pointing at bushes): There are more trees here and there is more nature here, but if you look around you... Look, there is already a bicycle there. -David*

### (Un)desired Future and the Energy Transition

In one of the neighborhoods, the social housing corporation redesigned a property into a carbon neutral house to create an example within the vulnerable neighborhood, not only to reach goals set in the Climate Agreement, but also to create social support and make citizens familiar with the energy transition.

*Antje: You do have a house here. That also applies to social housing corporations. Energy neutral, I thought. It also has panels on it. And one street away from me, (...) there is a house that has been completely transformed. It's completely off the grid. Energy neutral, home of the future. That house has been empty for 1.5 or 2 years, because nobody wanted it. It was only available for a family, with 2 children. It was not allowed to use a TV upstairs. well you know, there were a number of requirements you had to meet.*

*Interviewer: And those requirements were because it was energy neutral?*

*Antje: Yes. because they wanted to do tests there every so often, because you had to be open that people from the contractors came to do tests.*

*Interviewer: So was that a popular house then?*

*Antje: No. Actually not, no.*

One would assume that this house would be popular among citizens with financial concerns, as the family living in this house would not have energy bills. However, according to Antje her experience, this house was not very popular among persons looking for rental housing. Antje is a middle aged single women, living in a social housing property herself as well. She lives from social payments, but in return she is highly engaged with everything that happens in and around the neighborhood. What becomes clear from this fragment is that the energy transition is not in the attention scope of citizens. The fact that living in this house required a behavioral change, which they are not ready for yet, made people preferring to live in houses linking to their perception of living comfort and higher bills.

### Strategic Future: Responsibility

The undesired physical surroundings were, according to these people, caused by undesired behavior. Some see this as an individual responsibility, while others consider the responsibility to keep the neighborhood clean as a collective responsibility. Regarding the first, parents are appointed to teach their children, like Susan:

*Because I don't want it to deteriorate so much. And look at my children, my son, he was in my car once and threw out a stick from a lollipop. Well, I put on the brakes, I went back, clean up! That's how I raised my children. Now those kids who drink, huppakee, they throw everything down like that - Susan*

Some used to have a very active social role, and prefer to share responsibilities within the neighborhood together. For example Willem, a retired men, who lived for 40 years in his neighborhood. For a very long time, he was one of the board members of the neighborhood association. Not driven by frustration, but driven by the idea that the quality of living:

*I was able to buy a house very cheaply, so I always only needed part-time jobs for 60% and 80%. (...) That also left me free time, I was very active in the neighborhood in all possible ways; the entire redevelopment of the residential area is kind of done by me. These posts that are here, they would already have been removed ten times and every time I held it back, because cars need to be here, you understand that. - Willem*

There is also a downside of being one of the initiators within the neighborhood. Over time, it became clear that not everyone was always happy with Willem's good intentions. The first 20 years when he lived there, there were no parking lots and everyone just parked wherever there was free space. For example, as a result of his advocacy, inhabitants must apply for a parking permit at the municipality. Loes, a woman in her forties living in social housing and living now for 4 years in the same neighborhood as Willem, stressed the issues with the parking permits three times during our walk.

*Well, it's a big annoyance, I yet need to write another letter. Look, here you can park freely, but the part where I live is mainly for permit holders... But if you walk around, I do that a lot, four times a day, I see that there is always space at license holder places, so I don't understand why those licenses are not issued. - Loes*

Moreover, it seems that the ones who take responsibility also carry burdens to create the desired future, in this case a comfortable living environment. Nevertheless, they are afraid these burdens will continue in the future:

*But I have always thought in the interests of the neighborhood, for the great future ahead.... Then there was a meeting in my living room, but then there were neighbors who said: yes, there should be more trees in my street, but not in front of my window. Better lamp posts need to be made, but I don't want them to shine into me. There needs to be an extra barrier, but I don't want that in front of my door. (...). I had a dumpster right in front of my house for years, the new threshold has come right in front of my house, a lamppost shines into my living room. So I was the victim of everything (...). Then I pay the price, I have often worked very against my own interest, I took that with me.- Willem*

Due to feeling collectively responsible for his living environment and being willing to pay the price and mostly deal with the burdens, and where others had the benefits of his work. The burden might go as far that life itself gets difficulties losing your job:

*Sometimes you have gotten so much on your plate that you yourself go under. Because then you are busy with so many things. I'm even busier with volunteering than with my boss. - Susan*

### Strategic Future and Energy Transition

When walking with Fred, a single man in his early forties, living at the edge of the neighborhood, close to a park. Before he bought this house, he lived in various other properties in this same neighborhood or close by. He expressed his concerns regarding locals being part of the decision making regarding certain choices. As he lives on the edge between two neighborhoods, he observed a difference:

*Yes, but you can also see in neighborhoods such as [name neighborhood], you know, there it is all fine. And people are aware, and you see in such neighborhoods that those neighborhood initiatives in the field of energy transition simply arise by themselves. But in the more working-class neighborhoods, things go completely wrong. - Fred*

Living on the wealthy side, he initiated a local green initiative, which succeeded. Over coffee the idea arose, with two neighbors, to set up a new facebook group for green initiatives. Within this initiative they tried to stimulate action to isolate their properties, instal solar panels etc. Their underlying idea was that early adopters with successful stories inspired others in the neighborhood to follow.

## Expected Future Responsibility

As stated above, the expected future finds its origin in the undesired futures: the people do not expect their neighborhood to change. Their expected future, therefore, is a continuation of waste dump and lack of appreciation of green areas.

Two interrelated particular aspects of the expected future play a role in relation to justice. The first is linked to procedural justice and the willingness for citizens to take responsibility. The second is linked to recognition of justice and the fact that citizens do not feel heard or seen by the municipality. When they are taking their responsibility, they feel the municipality does not keep her promise:

*And then I say, we can also collect the rubbish ourselves, and the municipality has to come and take it away. Well 'no,no, I am not going to do that, because you know beforehand that the municipality is not coming' -Antje*

Also later in the conversation, Antje tells us that they created a dog walking area and social meeting place in the neighborhood, but that had taken over 4 years, because they had to wait for responses from the municipality several times, which leads to distrust.

Furthermore, governmental institutions put a responsibility on the shoulders of citizens that come up with good ideas to improve the quality of the neighborhood. In the example used here, it took seven years to realize a dog playing field. The engaged citizens had a long breath and did not give up. After a while, conflicts emerged with their fellow neighbors. Like Antje, who is one of the volunteers appointed by the municipality to maintain the dog place:

*Antje: Let me put it this way. we run the dog playground for 3 years. And in those 3 years we have been attacked, cursed, spat on by residents who disagree.*

*Interviewer: Because due to the key [of the fenced dog playground]; you are also the contact person for and from the municipality to maintain it?*

*Antje: Yes. Well it is because the dog playground is located in the middle of the neighborhood. you are restricted by certain rules.*

*Interviewer: is that also to prevent it from becoming a hangout?*

*Antje: Yes. Also. But also for nuisance.*

This example shows that local governments do not fully realize that giving inhabitants a key to a public space also causes serious social burdens. The transferred responsibilities of local governments toward inhabitants put pressure on the role of the inhabitants, who could be considered as privileged by other neighbors. The citation above even stresses how this one key is a reason for intimidating behavior between citizens in one neighborhood, in this case against those who have the key.

## Expected Futures and the Energy Transition

When looking at energy transition processes, the economic expected futures play a role. Flat owner David expressed:

*Last week I was approached by the municipality with the message that they want to generate electricity locally. But it doesn't make*

*that much difference at all. I am still cheaper with my current energy supplier. That is also GreenChoice. That is not local, but relatively green electricity. On that part I choose eggs for money, because it shouldn't cost me more and more.- David*

As already became clear throughout earlier stories, David makes choices anticipating an economic expected future. He is really well-known about the nuts and bolts of his current situation, and financial aspects are frequently the main condition to change or remain a situation.

The technical future was mainly negatively anticipated in these efforts by the citizens in their stories. House owners are sometimes interested in improving their property with technical measurements. They attended (online) information evenings, replied to flyers, made phone calls with for example solar panel companies and even made serious calculations about the costs and benefits. Rogier lives with his family in a large municipal monument that he bought a couple of years ago. He knew the house was for sale, but also in poor maintenance conditions, as his brother and his wife are their neighbors. For technological development, the limitations are stressed rather than the potential. Rogier stresses for example:

*There are hundreds of people who advertise, such as IKEA and the energy companies, who even want to rent out solar panels to you so that you don't have to make a big investment all at once. I think: bring it on, I will calculate what the benefit is for me and whether that actually makes sense. Where is it going now? I don't have a standard house. 'Ah, it's a monument. We will not start on that. 'I'll figure it out, I'll apply for that permit.' 'Okay. What kind of roof do you have? Oh, you have a cold insulated roof, we're not getting into that. The angle, not standard. If you had had a tiled or flat roof, it would have been fine. 'It's all 'desk so much' again. So as long as it's all standard... - Rogier*

Other people anticipated different expected futures. When speaking to Arnold, a man in his forties living in social housing, in the past he also had been approached to switch energy providers. In case he would switch to this provider, he got a sports shirt of his favorite football team for free, which made him switch. He was very happy in the beginning (also with the bills), though, after a couple of months when they recalculated his consumption, he had to additionally pay almost 1/3 of the original amount while he did nothing different than before. The next year, as soon as he could, he switched back to his previous energy provider and told me that he would never ever switch again due to this experience.

## DISCUSSION AND CONCLUSION

The aim of this exploratory paper was to analyze and compare the future narratives in Dutch energy policy with the future narratives of citizens affected by the energy transition to identify potential mismatches, particularly with regards to how issues of justice were considered in these narratives. We identified two forms of mismatches: (1) opposing mismatches, where policy narratives and narratives of citizens anticipate antagonistic futures, and (2) disconnected mismatches, where the mismatch emerges because narratives do not engage with each other and

focus on different issues. It should be taken into account that these are the *dominant* mismatches. The variety of narratives within communities are much more diverse and detailed than what can be covered in this paper. Hence, we identified several main mismatches (see **Table 2**) that could potentially contribute to hampering the implementation of the energy transition. These mismatches of anticipated futures are linked to justice issues. In the future, these mismatches might lead to negatively experienced consequences on both an individual as well collective level.

With regards to desired future, policy narratives focus strongly and optimistically on achieving national carbon neutrality until 2050, however, this narrative disconnects with future desires represented in citizens' narratives. Citizens' desires are more localized in scale, and broader and more comprehensive in scope, namely creating comfortable living environments (clean, green, safe). Opposing narrative can be seen according to the type of future: citizens' narratives appear to be more pessimistic, preventing undesired futures such as waste dump, less green, etc., then policy narratives, which are optimistic with a clear desire, carbon neutrality. Disconnected is the narrative on the content of the undesired futures. The undesired future represented in policy narratives on the municipal level is to prevent that the energy transition causes economic burdens and energy poverty for citizens. The main focus of citizens is on a clear, safe, and green living environment. This mismatch may cause issues for distributive justice in the future as citizens may experience and value the distribution of burdens and benefits in the context of the energy transition differently.

There are two, although related, opposing mismatches with regard to expected futures: policy narratives have an optimistic long-term perspective expecting that the energy transition will

produce economic benefits due to cheaper energy sources, and that technological development will take place in the future that will enable/facilitate the energy transition. However, citizens do not expect that technological development will enable the energy transition as they are faced in their daily practices with the difficulties of implementing low-carbon measures. Similarly, they sometimes also expect an extra economic burden of investing in low-carbon energy sources. Hence, policy future narratives and citizens' future narratives show an opposing mismatch when it comes to the expected distribution of burdens and benefits, which may lead to distributive justice issues in the future. This opposing mismatch is critical as citizens are clearly recognized in policy narratives as an essential actor and driver to implement the energy transition. Hence, most citizens anticipate different desired and expected futures and hence, consider different potential long-term benefits.

According to the strategic future, we see an important and active role of *individual* citizens in the policy document. The motivation of the citizens derives from a translation of the policy goals (carbon neutral, cost efficient). In other words, citizens are expected to participate because they too want to reach these goals. However, although citizens' might take individual responsibility (e.g., changing their everyday lifestyles or implementing carbon low technology), yet striving for another desired future, a clean and safe neighborhood. Carbon neutrality is not a dominant issue that comes to the fore in the citizens' narratives. Policy does not present a narrative that clearly links the energy transition to the desired future narratives of neighborhoods. However, as became clear in the narrative regarding the dog walking place, this transferred responsibility of local governments toward the shoulders of active citizens negatively affects the position of

**TABLE 2** | Overview of mismatches between future narratives in policy and citizens.

Anticipated future	Narrative mismatch	Policy narratives	Citizens' narrative
(Un)desired	Disconnected (issues of distributive justice)	Carbon neutrality, cost efficient (national-wide, specific)	Focus is broader on neighborhood as a whole (localized, broad-comprehensive)
	Disconnected (issues of distributive justice)	Preventing economic burdens and energy poverty (local)	Creating clean, safe, and green living environment
	Opposing (issues of recognition justice)	Focus dominantly on desired futures (optimistic)	Focus dominantly on undesired futures (pessimistic)
Expected	Opposing	Technologic (mainly optimistic, long-term)	Technologic and economic (pessimistic, short-term)
	Opposing (issues of distributive justice)	Economical benefits	Economic benefits and burdens, no changes in the neighborhood concerning waste dump and green. Fear of conflict
Strategic	Disconnected (issues of recognition justice)	Individually: Direct translation of abstract goals to individual goals (economic, environmental)	Individually: Responsibility for their desired future (clean/green local environment)
	Opposing (issues of procedural justice)	Collective: neighborhood approach: active participatory and co-creative with citizens	Collective: citizens fear conflict when they take the lead in collective approaches (expected future) Citizens hesitate to trust governmental institutions in being supportive to facilitate local initiatives (expected future).

these citizens within the neighborhood, which may cause issues with regards to procedural justice or recognition justice as active citizens might be disrespected within their own community.

Another opposing mismatch in strategic futures is at the collective level. The policy documents argue that a collective neighborhood approach should be adopted to implement the energy transition. This approach should be based on participatory and co-creative decision-making. However, this narrative is an opposing mismatch with the narratives of citizens in two ways. First, the narratives of citizens demonstrate that taking responsibilities for collective neighborhood initiatives can be a quite challenging task. Not only because the people taking the initiative feel like carrying the burden, but also because collective neighborhood approaches sometimes result in controversy or even conflict among neighbors as other neighbors do not accept how costs and benefits are distributed. Second, citizens' narratives stressed the negative experiences they had with the municipality in the past. They explained that their concerns were not taken seriously, that the procedures were bureaucratic and that it took a lot of time and energy. This decreases the willingness of citizens to lead or participate in these collective initiatives. This indicates that future issues of procedural justice in the form of non-participation might be caused by past experiences of misrecognition. In the literature on energy justice, little attention is being paid to conflicts among citizens stemming from the participatory approaches to implement the energy transition.

A final observation is that the policy documents recognize an important role for citizens in the energy transition process. Hereby, policy documents recognize that neighborhoods and citizens differ in terms of economic and cultural characteristics, however, this recognition justice remains still abstract and is—for now—hardly translated into strategic considerations. The dominant future policy narrative with its focus on economic future considers mainly the position of higher educated citizens, but does not recognize the position of lower educated citizens, socially-deprived households or households of a different cultural background. Our analysis of citizens' narratives clearly stresses the diversity and idiosyncrasy of citizens with regards to their future narratives. This diversity is not only based on statistical socio-economic characteristics (e.g., tenant/property owner, income, education), but also on their experiences in the neighborhood. From an energy justice perspective, it raises the question whether citizens have the capabilities to take on these responsibilities (see also Walker and Day, 2012).

Notably, these mismatches present analytical conclusions based on exploratory research, but focus on the dominant, broadly shared futures. That means they might be differently applicable for each (group of) citizen(s). Further research could be done to specify between (groups of) citizens and narratives, and/or at the relation between matching—and—mismatching and opposing narratives.

Theoretically, this paper combined the literature on future-making with the literature on energy justice. For future studies, the justice literature provides concrete aspects to consider when focusing on worldviews or perspectives. We observed that the policy documents apparently paid relatively little attention to

the futures anticipated by other actors in the energy transition. Critical futurists might argue that alternative futures are not considered in the policy futures. The literature on energy justice helps us to pinpoint the mismatches more clearly. For the literature on energy justice, the current justice literature tends to focus on the fairness of decision-making procedures, the fair distribution of burdens and benefits, or the respectful recognition of groups' particular idiosyncrasies, which are often analyzed in ex-post analyses paying little attention to futures. That is a missed opportunity for two main reasons. First, policies are based on particular anticipated futures. Hence, excluding certain groups' future narratives increases the danger of reproducing injustices. Not acknowledging or (mis)recognizing alternative expected and desired futures of vulnerable groups may contribute to the creation or reproduction of existing injustices (cf. critical futurists). In this paper, we have not analyzed the societal consequences of particular future narratives, hence, we cannot prove in how far the exclusion of certain citizens' future narratives actually (re)produces injustices. However, what our analysis has shown is that there are several disconnected and opposing mismatches between the future narratives in policy documents and those present among citizens.

Our analysis also indicates more practical insights for policymakers. An ex-ante evaluation of future narratives dominant in policymaking could prevent reproducing injustices in policies. This can be done by policymakers paying more attention to developing multiple future narratives on desired futures that links the individual desired futures of citizens more clearly to the energy transition. In order to do so, our method proved that (one-to-one) walk-alongs work. Attitudes are less offensive when citizens experience that they are literally seen and their voices are heard, in contrast, with digital surveys of which they are never sure what happens with the outcome. Not only can they collect citizens' futures, the walks can also improve the relationship between citizens and policy to listen and learn from each other's futures. This approach may help to integrate or the narratives, which leads to a more societal support to implement the energy transition.

## DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements. Written informed consent was obtained from the individual(s) for the publication of any potentially identifiable images or data included in this article.

## AUTHOR CONTRIBUTIONS

By using an online text editor we were able to write together and have discussions about the arguments made in this article real time and contributed all equally to this article. SV and MK raised the funding, were SH conducted the interviews. All authors contributed to the article and approved the submitted version.

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## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/frsc.2021.654162/full#supplementary-material>

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