



# dialogues

Energy citizenship  
for a sustainable future

## 5.4

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## 1. Introduction

Promoting inclusive energy citizenship that allows ordinary people to take a central role in the energy transition in Europe is the main objective of the DIALOGUES project. The 8 Citizen Action Labs (CALs) conducted in seven DIALOGUES partner countries – Bulgaria, Germany, Greece, Italy, Norway, Switzerland and Türkiye – were intended as open, innovative spaces that motivate, encourage and inspire novel reflections and practices related to energy. The analysis of the CALs allows for the identification of pathways toward deepening ‘energy citizenship’. Citizenship, in DIALOGUES CALs, is understood as a practice that, in the broadest sense of the word, implies a wide array of actions undertaken by people in a given society, and oriented towards social change – rather than a narrower definition of citizenship as legal membership in a state. These citizen actions could imply reductions in energy usage, or the promotion of more efficient technologies and renewable energies. The focus of this deliverable report is not to define energy citizenship, which has been done elsewhere in the DIALOGUES project<sup>1</sup>, but rather to consider the different pathways through which energy citizenship as a practice can be further supported, based on insights gathered from the CALs.

Pathways are by nature forward looking and future oriented. In the CALs, past and future practices meet in the present through experimentation with energy citizenship in the now. The common feature of all CALs was the intention of engaging citizens in the energy transition. Each of the CALs defined their own format and process, targeted different themes and populations, used diverse techniques for deliberation, and engaged with participants at different scales. Some of the CALs were one day events, while others took place over several months. In some CALs, citizens were mainly invited to share their experiences and perspectives and reflect on their roles as energy citizens; in other CALs, citizens worked alongside researchers and partners towards a co-established goal related to energy citizenship through participatory processes and experimentation. While all CALs strived to ensure some degree of co-creation, in some cases this goal was not readily achievable due to contextual particularities. While alternative meanings and knowledge were acquired in some CALs, in others, novel skills and competencies were also developed. Furthermore, the CALs also took place within varying material settings and spaces, over different periods of time, and were conducted against the backdrop of diverse institutional and political settings. It is the variety of the CALs that allow us to paint a very broad picture of what supports or hinders energy citizenship pathways in Europe.

To describe the ways in which the CALs played out, we consider the different meanings, skills, material and institutional arrangements that were part of the CAL design. This practice-centered approach also allowed us to move beyond descriptions, to then reflect on

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<sup>1</sup> Task 2.1 “Research White Paper” of DIALOGUES defined how energy citizenship can be reached with distinct roles, through different pathways, and expressed in distinct forms. These differences in pathways and expressions of energy citizenship are related to individual and contextual aspects such as social, political, and material conditions (Biresselioglu et al., 2021a).

how energy citizenship practices can be further supported through pathways. Ultimately, the CALs were about bringing diverse people together; as such, in addition to practices, it is also important to focus on people and diversity in considering promising pathways. In the following sections, we first discuss the empirical-conceptual framework for uncovering pathways to citizenship, followed by an introduction to the methods and data. We then turn to findings, describing each CAL, discussing current practices and future imaginaries of energy citizenship, along with the barriers and enablers, before concluding with several promising and inter-related pathways to deepening energy citizenship.

## 2. Conceptualizing pathways to energy citizenship: from imaginaries to practices

There is an increasing call, among researchers, practitioners and policymakers alike, for new imaginaries around the energy transition. While meanings, goals and values are of course relevant, a pathway to energy citizenship must be grounded in practice. It is through the practices of experimenting with ‘energy citizenship’ that we can learn more about how this form of engagement can be further supported or hindered. In this brief conceptual introduction, we lay down the foundations for our analytical approach to assess how the DIALOGUES CALs inform on the pathways necessary for supporting energy citizenship.

According to Castoriadis (1987), each period of time has a singular way of seeing the world. Images are shaped by culture and social norms, and change emerges when new imaginaries are evoked. How such imaginaries emerge and materialize is under-theorized in his work. In Science and technology studies (STS), Jasanoff and Kim (2009) have demonstrated how socio-technical imaginaries are manifest in political decisions, investments, media discourses or degrees of inclusion of certain actors, reinforced by material and institutional arrangements. Their work suggests that, to uncover socio-technical imaginaries, more attention might be given to practices, and how any imaginary is articulated in doings and sayings. This link to practices allows us to bridge between ‘energy citizenship’ as an idea, a wish, a goal; to ‘energy citizenship’ as something that is done by people. As the aim of the DIALOGUES CALs was to experiment with energy citizenship, our analysis is based on uncovering not only the **meanings and imaginaries** that emerged through the CALs, but also how the CALs played out in practice, which involves how people interpreted different topics related to the energy transition, the **skills and competencies** they acquired or further developed in the CALs, as well as the actual **material and institutional conditions** that allowed for CALs to be deployed (i.e., see Sahakian and Wilhite 2014 for different interpretations of what makes up a social practice). We consider how meanings and imaginaries emerge as part of the practice of doing a Citizen Action Lab. We see all elements of practices as having agency, with some elements having more power over others when it comes to opportunities for change.

With this perspective, our definition of a pathway to energy citizenship is a process by which the practice of being an energy citizen is supported, involving the following components:

**meanings and imaginaries** discussed and debated in the CALs, or different understandings; **skills and competencies** that come together and are further developed in the CALs; and the **materiality** of CALs, involving such mundane matters as the possibility to meet in a given space. Because the CALs ultimately involve people – citizens, participants, hard to reach groups, etc. – we also place attention on **socio-demographic considerations**, in uncovering how some people are more able than others to practice ‘energy citizenship’. **Time** becomes an important consideration here, as do the **resources** for participating in any energy-related initiative (e.g., not necessarily financial, also cultural capital). From people, we also link to **broader institutional arrangements** that support or hinder energy citizenship.

Another feature of pathways is that they can be supported or hindered, but also that certain pathways can lead to **‘lock in effects’** – where a dominant pathway prohibits other forms of innovation to be deployed. In addition to **‘technological’ lock in**, **‘social’ and ‘material’ lock in** has also been investigated when it comes to energy usage in the home (Sahakian 2017). For energy citizenship outside of the home, we give attention to what elements within pathways can either lock-in or lock-out the most promising forms of energy citizenship. This is also a way of recognizing what (or who) has power or agency when it comes to opportunities for change.

When it comes to the meanings of energy citizenship, we also discuss the role of **feelings and emotions** that help reveal the normative dimension of energy citizenship practices: what people feel is the right or wrong way to engage. While participants in the CALs often express emotive responses to questions related to energy, we also recognize that the DIALOGUES research team carries certain **normative understandings about how to address energy issues, but also on how social change comes about**. As such, assumptions around energy citizenship and social change can inform outcomes, and we give attention in this report to the **positionality of researchers**.

### 3. Methods and data

To capture the variety of practices around energy citizenship that took place in the 8 DIALOGUES CALs and trace their potential evolution over the course of the CALs, we rely on three main sources of data: first, the cross-national survey conducted before and after citizens’ participation in the CALs; second, the data produced by the citizens themselves during the CALs, including recordings of the events (and the transcripts) and notes written by participants; third, data produced by the researchers and implementing partners after the CALs – mainly the reports of the CALs following a unified template and the reflexive interviews between researchers. In the following paragraphs, we discuss the conceptual-empirical processes behind the development of the analytical framework and data collection procedures.



Figure 1: Conceptual-empirical process for identifying pathways to energy citizenship

### 3.1 Cross-national surveys: recruitment and post-CAL

Two surveys were conducted: the recruitment survey, to capture existing perceptions, behaviors and practices, as well as meanings and understandings around energy citizenship and their potential evolution over time; the post-CAL survey, to capture potential changes, as a result of CAL participation. In addition to serving as a baseline, the recruitment survey also served to capture the socio-demographic characteristics of the participants, paying special attention to gendered patterns of labor related to energy consumption. The survey was constructed collaboratively amongst research teams, drawing from knowledge and expertise from multiple disciplines and a comprehensive work on energy citizenship operationalization (Deliverable 2.3)<sup>2</sup>.

Among all the participants in the CALs, 168 answered the recruitment survey. The first part of the survey seeks to gauge current engagements of participants in relation to energy: from the more private actions at home (e.g., energy conservation and saving), to the more public actions in energy communities (e.g., energy prosumerism) and energy politics (e.g., participate in party activities, environmental groups and social movements). The group of questions in this part builds on the recognition that energy citizenship in the real world is multifaceted and pluri-local – which manifests itself through both individual and collective actions in the home, the community, the marketplace and fields of formal politics. The second and third parts of the survey focus on meanings and understandings, to get a glimpse of “why people do what they do” (or “what they say they do”). The survey broke down understandings into two categories: general understandings and specific understandings of citizenship. For the general, we gauge their environmental consciousness (e.g., perceptions on climate change and the energy transition), their

<sup>2</sup> The Energy Citizenship Assessment Tool (ECAT) was proposed in Deliverable 2.3, which developed multidimensional quantitative indicators to assess energy citizenship in ten different major areas and sub-dimensions (Massullo et al., 2021).

perception on energy politics and climate actions in the country, and understandings around justice and fairness in the transition. For the latter, we ask questions related to rights, responsibilities and community – which are pillars in the study of citizenship (Marshall 1992; Turner 1997; Isin and Turner 2007).

The post-CAL survey includes all questions in the recruitment survey, plus a fourth part with questions on the experience of the CAL participants and, importantly, whether and how the CAL might have led to new meanings and understandings, as well as new competencies and skills, which, along with material arrangements and institutional conditions, are all central to energy citizenship. An overview of the survey questions is provided below.

Table 1. Overview of survey: gauging practices of energy citizenship

<i>Engagements</i>	energy behaviors at home and sustainable consumption participation in energy communities and energy production broader political engagement with the energy transition
<i>General understandings</i>	enablers and barriers to engagements environmental consciousness and belief domains climate actions and energy policies in the country
<i>Citizenship understandings</i>	fairness and justice in the energy transition sense of responsibility and obligations sense of entitlement and rights sense of community and solidarity

### 3.2 Data gathered during CALs

Together with research team members and partners, different methods and techniques were mobilized such as world cafés, focus groups, future envisioning exercises, mapping exercises and visualization. Various forms of data were collected during the implementation phase of the CALs, giving us a wealth of first-hand, in-depth information about how energy citizenship was experimented with in practice. Data gathered during the CALs involves participant-produced data, including video/audio recordings of CAL events, written materials (such as posters and notes from group discussions); it also involves researcher-generated data, such as transcripts of recordings, observation notes and photographs. These data sources provide detailed, thick and contextualized information on participants' perceptions, experiences and understandings of energy citizenship, its barriers and enablers; they invite researchers to access the complicated, and sometimes convoluted meaning-making processes of participants, as well as feelings and emotions associated with energy citizenship.

### 3.3 Reports of the CALs by research teams

After the CALs, each research team followed a common reporting template and produced a comprehensive report of their CAL based on their analyses of all the different sources of data. The reporting template consists of four parts. According to this template, the first part of the CAL report summarizes general information of the CAL – its objectives, context,

sequence of events, its partners and participants. The second part presents the various understandings of energy citizenship (what it means, what activities does it involve and at what scale/level) as put forward by the participants of the CALs; in addition, expressions of rights, duties/responsibilities, understandings of membership and communities, and ways of participation that have been articulated by the participants. The third part presents the theories of change used in the CAL, ways in which the CAL engaged, enabled or facilitated participants to act as energy citizens. Research teams are also asked about the factors, such as more individual and structural ones, that have come into play in the processes of activating energy citizenship. The last part invites the research team to reflect upon the CAL's inclusive and participatory design, and their effects on the outcomes of the CAL. An overview of the report template is provided below, and the full reports of the different CALs are included in the Annex. After the report, each team responsible for the CALs had an interview with researchers from the University of Geneva (task leader) to elaborate on the design, activities and learnings from their CALs.

Table 2. Overview of CAL report: analyzing practices of energy citizenship

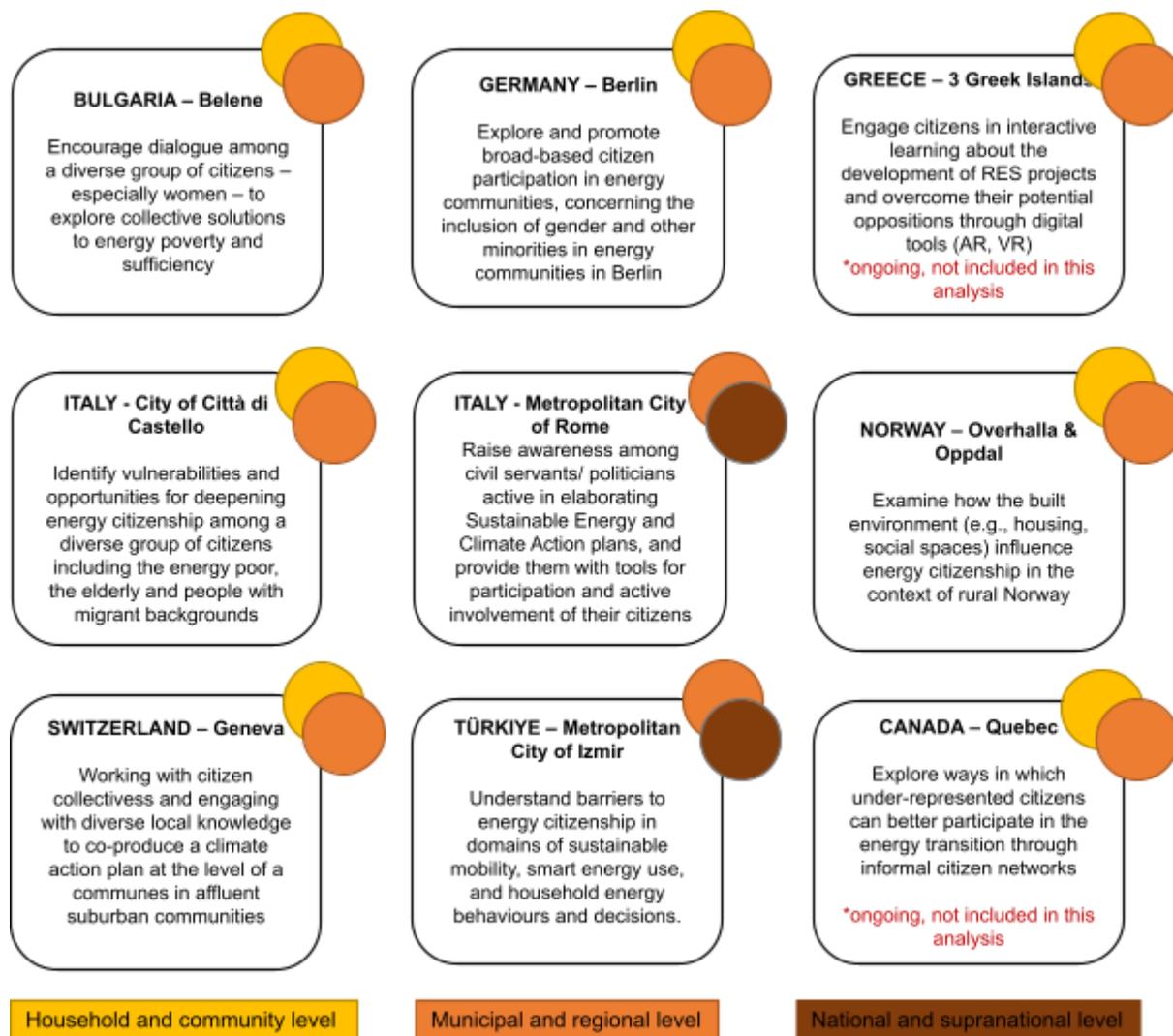
<i>Basic information of the CAL</i>	objectives and context of the CAL
	sequence of events
	description of the partners and participants
	outputs, outcomes and impacts
<i>Energy citizenship at the CAL</i>	degree of citizen participation
	perception of energy in everyday life
	general understandings of energy citizenship
	understandings of rights, responsibilities and community
<i>Pathways to energy citizenship</i>	understandings of justice and fairness
	sense of agency to affect change
	barriers and enablers observed
	knowledge, skills and competencies delivered
<i>Design features of the CAL</i>	summary of pathways to energy citizenship
	theory of change for deepening energy citizenship
	design for inclusiveness, justice and equity
	design to ensure quality of discussion and participation
	communication and continuation of the CAL

The multiple sources of data gathered at varying points of time through cross-country surveys and the CALs, analyzed systematically following the same methodological frameworks, reveal participants' understandings and lived experiences with energy citizenship and illuminate pathways toward inclusive energy citizenship in the EU.

## 4. The Citizen Action Labs

The DIALOGUES project allowed for a great deal of flexibility in terms of both the content and format of the CALs: the CALs target different themes and populations, use diverse techniques for deliberation, engage with participants at different scales, and take place

over varying temporalities – therefore providing rich and diverse perspectives on pathways to energy citizenship. We briefly describe the design, activities and outcomes of the CALs conducted in 8 locations in 7 European countries: Bulgaria, Germany, Greece, Italy, Norway, Switzerland and Türkiye. Note that both the CAL in Greece and Canada are underway at the time of this writing, therefore they are not included in the analysis of the results. A brief discussion of the activities planned for the CAL in Naxos, Greece is provided in section 4.3.



Source: JKU LINZ

Figure 2: Overview of the Citizen Action Labs

### 4.1 Bulgaria – Belene

The objective of the CAL in Bulgaria was to understand the role of energy in the participants’ lives, their level of acceptance of low-carbon technologies, visions of the energy future of their town and region, and attitudes toward the potential creation of an energy community as a solution to energy poverty and collective energy problems. This

CAL involved a full-day workshop which took place in the small Northern Bulgarian town of Belene in October 2022 and an online expert stakeholder workshop (with representatives of government, civil society and the business sector) in February 2023. The CAL was organized by the Center for the Study of Democracy in collaboration with two local partners – the Association of Danube River Municipalities ‘Danube’ (ADRM) and the Municipality of Belene. The CAL took place in a context where the issue of traditional vs. renewable energy sources in the local energy mix has been under debate. In the 1980s, a nuclear power plant was constructed in the town’s vicinity but never put into use. Nonetheless, beliefs about the alleged benefits and opportunities related to the hypothetical scenario of nuclear energy generation have become embedded into local attitudes toward energy issues. In parallel to that, there have been developments related to local production of energy from renewable energy sources. Notably, since 2021, the Municipality of Belene has been implementing a green hydrogen initiative to meet the energy needs of the municipality building.

There were 20 women from Belene and the neighboring town of Svishtov that attended the first and main CAL workshop, making it the only CAL in the DIALOGUES project involving female-only participants. The participants are diverse in terms of age, socio-economic status, disability and ethnicity. The workshop started with expert presentations on the energy transition, followed by a discussion moderated by a facilitator, aimed at illuminating what matters to people in relation to energy and how energy citizenship is perceived. The workshop proceeded with several group exercises, designed to explore social acceptance of renewable energy and visions of the energy future in the local context. It concluded with a role-play game centered around a hypothetical situation – the establishment of an energy community to respond to collective energy problems. This workshop captures citizens’ perception of their role in the energy transition, and the intersectional vulnerabilities related to gender and other types of social identities in relation to energy citizenship in Bulgaria.

The follow-up expert stakeholder workshop sought to harness the results of the CAL for the purposes of supporting the development of local energy citizenship within the current political framework. In January 2023, the European Commission referred Bulgaria to the Court of Justice of the European Union for non-transposition of the Renewable Energy Directive (Directive (EU) 2018/2001). Financial sanctions will likely be imposed unless the Bulgarian Government undertakes urgent measures to bring national law in accordance with the Renewable Energy Directive, including by creating the regulatory and administrative conditions that would allow citizens to play an active role in energy generation and consumption. The online expert discussion also unfolded against the background of efforts in energy policy aimed at improving the situation of vulnerable groups, including such related to the introduction of a formal definition of energy poverty. Experts who attended the workshop are convinced that local authorities have the potential – and the responsibility – to play a key role in supporting local energy citizenship. Following the CAL, the research team in Bulgaria came up with a list of recommendations outlining concrete actions and measures that local authorities could undertake so as to foster citizen engagement in the energy transition.

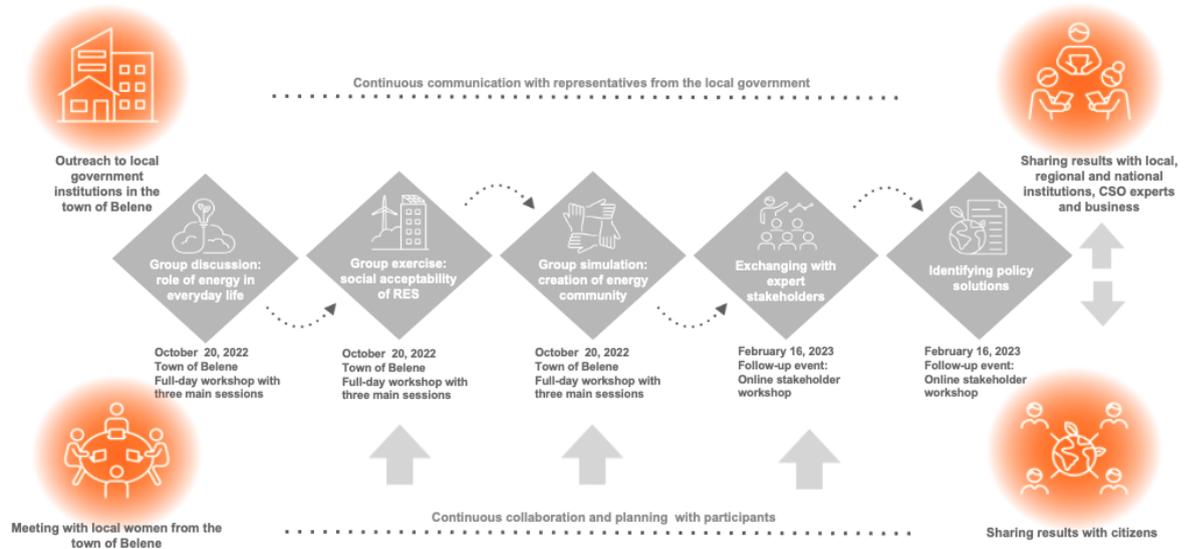


Figure 3: Process diagram, Belene-Bulgaria (two events over several months)

## 4.2 Germany – Berlin

The objective of the CAL in Berlin, Germany was to understand how energy citizenship can be further supported for underrepresented and underserved populations in energy cooperatives. Energy cooperatives allow citizens to participate in local energy production, and have the potential to alleviate energy poverty, promote energy democracy and contribute to an accelerated clean energy transition. They represent an important avenue of citizen participation. However, research has shown that energy cooperatives often suffer from a lack of diversity in its membership, where older, white, male with high income and education levels tend to be overrepresented (Radtko & Ohlhorst 2021, Yildiz et al. 2015). Led by PIK and Berlin's largest energy cooperative 'BürgerEnergie Berlin' (BEB), as well as the NGO partner Gender CC (NGO, Women for Climate Justice) the CAL in Berlin developed a series of measures to improve diversity in energy cooperatives, specifically promoting the participation of women, gendered minorities and people with migratory backgrounds.

The CAL took place when several important political developments came into effect, impacting ways for citizens to engage in the energy transition. BEB hopes to enable the participation of Berlin's citizens in the local energy infrastructure (electricity grid) and in the setup of renewable energies. There have been heated debates at the Berlin senate to determine whether and how energy cooperatives can be incorporated in local energy infrastructures. Further, in February 2023, the Berlin Senate introduced a new funding scheme for solar balcony modules, providing financial support and allowing people living in apartment buildings (including tenants) to participate in energy production activities. In the following month, Berlin citizens also took part in the referendum 'Berlin 2030 climate-neutral' – despite a negative vote, this referendum gathered popular momentum. The CAL therefore serves the purpose of engaging underrepresented groups in these debates, and potentially motivating their civic engagement in energy issues.

Following a year-long planning and co-design process between different partners, four events (focus groups) took place between December 2022 and March 2023, involving 41 participants in total, representing different populations – students and young people, people with migrant history, and women and gendered minorities – all of whom face various barriers to participation in energy communities. To ensure the participation of these hard-to-reach groups, the CAL team used a range of measures: they adapted the communication materials to suit the target groups, collaborated with community organizations (Yesil Cember, NGO for intercultural sustainability, ‘gatekeeper’ of the Turkish migrant community in Berlin), conducted place-based recruitment (e.g., students - via universities, mothers - at the playground), and provided childcare service at the workshop. At the events, participants learned about the current status of energy production in Germany and Berlin, the individual and collective ways to participate in the energy transition (such as existing organizations, local services, fundings schemes). Most importantly, a variety of techniques were used to encourage reflections and discussions on the barriers and motivations behind participating in cooperatives (or not), while gaining both individual and group perspectives on such topics. This CAL has gained deep insights into the specific, compounded barriers facing under-represented populations in their participation in energy production, which allowed them to develop recommendations for different stakeholders to facilitate the development of inclusive energy citizenship in Berlin and beyond.

In January 2024, a workshop is planned in collaboration with two NGOs: Lesle Fam and Nour Energy. The first one is an NGO working with queer people in Berlin and the second one focuses on sustainability topics in the German-Arabic community. The workshop – compared to the focus – trains hard-to-reach groups to act upon the energy transition and overcome some of the analyzed barriers from the focus groups

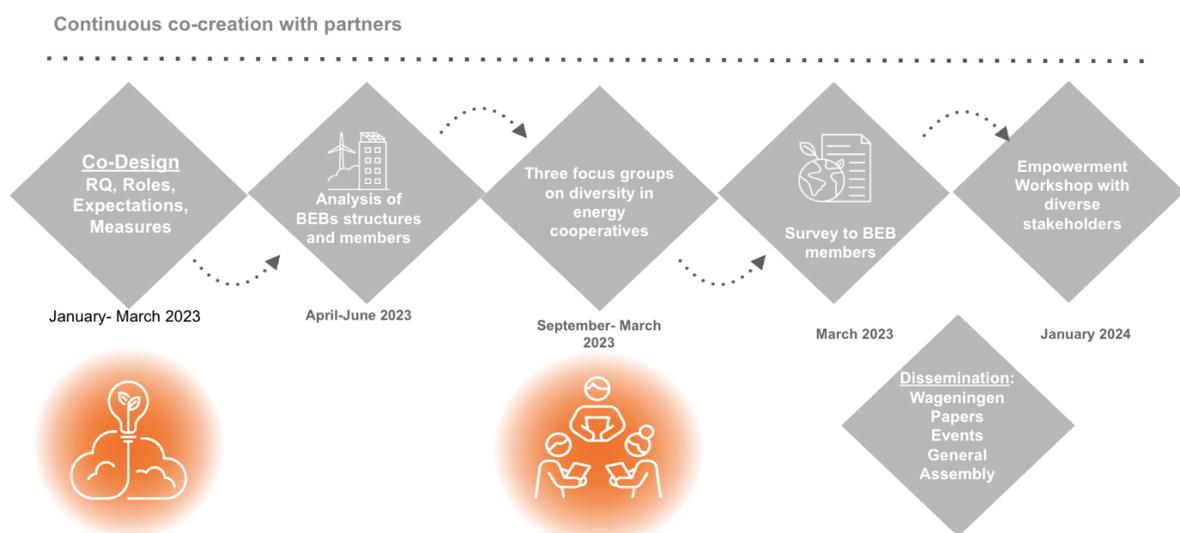


Figure 4: Process diagram, Berlin-Germany (a series of events over several months)

### 4.3 Greece – Naxos

In Naxos Greece, a CAL is planned for November 2023 after the municipal elections. The CAL aims to engage local citizens in the early stages of the energy planning processes so that any potential opposition is minimized. DAFNI, the CAL organizer, is working in collaboration with GET on the development of a geo-spatial tool which will be used during the CAL in order to help the citizens understand the foreseen plans of renewable energy infrastructure. Additionally, an augmented reality tool will be employed to provide a visual understanding of the potential projects. The organization of the Greek CAL requires intensive communication with the Municipality who will invite all the local stakeholders including businesses, citizen associations and individuals and provide the venue.

In the first part of the CAL, DAFNI will introduce the current energy situation focusing on the high costs associated with the supply of electricity and show the importance of fostering energy citizenship in the EU. The main outcome of the CAL involves the creation of the Clean Energy Transition Agenda (CETA) document which will serve as a strategic plan for the decarbonization of Naxos island. The CETA document is also required to join the Clean Energy for Islands initiative. Greece has adopted Law 4513/2018 on energy communities. For the second part of the CAL, a game related to the creation of citizens' energy communities will be proposed as the participants should have acquired a better idea of energy citizenship. This game will demonstrate the multiple benefits of joining an energy community: environmental, economic and social. After the CAL interactions, DAFNI will draft the vision for the energy transition, and based on this, propose a set of actions and pathways to reach the island's targets. The document will be finalized following a feedback process involving citizen's representatives and the municipality.

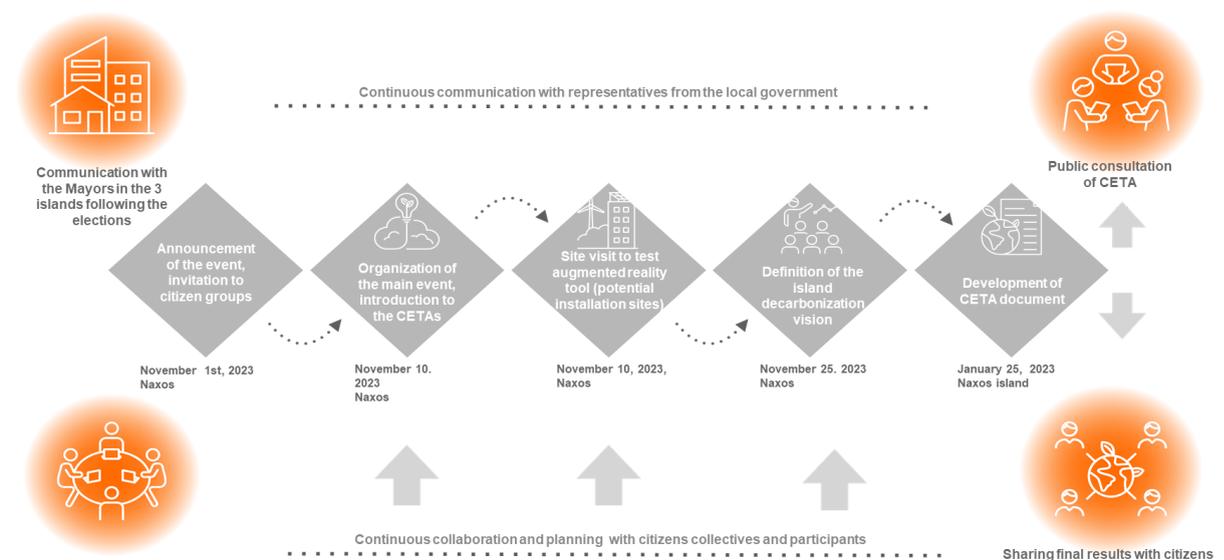


Figure 5: Process diagram, Naxos-Greece (a series of events over several months)

#### 4.4 Italy – Città di Castello

The CAL in Città di Castello explored energy citizenship by providing a space for citizens from different backgrounds to discuss issues and doubts that have arisen over the past year in relation to energy, in the context of both a climate and an energy crisis. Since the Russian invasion of Ukraine, the increase in energy prices has been an issue concerning a large segment of the population in the city, who felt the burden brought by hiking gas and electricity bills. The CAL was organized by Climate Alliance Italy with the support of Roma Tre University, in close collaboration with the department of social services at the Municipality of Città di Castello, the local branch of Caritas, and the senior citizens' organization UniTre. These partners supported the CAL in reaching diverse segments of population. More specifically, the department of social services helped with recruiting people suffering from energy poverty, Caritas assists families at risk of electricity or gas failure, and UniTre organizes educational events for the elderly. This was the only CAL in the DIALOGUES project that had a strong focus on the experiences of retirees and senior citizens.

The CAL in Città di Castello involved four events in 2 months, bringing together more than 40 participants in all the events with little change in the composition of the group over time. The first event took place on 24th October 2022, where facilitated discussions took place to understand what mattered to people in terms of energy, how they perceive energy in everyday life and their energy consumption at home. At the second event, a home automation application used by a participant was shown to all in order to understand energy consumption at home by different appliances. This enabled self-assessments and discussions around energy behaviors. The third event moved from individual to collective action in three smaller groups. The results were taken up in a manifesto with commitments and demands to the local government that was presented to the municipality during the public meeting (the last event). This town hall meeting on December 1st took place in the council chamber of the municipality of Città di Castello. It was open to all residents of the town and attended by the counselors for social and environmental policies, the mayor and regional officials from the waste and energy department. During the event, experts and officials presented issues pertinent to local energy production and consumption from both a policy and technical point of view, and the CALs participants presented the manifesto elaborated in the third meeting to the political representatives and citizens present.

The CAL not only helped the research team to gain insights on energy citizenship in the local context, it has wider impacts – the final event has been widely promoted through the press and social media, and helped to prepare the ground for individual and collective action, the latter involving the local government as facilitator for starting an energy community. During the public meeting, in addition to the CALs participants, numerous stakeholders and citizens intervened in the public debate and expressed their opinions. The implementing partner Caritas has expressed that they would like to replicate CALs in a purely informative way to combat energy poverty, while UniTre would like to start an awareness-raising process with school children.

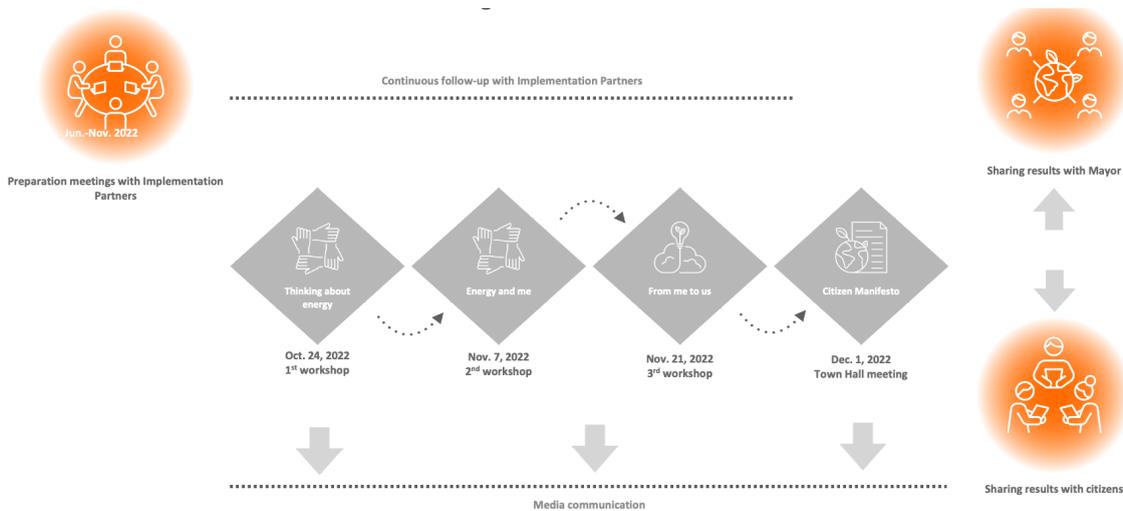


Figure 6: Process diagram, Città di Castello-Italy (a series of events over several months)

#### 4.5 Italy – Rome

The CAL in Rome, organized by Climate Alliance Italy with the support of Roma Tre University in collaboration with the Metropolitan City of Rome, convened public officials and private consultants working on energy policy on the local, regional, and national level to discuss energy citizenship (13 female and 6 male participants). This was the only CAL in the DIALOGUES project targeting public administration. Several participants were energy managers responsible for compiling sustainable energy and climate action plans (SECAP) for their municipalities under the European initiative Covenant of Mayors for Climate and Energy. They are tasked with collecting energy data, verifying and optimizing consumption, and promoting actions aimed at energy efficiency and the use of renewable sources. Russia's war in Ukraine and the economic uncertainties in the post-pandemic era field sentiments of disillusionment and frustration related to their daily work. These officials felt the need to further exchange and collaborate with peers and other stakeholders, to manage the particular complexities born out of the crises. The CAL provided a favorable environment for that.

The CAL in Rome consisted of a one-day workshop. Through different workshop techniques (e.g., guided group discussions to construct a mind map of energy citizenship), the research team was able to gather what energy citizenship meant for the involved energy experts. Further, building on the Business Model Canvas (BMC) methodology, the experts were asked to form groups to deliberate on key energy issues of their concern using the following structure: problem - effects of the problem - proposed solution - actors involved - practical actions. Two subjects were chosen: first, energy poverty, energy security and lack of trust in institutions; second, building political will and capacity for the energy transition. Frequently participants reflected on the relationship between their own professional role, the general situation, their personal life, and their state of mind. They considered a sustainable lifestyle a logical continuity of their own professional role. Recurrent motives were concern, fear and helplessness in front of the complexity of the energy transition.

What resulted from the CAL in Rome was that policy advice to policy makers on deepening energy citizenship does not need to motivate them or “raise their awareness”. It needs to guide those who are eager to do something, e.g. by facilitating the creation of an energy community, instituting a one-stop shop for energy poverty, renewables, and climate adaptation, and putting out a newsletter. It needs to reassure them that they are right to be worried and give them actionable proposals on how to reach out to the community.

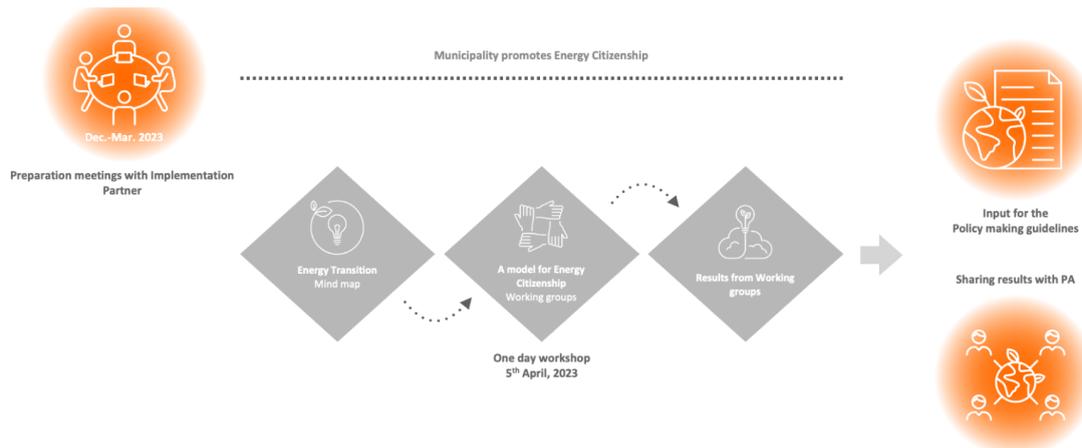


Figure 7: Process diagram, Rome-Italy (one day event)

#### 4.6 Norway – Overhalla and Oppdal

The CAL in Norway aimed to gain insights that contribute to better understanding the interplay between rurality, energy, and societal transformation; and explored future visions of well-being in relation to the green transition, with a focus on place development and the build environment. The CAL examined the unfolding of energy citizenship in the two rural communities Overhalla and Oppdal, each representing two well-known rural challenges: depopulation and dismantling nature through second home developments.

Overhalla municipality has a population of only 3,815 inhabitants living in four villages, and are struggling with depopulation. Here the CAL’s main focus was on co-designing housing and social spaces (especially microhouse and shared housing) as a strategy to attract young skilled workers. The underlying idea was to understand how energy citizenship plays out in the local context, between home, work and leisure spaces, and how these arenas are related to each other and to which sustainable options are viable. The CAL comprised a wide array of events from September 2021 to May 2023 - grouped into eight different activities. (1) Preparatory activities aiming to create a group of conveners, where we scoped together problems and agreed on goals, situating what change and transformation meant for such a process. Based on the insights gained during this first stage, we identified young professionals as a target group. Young male professionals and people with immigrant backgrounds were considered particularly vulnerable groups and were invited to CAL activities. (2) A young-professionals workshop was then conducted. During a 3-hour session, 17 young professionals discussed what living, working and socializing in Overhalla means, with researchers participating with questions and reflections to spur the dialogue

along. Findings were shared with participants to get feedback and verify their collective relevance (3) An ultra-compact housing (microhouse) example with high architectural quality was developed, as a clear contrast to the prevalent housing solutions available in Overhalla. Data: A full scale 12+6 square meter microhouse as well as full as-built documentation (3D model, will be made freely available). The microhouse is almost 100% circular, low-cost and with very low energy use, and will live on after Dialogues as part of NTNU research infrastructure (4) Contextualizing local engagement, as well as identifying challenges and opportunities, was ensured via a series of conversations with different groups representatives and community leaders (2 men, 3 women) within industry, health care sector, education, agriculture and forestry services, as well as mapping local social engagement and leisure/social activities. (5) A young-professionals home design workshop was carried out to gain insights into design requirements and potential for smaller and more energy efficient housing. Their hopes and aspirations for a home, and how that affected their life in terms of socialization, hobbies, activities, economy and sense of well-being were discussed in 1:1 sessions, each lasting between 1-2 hours. The session then moved over to discuss future scenarios of compact living where the participants were shown the developed microhouse as well as 3 different small dwellings in 1:100 scale models, developed by the CAL team based on the initial workshop described above. (6) Collaboration with industry was very important in the Overhalla CAL, and empowering the local industry to tackle these housing challenges and to find win-win solutions to the identified challenges. A 40 square meter detached house is being developed ready-to-fabricate for the element-based house production line at Overhalla Hus AS specifically tailored to the needs, wants and economic situation of young professionals. (7) Translating local engagement into energy citizenship became a technique to find relevant data. A group of women particularly engaged in the community and its social development and wellbeing was identified and interviewed, to better understand existing local engagement in place development, how social interaction could be promoted and translated into energy citizenship. (8) Developing local housing areas and elderly housing was an activity performed by two students engaged in the CAL who wrote their master theses on this subject.

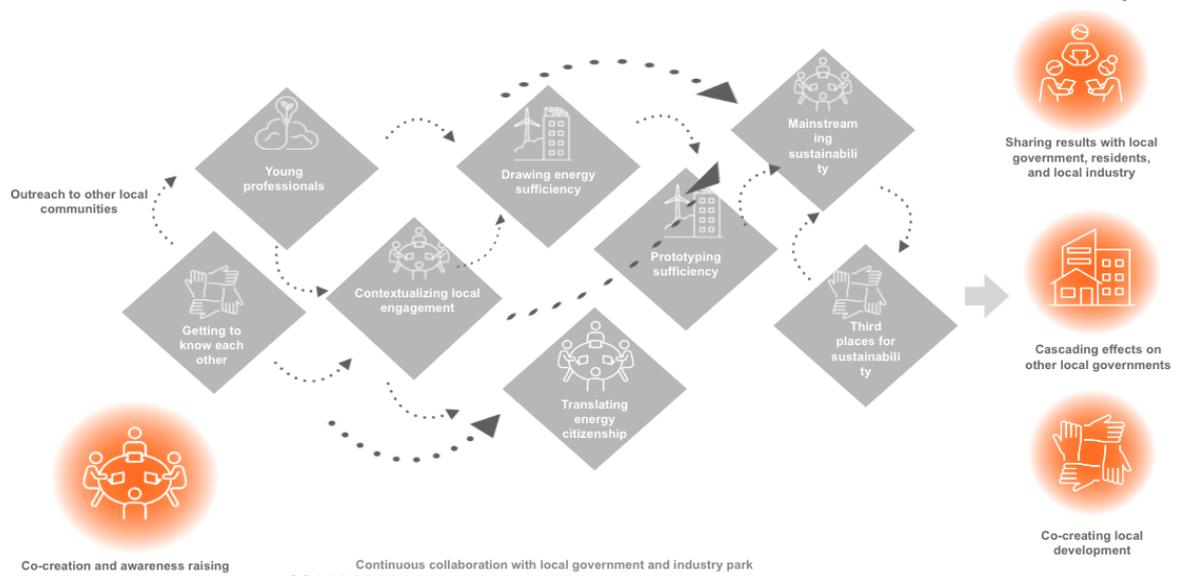


Figure 8: Process diagram, Overhalla-Norway (a series of events over several months)

To a large extent the second Norwegian CAL, Oppdal, was based on findings from the Overhalla CAL, and therefore gathered less data and had fewer activities than the Overhalla CAL. Oppdal is known as a winter sports resort town with a growing population (over 7000 inhabitants), with 4,234 cabins significantly contributing to energy use, social networks, municipal activities as well as industry and value creation. With support from the local government, a focus group workshop with non-owners of cabins was hosted to explore the second home phenomena in Norway in relation to cultural preferences, place development, different generations, energy use and citizenship. Overall, the CAL in Norway explored place-specific measures supporting the green shift combining local competence and solutions with construction expertise and academic knowledge, establishing key enablers for local participation in the green transition.

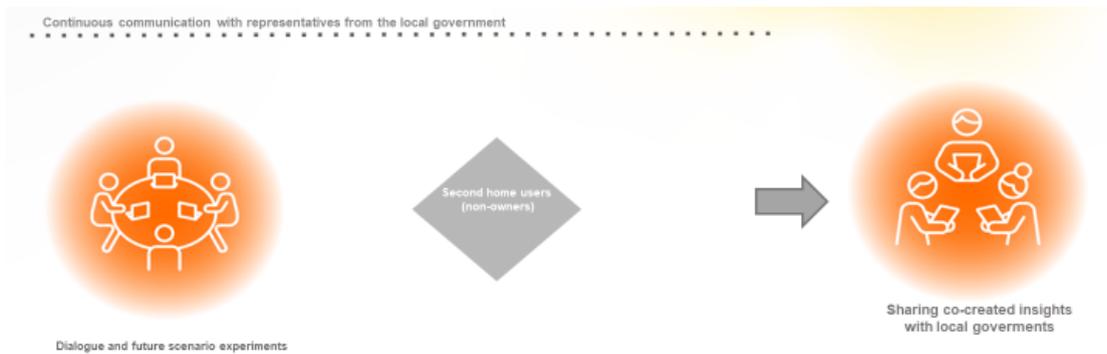


Figure 9: Process diagram, Oppdal-Norway (one day event)

#### 4.7 Switzerland – Geneva

The Geneva CAL sought to: i) contribute to in-depth citizen participation by sharing practical information and identifying the needs and wishes of the inhabitants of four municipalities in suburban, high income areas (Collonge-Bellerive, Choulex, Meinier and Vandoeuvres) ; ii) obtain new knowledge on the forms of citizenship and engagement that are necessary for an energy transition; iii) support the inhabitants in the co-production of local climate action plans and contribute to the objectives of the energy transition in the region and country. These objectives, set by the research team at the University of Geneva, the local citizen collectives and the municipal government, were highly relevant and timely for the local context. Switzerland’s Energy Strategy seeks to maintain the country’s high level of energy supply domestically, while drastically reducing greenhouse gas emissions to achieve Net Zero by 2050. The Canton of Geneva has issued plans for action on climate, energy and biodiversity, among others, and is leading up to a revision of the Cantonal Director’s Plan to guide the region’s transition to more sustainable and resilient ways of living in line with objectives set by the Federal council. Commune-level municipal authorities are now getting ready to ground these plans at the local level, and citizen actions must now take place to contribute to shaping local blueprints for actions.

The Geneva CAL comes in here as a participatory project that helps to create the conditions in which citizens' ability and confidence to engage on energy issues in their homes, communities and beyond can be strengthened.

The Geneva CAL consists of five events spanning over a period of five months from September 2022 to January 2023. The planning for the events lasted considerably longer, as the research team had built a relationship with the citizen collectives starting in mid 2020. Meetings around the CALs began in late 2021 and early 2022. There were in total 114 citizen participants, and between 30 to 45 in each event, with a core group of approximately 10-12 participants who have been present throughout events. Throughout the events, there were more female than male participants; despite working in different occupations, they tend to belong to the middle to upper-middle class in Geneva – which is what the Geneva CAL aimed to target. The launch event set the scene of upcoming events, aroused the interest of the communes, and encouraged continued participation. The second event involved a participatory workshop that used personas of the future to inspire participants to come up with commune-specific imaginaries of what a good life could look like in 2035, and what future practices for energy citizenship. The third event focused on energy in buildings: it started with a panel discussion by energy experts from the government, the private sector and citizen collectives who conveyed both a sense of the urgency and a sense of agency and hope for energy and climate action; the event also kicked up heated discussions around what priority actions people can take collectively to achieve sufficiency individually and collectively. The fourth event featured a Q&A session with experts in a world café format: with the help of the sustainability experts from different knowledge and professional domains (e.g., energy, mobility, food, waste, citizen participation and etc.), this event addressed critical concerns of citizens related to energy transition and climate actions more broadly, and allowed citizens to gain new and/or alternative understandings related to the transition, which might help strengthen their participation at the local level.

The fifth and final event involves a full-day workshop to co-develop citizen initiatives for living well within the energy transition. This event consolidated debates, perspectives and learnings from previous events, and allowed the citizens to identify and debate priority areas for change, and to co-create different proposals for a transition in their municipalities: 16 proposals were put forward, organized around four themes: 1) citizen participation, 2) food consumption and production, 3) energy and 4) mobility. In addition, five cross-cutting themes were brought forward, including: the need for a multifunctional space for sustainable development projects; one-off events to demonstrate how practices can be changed; the continuation of inter-communal efforts by citizens; the need for an indicator for sustainable prosperity in the region; and a need to respect diversity and greater gender equity in the ecological transition. A core group of citizens involved in the citizen collectives continue to meet and bring forward the ideas proposed in this action plan. Several ideas are currently either being implemented or planned. For example, in the fall, the citizens will organize a food challenge, to promote local food consumption and the reduction of meat. These ideas directly emerged from the action plan. Over the course of the spring and fall, the research team has been promoting results via newspaper articles and magazines,

presented results to Mayor’s offices in the communes and discussed the results with other interested parties, for example, other Mayor’s offices (eg, Bernex). And the long term impacts of the Geneva CAL remain to be seen.

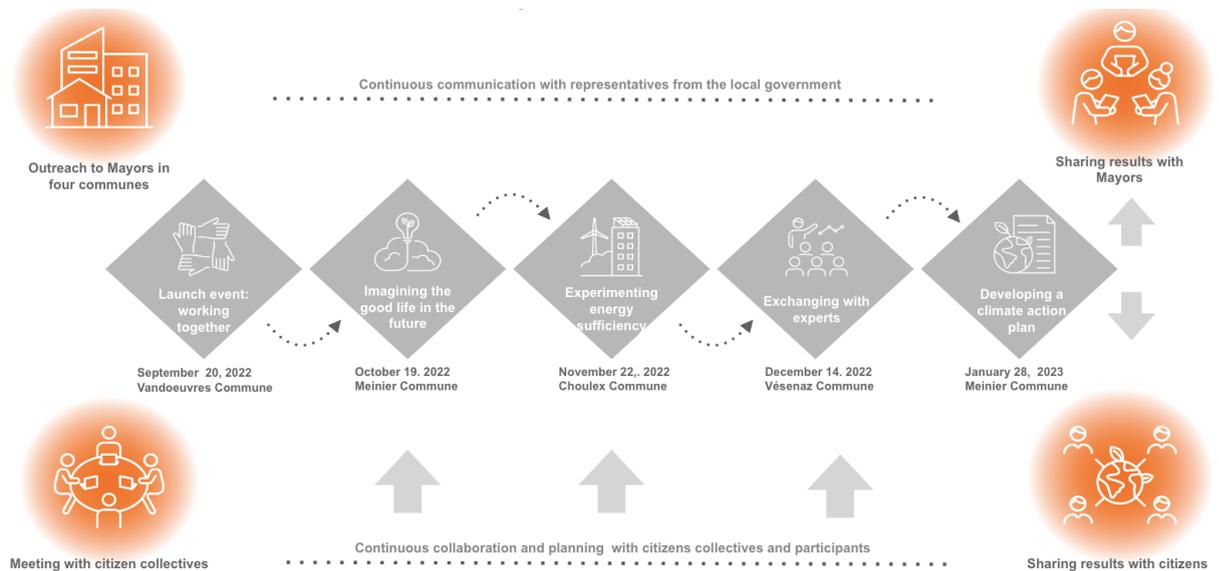


Figure 10: Process diagram, Geneva-Switzerland (a series of events over several months)

#### 4.8 Türkiye – İzmir

The CAL in İzmir sought first-hand knowledge of participants' perceptions of energy in their daily life. The objectives of the İzmir CAL were determining indications of viable pathways to energy citizenship, ranking motivators and barriers toward energy citizenship, co-creating solutions to alleviate barriers toward energy citizenship, and identifying policy suggestions to improve energy citizenship. To achieve these objectives, İzmir CAL was organized as a public workshop with two main sessions in which multiple moderators guided the workshop. İzmir CAL was particularly relevant for the national and local context since the objectives of the CAL match with the key strategies and initiatives of the Republic of Türkiye Climate Change Action Plan 2011-2023 and İzmir Metropolitan Municipality's Sustainable Energy Action Plan and Green City Action Plan which aim to increase citizen participation in the energy transition through energy saving and efficiency measures, and climate change adaptation and mitigation efforts.

Izmir University of Economics and its implementation partners – the İzmir Metropolitan Municipality and the Sustainable Urban Development Network, carried out the CAL in a one-day-long workshop. The 34 citizens who participated in the CAL activities represent different genders (15 male and 19 female) and socio-economic backgrounds; some of them are also representatives from municipalities, local governance bodies (mukhtars), universities, and non-governmental organizations engaging in environmental actions, social services, youth rights, gender and urban and social development. In the morning session, the facilitators guided discussions to understand participants' perspectives on energy

citizenship, their current engagement and attitudes, their consumption behavior, and motivators and barriers to becoming energy citizens. Based on the state-of-the-art literature review and the results of the workshop's first session, three focal areas pertaining to energy citizenship were identified as the themes of the afternoon session: these were (1) sustainable mobility, (2) smart energy implementations for individuals, and (3) household energy behaviors and decisions. The participants were divided into three groups, each discussing a different theme. The "6 Thinking Hats" methodology was applied to guide the discussion, allowing the issue to be examined from different roles with distinct experiences and perspectives.

The Izmir CAL has guided participants to reflect their everyday consumption in a holistic manner, and gathered valuable first-hand information on what motivates and hinders citizens' participation in the energy transition. Furthermore, this experience has encouraged participants to "internalize" the significance of pro-environmental behaviors, and many have expressed their commitment to a host of activities in low-carbon transport and energy saving. They have also put forward a number of recommendations or demands for the municipality. For sustainable mobility, participants emphasized the importance of diversity in modes of transportation options in transit centers (e.g., bus, tram, subway and car sharing) with enhanced comfort to replace the use of private vehicles, and more safe and green pedestrian zones and bike lanes to encourage walking, cycling and energy saving. For smart energy solutions, participants agreed that smart systems could have been more user-friendly and feasible, that local administrations and non-governmental organizations could develop seminars and webinars for awareness-raising, while providing low-cost loans to encourage their deployment. Concerning the theme of household energy behaviors, it was proposed that energy literacy programs must be promoted in schools and for adults. Several citizen representatives stated their willingness to provide education on sustainability and energy conservation to primary school students in their neighborhoods. Overall, the Izmir CAL created a significant awareness among the participants to change their habits and spread their perspectives to their surroundings.

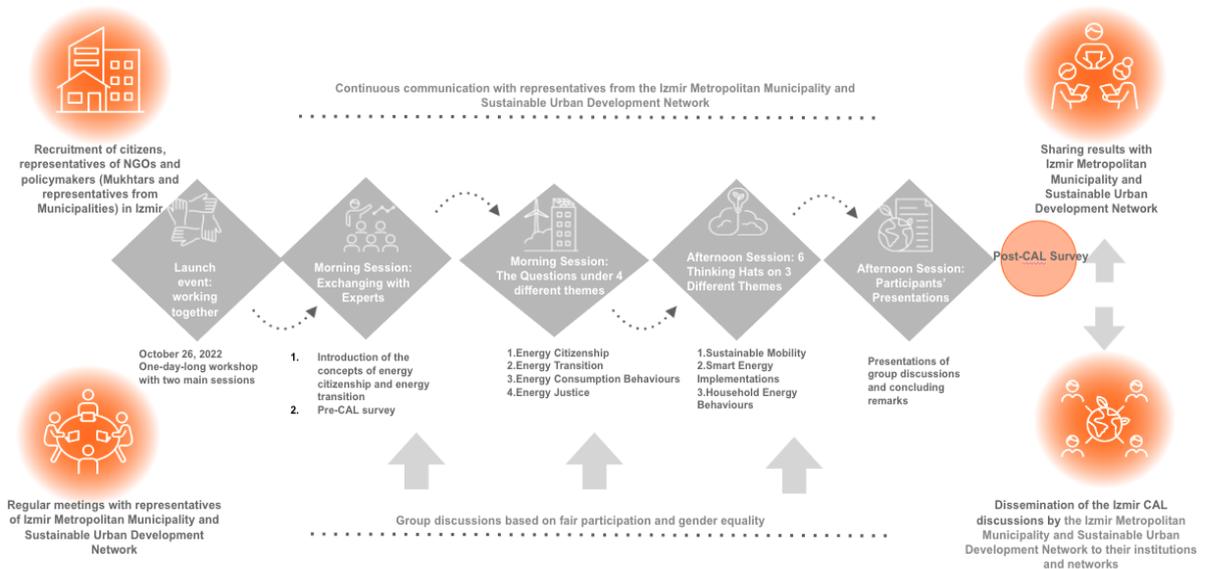


Figure 11: Process diagram, Izmir-Türkiye (one day event)

#### 4.9 Summary and overview of socio-demographics

To summarize, **the CALs across countries**, with diverse formats, targets and goals, invariably put citizens at the core of the innovation process in the energy transition. Through these rich interactions, the DIALOGUES project gained in-depth knowledge of energy citizenship, incorporating a diversity of views from various stakeholders and different segments of the population. All participants involved in the CAL were encouraged to answer a recruitment survey that the research teams collaboratively designed. The survey gathered 168 responses from participants representing diverse backgrounds in terms of gender, education, income, civil and employment status (see the summary of socio-demographic details in Table 3 below). The CALs have thus successfully engaged with different hard-to-reach groups – such as women and gender minorities, low-income populations, as well as wealthy households – to support the operationalization of an inclusive energy citizenship that empowers those at the margins of the energy transition. The bias towards more women than men was intentional in certain CALs, where the objective was to engage women in the energy transition.

**Table 3. Socio-demographic characteristics of CAL participants**

<b>Total</b>	<b>N</b>	<b>%</b>
<b>Total</b>	<b>168</b>	
<b>Age</b>		
18-24	22	13
25-34	28	17
35-44	31	18
45-54	33	20
55-64	26	15
Above 64	28	17
<b>Gender</b>		
Female	115	68
Male	46	27
Non-binary	3	2
Not disclosed	4	2
<b>Education Attainment</b>		
Elementary or secondary school	23	14
Professional training	8	5
A-Levels (qualification for university entrance)	34	20
Bachelor's degree	49	29
Master's degree	41	24
Post-lauream education (e.g., PhD)	13	8
<b>Employment Status</b>		
Full-time employed	63	38
Part-time employed	18	11
Full-time self-employed	10	6
Part-time self-employed	9	5
Unemployed	12	7
Student	22	13
Housework/care responsibilities, not paid work	3	2
Long-term sick or disabled	1	1
Retired from paid work	23	14
Parental leave	2	1
Not in paid work for some other reason	5	3

<b>Household Income</b> <sup>3</sup>		
Low	39	23
Low-Middle	19	11
Middle	25	15
Middle-Upper	30	18
Upper	21	12
Not disclosed	34	20
<b>Household Size</b>		
Single person household	28	17
Two person household	51	30
Three person household	34	20
Four person household	36	21
Five person household	12	7
Six or more person household	7	4

## 5. Findings

### 5.1 Energy citizenship: current practices

The CALs created open, innovative spaces where people freely exchange and debate ideas around energy, exploring their roles, agency and power (or lack thereof) in processes of social and environmental transformations. In some cases, the CALs asked people directly what ‘energy citizenship’ means to them (e.g., Türkiye, Germany) while in others, energy citizenship was not a concept that the DIALOGUES team directly put forward. But in all CALs, participants talked about a wide array of different activities that citizens can take up to participate in the energy transition, in their communities and beyond. The diversity in understanding among CAL participants can be explained by one’s identity and positionality – or their socio-economic status, along with cultural and historical backgrounds. The built environment and the material arrangements, the norms of citizen participation, institutional arrangements involving local and national energy policies, to name but a few, also have powerful effects over how energy citizenship is understood and practiced.

Thus, based on analysis of the different data sets detailed above (i.e., surveys, CAL reports), practices of energy citizenship can be categorized into eight different types, from more individual to more collective actions in the domains of 1) energy consumption-sufficiency, 2) energy consumption - efficiency, 3) energy production, and 4) energy politics (see summary and examples in Table 4 below).

<sup>3</sup> The household income categories were constructed based on statistics on income distribution provided by Eurostats for Bulgaria, Germany, Greece, Italy, Norway and Türkiye, and that provided by the Swiss Federal Office of Statistics for Switzerland.  
Sources: [https://ec.europa.eu/eurostat/databrowser/view/ilc\\_di01/default/table?lang=en](https://ec.europa.eu/eurostat/databrowser/view/ilc_di01/default/table?lang=en)  
<https://www.bfs.admin.ch/bfs/fr/home/statistiques/situation-economique-sociale-population/bien-etre-pauvrete/inegalites-de-repartition-des-revenus/distribution-des-revenus.html>

**Table 4. A typology of energy citizenship practices**

	<b>More individual actions</b>	<b>More collective actions</b>
<b><i>Energy consumption (sufficiency)</i></b>	Energy conservation, reduce heating, cooling and overall energy consumption, take public transportation	Join energy saving initiatives in the community/school/work, join group-based voluntary rationing
<b><i>Energy consumption (efficiency)</i></b>	Invest in and use energy efficient products, technologies & services	Implement collective solution for energy efficiency upgrade
<b><i>Energy production</i></b>	Install renewable energy systems at home (e.g., solar panels)	Implement collective solution for renewable energy in the building  Join an energy community or cooperative
<b><i>Energy politics</i></b>	Learn and talk about energy issues with family and friends  Support politicians and initiatives for the energy transition  Contact local council members to offer ideas and demand change	Participate in activities of environmental groups or voluntary associations for the energy transition  Participate in social movements for energy transition

For energy consumption, we differentiate between measures for energy sufficiency and efficiency. Energy efficiency and sufficiency can be distinguished as, for the first, doing better when it comes to energy usage (i.e., using less energy to consume in the same way), and for the second, consuming less. While energy efficiency measures are abundantly discussed in the scientific literature and policy arena, efficiency has also been criticized for not achieving absolute reductions in overall energy usage (see for example Shove 2018). The notion of sufficiency is only just emerging as an important component in energy transitions and climate change mitigation measures. It implies consuming less, reducing or avoiding demand, but is increasingly associated with human wellbeing. For example, the 6th Assessment Report of the IPCC defines sufficiency as “a set of measures and daily practices that avoid demand for energy, materials, land and water while delivering human well-being for all within planetary boundaries” (IPCC, 2022:31).

Participants across the CALs saw simple sufficiency measures at home as important actions that ordinary citizens can commit to, such as turning down the level of heating and cooling, and cutting down overall energy consumption. In the Norway CAL, sufficiency was explored in a more central way in relation to micro-housing, or the overall reduction of living surfaces (and associated energy usage, not least for heating homes). Reducing consumption was considered desirable for participants across different socio-economic backgrounds in different countries. The recruitment survey shows that more than 80% of the participants already try to reduce energy consumption in the household, which demonstrates the bias when it comes to engaging with citizens on energy topics: such

initiatives, such as the CALs, tend to attract people who are already interested in this theme. There can also be a bias in the method: survey questions can also prompt normative responses which are deemed more desirable, as can CAL discussions.

In general, more *collective* initiatives to reduce and improve energy consumption were barely discussed – such as participating in community energy-saving initiatives, with the exception of the Geneva CAL where a citizen collective was invited to share their collective experiment with voluntary energy rationing (it is important to note that the Geneva CAL placed an explicit focus on moving beyond individual behavior change to invite participants to reflect on more collective forms of change). In the survey, we also see that only 23% of all participants have joined in collective efforts for energy sufficiency (Figure 12). Another important activity in the area of energy consumption concerns greater energy efficiency at home, such as buying more efficient products and home appliances, and improving home insulation. Survey results show that 80% of the participants consider this when they are purchasing home appliances. At the more collective level, people living in the same building or area could be encouraged to plan for and carry out energy efficiency upgrades (e.g., systemic renovations of the building to improve insulation). However, this was not a prominent form of action put forward by participants in most CALs. In one Geneva event which focused on energy in a particular building, a collective energy efficiency upgrade was identified as a critical action for tenants who tend to have little power over energy renovations; the tenants believed that their power can be strengthened by communal and collective actions.

Participation through energy production (also known as energy prosumption), such as installing solar panels at home (at the individual household level) or joining an energy community (at the collective level) gathered great interest among CAL participants in Berlin, Città di Castello and Geneva – where energy communities are more developed and present. This form of participation is considered a prominent avenue for energy citizenship: it directly empowers citizens to consume, produce, store and in some cases, sell renewable energy, which helps advance energy efficiency in households, support the use of renewable energy and at the same time contribute to reduced utility bills. However, this form of participation is less viable for participants in other CALs. Across the CALs, approximately 20% of the participants expressed that they invest in energy production or renewable energy. This could be explained by two primary factors. First, investment in renewable energy often requires significant start-up costs, attracting mostly only middle to high income households who are homeowners. A large fraction of the participants in the CAL did not have the financial capital for this, while support from the state was limited in most cases. Second, energy communities were either at the nascent stage of development (e.g., Italy) or rather absent in the areas where the CAL took place (e.g., in the case of Bulgaria, Türkiye). Both factors will be further explored in the next section as barriers to deepening energy citizenship. In the case of Overhalla, Norway, many citizens felt that they were already participating in energy production since Norway is the biggest energy exporter in Europe. Some even own part of the land where the hydropower plants are located. Therefore, coming together to invest in renewable energy in the form of energy

communities or cooperatives is less relevant for Norway than all other DIALOGUES countries which are heavily dependent on energy imports and fossil fuels.

All four domains of actions for energy citizenship practices were built on a citizenry who are deeply concerned with environment and climate issues, and the first step to performing one's energy citizenship involves getting informed, thinking, and talking about it. Many participants came to the CAL events with their friends and families, as they frequently discuss energy issues in their homes, for instance, at family dinners, and in social settings. Survey results validate that around 66% participants regularly keep themselves informed about energy and climate issues, and more than 50% engage in conversations on this topic with their friends and family (Figure 12). While participation in formal politics (e.g., voting, actively engaging with local political representatives, participation in party activities and other political associations) was not explicitly discussed as a precursor or a practice of energy citizenship in most of the CALs, yet, for the vast majority of participants, voting for political candidates who take actions for environment and energy issues was part of their civic repertoire. Approximately 49% of the participants also engage in activities of environmental and voluntary associations (e.g., attending meetings and events, contributing financially or spreading information), and 24% have participated in public demonstrations on climate change in the past. We recognize that participation against the installation of renewable energy projects or infrastructure is also an expression of energy citizenship, but few participants have done so (Figure 12).

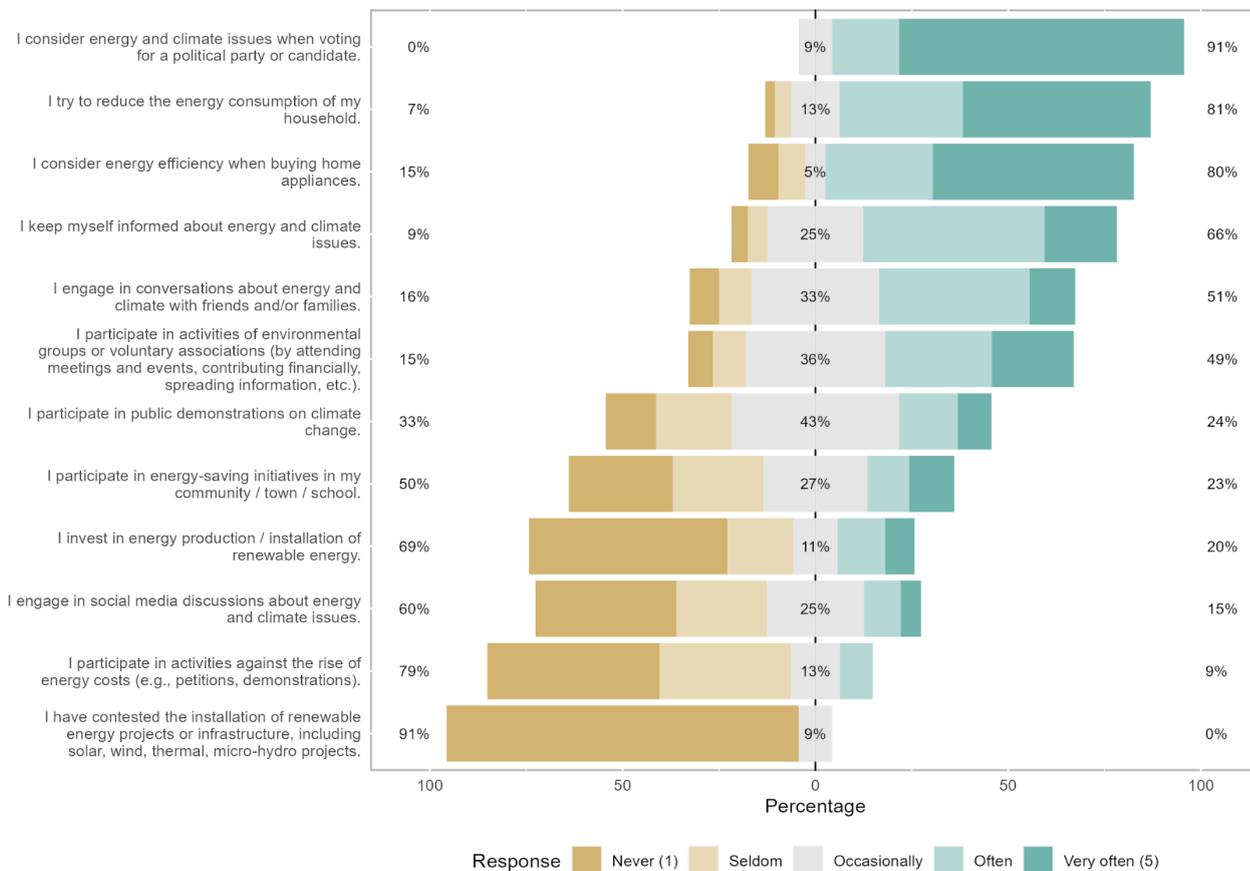


Figure 12: Types of energy citizenship practices and degrees of involvement

The CALs provided a space to discover novel and alternative understandings around energy citizenship, and to some extent, to experiment with more collective forms of energy citizenship. Overall, existing energy citizenship practices are varied and diverse; but for the majority of the citizens, these efforts were concentrated on individual actions rather than collective ones. How to propel more collective efforts across the domains – in energy consumption, production and energy politics – is thus crucial for deepening energy citizenship for all.

## 5.2 Imaginaries: sufficiency, security, justice and participation

We now turn to what matters to people when it comes to energy and what their imaginaries of a desirable future look like. These imaginaries contain normative orientations for future energy citizenship practices. In other words, they represent what participants hope to achieve in the future with their energy citizenship. To start with, participants across countries were overwhelmingly supportive of climate actions and toward the energy transition, based on data gathered at the CALs and the surveys (Figure 13) – which is not surprising, given that people were being recruited to participate in a CAL around the energy transition (albeit, formulated differently in the various settings; in Geneva, for example, the main recruitment message was around ‘Living the good life’). Around 94% of the participants believed that climate change is a major threat to our health, safety and well-being, and 88% were convinced that human activities and the associated greenhouse gas (GHG) emissions are the main cause of global warming. Accordingly, the vast majority of the participants held that reducing energy consumption and emissions is crucial in mitigating the negative effects of climate change (91%). Further, they expressed that they are ready to change or have already changed habits to reduce energy consumption (90%), and that such a reduction is congruent with living a good life (85%). For example, in Overhalla, most participants lived in independent houses with big surfaces. During the CAL, many came to realize the energy inefficiencies of such dwellings, and how their needs for comfort, safety and socialization can be equally if not better satisfied with a smaller house catered to their needs. In Izmir, participants reached consensus that reducing energy and overall consumption – for example, using second-hand products instead of buying new – is an action that everyone can take to participate in the transition. In Geneva, a citizen collective shared their experiment with voluntary energy rationing. In this experiment, five households came together and committed to reducing their carbon emissions and energy consumption over the course of a year – as a group, not solely on an individual household basis. The group distributed the energy consumption quotas on an individual basis, based on the needs of the group members; for example, if one person had a relative in a distant country, that person’s allowance was higher. Together, they aimed towards a total reduction target, with variations between households. Their talk inspired participants to think about how neighbors and friends can come together to support each other for energy sufficiency. Across the CALs, energy sufficiency was very much in the future imaginaries of participants, and energy citizenship practices like reducing energy usage and living a more low-carbon lifestyle was considered consistent with the good life and human wellbeing.

The energy crisis triggered by Russia’s war in Ukraine was of great concern to participants. Meanings around energy security and the cost of energy became more visible throughout Europe, as seen in the CALs. More than 90% of the participants agreed that they were concerned about the rise in energy costs (Figure 13). For the underprivileged participants – those receiving social benefits from the state, for example – worries and even anxieties over paying for their energy bills and making ends meet were not uncommon. As a matter of fact, learning about ways to achieve energy saving and schemes for financial support was a primary motivation for some participants for joining the CAL (seen in Città di Castello and Belene, for example). Across the CALs, energy security – understood as access to affordable and clean energy for everyone – is deemed critical for the energy transition. In Belene, the participants were unanimous that their fellow town inhabitants’ readiness to embrace renewable energy depends on the potential of such systems to lead to reduced energy bills. Some participants also highlighted that the main reason why the majority of the local people still largely rely on burning coal and firewood for home heating in winter is that those fuels are the most affordable. Few participants said that they rely solely on electricity for home heating because of the (in participants’ words) “excessive” price of electricity. In Berlin, all focus groups – with students, mothers/women and migrants – put energy price, and the associated costs in mobility and public transport, as key issues to tackle during the energy transition. Accordingly, securing clean, affordable energy for all is a prominent goal that orient the actions of energy citizens. Hence, issues of energy security and the cost of energy are prominent in peoples’ imaginaries of energy futures.

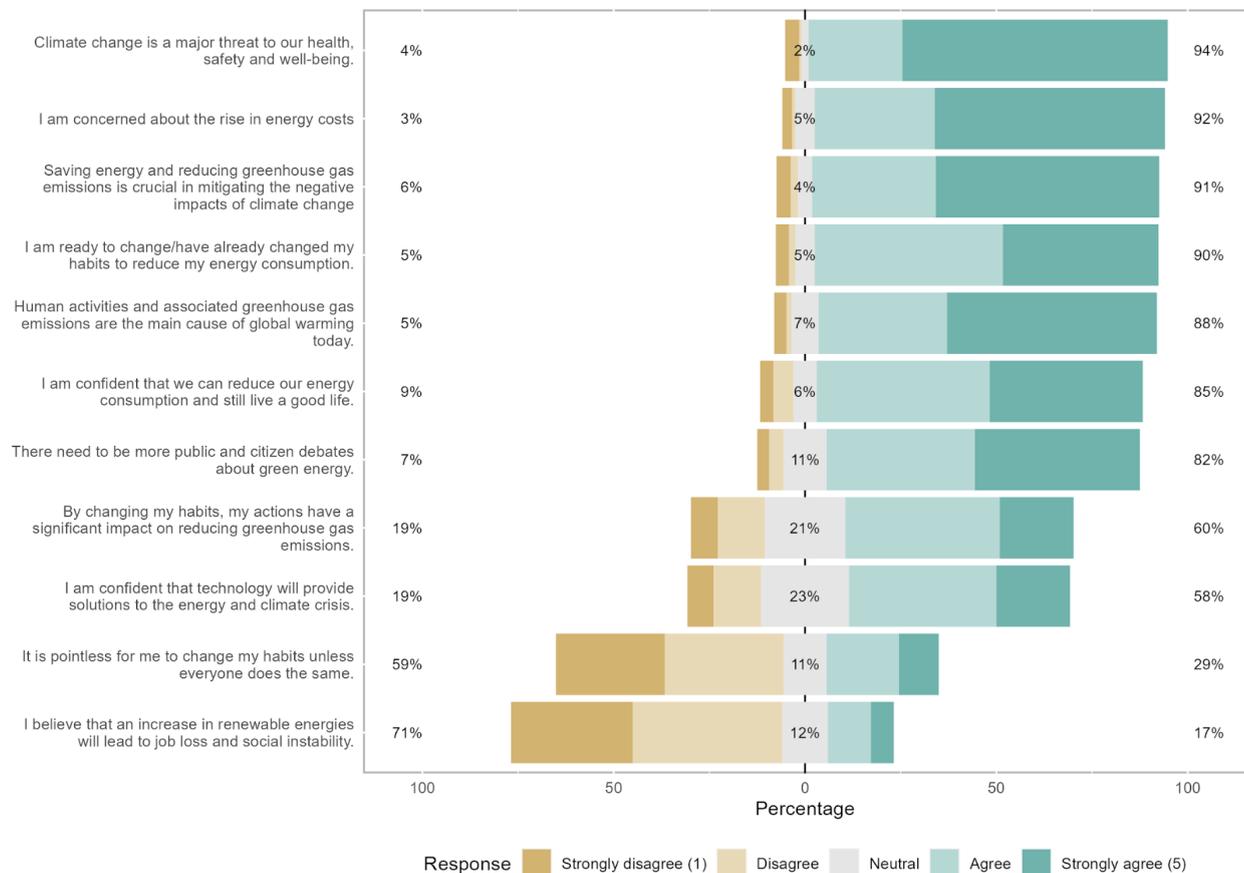


Figure 13: Meanings and understandings related to energy citizenship

The CALs revealed that justice was another central theme in the future imaginaries of citizens. In general, the majority of the CAL participants agreed that *not* everyone benefited equally from the transition to more sustainable energy sources (66%), and some groups of people might bear more burden than others for the costs associated with the energy transition (72%), which indicates relatively high levels of perceived injustice (Figure 14). We uncovered more specific and nuanced understandings on justice during the CALs. One form of injustice, concerning the highly unequal consumption patterns and accordingly the carbon footprints of the rich and the poor, was put forward by participants in the CALs in Berlin, Geneva and Italy. For example, participants in Geneva pinpointed frequent flying and international travel among the wealthy and the middle class as highly problematic, and proposed potential measures to curb such practice, for instance, individual carbon budget and taxation. In Berlin, many participants held that people in high-income countries produce more greenhouse gas emissions and also have more resources and options to act on climate mitigation, they should therefore take over more responsibility. Generational injustice was also articulated in these three CALs. For instance, young participants from Berlin expressed that climate change is causing an existential crisis that the young generation has to live with more than the older one, and at the same time, many of the high-impact positions are occupied by the older generation who still profit from the current exploitive and destructive economic system and block more transformational change. While there was a general recognition of injustices in terms of the distribution of benefits and ills, survey results show mixed attitudes toward the idea of differentiated responsibilities. The majority of participants (74%) agreed that people from developed and high-income countries should bear more responsibility for reducing energy use, less (58%) were on board with the idea that people with higher incomes should bear more responsibility (see Figure 14).

Another form of injustice identified by the participants concerns the procedural and representational aspects of justice: more specifically, the lack of representation or mis-representation, and the exclusion of underprivileged groups in the energy transition. In both Belene and Izmir, participants articulated that more work needs to be done to ensure the participation of women, minorities, refugees, and people with disability in the energy transition. In Città di Castello, participants expressed sentiments that energy is an economic sector in which injustice reigns – subsuming the enrichment of a few at the expense of the mass who pay the bills, with some ending up in poverty. Creating more equality and justice in the energy field, e.g., by enabling people with a medium or low income to invest in the production of energy through energy communities – was seen as a strong driver for energy citizenship. In Overhalla, participants expressed that measures for climate actions and the energy transition were predominantly designed for cities, and rural areas have been neglected by national and international policymakers. In Berlin, young people – who are more likely to have lower-income – stated a sense of injustice when they were barred from investing in renewable energy and participating in energy communities due to financial constraints. Participants' communication of injustice was tied to their visions of a just transition, where every citizen can produce and own a share of the energy they need, and participate in decision making processes with regard to the energy transition (as seen in the survey results, figure 14). This signifies the centrality of inclusive,

universal participation in both energy production and energy politics as key to energy citizenship.

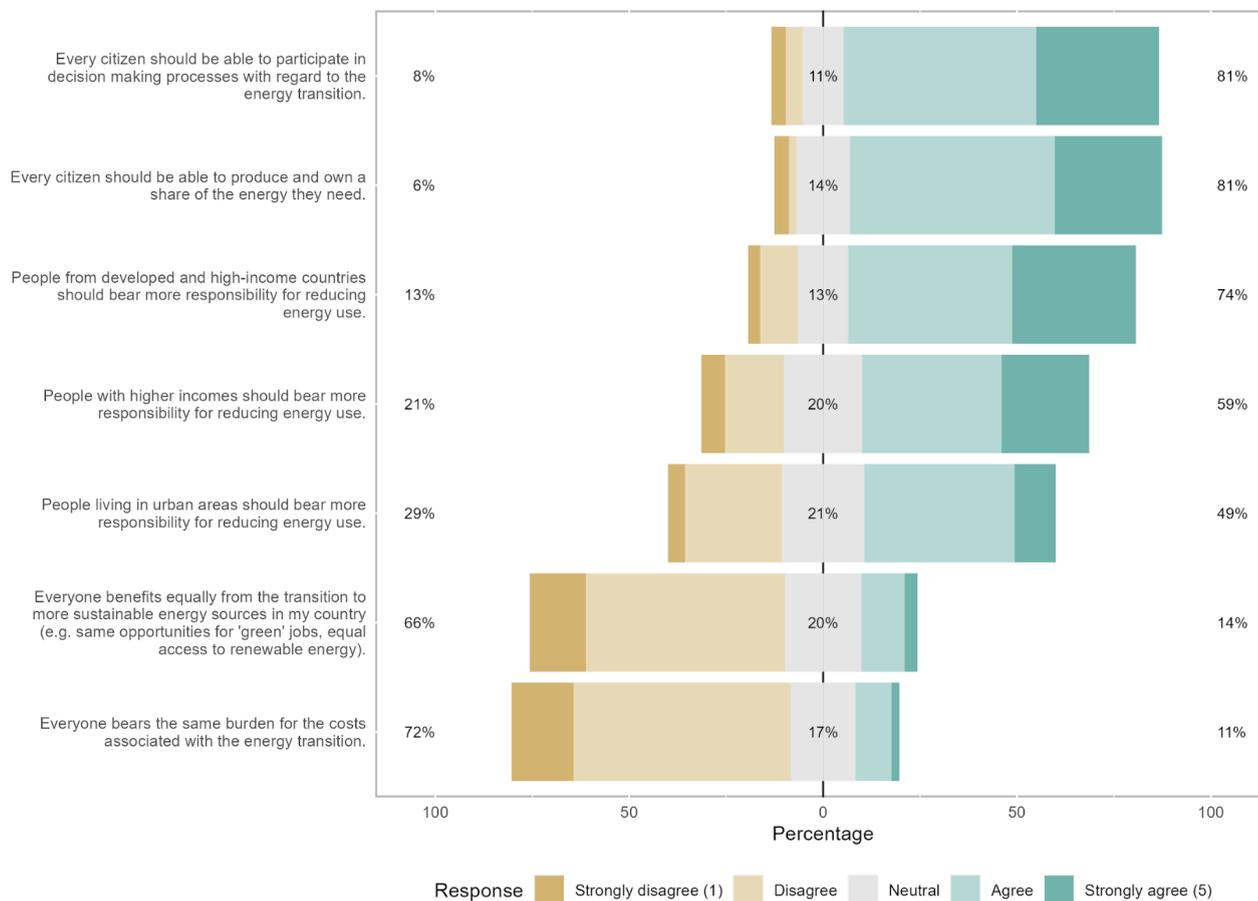


Figure 14: Meanings and understandings of energy justice

### 5.3 Barriers to energy citizenship

Based on the findings from the CALs and the discussion in the preceding sections, we identify three sets of common barriers that hindered participants' engagement as energy citizens, in relation to 1) meanings and understandings, 2) knowledge, skills and competencies, 3) materials (time, space, capital). These barriers have varying degrees of influence on the specific type of energy citizenship practice, namely, the more individual and the more collective actions in the domains of energy consumption (both towards efficiency and sufficiency), energy production or energy politics, as summarized in Table 4: A typology of energy citizenship practices.

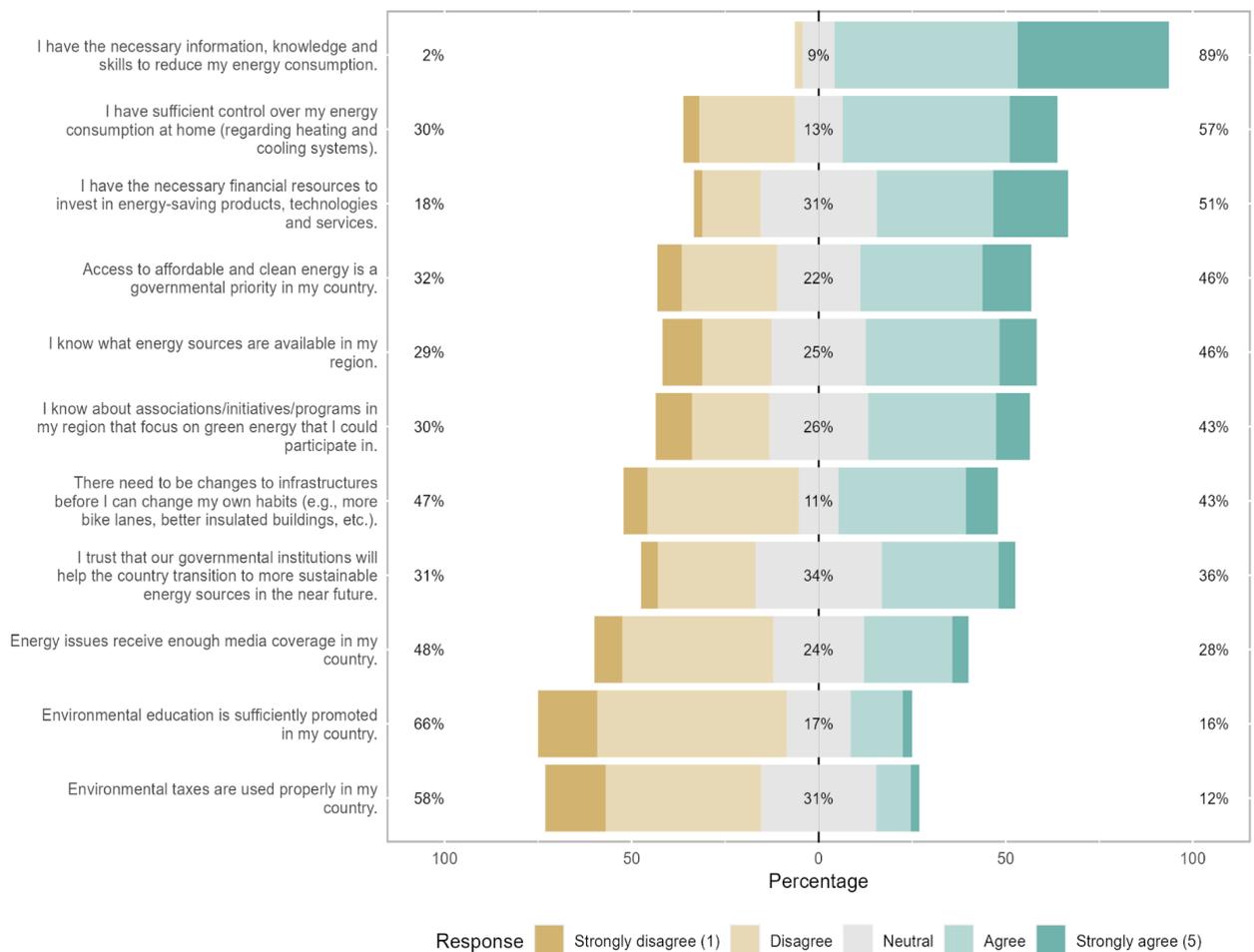


Figure 15: Barriers and enablers for energy citizenship

### Energy citizenship practices related to energy consumption: efficiency and sufficiency measures

As discussed in the previous section, the majority of participants had already taken actions or declared a willingness to reduce energy consumption and enhance energy efficiency in their homes. Existing meanings and understandings, as well as dominant social and cultural norms, are conducive for these types of engagement. However, sufficiency-oriented practices beyond energy conservation, toward avoiding and reducing the use of materials, land and natural resources altogether, face more challenges in the current growth-oriented consumer society. These practices might involve voluntary reduction in energy usage, the refusal of air travel for leisure, cutting back on the consumption of non-essential material goods, downshifting to a smaller house, etc. Such measures have significant potential for reducing energy use (both direct and indirect) and carbon emissions for middle- and high-income households. Yet, sufficiency practices beyond energy conservation tend to be overpowered by the more dominant and entrenched understandings of what it means to live a good life. The CALs in Geneva, Switzerland and Oppdal, Norway, which involved more affluent groups, sought to experiment specifically with the links between consuming less and living better (or at least,

not compromising wellbeing). Challenging these entrenched meanings requires concerted efforts.

In terms of knowledge, competencies and skills, most CAL participants were already familiar with measures for energy conservation and efficiency at home (e.g., turning down heating and cooling, switching off lights, buying energy efficient appliances, using public transport), but much less was known about the more *collective* actions for energy efficiency and sufficiency. This conclusion is validated by survey results (Figure 14) where approximately 90% of the participants agreed that they have the necessary information, knowledge and skills to reduce their energy consumption, but only 43% of the participants stated that they knew about associations and initiatives that focus on green energy. Furthermore, most of the participants indicated in the survey that energy issues do not receive enough media coverage, and environmental education is not sufficiently promoted in their country, and suggested that there need to be more public and citizen debates about green energy. These results point at the need for more nourishing, interactive and participatory forms of exchanges and debates on energy transition and citizenship, which often requires significant investment of time and cultural capital (e.g., education).

While measures for energy conservation usually help individuals to reduce their utility bills, efforts to enhance energy efficiency can imply the need for financial investments. Such measures could involve small purchases such as LED light bulbs; bigger, energy efficient household appliances like refrigerators, televisions and washing machines; or significant investments in home insulation or the installation of alternative, more efficient heating/cooling systems. Survey results suggest that only half of the participants felt that they have sufficient financial resources to invest in energy-efficient products and services. Some countries do provide financial support for energy efficiency upgrades, but this usually predicates upon property ownership. In addition, information on financial support could be opaque, partial and confusing for the public. This barrier is also manifest for participation in energy production, which will be further elaborated in the next section.

### **Energy citizenship practices related to energy production**

The lack of knowledge, competencies or know-how is a major barrier to participation in energy production. For investments in renewable energies, participants were often confronted with complex information that easily overwhelms those without a technical background; additionally, information on the benefits, economic viability, and available subsidies for renewable energy, among other factors, was also often unclear, according to different CAL participants (e.g., Berlin, Belene and Geneva). Participants tended to agree that there was a lack of trustworthy, unbiased and scientific information on investment in renewable energy that is easily accessible to all. Survey results also show that less than half of the participants know what energy sources are available in their region (Figure 15). For the more collective form of participation in energy communities, people face similar challenges; additionally, some simply were not aware of this possibility in the town where they reside – which could be explained by a lack of willingness or efforts on the communities’ part to reach people beyond their own social networks. In the Berlin CAL,

Turkish migrants pointed out that much of the communication materials of energy communities were in German, which prevented their participation.

When it comes to materiality, lack of financial capital and insufficient subsidies for investment in sustainable energy production presents itself as a major challenge for participation in energy production. Investment in renewable energy often requires a significant start up cost, attracting mostly middle to high income households who are homeowners. Across the CALs, different groups expressed this finding: many women from low-income families in Belene, young people and migrants in Berlin, and senior citizens in Città di Castello, and middle-class families who rent apartments in wealthy Geneva suburbs have all identified financial constraints as an obstacle to energy prosumption. In Belene, the low-income level related to local and regional economic underdevelopment and high unemployment rate supports continued use of cheap fuels like coal and halts citizens' investment in renewable energy. In Berlin, the recent financial support for solar balcony modules provides a valuable opportunity for people with less economic means; and the CAL provided knowledge and information, as well as spaces for peer exchanges, so that the barrier of insufficient financial capital, as well as the lack of skills and competencies, can be overcome. Depending on the country and context, regulatory, administrative barriers and institutional arrangements could hinder deeper citizen participation in energy production. Paying closer attention to institutional conditions for renewable energy production is an enabler, as is the need to help people finance such investments, which involves not only access to capital, but also access to space, and the skills and competencies to engage in such a process.

### **Energy citizenship practices related to political participation**

Political participation in the energy transition is a vibrant force for social change. However, more individualized and depoliticized understandings around social change prevail in most segments of society; they also manifest in the CALs, where participants demonstrate higher levels of individualized participation, concentrated on efforts in the private sphere (except for Berlin and Geneva, where emphasis was deliberately placed on collective actions). We observe, through an analysis of the data gathered at the CAL, a widespread sense of powerlessness – the feeling that ordinary citizens have very limited power and agency to affect political ambitions and actions in relation to energy and climate – fueled by political impasse, institutional distrust and climate fatalism. Survey results also illuminate these sentiments: one third of the participants had the general impression that the government is not doing enough to guarantee access to affordable and clean energy; only 36% trust that the government will help their country to transition to sustainable energy in the near future, and 59% of the participants believe that the environmental taxes were not used properly (Figure 15). Feelings of powerlessness and low levels of perceived efficacy for political actions were conveyed by participants in Bulgaria, Italy, Türkiye and (rural) Norway. In the case of Switzerland, a country with a semi direct democracy and high levels of political trust, citizens tend to perceive greater efficacy of political participation. CAL participants in Geneva stressed the significance of keeping alive the direct democracy, by engaging in local politics, and forming and supporting popular initiatives (unlike most other

countries where the CALs took place, Swiss citizens are able to propose votes on specific issues themselves, which can be done via a popular initiative or an optional referendum). The stronger sense of agency in the Geneva CAL might also relate to the fact that participants belong to the well-educated, middle and upper-middle classes, many of whom are already politically active at the local level.

Many forms of political participation are predicated upon one's legal membership in a state which confers political and civil rights. For instance, formal politics (e.g., voting, talking to local council members, engaging with party-related policies) were inaccessible to refugees and migrants, who make up roughly 20% of the participants who joined the CALs. Therefore, participation in community-based, environmental/energy initiatives and organizations are key for migrants to enact their energy citizenship. Yet, the vast majority of these initiatives and organizations tend not to make extra efforts to ensure the diversity and inclusiveness of their activities, further marginalizing people from migratory backgrounds (this was studied in another DIALOGUES report Deliverable 3.3).<sup>4</sup> Engagement in these types of activities also tend to require high levels of cultural capital, which becomes a barrier to low-income groups.

Participants emphasized the lack of time to practice energy citizenship beyond the households, to participate in energy production and energy politics (discussed in Berlin, Geneva and Norway CALs). Current five-day working week, plus care work for children and other family members, can crowd out time for civic engagement. Therefore, a number of participants envision work time reduction and voluntary simplicity in their future imaginaries to allow more time and mental space for political engagement. Time might be a bigger challenge for women, who tend to spend much more time on care and domestic work. Survey results (Figure 16) show that 66% of the male respondents believed that housework using energy (e.g., cooking, doing laundry, vacuuming) was shared equally among household members, while only 27% of female respondents held the same view; 68% of the women believe that they are mostly or solely responsible for energy-intensive housework at home. However, more men than women were responsible for choosing the energy provider and energy source, this is also true for paying energy bills – implying that men are much more likely to be members of energy communities, and this is indeed the reality throughout European countries. Accordingly, women might be able to play a major role in practicing energy citizenship in the household; but practicing citizenship within the confines of the domestic sphere risks reproducing and entrenching gendered patterns of (unpaid) labor and reaffirms gendered stereotypes around women's place in society. Women and gendered minorities from low-income and/or migratory backgrounds face additional and compounded structural barriers to participation in energy production and politics. Systemic, concerted and targeted efforts must be made to address these structural barriers.

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<sup>4</sup> Deliverable 3.3 analyzed activities of energy communities and energy initiatives in DIALOGUES countries and found that most of them do not make a concerted effort to include marginalized groups, such as women, migrants and people with disabilities (Shejale et al., 2022).

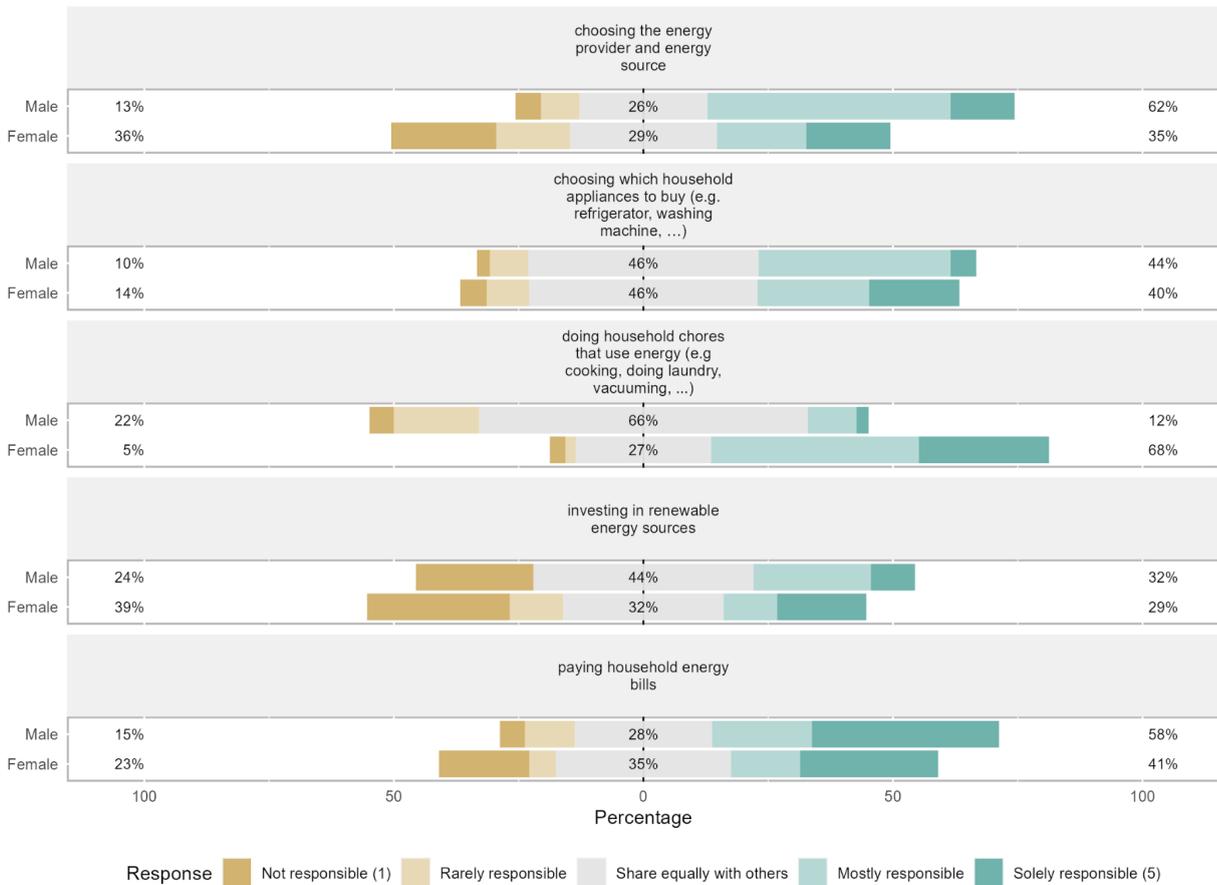


Figure 16: Gendered patterns of labor in relation to energy citizenship

### Space and time for experimenting with any form of energy citizenship

In addition to what has been outlined above, the CALs themselves were a form of experimentation with energy citizenship, as they were spaces where people could discuss and debate on what actions should be prioritized moving forward. As researchers, it is important to acknowledge how we enable or hinder different forms of participation. Clearly, having access to European funding results in having the resources and time to recruit partners and participants, (co-)design and organize meetings, but also provide feedback to participants and engage in ongoing communications. This also requires certain skills and competencies, such as organizational and project management skills. In some instances, it was the research team that provided meeting spaces that may not have otherwise been available to citizens. In other cases, space was provided by municipalities. Either way, having access to something as mundane as a space to meet is essential to fostering dialogue and ultimately energy citizenship practices.

Furthermore, CALs involved discussions, debates and deliberations, which took different starting points: in some instances, research teams and partners had brought with them certain meanings and understandings around energy citizenship (e.g., Geneva, Berlin, Overhalla and Oppdal); in other instances, research teams deliberately avoided bringing in meanings, to better understand how people relate to energy in their daily lives (e.g., Rome, Città di Castello, Bulgaria and Türkiye). In Geneva, researchers and partners (citizen

collectives) brought in the idea that energy citizenship should focus on collective actions, and much of the activities originally planned were oriented toward collective action. However, over the course of the CAL, participants insisted that micro actions also matter; and additional activities were planned around this, as proposed by the participants. In Berlin, research team and partners came into the CAL with the normative goal of enhancing diversity in energy cooperatives; in Overhalla, smaller houses were introduced as a desirable, energy-efficient dwelling, and in Oppdal, the idea that luxury cabins and secondary vacation homes that are barely occupied throughout the year should not have a place in a sustainable future was discussed. These ideas were confirmed, accepted or contested by participants. This draws attention to how the imaginaries of researchers - on what constitutes energy citizenship, on how social change is brought about - can have an influence on participatory processes.

#### 5.4 Institutional arrangements and policies: barriers and enablers

Each of the CAL teams provided insights on what institutional conditions and policy measures would be useful to further support energy citizenship. Before concluding with a summary of the most promising pathways, we highlight here the main insights concerning institutional arrangements and policies. At a national level, DIALOGUES CAL team members highlighted the following necessary conditions to deepen energy citizenship across all countries:

- Creating, reinforcing or reforming participatory mechanisms that involve all citizens (irrespective of legal citizenship status) in decision-making processes around energy and climate policies.
- Providing subsidies, tax incentives and financial support for ordinary citizens to access investment in renewable energies.
- Supporting the development of skills and competencies for community participation and organizing around the energy transition.

While bridging the information-action gap is a barrier we further discuss below, the research team members also suggested that knowledge on the energy transition needed to be deepened. For example, basic education in schools should cover 1) information on energy consumption and production at a national and regional level, and the different energy sources available. For people to engage in voluntary measures, it is also necessary to offer 2) clear and trustworthy knowledge on different energy efficiency and sufficiency measures, their benefits and costs, evaluation of available technologies on the market, available subsidies and how to obtain them. To move into action, it is also necessary to 3) develop skills and competencies when it comes to participating in renewable energy production, and knowledge on available subsidies and how to obtain them. Another suggestion is to 4) publicize the existence of energy communities and their activities, as well as 5) initiatives, programs and organizations working on the energy transition, and how to participate in them, organized on a centralized platform, with features that allow citizens to interact with energy experts and professionals on more specific topics. Such an effort can be implemented by public authorities, in collaboration with industry and non-for-profit

organizations as partners. And this should be widely promoted in social network sites and traditional media, to ensure that communication reaches all segments of the population.

However, providing information is not sufficient: a human-centered approach that allows face-to-face interactions is equally important, as well as dialogue. Spaces that bring people together, such as workshops, forums, or a citizen action lab, create spaces where people can learn about a variety of topics and get the help they need. Further, the research team identified the need to have 6) additional private and public subsidies for low- and middle-income households for investments in energy efficiency and energy production, with detailed guidance and instructions for their obtainment. To move from ideas to action, they also recommend 7) more proactive actions from the municipality and state to *directly* support citizen action in the energy transition, with different forms of assistance provided to tenants and owners, but also citizen collectives. Initiatives that give more agency to people can also be supported, such as 8) the possibility for citizens to become ambassadors in their communities and provide peer to peer counseling on energy and heating topics.

## 6. Conclusion: Pathways to inclusive energy citizenship

CALs have proven to be an effective tool for stimulating public reflection, discussion and debates around energy, and motivating and inspiring novel citizenship practices for the energy transition. Our findings demonstrate that there are different ways of engaging as energy citizens: 1) through energy consumption measures that are oriented towards efficiency and/or sufficiency, 2) through renewable energy production, and 3) through more political forms of action. The CALs were a space of experimentation for citizens to explore these different means. Regardless of the form that energy citizenship might take, there are common pathways to energy citizenship across countries. Based on insights gleaned from among research teams, partners and citizens, we identify the following key pathways to overcome barriers and support the deepening of energy citizenship.

- **Moving from imaginaries/discourses to practices and experimentation:**

The first pathway validates the CAL as a method, at least when it is interpreted as a more participatory form of engagement, or one that takes place over a sustained period of time and moves from citizens 'being informed' to 'being engaged'. Giving people the opportunity to discuss and deliberate around the energy transition is essential, but also requires that certain resources are fortuitously combined (such as access to space, time to meet, knowledge and skills to engage in debates around energy, and the resources to put ideas into action). Creating and formalizing spaces for citizen engagement is important, and is a way of locking-in broader engagement in the energy transition. To reach those who do not typically engage in energy or sustainability issues, the creation of citizen forums – based on the arbitrary recruitment of civilians to debate and provide recommendations on societal

issues – is one way forward, so long as they are supported by institutions or find an echo in the political sphere.

- **Moving from individual measures to collective action:**

The individual actions that people can take to save energy in the home are well established. What is missing as a pathway to deeper energy citizenship are shared understandings around *collective* forms of energy citizenship. There are several reasons why collective action can be more effective: people feel more capable of taking on major societal challenges when working together, and participating in a group is (for many people, though not all) a fundamental human need. Efforts to experiment with forms of collective action should be promoted. The ability to be heard as citizens at a collective level requires support from varying levels of governance, such as municipalities and national government. To be able to organize requires space, skills, time and other factors, we turn to next.

- **Creating spaces and times for energy citizenship activities:**

How to support energy citizenship also relates to the space and time available for either collective or individual actions. One needs time for organizing, and for getting people on board, and not least, to account for diverse groups of people in the process. Here, work time reduction policies that allow time to be freed up for work in communities is a promising way forward, and one that could lock-in forms of societal engagement. Policies that seek to advance gender parity when it comes to care would also allow for more women to participate equally in the energy transition.

- **Bridging the gap – moving from information to capacity to act:**

For the participants in the CALs, the information-action gap was not very wide when it comes to certain energy issues: people are generally well informed about energy saving measures in the home, for example. But not everyone has the capacity to act on knowledge in the same way. Financial means is one piece of the puzzle, but so are the skills and competencies to take action. Energy saving measures do not always account for social and material differences in the home (e.g., turning off the lights or turning down the heat in a mansion vs tiny apartment), nor for differences in socio-economic status. When it comes to renewable energy specifically, information tends to be complex, opaque and sometimes confusing. Developing knowledge and competencies around renewable energy generation is essential, which also implies deeper knowledge of energy sources and distribution. The availability and accessibility of trustworthy, unbiased, scientific and practical information to guide citizens' participation in the energy transition is lacking, but needs to move beyond traditional mediums (flyers, websites, etc.), to engage more directly with people in meaningful ways (e.g., through citizen debates and discussions, interactive education programs). It is not only information that is needed, but how information can be translated effectively into agency, understood as the capacity to act.

- **Contesting entrenched meanings around ‘more is better’: sufficiency and the good life**

Energy efficiency measures and renewable energy deployment are largely regarded as important parts of the puzzle when it comes to the energy transition. Overall reductions in energy usage are less popular and bring in notions of ‘limits’, ‘boundaries’, ‘maxima and minima’, or ‘corridors’, that are less palatable in a society that – at least in the Northern hemisphere – has equated abundance with prosperity, and frugality with poverty and deprivation. To make energy sufficiency palatable, it is necessary to equate efforts to reduce energy with wellbeing (to live better with less), and to tie such efforts to questions of solidarity and social justice – so that some may not consume in ways that hamper others from living the good life, or human wellbeing for all.



## Annexes

### Bulgaria, Belene – Report of the Citizen Action Lab

#### Part I. Basic Information of the CAL

*In this part, please provide a short summary (max. 500 words) of the objectives, sequence of events, the participants and the data gathered.*

##### 1.1 How were the main objectives of the CAL described to partners and participants?

The Bulgarian Citizen Action Lab (CAL) was a full-day workshop which took place in the small Northern Bulgarian town of Belene on 20 October 2022. The participants were 20 women from Belene and the neighbouring town of Svishtov. In addition, as a follow-up event to the CAL, an online expert stakeholder workshop was held on 16 February 2023 which involved representatives of local, regional and national institutions, civil society and the business sector.

In communicating with partners and the participants in the events, the CAL organisers articulated the primary objectives of the CAL as research-related, namely to understand the role of energy in the participants' lives, their level of acceptance of low-carbon technologies, visions of the energy future of their town and region, and attitudes toward the potential creation of an energy community as a solution to energy poverty and collective energy problems.

##### 1.2 How was the CAL relevant and/or timely for the local context, taking into consideration current events in local and national politics?

The case of Belene is an interesting one to study as there have been conflicting past and present narratives about traditional vs. renewable energy sources in the local energy mix. In the 1980s, a nuclear power plant was constructed in the town's vicinity but never put into exploitation. Nonetheless, beliefs about the alleged benefits and opportunities related to the hypothetical scenario of nuclear energy generation have become embedded into local attitudes toward energy issues. Women have also been involved in the discussions about nuclear energy, including through the local department of the Women in Nuclear Industry Association. In parallel to that, there have been developments related to local production of energy from renewable energy sources. Notably, since 2021, the Municipality of Belene has been implementing a green hydrogen initiative to meet the energy needs of the municipality building.

In addition, the follow-up event to the CAL which aimed to harness the lab's results for the purposes of building local energy citizenship was highly relevant to recent developments in national politics. In January 2023, the European Commission referred Bulgaria to the Court

of Justice for non-transposition of the Renewable Energy Directive (Directive (EU) 2018/2001). Financial sanctions will likely be imposed unless the Bulgarian Government undertakes urgent measures to bring national law in accordance with the Renewable Energy Directive, including by creating the regulatory and administrative conditions that would allow citizens to play an active role in energy generation and consumption. The online expert discussion also unfolded against the background of efforts in energy policy aimed at improving the situation of vulnerable groups, such as in relation to the introduction of a formal definition of energy poverty.

- 1.3 Please describe the sequence of events of the CAL, and list the different types of data that you have collected from each of the events (please refer to Table in Annex). Please also describe the methodological approach you will use to analyze the data collected.

In the framework of the CAL, data were collected from three main sources: 1) the quantitative pre-event survey (which was filled out by all 20 participants); 2) the event activities which allowed for qualitative data-collection; and 3) the post-event survey which was conducted using a semi-structured questionnaire including both closed-ended and open-ended questions (which was completed by 10 of the CAL participants, 7 of whom provided answers to the open-ended questions). No video or audio recordings were made during the lab as not all participants consented to the gathering of such data. Several anonymous photos were taken. Written materials from the group activities are also available, such as photo collages portraying the participants' visions of the energy future of their town and region. Additional qualitative data were collected during the follow-up event: video and audio recordings and notes from the expert discussion; a written response to the discussion questions submitted in advance by one of the participants.

The methodological approach to analysing the quantitative data was based on the pre- and post-CAL surveys for which means and standard errors were computed for the close-ended questions that used Likert scales. Qualitative data were classified into patterns to conclude results.

- 1.4 Who are your partners in the CAL (researchers, representatives from civil society organizations, private enterprises and public authorities) and what were their main roles in the different stages of the CAL? (more elaboration on your experience with CAL partners in Question 4.1 of this reporting template).

The CAL was organised by the Center for the Study of Democracy (CSD) with the support of two local partners – the Association of Danube River Municipalities “Danube” (ADRM)<sup>5</sup> and the Municipality of Belene. ADRM was CSD’s principal partner and supported the CAL’s organisation through the following activities: consultation on the design of the CAL and the follow-up event; review of the pre-event survey questionnaire; assistance in the

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<sup>5</sup> ADRM is an association of local authorities which currently has 34 municipality members. Among other things, ADRM works in the areas of energy and ecology formulating policy options and proposals for regulatory and structural adaptation and supporting key initiatives.

recruitment of participants in the CAL and the follow-up event; logistical support; facilitation during the CAL activities; communication and dissemination of the results of the CAL and the follow-up event at the local and regional level. The support provided by the Municipality of Belene consisted in helping to identify a venue, recruit participants and disseminate the CAL's findings through local media.

- 1.5 How would you evaluate the degree of citizen participation in the CAL? Are citizens/local residents engaged in the CAL beyond that of the "ordinary" participants (e.g. citizens have the power to co-design the events, determine the objective, the focus, and the agenda of the CAL, etc.), and if so, in what ways are they engaged?

The participants were quite active in the group activities which were carried out in the course of the CAL. They were also curious about the pre-event survey and were happy to fill out the survey questionnaire. However, when it came to the post-event survey, the women were far less willing to set aside time to take part in it. None of the CAL participants took part in the follow-up event, though it was communicated to them that the online workshop aimed to disseminate and build upon the lab's findings. This lack of participation appears to be attributable to a low level of interest, work- and care-related commitments, and limited Internet access.

Implementing a co-creation approach in the framework of the CAL proved somewhat challenging. A number of aspects of co-creation, such as having the participants co-design the lab and determine its goals, focus and agenda, were not readily achievable. This is to be attributed to a number of factors. Firstly, communicating with the participants prior to the event was difficult as many did not use email and were only available for brief phone conversations. Thus, the CAL organisers were not able to follow through with the initial plan of carrying out the pre-event survey in advance of the event and using the survey as an opportunity for the participants to express ideas and preferences regarding the lab's objectives, activities and discussion topics. Instead, the pre-event survey had to be conducted on the day, immediately before the opening of the event, which made it difficult to involve the participants in co-designing the CAL. Secondly, many of the women were timid during the CAL activities, especially in the beginning, and seemed to prefer to be given more guidance and direction than to be stimulated to make decisions related to co-creation. Despite these challenges, some important requirements of co-creation were met, for example the participants were able to influence the focus of some of the group activities, including the final role-play exercise. What is more, the design of the follow-up event was developed on the basis of the findings of the CAL, particularly regarding the changes needed in order to foster citizen involvement in the energy transition.

- 1.6 What are the socio-demographic characteristics of the participants, in terms of age, gender, socio-economic status, etc. (please feel free to add a summary table in the annexes)?

The Bulgarian lab is the only CAL organised in the framework of DIALOGUES that involved only women as participants. Importantly, the participants differed in terms of other social characteristics, such as age, socio-economic status, disability and ethnicity. On the one hand, the CAL organisers aimed to arrive at a diverse group of participants. On the other hand, it was sought to capture potential intersectional vulnerabilities related to gender and other types of social identities.

## Part II. Understandings of Energy Citizenship

*This part presents the various understandings of energy citizenship (what it means, what activities does it involve and at what scale/level) as put forward by the participants of the CALs. You are also encouraged to summarize expressions of rights, duties/responsibilities, understandings of membership and communities, and ways of participation – all of which are central in the conception of active citizenship – that have been articulated through the CALs.*

*For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. If you made audio registrations of sessions or parts of them (as we recommended), please use direct quotations to support your responses.*

- 2.1 How did participants perceive energy in their everyday life (e.g., heating and illuminating the home, fueling the car, etc.) and what about energy concerns them the most?

The results of the group discussions and activities show that, overall, the participants feel engaged with energy-related topics. The majority of the participants appear to perceive energy as a necessity of life which requires purposive management due to the increasing energy prices. When it comes to energy, virtually all women who took part in the CAL are primarily concerned about consumption, prices and bills. Availability and affordability of energy for domestic uses, in particular heating and cooling, cooking and cleaning, and illuminating the home, are of main concern. Next in turn are energy use for other everyday (non-domestic) purposes, such as transport, and industrial energy use which affects entrepreneurship as well as the price level of key commodities, such as food.

- 2.2 What were the main understandings of energy citizenship that emerged out of the CAL?

The results of the CAL discussions and activities allow for several observations to be made regarding the forms of energy citizenship in which the participants tend to engage in their everyday lives. The data show that main internal manifestations of energy citizenship include concern about the rising prices of energy and the level of energy consumption in one's household. Some women also shared that their engagement with energy-related topics goes hand in hand with an interest in environmental, climate and biodiversity issues.

In regard to the external manifestations of energy citizenship, these mainly include participation in informal conversations on energy-related questions and investment of financial resources and time in energy efficiency measures at the household level. All participants shared that they talk about energy with their family, friends, neighbours and colleagues. The topics that are typically discussed are energy prices, consumption, and bills. Beyond such everyday conversations, few women stated that they take part in more formal discussions or debates about energy. When it comes to energy efficiency, all participants said that they make efforts to reduce their energy use. The findings of the CAL discussions point to the conclusion that the primary motivations behind efforts to consume less energy are financial. Only a few mentions were made of environmental concerns as a driver of energy saving behaviour. The most popular energy conservation measures, which according to the participants are implemented in nearly every household in their town, are purchasing energy efficient appliances and heating only some rooms in the home in wintertime. In addition, some participants indicated that they had benefited from building renovation programmes implemented by their municipality. In order to reduce their monthly energy bills, many of the women shared that they and their families try to run household appliances at night (when the tariff is lower). In addition, prosumerism also emerged in the CAL discussions as a relevant, albeit less widespread, form of participation in the energy system and the energy transition. Several women said that they had researched opportunities for energy self-generation or taken actions to become prosumers, in particular by investing in a home solar electric or thermal system.

When it comes to the scale of involvement, the data collected in the context of the group discussions and activities reveal that the participants provided more examples of individual-level actions related to energy citizenship than of collective-level engagement. Disconcertingly, few participants mentioned that they had taken part in collective initiatives related to energy. The only exception seemed to be measures related to enhancing energy efficiency in residential buildings which had been undertaken by some of the participants in collaboration with their neighbours.

These findings are confirmed by the results from the post- and pre-CAL surveys summarized in the table below: by far the most common activities mentioned by the participants in both surveys are considering energy efficiency when buying home appliances and trying to reduce the energy consumption of their households. Still, it is reassuring that some participants in the post-CAL surveys tend to consider energy and climate issues when voting for a political party or candidate (mean 2.9 on a scale from 1 to 5, where 1 is “Never” and 5 is “Very often”).

<b>Do you currently participate in any of the following activities? (1-5 scale, where 1 is “Never” and 5 is “Very often”)</b>	<b>Post-CAL: Mean (SE)</b>	<b>Pre-CAL: Mean (SE)</b>
I consider energy efficiency when buying home appliances.	4.2 (0.5)	4.4 (0.3)
I try to reduce the energy consumption of my household.	4.1 (0.4)	3.9 (0.2)

I engage in conversations about energy and climate with friends and/or families.	3.2 (0.4)	3.2 (0.2)
I consider energy and climate issues when voting for a political party or candidate.	2.9 (0.4)	N/A
I keep myself informed about energy and climate issues.	2.7 (0.3)	3.3 (0.2)
I participate in activities of environmental groups or voluntary associations (by attending meetings and events, contributing financially, spreading information, etc.).	2 (0.4)	N/A
I participate in energy-saving initiatives in my community / town / school.	2 (0.2)	2.1 (0.3)
I engage in social media discussions about energy and climate issues.	1.6 (0.2)	1.8 (0.3)
I invest in energy production / installation of renewable energy.	1.4 (0.2)	1.8 (0.4)
I participate in activities against the rise of energy costs (e.g., petitions, demonstrations).	1.4 (0.2)	N/A
I participate in public demonstrations on climate change.	1 (0)	N/A
I have contested the installation of renewable energy projects or infrastructure, including solar, wind, thermal, micro-hydro projects.	1 (0)	N/A

### 2.3 What did participants identify as their rights and responsibilities as energy citizens (i.e., did they express a sense of entitlement or a sense of responsibility, in what context)?

During the groups discussions and activities, a number of participants explicitly stated or tacitly suggested that citizens – themselves included – bear a responsibility for energy, environmental and climate outcomes. By contrast, no solid conclusions may be drawn from the discussion data as to whether the women who took part in the CAL perceive themselves (or citizens more generally) as rights-holders or if they feel entitled to be provided with the necessary conditions to take active part in the energy system and to have a say in political decision-making on energy matters. It is worth noting that one participant seemed to think that citizens should not be expected to be involved in the making of significant decisions about energy and that such decisions should be the prerogative of mandated expert entities, such as the Water and Energy Regulatory Commission.

Results from the post- and pre-CAL surveys tend to be ambiguous with participants showing somewhat higher tendency to agree that institutions (both public and private) should be responsible for reducing energy use and accelerating the energy transition. Nevertheless, participants in the pre-CAL survey tend to also agree that individual citizens should be responsible as well – the mean score there, however, dropped from 3.6 to 3.1 in

the post-CAL survey (where 5 is the highest level of agreement with the statement). Similarly, agreement that people in urban areas should bear more responsibility dropped from 3.3 to 2.7 between the pre-CAL and post-CAL surveys.

<b>To what extent do you agree with the following statements about responsibilities? (1-5 scale, where 1 is "Strongly disagree" and 5 is "Strongly agree")</b>	<b>Post-CAL: Mean (SE)</b>	<b>Pre-CAL: Mean (SE)</b>
Public institutions (national/federal, regional and local government) should be mainly responsible for reducing energy use and accelerating the energy transition.	3.6 (0.3)	3.7 (0.2)
Private institutions (private enterprises, transnational corporations) should be mainly responsible for reducing energy use and accelerating the energy transition.	3.3 (0.3)	3.6 (0.2)
Individual citizens should be mainly responsible for reducing energy use and accelerating the energy transition.	3.1 (0.3)	3.6 (0.2)
People with higher incomes should bear more responsibility for reducing energy use.	3 (0.4)	3 (0.3)
People from high-income countries should bear more responsibility for reducing energy use.	3 (0.4)	3.2 (0.3)
People living in urban areas should bear more responsibility for reducing energy use.	2.7 (0.3)	3.3 (0.3)

2.4 How did participants define their own communities (e.g., do participants feel a sense of belongingness and/or responsibility toward a community, city or country?) What did they understand as the appropriate scale of action (local/regional/national/cross-national)?

Hardly any conclusive findings emerged from the CAL discussions and activities regarding the question whether and to what extent the participants feel a sense of belonging or responsibility toward a community, a city or a country, or how they define the communities they belong to. Nonetheless, a number of women demonstrated an awareness of some of the collective benefits associated with the deployment of RES technologies, including in relation to achieving national energy self-sufficiency and overcoming Bulgaria's dependence on energy imports, particularly of Russian oil and gas. That several participants brought up the problematic linkages between energy matters, on the one side, and political and geopolitical issues of national and EU-wide concern, on the other side, may be an indicator of a sense of belonging to the country and to the EU more broadly.

2.5 What were the notions of justice – if any – put forward by participants (i.e., did they identify any elements of injustice in the energy transition, and how did they relate to

a fair, just and inclusive energy transition)? Please pay special attention to ways in which factors of discrimination like sexism, racism, classism and others were brought into the conversation. Were there specific barriers mentioned which relate to these forms of oppression in society?

This question presupposes providing additional information about the social profiles of the participants. As mentioned in the introduction of the report, the women who took part in the CAL come from diverse backgrounds. In terms of occupation, there were retirees (in Bulgaria retired persons are a social group which is generally economically vulnerable), entrepreneurs, women employed in low-paid jobs, local municipal officials, and professionals working in the health, tourism and creative sectors. The participants also differed in their educational levels as among them there were women with secondary and tertiary education. In terms of economic vulnerability, it is important to note that, while none of the women experience extreme poverty, the geographical context may be considered marginal in and of itself given the low income and high unemployment rates in the town of Belene and the Northwestern region more generally. Two of the participants indicated that they had a disability.

Despite the diversity of the group of participants, in the course of the CAL discussions and activities, no mentions were made of any experiences of discrimination along the lines of gender, race, ethnicity, religion, class, age, disability, etc. Furthermore, there is no available data from the discussions regarding the participants' understandings of justice and fairness in the context of energy governance and the energy transition.

Some participants shared their visions of the just energy transition in responding to one of the open-ended questions included in the post-event survey questionnaire which asked about what the just energy transition should look like. These visions focus on justice in the energy transition as: a necessary aspect of the energy transition<sup>6</sup>; compensation for those groups that are negatively affected by the energy transition<sup>7</sup>; positive environmental outcomes, including improved air quality<sup>8</sup>; ubiquity (e.g. all citizens having access to RES systems<sup>9</sup>; consideration of the needs of various groups of citizens, including persons with disabilities<sup>10</sup>; equal involvement of the state and the private sector.<sup>11</sup> Two of the seven participants who responded to the open-ended questions stated that they do not know how to answer this specific question.<sup>12</sup>

The quantitative data demonstrate that most of the participants who took part in both the pre- and post-CAL surveys tend to agree that “every citizen should be able to produce and own a share of the energy they need”, and that “every citizen should be able to participate in decision making processes with regard to the energy transition”. Understanding about

<sup>6</sup> RE6(BG).

<sup>7</sup> RE2(DP).

<sup>8</sup> RE3(ER).

<sup>9</sup> RE4(MH).

<sup>10</sup> Ibid.

<sup>11</sup> RE7(LD).

<sup>12</sup> RE1(BK), RE5(TSG)

whether “everyone bears the same burden of the costs associated with the energy transition” is somewhat mixed: some of the participants agree, some disagree with this. Finally, most of the participants disagree with the statement that “everyone benefits equally from the transition to more sustainable energy sources in the country” which indicates relatively high levels of perceived injustice. Notably, the mean score declines in the post-CAL survey (2.4, compared to 2.8 agreement score in the pre-CAL) which indicates there is no improvement since the CAL event or there is possibly even potential decline in the way the justice aspect of the energy transition is perceived by the women who took part in the CAL.

<b>To what extent do you agree with the following statements about the fairness in energy transition (1-5 scale, where 1 is “Strongly disagree” and 5 is “Strongly agree”)</b>	<b>Post-CAL: Mean (SE)</b>	<b>Pre-CAL: Mean (SE)</b>
Every citizen should be able to produce and own a share of the energy they need.	4.2 (0.2)	4.2 (0.2)
Every citizen should be able to participate in decision making processes with regard to the energy transition.	4 (0.1)	4.2 (0.2)
Everyone bears the same burden for the costs associated with the energy transition.	3 (0.4)	2.9 (0.2)
Everyone benefits equally from the transition to more sustainable energy sources in my country (e.g. same opportunities for “green” jobs, equal access to renewable energy).	2.4 (0.3)	2.8 (0.3)

### **Part III. Pathways to Energy Citizenship**

*Given the different local contexts across the eight countries, each CAL might reveal unique dynamics in the pathways to energy citizenship. This part presents the theories of change used in the CAL, ways in which the CAL engaged, enabled or facilitated participants to act as energy citizens. You are also invited to reflect upon other factors, such as more individual and structural ones, that have come into play in the processes of activating energy citizenship.*

*For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. Please use direct quotations to support your responses.*

- 3.1** What was the theory of change that you assumed in the design of the CAL? In other words, why should the CAL work as intended, to achieve desirable outcomes for deepening energy citizenship? (explain your assumptions – if X has been done through the CAL, then Y would be the anticipated results.)

The design of the Bulgarian lab has been informed by the understanding that the CAL is first and foremost a research exercise and that its primary objectives therefore relate to collecting data that could shed light on the participants' conceptions and attitudes towards energy and energy-related choices, the low-carbon energy transition and energy justice. Thus, the objective of enacting or facilitating attitudinal and behavioural changes so as to deepen the participants' experiences of energy citizenship has been approached as secondary to research. This is the reason why no elaborate theory of change was formulated at the stage of design. Nonetheless, the CAL organisers did rely on several assumptions about how the activities developed in the CAL could contribute to bringing about positive change in terms of encouraging energy citizenship. It was assumed that by being involved in energy-related group discussions and activities the participants would acquire new knowledge about the various aspects of the sustainable energy transition and experience in deliberating on energy topics, solving collective energy problems, envisioning energy future(s), and (hypothetically) designing and kick-starting a collective energy initiative. Such experience would contribute to honing skills related to the individual and collective exercise of energy citizenship. In addition, the CAL's design was underpinned by the assumption that the lab would produce spill-over effects in several important ways. Firstly, the participants, being of diverse backgrounds, would communicate their impressions and, potentially, newly formed intentions in their respective households and various communities. Second, the dissemination of the CAL – including through the follow-up event – would contribute to popularising co-creation approaches and formats that encourage citizen involvement in energy-related deliberations.

3.2 In which capacities/roles were the participants engaged (i.e., as energy consumers, producers and political subjects participating in decision-making processes) in the CAL, through what specific activities?

The CAL activities sought to involve the participants in various actual and potential roles and capacities. In the course of the group discussions – which focused on engagement with energy-related topics and attitudes towards low-carbon technologies – the women were involved in their capacity as citizens deliberating on issues of public importance, energy consumers, potential prosumers, and research participants. In the two group exercises, the participants were engaged as community members discussing energy issues and energy transition opportunities in their town and neighbourhood/residential building, political subjects involved in (hypothetical) decision-making processes, energy consumers and potential prosumers in an energy community, co-creators of the research process and research participants. These group exercises revolved around envisioning local and regional energy future(s) and playing out a hypothetical scenario about a collective energy problem which could be addressed through the creation of an energy community.

3.3 What sense of agency (understood as the capacity to act on change) was observed during the CAL? What changes in actions did the participants commit to during and following the CAL activities? (e.g. reduce energy usage, participate in energy production, influence other citizens, join collective actions, etc.)?

One of the key findings of the CAL discussions is that the majority of participants expressed a somewhat limited sense of agency and feelings of disempowerment when it comes to opportunities for influencing energy governance or the making of macro-level energy decisions, such as regarding price levels or national energy exports and imports. When asked whether they think citizens – including themselves – have any power to influence macro-level energy decisions and outcomes, the women nearly unanimously agreed that they do not. It was repeatedly emphasised that neither local/regional governance institutions nor the business sector provide any room for citizen participation or consultation in decision-making on energy questions. In general, the women communicated their agency in regard to energy-related choices mainly as a capacity to make certain adjustments in their individual and domestic energy consumption within an energy system framework which they do not have the power to shape.

The qualitative data do not indicate any explicit commitments by the participants to introducing behavioural changes. Nonetheless, the responses to the open-ended questions included in the post-event survey questionnaire show that several participants feel that the CAL has increased their capacity and readiness to implement such changes, for instance to undertake actions related to reducing energy use, increasing energy efficiency, and participating in transformations related to the energy transition<sup>13</sup> (for more details, see 3.5 and 3.6).

3.4 What factors (from the more individual to the more structural) might have enabled or hindered the participants' engagement as energy citizens? For example, at the individual level, not feeling obligated to act, not knowing how to act, wanting to act but lacking resources to act (economic capital, land, time, etc.); and more structurally, social norms, legal and regulatory constraints, among others.

The qualitative data from the CAL discussions and activities provide valuable insights into the factors that foster or hinder the emergence, exercise and deepening of energy citizenship. Factors that presently operate as drivers encouraging the internal and external manifestations of energy citizenship are: the energy self-sufficiency and high investment returns associated with RES systems; and the availability of positive examples in the community. For instance, a number of participants repeatedly mentioned that examples of neighbours and other persons in their communities installing RES systems for domestic or business purposes had aroused their curiosity about RES, and that they were open to learning from the experience of their fellow town inhabitants. In addition, there seems to be a positive correlation between entrepreneurial experience or inclinations, on the one side, and readiness to speak up or take up initiative on energy-related topics, on the other.

When it comes to the factors that obstruct energy citizenship, the majority of the participants highlighted as critical impediments to the uptake of RES by citizens in their municipality and region the following: unavailability of financial capital; lack of information about the advantages of RES systems and the practicalities of their deployment; and legal,

<sup>13</sup> RE2(DP), RE3(ER), RE6(BG), RE7(LD).

regulatory and administrative barriers and deficiencies. More specifically, economic factors, such as low income level which is related to local and regional economic underdevelopment and high unemployment levels, emerged as critical obstacles to prosumerism. The women who took part in the CAL repeatedly stressed that RES systems are expensive and that the income level in their communities is below the national average which would preclude citizens from investing in RES installations. The participants suggested that limited financial resources may also restrict the uptake of RES by local authorities and businesses. For instance, some participants contended that financial and investment reasons are to explain why a hydrothermal spring available on the territory of the Municipality of Belene remains untapped as a renewable source of energy. At the same time, the women were unanimous that their fellow town inhabitants' readiness to employ RES technologies depends on the potential of such systems to lead to reduced energy bills. Some participants also highlighted that the main reason why the majority of the local people still largely rely on burning coal and firewood for home heating in winter is that those fuels are the most affordable. Most participants in the CAL shared that they do have air conditioning, however, few of them rely solely on electricity for home heating because of the "excessive" price of electricity.

In general, when it comes to individual-level barriers to RES uptake, the participants pointed out factors that do not have to do with their interest in or willingness to be engaged as energy citizens. Rather, they stressed their perceived lack of capacity to engage in such actions because of external realities.

#### 3.4.1 What are the enabling/hindering factors related to gender? Please also note specific experiences of discrimination shared by the participants.

In the course of the CAL discussions and activities, the participants made few mentions of barriers to inclusive energy citizenship that are specifically related either to gender, or to intersections between gender and other social characteristics (e.g. disability, ethnicity, socio-economic status, etc.). In response to a question posed during the discussions whether they feel that women and men face different obstacles to meaningfully participating in the energy system and the energy transition, including by having a say in energy-related decisions, the participants responded in the negative. No experiences of gender-based or intersectional discrimination were shared during the group discussions and activities.

In addition, in responding to one of the open-ended questions in the post-event survey questionnaire which asked whether they think the gender of a citizen affects or relates to his or her ability to actively engage with energy topics, six of the seven participants who provided an answer to this question said that gender is not relevant. One participant shared that, in her opinion, energy issues are relevant to women as the latter are typically the ones to run the household and are more engaged in energy efficiency issues than men.<sup>14</sup>

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<sup>14</sup> RE1(BK).

- 3.5 What knowledge, skills and competences have been introduced to the participants through the CALs (e.g., related to changing energy consumption and energy production, and participating in collective political actions)? Did the participants consider the knowledge, skills and competences they were introduced to relevant to their lives? If not, how so?

In the course of the lab, the participants were introduced to knowledge about key terms, such as the sustainable energy transition, energy citizenship and energy democracy (as those have been conceptualised in the framework of DIALOGUES). Information was provided about the main aspects and requirements of the energy transition as well as the dimensions and various possible manifestations of energy citizenship. An overview was also given of the different types of low-carbon technologies and their advantages and shortcomings. The group discussions and exercises aimed to contribute to developing or honing skills and competences related to deliberating on energy topics, envisioning energy local and regional future(s), solving collective energy problems, participating in political decision-making about energy issues, and designing and kick-starting a collective energy initiative.

On the basis of the qualitative data gathered during the discussions, it is difficult to gauge the extent to which the participants consider these skills and knowledge relevant to their lives. Nevertheless, in the group activity focusing on social acceptance of low-carbon technologies it clearly emerged that the participants only deemed some of these types of technologies applicable to the local and regional context, for example, solar photovoltaic and thermal systems and biomass systems. Other technologies were regarded as irrelevant (e.g. carbon capture and storage) or much less relevant (e.g. wind turbines). Interestingly, while one group thought that there was considerable potential for deploying green hydrogen systems and geothermal systems in the town and region, the other group did not see a place for these technologies in the future local and regional energy mix.

The data from the open-ended questions included in the post-event survey questionnaire provide some insights as to what knowledge and skills the participants feel they have gained and how relevant to their lives they find those to be. Several participants said that they had learned new things<sup>15</sup>, in particular in regard to household energy use, the specificities related to RES deployment in Bulgaria, good examples of RECs in other countries, and were of the view that the theme of the event was “topical”<sup>16</sup>, and that the information they acquired was “useful” and “necessary”.<sup>17</sup> Interestingly, one participant shared that the knowledge she gained enabled her to have a clearer understanding of the extent to which she and the other members of her household had been able to implement measures aimed at improving energy efficiency and reducing greenhouse gas emissions.<sup>18</sup> It is notable, however, that none of the participants who responded to the open-ended questions mentioned anything about acquisition or honing of skills as a result of the CAL.

<sup>15</sup> RE1(BK), RE2(DP), RE3(ER), RE6(BK).

<sup>16</sup> RE2(DP).

<sup>17</sup> RE3(ER).

<sup>18</sup> RE4(MH).

The analysis of the quantitative data from the post-CAL survey shows that the participants strongly feel that they “received new information and knowledge on the energy transition in my city/region” (mean 4.6 where 5 means “strongly agree”).

Having participated in the experience, to what extent do you agree with the following statements? (1-5 scale, where 1 is “Strongly disagree” and 5 is “Strongly agree”)	Post-CAL: Mean (SE)	Pre-CAL: Mean (SE)
I received new information and knowledge on the energy transition in my city/region.	4.6 (0.2)	NA

3.6 What are the outcomes and impacts of the CAL? And did the CAL have any wider impacts, societal, environmental, economic, etc., beyond the group that was involved as organizers and participants? Please provide a short summary.

The answers to the open-ended questions in the post-event survey questionnaire show that, according to the participants, an important outcome of the CAL is their acquisition of new knowledge on issues related to energy and the energy transition.<sup>19</sup> One participant shared that her taking part in the event had had a positive impact on her life in terms of encouraging her efforts directed at energy efficiency.<sup>20</sup>

The quantitative data analysis from the post-CAL survey demonstrates that there is wide agreement among the participants that “their participation led to new understandings of how they can engage in an energy transition” (mean score 4) and that they “feel empowered by their experience, and that they can be part of the solution” (mean 3.8). The wider impact of the CAL event is perceived less enthusiastically even if on average participants tend to agree that:

- “they discuss with others, such as friends, family, or colleagues, in person and/or on social media about participating in the energy transition”;
- “they feel that the outcomes of this experience have an influence on decision makers”;
- “they have concrete ideas on how to take action in my community, for an energy transition”.

Average scores for the three statements above are between 3.4 and 3.5 with some variation in answers between the participants especially for the last statement about having concrete ideas.

Having participated in the experience, to what extent do you agree with the following statements? (1-5 scale, where 1 is “Strongly disagree” and 5 is “Strongly agree”)	Post-CAL: Mean (SE)	Pre-CAL: Mean (SE)
My participation led to new understandings of how I can engage in an energy transition.	4 (0.1)	NA

<sup>19</sup> RE1(BK), RE2(DP), RE3(ER), RE6(BK).

<sup>20</sup> RE3(ER).

I feel empowered by my experience, and that I can be part of the solution.	3.8 (0.4)	NA
I discuss with others, such as friends, family, or colleagues, in person and/or on social media about participating in the energy transition.	3.5 (0.3)	NA
I feel that the outcomes of this experience have an influence on decision makers.	3.5 (0.3)	NA
I have concrete ideas on how to take action in my community, for an energy transition.	3.4 (0.5)	NA

It is also important to highlight some potential longer-term impacts of the CAL which, for the time being, are not yet observable. Through engaging the participants in a hypothetical creation of an energy community, the lab may have provided a conceptual field for a possible future initiation and implementation of such an undertaking. The latter could be the long-term outcome of the CAL beyond the project duration, and serve as a pilot for launching similar energy community projects in other municipalities and as a basis for developing a nation-wide programme for supporting energy communities.

What is more, the findings and lessons learned in the context of the CAL could potentially feed into specific recommendations to inform policy efforts in (at least) two important directions: 1) transposing and implementing the Renewable Energy Directive in Bulgaria, in particular articulating the definition and provisions on prosumers and energy communities; and 2) developing an energy poverty strategy which is envisioned as a separate reform in the National Recovery and Resilience Plan (NRRP). In regard to the energy poverty strategy more specifically, the lessons learned could be incorporated into the document outlining how energy-poor households should be supported through the municipalities as a special target group of vulnerable consumers and what kind of specific incentives for energy conservation (in addition to consumer behavior shifts and reduction of energy bills) have to be created to make these households direct participants in the energy transition.

### 3.7 Overall, how can citizens' participation in the energy transition be better supported and by whom, in the context of where the CAL took place?

National experts are convinced that local authorities have the potential – and the responsibility - to play a key role in supporting local energy citizenship.<sup>21</sup> On the basis of the results of the CAL and the follow-up event, the following recommendations can be made to local authorities about some concrete actions and measures which they could undertake with a view to fostering citizen involvement in the energy transition:

- ❖ In their local energy strategies, assess the potential for citizen engagement in energy-related matters and citizen contribution to achieving the goals identified in the local energy strategy, including through independent energy production. Create

<sup>21</sup> Results from the follow-up event to the CAL and the expert interviews carried out in T5.2.

a local plan of action for encouraging inclusive participation of citizens in energy-related issues of local relevance.

- ❖ Design a detailed action plan for jumpstarting investments in small-scale renewable energy plants which would include a piloting phase for a new support scheme in several municipalities. As a next step, a nation-wide programme should be created that would build upon lessons learned in the context of energy efficiency investment initiatives.
- ❖ Seek opportunities to participate as active partners in public-private initiatives for the development of renewable energy cooperatives to increase energy self-sufficiency in small communities.
- ❖ Develop a “one-stop shop” providing information and assistance regarding the establishment of energy community projects.
- ❖ Communicating information about positive local examples of RES uptake and successful energy initiatives in a timely and engaging manner. Presently, there appears to be a need for more coordinated efforts in this regard – for instance, that few of the CAL participants were aware of the green hydrogen project of the Belene Municipality might in part be explained by insufficient dissemination of relevant information, including in the media.
- ❖ Include community-based criteria in the local public procurement of energy services in a way that enables community projects to benefit from targeted support schemes.
- ❖ Seeks ways to contribute to mobilising investments and involving vulnerable groups through special public procurement schemes.
- ❖ Through their participation in regional and national fora, such as associations of cities and municipalities, seek ways to encourage the implementation of national and regional measures aimed at fostering citizen participation in energy-related issues. Ensure citizen representation in energy-related discussions at such fora.

In addition, the qualitative data from the CAL discussions regarding the factors affecting energy citizenship point to the conclusion that, in order for energy citizenship to be encouraged among local people, critical structural impediments need to be addressed, in particular local and regional economic underdevelopment. Furthermore, there is an urgent need for systemic coordinated efforts at the national level in the direction of, inter alia: designing a national energy citizenship strategy; creating a comprehensive enabling framework for energy communities in Bulgaria that is fully aligned with the EU’s Renewable Energy Directive and the upcoming energy poverty strategy and provides regulatory certainty for prosumers and RECs; implementing a nation-wide information campaign about opportunities for citizen-led energy projects; and preventing Distribution System Operators (DSOs) from arbitrarily changing the administrative procedures for trading excess electricity with the grid, etc.

## Part IV. CAL Processes and Quality of Participation

*CAL, as a form of citizen engagement in itself, must take into account the inclusiveness and diversity (in terms of gender, socio-economic background, migratory status and etc.), as well as the quality of participation in its activities. This part invites the CAL organizing team to reflect upon the inclusive and participatory design, and their effects on the outcomes of the CAL.*

*For each question, if you have gathered information from the CAL participants that can support your claim, please note the source of data and use direct quotes when applicable.*

4.1 What was your overall experience working with your partners? Did the roles of partners evolve, possibly also differently from what you agreed upon and reported in the Implementation Document? At which stage, and with what tasks were they most engaged, and where did they lose interest (if that was the case)?

4.1.1 In a number of CALs, some of the implementation partners are identical with our target group for policy advice, i.e. civil servants working in local governments or public institutions. How they handled their roles and possible evolutions in their understanding of the CAL while they assisted in the implementation deserve particular attention. Please pay extra attention to this point while you are answering this above question.

The representatives of ADRM, CSD's principal partner, were very dedicated in their provision of support for the design, organisation and implementation of the Bulgarian CAL. In particular, they were most active in tasks which related to communicating and coordinating with local stakeholders, such as: assisting in the recruitment of participants in the lab and the follow-up event; communicating with the Municipality of Belene; providing logistical support; communicating and disseminating the results of the CAL and the follow-up event at the local and regional levels. In addition, they made a valuable contribution to the design of the CAL. It is observable that ADRM's representatives showed a genuine interest in the topic and a commitment to helping to encourage local people's involvement in energy-related matters by means of the lab. Nevertheless, ADRM's professionals were not energy experts and their unsureness about their competences in regard to energy issues made them less willing to assist in tasks which, in their view, required substantive knowledge and expertise. For example, they were somewhat timid in their facilitation of the CAL group discussions and activities as well as of the expert discussions that took place during the follow-up event.

When it comes to CSD's other partner in the organisation of the lab, the Municipality of Belene, its engagement was coordinated by ADRM and consisted in helping to recruit participants, identify a venue, and communicate the results of the CAL though local media. It is the impression of the CAL organisers that the Municipality of Belene did show commitment to the event. For example, the Mayor of Belene made an opening statement at the CAL, two municipal officials took part in the lab activities, and a representative of the Municipality was present at the follow-up event. Furthermore, the CAL's findings were

disseminated through the Municipality's official communication channels. Nonetheless, the Belene Municipality's engagement could have been more substantial. It is notable that the municipal experts' actual level of participation in the lab and the online expert workshop was minimal. Moreover, the local authorities' interest noticeably declined after the CAL was held and little contribution was made to the discussions in the follow-up expert stakeholder workshop. This is disconcerting as local municipalities were envisioned as key members of the event's target group. Ideally, in the course of the follow-up event, local authorities and other key policy stakeholders should have collaboratively developed policy recommendations for innovative ways to encourage local energy citizenship. Thus, local municipalities were supposed to be both contributors to the formulation of and a recipient of policy guidance. However, the Municipality of Belene engaged in neither of these two roles and, therefore, it is difficult to interpret its understanding of its responsibility as an agent of change and a target group of policy advice.

#### 4.2 What measures were put in place to ensure the inclusiveness of the CAL (during recruitment and implementation, among participants, invited speakers and the CAL organizing team)? What worked and what didn't work, in your opinion?

The CAL organisers are of the opinion that the selected approach of having gender as a common characteristic of the participants was quite successful in practice in terms of contributing to addressing potential gender-related power dynamics and creating a safe space for the participants to freely exchange ideas. In addition, in order to ensure inclusiveness at the recruitment stage, the CAL organisers relied on the local partners, in particular ADRM, to arrive at a participant sample which would be representative of the female members of the local community. It may be said with confidence that a relatively high level of representativeness was achieved. In addition, members of some of the groups that may be considered hard-to-reach from the perspective of the energy transition in the local context took part in the CAL, such as persons affected by energy poverty, older persons, and people with disabilities. Nonetheless, there remain some important hard-to-reach groups that were not represented at the CAL, in particular women of Roma origin as well as members of the LGBTQI community. Although some local stakeholders who were consulted prior to designing the CAL argued that the Roma minority in Belene was well-integrated<sup>22</sup>, it proved difficult to reach females of a Roma ethnicity during the recruitment. In regard to LGBTQI persons, the traditional character of the local community in Belene appears to be a factor which complicated the involvement of individuals of such a background in the lab.

It is also worth mentioning that, with a view to identifying hard-to-reach groups, CSD's experts attempted to establish collaboration with local NGOs working with vulnerable and/or marginalised communities. However, despite publicly available information about the existence of such NGOs, the CAL organisers were not able to get in contact with them.

So as to achieve inclusiveness during the lab's implementation, the activities and the discussion topics were developed in a way which was intended to contribute to giving all

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<sup>22</sup> Belene Municipality expert who was interviewed.

participants an equal opportunity to engage. Among other things, the CAL organisers strived to settle for straightforward, clear and concrete discussion topics and questions that would not require significant prior knowledge or expertise, and a short information material was shared with the participants in advance of the event. In addition, the venue was large enough to accommodate several round-table group discussions and was freely accessible to individuals of diverse backgrounds.

- 4.3 What measures were put in place to ensure the quality of discussions during the CAL (for example, efforts to make sure that diverse points of views are respected and minorities or underprivileged groups were given sufficient time and space to speak, efforts to stimulate debates and scrutinize information fed into the CAL)? What worked and what didn't work, in your opinion?

The CAL sessions were facilitated by experts with considerable experience in qualitative and participatory research, including among members of vulnerable and marginalised communities. The facilitation contributed to making sure that the participants felt comfortable and at ease and that everyone felt acknowledged, respected and encouraged to participate actively.

Initially, it was planned that each of the groups in which the participants would be divided in the course of the CAL would be comprised of women with different social profiles. This measure was intended to help ensure that diverse viewpoints be expressed during all group discussions and exercises, and to mitigate possible power dynamics related to socio-economic status or other social characteristics. However, the CAL organisers were not able to follow through with this plan as on the day of the event many participants preferred to be grouped with people whom they already knew, and whose social profiles in many cases were similar to theirs.

- 4.4 What procedures/processes were put in place to elicit reflections on justice and equity issues in relation to the energy transition?

In order to encourage and elicit reflections on justice, fairness and equality in relation to the energy transition, specific questions in this regard were asked in the course in the CAL discussions, such as what the fair energy transition looks like and to what extent the current energy system is just. A question on the requirements of justice in the context of the energy transition was also included as an open-ended question in the post-event survey.

- 4.5 How were the results of the CAL communicated to the i) general public and the ii) public authorities, and how were they received?

Efforts directed at communicating the results of the CAL to the general public included publishing a press release in national and local media outlets, as well as an article and social media posts in social media. With a view to communicating and disseminating the outcome of the CAL to public authorities, the follow-up event was organised which focused on presenting the objectives, methodology and key findings of the CAL to representatives of national, regional and local authorities and civil society. It is notable that the civil society

experts who took part in the follow-up event were very positive in their comments regarding the CAL. However, the representatives of state institutions shared few thoughts on the CAL.

4.6 What measures were put in place to allow the continuation (e.g., picked up and carried forward by participants or partners) and replication of the CAL, if any?

The follow-up event was intended to encourage and facilitate the replication of the CAL by means of sharing the CAL’s methodology and results with various stakeholders. Considering the specificities of the local context in the town where the CAL was held, including such related to limited financial resources, restricted access to the Internet and restricted mobility of some of the participants, the CAL organisers were not able to implement specific measures to allow the continuation of the CAL by the participants themselves.

**Appendix: CAL events and data capturing**

Please list the different CAL events, their participants, and the data that were captured at the events.

Available to the Consortium?	Total # of participants (include team) / gender breakdown	Video recording	Audio recording	Transcript (English)	Observation notes	Written materials by participants (posters, post-its, etc.)	Other sources of data
Event 1	20 female	None	None	None	Notes on the group discussions and exercises	Posters made by the participants envisioning the energy future(s) of their town and region	2 anonymous photographs

## Germany, Berlin – Report of the Citizen Action Lab

### Part I. Basic Information of the CAL

*In this part, please provide a short summary (max. 500 words) of the objectives, sequence of events, the participants and the data gathered.*

#### 1.1 How were the main objectives of the CAL described to partners and participants?

We worked on the issue of diversity in energy citizenship with focus on energy cooperatives. In our case we developed different measures to improve gender diversity and diversity regarding migration history of members in a Berlin energy cooperative (BürgerEnergie Berlin). Due to this cooperation we had a stronger focus on the engagement of citizens in the renewable energy production than energy consumption. In general speaking: Energy cooperatives are an important means for civil participation. In the end empirical findings showed that it is mostly ‘old, white, men with high income and good education’ that participate in energy cooperatives (vgl. Drawing & Glanz 2015<sup>23</sup>; Yildiz et al. 2015<sup>24</sup>). This was also supported in our expert interviews. We therefore concentrated on measures for energy cooperatives to reach out to more citizens and attract hard-to-reach groups.

#### 1.2 How was the CAL relevant and/or timely for the local context, taking into consideration current events in local and national politics?

The mission of BürgerEnergie Berlin (BEB) is to enable the participation of Berlin’s citizens in the local energy infrastructure (electricity grid) and in the setup of renewable energies. The federal state of Berlin bought back the electricity grid from Vattenfall in order to be able to invest more into the local energy transition. BEB would like the local government to take decisions that go beyond the use of the electricity grid and therefore fights as an energy cooperative for the participation of civil society. While the local government adopted a measure in their Energy and Climate Program to engage BEB in the electricity grid, in December 2022 the Berlin senate canceled this measure due to regulatory issues. It is still open if this decision will be revoked. Informing Berlin’s citizens about this political process is important, because infrastructure like the electricity grid is important for enabling the energy transition. There needs to be major investments into the grid to allow for Vehicle-to-Grid and heat pumps. The owner of this grid can easily act as enabler or impediment for the local energy transition. BEB’s mission to allow citizens to be included in

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<sup>23</sup> Drawing, E., & Glanz, S. (2020). Die Energiewende als Werk ausgewählter Gemeinschaften?: Zur sozialen Exklusivität von Energiegenossenschaften. In S. Engler, J. Janik, & M. Wolf (Eds.), *Edition Politik* (1st ed., Vol. 93, pp. 275–302). transcript Verlag.  
<https://doi.org/10.14361/9783839450710-012>

<sup>24</sup> Yildiz, Ö., Rommel, J., Debor, S., Holstenkamp, L., Mey, F., Müller, J. R., Radtke, J., & Rognli, J. (2015). Renewable energy cooperatives as gatekeepers or facilitators? Recent developments in Germany and a multidisciplinary research agenda. *Energy Research & Social Science*, 6, 59–73.  
<https://doi.org/10.1016/j.erss.2014.12.001>

the ownership of the electricity grid would also have financial implications. The majority owner may receive financial investment by the citizens and in the long run should be able to return profits to them. Of course, in a collaborative ownership of the electricity grid, citizens would also help monitor the progress of the energy transition.

In addition, BEB wants to enable the build-up of renewable energy plants owned by citizens in Berlin. Because of national regulation hindering tenants to do this, there is hardly any progress in cities to build solar power plants ('Mieterstromgesetz'). Another burden of solar power projects is by the way the owner of the electricity grid as they are in fear of a destabilization and therefore often block renewable energy projects. At the same time the Berlin Senate introduced a new funding scheme for solar balcony modules in February 2023 which is very popular and has almost been exhausted. However, we also fear that it is mostly eager academics with high income and education who know about this funding scheme and act upon it. We therefore see the necessity to inform differently about opportunities for citizens' participation in the energy transition. In order to scale-up renewables in Berlin, there must be regulatory changes on the national level. Finally, Berlin's citizens took part in the referendum 'Berlin 2030 climate-neutral' in mid-March. This referendum got a lot of attention and influenced the content of our work in the CAL, even though it has, in the end not had a positive outcome

1.3 Please describe the sequence of events of the CAL, and list the different types of data that you have collected from each of the events (please refer to Table in Annex). Please also describe the methodological approach you will use to analyze the data collected.

#### **Organization Meetings between BEB, PIK and GenderCC:**

12.01.2022: First meeting with focus on the concept, expectations and objective of the CAL

21.03.2022: Second meeting discussing the results of the expert interviews and literature review on diversity in energy cooperatives. Brainstorming session on events and measures we want to conduct in the CAL. Decision that PIK will analyze the member base of BEB according to age, gender, location to understand the status quo. BEB has around 1.400 members in Berlin.

02.09.2022: Third meeting discussing the results from PIK's analysis of the member base. Further discussion on how to proceed in the CAL and the decision to set-up a survey which was sent out to all members of BEB to learn about their motivation to have joined this energy cooperative plus questions about their socio-economic status (income, background, education). Parallely, PIK will organize three focus groups with groups underrepresented in the member base of BEB: students/people under 30 years, women/mothers in the age span 30-50 years and people with migrant background. The survey was designed with all partners in October and November, it was then sent out on the 2<sup>nd</sup> of March. In total, 220 people answered the survey

03.05.2023: Fourth meeting discussing the results from the member survey and focus group with all partners.

#### **Focus groups:**

01.12.2022: First focus group with students/people under 30 (15 participants) – we conducted different phases with the participants (group work, statements, work sheet) which we transferred to a protocol. We also identified 10 quotes in the session and audio recording which we found important.

10.03.2023: Second focus group with people with migrant history (age diverse, 14 participants) - similar concept as first focus group, we worked together with an NGO for intercultural diversity to conduct the workshop (Yesil Cember) and had several organizational meetings with them from December until March.

24.03.2023: Third focus group with mothers and women (age 30-50, 12 participants) – similar concept but we changed the conditions of the workshop and offered free childcare by a professional provider.

1.4 Who are your partners in the CAL (researchers, representatives from civil society organizations, private enterprises and public authorities) and what were their main roles in the different stages of the CAL? (more elaboration on your experience with CAL partners in Question 4.1 of this reporting template).

CAL Team Berlin: BürgerEnergie Berlin (BEB): Implementation partner – energy cooperatives – role: link to members and volunteers, leading the discourse about the development of their goals, editing information about BEB f.e. the events of the CAL, implementing events, testing innovative participation mechanisms

GenderCC: Project partner – role: providing expertise in energy democracy and energy justice as well as gender in general, support the implementation of events and the development of innovative measures for a diverse participation

PIK: Project/scientific partner - role: Coordinating and organizing events, scientific analysis and publications, expertise in energy citizenship and political developments in Berlin

External partner:

Yesil Cember (NGO for intercultural sustainability): Support in organizing the second focus group as a multiplier and gatekeeper of the Turkish migrant community in Berlin.

1.5 How would you evaluate the degree of citizen participation in the CAL? Are citizens/local residents engaged in the CAL beyond that of the “ordinary” participants (e.g. citizens have the power to co-design the events, determine the objective, the focus, and the agenda of the CAL, etc.), and if so, in what ways are they engaged?

Our idea was to engage citizens in focus groups to ask them about their perspective on energy citizenship and participation in energy cooperatives. As the focus groups were mostly designed by the partners (PIK, GenderCC and BEB) there was limited room for co-designing these events with citizens. However, before we implemented the focus group we discussed the concept, content and conditions of the focus groups with representatives from our specific target groups and adapted them. Particularly the second focus group was

co-designed with Yesil Cember as they had important remarks toward the concept and also the language of the focus group (simple, technical terms in Turkish). Also, GenderCC had important remarks towards the language before implementing the focus groups and we made the experience that we needed to adapt a lot of material to reach out to our target groups. As we want to continue after the focus group, we want to use the feedback from the focus group to design further events for the CAL until fall 2023.

1.6 What are the socio-demographic characteristics of the participants, in terms of age, gender, socio-economic status, etc. (please feel free to add a summary table in the annexes)?

Focus group I: Students/People under 30 years, 7 female, 1 non-binary, 4 male. Most of them were students at the university, two of the participants were pupils, one person was an entry-level worker.

Focus group II: Women and men between 18-60, diverse socio-economic status, all migrant background, language barrier – moderator translated partly the focus group

Focus group III: Women/mothers between 30-50 years, diverse socio-economic status/income (single mother, architect, cook, etc.)

When we look at the socio-demographic status of the members of BEB, we see that the majority of members are male (65% male – 34 % female). Regarding the age groups, the majority of members are in the 51-70 age group, followed by the 31-50 age group. There are fewer members under the age of 30, but a significant number of members over the age of 70. In the survey, 80% of respondents indicated that they had an academic background. Moreover, 90% of respondents answered that they had no migrant history. That is why we decided on a focus group with people under 30 years, one targeted at women and one with people with migrant history to understand what are their burdens to join an energy cooperative/become engaged in the energy transition.

## Part II. Understandings of Energy Citizenship

*This part presents the various understandings of energy citizenship (what it means, what activities does it involve and at what scale/level) as put forward by the participants of the CALs. You are also encouraged to summarize expressions of rights, duties/responsibilities, understandings of membership and communities, and ways of participation – all of which are central in the conception of active citizenship – that have been articulated through the CALs.*

*For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. If you made audio registrations of sessions or parts of them (as we recommended), please use direct quotations to support your responses.*

2.1 How did participants perceive energy in their everyday life (e.g., heating and illuminating the home, fueling the car, etc.) and what about energy that concerns them the most?

In our focus group the discussion mostly focused on the electricity sector and heating sector as fueling cars didn't play a big role. As the routines of our participants differ highly between the focus group, we will distinguish the results according to the focus groups:

**Focus groups I (students):** Because of the Ukraine war the cost component of energy supply became more important to our participants. In general, choosing an energy supplier depends rather on the costs than on other factors. Moreover, most participants live in shared flats and often the suppliers are chosen by somebody else. Also buying new appliances is done together and the price plays a big role. In general the participants were rather system critical and concerned about the climate crisis, however they see that there must rather be political and industrial change than individual action.

- **FG I Quote 3:** *"We had just saw it here, who of us knows what electricity we use and many of us are not familiar with the subject. You're young, you're with your parents, you had no idea what they did with electricity anyway, if you're completely honest. Well, most of them, more or less. Then you move into a shared apartment, then the roommate is responsible or so and then you are again not so into the topic. [...]"* (Part 1: 00:55:34)

**Focus group II (People with Turkish migrant history):** Participants mentioned that sustainable lifestyle routines like saving water or buying things second hand plays a certain role in their life. While all participants agree that it is important that citizens can participate in the energy transition, one participant elaborates that in their circle of friends most people don't know a lot about the topic and how to engage. Another participant adds that renewable energies are important for the climate system and biodiversity, but there must be more engagement with the topic. One important remark, made by the CEO of Yesil Cember, was that we should rather look at people's lifestyles and routines and then try to engage them where they are at. For example, Turkish families with a Turkish migration history often receive big presents at the birth of children or for their weddings. These presents are often of monetary value. This should be connected to the energy transition, f.e. A membership in an energy cooperative or an investment in a renewable energy power plant. This way the family receives as a present a financially sustainable investment. There was also one participant who expressed his interest in energy cooperatives from an integration point of view: For him energy cooperatives are a part of German social life and knowing more about them would also teach him about Germany. It is a way how citizens engage in the political system which should be encouraged for all backgrounds.

- **FG II Quote 2:** *"[...] So I think... being environmentally friendly is one side, but if you really want to reach a lot of people, it really has to be a benefit monetarily as well. It's much easier to convince people then. Because everybody thinks 'should I save the whole world', so I have to watch my... my money, so in the end."* (Part 1: 00:59:25)

**Focus group III (women/mothers):** This group had a lot of questions towards the energy transition and some participants were highly interested in solar balcony modules or energy efficient house applications/measures to reduce energy consumption. When we asked them what associations they have regarding the energy transition, they mentioned the following terms: renewables, environmental protection and climate change, expensive, transportation (car vs. public transport, biking), politics (see Figure 1). They were also concerned about the rising costs of gas and electricity prices due to the Ukraine war. In general, they joined the focus group to learn more about the current status of the energy transition and they were also eager to discuss energy politics due the Berlin referendum 'climate neutral Berlin 2030' which was happening two days after the workshop. As we expected/hoped they had little previous knowledge or connection to the topic energy transition/energy citizenship/participation.

- **FG III Quote 3:** *"I always ask myself: Who is actually paying for all this? And then I'm also afraid that it will fall back on the taxpayers, on all of us. And now with the electricity costs and subsidies and so many details and grants. [...] So it's going to be expensive. So, I'm all for it and I'll do my part. I don't have a car and I only ride my bike, I hardly eat any meat and I'm very much green oriented and I do what I can, but actually I ask myself 'What does it cost? And who's going to pay for that?'"*  
(00:37:38)

As mentioned before we also sent out a survey to members of BürgerEnergieBerlin, asked them about their motivation to join an energy cooperative and the action they take in the energy transition. One of the questions was how they contributed to the energy transition; the top three answers were: 1. I have a renewable energy supplier, 2. I try to save energy in my everyday life, 3. I buy household appliances with a high energy efficiency label (not all).

Figure 1: Associations with the energy transition by participants of focus group III (©Epp/PIK)



## 2.2 What were the main understandings of energy citizenship that emerged out of the CAL?

We spend more time discussing with our target groups what the possibilities for engagement in the energy transition exist and why this is something to look into. There was a great interest in solar modules on balconies and on energy consultations to reduce energy consumption, but in general the concept of energy citizenship with its rights and duties was too abstract and complex. While the energy transition and renewable energy system is associated with active involvement of citizens, our target groups didn't know how to become active. We asked participants in one phase of the focus group to rate different statements. One of them was: I find it important that people engage in the energy transition financially and ideologically – the majority of participants rated this statement as very important. So there was a certain 'claim' that engagement of citizens in the energy transition is crucial, but this was not transferred to the concept of 'rights' or 'citizenship'. At the same time, when asked if they knew what energy cooperatives are and what they do, the majority answered that they didn't know a lot about them. Moreover, there is a lot of information about energy available, but citizens didn't really know where to start. While the State of Berlin offers free energy consultations for its citizens, most people don't know about it. Finally, we realized that communicating to our target groups about energy citizenship requires the time to answer their open questions about the energy system first.

In comparison the respondents of the survey had a rather progressive understanding of energy citizenship. For them the right of citizens to participate in the energy transition financially and ideally is immanent. As mentioned before, the mission of BEB is a renewable energy system in the hands of Berlin's citizens, prioritizing the repurchase of the

electricity grid/civic participation in the remunicipalisation of the electricity grid. The main reasons why they joined BEB are listed in Figure 2. We see a clear difference towards the understanding of energy citizenship between people engaged in the energy transition and people who had little interaction with it.

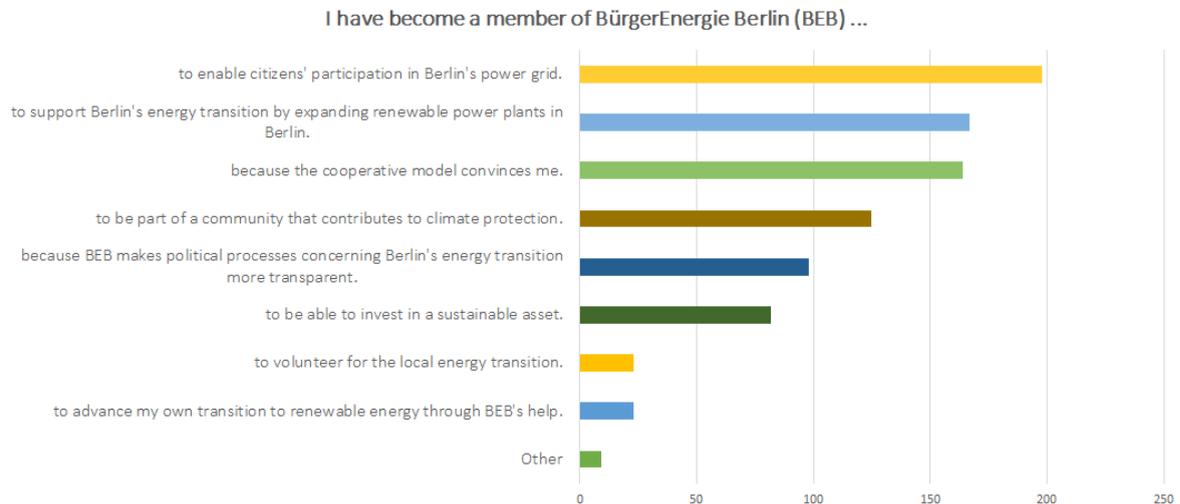


Figure 2: Motivation to have joined the energy cooperative BürgerEnergie Berlin (n=220) (©PIK/BEB)

### 2.3 What did participants identify as their rights and responsibilities as energy citizens (i.e., did they express a sense of entitlement or a sense of responsibility, in what context)?

As mentioned before participants in the focus groups had difficulties grasping the possible rights and responsibilities as energy citizens. They were in general interested and found that energy cooperatives like BEB are interesting. However, they feel insecure about investing in the energy transition or becoming a member of an energy cooperative. It is a struggle, because many live as tenants in their apartments, they often move and they are not familiar with the possible options to act on the energy transition. One participant mentioned her personal commitment, however most participants felt that the government, politicians, the industry and also other social classes are responsible to act upon the energy transition. As most participants of the focus groups live in rented apartments, they feel that they have limited possibilities to engage in the energy transition. In general, they agree that all citizens have the right to participate in the energy transition financially and ideally. But breaking this down into concrete actions seems complex.

**FG III Quote 4:** "We all have this about our personal commitment in mind. I buy second-hand clothes, everyone does their own thing, but I have the feeling that so little is said about corporate responsibility, about the big picture, about groups that have so much more influence. This discourse about the private sphere, about consumers, is something that really annoys me." (00:39:25)

**FG III Quote 2:** "[...] The footprint of rich people is much, much larger, mostly those who own their own home. And of the super-rich, of course, anyway. And that the possibilities are sometimes also very limited, if you have little money. [...]" (00:27:56)

**FG II: Quote 17** : *“I have got a question. As a tenant, can I... There is only one possibility that I [get] these balcony things, isn't there? [...] Because it is impossible to convince a landlord.”* (part 1: 01:03:10)

**FG II Quote 6**: *“And at the end of the day, if the owner of the house says no, you're not allowed to anyway. You can't do anything anyway.”* (part 1: 01:04:20)

**FG I Quote 4**: *“And that with the homes: I can imagine that it is much more attractive for people who own their own home to get financial help, because I also don't feel at all like dealing with my landlord.”* (Part 1: 00:56:40)

- 2.4 How did participants define as their own communities (e.g., do participants feel a sense of belongingness and/or responsibility toward a community, city or country?) What did they understand as the appropriate scale of action (local/regional/national/cross-national)?

All of the participants of the focus groups were from Berlin and they were recruited in social groups (students, citizens with migrant background, women/mothers). In the focus group we focused on local action as individuals and in a collective. In each of the focus groups we had a belonging towards their recruitment group and towards Berlin. However, in all focus groups participants addressed the responsibility of politicians and the industry to act on the energy transition. Some participants also felt like it didn't matter as much what they did.

**FG I Quote 11**: *“[...] I think quite a lot of people at our age, they don't have much access to it or it's not yet so ingrained in their minds when it comes to the topic of energy transition. Because especially when I think of the younger generations, who are somehow living alone for the first time or take responsibility for their first household, I don't think their first priority is the topic energy. If I think now of the younger generations, which grow up with this existential crisis, then it is totally justified that other things have priority in quotation marks. [...] The solution would simply be that everyone can always participate. And decision makers are also held accountable to execute really good decisions.”* (Part I 00:48:09)

- 2.5 What were the notions of justice – if any – put forward by participants (i.e., did they identify any elements of injustice in the energy transition, and how did they relate to a fair, just and inclusive energy transition)? Please pay special attention to ways in which factors of discrimination like sexism, racism, classism and others were brought into the conversation. Were there specific barriers mentioned which relate to these forms of oppression in society?

The notion of justice differed between the focus groups. In the first one, the participants articulated systematic injustice and generational injustice as well as classism and young age as a factor of exclusion as more specific mechanisms. Climate change is causing an existential crisis that the young generation has to live with more than the older one. At the same time, the capitalist economic system is difficult to harmonize with a sustainable transformation. They criticize politicians for not acting appropriately. They see themselves to some extent limited in their possibilities as they are young and still studying. One participant calls this the injustice of time and thinking resources as older people can profit from their experience, money and social standing. They also felt that it is harder for people

from a lower income group to do something about energy transition, since people are already facing so many challenges in everyday life. They also felt it would be a challenge to be part of a REC where the 'older' members would already have such a big knowledge. One person mentioned that this would intimidate him.

The second focus group addressed the issue of language barriers and people who might have a different background do not have the same possibilities to get access to information and opportunities for engagement in the energy transition. Moreover, they mention the issue that tenants in general have less possibilities than people who own their house because the landlord has to agree on changes or even implement them (f.e. Solar balcony modules, switch of heating, renovation). There should be simple and concrete information for citizens in different languages. On a very direct level, at several points participants struggled to express themselves during the workshop and either spoke in Turkish instead of German or asked other participants to help them find words. They also emphasized how important they found it that people would be addressed in their native language when it comes to complex topics such as energy and finance. During a part of the focus group, which was organised as group work, people eventually switched to Turkish as their mother tongue. We noticed that the discussions that arose were much more concrete and lively at that stage. This is definitely a learning experience for any follow-up events.

The third focus group particularly discussed injustice with regards to the CO<sub>2</sub>-footprint of rich vs. poor. Wealthier people produce more CO<sub>2</sub>-emissions and also have more options to act, they should also take over more responsibility. Additionally, participants articulate the need for systematic changes and the responsibility of politicians. There is also a short discussion about the responsibility for climate action between the industrial and developing countries and whether it makes sense that Germany is committing to its climate targets.

**Focus group II Quote 4 :** *"It should definitely be in native language. So, even if everyone here can also speak English well, - on such a topic, there are so many technical words; that should be in native language. So that you can also ask all kinds of things."* (Part 1: 1.02.50)

For BEB, there is definitely a notion of justice towards the economic system. An energy cooperative that is trying to buy back the electricity grid from a large company such as Vattenfall explicitly criticizes the industry for their neglect to act upon the energy transition and climate change and to block citizen energy. Enabling citizens to participate in the energy transition in various roles is important, because it allows for acceptance, transparency and ambitious climate action. With regards to Arnstein's ladder of participation, many of BEB's members would favor an energy system in the hands of citizens. There are several motives that drive BEB's members like being independent from corporate decisions/greed or the responsibility to act upon climate change a lot faster. But they also want citizen participation, because it allows for financial benefits for the state and the citizens in case of a remunicipalisation.

### Part III. Pathways to Energy Citizenship

*Given the different local contexts across the eight countries, each CAL might reveal unique dynamics in the pathways to energy citizenship. This part presents the theories of change used in the CAL, ways in which the CAL engaged, enabled or facilitated participants to act as energy citizens. You are also invited to reflect upon other factors, such as more individual and structural ones, that have come into play in the processes of activating energy citizenship. For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. Please use direct quotations to support your responses.*

3.1 What was the theory of change that you assumed in the design of the CAL? In other words, why should the CAL work as intended, to achieve desirable outcomes for deepening energy citizenship? (explain your assumptions – if X has been done through the CAL, then Y would be the anticipated results.)

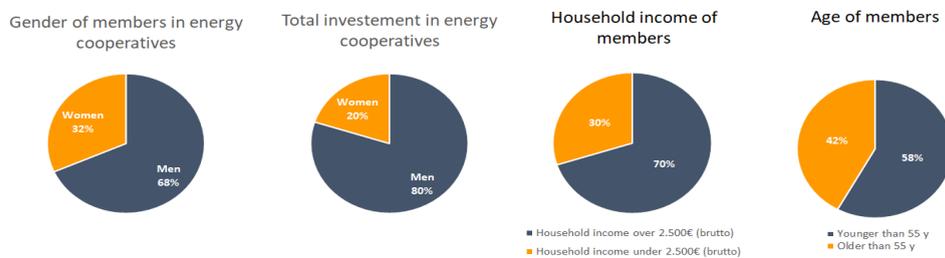


Figure 3: Distribution of gender, age, income and investments in energy cooperatives in Germany<sup>1,2</sup>

For the CAL in Berlin, we had the following assumptions: First of all, we knew from a literature review that there is a high imbalance of diversity in participation in the energy transition and in particular in energy cooperatives. Most members in energy cooperatives in Germany are male (68%), they have a high household income and they are rather old, as almost half of members are over 55 years old (see Figure 3). According to Kuschan (2022)<sup>25</sup> various aspects play a role in preventing women from becoming active in the energy transition: Socially shaped role models & upbringing, traditional thought patterns. These include but are not limited to, for example, female-attributed behaviors (assumed technology alienation), lack of time (due to unpaid care work), finances (due to e.g. gender pay and pension pay gap), lower awareness of (energy-) relevant networks, and not being able to reconcile family and career (again: responsibility of unpaid care work). In addition to structural and personal barriers, financial and political ones also fall: Political inconsistency, political unwillingness for coherent policies, patriarchal structures. Last but not least, the Gender Pay Gap (2020: 18%), Gender Pension Gap (2020: 59.6%), Gender Lifetime Earnings Gap (2020: for youngest cohorts 45%) show that women have less financial participation and opportunities to participate.

<sup>25</sup> Kuschan, M.; Burghard, U.; Groneweg, K.; Strebel, A. (2022): Is the German energy transition perceived as gender- and socially-just? Karlsruhe: Fraunhofer Institute for Systems and Innovation Research ISI (ed.).

Karl & Bode (2021)<sup>26</sup> analyzed in a study for the World Wind Energy Association the gender distribution and diversity in energy cooperatives and energy initiatives in the German federal state North-Rhine-Westphalia (NRW). Their results showed that citizens engaging in the energy transition remain a rather homogeneous group, with a clear male dominance and of people who are already retired. Many shareholders have a good income and a high level of education, and also value education and income - some of the factors that facilitate access to energy citizenship. In small citizen energy organizations, with fewer than forty shareholders, the participation rate of women is particularly low, averaging only 7%. Here, various factors reinforce each other. Some of the companies are from the citizen wind sector, which often emerge from already existing "male-dominated" networks and for whose access a certain basic capital is indispensable. Some of these small projects include civic energy companies from the agricultural sector and thus from a sector that is also very male-dominated. On the other hand, the study shows examples of projects which are open and participatory interaction with society and have deliberately placed women in leadership positions. These may also have an above-average participation of women among the shareholders. The consulted energy organizations are aware that women are not sufficiently represented and integrated in their energy projects. They were also asked to make assumptions for the structural barriers to the participation of women in energy projects. The estimates of women and men diverge. For example, 26% of men assume that technical projects have a deterrent effect on women, while only 17.5 % of women share this view. On the other hand, the lack of financial resources was weighted much more heavily by women as a factor (43.7 % of women and 24.5 % of men) (see Figure 4).

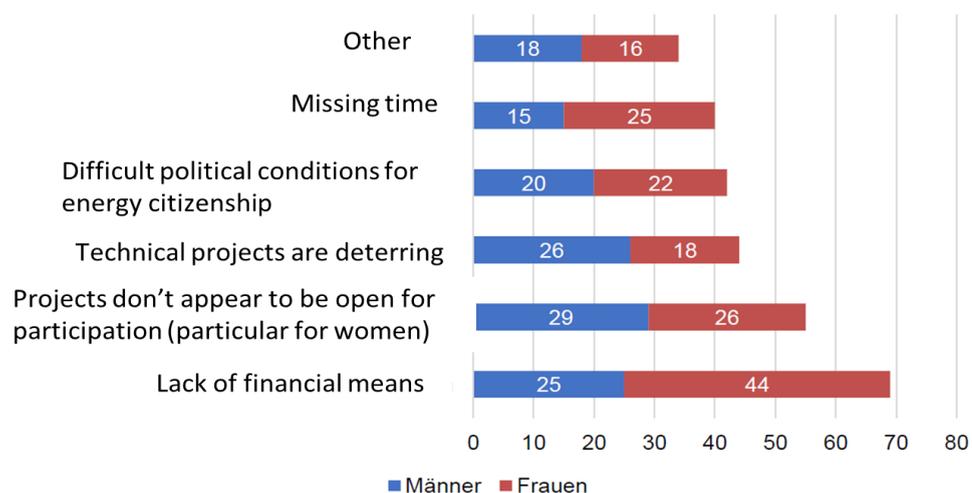


Figure 4: Assumed barriers for participation of women in energy cooperative according to gender in % (n=319) (Karl & Bode 2021)

With this in mind, we tried to design a CAL that takes into consideration the barriers for women but also other underrepresented groups in energy cooperatives. We wanted to brainstorm together with our participants what measures we could implement for a more diverse participation of Berlin's citizens in mind. Following Tanneberger's Index for Inclusive

<sup>26</sup> Karl, Ti., & Bode, M. (2021). Frauen in der Bürgerenergie Durch Offenheit zur Vielfalt. World Wind Energy Association.

Participation in Real-world Laboratories<sup>27</sup>. We tried to implement in our CAL, in our research design and in our implementation different means for inclusion. By parallelly analyzing the structures and participation within BEB and questioning groups that are underrepresented or even excluded from the participation in BEB we wanted to understand what measures could be implemented to increase inclusive and diverse participation. From the expert interview we already knew other energy cooperatives working on this topic and that measures must be implemented to create an impact of diversity.

Therefore, we concentrated first of all on the life cycles of our hard-to-reach group and getting in contact with partners who are important in their daily lives or at least recruiting them where they spend a great deal of their daily lives. We wanted to follow a life cycle approach to better integrate the daily struggles of our participants. Younger people often have financial concerns and not a long-term home, while women in their 30ies often enter the family phase and take over more responsibilities at home. However, we also knew that we should be working with representatives from each community, to gain greater access to our participants but also to design the focus groups with their expertise. Therefore, we discussed our focus groups – before we implemented them - with representatives from family centers, Yesil Cember, other students, etc. We did not only discuss the topic and content of the workshop but we also tried to reflect our language, our approach (relevant to their current lifestyle) and the organizational conditions (like time, place, child care, etc.).

By parallelly organizing three focus groups we also had the possibility to compare the results from our research between our different target communities. Moreover by analyzing the members of BEB and why they joined the energy cooperative, we intended to have a comparison group. Since we are going to present the results of our research also at the next general assembly of BEB, we think that addressing the topic of diversity towards the members might also make them more sensitive towards their behavior, culture and recruitment strategy. We also hope to be able to support BEB in finding new and alternative recruitment strategies for additional members from more diverse backgrounds. In addition, as many energy cooperatives rely on their members' network and members are often recruited by other members, we hope that this might become more a topic for the individual to also proactively reflect themselves and approach women and acquaintances with diverse backgrounds. Finally, with the findings we have received from the focus group, we are now developing experiments that BEB can implement to increase diversity.

3.2 In which capacities/roles were the participants engaged (i.e., as energy consumers, producers and political subjects participating in decision-making processes) in the CAL, through what specific activities?

The participants of the focus group were invited to join the CAL mostly as prosumers. Energy consumption only played a minor role in our CAL as we focused on the topic of diversity in energy cooperatives. They were also invited to some extent as political subjects because we discussed energy transition with them in general and wanted to understand

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<sup>27</sup> Tanneberger, Stephine (2022): Master's thesis on Index for Inclusive Participation in Real-world Laboratories Adapting the 'Index for Inclusion' to promote and review inclusion in Real-world Laboratories

their perspectives as citizens. Other participants such as Yesil Cember or representatives of family centers were invited as experts to help design the focus groups.

3.3 What sense of agency (understood as the capacity to act on change) was observed during the CAL? What changes in actions did the participants commit to during and following the CAL activities? (e.g. reduce energy usage, participate in energy production, influence other citizens, join collective actions, etc.)?

In our CAL, we did not monitor the change of behavior of citizens over time. Also citizens just participated once in the focus group, so we do not know how their action changes after the event. We can draw from the discussion that first of all, many participants stated that they would inform themselves about participation in the energy transition in forms of energy cooperative, solar balcony modules, energy saving consultation and political decisions like the Berlin climate referendum. However, there is often a gap between the intention for action and the actual implementation. Moreover, several participants stated that either they themselves would join BEB or that they would tell friends and family about the mission of BEB and what individuals can do about the energy transition. So it is not just that they will act upon the energy transitions but that they inspire other people. In our CAL we were hoping for some kind of multiplication effect in our target group's communities.

**FG I Quote 2:** "I actually find it, as you have told, very interesting and great! Uh, I also go to work full time in the meantime and actually have the money, so to speak, to take care of such things more. Often the interest in the topic of electricity in general is missing, that's pretty low with me. Um, but is but, I think that sounds a little bit too good to be true. So where are all the catches, because you also get the money back just like that and stuff? And they advocate for all my causes and even if I give 100€, my vote counts just as much from the person who's been there for 10 years and puts in half their monthly salary. I find that hard to believe, um, but I definitely want to do more research at home and see if that's actually something for me." (Part I 50:28)

**FG II Quote 2:** „So I, for example, this balcony module now also made notes. A friend of mine has his own apartment. He even told me today that he pays 65€ a month for electricity, and, uh, he has an apartment also with balcony and with such west side. So, for example, it can be interesting for him... so, I will tell him. [...]" (Part 1: 59.25)

3.4 What factors (from the more individual or to the more structural) might have enabled or hindered the participants' engagement as energy citizens? For example, at the individual level, not feeling obligated to act, not knowing how to act, wanting to act but lack resources to act (economic capital, land, time, etc.); and more structurally, social norms, legal and regulatory constraints, among others.

Factors enabling and hindering energy citizenship was part of our focus group, however we focused more on the factors that hindered/enabled their participation in energy cooperatives. The factors are listed in the following tables:

Focus group I: Factors influencing the engagement of young people

Motivation	Barriers
Cooperative way of building renewables together in a community	Financial restriction/little experience with investments
Networking with other citizens interested in renewables	Time and effort for engagement
Learning about the sustainable transformation in my city	Little knowledge leaves you with a disadvantage in events and discussions
Contribution to sustainable development/fighting Climate Change	Effectiveness of engagement
Future/fear of existential crisis	Language (usage of many technical terms)
Vision of a different economic system	Frequent change of residency

#### Focus group II: Factors influencing the engagement of people with migrant background

Motivation	Barriers
Saving money	Language (information not available in mother tongue)
Investing in something sustainable	Complexity of information (even if understood, still too bureaucratic)
Offering more concise and simple information	Legal constraints (tenants have little possibilities to build renewable power plants)
Political Influence	The advantages of participation are unclear: How do I profit from it?
	For women: Men make decisions on household energy supply.
	Too little consultation on the topic
	Effectiveness: It takes long until I see a result for my investment

#### Focus group III: Factors influencing the engagement of women and mothers

Motivation	Barriers
Saving money	Information and language to complex
Sustainable investment	Relevancy for daily life must be clear
Simple information, preferably offered by women for women/diversity in experts 'Information offered at the same eye level'	Irresponsibility of politicians

Feeling responsible	Landlords can easily restrict balcony solar modules or solar modules on the roof
Family and children	Bureaucracy
Financial incentives for participation	Time constraints due to family
Events with childcare services	Conditions of events are often not suitable for women (time, location, etc.)

3.4.1 What are the enabling/hinder factors related to gender? Please also note specific experiences of discrimination shared by the participants.

There was a limited explicit focus on the topic of gender during the focus groups. Nonetheless, there were several mentions of related issues. In focus group 2 (people with a migrant background) participants mentioned in their community men are traditionally the decision makers in the household (part 3: 0.30) but still also talked about the chances presented by using women's social networks as multipliers for information (Part 3: 2.50).

The participants of focus group 3 (mothers and women) spoke a lot about feeling more engaged by offers that presuppose a low level of knowledge and were inclusive, even though they themselves did not necessarily connect that to gender and could imagine that this would generally lead to the inclusion of more groups. One participant also noted as the result of their discussion in a smaller group that they all would imagine preferring a frame of "women for women". They also directly related this to further forms of inclusivity like language for non-German speakers.

**FG III Quote 10:** „*The framework that we could imagine, really this from women for women. It's often really old, white men who present something like this, who are then also involved. It's good if it specifically addresses women and is understandable in their own languages and also in foreign languages, I think that's important. I am also in the cooperative for the supermarket and we also have to struggle with this. So everything is in English, but we also have to address the Turkish community, for example. The local and good publicity was also quite important for us, we also noticed that we all found out about this event through a different way. Because often you don't necessarily look for the information, so sometimes it's good to have it thrown your way. I don't know, but many people probably won't consciously look for a cooperative, but maybe it's really good that it's just slapped in your face. That it's accessible then, through clock hours and childcare. Maybe also digitally, because depending on where it is, I wouldn't necessarily drive a lot of time for a two-hour event if I have a tight day. Then it's also cool if it's local or digital as well.*“ (01:38:00)

3.5 What knowledge, skills and competences have been introduced to the participants through the CALs (e.g., related to changing energy consumption and energy production, and participating in collective political actions)? Did the participants consider the knowledge, skills and competences they were introduced to relevant to their lives? If not, how so?

We informed the participants about the current status of energy production in Germany and Berlin to enable them to see the bigger picture. Moreover we provided information about individual and collective forms of participation in the energy transition. On the individual level we introduced Berlin's solar center - a local service consulting citizens on solar power projects. Moreover, in February 2023 Berlin started a local fundings programme for balcony solar modules and we informed participants also about this programme. In addition, Berlin offers a local energy consultation where experts come to your home to check the energy consumption of household appliances, energy contracts, lights bulbs and energy efficiency. The participants were interested in all options that we presented and found them relevant for their lives. Particularly in the focus group II and III participants were interested in the fundings scheme for solar balconies. As not all participants had balconies, this information was of course not realizable for everyone. Moreover, participants of focus group III were interested in Berlin's local energy consultation. As energy prices have risen significantly, they noted where and how to get in touch with this service. On a political level most participants were either already engaged (f.e.: focus group I - several participants already volunteered for initiatives) or interested in the upcoming vote about Berlin's climate referendum. Several participants were curious about our assessment of the referendum and wondered if it was necessary to become climate neutral so fast. None of the participants articulated an interest to become politically active.

3.6 What are the outcomes and impacts of the CAL? And did the CAL have any wider impacts, societal, environmental, economic, etc., beyond the group that was involved as organizers and participants? Please provide a short summary.

In our expert interviews we connected with NGOs and energy cooperatives who were also interested in implementing measures to increase diversity in energy cooperatives since this is a large problem. We will share our insights with these strategic partners and connect with them to learn from their experience. In this sense, the CAL has a wider societal aspect, because it addresses the issue of equality and participation in the energy transition and identifies burdens but also solutions to enable a more inclusive energy transition. In the long run, this can also have an economic impact, because enabling more citizens to engage in the energy transition will allow them to financially benefit from the energy transition.

3.7 Overall, how can citizens' participation in the energy transition be better supported and by whom, in the context of where the CAL took place?

In general, citizens' participation in research projects or in public forums should be financially reimbursed. Last year, Berlin had its first climate council: 100 people were chosen by lot to be part of a citizen climate council. There were certain criteria chosen like age, gender, background, income to make sure the 100 citizens display a somewhat representative picture of Berlin. The citizens were briefed by scientists and experts on the topic of climate change and the measures Berlin is taking to implement them. Then the citizens should assess which measures should be implemented, adjusted or rejected. Afterwards the Berlin's senate received the citizens' recommendations and had to justify whether it would take on these recommendations or not. The participants took part in more

than 8 group meetings and several smaller ones and received a financial compensation of 350 Euro.

In our focus group we also decided to pay the participants to come to the focus groups, because we know that hard-to-reach groups are for various reasons not able or not interested to join a discussion about energy. Several participants from all focus groups gave us the feedback that the monetary incentive was very important to them. For once it motivated them to come even if the topic was interesting, some participants rather came for the money. Moreover, it made them feel like their opinion was so important that it was even valued financially. Finally, some participants were financially and timewise highly restricted, a single-mother (anything missing here?)

#### Part IV. CAL Processes and Quality of Participation

*CAL, as a form of citizen engagement in itself, must take into account the inclusiveness and diversity (in terms of gender, socio-economic background, migratory status and etc.), as well as the quality of participation in its activities. This part invites the CAL organizing team to reflect upon the inclusive and participatory design, and their effects on the outcomes of the CAL. For each question, if you have gathered information from the CAL participants that can support your claim, please note the source of data and use direct quotes when applicable.*

4.1 What was your overall experience working with your partners? Did the roles of partners evolve, possibly also differently from what you agreed upon and reported in the Implementation Document? At which stage, and with what tasks were they most engaged, and where did they lose interest (if that was the case)?

The initial roles did not change. Our implementation partner BEB was actively engaged in all of the phases of the CAL. They spend time and effort to support our research activities by reviewing material and meeting with us regularly. BEB was mostly engaged in providing access to the data of their member base and in designing the survey that they sounded out to all of their members. We intentionally asked them not to join the focus group as they were part of the research object and we wanted to participate to reflect freely on energy citizenship and energy cooperatives. In a next step, they want to implement measures for diverse participation based on the results of the focus group and member survey. The exchange between PIK, GenderCC and BEB was good and productive. PIK offered in the beginning to coordinate the CAL and was supported organizationally and through their expertise by GenderCC.

4.1 What measures were put in place to ensure the inclusiveness of the CAL (during recruitment and implementation, among participants, invited speakers and the CAL organizing team)? What worked and what didn't work, in your opinion?

First of all, we worked on communicating not 'too academically' about the energy transition and early on discussed that we would adapt our language to engage our target groups in the energy transition. We drew upon the expertise of GenderCC and Yesil Cember and had

separate meetings discussing the issue of language. Second, we recruited explicitly for hard-to-reach groups, because we wanted to get in contact with citizens who are not involved yet in the energy transition.

For the recruitment we tried to seek places where we can find our target group (f.e. Students - via universities, mothers - recruitment at the playground). We also tried to mix-up our recruitment strategies. For the third focus group, we printed flyers and distributed them near our event location. We also went to playgrounds and approached mothers with kids. We informed them right away there will be a professional child service at the workshop or that small children can also stay with their mothers during the workshop. However, we also used different channels like ebay. When people registered for the focus groups we asked for their gender and age. The recruitment was done by female/non-male experts.

Participants of the third focus group also noted that the offer of free childcare at the event made them more likely to attend. Even if some of them who had initially planned to bring their kids, ended up leaving them in the care of someone else, the offer made it easier for them to plan their attendance.

The first and last focus group were solely moderated by female/non-male experts and the second by two females/non-males and one man. However, this is also just due to the gender of the employees at PIK/GenderCC/Yesil Cember. For the second recruitment we relied on the support of Yesil Cember. Before we organized this focus group we tried to find similar projects and most of them recommended working with somebody who acts as a gatekeeper for the community (speaks the language, same background, connected to the target community). Yesil Cember then also recruited our target group and supported the moderation of the second workshop. Without their engagement it would not have been able to do this workshop.

**FG III Quote 6:** "For example, I read in the advertisement [for the focus group] that it is also okay to come if you don't know that much about energy. And I would now, if I read 'workshop on energy' I would already assume that I have to have a relatively very high level of know-how to be able to participate. And that would probably put me off otherwise" (01:20:08).

**FG III Quote 10:** "*The frame that we could wish for, is really this 'by women for women'. It's often really old, white men who present something like this, who are then also involved. It's good if it specifically addresses women and is understandable in their own languages and also in foreign languages, I think that's important. I am also in a cooperative for the supermarket and we also struggle with this. So, everything is in English, but we also want to address the Turkish community, for example. [...] That it is also accessible, regarding time and childcare. Maybe also digitally, because depending on where it is, I wouldn't necessarily drive for a two-hour event if I have a tight day. It's also cool, if it's analog or digital at the same time.*" (01:38:00)

For the focus group III (women/mother) we recruited at playground and family cafés with flyers, via ebay, via nebenan.de (neighbourhood platform) and via a local newsletter (Weddingweiser). We adjusted the recruitment text and flyer for each focus group specific to our target group. We used each language and no technical terms (like energy citizenship).

4.2 What measures were put in place to ensure the quality of discussions during the CAL (for example, efforts to make sure that diverse points of views are respected and minorities or underprivileged groups were given sufficient time and space to speak, efforts to stimulate debates and scrutinize information fed into the CAL)? What worked and what didn't work, in your opinion?

In the beginning we explicitly mentioned that if anybody feels uncomfortable or mistreated that they can approach us and that we want to establish a room for a fair and respectful discussion. During the focus group, we implemented different phases: individual, group discussion and group work. This way participants could engage in various ways and even if they did not feel comfortable to speak in a large group they could either share their opinion as an individual in written or oral form. In the group discussion the organizing team discussed with the whole group the concept of the energy transition and energy cooperatives. In the group phase the participants worked in small groups and had the possibility to exchange their ideas with other participants. This mixed method approach was used to account for different levels for participation. We over recruited women in all three focus groups, so that we have a gender constellation that favors the non-male perspective.

In the second focus group a lot of the discussion and group work happened in Turkish which was simultaneously translated by the employees of Yesil Cember. As the focus groups were designed interactively with just one input from experts, the participants mostly enjoyed the discussions and wanted to learn more about the energy transition. We offered free food and beverages of course to help the participants focus on the content of the workshop.

Finally, we paid a financial incentive to participants to come to the focus groups, because we wanted to reimburse them for their time. This financial stimulus was important to motivate our hard-to-reach group to come to the focus groups, particularly for the mothers.

4.3 What procedures/processes were put in place to elicit reflections on justice and equity issues in relation to the energy transition?

At the beginning we introduced one phase in each focus group, during which participants could stick a glue dot to certain statements about the energy transition. After everybody was done with their glue dots we discussed the results in the group and many participants addressed different aspects of justice as mentioned before (responsibility of the industry and politicians, CO2-footprint of rich people, etc.)

4.4 How were the results of the CAL communicated to the i) general public and the ii) public authorities, and how were they received?

The results were communicated at a podium discussion on Berlin's referendum 'climate neutrality' with Berlin's climate senator at the time Bettina Jarasch. Moreover the results will be presented at Berlin's energy day 2023 in the session 'Energiekrise, Ukraine-Krieg, Klimawandel – Zeitenwende für die Berliner Energie- und Klimaschutzpolitik?!'. Moreover the results will be presented at the general assembly of BürgerEnergie Berlin mid-June.

4.5 What measures were put in place to allow the continuation (e.g., picked up and carried forward by participants or partners) and replication of the CAL, if any?

The CAL will continue for now through the coordination of PIK since we decided to implement measures suggested in the focus group until the end of the year. We would like to continue our work and see if there is funding by the Senate or government to continue working on the topic.

4.6 Please provide any additional information that you believe would be helpful to others, in designing a CAL and towards the replicability of your CAL.

Remark on the terminology 'energy citizenship' in German:

We discussed in the beginning how to deal with the concept and terminology of energy citizenship. In German, there is no good translation for this word. The wide-used term 'Bürgerenergie' is highly associated with renewable energy production and citizen participation<sup>28</sup>. This term exists for more than 20 years and is an umbrella term for many projects and initiatives associated with the energy transition. While it is rather associated with a bottom-up approach it is not limited to it. The state can also enable 'Bürgerenergie' and has implemented legislation to ensure for guaranteed citizen participation. For example the German Federal State Mecklenburg-Vorpommern adopted in 2022 a law (Bürger- und Gemeindenbeteiligungsgesetz/Citizen and Community Participation law) that obligates a guaranteed 20 % share for citizens or the local community in new wind power plants (in a radius of 5 km around the plant). As mentioned before, the term 'Bürgerenergie' is highly associated with initiatives that focus on building new energy plants rather than on the topic of energy consumption, although most experts would agree that it encompasses it.

Thus, the term has a long tradition and it can not be used synonymous with 'Energy citizenship'/'Energie Bürgerschaft'.<sup>29</sup> At the same time the English term was rejected by participants in a first public event PIK hosted at the Berlin energy transition days. While the term 'Energie Bürgerschaft' is new and even for people who are already engaged in the

<sup>28</sup> Bündnis BürgerEnergie Berlin (2013): Definition und Marktanalyse von Bürgerenergie in Deutschland. Available here:

[https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj34Zidhqn-AhV0SfEDHWIOCqkQFnoECCEQAQ&url=https%3A%2F%2Fwww.buendnis-buergerenergie.de%2Ffileadmin%2Fuser\\_upload%2Fdownloads%2FStudien%2FStudie\\_Definition\\_und\\_Marktanalyse\\_von\\_Buergerenergie\\_in\\_Deutschland\\_BBEEn.pdf&usq=AOvVaw1-V3QOdJ0YpixZeJ-5sIFm](https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&ved=2ahUKEwj34Zidhqn-AhV0SfEDHWIOCqkQFnoECCEQAQ&url=https%3A%2F%2Fwww.buendnis-buergerenergie.de%2Ffileadmin%2Fuser_upload%2Fdownloads%2FStudien%2FStudie_Definition_und_Marktanalyse_von_Buergerenergie_in_Deutschland_BBEEn.pdf&usq=AOvVaw1-V3QOdJ0YpixZeJ-5sIFm)

<sup>29</sup> Bürger- und Gemeindenbeteiligungsgesetz: <https://www.leka-mv.de/buegem-mv/>

energy transition, it seems strange because the term ‘Bürgerenergie’ is similar to our concept. We discussed at length how to communicate about this concept in detail and decided to keep it as simple as possible, because our target group is not familiar with technical terms about the energy transition. If researchers want to pursue the comprehensive concept of energy citizenship, there needs to be more focus on developing a better terminology.

### Appendix: CAL events and data capturing

Please list the different CAL events, their participants, and the data that were captured at the events.

	Total # of participants (include team) gender breakdown	Video recording	Audio recording	Transcript (English)	Observation notes	Written materials by participants (posters, post-its, etc.)	Other sources of data
Available to the Consortium?			no	yes			
Event 1	12 (7 f, 1 n, 4 m)	None	3 hours	Protocol including 10 quotes from event Language: DE-EN		Posters, post-its transferred to protocol	-
Event 2	14						-
Event 3	13 (13 f, 0 m)						-
Survey	220 (23% f, 73% m)	-	-	Survey DE, translation of results in ENG available	-m-	-	-

## Italy, Città di Castello – Report of the Citizen Action Lab

### Part I. Basic Information of the CAL

*In this part, please provide a short summary (max. 500 words) of the objectives, sequence of events, the participants and the data gathered.*

#### 1.1 *How were the main objectives of the CAL described to partners and participants?*

In June 2022, Climate Alliance Italy started the implementation of the Citizen Action Lab in Città di Castello. Prior to in-person meetings, several documents were sent to partners to inform them about the DIALOGUES project and the Citizen Action Labs (CALs).

Four meetings were held in the Council Chamber of the Municipality of Città di Castello for cognitive and organizational purposes. The ways in which the partners were informed were as follows: DIALOGUES project sheet describing the general outline of the project and the final objectives, a CAL factsheet describing the general modalities of the workshop, the timetable and the objectives, in-person meetings in which the Climate Alliance team answered questions. Together with the partners, both the method of administering the questionnaire and their content were discussed. Each implementing partner was enabled to tell their users about the main objectives of the project and of the CAL. During the workshops, the team again presented the objectives of the CAL to the participants, who had already been informed by the implementing partners, and explained the activities in more detail.

#### 1.2 *How was the CAL relevant and/or timely for the local context, taking into consideration current events in local and national politics?*

The CAL tried to deal with the perplexities and doubts that have arisen over the past year in relation to energy. The participants were already moderately informed on the subject, as they were necessarily confronted with the issue due to the media debate that arose after the out-break of the war in Ukraine and the increase in energy prices which the participants feel heavily with their gas and electricity bills.

#### 1.3 *Please describe the sequence of events of the CAL and list the different types of data that you have collected from each of the events (please refer to Table in Annex). Please also describe the methodological approach you will use to analyze the data collected.*

### Sequence of events

The first event took place on 24 October 2022 on the premises of the implementing partner, the senior citizens association UniTre. Approximately 35 participants were present. After the introductions, in which the participants had to get to know their neighbour for 2 minutes and then each had to introduce the other, the trainer started to construct a mind map starting with the word energy: Participants had to say the first word that came to mind. The facilitator noted them down and projected them on the wall, grouping the concepts under more general titles with a mind map as the result. Afterwards, the public was asked, using cards on which the main household appliances were drawn, which appliances were the most used, which consumed the most and which consumed the least. The degree of citizen participation was both at the level of debate and co - production of solutions.

The second event took place on 7 November with approximately 35 participants. In this second workshop, the home automation of the house of one of the participants was presented: by connecting his smartphone to the video projector it was possible to see the energy consumption by switching the various connected appliances on or off. A self-assessment questionnaire on one's energy behaviour was also administered, and the various results were discussed. The level of participation was predominantly informative.

During the third meeting, which took place on 21 November, the participants were randomly divided into three groups by the trainer. The groups were asked to step out of the individual dimension and take a collective perspective by drafting a set of demands to be proposed to the municipality during the public meeting on 1 December. Each group had 25 minutes to prepare their requests, which were then presented by a spokesperson to the audience. The degree of participation was co-production of solutions.

On 1 December 2022 the final CALs event took place in the council chamber of the municipality of Città di Castello. The meeting was open to all citizens and was attended by the councillors for social and environmental policies, the mayor and regional officials from the waste and energy department. During the event, the CALs participants presented the requests elaborated in the third meeting to the political representatives and citizens present. The meeting was divided into three parts: the first part was informative where experts and representatives of the bodies presented the state of the art of energy from both a policy and technical point of view. In the second part the citizens who participated in the CALs presented their demands and finally in the third part there was a public debate. The degree of participation was therefore both informative and debating as well as co-producing solutions.

**Types of data** All meetings were recorded (audio only)

### **Methodological approach: hermeneutics, ethnomethodology and grounded theory**

In our analysis of the data, we are drawing on hermeneutics, ethnomethodology and grounded theory, all qualitative research methodologies used in the social sciences. Hermeneutics originated in philosophy, and it was above all Hans Georg Gadamer who paved the way for its adaptation in the social sciences by Alfred Schütz, and then Thomas Luckmann and Peter Berger. It emphasizes the importance of interpretation, context and reflexivity. From ethnomethodology, developed by Harald Garfinkel in the 1960s we draw on its attention on how people construct their social reality and make sense of it while with grounded theory, developed by Barney Glaser and Anselm Strauss in the same period, we find helpful the approach to make the ideas and concepts emerge from the data. We do not adhere to the rigorous method the fathers of grounded theory developed and fought about.

What we do take over from all three approaches is the emphasis on the life world of the research subjects, their intentions, their understanding of the situation and how they attribute meaning to their thoughts and actions. In the tradition of the Critical Theory of the Frankfurt School the aim of the research is to further scientific knowledge about the subject of interest, but also to further the understanding of the research subjects about their own situation in an emancipatory perspective.

In this tradition the CAL DIALOGUES give a voice to citizens and their perceptions, desires and anxieties dealing with energy in their everyday lives. A voice to be interpreted and rendered fruitful for policy advice to decision makers but also for the subjects themselves to further their self-efficacy.

The analysis of the audio recording together with the notes from the teams were in a first round analysed along the concepts of:

Agency	Powerlessness
Competence (I can do it)	Incompetence (I wouldn't know how to do it)
Taking responsibility (I should do)	Shifting responsibility (they should do it)
Knowledge	Ignorance
Technology	Lifestyle / Behaviour change

A continuous attention was dedicated to how gender in a transversal manner entered the communicative interactions. These are a first intuitive set of categories to analyse the audio recordings and other materials. The approach is rigorously subject-oriented, meaning that the perception of the subject counts. It's not a question of real agency but if the person senses to have agency, feels to have competence, has true knowledge or just assumes to have it. The set of categories will need to be revised on the basis of the analyses of the Città di Castello CALs and in a comparative approach with other CALs.

**1.4** *Who are your partners in the CAL (researchers, representatives from civil society organizations, private enterprises and public authorities) and what were their main roles in the different stages of the CAL? (more elaboration on your experience with CAL partners in Question 4.1 of this reporting template).*

The implementing partners for the CALs organised by Climate Alliance and Università di Roma Tre (RomaTre) in Città di Castello were the Social Services of the Municipality of Città di Castello, the territorial diocesan Caritas, and the senior citizens' organisation UniTre. The Social Services Department of the Municipality of Città di Castello is in contact with people suffering from energy poverty. Caritas assists families at risk of electricity or gas failure. UniTre organises educational events for the elderly.

During the drafting phase of the DIALOGUES project, Climate Alliance Italy held meetings with the implementing partners to verify the feasibility and type of collaboration to be put in place. The partners signed a letter of support specifying their role in the implementation of the CAL. All implementing partners helped to recruit participants.

**1.5** *How would you evaluate the degree of citizen participation in the CAL? Are citizens/local residents engaged in the CAL beyond that of the "ordinary" participants (e.g., citizens have the power to co-design the events, determine the objective, the focus, and the agenda of the CAL, etc.), and if so, in what ways are they engaged?*

### **Co-creating the CAL as an open, inclusive and horizontal space**

The idea of Jürgen Habermas that society is constituted by communicative action attributes to the communicating subjects the right of expressing themselves fully in a space free of domination (herrschaftsfreier Raum). The Città di Castello CAL attempted to create such a space through an inclusive recruitment strategy, enlisting the help of a qualified, non-intimidating facilitator, with a low threshold meeting place (the seat of the senior citizens organisation, easily accessible in a public building with all kinds of services) and

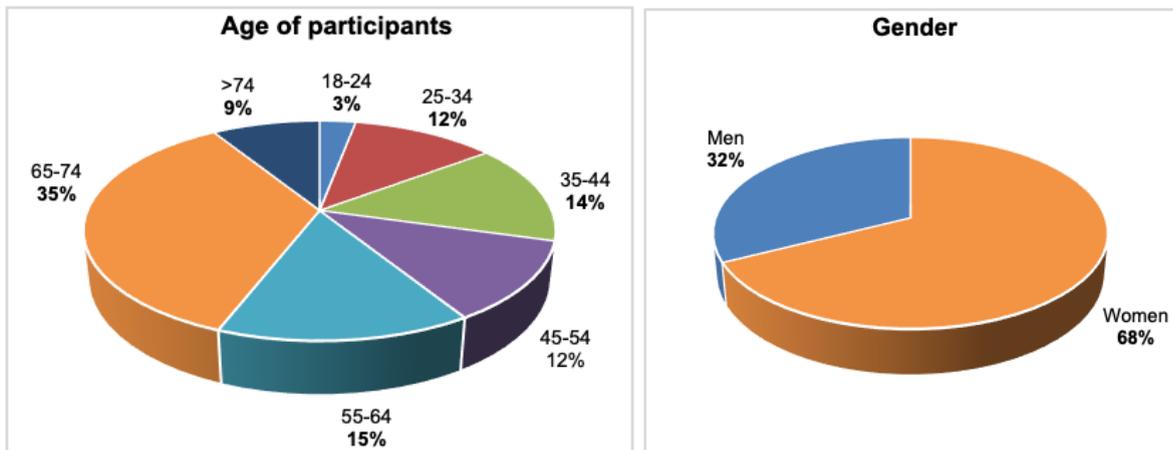
giving participants room for voicing their desires and possible irritations in any moment of the meeting as to which course it should take.

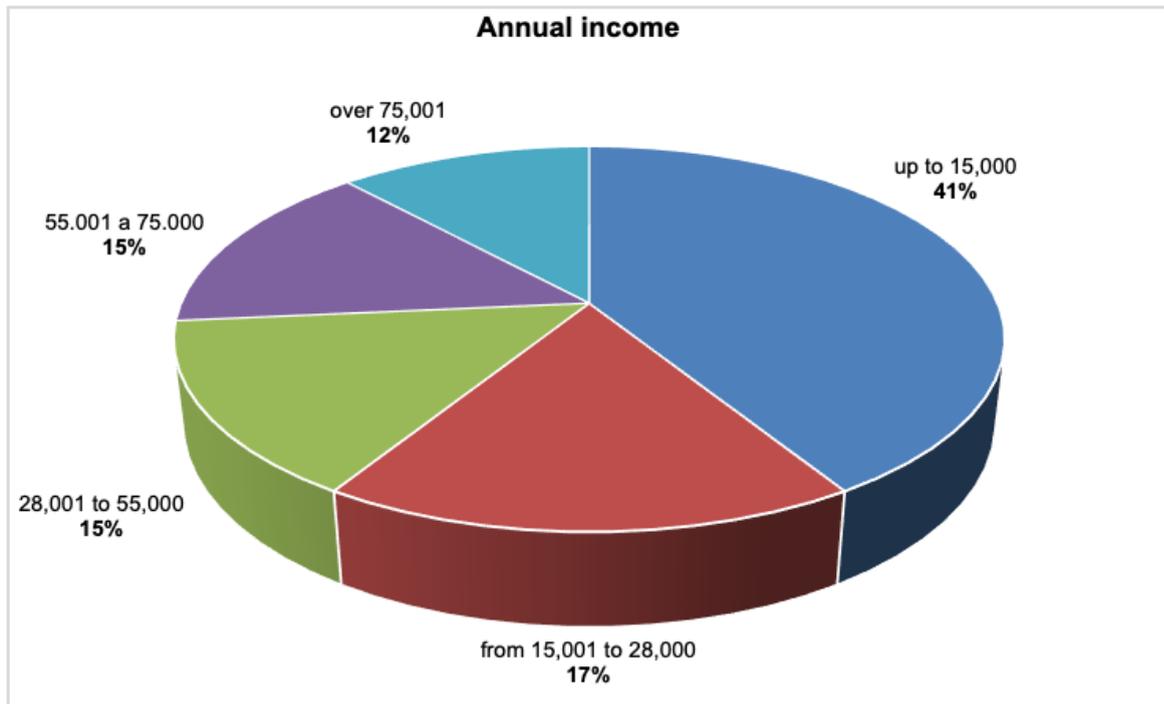
Each workshop organised was first planned in every phase by the Climate Alliance and RomaTre teams and the facilitator. The main focus in the design phase was not to interfere in the group processes and dynamics. To this end, the facilitator asked participants at the end of each workshop if there were any activities or topics, they were interested in learning more about. At the end of the first workshop, one participant reported his personal experience: "In my very small house of 40 square metres with all these appliances we mentioned, even when no one is there so the house is empty, I cannot go below 30-35 watts. Even if everything is switched off, we still have consumption, there is never zero consumption'.

The participants were intrigued by this experience and asked to better understand what home automation was. The next workshop was revised in the light of what had emerged in the first one and the home automation experience was included. Although the design of the CAL was worked out by the project teams, the participants contributed to deciding the agenda.

1.6 *What are the socio-demographic characteristics of the participants, in terms of age, gender, socio-economic status, etc. (please feel free to add a summary table in the annexes)?*

The survey administered also made it possible to collect general information on the respondents' households (people with whom they live together, household consumption management habits, characteristics of the dwelling, total economic income of the household, etc.). As to the age and gender composition and the income distribution see graphs below.





## Part II. Understandings of Energy Citizenship

*This part presents the various understandings of energy citizenship (what it means, what activities does it involve and at what scale/level) as put forward by the participants of the CALs. You are also encouraged to summarize expressions of rights, duties/responsibilities, understandings of membership and communities, and ways of participation – all of which are central in the conception of active citizenship – that have been articulated through the CALs.*

*For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. If you made audio registrations of sessions or parts of them (as we recommended), please use direct quotations to support your responses.*

2.1 *How did participants perceive energy in their everyday life (e.g., heating and illuminating the home, fueling the car, etc.) and what about energy that concerns them the most?*

At the beginning of the first meeting those present were asked why they were attending the CALs, except for one participant who answered "I'm here but I don't know what we have to do" the answers were almost all related to a medium-high knowledge of the energy topic for example:

*"I'm here because I'm very interested in the environment and what you're talking about.... Also, because I have grandchildren and the youth must be addressed in the best possible way on the environment on energy, on everything that prepares us for the future and the present".*

Two sisters:

*"We are interested, already our houses are very well equipped with thermosolar panels, photovoltaic panels, wood stoves, pellet stoves. So already we are very well equipped in this way, and we run after our husbands to turn off the lights!"*

One participant confesses that she participates because she is not really informed on the subject:

*"I expect to have some knowledge, I already had some indications since she (referring to a neighbour) told me a little bit. I expect to find out some things that I am not aware of about a world that is talked about a lot and about which I know nothing: savings, renewables. I only know what others tell me, maybe here I hope to find out something about the information I am lacking!"*

Very similar was the response of another participant who said:

*"I'm here to learn myself and to make other people understand about energy and bills to save a bit".*

During the first and the second meeting, the participants were asked what electrical appliances were present in their homes and to classify them according to consumption. In the second meeting, the participants were able to see the actual consumption peaks thanks to a home automation experience in one participant's home. When asked by the facilitator: "Did you know that you have all these appliances in your home?" everyone answered yes.

The participants therefore considered themselves familiar with energy consumption in their homes. One aspect considered important and related to energy is saving. In this regard, one participant during a meeting remarked:

*"The only thing I can say is that when we started, we talked about saving on bills. The fact is that we had to acquire this reasoning beforehand, i.e., saving energy. It must be an inner maturation that makes us reach the goal ...".*

The spontaneous association awareness = savings appeared several times among the opinions:

*"Perhaps it would be more useful to be aware of how much energy all these tools consume. The little red light of the television or the time of the microwave oven, because they are little LEDs, they also consume".*

The aspect of energy that most concerns them is certainly the economic aspect given the growing geopolitical tensions and the economic-social impacts caused by the war in Ukraine.

## 2.2 What were the main understandings of energy citizenship that emerged out of the CAL?

Two main strands of energy citizenship emerged: the first related to the concept of individual agency, which translates into a series of sustainable virtuous behaviours that can be easily adopted by participants; the second is related to collective solutions. Regarding the first aspect, it can be noted that the most frequent behaviours adopted by participants are those that are easier and more immediate to undertake, such as turning off lights when not needed, using household appliances sparingly or using them only during the cheapest

hours of the day, some have bought appliances that consume less, e.g., class A++, or using low-consumption light bulbs. One participant said:

*"Today I did a positive action, I turned off the TV, plugged it in and when the red light came on, I turned off the power strip, from now on I'll leave the TV completely off when I don't watch it".*

Another participant reported:

*"I live alone, and I'm used to a pretty spartan life, I don't use many things, I don't have a dishwasher and other things like air conditioning, and I live very well eh, I live in the country".*

Many said they do not use the range hood, which can be replaced by the open window. Only one participant said they use renewable energy, demonstrating a more energy-conscious citizenry:

*"I have for example solar panels at home, when I cook pasta I use hot water from the solar panel, I use less gas, I already put hot water inside the pot. I have the heater connected to the pellet stove and it sends me all the heating in the house, but the hot water in winter when it's not there already goes directly into the radiators and the heating doesn't start from cold water but from water that is already lukewarm".*

In the third meeting, the participants worked in groups and were stimulated to think on a community level. Arguments emerged regarding all those actions that can be taken for improving energy efficiency and energy saving, for the rehabilitation of heritage and public buildings, for land development, as well as directly aimed at alleviating household energy costs. The spokesperson of one group reported:

*"We would like to propose incentivising both photovoltaics, in groups and in small communities, and small wind power. We also think that incentive measures for efficiency measures are fundamental, and we talked a lot about group purchasing, for example a farmer kills a pig, and several people buy that particular product, or large quantities of wood or pellets".*

Another spokesperson:

*"Then we talked about small communities trying to power their businesses and homes with renewable energy," she continued: "The other thing could be to use processing waste to create energy. A beautiful example is in Trentino, where they use waste wood and run both the heating and the light for a whole town. We have companies that produce furniture, printers, maybe by using non-polluting production waste, we could produce energy not only for private use, but also for public use".*

These testimonies show that energy citizenship concepts such as individual agency or the collective ability to solve a problem, in our case related to energy, were already present in the perceptions of many of the CALs participants.

**2.3** *What did participants identify as their rights and responsibilities as energy citizens (i.e., did they express a sense of entitlement or a sense of responsibility, in what context)?*

The concept of planned obsolescence and their rights as consumers emerged among the participants. The term refers to the process by which an attempt is made to instill in consumers the desire to replace technological goods or more specifically consumer electrical and electronic equipment. Planned obsolescence takes place by means of expedients introduced at the production stage (use of poor-quality materials, planning for higher repair costs than at the time of purchase, etc.), as well as by placing on the market new models to which irrelevant changes are made from a functional point of view, but with substantial outer changes. This strategy is advantageous for the industries, but it results in an alteration of the individual consumer's freedom of choice, and therefore of negotiating autonomy, in addition to the negative effects on the environment in terms of the strong impact on the consumption of raw materials. One participant:

*"It is clear that then other situations come into play here, with the big multinationals and guaranteed [programmed] obsolescence. My first washing machine lasted 28 years, kept very well. [I bought another one] and the technician said: madam, this one more than seven years it won't last. At the end it lasted 16 years, so a remarkable life! But that doesn't depend on us but upstream".*

Another participant:

*"You have to consider that before a household appliance lasted ten, maybe even twenty years, and today it lasts six years. The reason is very simple, in order to lower the price to be competitive they take poor materials (comment by a participant: it's the guaranteed obsolescence that Philips invented with light bulbs.) If you take one of the small washing machines in commerce, that loads five kilos maximum eight, let's say with SMEG being the leader for washing machines, if you take Ariston, you pay half the price, then it breaks down and you throw it away. There's one thing to be said about washing machines, that the competition still dictates that you must use a certain standard because otherwise you're out of business. Unfortunately, it's a dog biting its own tail. Maybe you bought the Telefunken refrigerator 30 years ago and threw it away in despair because it's a very good appliance that would still work!".*

As much as they go about it matter-of-factly, the participants are clearly annoyed by planned obsolescence. They blame the "multinationals" but also themselves for choosing low quality products. A mix of feeling at the mercy of the "multinationals" and self-blame for not using the possible spaces of action. It is unclear what the participant means by "*maybe you bought the Telefunken refrigerator 30 years ago and threw it away in despair*". Wherever this despair comes from, also here agency is implied. You threw it away instead of keeping it.

2.4 *How did participants define as their own communities (e.g., do participants feel a sense of belongingness and/or responsibility toward a community, city or country?) What did they understand as the appropriate scale of action (local/regional/national/cross-national)?*

Two different types of citizens took part in the CALs in Città di Castello: the largest group was made up of elderly retired persons (UniTre) who have been living in the municipality for a long time or all their lives, while the other group was made up of citizens with both national and international migration backgrounds. The UniTre group, unlike the others, were people who already knew each other, habitually attended the halls where the CALs

were held, and were familiar with expressing their opinions in public. The members of this group have strong ties to the local community, as they have all lived and worked in the same town for a long time. A strong sense of belonging to the local community emerges, which can be seen both in the participating members' investment in the community in the past and present initiatives and in their sense of responsibility for the betterment of the area and its inhabitants. For example, one participant said:

*"We talked about bicycles in Città di Castello because actually you could save a lot of money because none of us go shopping by bicycle, but we always go by car. The problem of bicycles in Città di Castello is 30 years old, we had already had meetings in the municipality 30 years ago in which my husband emphasised in particular the importance of creating safe bicycle lanes, given that we are a city in the plains..."*

Another participant:

*"It's important to lay the foundations with children towards energy education, because they usually do it in middle school, but primary school children have little information about it, here in Castello my nieces don't do anything!"*

The references and examples given by the participants, both negative and positive, are almost always in relation to the territory:

*"We would like decent urban transport, which we clearly do not have, if I have to move and go from Città di Castello to Umbertide the only way to go is by car. This means energy consumption that we would save if transport were efficient".*

It is interesting to note that among the requests made during the third meeting, two out of three groups requested LED street lighting for the municipality, an intervention that has been done by the municipal administration already some years ago. For example:

*"Surely since we are talking about public energy, having all public lighting LED would be necessary, to say the least"*

and also:

*"We then moved on to public lighting, the streetlights for instance. Earlier a proposal had come up to save money: you could have one streetlight yes and one streetlight no. However, this can entail risks because you create shadow cones in certain areas, so we dropped this and went instead to the advisability of replacing the currently used bulbs with LEDs that can save a lot of money, or even solar-powered streetlights that are self-powered".*

This gap between the real and the perceived reveals a lack of trust in administration and public services on the part of citizens. The public administration is the one that is perceived as the subject that should be acting but there is no recognition of what it has done to make then a step towards what it should be doing. Tendentially the public administration is seen as totally inefficient and at the same time the subject that could and should act. The participants consider the appropriate scale of action the local one.

**2.5** *What were the notions of justice – if any – put forward by participants (i.e., did they identify any elements of injustice in the energy transition, and how did they relate to a fair, just and inclusive energy transition)? Please pay special attention to ways in*

*which factors of discrimination like sexism, racism, classism, and others were brought into the conversation. Were there specific barriers mentioned which relate to these forms of oppression in society?*

The concept of justice did not emerge explicitly in the 3 CALs. Concepts that came up somewhat unexpectedly in the 1<sup>st</sup> meeting doing the mental mapping starting from the concept of energy were “sharing” and “speculation”, hinting towards a desire for a more just distribution and towards people enriching themselves. This was borne out when the participants connected speculation to: nuclear, costs, ways of production, poverty, waste, bills. The impression of the participants clearly is that energy is an economic sector in which injustice reigns. Subsuming the enrichment of a few under the concept of speculation, paid by the many through their bills with some ending up in poverty.

It can be assumed that the promise of creating more equality and justice in the energy field, e.g. by enabling also families with a medium or low income to invest in the production of energy through energy communities is a strong driver for deepening energy citizenship.

Sharing was connected in the mental map to respect, wellbeing, positivism. The concept came up later in the first meeting when in a discussion on photovoltaics that produce also when the electricity might not be needed, a participant comments on the use of energy produced from renewables:

*“Excuse me, also through sharing, because there are towns where the photovoltaic panels are shared”*

There is clearly the notion that there are other ways of producing and distributing energy, even though the ideas of how that could function might be vague.

Gender came up in the discussion only once in passing when it revolved around the topic which appliances to do without in order to save money. A male participant said:

*“One thing you can get rid of if you want to are the various blenders and mixers because those with a bit of effort are all things you can do”,*

a female participant replies:

*“But whose effort? Always women’s!”*

Those present expressed consensus towards the sentence uttered by the female participant but no debate followed.

### **Part III. Pathways to Energy Citizenship**

*Given the different local contexts across the eight countries, each CAL might reveal unique dynamics in the pathways to energy citizenship. This part presents the theories of change used in the CAL, ways in which the CAL engaged, enabled or facilitated participants to act as energy citizens. You are also invited to reflect upon other factors, such as more individual and structural ones, that have come into play in the processes of activating energy citizenship.*

*For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. Please use direct quotations to support your responses.*

3.1 *What was the theory of change that you assumed in the design of the CAL? In other words, why should the CAL work as intended, to achieve desirable outcomes for deepening energy citizenship? (explain your assumptions – if X has been done through the CAL, then Y would be the anticipated results.)*

Over the course of four meetings, participants were encouraged to think about energy as part of their daily lives and how they relate to it. The CAL began by constructing a mind map around the word energy to examine basic understandings and feelings around this topic. Afterwards, the workshop focused on surveying the most common household appliances, their use and misuse. Through a demonstration of home automation, it was also possible to become aware of the energy peaks that usually occur in every home (turning on or off the hairdryer, television, lamps). The ability to see live how much energy a given device consumes, generated both reactions of amazement such as: *“but look where we are!”* - as well as reflections, for example:

*“I was struck by the talk about the television set (how much energy it consumes) because I actually reflected on the fact that in many homes, in many families, now raise your hand among us who has never left the television set on most of the time, for company, when we are not actually watching it. Lonely people do it. Maybe the radio consumes less power than the TV, then yes, sometimes we could, instead of the TV, maybe listen to that’.*

In addition, a heated debate about the use of technology arose between a very young participant and two older ones. The young woman, following the demonstration, said:

*“For me these are all things that are taken for granted but for most people here they are not, because they are everyday things, even home automation. I mean they are things I do all the time. Even the knowledge that the kettle and the hairdryer have a high consumption, all this information for me is knowledge that I already have, that I've been doing since I was little, like the idea of doing the washing machine full. I mean for me it's obvious”.*

One participant stated:

*“I'm a bit against technology, because it doesn't make you think anymore. You have a super-technological house and then practically everything is done; so, you don't think about anything anymore. You practically don't build anything anymore and that is a huge damage because you don't reason anymore and therefore you don't use your brain”.*

The young woman replies:

*“But what's that got to do with it? You have to turn the light on, you're the one who has to have the impulse to say now I'm going to turn the light on and off. Before there were oil lights, technology is needed, for example the light bulb that turns on according to when you pass by was created precisely to prevent you from consuming twice as much if you are not in that room. I don't even forget to switch it on and off because it does it by itself. I don't see any negativity in technology”.*

One participant interjects:

*"We think that for many people it can be difficult to use apps or go on the computer, for you young people it is very easy".*

The debate then involved, in a lesser form, other participants who freely took the floor and expressed their opinions. The discussion polarised around two topics: new generations vs. older generations on the use of technology and technological developments vs. human ability to use it. The debate arose spontaneously. The direct visualization of consumption and the heated debate that has arisen have changed the attitude of citizens: even if partially guided to think collectively, starting from the third meeting onwards, the individual dimension no longer appears in the comments of the participants. We go from 'I' to 'We'. For example, during the first meeting, even if the question was asked in a generic way such as - which appliances are most used - the answers always referred to the individual dimension such as:

*"The dishwasher, for example, instead I bought it despite being aware that it consumes energy, but at the same time it saves water" or "Me the television that keeps me company" and: "I confess an abuse of tablet computers and mobile phones"*

and other similar related to the use of electric heaters or other devices. From the third meeting onwards, requests or comments are always made in plural form, for example:

*"Yes, yes, we did ask for incentives for bicycle lanes" or "We opened a small parenthesis because we did not only talk about electricity, we also talked about gas consumption of other energy sources" "Another thing is bicycle lanes, which we do not have".*

The first two meetings were therefore instrumental in the basic socialisation process that generated in the participants a sense of belonging to a group and a community.

### 3.2 *In which capacities/roles were the participants engaged (i.e., as energy consumers, producers and political subjects participating in decision-making processes) in the CAL, through what specific activities?*

Participants were essentially engaged in the role of energy consumers. During the three meetings, the activities of which have been described above (1°CAL mind-map and household appliance reconnaissance and classification through cards, 2°CAL self-assessment questionnaire and domotics demonstration, 3°CAL group work for processing requests to public bodies 4°CAL presentation of requests -manifesto- to public officials and territorial actors) the participants explored and reflected on the spaces for action for a more conscious management of energy in everyday life.

### 3.3 *What sense of agency (understood as the capacity to act on change) was observed during the CAL? What changes in actions did the participants commit to during and following the CAL activities? (e.g., reduce energy usage, participate in energy production, influence other citizens, join collective actions, etc.)?*

As explained above, in the first instance, a sense of agency relating to the individual sphere was observed, which translated into a series of behaviours adopted by the participants, such as switching off lights when not needed, using household appliances sparingly or using them only at the cheapest times of the day, some bought appliances that consume less, e.g., class A++, or using low-energy light bulbs. During the group work, participants

drew up demands that flowed into a manifesto containing both demands and commitments. Below are the commitments made.

We commit ourselves: to manage energy more consciously, saving according to one's lifestyle and possibilities. Among the solutions to be implemented in the household and community we have identified:

- Conscious use of energy in the home
- Efficiency measures and avoiding dispersion
- Active participation in the public sphere
- Availability and evaluation of participation in energy communities
- Assessing the convenience of collective purchasing

The document is the result of three drafts developed by the participants. Both the Climate Alliance team and the Roma Tre team, present during the drafting of the document, had the role of observers, not influencing the process in any way.

There was a consistent strong feeling by the participants that they should act virtuously in the domestic sphere. At the same time there are very vague ideas on how to act collectively (*“because there are towns where the photovoltaic panels are shared”*), but the possibility to do so is quite present albeit in an abstract way (active participation in the public sphere, energy communities, collective purchasing).

The natural actor in the public sphere is the local government, which, however, is considered (falsely) inactive in the most obvious realm, public lighting (change to LED, which already the case. There is no notion whatsoever of possible public/private collaborations, for example in setting up an energy community.

**3.4** *What factors (from the more individual or to the more structural) might have enabled or hindered the participants' engagement as energy citizens? For example, at the individual level, not feeling obligated to act, not knowing how to act, wanting to act but lack resources to act (economic capital, land, time, etc.); and more structurally, social norms, legal and regulatory constraints, among others.*

The CALs took place at a particularly relevant historical moment for the energy sector. Since February 2022, the war in Ukraine has slowed down the economic recovery and increased the prices not only of energy, but also of many other food and non-food commodities. At the same time, the media debate both on social media and in the mainstream media around the phenomenon of rising prices and the need for energy has necessarily informed citizens on the subject. As previously stated, the participants already had a basic knowledge on the subject, both in terms of energy-saving behaviour (using energy-hungry appliances during convenient periods, doing without some devices, use of bicycles) and of the main technologies related to renewable energy (photovoltaic panels, solar thermal, biogas plants). Individual use reduction behaviour could be mainly influenced by economic factors, whereas energy efficiency promotion behaviour could be more influenced by both individual and contextual factors of a community and/or group. Interestingly, group interaction exerts important positive agency effects.

Perceived obstacles and barriers fall mainly on the structural level, for example:

*“I can tell you a direct experience of mine, my house in Castello was literally floating on water because my garden is crossed by a pipe from the*

*municipality. My daughter used to see the floor all wet all the time, there was the municipal pipe leaking water in quantity. So everywhere the water network needs to be reviewed”.*

And also:

*“In a region like Umbria, we have a railway that I don't even think exists in the most remote regions of Africa!”*

Another participant referred to the situation of the road network in relation to cycling:

*“I, who have used the bicycle a lot this summer and also use it in the winter because if not I'm on foot, which I have to say is not so pleasant. I always use side roads because if you go on the main roads it is not safe. On the other hand, for us with a city on the plain, there isn't any problem to move from the immediate suburbs to the centre. Using the bicycle would be a not insignificant saving, both in terms of emissions and cost”.*

The potential actor to move forward in the energy transition in a structural sense consistently is the local government.

*“The Municipality could encourage its (photovoltaic panels) adoption especially in new buildings. I'm not saying obliging but somehow favoring, above all in public buildings and companies, putting photovoltaics in parking lots.*

*Then to avoid the energy dispersions that may occur, an office in charge should be set up to verify why your bill is perhaps so high.*

*Surely since we are talking about public energy, having all the public LED lighting would be necessary to say the least.*

*Then another thing we noticed that in public buildings the lights are always on continuously, even when nobody is there, even in the summer. They could put motion sensors in public buildings. We have companies that produce furniture, printers, perhaps using non-polluting production waste, we could produce energy not only for private use, but also for public use.*

*The last thing, perhaps the most important, is public participation, i.e. acting together. I always told the kids at school then when you make the revolution, it seems to me that we are all a bit asleep instead it is in our interest to start making ourselves heard!”*

The proposals are all very valid, but apart from the generic appeal “to start making ourselves heard”, the subject that should be acting in a more enlightened way is the local government.

- 3.5 *What knowledge, skills and competences have been introduced to the participants through the CALs (e.g., related to changing energy consumption and energy production, and participating in collective political actions)? Did the participants consider the knowledge, skills and competences they were introduced to relevant to their lives? If not, how so?*

In designing the CAL, both the Climate Alliance and Roma Tre teams applied a methodology that neither influenced nor provided knowledge to participants. Both teams acted as observing or participants. The demonstration of home automation was of great impact for the participants. They could see concretely the average energy consumption of a house. The home automation expert participant:

*"I'm just telling the personal experience. We will see two screens from the smartphone. The first screenshot is an energy meter that is attached downstream of the meter, the ENEL meter, then there is this one which is an extra meter that comes to the electricity that starts and goes from there. So, this tells us instant by instant what the consumption is at that moment. With the second application, which we will see now, it tells us the daily consumption. To see how much they consume, we have to switch the objects on and off. For each appliance there is an application that turns it on and off at home via the smartphone. The application is wireless. So, the first application says: your meter is consuming 29.56 watts. What is on in my house? More or less nothing. It's all those little lights that are on, stand-by, etc".*

Receiving immediate feedback on energy use behavior increased participants' awareness and could help change their behaviors. One of the advantages of home automation is being able to immediately view consumption peaks, through applications that return information in a clear and simplified way, identifying bad habits and trying to avoid them. Almost none of the participants (except for one young woman) were familiar with home automation and the possibilities related to it. What was learnt during the various workshops flowed into the document presented at the public meeting on 1 December (see 3.3). Below are some testimonies about the CALs experience from some participants:

*"I took part in a series of meetings held at the University of the Third Age. The first thing I want to say is that this was new for me, I have always dealt with the topic of energy efficiency of environmental sustainability, I have to say looking back a little bit, I have always dealt with it in a very ideological way in the most various phases, in politics sometimes in my work, sometimes in my private life. So confronting people like me who live everyday life was important to understand what we all feel when we deal with these issues".*

Another participant:

*"Until just before this workshop in which I participated, I actually had very little knowledge, so I really want to talk to you about how we worked to get to understand, not totally, but to start a path, more than to understand, to start a path that can lead us to awareness. I am a teacher, so I give weight to words. And so, it's absolutely important for me to reflect on this topic."*

*"Yes, so I can trace the speech that Mario made.... But I want to say, are we willing to change our way of life? My question is this because I am afraid that this is the problem. We never leave because we are afraid to change our style which is a style that unfortunately will lead us to destruction because we practically have the environment destroyed. So yes, yes, in this sense we have a war going on and in Italy we spent 25 billion euros this year, a figure never reached before and, in the world, we spend 2 billion dollars on*

*armaments, so we continue to say that there is no money for the environment when we leave the environment for last, that's my question, thank you".*

Testimonies reflected that CALs had a major impact on participants. What is lacking are concrete perspectives on how to act beyond one's own household or family. In the minds of the participants there seems to be no field of action in between their private sphere and the outside forces that set the structures.

3.6 *What are the outcomes and impacts of the CAL? And did the CAL have any wider impacts, societal, environmental, economic, etc., beyond the group that was involved as organizers and participants? Please provide a short summary.*

On the level of the overall project objective, the final event, which was widely promoted through the press and social media, helped to spread the need for greater awareness on the topic of energy. During the public meeting, in addition to the CALs participants, numerous stakeholders and citizens intervened in the public debate and expressed their opinions. One engineer, for example, stated:

*"I would like to call on the administrations to streamline procedures, because even a photovoltaic plant is not so easy to realise. Even energy communities will need authorisations, connections, in short, bureaucracy is the science of making easy things difficult through the superfluous, an old proverb used to say!"*

Again: the main road to changing the conditions for moving ahead the energy transition is to appeal to the local government. The normative regulations on installing photovoltaic panels in this period (2022/2023) in Italy are very ambiguous. The national legislation has simplified the procedures, the regions are slow to render these laws operative. At no point in the public meeting was there any mentioning of organizing pressure on the local and regional government, let alone civil disobedience, for example of simply installing the photovoltaic panels without authorisation and then notifying the municipal administration (as foreseen in the national legislation).

The high level of stakeholder influence in support of the activities promoted by Dialogues, may result in effective measures. The biggest impacts were with our implementing partners. Caritas would like to replicate CALs in a purely informative way to combat energy poverty, while UniTre would like to start an awareness-raising process with school children.

3.7 *Overall, how can citizens' participation in the energy transition be better supported and by whom, in the context of where the CAL took place?*

CALs have proven to be an effective tool for stimulating public reflection and participation. Citizens have expressed the need for clear and accessible information on the energy transition, the benefits of renewable energy sources, the options available and the potential environmental and social impacts. For example:

*"There is a need for clarity of tariffs in bills, which are not always so clear and explicit in what we consume and do not consume, they are not always clearly legible"*

*"It is necessary to avoid energy dispersions that may occur, an office in charge should be set up to verify why your bill may be so high. Sometimes it*

*depends, as Patrizia said, on a dispersion that you do not quantify because perhaps you are not an expert not at all".*

Another participant:

*"I was reduced to doing the washing machines in the evening and leaving the clothes inside, because it depends on the contract. So, you must check what type of contract do we have. Then we changed the tariff plan with the time slots. We need to check the contract carefully. I didn't know all these things, no knowledge, what are these contracts like, when they expire, what does it provide, it helps a lot"*

Clear information would also guarantee support for initiatives such as energy communities, minimizing the risk of social resistance to the location of generation, distribution or transmission plants in the area. Integrated and continuous public participation in the territory, led by the municipalities, could be the appropriate type of initiative to support participation. The municipality can be a point of reference for citizens in this process only if it truly operates as an exponential organ of the community and not as an instrumental organ of national or international strategies, re-proposing centralisms and concentrations of decisions and wealth. At the same time the top-down approach should be combined with a bottom-up approach, connecting to the wide-spread motivation among citizens to act in favour of the energy transition. To facilitate the participation of the population, political and administrative measures are necessary: first of all, a clear recognition of who are the energy providers is desirable in order to avoid privatizations contrary to the will of the citizens, which effectively exclude citizens from the possibility of actively participating in the process towards energy and participatory citizenship, simplifying administrative procedures in order to integrate them with environmental protection policies and clean energy implementation policies, improving the quality of technical-scientific information and technical-scientific information and monitoring activities, in order to plan and promote an economic and entrepreneurial development that prospers improving the quality of life of citizens.

## Part IV. CAL Processes and Quality of Participation

*CAL, as a form of citizen engagement in itself, must take into account the inclusiveness and diversity (in terms of gender, socio-economic background, migratory status and etc.), as well as the quality of participation in its activities. This part invites the CAL organizing team to reflect upon the inclusive and participatory design, and their effects on the outcomes of the CAL.*

*For each question, if you have gathered information from the CAL participants that can support your claim, please note the source of data and use direct quotes when applicable.*

4.1 *What was your overall experience working with your partners? Did the roles of partners evolve, possibly also differently from what you agreed upon and reported in the Implementation Document? At which stage, and with what tasks were they most engaged, and where did they lose interest (if that was the case)?*

Overall, the experience with the partners was fruitful and positive.

All three implementing partners contributed to the recruitment of participants and the administration of the pre-CAL questionnaires. Each partner participated with one or two

members in the CALs. There were no significant changes in their roles compared to the initial design.

One of the most difficult aspects was to involve vulnerable citizens, in which regard the director of Caritas said during a meeting the day after the first CAL:

*"It is difficult to motivate our people to participate if you do not provide them with practical feedback immediately".*

In order to further motivate both those who participated in the first meeting and possibly some additional participants, a municipality official agreed to make a round of reminder phone calls on the morning of the second meeting.

During the meetings that took place both before and during the realisation of the CALs, several requests emerged from the partners to continue the pathway started with DIALOGUE. The director of Caritas would like to organise meetings aimed at those suffering from energy poverty in order to raise awareness, while UniTre would like to set up educational courses for primary schools. Certainly, the phase that engaged them the most was the recruitment and administration of the pre-CAL questionnaires, while the most difficult task to complete was the return of the post-CAL questionnaires.

**4.1.1** In a number of CALs, some of the implementation partners are identical with our target group for policy advice, i.e. civil servants working in local governments or public institutions. How they handled their roles and possible evolutions in their understanding of the CAL while they assisted in the implementation deserve particular attention. Please pay extra attention to this point while you are answering this above question.

The staff and councillor of the Department of Social Services played a very active role at all stages. They made important suggestions, especially for the questionnaire, as many questions were quite complex for a user who, in many cases, has a basic literacy in the Italian language. Their role in liaising with other departments of the municipality such as the mayor's office and the environment department was very important.

**4.2** *What measures were put in place to ensure the inclusiveness of the CAL (during recruitment and implementation, among participants, invited speakers and the CAL organizing team)? What worked and what didn't work, in your opinion?*

The facilitator's long experience in adult education ensured the inclusiveness of the CALs. Given the heterogeneous composition of the participants, it was necessary to provide both visual facilitation and participation models that ensured that everyone could take the floor and intervene without being forced. The first activity chosen to be carried out during the first meeting was the mind map. Concept and mind maps are tools for learning and their purpose is to give a logical-conceptual structure to a set of unstructured information. During the first CAL, the mind map was created around the word energy. The tool proved to be an excellent ice breaking as everyone felt able to respond and say their own mental association related to this word. In case anyone had any reticence in exposing themselves, the trainer always paid close attention to allow everyone to speak. To do this she threw a ball as a word-of-mouth symbol. Cards representing the most common devices present in every household were used for the activities in order to provide visual support in the case of low language comprehension. Video aids were used in all meetings. Although all the participants were able to actively participate in the sessions, citizens with an international

migrant background, therefore not native speakers of Italian, intervened much less than the UniTre group.

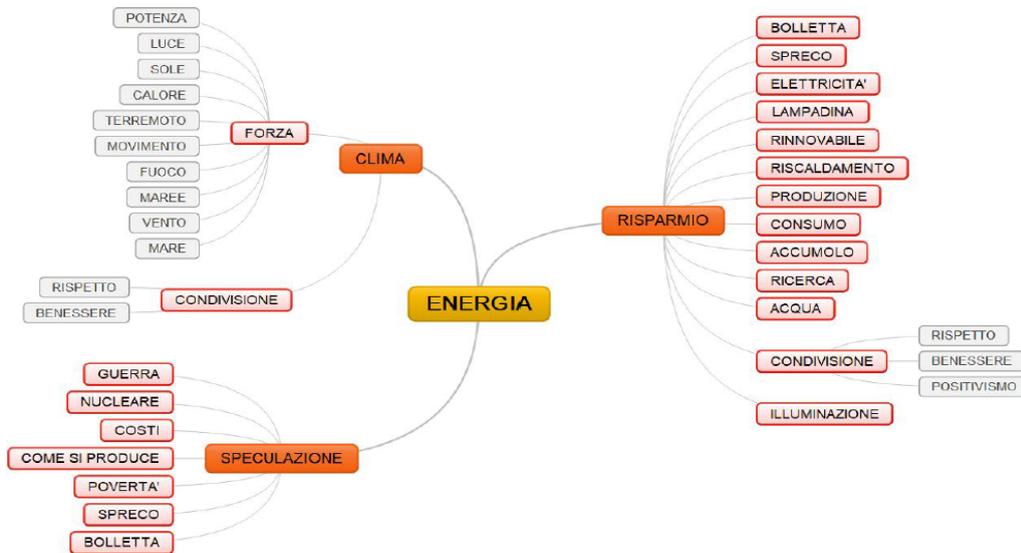
*4.3 What measures were put in place to ensure the quality of discussions during the CAL (for example, efforts to make sure that diverse points of views are respected, and minorities or underprivileged groups were given sufficient time and space to speak, efforts to stimulate debates and scrutinize information fed into the CAL)? What worked and what didn't work, in your opinion?*

As described above, the facilitator has a long experience in adult education. She has implemented various strategies starting from the care of the atmosphere in the classroom, enhancing the informal moments and stimulating the participants to put their experiences at the centre. In order to create a positive atmosphere for everyone and to put the knowledge of the participants at the centre: the initial knowledge technique envisaged that each participant got to know his neighbor and then each one introduced the other to the whole room in two minutes. In addition, the trainer learned everyone's names very quickly, signaling attention and interest to encourage participation. Particular attention was paid to foreign participants whose names are not always easy to pronounce. time was also dedicated to the expectations they had of the path they would take.

As regards the organization of the meetings, after planning the topics to be covered together with the DIALOGUES team, the trainer implemented a series of micro-actions in a sort of consolidated routine: in the first few minutes, using an informal and cordial register, framing then the topic of the day finally have a randomly chosen participant resume a summary of the previous episodes. Brainstorming techniques were also used to bring out perceptions regarding the various topics covered, supported by various materials (cards with drawings, post-it notes, audio-video supports). Despite the efforts of the trainer, some participants were much more active than others, especially those who were part of the larger group, more accustomed to public speaking and to expressing their opinions.

*4.4 What procedures/processes were put in place to elicit reflections on justice and equity issues in relation to the energy transition?*

As mentioned above, the CALs were designed so as not to interfere with meaning-making processes. The CALs sought to stimulate participants on both the concept of spheres of influence, i.e. how individual behaviour affects the global level, and collective capacity. The result of the mind map, born from the spontaneous associations of the participants, brought out three macro-concepts around the word energy: climate, savings and speculation.



In this regard the trainer said:

*"OK then, let's start now from speculation (from the audience the inputs come in this order - nuclear, costs, how it is produced, poverty, waste, bills) let's try to sort out the other words that are left around".*

The association energy = speculation arose spontaneously among the participants. The influence of the current media debate around energy scenarios was made explicit in the concept of speculation. Rising energy costs as a consequence of the conflict in Ukraine brought up concerns that were previously present in a lesser form or even absent for some. The concept of speculation therefore relates to injustice: if the rise in prices is determined by the scarcity of resources due to the supply difficulties caused by the ongoing war, why should the consequences of these power games driven by the economic interests of the large energy-producing companies be paid by the citizens?

**4.5** *How were the results of the CAL communicated to the i) general public and the ii) public authorities, and how were they received?*

To inform the general public, two press releases were issued in collaboration with the press office of the municipality of Città di Castello: the first after the second meeting containing general information on the project and the workshops. The second was issued before the final meeting as a report on the activities carried out and as an invitation to the general public to participate. They were published in all local newspapers, both online and in print, as well as a television report on a regional broadcaster. Public authorities were actively involved in this phase by being a CAL implementation partner.

**4.6** *What measures were put in place to allow the continuation (e.g., picked up and carried forward by participants or partners) and replication of the CAL, if any?*

During the CAL preparation meetings, the implementing partners expressed their willingness to continue the project and the city workshops. The president of the territorial Caritas and the social services department of the municipality of Città di Castello would like to organise a workshop for those suffering from energy poverty. The UniTre association

would like to organise CALs for primary school children to provide them with energy knowledge. A follow-up meeting with CALs participants is being considered.

4.7 Please provide any additional information that you believe would be helpful to others, in designing a CAL and towards the replicability of your CAL.

### Appendix: CAL events and data capturing

Please list the different CAL events, their participants, and the data that were captured at the events. An example has been provided.

	Total # of participants (Include team) / gender breakdown	Video recording	Audio recording	Transcript (English)	Observation notes	Written materials by participants (posters, post-its, etc.)	Other sources of data
Available to the Consortium?		none	yes	transcripts will be translated shortly	none	yes	yes
<b>Event 1</b>	13 males, 28 females	none	Audio recordings of approximately 1.5 hours	Language IT	none	cards were used with the appliances drawn and attached in order of consumption on a blackboard by a designated participant	Photographs (8-10)
<b>Event 2</b>	13 males, 28 females	none	Audio recordings of approximately 1.5 hours	Language IT	none	participants filled in a self-assessment questionnaire	Photographs (8-10)
<b>Event 3</b>	13 males, 28 females	none	Audio recordings of approximately 1.5 hours	Language IT	none	the participants wrote a manifesto working in 3 groups	Photographs (8-10)
<b>Event 4</b>	30/35 males, 45/50 females	none	Audio recordings of approximately 2.5 hours	Language IT	none	a spokeswoman for the participants presented the manifesto to the public	press review, TV service, Photographs (20-25)

## Italy, Rome – Report of the Citizen Action Lab

### Part I. Basic Information of the CAL

*In this part, please provide a short summary (max. 500 words) of the objectives, sequence of events, the participants and the data gathered.*

#### 1.1 *How were the main objectives of the CAL described to partners and participants?*

In December the teams from Climate Alliance Italy and University Rome 3 finalised the methodological approach of the Rome CAL also based on the experience with the one in Città di Castello. The implementation partner was the Metropolitan City of Rome Capital (CMRC) that had provided a letter of support in the application phase. A DIALOGUES' outline describing the project and its objectives, and a description of the CAL were sent to the implementation partner, CMRC, Management Office for the "Promotion of Sustainable Development," followed by an in-person meeting at the CMRC offices of the research team and the implementation partner. There both the method of administering the questionnaire and its content were discussed. The implementing partner sent invitations and pre-CAL questionnaires to participants while post-CAL questionnaires were distributed and filled out by participants at the end of the meeting.

The Rome CAL differs from all the other ones in that it worked with the persons that will be the target group of the Policy Handbook of DIALOGUES, public officials and private consultants that work on the energy policy of public administrations on the local, regional, and national level. They will be the recipients of the actionable policy advice for deepening energy citizenship in their communities and fields of activity. The Rome CAL therefore had the objective to hear from our target group their understanding of energy citizenship, be it in their professional activity, be it as citizens. The wide experience of Climate Alliance Italy working as a city network with public administrations, not the least collaborating with the Metropolitan City of Rome Capital has shown over the years a high threshold for getting public servants to participate in events that do not serve directly for their function in the administration, informing them, for example, on financial opportunities. It was therefore decided to organize the CAL as a one-day intensive event.

Obviously a single, one-day event will not deliver exhaustive data on the main objective of the CAL, understanding better the awareness and frame of reference of the target group of DIALOGUES' policy advice. But it should furnish some indications on the themes and the framing of energy citizenship by the target group of DIALOGUES to be further elaborated and deepened in the course of the project.

#### 1.2 *How was the CAL relevant and/or timely for the local context, taking into consideration current events in local and national politics?*

The target audience for the Rome CAL were energy managers and civil servants working in the energy sector. In addition to feelings of concern related to the war in Ukraine and the post-pandemic situation, feelings of disillusionment and frustration related to their daily work emerged. Many among those present were energy managers who are responsible for compiling SECAPs for their municipalities i.e., sustainable energy and climate action plans under the European initiative Covenant of Mayors for Climate and Energy. The energy manager is tasked with collecting energy data from his or her entity, verifying consumption, optimizing it, and promoting actions aimed at energy efficiency and the use of

renewable sources. It is therefore necessary to get into contact with other public and private bodies in order to collect data and information for the compilation of plans. It turned out that this aspect is particularly complex and that collaboration with other entities is far from smooth. CAL was able to intercept these perceptions; participants felt free to talk about the problematic aspects of their work and the setting of the Citizen Action Lab played a favourable role.

*1.3 Please describe the sequence of events of the CAL and list the different types of data that you have collected from each of the events (please refer to Table in Annex). Please also describe the methodological approach you will use to analyze the data collected.*

**Event:** The Rome CAL was held in a one-day workshop. It began with introductions of the attendees through the card game dixit: participants had to choose two cards from the table then introduce themselves based on the images represented; everyone related their profession to their choices, and this proved very interesting in framing their perceptions. In the second part of the morning, a mind map was constructed around the concept "Energy Transition,". Each participant wrote down on one or more post-it notes the mental associations around this concept and then explained to everyone the reasons for what they had written. In the last part of the CAL, two groups were randomly created and worked on the basis of the Business Model Canvas (BMC) methodology on the predefined sections: Problem - effects of the problem - proposed solution - actors involved - practical actions. The ideas and comments of the participants were written down on posters and then reported to the plenary by a designated spokesperson. The subjects chosen were:

Group 1: Energy poverty, energy security, lack of trust in institutions

Group 2: Politics – be it in terms of political will, be it capacity

### **Types of data**

The meetings were recorded (audio only) and then transcribed.

### **Methodological approach: hermeneutics, ethnomethodology and grounded theory**

For the analysis of data, we make use of hermeneutics, ethnomethodology and grounded theory, all qualitative research methodologies used in the social sciences. Hermeneutics originated in philosophy, and it was mainly Hans Georg Gadamer who paved the way for their adaptation in the social sciences by Alfred Schütz and later Thomas Luckmann and Peter Berger. Hermeneutics emphasise the importance of interpretation, context and reflexivity. From ethnomethodology, developed by Harald Garfinkel in the 1960s, we draw attention to how people construct their social reality and make sense of it, while with grounded theory, developed by Barney Glaser and Anselm Strauss in the same period, we find useful the approach of developing ideas and concepts out of data. Instead of starting with a predefined theoretical framework, researchers immerse themselves in the data and systematically analyse them to uncover patterns, concepts, and relationships.

What we take from all three approaches is the emphasis on the lifeworld of the research subjects, their intentions, their understanding of the situation, and how they attribute meaning to their thoughts and actions. They all focus on understanding and interpreting social phenomena from the perspective of the participants involved, emphasizing subjective meanings and social contexts. This has an effect on the kind of knowledge that is being produced. In the tradition of the Critical Theory of the Frankfurt School, the aim of research is to deepen scientific knowledge on the topic of interest, but also to deepen the

research subjects' understanding of their own situation from an emancipatory perspective. The analysis of the audio recording and the notes of the working groups were analysed in a first step according to the concepts of:

Agency	Barriers
Opinion	Solutions

A continuous attention was dedicated to how gender in a transversal manner entered the communicative interactions. The set of categories if needed, will be revised on the basis of the analyses of the Roma CAL that follows and in a comparative approach with other CALs.

**1.4** *Who are your partners in the CAL (researchers, representatives from civil society organizations, private enterprises and public authorities) and what were their main roles in the different stages of the CAL? (more elaboration on your experience with CAL partners in Question 4.1 of this reporting template).*

The implementing partner of the CAL organized by Climate Alliance and the University of Roma Tre (RomaTre) in Rome was the Metropolitan City of Roma Capitale, Management Office for the "Promotion of Sustainable Development." The CMRC is the territorial coordinator of the Covenant of Mayors for Climate and Energy, so it is in constant contact with the energy managers and officials of the environment offices involved in the compilation of the PAESCs.

During the drafting phase of the DIALOGUES project, Climate Alliance Italy held meetings with CMRC to verify the feasibility and type of collaboration to be put in place. The partner signed a letter of support specifying its role in implementing the CAL.

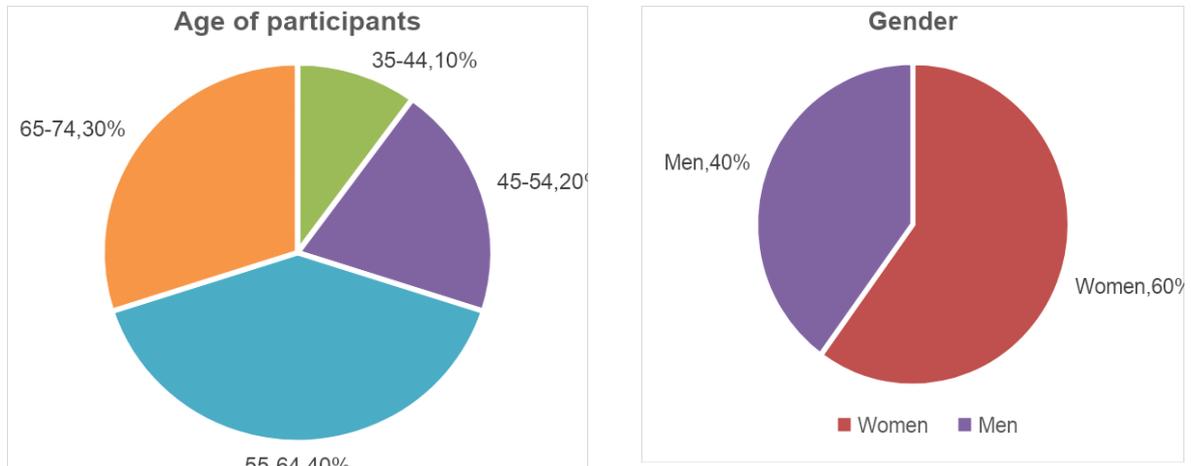
The partner helped recruit participants. In addition to the identification of the location, Villa Altieri a prestigious building located in the centre of Rome, the partner contributed both to the recruitment of participants through ad hoc invitations and to the distribution of the pre-CAL questionnaire.

**1.5** *How would you evaluate the degree of citizen participation in the CAL? Are citizens/local residents engaged in the CAL beyond that of the "ordinary" participants (e.g., citizens have the power to co-design the events, determine the objective, the focus, and the agenda of the CAL, etc.), and if so, in what ways are they engaged?*

The Rome CAL was held in one intensive day-long workshop with energy managers and municipal officials from environmental offices. The event was held in a prestigious venue, Villa Altieri a representative palace of CMRC and given the limited time the agenda and activities were quite intense. Thanks to the facilitator the participants felt comfortable right away and had the opportunity to express their wishes and possible irritations at any time during the meeting. The CAL, except for the first part when participants presented themselves, was structured to elicit the co-production of solutions.

**1.6** *What are the socio-demographic characteristics of the participants, in terms of age, gender, socio-economic status, etc. (please feel free to add a summary table in the annexes)?*

The survey administered also made it possible to collect general information on the respondents' households (people whom they live with, household consumption management habits, characteristics of the dwelling, total economic income of the household, etc.). As to the age and gender composition see graphs below.



## Part II. Understandings of Energy Citizenship

*This part presents the various understandings of energy citizenship (what it means, what activities does it involve and at what scale/level) as put forward by the participants of the CALs. You are also encouraged to summarize expressions of rights, duties/responsibilities, understandings of membership and communities, and ways of participation – all of which are central in the conception of active citizenship – that have been articulated through the CALs. For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. If you made audio registrations of sessions or parts of them (as we recommended), please use direct quotations to support your responses.*

### 2.1 *How did participants perceive energy in their everyday life (e.g., heating and illuminating the home, fueling the car, etc.) and what about energy that concerns them the most?*

As mentioned earlier, the participants in the Rome CAL were all either energy managers or officials from environment offices of municipalities. Energy and energy efficiency are part of their daily work, and they have professional knowledge of the topic. In two cases, two participants referred to their non-work lives during presentations:

*"Home is an important shelter; it is a place where we have to be comfortable and it is also related to the topic of energy in some way, so a comfortable home also means having an interesting management and climate capacity."*

*"But let's say that even individually I have always had a sensitivity: I used to collect paper, for example, and take it to the parish already 50 years ago and in my house even with my children I used to say with the cans that instead of throwing them into the bucket let's collect them and make a mountain like Everest."*

Managing one's home in a competent manner and a sustainable lifestyle are seen as a logical continuity with one's professional role and vice versa, separate garbage collection in the private sphere is an additional qualification for doing a good job as energy expert. Unfortunately, this motive of how behaviour in the private life and professional role relate to each other did not emerge more prominently in the event.

Otherwise, references to energy and the environment refer always to the professional role, however, with frequent reflections on one's own state of mind reacting to a general situation which is perceived as complex and problematic.

It is interesting to note how the words fear, anxiety, and worry appear in many statements:

*"The water is gone. This is another phobia of mine, tremendous phobia, because water is a vital element, as we all know, very important. The fact that it is about to end means we are on the brink of disaster. I am afraid. This is my feeling."*

*"I've been working in this field for many years, it's not the first time I've heard the theme, I'm quite worried about having to change the current model."*

*"So yes, the fear of this change and also the difficulties associated"*

*"I was reminded of what we went through with the covid epidemic and the difference there is between fear and panic, two concepts that in my opinion need to be developed in a scientific approach: fear is a healthy feeling; panic is a feeling that should be avoided. So, you need the fear necessary to understand that you have awareness, another term I think I've indicated, to find the right way."*

*"Maybe the issue of energy security is the one that scares us the most, but I think in terms of environmental impact and the footprint of that impact, all of these issues have to move synergistically otherwise you're not going anywhere."*

Awareness about climate change, then, combined with concern about the future and a sense of powerlessness builds the foundation for eco-anxiety, a term coined by Albrecht (Albrecht, Glenn. (2011). *Chronic Environmental Change: emerging 'Psychoterratic' Syndromes*. doi: 10.1007/978-1-4419-9742-5\_3) to describe the chronic fear of environmental catastrophe or anxiety associated with worsening environmental conditions. Such feelings were all expressed by women. In general, the participants' perception of energy is geared toward a sustainable and responsible approach that takes into account the needs of present and future generations, but above all they are aware of the complexity of the topic in their daily work.

## 2.2 What were the main understandings of energy citizenship that emerged out of the CAL?

The participants in the Rome CAL are all people who are familiar with the topic of energy. Behaviours related to good daily practices (such as turning off the light when leaving a room, using class A+++ appliances, preferring to travel by train instead of by car) are almost taken for granted, individual agency is considered implicit, e.g.

*"I am not referring to the education of turning off the faucet when brushing one's teeth."*

The reflections are mainly about one's professional role within society and what can be done to get messages across to citizens. There are also many global and societal reflections:

*"The situation we are experiencing is complex precisely because of human history, that is, this is a transition that is perhaps unprecedented in human history."*

another participant:

*"I think we need to reflect as a Western society on our issues and especially starting from the point of view that we want to continue to secure the consumption pattern and lifestyle that we have been accustomed to up to now, without actually considering that six maybe 7 billion human beings are not even remotely familiar with our lifestyle."*

*"So, the thing that I think everyone realizes, being the way we are, what we have is not a pattern that can be perpetuated forever, we've had proof of that with the increase in energy prices that have skyrocketed so we've all more or less gone crazy."*

The main issues that have emerged relate mainly to the ability of the public administration to offer solutions that citizens can perceive not as something imposed from above, but one that sees them as protagonists and creators of their own destiny and that of an entire community, that transforms them, precisely, into energy citizens, and that in an active and conscious way they can make investments to safeguard their wallets and at the same time the protection of the collective environmental interest. For all, this process is seen as very complex, the word complexity appearing numerous times in the participants' speeches:

*"I really mean the difficulty that every operator in this view has to face, among the various laws the various regulations, the various European and international, regional, municipal and company complications.*

*It's true that there was the pandemic, but the complication is really that of the regulations and finding the data that is the most complicated thing for those who want to try to do something proactive."*

*"However, certainly the energy transition the first thing that comes to my mind is complexity, a very overused term but frankly unavoidable in the sense that we are talking about an extremely complex thing."*

*"Certainly, complexity is associated with the term uncertainty, a transition is characterized by uncertainty. We know where we are moving from and there is a tendency as my colleague was telling us earlier to be conservative, so it is difficult to go into transition and above all it is uncertain."*

*"It is an inescapable, irreversible process although very difficult to achieve because there are so many economic interests. You have to think about all the employment chains in different sectors, you have to change both industrial and domestic equipment, you also have to consider geopolitical aspects."*

The participants were clear that the energy world is largely interconnected and that there are different elements involved in the energy transition such as technical, economic, political, institutional and behavioural issues. The energy transition is a systemic issue.

**2.3** *What did participants identify as their rights and responsibilities as energy citizens (i.e., did they express a sense of entitlement or a sense of responsibility, in what context)?*

During the presentations, two participants - a male engineer and a female architect - expressed a strong sense of responsibility related to their profession. The need to train and update implies feeling responsible for one's decisions and actions, and a sense of community responsibility emerges that is specifically related to the engineering and architectural professions that typically deal with the safety and well-being of people.

*Although it's been several years, I'm not ashamed to say that I'm still studying since it's such a vast subject that before you fully understand the ins and outs the years pass.*

*So, I started to study again and actually this is something that continues to this day, and I think it is essential knowledge on all the different levels not only the scientific one but also for citizens on a much more practical level.*

*Even in my work with gas I was always trying as much as possible to figure out how not to pollute the environment too much, although working mainly with Middle Eastern countries there were not all these possibilities.*

Then during the CAL, a broader sense of responsibility emerged referring to humankind and the future that would await us if we do not take the necessary responsibility.

*..... the inevitable responsibility to understand that something more than our individual lives is at stake, that it is really the human culture, the human species that is at stake.*

*We have to rethink our way of life is because otherwise the planet can never make it to endure twelve billion people consuming as we do. Something absolutely impossible.*

*Every citizen, every human being has to be able to find his or her own way in the energy transition and us administrations can help in this.*

In general, it emerged that the goal to be achieved is that of a just energy transition. The ideal outcome of such a transition would be a fair and regenerative energy system. The subject that needs to act in most cases is an unspecified "we" but there is also the awareness of the supportive role of public administrations.

**2.4** *How did participants define as their own communities (e.g., do participants feel a sense of belongingness and/or responsibility toward a community, city or country?) What did they understand as the appropriate scale of action (local/regional/national/cross-national)?*

The participants in the Rome CAL were all either from the city of Rome or from towns in the province of Rome. Only in two cases were there references to the area, by two male engineers referring to the complexity in their work that is also related to the bureaucratic problems present in Italy:

*"In the municipality of Albano, we have Ace Ato 2 responsible for water management. On one road, where you see continuously leaks, they have subcontracts where they repair one meter at a time, but on that road, which is 300 meters if you do 50 one-meter repairs, you lose so much water. The logic would be to replace the whole tube in a single operation."*

*"50 years ago, Rome had an excellent streetcar network. It was dismantled to make people buy cars, and now we say there's a car problem? Because 50 years ago Italy was not a republic founded on labour but was a republic founded on Fiat because you had to sell Fiat cars. The streetcar from Velletri used to go all the way to Rome, and so did the one from Fiuggi. Think about the people coming now by car from Fiuggi to Rome to work - the complexity is this!"*

In the remaining comments, as was analyzed above, the perception of the problem is global with regard to the sentiment afferent to climate change and the environment in general, while it is national where the potential solutions to be put in place are discussed. The appropriate scale of action is national.

2.5 *What were the notions of justice – if any – put forward by participants (i.e., did they identify any elements of injustice in the energy transition, and how did they relate to a fair, just and inclusive energy transition)? Please pay special attention to ways in which factors of discrimination like sexism, racism, classism, and others were brought into the conversation. Were there specific barriers mentioned which relate to these forms of oppression in society?*

A female participant both during the construction of the mind map and as a spokesperson for a group twice expressed the concept of equity in the energy transition:

*"In the energy transition we are often not aware of the additional benefits we would reap beyond health in terms of economic and social benefits. There are so many aspects that are often not really communicated. Equity is one of the key issues. Change of habits, communication of benefits and equity."*

*"The problems are energy poverty, social vulnerability and the lack of equity. Many citizens just can't pay their bills, many don't have the means to install renewable energy systems in their building, many live in badly insulated buildings."*

The barrier is therefore essentially economic. The efforts towards a sustainable future involve risks and opportunities, the opportunities need to be better communicated, the risks of energy poverty require an effort for a fair transition with no one left behind.

### **Part III. Pathways to Energy Citizenship**

*Given the different local contexts across the eight countries, each CAL might reveal unique dynamics in the pathways to energy citizenship. This part presents the theories of change*

*used in the CAL, ways in which the CAL engaged, enabled or facilitated participants to act as energy citizens. You are also invited to reflect upon other factors, such as more individual and structural ones, that have come into play in the processes of activating energy citizenship. For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. Please use direct quotations to support your responses.*

**3.1** *What was the theory of change that you assumed in the design of the CAL? In other words, why should the CAL work as intended, to achieve desirable outcomes for deepening energy citizenship? (explain your assumptions – if X has been done through the CAL, then Y would be the anticipated results.)*

During the CAL preparation meetings in Rome with the Metropolitan City, the University Rome Tre team, and the facilitator, various methods were hypothesised on how to run the workshop before choosing the final one. The fact of having an audience of professionals posed various questions to the organising team in order not to be trivial to stimulate meaningful reflections for our research in a single intensive day of workshop. After the CALs in Città di Castello, everyone agreed to use the mind map again, which proved to be a particularly useful tool for getting people to talk freely. Unlike the previous workshops, in this case the mind map was constructed in a more articulate manner, i.e., each participant had to write his or her mental associations on a post-it note and then report the reasons for what he or she had written to the whole audience. The chosen concept around which to reflect was "energy transition". At first the team had thought of being more specific and the phrase "fit for 55%" was chosen, but later "energy transition" was preferred, as being more generic and potentially stimulating broader reflections. One tool that proved to exceed expectations was the card game Dixit. As described above, the participants presented themselves by choosing two cards on which there are phantasmagorical representations to which one can attribute multiple meanings. It was interesting to see that almost all of the participants related this choice in some way to their profession and/or energy despite the fact that the trainer's introduction made no mention of it:

*"The first activity we are going to do is one that allows us to get to know each other a little since we are all together around a goal it is important first of all to know who we are working with, and we do it with a game"*

Some testimonies:

*"In the choice that the trainer asked us to make, I was thinking about the discourse in relation to the subject, I chose a labyrinth with symbols, by labyrinth I mean the difficulty that every practitioner has to face in this optic."*

*"The card I chose is an end of lunch also with a lot of waste and this introduces a bit the theme of synthetic meat".*

*"The cards I chose are a forest with a horse, if I could ideally go back to the old days, I would remove the cars and have horses."*

*"However, the fact that there's a snail at the bottom evokes to me the path of energy efficiency which is not exactly fast."*

*"The card has as its protagonist a dragon, which made me think of fire and certainly of the theme of energy because fire, let's say, probably par excellence like the sun, represents this energy source, so it's a bit of a reminder of what our work is."*

*"The other is this werewolf type dragon monster with two little ones who are escaping, clearly they are Greta Thunberg and her boyfriend, and we are the ones who created the situation from which they have to escape".*

*"The first one I chose I think represents a bunch of keys that are useful to open the mind where sparks come out, so I would like that for example our government could have these keys and bring out sparks not only of intelligence but also of innovative ideas".*

As with the CAL in Città di Castello, the Climate Alliance and Roma Tre teams acted as participant observers trying "to go with the flow", interfering as little as possible with the process. The input that was provided i.e., the construction of the mind map and the workshop in groups based on the business model canvas allowed the participants to speak freely about their perceptions and reflections without restrictions in a neutral environment. This approach turned out to be very positive and succeeded well in activating group discussions on energy citizenship aspects not considered during routine work activities.

The research team did not depart from the idea that the CAL should bring about any change among the participants. That might happen as an unintended consequence, but the main purpose of the CAL was to gain a better understanding of the perception energy experts working in or for public administrations have of themselves as energy citizens and how they understand their own work of promoting energy citizenship among their fellow citizens. What emerged very clearly but not unexpectedly was their widely shared conviction on the need for deepening energy citizenship, what was less to be expected was the existential relationship many have with the energy transition and more in general the ecological conversion, often with a strong undercurrent of Angst.

The DIALOGUES policy handbook will need to take these results in consideration, above all if they are confirmed by other research. First conclusions could be:

- No "Teaching and Preaching". Our target group is well-informed and knows what is at stake
- However, our target group feels somewhat helpless as to what their contribution as policy makers and experts could be.

**3.2** *In which capacities/roles were the participants engaged (i.e., as energy consumers, producers and political subjects participating in decision-making processes) in the CAL, through what specific activities?*

The construction of the mind map, which engaged participants in writing free associations related to the concept energy transition on a post-it note, was functional in preparing the ground for the next activity i.e., the business model canvas. This activity involved a random division into two groups where each group had to work on: problem - effects of the problem - proposed solution - actors involved - practical actions. To this end, posters were prepared

which were compiled and then reported to the audience by a designated spokesperson. Participants therefore were engaged essentially as political actors participating in decision-making processes.

3.3 *What sense of agency (understood as the capacity to act on change) was observed during the CAL? What changes in actions did the participants commit to during and following the CAL activities? (e.g., reduce energy usage, participate in energy production, influence other citizens, join collective actions, etc.)?*

As mentioned above, agency understood as reducing energy in one's home and/or behaviours aimed at conscious consumption are almost taken for granted. One of the main concerns of the participants is being able to guide citizens toward sustainable behaviours:

*"I think this initiative you have organized is important precisely because involvement could be the tool through which to get this energy awareness"*

*"In my opinion it is important to invest in citizens' awareness of energy and for awareness you need to reach various targets. Certainly, schools are one of the key targets"*

*"Then I wrote another post-it that focuses more on the citizen, on changing habits and on communicating the benefits. In the energy transition we are often not aware of the additional benefits we would reap beyond health in terms of economic and social benefits. There are so many aspects that are often not really communicated."*

This concern, however, does not translate into agency in one's work, there is awareness that one's agency is not doing enough in this area but none of the participants expressed a willingness to change, not so much a lack of willingness but a lack of opportunity to act:

*"We still move in entities that still look at problems by silos, problems that should be looked at in their integrity in their synergy. Instead they are dissected as if this complexity is not there. I think the issue is really how to you deal with the complexity of what citizens could be doing? This should be done by the public entity, but obviously all those stakeholders and players that we were talking about earlier (are an obstacle to this)."*

What emerges is a perception of the Italian PA as a set of redundant and confusing regulations that hinder innovation and make simplification a chimera. The excessive production of overlapping regulations generates confusion and disorientation, so much so that those who work in the PA feel frustrated and tired.

There is a nearly complete lack of a we-feeling in the sense of "us energy citizens". What prevails is a dichotomous perception of "they", the citizens who lack awareness and "us" the experts, who are aware of what energy citizenship entails combined with a feeling of helplessness in view of the complexity of the situation and the entrenched power relations and particular interests that dominate the field.

3.4 *What factors (from the more individual or to the more structural) might have enabled or hindered the participants' engagement as energy citizens? For example, at the*

*individual level, not feeling obligated to act, not knowing how to act, wanting to act but lack resources to act (economic capital, land, time, etc.); and more structurally, social norms, legal and regulatory constraints, among others.*

Participants in the Rome CAL at the individual level expressed a deep commitment as energy citizens resulting from the awareness on the subject acquired over the years in their profession. At the professional level, as mentioned earlier, they are all able to understand what things are not working in their institution and there were many criticisms as well as proposals to make the system improve but no room for action is discerned. For example:

*"I put integrated planning last, but it is the first in the sense that talking only about energy is reductive. They are all issues that need to be looked at in an integrated way, from transportation to land use planning which is an issue that is being neglected in Italy."*

Even though the participants are all civil servants and some even hold top positions within their institution, none foresees spaces of action where they can be responsible and activate some kind of change. Those responsible are the politicians both at the local authority level and in the national government:

*"If you don't make strong political choices, that might be unpopular, the energy transition doesn't go forward. Even though all these issues have been talked about for years little or nothing has been done. Strong political choices would mean a ban on land consumption, it would mean strict building regulations on renewables and all the compulsory measures to contain energy consumption, it would mean 30 km/h zones, it would mean a whole series of things."*

The complex relationship between politics and administration has always been among the most debated issues in Italy. Officials typically have a 'technical' role to play as a function of political indications from above. A favourite way of framing the problem is on the political side to lament the inertia of the technical staff and on the side of the latter to lament the opportunism and obtuseness of the politicians. Both parts, of course, have unused spaces for becoming active which they don't use because they lack a vision of where to go and they don't want to take the risk to stick their head out with the risk of failing.

On the side of policy advice this means to create and promote a feeling of being part of a large European movement when moving the energy transition ahead in your community, even though in the local context your proposal might still be considered unusual or even utopian. The Sustainable Energy and Climate Action Plans of the Covenant of Mayors help in this context and so does the support the EU is giving to Renewable Energy Communities. "Energy citizenship" needs to embed these fields of action into a wider context of energy transition and its social and environmental dynamics as they manifest themselves in the lifeworld of European citizens.

**3.5** *What knowledge, skills and competences have been introduced to the participants through the CALs (e.g., related to changing energy consumption and energy production, and participating in collective political actions)? Did the participants consider the knowledge, skills and competences they were introduced to relevant to their lives? If not, how so?*

Participants were not provided with knowledge since they already possessed all knowledge related to the subject matter. What was particularly appreciated was the meeting as such, which was seen as an opportunity to be able to talk freely about one's work without restrictions and reflect on the social aspects of one's profession.

3.6 *What are the outcomes and impacts of the CAL? And did the CAL have any wider impacts, societal, environmental, economic, etc., beyond the group that was involved as organizers and participants? Please provide a short summary.*

The most important impact was related to the fact that during the CAL, professionals from different entities were able to exchange views informally. The workshop allowed participants to develop a real and sincere discussion around the topic of energy citizenship.

Although their testimonies did not reveal any short-term possibilities for action in their profession, in terms of long-term impact, it is hoped that the sensitivity shown to the topic will translate into participation and awareness-raising initiatives. In this regard, one female participant, an official of the Istituto Superiore per la Protezione e la Ricerca Ambientale (ISPRA) said:

*"The reason I came here is because I study public participation processes, and I think this initiative you have organised is important precisely because involvement could be the tool through which this energy awareness could be acquired".*

3.7 *Overall, how can citizens' participation in the energy transition be better supported and by whom, in the context of where the CAL took place?*

Many of the participants in the Rome CAL argued that to make the energy transition a reality, citizen participation is crucial. The absence of knowledge and skills can hinder citizen engagement in energy. People may not know how to act sustainably or what actions to take to reduce energy consumption. Access to information and educational programs could help bridge this gap. The approach to this is seen to be as complex as the subject matter itself. Interesting in this regard is the reflection made by one participant:

*"I am interested in the approach that is being taken dealing with young people who are highly sensitive to the issue of climate change and who are demonstrating with the aim or claim of raising awareness. The young people are convinced that the solutions are there, but the political will is lacking. In my opinion this approach is wrong. It is not true that the solutions are there, they are not at hand. We are dealing with extremely complex problems so to complex problems we need to respond with complex solutions not with simplistic ones. I don't say simple but simplistic and in the approach that they follow, they are not the only ones. There is worse, there are the climate change deniers, but I don't want to go into that. Instead, these are not deniers, but they deny that the problem is complex pretending that there is no complexity and only political will is needed. I reiterate this is not true, in the sense whether you try your hand at the level of the small municipality in the Roman hinterland as a council president, or at the European level, you find things are not linear and simple rather of monstrous complexity."*

3.8 *Please provide any additional information that you believe will help the consortium's analysis of the pathways to energy citizenship.*

## Part IV. CAL Processes and Quality of Participation

*CAL, as a form of citizen engagement in itself, must take into account the inclusiveness and diversity (in terms of gender, socio-economic background, migratory status and etc.), as well as the quality of participation in its activities. This part invites the CAL organizing team to reflect upon the inclusive and participatory design, and their effects on the outcomes of the CAL. For each question, if you have gathered information from the CAL participants that can support your claim, please note the source of data and use direct quotes when applicable.*

**4.1** *What was your overall experience working with your partners? Did the roles of partners evolve, possibly also differently from what you agreed upon and reported in the Implementation Document? At which stage, and with what tasks were they most engaged, and where did they lose interest (if that was the case)?*

The experience with the implementing partner has been very positive. The partner followed the tasks as set out first in the letter of intent provided during the project preparation phase and then, going into more detail, in the implementation document. There were no changes in its role. The main task the Metropolitan City of Rome was engaged in was, in addition to the identification of the venue, the recruitment of participants. The authority's staff immediately made themselves available to forward invitations to the recipients, as they considered CAL's initiative very significant.

**4.1.1** In a number of CALs, some of the implementation partners are identical with our target group for policy advice, i.e., civil servants working in local governments or public institutions. How they handled their roles and possible evolutions in their understanding of the CAL while they assisted in the implementation deserve particular attention. Please pay extra attention to this point while you are answering this above question.

The municipal officials who participated in the Rome CAL all did so on a voluntary basis. With the invitation was also sent the agenda for the day with a fairly detailed description of the programme. As extensively described above, the CAL was widely understood by all participants.

Climate Alliance Italy has a longstanding collaboration with the Metropolitan City of Rome Capital and both realities have developed a common understanding of energy transition and climate protection at the local level. The CAL was certainly an interesting experience for them but not one which marked a significant evolution of their understanding of energy citizenship and their role in deepening it.

**4.2** *What measures were put in place to ensure the inclusiveness of the CAL (during recruitment and implementation, among participants, invited speakers and the CAL organizing team)? What worked and what didn't work, in your opinion?*

The facilitator's long experience in adult education ensured the inclusiveness of the CALs. However, the participants spontaneously got involved from the very first moment, so no special attention was needed. The homogeneous composition of the audience also made it possible to use specific and technical languages without the fear that someone would not understand.

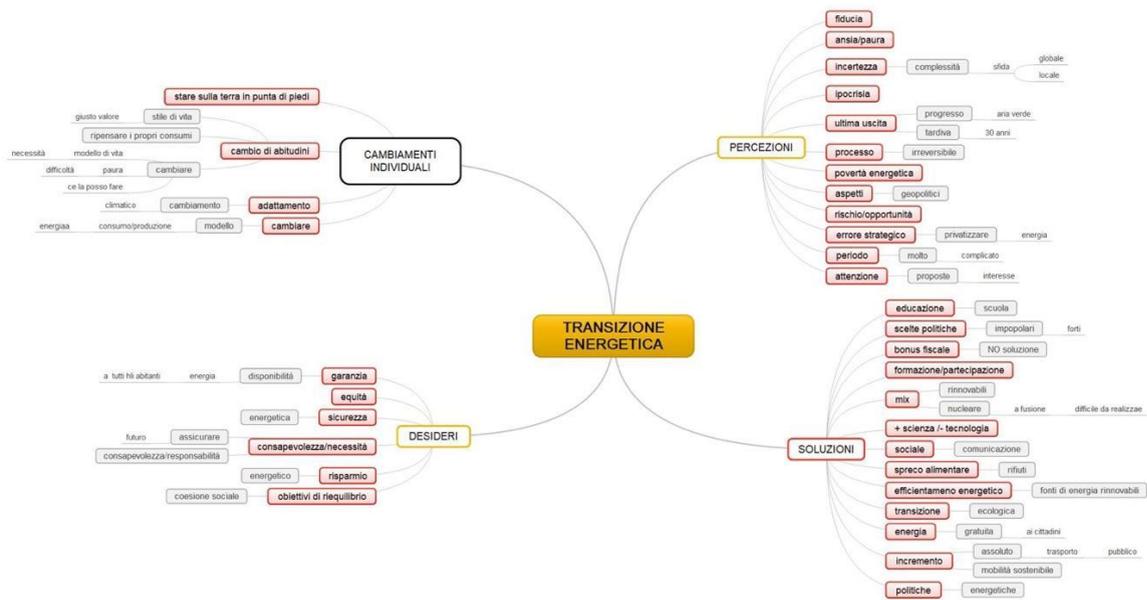
**4.3** *What measures were put in place to ensure the quality of discussions during the CAL (for example, efforts to make sure that diverse points of views are respected,*

*and minorities or underprivileged groups were given sufficient time and space to speak, efforts to stimulate debates and scrutinize information fed into the CAL)? What worked and what didn't work, in your opinion?*

As described above, the facilitator has long experience in adult education. She implemented several strategies starting with taking care of the atmosphere in the classroom, valuing informal moments, and stimulating participants to put their experiences at the centre. An excellent icebreaker was the personal presentation through the Dixit game cards, described earlier. During the meeting, everyone present spoke in turn; no actions were necessary to get anyone to take the floor or vice versa to stop excessively long speeches. In addition, participants were offered both a mid-morning coffee break and lunch. The quality of the discussion was relevant.

#### 4.4 What procedures/processes were put in place to elicit reflections on justice and equity issues in relation to the energy transition?

The CALs were designed so as not to interfere with meaning-making processes. Even in choosing the phrase on which to build the mind map, an attempt was made to stay more on a general level to stimulate broader reflections. The result of the mind map, which arose from the spontaneous associations of the participants, revealed 4 main nodes: individual changes - desires - perceptions - solutions



Among the desires is the word equity, said by a female participant and previously described. The concept of equity or at least awareness toward a lifestyle in which we consume too much was always reported by women.

In this regard one participant, already quoted above, said:

*"I think we need to reflect as a Western society on our issues and especially starting from the point of view that we want to continue to secure the consumption pattern and lifestyle that we have been accustomed to up to now, without actually*

*considering that six maybe 7 billion human beings are not even remotely familiar with our lifestyle."*

**4.5** *How were the results of the CAL communicated to the i) general public and the ii) public authorities, and how were they received?*

To inform the general public, social media posts were made on the Climate Alliance facebook page, after the CAL a news item was sent out in the bi-monthly Climate Alliance newsletter. A long article was also written and is currently being published in the bimonthly magazine Bioarchitettura.

**4.6** *What measures were put in place to allow the continuation (e.g., picked up and carried forward by participants or partners) and replication of the CAL, if any?*

Climate Alliance Italy has had a collaborative relationship with the Metropolitan City of Roma Capitale for many years. At the end of the meeting, Climate Alliance and the Roma Tre team made themselves available to assist the staff of the municipalities present to organize any initiatives related to energy citizenship.

**4.7** *Please provide any additional information that you believe would be helpful to others, in designing a CAL and towards the replicability of your CAL.*

## Appendix: CAL events and data capturing

Please list the different CAL events, their participants, and the data that were captured at the events. An example has been provided.

	<i>Total # of participants (Include team) / gender breakdown</i>	<i>Video recording</i>	<i>Audio recording</i>	<i>Transcript (English)</i>	<i>Observation notes</i>	<i>Written materials by participants (posters, post-its, etc.)</i>	<i>Other sources of data</i>
<i>Available to the Consortium?</i>		<i>none</i>	<i>yes</i>	<i>transcripts will be translated shortly</i>	<i>none</i>	<i>yes</i>	<i>yes</i>
<b>Event 1</b>	13 female, 6 males	none	Audio recordings of approximately 4.5 hours	Language IT	none	Post-it Billboard	Photographs (8-10)

## Norway, Overhalla and Oppdal – Report of the Citizen Action Lab

### Part I. Basic Information of the CAL

*In this part, please provide a short summary (max. 500 words) of the objectives, sequence of events, the participants and the data gathered.*

The Norwegian CAL examines the unfolding of energy citizenship in rural contexts. While the majority of people now live in urban areas, still many people live in rural or semi-rural areas. Rural communities in general face different challenges than cities (with regards to demography, since young people, particularly women move to the cities, qualified labor, for the same reason – or in general out-migration of people in their productive phase). They also have different, and less developed infrastructure with fewer transport options, bigger distances, and not the same opportunities when it comes to housing, work, and leisure. We therefore assume that efforts and measures for an energy transition developed for urban realities are not necessarily a suitable fit. The Norwegian CAL aims to contribute to the need to better understand the interplay between rurality, energy-related issues and societal transformation.

What could be rural communities' approach to the green shift, and alternatives to urban solutions, like densification, micro-mobility, and public transport to mention a few? What kind of community can current, or future inhabitants see themselves living in through and after this transition? The CAL activities are envisioned to facilitate stakeholders' engagement in the discussion of such questions, with a focus on community and place development and a contextual approach. This focus is appreciated by the rest of the partners. In order to investigate such concerns, we have selected two different locations representing different rural challenges to perform CAL activities, namely, Overhalla and Oppdal. Overhalla municipality has a total of 3815 inhabitants divided into four villages: Ranemsletta (administrative center), Hunn, Skogmo and Øysletta. With the exception of the 1970s and 1980s, the number of inhabitants has decreased since 1950, but the municipality is still among Namdalen's largest in terms of population. The municipality's main activities are agriculture and forestry, and the average farm size is the largest in the county. There is also industrial activity comprising wood, mineral product production and the biomedical industry. The local community has actively worked with local development to attract new residents to the area and thus address depopulation. This is currently working, but only at a small scale.

In Overhalla, the CAL aims to discuss how to develop local strategies for attracting young and old, qualified and educated, people of all genders - and be able to provide them with a home suitable for the lifestyle they want, a fulfilling job, as well as meaningful leisure time. The CAL includes an understanding of first, second and third places in an approach to facilitate and enable energy citizenship and create rooms for low-emission rural lifestyles:

- What characterizes an energy efficient and desirable home in Overhalla?
- How can the industry park and its companies be partners and a part of the energy transition?
- How might social life and leisure activities support citizens participation and local democracy?

Getting young people of all genders to stay or move back after studying is challenging as rural areas often offer a narrower specter of job opportunities, difficulties getting affordable and up to standard housing, and meaningful leisure activities. The spaces that citizens use as their homes, workplaces, and social spaces are, at the same time, some of our biggest energy consumers. Globally, buildings account for approximately 40% of our total energy use. Even in a country with good building standards and well-built hydropower capacity, buildings still account for 15% of national emissions. Optimizing the use of buildings has proven to be very complicated, as their intrinsic technical, cultural, social, and physiological aspects are not aligned. Home, work, and leisure are often far apart and require private transport to get between. Citizens' proximity and access to physical environments that provide quality of life and facilitate social behavior is central to achieving the green shift, and affects citizens' travel patterns, transportation options, and overall living conditions. These informal social spaces to gather, engage and interact outside the home and workplace, are commonly referred to as 'third spaces', and can function as places for citizen's participation and local democracy. By investigating opportunities to combine social spaces, such as shared neighborhood facilities and activities, with housing and workplaces, we aim to increase awareness of energy citizenship and create more room for sustainable, low-emission lifestyles in rural areas. Utilizing participatory strategies to involve local citizens, with knowledge of local potentials and challenges, is an alternative route to develop context sensitive solutions instead of externally developed one-size-fits-none.

On the other hand, Oppdal is a municipality with a growing population (over 7000 inhabitants). The municipality invests relatively heavily in tourism and has for many years been known for being a winter sports resort. In the Oppdal area, cabins are a significant contributor to energy use, social networks, municipal activities as well as industry and value creation. There are 4234 cabins in the municipality. Furthermore, the municipality has an increasing number of immigrant families and families with one of the spouses born outside Norway. The aim has been to explore energy citizenship in relation to the cabin phenomenon, and the interplays between cabin owners, local residents as well as the interplay accommodated by the municipality and local actors.

The departing point of the CAL was the interest of both locations to examine how the built environment could contribute to energy citizenship. The CALs were planned iteratively where initial work in Overhalla would also inform work done in Oppdal later. Both locations knew of each other and would also like to learn from each other. In practice, the CAL has mainly focused in Overhalla and has not followed a linear process and has composed a numerous number of heterogeneous activities with different local residents and stakeholders (including formal and informal, as well as successful and unsuccessful ones). Thus, Our CAL explored context-specific measures supporting the green shift combining local competence and solutions with construction expertise and academic knowledge, establishing key enablers for local participation rather than overarching frameworks.

### 1.1 How were the main objectives of the CAL described to partners and participants?

The DIALOGUES project has been introduced in each of the events. Further, we have informed that Norwegian CAL activities aim to investigate context-specific measures supporting the energy transition combining local competence and solutions with construction expertise and academic knowledge. Both, in Overhalla and in Oppdal, CAL aims have been developed together with the rest of the partners using participatory methods targeting in particular the age- and gender dimensions exploring social meeting places, working places and new and innovative forms of housing enabling low-emission lifestyles.

1.2 How was the CAL relevant and/or timely for the local context, taking into consideration current events in local and national politics?

The Norwegian CAL had a local focus and national politics were not taken into account. The CAL was adapted to the needs and timeframes (for instance by participating in relevant local events such as Sustainability days or Skogmo days) of the local participants. Even though we have not targeted local political processes directly, the CAL has been discussed widely locally and has resulted in political outcomes, specifically raising questions about gender and participation, as well as housing shortage for young people as part of the ongoing public discussion in preparation for the local elections in September 2023. Additionally, neighboring municipalities have expressed interest in extending the work of the CAL beyond Overhalla as they recognize the need to address these issues in the whole region.

1.3 Please describe the sequence of events of the CAL, and list the different types of data that you have collected from each of the events (please refer to Table in Annex). Please also describe the methodological approach you will use to analyze the data collected.

We comprise all CAL related activities in Overhalla in 8 different activities.

(1) **Preparatory activities** – Aims: to create a group of conveners; together scope problems and agree on goals, situating what change and transformation mean for such a process; and select and invite participants. Data: notes and PowerPoint presentation.

In Overhalla, we established good communication with the local municipality and industry. We joined the *Sustainability days*, and had the opportunity to formally present DIALOGUES and the CAL for the local community and have discussions with the local industry and business sectors, local government representatives, etc. We had several informal conversations and meetings to decide the scope problem of the CAL. We agree that the starting point for the CAL would be a municipal owned area, Barlia, that the local community wanted to develop based on the following premises:

- A housing area that is sustainable and promotes a sustainable lifestyle:
- A strategic project to attract young, highly skilled workers to the area
- A wish to explore new solutions for local housing, for instance a microhouse, shared housing and new ways of habitation more in line with youth lifestyles.
- A wish to understand what young, sustainably minded individuals prioritize and value in their local surroundings.

Based on the insights gained during this first stage, we identified young professionals as one of our target groups. We identified male young professionals and those with an immigrant background as particularly vulnerable groups to be involved in a concrete CAL activity.

- (2) **Young-professionals workshop- First place focus** - Aims: Design and implement participatory workshops and/or other collective activities. Data: audio-recording, visual codes, photo essay of the local industrial area.

To better understand the perspectives of young adults that worked in the area we utilized a two-step focus group workshop. During a 3 hour session, 17 young professionals joined in groups discussion focused on what it was like living, working and socializing in Overhalla. The session was conducted as an open interview with the researchers participating with both questions and reflections to spur the dialogue along. An audio-recording of the session was coded and main topics extracted that were then, in turn, written to a coherent narrative of Overhalla. The narrative was then sent to the participants to comment and to verify that it was a just and truthful description of the discussion that had taken place and also reflected their collective perspective on living in Overhalla as a young adult.

- (3) **Microhouse development** – Aims: To develop an ultra-compact housing example with high architectural quality that provides a clear contrast to the prevalent housing solutions available in Overhalla. Data: A full scale 12+6 square meter microhouse as well as full as-built documentation (3D model, will be made freely available).

The microhouse is built in Trondheim but has been visited several times by representatives from Overhalla. The microhouse itself is almost 100% circular, low-cost and very low energy use. The microhouse will live on after Dialogues as part of NTNU research infrastructure as it has 2 built in variables: it is built on a trailer, making it possible to see how people will live in the same house in different locations, as well as the latter 6 square meters can be disengaged easily, allowing comparisons between for instance a social space and a library for contemplation.

- (4) **Contextualizing local engagement** – Aims: To calibrate tentative insights and collect ongoing feedback via interviews; to map problem perceptions, values and a series of informal discussions with different groups representatives and community leaders (2 men, 3 women): industry, health care sector, education, agriculture and forestry services. Data: notes

We had informal interviews in which we deepened our understanding of their problem perceptions, networks and values; and the challenges and opportunities of Overhalla as a place to live. We also mapped local social engagement and leisure/social activities.

- (5) **Young Professionals home design workshop** – Aims: To understand the current habitation, personal needs and future wishes for their homes in Overhalla. Data: audio-recording, drawings, notes.

To better understand the design requirements and potential to develop smaller and more energy efficient housing that would better suit the needs of young professionals, we jointly discussed their hopes and aspirations for a home in a 1:1 session, each lasting between 1-2 hours. The session included the participant drawing and explaining their current housing situation, (what worked, what didn't) and how that affected their life in terms of socialization, hobbies, activities, economy and sense of well-being. The session then moved over to discuss future scenarios of compact living where the participants were

shown the developed microhouse as well as 3 different small dwellings in 1:100 scale models, developed by the CAL team based on the initial workshop described in pt 2 above.

- (6) **Collaboration with industry** – Aims: To empower the local industry to tackle the local housing challenges and to find win-win solutions that attract future employees, provide good homes based on local needs and to promote social life that enables young professionals to stay. Data: Currently in-development Building Information Models (BIMs) that will be made Open Source.

The activity has consisted of developing a 40 square meter detached house that is specifically tailored to the needs, wants and economic situation of young professionals in Overhalla. It is being developed ready-to-fabricate for the element-based house production line at Overhalla Hus AS. The dwelling will hopefully be production ready within the time-frame of the Dialogues project. The CAL has had multiple meetings with the industry, Overhalla Hus and local investors to encourage the development of the dwelling and to suggest that economic mechanisms for loan be put in place so that the dwelling is economically viable in the local area.

- (7) **Translating local engagement** – Third place focus- Aims: – Aims: to better understand existing local engagement in place development, how can social interaction be promoted and how this local engagement could be translated into energy citizenship. Participants: social champions within the culture sector and tourism (2 women). Online in-depth interviews. Data: audio records and transcripts

Based on our previous activities in Overhalla, we have identified a group of social champions, namely, a group of women particularly engaged in the community social development and wellbeing. We contacted the four of them via email to invite them to participate in the CAL activity. Only two of them respond positively. Although the activity was envisioned by the researchers as consisting in several steps, including (initial and post surveys, taking pictures of relevant social interaction arenas, an initial individual conversation, and a final common workshop), their participation finally was limited to an online interview with each of them. They did not fill in the surveys because they found it not relevant for them. They did express their lack of time to carry out extra efforts to participate in the CAL. We ask them to reflect upon their experiences with social interaction in Overhalla. We ask them to list important places and explain to us the significance of these places for both, organized and spontaneous social interactions. Finally, we invite them to reflect upon which aspects of their local engagement are energy citizenship relevant.

- (8) **Developing local housing areas and elderly housing through student engagement.** Aims: To investigate potential housing developments in Overhalla based on CAL learnings. Data: 2 complete MSc theses in Architecture. Two eager students were engaged in the CAL and given access to findings from the Overhalla CAL, the possibility to spend time locally, discuss with local partners and to examine the area during the spring semester of 2023.
- a. First thesis developed a small housing area of 9 units + a common house centrally in Overhalla. The units were aimed to investigate the same topic as the ongoing industry discussion described in pt. 6. Each of the units were

based on local production and as an additional dimension, also allowed the habitants to extend the design over time, allowing establishing a family when desired, without this triggering a need to relocate.

- b. The second thesis developed elderly housing on a central plot. The project focused on increased social interaction between the elderly and other groups to combat loneliness and enable people moving to Overhalla to meet people that have a good knowledge of the local community.

In Oppdal, we have developed one CAL activity, which consists of a **focus group workshop with non-owners** (2 women 2 man – ages 20-50) to explore the cabin phenomena in Norway and in which ways are relevant for energy citizenship. The CAL design was largely influenced by our findings of the rural aspects of the Overhalla CAL. Data: Notes and audio-recordings.

- 1.3 Who are your partners in the CAL (researchers, representatives from civil society organizations, private enterprises and public authorities) and what were their main roles in the different stages of the CAL? (more elaboration on your experience with CAL partners in Question 4.1 of this reporting template).

We have sought to involve participants in their professional roles and as residents in the community, representing diverse perspectives of the problem and having different capacities for actions (from a range of professionals to community leaders). We have also considered diversity and seek to take into account age (young professionals) gender, immigrant background (from other parts of Norway and abroad). Their participation in the different events has been described above.

The following list summarizes CAL partners in Overhalla:

- Researchers (an interdisciplinary group of researchers from NTNU and NTNU Social Research comprising architects, planners and social scientist (STS, social geography, anthropology, sociology)
- Local industry: Industrial park and business sector representatives, and young professionals
- Local government: politicians, policymakers, and employees from health and care, education, culture and tourism, and agriculture and forestry.
- Social champions

In Oppdal:

- Researchers (an interdisciplinary group of researchers from NTNU and NTNU Social Research comprising architects, planners and social scientist (STS, social geography, anthropology, sociology)
- Local government: politicians and policy-makers
- A group of non-owners

- 1.4 How would you evaluate the degree of citizen participation in the CAL? Are citizens/local residents engaged in the CAL beyond that of the “ordinary” participants (e.g. citizens have the power to co-design the events, determine the objective, the focus, and the agenda of the CAL, etc.), and if so, in what ways are they engaged?

The degree of citizen participation in Norwegian CAL has been high. They have been able to shape the CAL activities, specially the industrial park, with whom the collaboration has been the closest. The design and implementation have been informed by Transformation Labs (T-Labs) methodology, which refers to long-term multi-actor processes focused on sustainable transformations, with a particular emphasis on justice, as social-ecological and just change and human-nature connectedness (Cabello, V., 2023). This is a suitable method to address complex problems, where people share a sense of urgency but may disagree in their problem understanding. They are a very new tool and have been mostly applied in participatory research projects but could be relevant to any organization interested in social innovation for environmental problems. Seek to foster individual and collective agency in order to support participants in activating alternative pathways to change.

By means of T-Labs we have promoted reflexivity around the energy transition in rural context as a complex social-ecological problem with interconnected causes. The aim has been to generate new meanings and shifts in mainstream local narratives. T-labs is a method focusing on high quality processes, rather than judging success on outcome alone.

One notable aspect of participation is that local representatives in Overhalla, especially from industry, have both engaged with the CAL, but also expressed the interest of continued development beyond the CAL and DIALOGUES project. A common thread through the requests is the need for competence and internal knowledge building to better understand gender, ethnicity and cultural backgrounds in the industry employees, as well as the need to tackle housing, workplaces and social spaces in the entire region. This reflects that the 6 municipalities in the local region have close collaborations and a large part of the population commutes between the different townships.

- 1.5 What are the socio-demographic characteristics of the participants, in terms of age, gender, socio-economic status, etc. (please feel free to add a summary table in the annexes)?

In Overhalla, we have identified 4 groups in the CAL activities and although we did not collect specific socio-economic status, the discussions did reveal several socio-economic aspects:

**Young professionals** are men and women (although women more often move away from the area to study) that are either in apprenticeship for a vocational profession or in early worklife. We could only include people over 18 in the CAL as per DIALOGUES guidelines. The group mainly consisted of people 18-25 years who had a job in the local industry or in the municipality, where they had full time employment. We discussed the economic situation with some in the context of home ownership and found that some had a housing loan while others were struggling to get one. None of the participants in this group would be considered wealthy by the local standard. In this group, participants that were from the area

and grew up there had more access to local cultural tacit knowledge, making it easier to engage in the local community.

**Industry representatives** are exclusively men of over 40 years of age. Very rarely did women participate in the industry meetings. This group all had leading positions within their respective companies. Most of the companies are in either mechanical or construction with high male representation. They expressed the need to recruit more women, but were unsure how.

**Local representatives and social champions:** all women except 2 men, all over 40 years of age. Most of the participants in this group would be considered middle class. A classical urban-rural cleavage divided the discourses of the participants. The great majority of local government employees in the health and care sectors are women. Social champions are all women as well.

**Non-owners:** 2 men and 1 woman below 30 and 1 woman over 50. All highly educated (or studying to be).

## Part II. Understandings of Energy Citizenship

*This part presents the various understandings of energy citizenship (what it means, what activities does it involve and at what scale/level) as put forward by the participants of the CALs. You are also encouraged to summarize expressions of rights, duties/responsibilities, understandings of membership and communities, and ways of participation – all of which are central in the conception of active citizenship – that have been articulated through the CALs. For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. If you made audio registrations of sessions or parts of them (as we recommended), please use direct quotations to support your responses.*

2.1 How did participants perceive energy in their everyday life (e.g., heating and illuminating the home, fueling the car, etc.) and what about energy that concerns them the most?

We have used the concept of first, second and third places to encourage reflection on different arenas of energy citizenship during the CALs. Buildings are especially important elements in the energy transition as they have large impacts on household energy use. Homes need to be well made to reduce heating as well as designed to support energy conscious lifestyles. All sources refer to the activities described in part 1.3.

First places refer to peoples homes. People in rural areas are used to big houses, and from our first workshop it is clear that also the young generation highly appreciate that. While updated in the public discussion of sustainability and energy use in Norway, they did not express which alternatives they consider for their own homes, and how they would prioritize if other options were providing new qualities or benefits. This lack of link to what potential their own building might have in terms of being an energy citizen was a key finding that helped form many of the following CAL activities. It was clear that while agreeing on the general, global and abstract concepts of saving energy, the participants

deemed it very difficult to translate into actual characteristics of their own home or what a more energy focused dwelling situation would look like. It seemed like a very unknown situation. Source: Activity 2

Second place – where people work – has been a very central driver in initiating the work to develop not only the industry park, but the whole local community in a more sustainable direction. This can be linked to several factors, one being the park manager, who is a core actor in everything happening in the community, another is the culture at the industry park, which in general is very positive and supportive of initiatives. The industry park manager and most partners are eager to update local businesses to think and act sustainably, as they want to recruit young professionals from the region and beyond – and want them to stay. The task they are focused on is to involve the businesses, as workplaces, in facilitating for their employees to take part in the energy transition. They think this work might involve mobility, digital infrastructure, competence, but first and foremost a joint cooperation between the companies, as well as the surrounding municipalities. Source: Activities 2, 4 and 6.

Third place, meaning, leisure or social life is harder to categorize. It might involve a lot of energy consumption, or hardly any. Long distances mean that social life to a large extent occurs at home or close to home, like various kinds of sports. Finding out what kind of low emission activities, social meeting places, technical equipment, or transport modes inhabitants in Overhalla would consider for their free time might include a lot of different things, but one of the interesting findings in every activity is how important the physical surroundings are for the residents. What they like the most about Overhalla is the opportunity to go hunting and fishing - and what they think defines the place is the river. This was unanimously, and not gender specific. (This can be problematized and extended a lot since the leisure-chart). Another notable arena for social interactions, and therefore to discuss energy citizenship, is Frivillighuset (“the voluntary house”), a central building where many elderly (and some younger) citizens spend engaged in cultural activities, crafts, games or just have a cup of coffee in good company. Source: Activity 1 and 4.

Except in the case of industrial partners (A6), participants do not talk much about energy as such, which they largely perceive as too abstract and complex. The only exception is the use of electric cars and solar panels (A2). When discussing energy prices, they largely relate this to the use of diesel in agriculture and gasoline prices. In Overhalla, sufficiency is not a foreign perspective. When asked about sustainability on broader terms, several pointed out that they try to preserve nature as best they can and also sort their waste (A4).

## 2.2 What were the main understandings of energy citizenship that emerged out of the CAL?

The majority of the participants in the different events were not familiar with the term, what it could imply, or how they can participate in the energy transition. Some participants did express a clear disagreement and disaffection with the climate policies and technologies in general, and the energy transition measures in particular, which are perceived as not

suitable for the rural context and/or not in the interest of the people. For instance, when it comes to one of the most popular ways to become an energy citizen in Norway and contribute to a more sustainable mobility system, namely, the purchase and use of electric vehicles (which is generously subsidized by the state), one of our informants point:

*Q: What are the environmental discussions in Overhalla, in Trondheim there are e.g. tolls).*

*R: Yes, it is agriculture then. That's it, there are many in Overhalla practicing agriculture. And for the rest of us doing other things, we use the local business. So without agriculture and us here, we wouldn't have the local business life either. Everything is connected.*

*Q: How about an electric car?*

*R: Yes, some have bought electric cars. But you can't live in the mountains and drive an electric car. If you have to drive over two mountains to get to Namsos' hospital, you cannot drive an electric car in minus 30 degrees. If you work at the hospital in Namsos, you can drive an electric car. Then you drive to the hospital, charge, drive home again in the afternoon and charge. Then it's fine. The municipality is joining. And for instance those working in home care, they drive electric cars, but if it's minus 20 they can't even use the heater. It's absolutely ridiculous. No way, drive diesel!*

*Q: What role does the municipality take? Does the municipality try to do something, and does it do something that does not match what Overhalla needs, or what do you think?*

*They say they are so environmentally conscious. They drive electric cars, they have also put a solar panel on the building, and whether it works or not, I don't know. After all, we have darkness and winter. So I don't understand when they get to charge their solar things. We have 12 power plants in Namdalen, so why not take the energy from there and invest in things like that instead. So the fact that the municipality thinks they are so sustainable and such, no, I don't understand what they are doing (Informant 1).*

On the other hand, there are also other actors in the community which are aligned with the energy transition precepts, and despite not initially familiar with the term, they could very easily understand the concept and discuss and further develop their participation during the duration of the CAL in the energy transition. For instance, the local industry approaches the energy transitions as a key opportunity to support the local community, achieve a more sustainable industry with the revitalization of their productive systems and attract new residents to Overhalla. In the Oppdal workshop, participants were not aware of the term “energy citizenship” either, but they had extensive knowledge about energy related issues and had a high degree of reflexivity around the opportunities and limitations regarding their participation in the energy transitions.

- 2.3 What did participants identify as their rights and responsibilities as energy citizens (i.e., did they express a sense of entitlement or a sense of responsibility, in what context)?

All our participants express a sense of responsibility for nature, since it has a central role in the municipality. At the same time, the nordics have a very strong cultural belief in the right-to-roam, i.e. that nature is available to everyone. This illustrates well the general “feel” of the CAL where the participants are very engaged in local issues of nature, sustainability and energy, but the global and national perspectives are not deemed as important. To the CAL team, the global and national energy issues seem more abstract in the discussions, if brought up. Yet, the participants in the “Oppdal workshop” had a great degree of reflexivity around their role and responsibility in the energy transition. They felt responsibility and urgency to act against the climate crisis. They reflected upon how their consumption choices had an impact in local development, and were able to discuss national and international aspects of energy issues without experiencing them as too abstract. Still, they agree as well on their limited agency to influence national and especially international energy policies.

- 2.4 How did participants define their own communities (e.g., do participants feel a sense of belongingness and/or responsibility toward a community, city or country?) What did they understand as the appropriate scale of action (local/regional/national/cross-national)?

Citizens in rural places often have a strong sense of belonging, place attachment and community feeling. The distance from decision to action is short, networks are already established, and local know-how and initiative can produce contextual and fitting alternatives in the green shift. Definitely the great majority of participants feel a very strong sense of belongingness and responsibility towards the local community. Both local partners and social entrepreneurs are very much engaged in local development related activities. The local industry plays a very important role in the generation of jobs, but deem themselves completely dependent on attracting employees that stay and thrive. To them, this means good quality homes and a social life that supports their employees well-being. However, during Activity 2, some participants noted that their main social networks are in the nearby cities and they will move out as soon as their vocational training ends. They felt little place attachment. In the opposite end, participants that had grown up in Overhalla, very much thought about perhaps only leaving for a few years to get an education, but then returning (A2)

- 2.5 What were the notions of justice – if any – put forward by participants (i.e., did they identify any elements of injustice in the energy transition, and how did they relate to a fair, just and inclusive energy transition)? Please pay special attention to ways in which factors of discrimination like sexism, racism, classism and others were brought into the conversation. Were there specific barriers mentioned which relate to these forms of oppression in society?

In our CAL a particular form for discrimination was mentioned, some of the participants felt discriminated against as residents of rural contexts. Rural areas are somehow one of the marginalized areas in the energy transition, and several injustices are perceived by

participants. Specifically, spatial injustices underlying the production and consumption of energy (fuel dependency) access to energy (energy deprivation) and prioritization in the development of national infrastructure was mentioned several times. Participants express their feeling that rural matters within energy transitions have been neglected by national and international policy-makers. Procedural and distributional issues in relation to the production and consumption of energy are also mentioned. As the following quote from one of the interviews with one of our informants illustrate:

*R: It is good that prices are high in Eastern Norway, because then it will be written about in the news and a lot of information will be circulated and so on. If it had been in central Norway or in Nordland, it would not have been mentioned at all! So cheers for that! It is happening in Eastern Norway and so, it will be recorded. But it can't continue to be like that. The electricity is produced here in Namdalen, it is also sent to Sweden, and we also buy it again! After all, Sweden has made millions from this electricity scheme. Then it's really just nonsense. We can supply the country with electricity ourselves. That's just nonsense. It is a hoax from the state and government. People buy electric cars too, it's as expensive. The whole scheme is just ridiculous. In addition, diesel and petrol prices have risen to the unthinkable. What's the point? It's just nonsense. After all, we should have had cheap industrial diesel, for those producing the food. They don't think we should have any preparedness in Norway. So, because of the war now, the whole gang, both state and government, should be brought to their senses. And regarding importation and customs, they should import as little food as possible from abroad. Produce in Norway, pay the farmer ...that's food security. Think of those who live in the cities. We must have people living in villages. We must have good conditions for farmers. Yes, energy must become cheaper. It is produced right around the corner here. Agriculture must also be prioritized, it is what people mostly do here.*

Q: Who has to take responsibility for it?

*R: The government. The municipal politicians also have to be involved in pressing. We have many different workplaces here. If we want to continue living here, one must protect jobs and protect agriculture. It must be the first priority. (Informant 1).*

### **Part III. Pathways to Energy Citizenship**

*Given the different local contexts across the eight countries, each CAL might reveal unique dynamics in the pathways to energy citizenship. This part presents the theories of change used in the CAL, ways in which the CAL engaged, enabled or facilitated participants to act as energy citizens. You are also invited to reflect upon other factors, such as more individual and structural ones, that have come into play in the processes of activating energy citizenship. For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. Please use direct quotations to support your responses.*

3.1 What was the theory of change that you assumed in the design of the CAL? In other words, why should the CAL work as intended, to achieve desirable outcomes for

deepening energy citizenship? (explain your assumptions – if X has been done through the CAL, then Y would be the anticipated results.)

Our theory of change assumed that involving residents (including relevant stakeholders) in a co-creation process would help to identify, design and implement relevant local pathways to deepen energy citizenship. Thus, rather than just informing residents, we aimed to mobilize and empower the local community building their capacity to design and implement bottom-up social innovation. During the CAL, we observed a high degree of local engagement in community development. We assumed that learning from existing engagement could help us to understand how it could be translated into energy citizenship. In Oppdal, we assumed that involving citizens in a workshop would increase awareness about energy citizenship and change participants' energy related perceptions.

3.2 In which capacities/roles were the participants engaged (i.e., as energy consumers, producers and political subjects participating in decision-making processes) in the CAL, through what specific activities?

Almost all participants engaged in their professional roles, with the young professionals in Overhalla being the main exception. They used more time in discussing their personal approaches to energy and life in general, but also reflected on their professional work. Participants should represent diverse perspectives of the problem and have different capacities for action; this means there may be a focus on involving a range of professionals and community leaders. Depending on the context and process goals, diversity is also promoted regarding age, gender and ethnicity. From the Overhalla community, we had participants with diverse roles: professionals working in education, healthcare, elderly, youth, leaders, tourism, locals, migrated, norwegian and foreigners.

In Oppdal, the participants mainly engaged as citizens, although some of the participants also had a professional knowledge about cabins, energy or other relevant aspects.

3.3 What sense of agency (understood as the capacity to act on change) was observed during the CAL? What changes in actions did the participants commit to during and following the CAL activities? (e.g. reduce energy usage, participate in energy production, influence other citizens, join collective actions, etc.)?

Some participants had a limited sense of agency. They did not believe that they could contribute to change in a substantial way. Others recognized their agency, specially, on the local level. For instance, the local industry partners are aware of their responsibility and position to develop a more sustainable local industry. Several industry leaders have approached us to further develop the CAL, but as a regional endeavor, rather than within a single municipality as they see the issues they want to engage in as larger than the local area.

In the Oppdal CAL, participants do recognize a sense of agency as consumers. They talked about their behaviors having an impact. In that sense, at different points during the workshop, they acknowledge the negative environmental and energy related impact that

having a cabin would result, as they point out, it would not only be the transport to the cabin (since they are often not well. The materials, the and even the extra equipment that one would have to buy.

3.4 What factors (from the more individual or to the more structural) might have enabled or hindered the participants' engagement as energy citizens? For example, at the individual level, not feeling obligated to act, not knowing how to act, wanting to act but lack resources to act (economic capital, land, time, etc.); and more structurally, social norms, legal and regulatory constraints, among others.

We have not focused specifically on barriers and enablers in any of our CAL events. Still, we could observe that some of our participants consider the lack of suitable policies and measures for rural context as a discouraging barrier towards engagement as energy citizens. Also, some have expressed the perceived limited agency of the individual to change the system as a constraint towards engagement. Some believe that change should be facilitated instead by local, regional, national and international institutions. Initially, lack of time is also mentioned as one of the reasons for not being able to engage more. Culture may also play a limiting role, such is the case with the size of houses in the area, usually a very big and very appreciated aspect by those living in the community; the diesel culture; the popular cabin culture in Norway (etc).

A very important enabler is making the transition locally relevant, that is, translate it to the local context. Local culture can also be an enabler, for instance, when it comes to sufficiency and in relation to the production and consumption of locally produced food and other services. One of the enablers observed is the existence of local champions in line with the energy transition tenets, such as our industry partner. Another enabler mentioned is making "alternatives attractive and easy", such is the case of a pilot project in the municipality consisting in an alternative public transport system (on demand); or the case of other ownership models proposed during the Oppdal workshop.

3.4.1 What are the enabling/hinder factors related to gender? Please also note specific experiences of discrimination shared by the participants.

Despite that the researchers brought gender issues to every CAL activity, participants did not agree on gender being a relevant dimension to explain participation nor energy use in first, second and third places and related activities. Still, researchers observed a clear demarcation regarding participation in local communities by gender. While the local industry engagement in the local development was conducted only by men, healthcare work was in majority conducted by female employees. It is worth noting that gender issues themselves are understood locally as part of a cultural understanding that also includes ethnicity, age and family issues. This is something the industry especially expresses a dire need to understand better, but it is not linked to energy citizenship or energy locally. They are considered two distinct topics.

3.5 What knowledge, skills and competences have been introduced to the participants through the CALs (e.g., related to changing energy consumption and energy

production, and participating in collective political actions)? Did the participants consider the knowledge, skills and competences they were introduced to relevant to their lives? If not, how so?

The CAL related activities have focused more on engaging in a process to explore learning about rural energy than educating participants. Still, we believe that the discussions during the different events have increased the awareness among the participants. In developing and discussing alternative housing, the participants in Activity 4 and 6 participants were presented with knowledge about energy use in households, something they very much expressed interest in.

3.6 What are the outcomes and impacts of the CAL? And did the CAL have any wider impacts, societal, environmental, economic, etc., beyond the group that was involved as organizers and participants? Please provide a short summary.

The Norwegian CAL has produced rich **insights about rural aspects** of the energy transitions (qualitative datasets from interviews, surveys and workshops). Furthermore, despite it being difficult to quantify, **awareness** has been raised among our participants and thus the local community and industry. Researchers and other participants have **increased capacity** to engage with co-creation processes (**learning** about how to participate, how to facilitate participation, how to incorporate participant input, how to make research locally relevant, etc). Our approach (T-lab) targeted the **local as the level to be impacted**, for participants and their immediate networks (meaning there is often less focus on policy impact than in other participatory formats such as, for example, Deliberative Forums).

Some notable impacts beyond the CAL that are still uncertain is the local engagement to develop new, energy efficient housing that is inline with the hopes and aspirations of the young professionals in the area. The first of two notable processes are the **development of a new housing unit** that specifically addresses the reported shortcomings of local housing identified in activity 2 and 4. The second is the expressed **interest locally to further develop the CAL**, but in this case focus on the regional setting in Namdalen (the valley in which Overhalla is located) and to include all of the 6 municipalities in a joint endeavor. Both processes are supported by both industry and the municipalities. Perhaps most interestingly, the industry is currently planning this as a not-for-profit endeavor as they see the necessity and value of attracting youth to the area as greater than any profits that might be gained from sales.

3.7 Overall, how can citizens' participation in the energy transition be better supported and by whom, in the context of where the CAL took place?

We believe that all the different stakeholders comprising the Overhalla CAL can play a key role translating and supporting the energy transitions locally and encouraging residents to participate in the transition. Many of them, specially the local government and the local industry partners are already supporting the deployment of a locally meaningful energy transition.

3.8 Please provide any additional information that you believe will help the consortium's analysis of the pathways to energy citizenship.

Definitely more research is needed to better understand the interplay between rurality and energy citizenship. The city is the dominating spatial entity in the green shift discourse, as measures and efforts related to densification, increased investment in public transport and micro-mobility, to mention some, are usually not developed with rural communities in mind. Energy citizenship research needs to adopt a contextual approach to understand:

- how the rural context may enable and constrain specific energy citizenship pathways.
- while at the same time, how these local aspects are also embedded in regional, national and international energy markets, regulations and discourses.

Our insights point to the importance of the “local” for energy citizenship. Local needs, effects, settings and contestations are shaping certain types of energy citizenship. Finally, the role of buildings needs to be better understood. They represent a large part of energy use in Norway, but are becoming increasingly more complex to understand. The general “feeling” in the discussion with the participants was that they were uncertain how they could adapt the buildings around them in their daily lives to be more in line with their own personal energy aspirations.

#### Part IV. CAL Processes and Quality of Participation

*CAL, as a form of citizen engagement in itself, must take into account the inclusiveness and diversity (in terms of gender, socio-economic background, migratory status and etc.), as well as the quality of participation in its activities. This part invites the CAL organizing team to reflect upon the inclusive and participatory design, and their effects on the outcomes of the CAL. For each question, if you have gathered information from the CAL participants that can support your claim, please note the source of data and use direct quotes when applicable.*

4.1 What was your overall experience working with your partners? Did the roles of partners evolve, possibly also differently from what you agreed upon and reported in the Implementation Document? At which stage, and with what tasks were they most engaged, and where did they lose interest (if that was the case)?

We have experienced difficulties in achieving medium-term engagement with intermittent participation lessening the possibilities for transformation; except for the local industries, which collaboration with the has extended longer than expected. The CAL has been a very enriching experience for researchers. We have learned by doing and as a part of that, our partners have also evolved in response to both our increased understanding of the situation as well as when reflecting on their own. Some partners (like the industry cluster) were very active in order to maximize the local benefits of the CAL. This means they participated, worked as project champions and even included concepts (gender, aspiration to stay, friendship) from the CAL into their own surveys and knowledge gathering when engaging with youth in the area. Other partners saw themselves more as informants and

would respond when asked, but had little initiative beyond that. Finally, some partners lost interest, but we do have the impression that this is due to other, more pressing matters forcing re-scheduling and altered focus.

It was challenging to make partners to reply to the survey. Despite that we have not investigated the causes thoroughly, our hypothesis is that partners did not see the value of answering questions that are not relevant for them.

4.1.1 In a number of CALs, some of the implementation partners are identical with our target group for policy advice, i.e. civil servants working in local governments or public institutions. How they handled their roles and possible evolutions in their understanding of the CAL while they assisted in the implementation deserve particular attention. Please pay extra attention to this point while you are answering this above question.

Local government employees (civil servants) that participated in our CAL did see themselves more as informants and would respond when asked, but had little initiative beyond that.

4.2 What measures were put in place to ensure the inclusiveness of the CAL (during recruitment and implementation, among participants, invited speakers and the CAL organizing team)? What worked and what didn't work, in your opinion?

Gender has been mainstreamed through the different stadiums of the CAL and has been central in our planning. While many of the participants initially seemed somewhat perplexed by the inclusion of Gender aspects, already in activity 2 (group workshop) one participant recalled how her workplace, consisting solely of elderly men, made it impossible to socialize with colleagues after work as relationship would be implied and no neutral third places for informal social gatherings exist locally. This made it very difficult to form relationships and friendships. After this recollection, several of the participants also expressed their observations on gender and it became a natural part of the discussions. It is important to note that this workshop only had young professionals present by design as we assumed that some groups would refrain from honest responses if other groups would be present. In this case, if the local industry leaders or other colleagues from their companies would have been present, it might have inhibited this initial recollection and therefore made this aspect less accessible to the CAL.

During the CAL, we have also made specific notes about groups that are not represented. In Overhalla, one such group is migratory workers and especially their spouses. The industry has a proportion of migratory workers that initially commute, but some settle, bringing in their spouses. The initial workforce is largely men, while the women migrate as a family reunion, occasionally with children. Because of language barriers, both of these groups have some difficulty in creating relationships locally and therefore local national groups are in place to support each other. The municipality does make good efforts in language training and integration, so this should most likely be considered a temporary situation for most.

- 4.3 What measures were put in place to ensure the quality of discussions during the CAL (for example, efforts to make sure that diverse points of views are respected and minorities or underprivileged groups were given sufficient time and space to speak, efforts to stimulate debates and scrutinize information fed into the CAL)? What worked and what didn't work, in your opinion?

As mentioned above, our main approach was to include small groups that were assumed to share similar situations as well as 1:1 discussions. We used great effort to start the meetings by getting to know each other as we understood ourselves as outsiders in the context. We were very aware that for some participants, talking to a researcher from a research institute or university would itself be a limiting factor for expression. We tried our very best to come across as open and receptive to whatever the participants considered meaningful to nurture a relationship of trust.

- 4.4 What procedures/processes were put in place to elicit reflections on justice and equity issues in relation to the energy transition?

Same procedures as to include a gender dimension and quality in our events. Researchers have mainstreamed issues of justice and equity throughout the CAL (from the design to the implementation, including recruitment phase, etc). We have worked in 1:1 or very small groups to ensure that every participant could express him or herself. Furthermore, we have worked establishing a good relation of trust with our participants; and we have not been moralizing participants, but being open to listen to other opinions.

- 4.5 How were the results of the CAL communicated to the i) general public and the ii) public authorities, and how were they received?

Our approach (T-labs) has targeted impacts at local level and supported increased impacts for participants and their immediate networks (meaning there is often less focus on policy impact). No extra actions have been undertaken to inform public authorities as the local government has been one of the partners in the CAL, taking part in some of the activities; and having a good dialogue between researchers and local government employees over time. In Overhalla, the researchers have been invited to present the Dialogues project and CAL 3 times, in which presentations were focused on the basis of the Dialogues project, the focus of the CAL as well as any results or reflections we were able to offer at the time.

- 4.6 What measures were put in place to allow the continuation (e.g., picked up and carried forward by participants or partners) and replication of the CAL, if any?

Ripple effect – Together, (researcher and local industry) we have engaged in a quality process that has generated shifts in mainstreaming narratives about energy and sustainability issues. A notable future potential is the development of the housing unit described as Activity 6.

Our partners in the local industry have shared their experiences participating in the CAL in their local and regional networks. This has led to an increased awareness about such methods and their gains, and several neighboring municipalities have now expressed their

interest in establishing similar processes (research based local development – T-labs). There are currently ongoing discussions about how to proceed.

4.7 Please provide any additional information that you believe would be helpful to others, in designing a CAL and towards the replicability of your CAL.

We have learned a few valuable lessons as part of the CAL:

Firstly, People take part in what is relevant for them or what they care about. Flexibility and openness are key to generate interest in the participants. Engaging in co-creating requires a lot of flexibility, improvisation and resources, but is difficult to plan in advance. This also means describing impact a priori is very difficult.

Secondly, anchoring research processes to existing activities locally is key. This allows a wealth of local knowledge by gaining access to the people, background and focus of what is happening, but also allows to extend, adapt and discuss early in the project. An unwavering and additional activity will have to convince people to re-distribute their time, something no one seems to have in excess.

Thirdly, CALs are resource intensive if the goal is to ensure a full consideration of multiple factors and the processes are both long and unpredictable. There is often little time for communication beyond necessity which requires consideration both during planning, during the work and afterwards.

Fourth, real life is unpredictable. Both technology, relationships, events and other aspects of the research processes bear a risk of change that warrants an openness and willingness to adapt, regardless of overarching plans.

Fifth, generalizing the findings from a single localized lab is problematic to a wider context, but can provide valuable insights locally. A balance is necessary in projects such as Dialogues (which we think was quite successful in our project)

Sixth, we have discussed a possible selection bias towards certain stakeholder groups. As time goes by, we have gathered new insights into the groups and participants in the CAL, but we have no good indicator that we have reached all groups.

Seventh, ethical concerns related to privacy, data protection and conflicts of interest need to be considered from the outset, especially working with small communities.

Eight, local processes are dependent on local champions that have good will towards the project/researchers, as well as the necessary local knowledge and networks to operate efficiently within the community.

Finally, the CAL requires time for the researchers and participants to learn how to participate together and to push the co-created knowledge into use. This bond that is forged might make terminating the CAL challenging.

## Appendix: CAL events and data capturing

Please list the different CAL events, their participants, and the data that were captured at the events.

	Total # of participants (include team) / gender breakdown	Video recording	Audio recording	Transcript (English)	Observation notes	Written materials by participants (posters, post-its, etc.)	Other sources of data
Event 1	Preparatory activities	None	None	None	Notes	None	PowerPoint presentations and email correspondence
Event 2	Young professionals workshop	None	Yes, 3hr recording	None	Notes on main topics discussed and insights	None	Codes; visual representation of codes; Photo essay of the local industrial area
Event 3	Microhouse development	None	None	None	None	None	A full scale 12+6 square meter microhouse and full as-built documentation (3D model, will be made freely available). Pictures.
Event 4	Contextualizing local engagement (2 m, 3 f)	None	None	None	Yes	None	Pictures available of some social arenas and relevant places in the municipality
Event 5	Young Professionals home design workshop	None	Yes	None	Yes	None	Drawings
Event 6	Collaboration with industry (all men)	None	None	None	None	None	Building Information Models (BIMs) that will be made Open Source (in-development), email correspondence, PowerPoint presentations
Event 7	Translating local engagement	None	Yes	Yes (Norwegian)	None	None	None
Event 8	Developing local housing area and elderly housing through student engagement.	None	None	None	None	None	2 Master thesis in Architecture
Event 9	Oppdal workshop	None	Yes	None	Yes, notes on main insights	None	PowerPoint presentation

## Switzerland, Geneva – Report of the Citizen Action Lab

### Part I. Basic Information of the CAL

*In this part, please provide a short summary (max. 500 words) of the objectives, sequence of events, the participants and the data gathered.*

#### 1.1 How were the main objectives of the CAL described to partners and participants?

The Geneva CAL supports local residents' participation in the energy transition, more specifically, it seeks to: i) contribute to in-depth citizen participation by sharing practical information and identifying the needs and wishes of the inhabitants of four municipalities in suburban, high income areas (Collonge-Bellerive, Choulex, Meinier and Vandoeuvres) ; ii) obtain new knowledge on the forms of citizenship and engagement that are necessary for an energy transition; iii) support the inhabitants in the co-production of local climate action plans and contribute to the objectives of the energy transition in the region and country.

#### 1.2 How was the CAL relevant and/or timely for the local context, taking into consideration current events in local and national politics?

A central focus in Switzerland's ecological transition is a restructuring of the domestic energy sector. Concrete efforts are underway at every level that seek to realize significant shifts in energy production and consumption patterns. The Energy Strategy 2050 (2011) is the main public policy instrument by which Switzerland aims to navigate a period of intense change and uncertainty, and to find advantageous niches in the new and ever-evolving situation (e.g. Russian-Ukrainian conflict and resulting gas crisis, hotter summers and less-abundant hydro power). Its goal is essentially to maintain Switzerland's high level of energy supply domestically, while at the same time reducing greenhouse gas emissions to Net Zero by 2050, along with the reduction of other environmental impacts caused by energy consumption and production. The Canton of Geneva has issued plans for action on climate, energy and biodiversity, among others, and is leading up to a revision of the Cantonal Director's Plan [Plan directeur cantonal, the core legal planning process and mandate in the Canton] to guide the region's transition to more sustainable and resilient ways of living in line with objectives set by the Federal council. Commune-level municipal authorities are now getting ready to ground these plans at the local level in their communal Director's Plans and related strategies, while the State Council Geneva in Transition initiative (launched in 2021) supports exchanges, debate, and an imagining of the ecological transition that must now take place.

Following Switzerland's model of direct democracy, participatory actions are encouraged by municipal and cantonal authorities. However, how to achieve deep engagement of all residents in the energy transition remains to be seen on the ground. The Geneva CAL

comes in here as a participatory project that helps to create the conditions in which citizens' ability and confidence to engage on energy issues in their homes, communities and beyond can be strengthened. Through partnership with local governments (e.g., the municipality of Vandoeuvres), the Geneva CAL also contributes to amplifying the voices of citizens, which can impact the planning and implementation of the local transition plan. Furthermore, the Geneva CAL aims to strengthen an understanding of the community context influencing energy citizenship, including barriers and strategies for deeper energy citizenship, and the effect of energy citizenship on achieving local energy transitions. This information will be invaluable to a broader set of energy transition actors in Geneva and in other cantons in Switzerland. To date, other communes have already expressed interest in learning from the CAL.

- 1.3 Please describe the sequence of events of the CAL, and list the different types of data that you have collected from each of the events (please refer to Table in Annex). Please also describe the methodological approach you will use to analyze the data collected.

The Geneva CAL consists of five events spanning over a period of five months from September 2022 to January 2023. The planning for the events lasted considerably longer, as the UNIGE team had built a relationship with the citizen collectives starting in mid 2020. Meetings around the CALs began in late 2021 and early 2022. There were in total 114 citizen participants, and between 30 to 45 in each event, with a core group of approximately 10-12 participants who have been present throughout events. Table 1 provides a brief description of the sequence of events, their formats and main outcomes. More detailed descriptions about each of the events – its speakers, participants, contributors, the exercises used, debates held, views exchanged, and the outputs produced – can be found on the [Geneva CAL website](#). In addition, Appendix 1 presents the different types of data that have been collected from each event. For the analysis of the data, we primarily relied on event recordings and select transcriptions of group discussions, the process logs (a reflexive documentation maintained by the UNIGE team that logs the key steps taken to co-design, co create, and organize the Geneva CAL), and the event summaries generated by the UNIGE team and its partners after each event.

**Table 1: Brief Description of the Geneva CAL events**

Event title	Date	Format	Main outcomes
1 Citizen participation in the energy transition: what issues in our municipalities?	Sep 20 2022	Panel discussion followed by open floor debate	Set the scene of upcoming events, aroused the interest of the communes, and encouraged continued citizen participation. There had been interesting debates on the importance of participation, the responsibility of citizens and the need to make room for a diversity of opinions and actions in the transition.

2 What will life look like in our municipalities in 2035?	Oct 19 2022	Participatory workshop using comics that represent people living in the future	Allowed participants to come up with commune-specific imaginaries of what a good life could look like in 2035 in Geneva with energy sufficiency integrated, and a vision of the consumption practices that need to be changed across domains, as well as the broader enabling conditions for such a change.
3 Energy in our buildings: sufficiency chosen or imposed?	Nov 22 2022	Panel discussion followed by open floor debate	Conveyed the urgency of energy sufficiency in the energy transition in Switzerland as well as a sense of agency – that citizens can come together to reduce energy consumption and live a good life, as showcased in existing citizen initiative. The event also started serious conversations around what priority actions people can take collectively to achieve sufficiency individually and collectively, understood as avoiding/reducing demand.
4 Exchange of views with experts (energy and others)	Dec 14 2022	Q&A session with experts world café format	With the help of the sustainability experts from different knowledge and professional domains (e.g., energy, mobility, food, waste, citizen participation and etc.), this event addressed critical concerns of citizens related to energy transition and climate actions more broadly, and allowed citizens to gain new and/or alternative understandings related to the transition, which might help strengthen their participation at the local level.
5 A Citizen Climate Action Planning Event	Jan 28 2023	Full-day workshop to co-develop citizen initiatives for living well within the energy transition	This fifth and final event consolidated debates, perspectives and learnings from previous events, and allowed the citizens to identify and debate priority areas for change, and to co-create different proposals for a transition in their municipalities: 16 proposals were put forward in the areas of food, energy sufficiency, mobility and citizen participation.

#### 1.4 Who are your partners in the CAL (researchers, representatives from civil society organizations, private enterprises and public authorities) and what were their main roles in the different stages of the CAL? (more elaboration on your experience with CAL partners in Question 4.1 of this reporting template).

The partners of the Geneva CAL were primarily citizen collectives in the communes of Collonge-Bellerive, Meinier and Choulex and community members interested in the ecological transition in Vandœuvres, all of whom have been actively participating

throughout the different stages of the CAL. Some of these Collectives emerged during the COVID-19 pandemic, when citizens came together at a local level to reflect on how to support sustainability in their communities. They have been playing a central role in co-designing, co-creating the Geneva CAL since its early stages. The partners shared the responsibilities with the UNIGE team for the design, outreach, recruitment and the event logistics of the CAL, as well as the dissemination of results – in addition to active participation in the CAL events. Furthermore, the UNIGE team has opened up the process to citizen collective partners to co-determine the budget allocation in both offline and online spaces, through an open-access spreadsheet (however, we did not have much feedback on this point, partners were in agreement with the budgeting choices that were made by UNIGE). To illustrate the co-creation process, we give some details to the planning meetings between the UNIGE team and the citizen collectives.

In the summer of 2022, the UNIGE team and citizen collectives organized several meetings to co-create the CAL; during these meetings, we discussed general issues facing citizen participation in local climate actions and the opportunities for deepening engagement, the project DIALOGUES and its Geneva dimension, and most importantly, what Geneva CAL should aim to achieve, with whom and how. While we cannot present all outcomes and outputs of these meetings here, we highlight the last meeting before the CAL launch event, where we used a “Mountain of Tomorrow” exercise to support the co-creative process (see Figure 1 below for the output). Using this exercise, we framed discussions around problems and the solutions, the long-term ambitions, short-term objectives, milestones and expected results of the Geneva CAL, as well as planning of the core tasks related to the CAL. Our “process log” illustrates that in many aspects, ideas and proposals from the citizen collectives took primacy over those of the UNIGE team, which shaped the Geneva CAL into its current format.

Another partner of the Geneva CAL are the local governments, such as the municipal government in the Commune of Vandœuvres. We began with outreach letters to Vandoeuvres and Collonge-Bellerive mayors. We met with the Mayor of Vandoeuvre and her adjunct, who agreed to support the project through communications. Each event took place in one of the Communes, and at each event a representative of the Mayor’s office was present and gave some opening remarks. For the first event in Vandoeuvres, the Mayor attended and stayed until the end, to engage in discussions over drinks after the forum had concluded. A representative from the cantonal government delivered a presentation at the launch event, to frame the challenges of energy transition in Geneva. In a second stage, the Choulex and Meinier representatives were also brought on board through official letters from the UNIGE team. The communes helped with some communication and visibility, for example by posting events on their webpages.

The University of Geneva gave credibility to the project, as in some instances, the Mayor’s offices are unsure as to what to make of the citizen collectives. As one elected official confided to us: the citizen collectives only represent a minority, and the elected officials must cater to the general population. Even if the collectives bring good ideas to the table. We are now in the process of following up with the Mayors and planning the presentations

with summary results. It will be interesting to see to what extent the Mayors and their adjuncts take up the ideas that have come out of the forum, and whether the University researchers or the collectives will need to secure further support from the general public to push certain ideas through. At the time of writing, presentations have been made to all communes, with a public presentation organized in Meinier for mid September. As such, we see the Geneva CAL as continuing to have a life of its own, well into 2024, as different initiatives that were proposed get picked up and implemented.

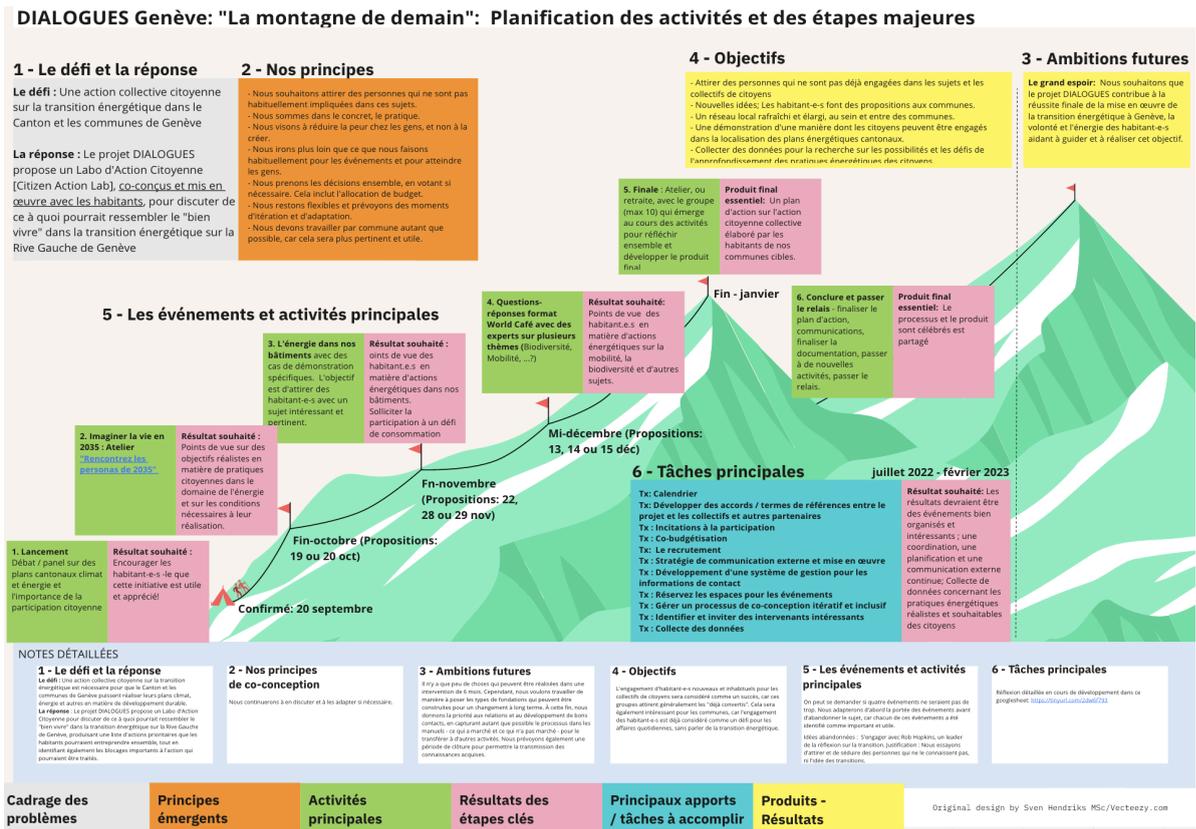


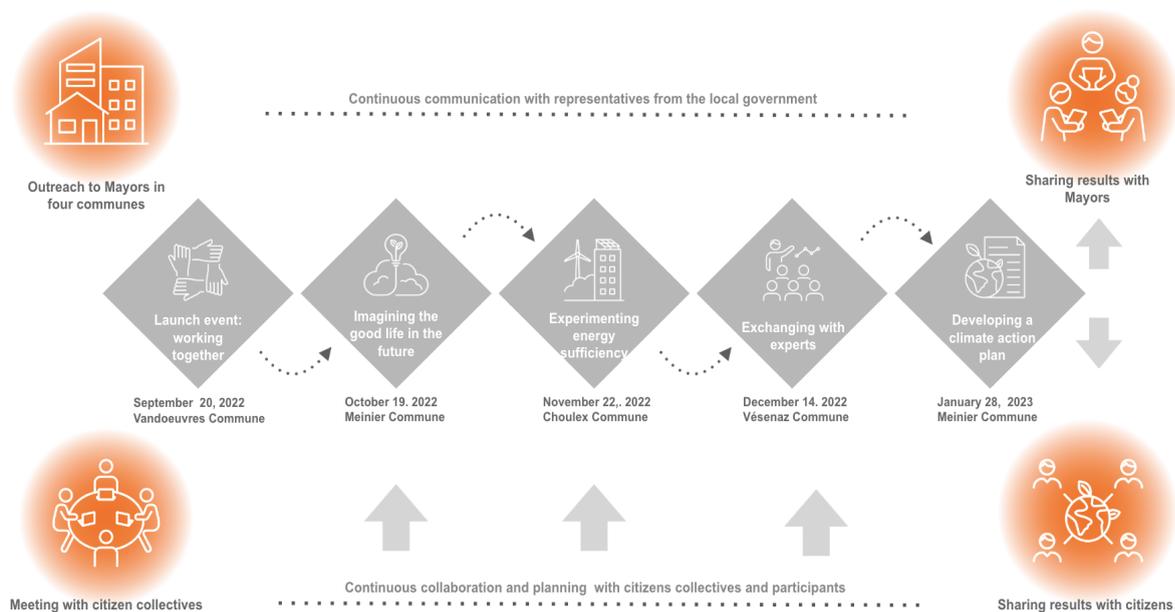
Figure 1: "Mountain of Tomorrow" Exercise for Co-creation with Partners

1.5 How would you evaluate the degree of citizen participation in the CAL? Are citizens/local residents engaged in the CAL beyond that of the "ordinary" participants (e.g. citizens have the power to co-design the events, determine the objective, the focus, and the agenda of the CAL, etc.), and if so, in what ways are they engaged?

We conceptualize the Geneva CAL as a transdisciplinary knowledge co-production process, taking place among a collective or group of citizens at the level of a commune. We build the CAL based on genuine collaboration between researchers and non-academic actors, facilitated by explicit forms of co-creation, co-production or co-design. As discussed in the previous section, citizens (through collectives) in the Geneva CAL were engaged since an early stage, prior to the launch event of the CAL, to co-create, produce and design the CAL – in other words, they had the power to determine the objective, the focus and the

agenda of the CAL. This was true for those engaged in the citizen collectives, but also those who were not members of the collectives and joined in the CAL at varying stages. They were given space and opportunity to participate in the co-creation process. For instance, participants joined at event three and four can still have a say in the shaping of the event agenda, and fully participate in the production of the citizen proposals at the full-day workshop of event five. For example, in suggesting expert topics for event 4, or for proposing new initiatives that were detailed at event 5. We show the process diagram in Figure 2.

**Figure 2: Process Diagram for the Geneva CAL**



1.6 What are the socio-demographic characteristics of the participants, in terms of age, gender, socio-economic status, etc. (please feel free to add a summary table in the appendices)?

There were between 30 to 45 citizen participants at each event, with a core group of participants who have been present throughout events; and 39 participants have filled out the recruitment survey which helps to ascertain their socio-demographic characteristics. On average, more than 60% of the participants are women throughout the different events; at the final event, the number of female participants more than doubled that of male. This comes into stark contrast to the systemic under-representation of females in the energy sector in Switzerland. Many factors could explain the participation of women in the Geneva CAL, we highlight a few here. First, there are more females than males in the citizen collectives in the different communes, and they played an important role in recruiting participants into the CAL (in other words, the sample “seeds” are mostly female, leading to less gender diversity in the overall sample). Second, there are conscious efforts from the organizing team of the CAL to ensure sufficient female participation, for example, childcare is provided on site of the events and this is communicated to all potential participants. In

terms of age, more than 70% of the participants are between 45-64 years old, with only 1 person below the age of 35, therefore young people are under-represented. This could also be partly explained by the fact that people active in the citizen collectives tend to belong to the same age group; additionally, there are also less young adults living in these targeted, affluent communes compared to other areas in Geneva that are more affordable. The participants are highly-educated, with more than 80% having received a bachelor's degree or above; they work in a diverse-array of occupations, but teachers and educators are over-represented, making up 38% (N=12) of all participants. A number of participants (N=7) did not disclose their income; among those who did, approximately half made less than the mean household income in Switzerland (approximately 105,000 CHF based on federal statistics in 2019), and 20% made significantly more than the mean, despite the fact that they live in some of the most expensive communes in the State of Geneva. This could be attributed to either a) part time employment, or b) not responding for household income but rather for individual income.

## Part II. Understandings of Energy Citizenship

*This part presents the various understandings of energy citizenship (what it means, what activities does it involve and at what scale/level) as put forward by the participants of the CALs. You are also encouraged to summarize expressions of rights, duties/responsibilities, understandings of membership and communities, and ways of participation – all of which are central in the conception of active citizenship – that have been articulated through the CALs.*

*For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. If you made audio registrations of sessions or parts of them (as we recommended), please use direct quotations to support your responses.*

- 2.1 How did participants perceive energy in their everyday life (e.g., heating and illuminating the home, fueling the car, etc.) and what about energy that concerns them the most?

The participants perceived energy in relation to what it does for them in their everyday life, related to heating, cooling and illuminating the home, fueling the car, and the use of electricity for a wide range of domestic tasks. Participants were particularly concerned with three interlinked aspects of energy: energy sources and their environmental impacts, the rising costs of energy, energy security and sustainability in the long run. For the first aspect, generally speaking, most of the participants were very concerned about climate change and support the transition to renewable energy sources, both locally and globally. Switzerland has a high ecological footprint due to consumption of ever-increasing resources, especially energy and raw materials. In Switzerland, 59% of energy needs come from fossil fuels. Housing represents a significant part of this energy consumption, with a high dependence on fossil fuels. How to decarbonize the domestic energy system is a

major issue. Many were considering or already taking measures to switch to renewable sources and/or increase the energy efficiency of their homes.

In addition to concerns for the climate and the environment, the rising costs of energy triggered by the Russo-Ukrainian war was brought up repeatedly, and energy security in Switzerland as well as Europe in the long run concerns most of the participants. For many, all these concerns mandate an immediate switch to renewables. However, while an upgrade for energy efficiency and the installment of renewable energy have been claimed to reduce the energy bill for households, they often require a significant amount of money to be implemented in the first place. Related to the costs of energy were also concerns over those who are more vulnerable and at risk, for example, the elderly and the unemployed who struggle to pay for heating during cold winters. Overall, for all the participants, how to deliver reliable, affordable, and sustainable sources of energy that keep all people sheltered, warm and comfortable throughout the year is a critical issue that requires rapid actions.

## 2.2 What were the main understandings of energy citizenship that emerged out of the CAL?

We did not ask the participants what the term “energy citizenship” meant for them, rather, we observed how issues of energy and environment were being discussed and acted upon by the participants throughout the CAL. Overall, for the participants, energy citizenship meant active participation in the energy transition through individual and/or collective actions. While many, lengthy discussion around energy citizenship came out of the CAL, one sentence by a participant sums it up nicely:

*“I think that we all have to find something a little more in tune with the environment that surrounds us, because I think that this overproduction, over productivity, somewhere we have moved away from it. So, it is in our interest to anticipate, organize and plan this transition.”*

The participants put forward a variety of ways to “organize and plan” this transition, we summarize them into eight different “types”, including individual and collective actions in energy consumption-sufficiency, energy consumption - efficiency energy production and energy politics.

**Table 2: Energy citizenship in the Geneva CAL**

	<b>Individual actions</b> (examples)	<b>Collective Actions</b> (examples)
<b>Energy consumption: sufficiency</b>	Energy conservation, reduce heating, cooling and overall energy consumption, take public transportation	Join group-based voluntary rationing
<b>Energy consumption: efficiency</b>	Invest in energy efficient products, technologies and services	Implement collective solution for energy efficiency upgrade

<b>Energy production</b>	Install renewable energy systems at home (e.g., solar panels)	Join an energy cooperative  Implement collective solution for renewable energy in the building
<b>Energy politics</b>	Learn and talk about energy politics with family and friends  Support politicians and initiatives for the energy transition  Contact local council members to offer ideas and demand change	Join citizen collectives and initiatives for the energy transition  Participate in social movements for the energy transition

For energy consumption, we differentiate between measures for energy sufficiency and efficiency. Participants frequently mentioned simple sufficiency measures at home, such as turning down the level of heating and cooling, and cutting down overall energy consumption. Efficiency was also mentioned, such as switching to LED light bulbs, Mobility was another main domain for action: they discussed using public transportation, ride-sharing and traveling by train. At the collective level, they put forward voluntary rationing. This was inspired by a citizen collective known as Seymaz Vie in Choulex, who invited members from another town to event 3, to share their collective experiment with energy sufficiency. In this experiment, five households came together and committed to reducing their carbon emissions and energy consumption over the course of a year – as a group, not solely on an individual household basis. The group has distributed the energy consumption quotas according to their reduction objective between the individuals of each household, with equal quantities for all. Their talk inspired participants to think about how neighbors and friends can come together to motivate and support each other with energy sufficiency. Another important domain of activities concern energy efficiency, from investing in more efficient products, technologies and services at home to more collective solutions (e.g., systemic upgrade of the building insulation to improve efficiency).

For energy production, some participants were particularly interested in the installment of alternative energy systems at home (e.g., solar panels). At event four, there were lengthy exchanges between a group of participants on the detailed practicalities of such a change, from the type of solar panel to choose, the financial subsidies provided by the state, to the engineers and companies to work with. These participants tended to be home-owners in rural or suburban areas, who have full control over the source of energy used to power their homes. Collectively, joining an energy community was put forward as a promising avenue for energy citizenship. This form of participation directly empowers citizens to produce, consume, store and sell renewable energy that help advance energy efficiency in households, support the use of renewable energy and at the same time contribute to reduced utility bills. However, it could be quite challenging to collectively act upon energy production for those living in condominium or apartment complexes. One participant said,

*“We have (people in) the EPPs (equivalent to condominiums) who always find themselves with someone in the EPP who will be the champion of sustainable*

*development, and then others who will be: ‘But I wouldn’t invest a penny for anything’.*

All these actions were built on a citizenry who are deeply concerned with environment and climate issues, and the first step of performing one’s energy citizenship involves getting informed, thinking, and talking about it. Many participants came to the CAL events with their friends and families, for that these issues are subjects that they frequently discuss at the family dinners and social outings. Many also initiate conversations with their neighbors and fellow citizens in the community, which raises the significance of social relations and interactions when it comes to energy citizenship, as one participant eloquently put it,

*“It’s individual, but we also talked about getting together with the people in the building, in the house, with friends, and finally, to get together to stimulate discussions, awareness, and then allow ideas to appear.”*

Further, exercising one’s political right also sits at the center of energy citizenship. Voting for elections, popular initiatives and referendums to ensure accelerated climate actions was emphasized by several participants. Participants also stressed the significance of keeping alive the direct democracy in Switzerland, by speaking to members of the local council, forming and supporting popular initiatives (in Switzerland, citizens are able to propose votes on specific issues themselves. This can be done via a popular initiative or an optional referendum). As expressed by one participant,

*“It has to be through the collective... We can also make a petition to be signed by the inhabitants, I don’t know, about fifty inhabitants or 100 inhabitants... In fact, it is the citizen who has the power, except that he has forgotten it”.*

Additionally, since the CAL was organized in collaboration with several citizen collectives (in the communes of Meinier, Choulex, Collonge-Bellerive), this became another key avenue for deepening energy citizenship. One of the final proposals that came out of the CAL process is the creation of citizen collectives in other Geneva communes like Vandoeuvres, Hermance, Anières, which would give more weight to citizens’ collective claims and have a greater force of power to implement intermunicipal projects focusing on energy and climate. Since the events, different communes have contacted UNIGE to discuss possible replication, for example in Bernex. Some of the findings are confirmed by the results from the CAL recruitment surveys summarized in the table below.

**Table 3: Recruitment survey results on participation (N=39)**

<b>Do you currently participate in any of the following activities? (1-5 scale, where 1 is “Never” and 5 is “Very often”)</b>	<b>Mean Score</b>
I consider energy and climate issues when voting for a political party or candidate.	4.63
I participate in public demonstrations on climate change.	2.81

I participate in activities of environmental groups or voluntary associations (by attending meetings and events, contributing financially, spreading information, etc.).	3.56
I consider energy efficiency when buying home appliances.	N/A
I try to reduce the energy consumption of my household.	N/A
I engage in conversations about energy and climate with friends and/or families.	N/A
I keep myself informed about energy and climate issues.	N/A
I engage in social media discussions about energy and climate issues.	N/A
I invest in energy production / installation of renewable energy.	N/A

### 2.3 What did participants identify as their rights and responsibilities as energy citizens (i.e., did they express a sense of entitlement or a sense of responsibility, in what context)?

We did not ask the participants what they identify as rights and responsibilities, the survey we conducted shows that there was a sense of entitlement to the right to participate, and to a certain degree, the right to access and produce energy (see Table 4 below). We also observe a shared, tacit understanding that everyone should be able to access clean and affordable energy. Individual responsibilities were much more pronounced in the CAL.

First, participants identified their civic responsibilities to vote and to participate in a variety of ways to maintain a healthy, strong direct democracy. A participant said: *“Civil society has a major, major role. And then, you have to go and vote. You mustn’t forget to vote. If you want to turn the tables, you have to go vote”*.

Second, participants articulated their responsibilities as consumers, to consume in ways that *“align ourselves with the ethical standards that are voted in Switzerland”* (original quote). Another participant said the following: *“As a consumer, we have responsibilities...We have immense power...We are the ones who, with our purchasing power, decide what system we make work.”*

Third, there was a strong sense of responsibility toward future generations. People felt that they must act on climate change and energy transition so that their children and grandchildren can breathe clean air, have fertile soil, and thrive in a habitable, healthy environment. For instance, participants felt that they should be able to *“give back to our children the land that was lent to us in a better state”*.

It is worth noting that assuming one’s individual responsibility does not mean that the participants felt that they hold the sole responsibility for the energy transition. The responsibilities of government toward its citizens were frequently discussed, as participants

understood that the right regulatory framework, financial incentives and support, investments in infrastructure, public communication and education, among others, were indispensable for a paradigm shift. This can be seen in the recruitment survey too (see Table 4 below). For example, when discussing mobility and energy issues, a group of participants came up with the following understanding:

*“The main lines that emerged were that for the moment it is extremely easy, comfortable and designed by and for the car, and that we must try to change the paradigm. We need to give more room to other modes, and in particular with certain measures that will sometimes be inevitably coercive but that will make it possible to have axes that are bicycle-friendly, and public transport rhythms that are much more encouraging with transport.”*

Participants, however, felt strongly that they could not wait until better policies happen before they take their responsibilities. In a conversation around sustainable food consumption, one participant emphasized that it is the government’s responsibility to regulate the companies into more sustainable production and retail practices, and others responded that the citizens and consumers must act regardless. *“If we wait for the policies and we say to ourselves that we always buy on Amazon or in the supermarkets, (this is) without taking responsibility...”*

To summarize, all of the participants would probably agree with the following phrase spoken by one participant: *“The people responsible are diverse and varied. There are new ones: each and every one, the neighbors, the municipality, the canton, in short, it touches a wide spectrum.”*

**Table 4: Recruitment survey results on responsibility (N=39)**

<b>To what extent do you agree with the following statements? (1-5 scale, where 1 is “Strongly disagree” and 5 is “Strongly agree”)</b>	<b>Mean Score</b>
Every citizen should be able to participate in decision making processes with regard to the energy transition.	4.08
Every citizen should be able to produce and own a share of the energy they need.	3.92
Public institutions (national/federal, regional and local government) should be mainly responsible for reducing energy use and accelerating the energy transition.	4.10
Private institutions (private enterprises, transnational corporations) should be mainly responsible for reducing energy use and accelerating the energy transition.	3.61
Individual citizens should be mainly responsible for reducing energy use and accelerating the energy transition.	3.49

- 2.4 How did participants define as their own communities (e.g., do participants feel a sense of belongingness and/or responsibility toward a community, city or country?) What did they understand as the appropriate scale of action (local/regional/national/cross-national)?

Since the CAL was advertised as a series of workshops for citizens to conceive a *local* climate action plan, there was a sense of belongingness, as well as a sense of responsibility toward the local commune and municipality. Local actions – at one’s neighborhood, commune and then at the level of the city – were seen as most desirable. There could be many explanations for this, and we suggest a few. First, as discussed in the previous section, much of the activities proposed by the participants – such as group renovations for energy efficiency, or energy cooperatives – are place-based in nature, and require planning and organizing amongst friends and neighbors at the local level. Sustainable production and consumption of food was another heated topic of debate at several CAL events. Similarly, there was a strong consensus amongst participants that eating local, organic food produced in Geneva is an important climate action (not surprising, food was an important focus given the proximity of these communes to agricultural land). Second, there were representatives from grassroots initiatives that attended the CAL, who were all engaged in local, small-scale activities – such as small organic permaculture farms, energy cooperatives, citizen collectives. Albeit small, these initiatives showcase how ordinary citizens can participate in a sustainable transition in meaningful ways, with visible, palpable and direct impact on the ground.

Last but not least, Switzerland's political structure consists of the Confederation, 26 cantons and over 2,000 communes. All the political levels have a legislature and an executive body. Of the three levels, the communes are the closest to the people, and are granted as much autonomy as possible. They can carry out as many tasks as possible themselves. The communes, for example, maintain and manage their own infrastructure, including roads and public buildings such as schools. At each CAL event, commune mayors and/or councilors were present to join the debates or answer questions from the citizens. Thanks to Switzerland’s federal system and a direct democracy, citizens have a variety of ways to engage politically and to influence commune decision-making processes. While we had made it explicit during the recruitment stage that all local *residents* (we did not use the term citizen to avoid exclusion) are welcome to join the CAL, all except for 2 participants are Swiss citizens who are granted comprehensive rights to political participation in Switzerland (based on the 39 survey responses, it is likely that there were also migrants among those who participated in the CAL but did not respond to the recruitment survey ).

- 2.5 What were the notions of justice – if any – put forward by participants (i.e., did they identify any elements of injustice in the energy transition, and how did they relate to a fair, just and inclusive energy transition)? Please pay special attention to ways in which factors of discrimination like sexism, racism, classism and others were brought into the conversation. Were there specific barriers mentioned which relate to these forms of oppression in society?

In general, participants of the CAL understood that not everyone benefited equally from the transition to more sustainable energy sources, and some groups of people might bear more burden than others for the costs associated with the energy transition (see results from the survey in Table 5 below). Who should bear more responsibilities for the transition is a central question to reflect upon in order to achieve a more just transition. The highly unequal consumption patterns and accordingly the carbon footprints between the rich and the poor were brought up frequently at several CAL events. In recent years, the jet-setting lifestyle of the super-rich and global elite have caused public outrage in many parts of the world. At the launch event, several participants have already pinpointed the problematic use of private jets and proposed potential measures to curb such practice, for instance, a strict ban on new acquisition, individual carbon budget, and wealth tax. To this, a participant responded that *“it is not just those who fly private, also those who take commercial airlines to go to New York or Greece for a long weekend”*, highlighting the carbon footprints and the responsibilities of the affluent in Switzerland.

Some participants suggested that the inequality of carbon emissions implies differentiated responsibilities, that the more privileged should take actions to cut down their lifestyle footprints. One participant summarized this way:

*“People who have less money, we know that technically they pollute less, they have less room to reduce...whereas people with higher incomes will pollute more. And then in terms of solidarity, it's also about passing on this information... to make the big polluters decrease, because that's the greatest solidarity.”*

However, not everyone was on board with the idea of differentiated responsibilities, as seen in the results of the recruitment survey. The statement *“every citizen should be able to participate in decision making processes with regard to the energy transition”* received a mean score of 4, and the statement *“people with higher incomes should bear more responsibility for reducing energy use”* received a mean score of 3.3. One possible explanation could be that people tend to believe that better educated, wealthier individuals are more likely to have pro-environmental values and behaviors and tend to hold negative stigma against those living with poverty. This is further explored in the following paragraphs.

There were also many conversations around how people living in precarious conditions can be better supported to access energy services. The Covid-19 pandemic had shaken up people's perception of precariousness in Switzerland – when they learned that many hundreds of people had to line up on Geneva streets every day for food aid in spring 2020 (which made the cover of the *New York Times* and shocked people living in Geneva). The cold winter and energy crisis in Europe also left many households struggling to pay for heating. The participants expressed that the municipal government has a responsibility to understand and respond to the needs of the vulnerable citizens (e.g., the elderly, the migrants), especially during heatwaves and cold winters. It could be done by general social

services, or through the creation of a new “solidarity fund” through progressive taxation for those in need, facing heightened climate risks. They also suggested that individuals could join local associations and volunteer their time to support the vulnerable.

The conversation on vulnerability is limited to the local context; people did not bring up poverty and lack of energy services in the rest of the world. In fact, there was barely any discussion on global distributive justice, or the responsibility of global north countries toward the global south – despite that one of the speakers (an expert of energy transition) at event 3 explicitly talked about this obligation. He discussed how if everyone living on the planet consumed as the Swiss do, we would need three planets to meet our needs, alluding to the need to radically change consumption patterns in countries like Switzerland. The statement “*people from high-income countries should bear more responsibility for reducing energy use*” received a mean score of 2.8. One possible explanation could be that the people from middle and low-income countries, while consuming less energy per capita, still consume the majority of the energy produced in the world. It could be argued that middle income countries like China and India should bear greater responsibilities compared to a small, developed nation like Switzerland, opening up an age-old debate on the significance of overall population vs per capita affluence.

**Table 5: Recruitment survey results on justice (N=39)**

To what extent do you agree with the following statements? (1-5 scale, where 1 is “Strongly disagree” and 5 is “Strongly agree”)	Mean Score
Everyone benefits equally from the transition to more sustainable energy sources in my country (e.g., same opportunities for 'green' jobs, equal access to renewable energy).	2
Everyone bears the same burden for the costs associated with the energy transition.	2.2
People with higher incomes should bear more responsibility for reducing energy use.	3.5
People living in urban areas should bear more responsibility for reducing energy use.	4.6
People from high-income countries should bear more responsibility for reducing energy use.	2.8

We also observe that there was still a profound stigma against vulnerable populations. At event 3, there was a group discussion focusing specifically on solidarity and justice issues. However, it was obvious that the participants sitting at the table were not themselves vulnerable. For example, they mentioned that they had never experienced financial difficulties, talked about not knowing how to access social services in the commune, and distanced themselves from vulnerable populations (i.e., referring to those who experience poverty as “they”). Participants tended to believe that vulnerability and precariousness are – at least in part – outcomes of poor financial decisions. This was an exchange at the table:

*Participant 1: Could there also be an action that could be carried out, that is to put in place people who will... well, on request obviously, people who*

*will support people to evaluate their budget, to check in their living environment where there are savings to be made. Because if they save money, I don't know, on the Internet, etc. They might have more money to be able to pay for heating, food and so on, if we're talking about solidarity.*

*Participant 2: Yeah, if they stop betting on soccer games, I don't know.*

*Participant 1: There you go... but obviously not in a compulsory, intrusive way, to propose to the inhabitants of the commune's advice...A point person who can advise on all aspects of vulnerability due to energy shortages. Who comes to the home...to make your budget efficient, when you are already in precariousness, to make your budget efficient so that you can have money, so that you can go out and put it elsewhere.*

*Participant 2: That's it, a person who gives advice, having a person of advice for the problems of budget management.*

A similar discussion took place at Event 4, at the group focusing on issues of local food consumption and production. When discussing buying local organic produce, a participant said:

*Participant 1: It's true that I often hear people say: "Oh, but it's too expensive"...And then some people say, "Yes, but not everyone can afford it. I say: "Yes. So, when you see the poor people who have the latest iPhone in their hand with the latest outfit, but they don't agree to put a little more money into healthy food and..." Because maybe they have a low income. And then, somewhere they think: "But I have no other solution than to go and buy sausages at the Migros".*

*Participant 2: Yeah, yeah. But there's the problem of the percentage of the budget that we put into food today. I mean, it's... I think today it's 6%...100 years ago it was 40% of the household budget.*

Indeed, the Swiss spend on average around 6.6% of their monthly household income on food and beverages, based on the most recent data (2015-2017) provided by the Swiss Federal Statistical Office. But this number doubles for households with a monthly income below 4,530 CHF, rising to 13.1%.<sup>30</sup> This number could be significantly higher for people from migratory backgrounds, many of whom practice careful budgeting on a daily basis to survive in one of the most expensive countries in the world. Overall, participants of the CAL understood that injustices exist in relation to energy justice; however, their privileged positions render them somewhat oblivious to the needs of people living in precarious situations in Switzerland. The idea of differentiated responsibilities – between people of different income levels, and people living in different parts of the world – remains contested.

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<sup>30</sup> Switzerland, Federal Statistical Office of Switzerland (2021). Available at: <https://www.bfs.admin.ch/bfs/en/home/statistics/economic-social-situation-population/income-consumption-wealth/household-budget.html>

### Part III. Pathways to Energy Citizenship

*Given the different local contexts across the eight countries, each CAL might reveal unique dynamics in the pathways to energy citizenship. This part presents the theories of change used in the CAL, ways in which the CAL engaged, enabled or facilitated participants to act as energy citizens. You are also invited to reflect upon other factors, such as more individual and structural ones, that have come into play in the processes of activating energy citizenship. For each question, please note the source of data you used, and highlight the counter narratives or minority views that entered into debates at the CALs. Please use direct quotations to support your responses.*

- 3.1 What was the theory of change that you assumed in the design of the CAL? In other words, why should the CAL work as intended, to achieve desirable outcomes for deepening energy citizenship? (explain your assumptions – if X has been done through the CAL, then Y would be the anticipated results.)

The theory of changes we assumed in the design of the CAL were informed by the methodology of transdisciplinary research (TD), the theory of social practices (SPT), and overarching, transversal concerns for inclusivity. We assume that, by adopting a TD research design and creating an *inclusive* space for citizen participation, and by co-creating a program of events which builds on insights for social change informed by SPT, the Geneva CAL could be a catalyst for deepening energy citizenship. First, as a research project that seeks to understand ways to support energy citizenship, we believe it is necessary to center citizens' voices and agency, take seriously their experiential and professional knowledge, and their concerns and needs. We are not simply asking participants to tell us what they think "energy citizenship" is, or what its pathways could be. We have created a space that brings diverse groups of people together to freely exchange ideas, debate priorities, co-construct solutions and future imaginaries, shaping each others' notion of energy citizenship, while co-creating or converging on a shared understanding at the collective level. We have also built the CAL based on genuine collaboration between researchers and non-researchers – to give citizens the central stage, help them climb the "ladder of participation" (Arnstein 1969) and take ownership of the research.<sup>31</sup> As discussed, citizens have been taking a crucial role in co-designing and co-producing the CAL; and all CAL events and activities were outcomes of collective decision making.

In our transdisciplinary model, we have taken explicit steps to enhance gender and other forms of inclusion. During participatory research processes, different people were invited to share information and views in different roles. Some will have more influence than others. Dominant social narratives and marginal social narratives can be reinforced or challenged; and these can have an effect on views that emerge and are shared. These dynamics can not be erased, but they can be influenced. Knowing this, the Geneva CAL team decided on specific design features to act on participation, gender and inclusion so that co-created concepts of energy citizenship and pathways are not defined by dominant narratives alone.

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<sup>31</sup> Arnstein, S. (1969) A Ladder of Community Participation. *Journal of the American Institute of Planners*, 35, 216-224. <https://doi.org/10.1080/01944366908977225>

We have taken into consideration inclusivity in our sampling approaches and participatory design to enhance deep and open participation that include and elevate marginalized voices in shaping the co-created understanding of energy citizenship and pathways (see more details in section 4.1, 4.2 and 4.3).

The DIALOGUES teams intentionally framed the CAL exchanges to ensure a rich and meaningful exchange on the notions of energy citizenship and justice. The UNIGE team also incorporated insights from SPT into the CAL design, in particular, the significance of socio-materiality and collective actions in bringing about social change.<sup>32</sup> Based on SPT, any project aiming to change everyday practices, from the way we eat, shop, travel to the way we commute to work, heat our homes and participate in climate actions, must begin with a recognition of the different sources of agency – the power affect change – spread across the people, the material and the social. During the events, participants have been encouraged to think about change in more collective terms, which challenge the dominant norms around citizen participation in the energy transition. For instance, our DIALOGUES preprint paper D3.3 found out that people are primarily engaged in the energy transition in their capacity as individual consumers who can dedicate themselves to energy efficient behaviors at home. At the Geneva CAL, the collaboration with citizen collectives brought to the fore how local citizens can come together in these expanding self-organized networks, to create spaces, opportunities, and connections that can help people engage in the transition, without feeling being nudged or forced into energy sufficiency. By demonstrating this possibility, centering agency, hope and well-being, we are confident that the Geneva CAL inspired fresh thinking about alternative ways to engage in the energy transition locally.

### 3.2 In which capacities/roles were the participants engaged (i.e., as energy consumers, producers and political subjects participating in decision-making processes) in the CAL, through what specific activities?

In the Geneva CAL, the participants were primarily engaged as citizens who can come together to engage in the energy transition; in the meantime, participants have also considered their capacity to act as energy consumers. Since its conception, the Geneva CAL has already been framed as a space, and a process for collective actions, with the objective to support and influence the local energy transition. At the launch event, the Mayor of Vandoeuvres welcomed the participants with a strong message on how citizen

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<sup>32</sup> Compared to studies in social psychology and behavioral economics which overwhelmingly focus on individual mindset, awareness and “sovereign” choices of consumers, SPT sees social change as embedded in the social, cultural norms and the materiality of everyday life. Sahakian and Wilhite (2014) argue that the “stubbornness” of everyday practices depends on how deeply anchored they are in relation to the three pillars of practices: the body – including cognitive processes and physical dispositions; the material world – including things, artifacts, spaces, technology, and infrastructure; and the social world – including norms, values, and institutions. The agency – the power to act on and affect practices – is therefore distributed among these different elements that constitute practices (Sahakian and Wilhite, 2014).

Citation: Sahakian, M., & Wilhite, H. (2014). Making practice theory practicable: Towards more sustainable forms of consumption. *Journal of Consumer Culture*, 14(1), 25–44.  
<https://doi.org/10.1177/1469540513505607>

participation is crucial to generating new ideas and preparing people to be actors of change. An official from the cantonal government gave an overview of the ecological and climatic challenges of the region, and the specificities of the canton's climate plan, and the priority areas for action in terms of energy production, mobility, heating and biodiversity. Marlyne Sahakian from the UNIGE team then engaged the participants to think about how we can imagine our roles not only as consumers but also as people involved in our communities. In the discussion following the presentations, participants who are members of citizen collectives, such as the Collectif Citoyen Collonge-Bellerive, spoke of their activities – which inspired others to look at ways to engage in the transition today beyond that of a consumer. Therefore, since the very first event, the Geneva CAL has set the stage for people to act beyond their roles as consumers, who can and should have a say in the energy transition by engaging collectively and politically. In the following events, through various group debates and exercises, participants have been continually prompted to challenge the individualistic thinking around climate actions that dominate our societies. At the closing events, participants co produced a series of initiatives to advance energy transition locally, which will be communicated to the local municipalities. Participants have also considered their role as energy consumers; but the Geneva CAL brings to light how energy efficiency and sufficiency can be achieved at a more collective scale.

3.3 What sense of agency (understood as the capacity to act on change) was observed during the CAL? What changes in actions did the participants commit to during and following the CAL activities? (e.g. reduce energy usage, participate in energy production, influence other citizens, join collective actions, etc.)?

We could not ask the participants to commit to anything during or following the CAL, but most of the participants demonstrated strong interests in a variety of actions, from the more small, individual actions to the more collective, political endeavors. We can say that participants generally felt that they have the capacity to at least “do something” about the current energy and climate crisis. Instead of listing what actions the participants had said they were willing to commit to, we use this part to discuss the nuances surrounding their understanding of agency.

First, participants considered knowledge, skills and know-how as necessary for citizen action. In other words, knowledge acts as a source of agency. Conversely, a lack of knowledge contributes to inaction. Many felt that there is too much and too little information on ways to participate in the energy transition at the same time. They are bombarded with information, and yet failed to get trustworthy guidance and advice on concrete actions. At different occasions, they stressed the importance of knowing before acting. For instance, a couple of participants considering switching to different energy sources at home had the following exchange:

*Participant 1: I'm waiting for guidance, because it seems impossible to me to make this choice.*

*Participant 2: Now, you are contacted by a lot of companies that tell you: "But you have to do this" and no, it is...", And then it's very distressing...*

*Participant 3: So, what needs to happen for this action to take place if we're thinking about heating? I feel like there needs to be money and support and...*

*Participant 1: No, but it's not just that, it's advice.*

*Participant 2: Sometimes we feel helpless, we ask ourselves questions... To prioritize actions, (we need) to have the tools to prioritize.*

Second, participants believed that their power as citizens is strengthened by communal and collective actions. This has already been discussed in the previous sections – how coming together amongst family, friends and neighbors was key for climate and environmental actions. Participants talked about the potential of starting a residents' association, a citizen collective, or even a thematic think tank and action groups for climate and energy solutions, to form a “critical sufficient critical mass” so that their requests can be implemented, and taken seriously by the local government. One conversation at the CAL concerns what tenants can do to improve energy efficiency or switch to renewable energy sources, and they agreed on the importance of collective action.

*“If all the tenants of the dwelling can get together, make a common request to the landlord or even organize themselves into a residents' association, it will have more impact than if they were alone. But if everyone goes individually, it is perhaps more complicated and less promising than if there is a grouping of situations... that a collective or that a group carries all the personal situations related to heating.”*

In another conversation at event 4 concerning the sustainable food consumption and the reduction of household waste, participants again emphasized collective actions.

*“I think that there, the collective action has a weight, and we should not hesitate to put ourselves together and say: ‘Ok’. To set an objective, even if it seems ridiculous. And if we manage to get the Coop and Migros to bend (two major supermarkets in Switzerland), that's already huge, and to say: ‘We at Migros want bulk, we want pasta and rice, basic things, we want six, ten things in bulk’...I think there is a way...Because if they see a collective of 150 people coming in and saying: ‘But I don't come to shop with you anymore. No...’”*

Last but not least, participants have come up with a list of climate action proposals to the municipality, some of which embody radical imaginaries about the future; yet, how they can come together to propel and realize these proposals is unclear. Some of these proposals include work time reduction, a perennial citizens' forum for climate actions, and a new indicator for prosperity and well-being. They identified the limits and obstacles facing such proposals, especially the more structural ones like the reorganization of working time, but couldn't really fathom how this could be tackled realistically. Therefore, it could be said that participants seem to see the limits of their agency, and their willingness and capacity for pushing forward more radical and political solutions remain to be seen.

3.4 What factors (from the more individual or to the more structural) might have enabled or hindered the participants' engagement as energy citizens? For example, at the individual level, not feeling obligated to act, not knowing how to act, wanting to act but lack resources to act (economic capital, land, time, etc.); and more structurally, social norms, legal and regulatory constraints, among others.

Based on conversations at the CAL, three main barriers hindered participants' engagement as energy citizens. They are, respectively, knowledge, resources and structural constraints. These barriers have varying degrees of influence on the specific type of citizen engagement, namely, individual versus collective actions in energy consumption (sufficiency and efficiency), energy production or energy politics, as detailed in section 2.2. We summarize these barriers in Table 6.

**Table 6: Barriers and enablers to energy citizenship**

	<b>Energy consumption - sufficiency</b>		<b>Energy consumption - efficiency</b>		<b>Energy Production</b>		<b>Energy Politics</b>	
	Individual	Collective	Individual	Collective	Individual	Collective	Individual	Collective
<i>Adequate knowledge &amp; competencies</i>	●●●	●	●●●	●	●	●	●●●	●●
<i>Sufficient resources (capital, time)</i>	●●●	●●●	●	●	●	●	●	●
<i>Conducive social norms &amp; regulations</i>	●●●	●●●	●●	●●	●●	●●	●●●	●●●

\* The table should be read as follows: the participants felt that they have – 1) adequate knowledge and competencies, or 2) sufficient resources, or 3) conducive social norms and regulatory framework – to engage in activities for energy consumption/production/politics, with increasing number of dots signifying higher level of agreement to the statement. This table shows the researchers' summary of different sources of data gathered at the CAL, another table below shows the participants' response to relevant survey questions which contributed insights into this summary table.

First, the lack of knowledge, competences or know-how presents itself as a barrier to participation in energy production (e.g., investment in renewable energy systems at home). This has already been discussed in section 3.3, to add on, many participants did not feel that they have the knowledge to make the right choice about investing in renewable energy for their home: they were bombarded with different solutions and propositions offered by various companies, confused about the costs, economic viability and available subsidies, among others. There wasn't enough trustworthy, unbiased and scientific information that is easily accessible to all. For people who rent homes, who make up a large majority in Geneva, the question is even more problematic, as they have no control over the installation of renewable energy for their building. The lack of capacity to engage in

collective energy production was also noted; people simply weren't aware of the possibility of joining an energy cooperative, for instance. For participation in energy consumption, participants seem to know a lot about measures for energy conservation and efficiency at home (e.g., turn down heating and cooling, switch off lights, buy energy efficient appliances) – and this is also verified in the recruitment survey (see Table 7 below). But much less about collective actions for energy efficiency and sufficiency, based on conversations at the launch event. The talk by Seymaz Vie in Choulex at event 3 inspired participants to reflect upon more collective measures.

Next, we discuss the barriers related to the lack of financial resources and time. While measures for energy sufficiency usually help individuals to reduce their utility bills, efforts to enhance energy efficiency imply financial investments. It could involve small purchases of LED light bulbs, bigger, energy efficient household appliances like refrigerators, televisions and washing machines, or significant investments in home insulation and the installation of alternative, more efficient heating/cooling systems. A number of participants did not feel that they have enough financial resources for such an investment (see Table 7). We also recorded the following conversation.

*Participant 1: "There's also a need for money anyway. No? Because it's expensive."*

*Participant 2: "Yes, because for example.. When we insulated the house, the canton pays a small (amount of) help, but it is minimal, it is not enormous, in the totality of the insulation. On the other hand, when we change our heating, the aid is only for heat pumps. We put wood pellets, zero, there is no subsidy, there is nothing at all, because it is not part of the plan of Switzerland..."*

*Participant 3: "...I really did an action... for me it was already a citizen action, when I renovated Minergie, the barn, we put a lot of money into it." (Minergie is a quality label for new and refurbished low-energy-consumption buildings)*

This is also true for participation in energy production: installing solar energy in the house and joining an energy cooperative/community both require significant investment of capital, and often predicated upon property ownership. For those renting their apartment or house and those with less economic means, it is thus extremely challenging to participate in energy production. Moving on to resource constraints for participation in energy politics (e.g., talking to local council members, joining environmental associations and social movements), participants mainly emphasized the lack of time to engage in such activities. Current five-day working week, plus care work for children and other family members, easily crowds out time for civic engagement. This has been extensively discussed at the closing event, and participants envisioned work-time reduction as a plausible way forward.

Last but not least, more structural factors, such as social norms and regulatory frameworks, also hinder deeper citizen participation. The recruitment survey tells us that participants had the general impression that the government is not doing enough to guarantee access to affordable and clean energy, and to provide adequate environmental education to the

future generation. Participants have pinpointed two specific regulatory constraints during the CAL: first, insufficient subsidies for investment in energy efficiency and sustainable energy production; and second, unfavorable conditions for tenants' participation as energy citizens in all domains. The first barrier on subsidies has been discussed in the previous paragraph on costs, we now turn to the second. In Switzerland, roughly 58% of all residents rent their homes. Tenants tend to have less control over their energy consumption, and often could not make their own decisions about the heating and cooling system, or the energy sources used to power their homes (results from the recruitment survey confirm this). One participant confessed that as a tenant, they have “*no decision-making power on heating, on all these issues*” and they do not know what to do in this situation. Furthermore, energy renovation often falls into the responsibility of the landlord, but who should pay for the renovation remains a contested issue. This dilemma was explained by some participants this way:

*Participant 1: In real estate, it's a big problem for tenants because, in fact.. It's not an incentive for landlords to do it. On the contrary, it costs them. Then, there may be problems of passing on the costs of renovation to the rents, with rents that may be contested. So, the less you do, the better off you are for the landlords.*

*Participant 2: But then, the laws will become more restrictive too.*

*Participant 1: Yes, definitely. That's kind of the current state, unfortunately.*

Acknowledging these barriers, participants have identified some enablers, they include: i) a platform/portal, potentially supported by experts and public authorities, that provide accessible, professional and unbiased information on concrete energy and climate actions; ii) additional private and public subsidies for low and middle-income households for investments in energy efficiency and energy production, with detailed guidance and instructions for their obtainment; iii) generally, more proactive actions from the municipality and canton to *directly* support citizen's action in the energy transition, with special attention paid to tenants, and iv) the possibility for citizens to become ambassadors in their communities and provide peer to peer counseling on energy and heating topics..

**Table 7: Recruitment survey results on barriers to energy citizenship (N=39)**

To what extent do you agree with the following statements? (1-5 scale, where 1 is “Strongly disagree” and 5 is “Strongly agree”)	Mean Score
I have the necessary information, knowledge and skills to reduce my energy consumption.	4.23
I have the necessary financial resources to invest in energy-saving products, technologies and services.	3.57
I have sufficient control over my energy consumption at home.	3.28
Access to affordable and clean energy is a governmental priority in my country.	3.05
Environmental education is sufficiently promoted in my country.	2.23

- 3.5 What knowledge, skills and competences have been introduced to the participants through the CALs (e.g., related to changing energy consumption and energy production, and participating in collective political actions)? Did the participants consider the knowledge, skills and competences they were introduced to relevant to their lives? If not, how so?

This information has already been summarized in Table 1, in section 1.3. Overall, the participants have received several main types of knowledge: i) knowledge on climate change, its urgency, the actions needed locally and globally; ii) knowledge on the current developments for the energy transition and climate actions in Geneva and its communes; iii) specific knowledge for cutting down one's carbon footprints in the domains of energy, food, mobility and waste, supported by group discussions with certified experts. To inspire deeper energy citizenship, we had already introduced what we termed "transformative knowledge", including but not limited to iv) alternative understandings of prosperity, well-being and citizen participation in climate actions and v) existing citizen collectives and associations for climate actions. We believe the knowledge introduced to the CAL was relevant for the participants, based on their positive feedback summarized below.

**Table 8: Post participation survey results on workshop content (N=17)**

<b>To what extent do you agree with the following statements? (1-5 scale, where 1 is "Strongly disagree" and 5 is "Strongly agree")</b>	<b>Mean Score</b>
I received new information and knowledge on the energy transition in my city/region.	3.76
My participation led to new understandings of how I can engage in an energy transition.	3.88
I have concrete ideas on how to take action in my community, for an energy transition.	4.0
I discuss with others, such as friends, family, or colleagues, in person and/or on social media about participating in the energy transition.	4.29
I feel empowered by my experience, and that I can be part of the solution.	4.11
I feel that the outcomes of this experience have an influence on decision makers.	4.05

- 3.6 What are the outcomes and impacts of the CAL? And did the CAL have any wider impacts, societal, environmental, economic, etc., beyond the group that was involved as organizers and participants? Please provide a short summary.

The outcome of the CAL was to issue a climate action plan, made for and by citizens. In this plan, a total of 16 initiatives were developed, organized around four themes: 1) citizen participation, 2) food consumption and production, 3) energy and 4) mobility. In addition, five cross-cutting themes were brought forward including: the need for a multifunctional space for sustainable development projects; one-off events to demonstrate how practices can be changed; the continuation of inter-communal efforts by citizens, across Choulex, Collonge, Meineir and Vandoeuvres; the need for an indicator for sustainable prosperity in

the region; and a need to respect diversity and greater gender equity in the ecological transition. A core group of citizens involved in the citizen collectives continue to meet and bring forward the ideas proposed in this action plan.

Several ideas are currently either being implemented or planned, for example: at a yard sale organized in Collonge at the end of August, several repair offers are being proposed for example, bicycle repair, but also clothing repair, thanks to a partnership with a migrant association in the area. In the fall, the citizens will organize a food challenge, to promote local food consumption and the reduction of meat. These ideas directly emerged from the action plan. Over the course of the spring and fall, the University of Geneva team has been promoting results via a) newspaper articles, including specialized magazines, b) in presenting results to Mayor's offices in the communes, and c) discussing the results with other interested parties, for example, other Mayor's offices (eg, Bernex). It is still too early to ascertain the wider impacts.

#### Part IV. CAL Processes and Quality of Participation

*CAL, as a form of citizen engagement in itself, must take into account the inclusiveness and diversity (in terms of gender, socio-economic background, migratory status and etc.), as well as the quality of participation in its activities. This part invites the CAL organizing team to reflect upon the inclusive and participatory design, and their effects on the outcomes of the CAL. For each question, if you have gathered information from the CAL participants that can support your claim, please note the source of data and use direct quotes when applicable.*

- 4.1 What was your overall experience working with your partners? Did the roles of partners evolve, possibly also differently from what you agreed upon and reported in the Implementation Document? At which stage, and with what tasks were they most engaged, and where did they lose interest (if that was the case)?

The partnership between the University of Geneva team and the citizen collectives was very fruitful. They were the key partners and were engaged in planning the CALs. Each collective took on one event in their commune. The relations with the Mayor's offices varied: in some cases, they were unsure what to make of this citizen engagement project, and were lukewarm toward the results, in other cases they were quite enthusiastic.

4.1.1 In a number of CALs, some of the implementation partners are identical with our target group for policy advice, i.e. civil servants working in local governments or public institutions. How they handled their roles and possible evolutions in their understanding of the CAL while they assisted in the implementation deserve particular attention. Please pay extra attention to this point while you are answering this above question.

There was only one person who was part of a citizen collective and was also an elected representative in a commune. This was seen as problematic for the mayor's office, who asked us to clarify roles when that person became engaged with our CAL.

4.1 What measures were put in place to ensure the inclusiveness of the CAL (during recruitment and implementation, among participants, invited speakers and the CAL organizing team)? What worked and what didn't work, in your opinion?

We used a two-level recruitment strategy to reach a diverse group of people in the targeted Geneva communes. Our first-level recruitment strategy centers on engaging with four local citizen collectives and one municipal authority as gateways to our broader groups of interest, including highly privileged households. For the second-level recruitment, we followed five procedures: i) outreach through implementation partners and their networks; ii) outreach through advertising at community events and public spaces; iii) flyer mail-out through central post office system targeting 4,053 households in 10 communes; iv) digital outreach through social media and email contact list. Our flyer and communication materials were designed in a way that is catchy, non-technical and easy-to-read. Throughout the CAL, we announced at each event that all are welcome and encouraged people to bring family, friends and neighbors to future events. To attract people with care duties, we offered childcare support or children's activities, and provided food and drinks at each event.

For the Geneva CAL, the hard-to-reach group was the highly-privileged populations living in wealthy communes, who have a high carbon footprints and accordingly, high energy saving potential. We had first tried to reach ultra high-networth individuals, but it turned out that the majority of them were not interested in group events like the CAL, possibly due to privacy concerns. One-on-one interviews or focus groups with people with a similar background are more plausible for them. Our CAL still reached wealthy and high-income households in the region.

4.2 What measures were put in place to ensure the quality of discussions during the CAL (for example, efforts to make sure that diverse points of views are respected and minorities or underprivileged groups were given sufficient time and space to speak, efforts to stimulate debates and scrutinize information fed into the CAL)? What worked and what didn't work, in your opinion?

From the outset, we have explicitly communicated to the participants that the CAL is and should remain a safe space where everyone feels comfortable to speak, regardless of their background and political views. We also asked everyone to practice patience and kindness, to exchange and debate in a friendly manner, and not to take up too much space so others could also participate meaningfully. At each event, there was a mix of planetary and group discussions, so that people who don't feel comfortable speaking up in public can talk in a more intimate setting. We also used post-it notes, to allow the free expression of ideas without speaking up at all. Furthermore, the events were carefully moderated by seasoned facilitators, who carried the events paying attention to the time, the energy and atmosphere in the room and the dynamics of interaction. Each event was followed by a small reception, where participants can exchange amongst themselves, or with the CAL organizers in a more casual setting. We have specifically accounted for gender in terms of participation. For each event, our research team observed whether women or other groups were having the same voice; whenever appropriate, we would address this imbalance by

adapting the workshop process on the spot (but this did not happen at the CAL). Last but not least, to ensure that different perspectives were presented at the CAL, for each topic (energy, food, waste, mobility etc.), we had invited several experts, representing different sectors, to join the event. The post participation survey also tells us that the participants were very content with the quality of discussions at the CAL.

**Table 9: Post participation survey results on workshop process (N=17)**

To what extent do you agree with the following statements? (1-5 scale, where 1 is “Strongly disagree” and 5 is “Strongly agree”)	Mean Score
My opinions and needs were taken into account during this experience.	4.47
I had a say on how the event(s) developed and what their outcomes were.	4.35
I am satisfied with the quality of discussions at the event.	4.35
I enjoyed participating in this experience.	4.65

4.3 What procedures/processes were put in place to elicit reflections on justice and equity issues in relation to the energy transition?

Justice and equity issues were brought up organically by the participants at the launch event, and remain an important part of the CAL discussions throughout. While many participants were already concerned about these issues, we still made sure that they were integral to different CAL presentations and activities. For example, at event three, we had invited an expert on climate change who discussed the inequalities in energy consumption and carbon footprints between Switzerland and developing nations in the world. Following this presentation, a group discussion chose to focus exclusively on justice and solidarity issues in relation to energy. At event four, several domain experts invited were activists who dedicate themselves to environmental and social justice; and exchanges with these experts encouraged the participants to further explore this topic.

4.4 How were the results of the CAL communicated to the i) general public and the ii) public authorities, and how were they received?

After each CAL event, we summarized the rich discussions and published them on the [Geneva CAL website](http://www.dialoguesproject.eu/geneva-cal-website), accessible for the general public. After the final event, we produced a comprehensive report in French in addition to the webpage, detailing each of the 17 initiatives proposed by the participants. This report was put on GoogleDoc and shared to all participants, who can comment and edit during one month. The finished report was then shared to the general public, and sent to public authorities in the communes involved in the CAL. Finally, the CAL organizing team delivered a presentation to all of the four Mayors and communes engaged in the CAL.

4.5 What measures were put in place to allow the continuation (e.g., picked up and carried forward by participants or partners) and replication of the CAL, if any?

The citizen collectives will ensure the continuation of the CAL, as the final report they generated is filled with ideas that they wish to act upon in the coming months and years. However, their time and resources are limited. Time will tell what can be actually achieved.

More than the implementation of initiatives, what seems to be attracting attention is the model that we used: to engage with citizens to come up with an action plan. This is an approach that other communes and citizen groups are interested in replicating. It speaks to the need to further explore opportunities for 'citizenship' or public engagement in the energy transition, beyond the usual ways of engaging: as consumer, as voter, or as activist. We believe that the CAL in Geneva has opened up a new imaginary for what energy citizenship can look like.

4.6 Please provide any additional information that you believe would be helpful to others, in designing a CAL and towards the replicability of your CAL.

The time and resources needed to organize the CAL can not be underestimated. We had a dedicated person just for communicating around the events, in addition to a project manager and staff support. Although the active phase of the CAL lasted five months, many more months were spent before and after in organizing the CAL and communicating around results.

## Appendices

### Appendix 1: Data Gathered at Geneva CAL

	Total # of participants (include team) / gender breakdown	Video recording	Audio recording	Transcript (English)	Observation notes	Written materials by participants (posters, post-its, etc.)	Other sources of data
Data available to the Consortium?				Yes			Yes
Event 1	31 (11 male, 20 female)	None	Recording of the plenary	/	/	Post-its	Photographs, process logs, event summaries
Event 2	31 (11 male, 20 female)	None	Recordings at 6 tables, 1h38 each	/	Notes on gender dynamics	Posters, post-its	Photographs, process logs, event summaries
Event 3	36 (13 male, 23 female)	None	Recordings at 4 tables and 1 general, 1h42	/	Notes on gender dynamics	Posters	Photographs, process logs, event summaries
Event 4	45 (19 male, 26 female)	None	Recordings at 8 tables, 1h26 each	/	/	/	Photographs, process logs, event summaries
Event 5	32 (10 male, 22 female)	None	Recordings at 5 tables, full day	/	Notes on gender dynamics	Initiative posters	Photographs, process logs, event summaries

## Appendix 2: Sociodemographic characteristics of CAL participants

	<b>N</b>	<b>%</b>
<b>Total</b>	<b>39</b>	
<b>Age</b>		
25-34	1	3%
35-44	5	13%
45-54	17	44%
55-64	11	28%
Above 64	5	13%
<b>Gender</b>		
Female	22	56%
Male	15	38%
Not disclosed	2	5%
<b>Education Attainment</b>		
Professional Training	3	8%
A-levels (qualification for university entrance)	4	10%
Bachelor Degree	12	31%
Master's Degree	18	46%
Post-lauream Degree (e.g., PhD)	2	5%
<b>Employment Status</b>		
Full-time employed	15	38%
Part-time employed	3	8%
Full-time self-employed	6	15%
Part-time self-employed	10	26%
Housework/care responsibilities, not paid work	1	3%
Retired from paid work	3	8%
Not in paid work for other reason	1	3%
<b>Occupation/Industry</b>		
Art, Architecture and Design	2	5%
Business and Finance Operations	7	18%
Community and Social Services	2	5%
Computer and Engineering	3	8%
Education and Research	12	31%
Healthcare and Medicine	3	8%
Home-maker	1	3%
Service, Sales and Retail	1	3%
Sustainability	2	5%
Not disclosed	6	15%
<b>Household Income</b>		
0 - 42,000 Francs	2	5%
42,001 - 65,000 Francs	2	5%
65,001 - 105,000 Francs	15	38%
105,002 - 170,000 Francs	6	15%
170,001 - 270,000 Francs	7	18%
Not disclosed	7	18%
<b>Household size</b>		
Single person household	4	10%
Two person household	7	18%
Three person household	8	21%
Four person household	15	38%
Five person household	5	13%

## Türkiye, Izmir – Report of the Citizen Action Lab

### Part I. Basic Information of the CAL

#### 1.1 How were the main objectives of the CAL described to partners and participants?

Izmir Citizen Action Lab (CAL) was a citizen-centred activity that sought first-hand knowledge of participants' perceptions of "energy" daily. In this regard, the Izmir CAL was an interactive activity that provided new knowledge on involving citizens in the energy transition. Therefore, it is particularly significant for citizens to internalise the energy transition and to be actively involved in this process by taking the necessary steps.

The objectives of the Izmir CAL were identifying indications of viable pathways to energy citizenship, ranking motivators and barriers toward energy citizenship, co-creating solutions to alleviate barriers toward energy citizenship, and identifying policy suggestions to improve energy citizenship. To achieve these objectives, Izmir CAL was organised as a public workshop with two main sessions in which multiple moderators guided the workshop. Hence, the moderators described the main objectives of the CAL to partners and participants just before the recruitment survey.

#### 1.2 How was the CAL relevant and/or timely for the local context, taking into consideration current events in local and national politics?

The design of the Izmir CAL is considered an inclusive and participatory process in all stages, including the workshop's design, where inputs from stakeholders are critical to the CAL design, and the actual implementation, where teamwork, consensus and joint decisions are prioritised. Furthermore, Izmir CAL was particularly relevant for the national and local context since the objectives of the CAL match with the key strategies and initiatives of the Republic of Türkiye Climate Change Action Plan 2011-2023 and Izmir Metropolitan Municipality's Sustainable Energy Action Plan and Green City Action Plan which aim to increase citizen participation in the energy transition through energy saving and efficiency measures, and climate change adaptation and mitigation efforts.

#### 1.3 Please describe the sequence of events of the CAL, and list the different types of data that you have collected from each of the events (please refer to Table in Annex). Please also describe the methodological approach you will use to analyse the data collected.

Izmir CAL was organised as a one-day-long workshop with two main sessions that shed light on different themes. The workshop lasted around 5 hours. Different data sources were utilised during the workshop, such as observation notes, post-it notes, and photographs. In the first session (morning session), the participants were divided into five groups and asked to fulfil the recruitment survey designed by the DIALOGUES team. Secondly, socio-demographic data was collected about the participants. Then, the questions under four different themes were asked, including participants' perspectives on

energy citizenship, their current engagement and attitudes towards the energy transition, their consumption behaviour concerning the energy transition, and active participation in the energy transition with a particular emphasis on the motivations and barriers to becoming energy citizens.

Based on the state-of-the-art literature review and the results of the workshop's first session, three focal areas pertaining to energy transition and energy citizenship were identified as the themes of the second session (afternoon session). These were (1) sustainable mobility, (2) smart energy implementations for individuals, and (3) household energy behaviours and decisions. Accordingly, the participants were divided into three groups, each discussing a different theme. In addition, "6 Thinking Hats" was utilised as the methodological framework of the discussions in the second session and the method to analyse the collected data (See Figure 1).

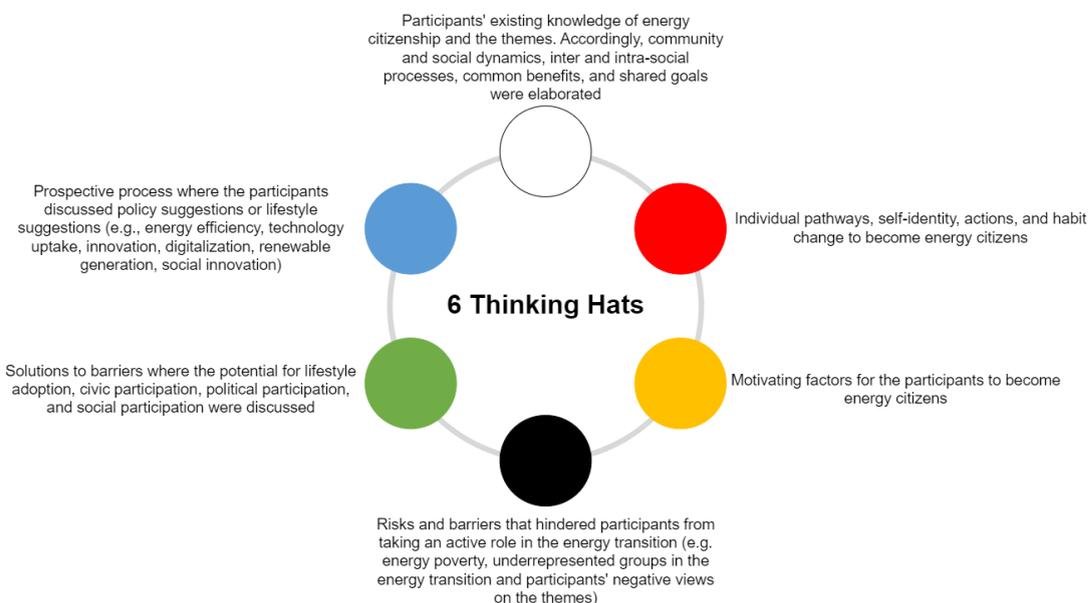


Figure 1. Methodological approach of "6 Thinking Hats"

The Six Thinking Hats Technique, introduced in the early 1980s by Edward De Bono, is an approach based on categorising the thinking system to direct knowledge differently (De Bono, 1994). The categorisation of thinking allows a problem or issue to be examined from multiple perspectives. The broad thinking hat is expressed in six characters and their corresponding roles, each in a different colour (McAleer, 2007). Many studies in the literature utilised Six Thinking Hats as a systematic thinking framework (Cioffi, 2017; Margarisova et al., 2012; Gursoy and Ozcan, 2022; Chien 2021; Chen et al., 2023).

The Six Thinking Hats Technique is mainly used for generating ideas, finding solutions and problem-solving (Gocmen and Coskun, 2019; Hani et al., 2016). The aim of the Six Hats Thinking Technique is to enable the individual to explain what he/she thinks about the subject put forward without any risk, to help him/her direct his/her attention from one point to another in an organised manner, to enable him/her to look at the events from

different perspectives (positive, negative, creative, etc.), and to reveal the event from all aspects. The most apparent benefit of the technique is that it supports creativity and enables horizontal and vertical thinking. Furthermore, the six thinking hats help strengthen communication, ensuring faster decision-making (Cioffi, 2017; Chen et al., 2023). Therefore, this method allowed the participants of the Izmir CAL to express their thoughts regarding energy citizenship and transition systematically.

1.4 Who are your partners in the CAL (researchers, representatives from civil society organisations, private enterprises and public authorities) and what were their main roles in the different stages of the CAL? (more elaboration on your experience with CAL partners in Question 4.1 of this reporting template).

DIALOGUES partner, Izmir University of Economics and implementation partners, Izmir Metropolitan Municipality and Sustainable Urban Development Network, carried out the Izmir CAL. Accordingly, Izmir University of Economics was responsible for designing and organising the CAL and providing the required technical and physical infrastructure. Izmir Metropolitan Municipality and Sustainable Urban Development Network co-designed the CAL and recruited participants.

Regarding target groups, the Izmir CAL sought to reflect different perspectives of actors with varying roles since "energy citizenship" involves all segments of society in the energy transition. Hence, the Izmir CAL focused on three target groups: citizens (individuals), non-governmental organisations (NGOs) representatives, and policymakers. In different stages of the CAL, the participants were encouraged to convey opinions, perform individual work, participate in group work, participate in discussions, generate ideas, and document their perceptions and ideas in different stages of the workshop. Additionally, the participants were encouraged to share their experiences pertaining to the selected themes, motivating factors, barriers, inter and intra-social processes, internal (individual), external (social and community-oriented) factors, etc.

1.5 How would you evaluate the degree of citizen participation in the CAL? Are citizens/local residents engaged in the CAL beyond that of the "ordinary" participants (e.g. citizens have the power to co-design the events, determine the objective, the focus, and the agenda of the CAL, etc.), and if so, in what ways are they engaged?

The citizen participation in the CAL was active and beyond the ordinary participants since the engaging actors reflected their perspectives freely and were motivated to shape the flow of the CAL. Moreover, the CAL was designed as semi-structured. Hence, the participants also co-designed the sub-questions, and they were encouraged to ask additional questions and raise perspectives within the in-group discussion.

1.6 What are the socio-demographic characteristics of the participants, in terms of age, gender, socio-economic status, etc. (please feel free to add a summary table in the annexes)?

The sample of participants was representative in terms of demographic and socio-economic factors and lifestyle habits. In addition, particular attention was paid to ensuring gender equality among the participants. Therefore, the number of female and male participants was equal as much as possible. The brainstorming sessions also considered female perspectives on the selected topics and female participation in energy citizenship. For selecting the workshop topics, special attention was paid to identifying issues that promoted and motivated the inclusion and participation of "hard-to-reach" groups.

## Part II. Understandings of Energy Citizenship

### 2.1 How did participants perceive energy in their everyday life (e.g., heating and illuminating the home, fueling the car, etc.) and what about energy that concerns them the most?

The participants mostly perceived energy in the context of consumption habits and behaviour based on energy transition and energy citizenship discussions. For this theme, the moderators asked several questions to the participants, including:

- What actions do you take regarding your consumption behaviour to contribute to the energy transition?
- Do you consider energy efficiency and conservation when buying a new household appliance?
- How do you evaluate your transportation habits? Do you use public transportation tools?

Based on the questions and answers from the participants, three sub-categories that concern people the most about energy emerged, including mobility (i.e., transportation habits), smart energy systems, and household energy behaviour and decisions. Regarding mobility, the respondents reported that they paid attention to public transportation; however, they also noted that several citizens used public transportation because of high gasoline prices rather than environmental motivations. In this sense, the participants agreed that public transportation should be economically and environmentally attractive. For example, a few participants shared car-sharing experiences. They indicated that they tend to share their cars with others while going to work or school to decrease fuel costs and contribute to the energy transition. Moreover, the participants highlighted the significance of encouraging hybrid and electric vehicles and scooters, particularly in public transportation. However, an interesting point the participants reflected on was that people were willing to use electric scooters, though a gasoline-driven car follows the electric scooters to change their batteries. The participants reflected this situation as a paradox.

Another sub-category discussed was the implementations pertaining to smart systems. Although the participants only took a few actions to implement smart systems at their homes, a few participants reported that they could control their appliances with a mobile application using an internet connection. Moreover, a number of participants also gave

examples to contribute to the energy transition, such as installing solar-powered bulbs on balconies and utilising solar-powered streetlamps.

Regarding household energy behaviour and decisions, the participants pointed out the importance of economic motivations for changing household preferences. The participants agreed that energy-saving behaviours varied according to the income level of citizens. Accordingly, people with a low-income level sought to pay lower electricity bills by saving energy in their houses. In this sense, they mostly associated household energy behaviour with economic conditions. However, several participants noted that the most important reason for changing energy habits was changing people's mentality and vision. For example, several participants indicated they sought to save energy in their houses by using their vacuum cleaners in minimum energy mode, smart sockets, inverter air conditioners and automatic curtain systems directly opening on sunny days.

Furthermore, various participants said they habitually bought recycled products. Again, several participants emphasised the importance of playing motivational games with household members for further energy saving. In addition to environment-friendly white appliances, the participants argued that people's curtain preferences could assist in energy saving. For instance, they said that while choosing curtains that would take heat into the house in winter was appropriate, choosing curtains cooling down the house in summer was essential. Finally, the participants generally said they sought to turn on electronic devices if necessary and buy energy-efficient products.

## 2.2 What were the main understandings of energy citizenship that emerged out of the CAL?

The moderators asked the participants in each group what came to their minds when they heard "energy citizenship". The main keywords associated with the concept of energy citizenship were awareness, responsibility, attempts for energy conservation, lack of fair access to affordable energy, habit change, lifestyle change, behaviour change, and energy literacy (i.e., understanding the role of energy in the world and daily lives and having the ability to implement this understanding to answer energy-related questions and generate solutions). In addition, the respondents believe that an energy citizen should detect the impeding factors for behavioural change and adopt a lifestyle to change their consumption habits.

## 2.3 What did participants identify as their rights and responsibilities as energy citizens (i.e., did they express a sense of entitlement or a sense of responsibility, in what context)?

The discussions demonstrated that awareness and responsibility started from the bottom, while top-level initiatives and strategies should support them. The participants discussed who would take more responsibility in the energy transition process. Accordingly, the participants in different groups agreed that the responsibility should not be solely on the consumers. Instead, the citizens as consumers should engage in the policy design and turn into prosumers. In addition, the public and private sectors should also share the burden on

consumers in a way that while the public sector is responsible for designing the most appropriate policies, the private sector takes the responsibility of implementing these policies with a consciousness based on environmental protection and a sustainable future.

The participants were also aware of their rights as energy citizens. One of the most prominent examples of such awareness was about a gender issue based on the responsibility of working mothers who had to pick their children up from kindergarten during rush hour. In this sense, they noted that these women had to make extra transfers on public transportation. To support their use of public transport, a number of participants argued for increasing the frequency and diversity of public vehicles. According to several participants, the responsibility here belongs to local governments. On the other hand, several participants thought that non-governmental organisations could bridge the demands of citizens and local administrations.

2.4 How did participants define as their own communities (e.g., do participants feel a sense of belongingness and/or responsibility toward a community, city or country?) What did they understand as the appropriate scale of action (local/regional/national/cross-national)?

Participants' perception of defining their communities depends on different factors such as age, level of education, and socio-economic background. For example, while young participants define themselves as more "world citizens", older participants feel they belong more to local or national communities. The discussions of the CAL show that the sense of belongingness increases among older participants. However, these participants tend to repeat the habitual behaviours of the community to which they belong due to their sense of belonging, are not readily open to innovations, and hesitate to act for behavioural change. However, young participants think they should take more responsibility for changing the existing system and have a voice in the energy transition. This mainly stems from the fact that young generations have more access to knowledge and a higher level of awareness. In addition, digitalisation and opportunities to learn new languages enable them to keep up with universal values and developments. Hence, they become more responsive to progress and can quickly adapt to new conditions.

One significant aspect of the CAL is that, as local authorities, Mukhtars are effectively a mediator and bridge between the local population and top-level authorities. Therefore, they are enthusiastic about communicating the needs and expectations of the local population to higher authorities. In this sense, the appropriate scale of action understood by the participants is mainly based on initiatives taken by the bottom (i.e., awareness of the local population and their enthusiasm to change behaviour) to be supported by top management and higher authorities, designating a harmonisation of the bottom and top level initiatives during the energy transition.

2.5 What were the notions of justice – if any – put forward by participants (i.e., did they identify any elements of injustice in the energy transition, and how did they relate to a fair, just and inclusive energy transition)? Please pay special attention to ways in which factors of discrimination like sexism, racism, classism and others were

brought into the conversation. Were there specific barriers mentioned which relate to these forms of oppression in society?

According to the insights from the participants, the notion of justice was mostly associated with whether all segments of society were involved in the energy transition, energy poverty and injustices caused by the unequal allocation of resources and opportunities during the energy transition. In the first place, regarding energy justice, the participants pointed out the importance of gender equality and fair representation of vulnerable groups, including minorities, refugees, and disabled people, in the energy transition.

The participants highlighted that energy transition might remedy energy poverty and injustices and noted that particularly energy poverty is likely to be avoided through the energy transition; however, the fair inclusion of all segments of society was seen as indispensable. Therefore, the citizens' and institutions' prioritisation of these issues is central to the energy transition. On the other hand, a few participants believed that energy transition might partially prevent energy poverty unless massive public investments are made.

According to the participants, the energy transition process in Türkiye is still not purely fair since individuals cannot actively participate in the transition efforts. However, they also noted that the citizens' awareness had been raised, and they have already started to take the initiative. The participants emphasised that economic development at all state levels would be essential for achieving energy transition. Otherwise, inequalities among individuals and significant disparities between the public and private sectors further alleviate injustices.

### **Part III. Pathways to Energy Citizenship**

3.1 What was the theory of change that you assumed in the design of the CAL? In other words, why should the CAL work as intended, to achieve desirable outcomes for deepening energy citizenship? (explain your assumptions – if X has been done through the CAL, then Y would be the anticipated results.)

A theory of change used by the Izmir CAL sought to examine how the relevant interventions could cause a specific behavioural change in participants in the path of energy citizenship. In this way, the theory of change was expected to define solutions and overcome the challenges that prevent participants from becoming energy citizens, following a multi-step framework. As the first step of the theory of change, the Izmir CAL team defined long-term objectives, including a change in participants' behaviours in favour of energy transition and energy citizenship. As the second step, preconditions and requirements were determined to reach the long-term goals when co-designing the Izmir CAL. In this sense, the involvement of different stakeholders and group discussions were determined to ensure the participants' internalisation of energy-saving values. The third step of the theory of change led the Izmir CAL team to determine the basic assumptions in the local context. In this sense, the basic assumption of the Izmir CAL was that the information-sharing on energy citizenship with participants, citizen-centred group

discussions and interaction among different stakeholders (citizens, representatives of NGOs and policymakers) were likely to increase the motivations of participants to change their habits in their daily life. Hence, as the fourth step, the interactive nature of the Izmir CAL was used as an intervention to bring participants' behavioural change. As the fifth step of the theory of change, creating indicators for measuring the outputs of the approach was significant. The discourses and commitments of participants toward becoming more active in energy-related issues were accepted as essential indicators for measuring the success of the Izmir CAL.

3.2 In which capacities/roles were the participants engaged (i.e., as energy consumers, producers and political subjects participating in decision-making processes) in the CAL, through what specific activities?

The participants engaged in the CALs as citizens (individuals), representatives of municipalities, local governance bodies (mukhtars), universities, and non-governmental organisations engaging in environmental actions, social services, youth rights, gender and urban and social development. First, all the participants were energy consumers in their households. Furthermore, several mukhtars representing a number of neighbourhoods in Izmir and representatives of both Izmir Metropolitan Municipality and district municipalities participated in the Izmir CAL as political subjects participating in decision-making processes.

3.3 What sense of agency (understood as the capacity to act on change) was observed during the CAL? What changes in actions did the participants commit to during and following the CAL activities? (e.g. reduce energy usage, participate in energy production, influence other citizens, join collective actions, etc.)?

All the participants agreed that the Izmir CAL was an inspiring activity for their energy-saving behaviours. Accordingly, they emphasised the importance of the interaction among citizens, representatives of NGOs and policymakers for increasing their visions on energy saving and joining collective actions. Furthermore, many participants knew they could control their energy consumption using smart-home systems and energy-efficient lighting. Regarding sustainable consumption, several participants said they would prioritise recycling daily and reduce their consumption using second-hand products. In addition, participants stated that they would continue carrying their coffee thermoses and glass bottles to use less plastic. The participants also expressed they would keep their efforts to consume less energy by using public transport, walking the pedestrian path or riding a bike.

3.4 What factors (from the more individual or to the more structural) might have enabled or hindered the participants' engagement as energy citizens? For example, at the individual level, not feeling obligated to act, not knowing how to act, wanting to act but lack resources to act (economic capital, land, time, etc.); and more structurally, social norms, legal and regulatory constraints, among others.

Regarding energy citizenship, the participants noted that storytelling and sharing successful experiences might encourage other individuals to engage in similar initiatives.

For this purpose, mass communication tools have great significance in disseminating knowledge. Furthermore, it was evident from the discussion that the participants knew that energy citizenship should be both a right and a responsibility. In addition, they emphasised that although several people were willing to become energy citizens and participate in energy decision-making, there was a link between the income level of citizens and their active involvement in the energy transition and related decision-making processes. The participants listed the motivators and barriers toward energy citizenship. Accordingly, the motivators include:

- Organising information campaigns at schools and mainstreaming energy citizenship
- Simplifying the relevant information to raise awareness
- Initiating challenges for a lifestyle change
- Free vehicle inspections and emission checks on certain days
- Increasing the insurance costs of vehicles with high emissions
- Decreasing the insurance costs of the citizens who can contribute to energy conservation
- Teaching young students at schools how to read electricity bills and rewarding the students that can conserve energy by decreasing their consumption
- Cooperating with influencers on social media to raise awareness regarding energy citizenship
- Authorising local governments to enforcement

On the other hand, the barriers toward energy citizenship are:

- Lack of trust in public institutions
- Self-indulgence and tendency to stay within the comfort zone
- Low level of economic development
- Public sector's inability to raise awareness

3.4.1 What are the enabling/hinder factors related to gender? Please also note specific experiences of discrimination shared by the participants.

Regarding gender representation in the energy transition, several participants thought there was social and gender inequality in the energy sector. In addition, a number of participants argued that the economic disparity between men and women was also reflected in the energy sector. Accordingly, they noted that most women did not have an initiative in the household economy, and they did not have a role in decisions on their household energy issues. However, several participants remarked on the importance of women in the energy transition in terms of educating and raising the awareness of their children about energy saving. Furthermore, they said women could contribute more actively to the energy transition since they were better at saving energy.

The participants also pointed to a traditional division of labour between men and women in buying electric devices. While men were interested in the technical features of devices, women were more likely to deal with their functions and aesthetic properties. According to several participants, men's interests and knowledge of technical characteristics of electric devices were likely to leave women behind in household decisions regarding energy-related issues.

- 3.5 What knowledge, skills and competences have been introduced to the participants through the CALs (e.g., related to changing energy consumption and energy production, and participating in collective political actions)? Did the participants consider the knowledge, skills and competences they were introduced to relevant to their lives? If not, how so?

At the beginning of the Izmir CAL, the concepts of energy citizenship and energy transition were introduced to the participants. Accordingly, the definition of the energy transition was made in terms of the following dimensions: the transformation of the global energy sector towards diversification of energy sources to increase climate resilience, long-term energy security, access to energy worldwide, reducing dependence on fossil fuels and expanding the use of renewable energy in electricity and transportation. Furthermore, energy citizenship was identified in terms of citizens' rights and responsibilities in the energy transition, including active participation of individuals in the energy transition in individual and collective ways, involvement of individuals in energy-related decision-making mechanisms, and incorporation of sustainable energy transition into their daily life practices.

The participants considered the abovementioned concepts relevant to their habits and shared their daily experiences. Regarding the concept of the energy transition, the main keywords that came to the participants' minds were the shift from fossil fuels-based energy systems to renewable energy resources (e.g., increasing the share of renewable energy resources such as wind and solar in the energy mix), carbon emissions, circular economy, energy dependency, energy conservation and efficiency, decarbonisation, prosumerism, sustainability, and recycling.

Accordingly, the participants agreed that individual efforts were highly significant for a more effective energy transition process, and shared experiences from their daily lives contribute to the energy transition. Accordingly, they reported that they paid attention to consuming less energy through, for example, using electric appliances when necessary, replacing old appliances with new energy-efficient ones, plugging-in washing machines and dishwashers when the appliances are full, using quick charges and energy-efficient lightbulbs, isolating their buildings and double-glazing, using public transportation instead of private cars as much as possible, and car-sharing. Several participants also said they were taking individual initiatives such as carrying special water bottles instead of plastic bottles, utilising recycled shopping bags, shopping from brands using recycled fabrics, and composting their household wastes.

The discussions about the individuals' efforts and responsibilities toward energy transition reveal that participants' level of awareness for low-carbon technologies and lifestyles is relatively high; however, they indicated that they found the government's incentives and initiatives insufficient. Furthermore, the legal procedures and regulations were also identified as barriers against low carbon energy transition. For instance, participants were greatly interested in generating energy through solar panels at the household level since Türkiye has particular potential for renewable energy resources such as solar and wind generation. However, the significant limitations of spreading renewable energy generation

technologies are high investment costs, fluctuating exchange rates, and lack of adaptation of government policies to the international agenda.

The participants listed the main ideas relevant to their experiences regarding energy citizenship, as stated in answer 2.2. Furthermore, the participants listed the factors that have enabled or hindered their engagement as energy citizens, as indicated in response to 3.4. In addition to energy transition and energy citizenship, the participants were informed on the difference between energy efficiency and energy conservation. Therefore, they were told how to achieve efficiency and conservation through different implementations. Accordingly, the participants shared their daily activities to conserve energy and achieve energy efficiency, including:

- Using energy-efficient lightbulbs
- Replacing incandescent bulbs with LED lights
- Recycling clothes
- Reading energy certificates when buying new appliances
- Preferring energy-efficient household appliances when purchasing new appliances
- Not running the washing machine and dishwasher before they are full
- Turning the lights off when leaving the room
- Not leaving television in standby mode
- Decreasing water consumption
- Not fuelling all the gas radiators at home

3.6 What are the outcomes and impacts of the CAL? And did the CAL have any wider impacts, societal, environmental, economic, etc., beyond the group that was involved as organisers and participants? Please provide a short summary.

The discussions among participants regarding energy transition and energy citizenship resulted in three focal points that can change people's lives: (1) sustainable mobility (transportation), (2) smart energy implementations for individuals, and (3) household energy behaviours and decisions. If appropriately internalised, each focal point has the potential to have broader societal, environmental and economic impacts. Moreover, their internalisation of participants (individuals, representatives of municipalities and non-governmental organisations, and policymakers) can change their daily habits and transform the context in which they live as agencies.

Regarding sustainable mobility (transportation), it was observed that the participants internalised the importance of environment-friendly transportation, zero-emission vehicles, and the increased number of electric cars and bike paths. Furthermore, they pointed out the importance of the incentives for using more public transportation in Izmir. They also agreed that their living spaces (e.g. centre or periphery) shaped which modes of transportation they would use.

In addition, discussions on sustainable mobility demonstrated the wide impact of environment-friendly transportation on people's lives. Accordingly, several participants expressed the importance of public transportation participants. They thought there should be diversity in modes of public transportation in transit centres which can encourage people

to prefer public transportation instead of their private cars. Furthermore, discussions encouraged the participants to try the car-sharing application programs, which assist people in sharing their vehicles with others to save energy and money. In addition, participants stated that they would convey their ideas to the Municipality on using renewable sources in public vehicles, lighting in metro stations, and installing solar panels on sidewalks.

The discussions on sustainable mobility also changed the vision and mentality of the participants in favour of energy-saving in transportation. For instance, the debate on the importance of public electric vehicles provided by the Izmir Metropolitan Municipality led participants to use them more frequently. However, participants agreed that the number and frequency of these electric vehicles should be increased. In addition, the participants emphasised that the local governments should disseminate electric vehicles and assist people with easy access to these environment-friendly public vehicles. Regarding encouraging people to use more public transportation, the participants noted that subway lines and buses should be more comfortable, and their air-conditioner maintenance should be done regularly. Furthermore, they remarked that public transportation drivers should be trained in accordance with sustainable mobility. For instance, the participants indicated that while the buses' air-conditioners were on, the windows in the buses should be closed for further energy saving.

Furthermore, the participants agreed that Izmir should have more pedestrian zones for energy saving and protecting their health. For instance, they said people should be able to walk to marketplaces with shopping carts without meeting any obstacles. They admitted that there were sidewalks in the city, but people needed help to use them adequately due to the barriers in the sidewalks. In this sense, the participants recommended that there should be barrier-free and planned designs for sidewalks to encourage people to walk further. In this sense, many participants argued that if the pedestrian paths were safe and green, more people would feel encouraged to walk as a transport mode.

Regarding the opportunities and barriers for sustainable mobility in Izmir, the participants emphasised the Izmir Metropolitan Municipality's (IMM) sustainable transportation initiatives, including electric scooters (e.g. Martı and Binbin). However, they agreed that the infrastructure of these e-scooters should be improved, they needed to be designed to integrate with other public transportation, and there should be a precondition for using these vehicles, such as having driving licenses. The participants also revealed that bike paths in the coastal parts of Izmir and IMM's bike services (e.g. BISIM) could be used at a low cost. However, the participants agreed that there were no bike paths in the inner parts of the city, which prevented bikers from reaching coastal bike paths securely. In addition, they discussed that the traffic was overcrowded in Izmir, and there were several barriers to riding bicycles in the traffic. In this sense, to increase the security of the bikers, the participants focused on the necessity of preconditions for bikers, including wearing luminous vests or using bicycle lights. Furthermore, they argued that bike paths should be integrated into the public transportation system, which can contribute to creating a cycling culture.

Concerning smart energy implementation for individuals, discussions in the Izmir CAL sessions allowed participants to think about their thoughts on the smart energy systems, their previous experiences, the motivators and barriers for using these technologies and their recommendations for eligibility of these systems in favour of energy saving. In addition, several participants argued that data on energy consumption should be shared with citizens to increase their motivation to save energy in their daily life by using smart energy systems. In this regard, several participants noted that the role of citizens and bottom-up dynamics were significant for disseminating smart energy systems.

According to several participants, public incentives, support, and low-cost loans were among the outstanding solutions for improving the infrastructure of smart energy systems. Furthermore, education on energy saving was regarded as a crucial step for changing people's vision and habits toward smart energy systems. The participants agreed that local administrations and non-governmental organisations could develop energy and technology awareness seminars and webinars. According to several participants, public figures could be role models, and they can notably encourage people to save energy and use smart energy systems.

More importantly, as a result of the Izmir CAL discussions, a number of participants noted that they would be more selective regarding smart energy systems rather than buying technological features they will not operate. On the other hand, they agreed that sales companies should offer services according to the consumption profile of people and inform consumers about the details of these technologies. Furthermore, the participants argued that most smart systems could have been more user-friendly and feasible.

Concerning the theme of household energy behaviours and decisions, several participants expressed their plans that will also affect other segments of society. In the first place, participants noted that energy saving and energy literacy must be included in students' education curricula. In this way, they said that children could change the energy behaviours of their parents and encourage them to save energy. Furthermore, education programs and seminars for adults could raise awareness of energy saving and their requirements. For this reason, several mukhtars stated their willingness to provide education on sustainability and energy conservation to primary school students in their neighbourhoods through experts. In this sense, discussions in the Izmir CAL have the potential to have a broader societal impact through education since the change in mentality can be gained by education and energy literacy starting from childhood.

Furthermore, as an impact of discussions on energy behaviours and decisions, the participants expressed that recycling incentive projects of local governments could increase citizens' sustainable habits. Overall, the participants agreed that economic incentives, raising awareness, education and motivational games could effectively change citizens' energy habits in favour of energy saving. In this sense, the Izmir CAL created a significant awareness among the participants to change their habits and spread their perspectives on their surroundings. In this sense, the Izmir CAL has a considerable capacity to have broader societal, environmental and economic impacts as the perspectives it incorporates

have a domino effect on new practices and thinking on energy citizenship and energy transition.

### 3.7 Overall, how can citizens' participation in the energy transition be better supported and by whom, in the context of where the CAL took place?

There was a discussion in the Izmir CAL on how to engage citizens in Türkiye's energy transition better. According to the participants, to fix the problems and remove the barriers against the fair participation of individuals in Türkiye's energy transition, a collective approach in which the public sector, private sector, non-governmental organisations, universities, and citizens cooperate was emphasised since the responsibility does not only belong to a single party which is either companies/organisations or individuals. On the contrary, all parties and institutions are responsible for the extent of their sphere of influence. In such a collective approach, individual behaviour changes trigger joint changes. In this sense, the role of the public sector will be critical in terms of a regulator and controller.

To improve the citizens' participation in the energy transition, the participants recommended raising awareness on social media platforms and educating citizens, particularly children, at an early age through several campaigns at schools. Moreover, they believed raising awareness might be achieved through digitalisation and innovations. However, many participants also remarked that technology and digitalisation are both enablers and disablers since technological developments help citizens engage more in the initiatives while increasing energy consumption.

Several participants stated that energy decision-making mechanisms in Türkiye were usually made at the highest levels; thus, not all stakeholders were equally influential during these processes. Moreover, numerous participants argued that energy taxation must be fairer in representing citizens' income levels. Hence, the participants thought the energy decision-making process should be fair and democratic in representing all segments of society, including low-income groups, minorities and refugees. In addition, according to various participants, culture and political geography were also influential in the under-representation of several stakeholders in the energy transition.

To encourage citizens' active participation in the energy transition, raising citizenship awareness of people via public workshops and social media was regarded as an effective tool. Furthermore, a number of participants argued that preparing climate action plans, sustainable energy action plans and carbon inventory reports that involve all citizens at the local level could be another solution for energy justice. State policies were also seen as remarkable for replacing an unjust energy representation with an inclusive and just one. According to several participants, social solidarity among all parts of society could direct the private and public sector energy policies. In this respect, generation Z was regarded as a significant catalyst for the active participation of people in energy decision-making. Overall, the participants agreed that private and public institutions and non-governmental organisations should cooperate to raise awareness of citizens and the active participation of all social groups in the energy transition.

3.8 Please provide any additional information that you believe will help the consortium's analysis of the pathways to energy citizenship.

As a significant parameter, the participants generally emphasised raising awareness and education for pathways to energy citizenship. For instance, regarding energy saving, they agreed that there should be more campaigns and advertisements on smart energy systems' advantages to raising people's consciousness. In addition, the participants agreed that governments and private companies should raise people's consciousness about energy saving and smart energy technologies by sharing their environmental and financial advantages. Hence, several participants noted that incentives, including economic, security and ecological benefits, could change the citizens' visions. Accordingly, social media and public service announcements were essential tools for informing citizens about the importance of energy saving through smart energy systems.

However, several participants remarked that it took more work to take control of their electricity consumption and to save energy since they could not measure the amount of their electricity use via smart meters. In addition, they pointed out the difficulty and high cost of applying smart meters in Türkiye. The participants also focused on bureaucratic barriers and the high price of smart meters in Türkiye. Moreover, several participants noted that changing individual habits and familiar technological systems were complex for most people, particularly the elderly. In this sense, the financial, legal and bureaucratic context in which citizens are embedded is a significant parameter in shaping the pathways to energy citizenship.

#### **Part IV. CAL Processes and Quality of Participation**

4.1 What was your overall experience working with your partners? Did the roles of partners evolve, possibly also differently from what you agreed upon and reported in the Implementation Document? At which stage, and with what tasks were they most engaged, and where did they lose interest (if that was the case)?

The partners in Izmir CAL carried out their tasks following what was written in the Implementation Document. Accordingly, Izmir University of Economics (IUE) designed and organised the CAL. It also provided technical and physical infrastructure, including Wi-Fi access, smart classrooms, and projectors. On the other hand, Izmir Metropolitan Municipality and Sustainable Urban Development Network were responsible for co-designing the CAL and recruiting participants. Therefore, all partners were eager to fulfil their predetermined tasks without losing interest. Hence, it is worth noting that the IZMİR CAL was realised through the harmonious collaboration among partners.

4.1.1 In a number of CALs, some of the implementation partners are identical with our target group for policy advice, i.e. civil servants working in local governments or public institutions. How they handled their roles and possible evolutions in their understanding of the CAL while they assisted in the implementation deserve particular attention. Please pay extra attention to this point while you are answering this above question.

The implementation partners in Izmir CAL were Izmir Metropolitan Municipality and Sustainable Urban Development Network, whose composition was civil servants working in local governments in Izmir. Regular meetings between IUE and implementing partners were held before the event to ensure the effective functioning of the Izmir CAL. In this sense, the implementing partners' perspectives about the CAL evolved through these regular meetings. As a result, they better understood the interactive nature of the CAL and the importance of diversity in recruitment.

4.2 What measures were put in place to ensure the inclusiveness of the CAL (during recruitment and implementation, among participants, invited speakers and the CAL organising team)? What worked and what didn't work, in your opinion?

The sampling, recruitment and randomisation processes were carried out to ensure the inclusiveness of the CAL. In this sense, the Izmir CAL was designed to reflect a balanced gender representation, encouraging women to participate. For this reason, IUE regularly met with implementation partners to promote women's participation in Izmir CAL. In this sense, implementation partners kept communication channels open with potential women participants to ensure their active participation in the recruitment process Izmir CAL. Moreover, IUE regularly guided the implementation partners regarding the recruitment process for the CAL and workshop design.

Furthermore, the CAL was arranged at a time and location where male and female stakeholders could participate without barriers. Hence, the meeting place was safe and convenient for both women and men to participate. In this regard, the CAL took during daytime hours in a central location in Izmir, where women could easily reach by their vehicles and public transportation. As a result of these efforts of both IUE and implementation partners, Izmir CAL was representative in terms of gender, and the number of female and male participants was equal as much as possible. Moreover, gender equality and fair participation were achieved through both quantitative and qualitative aspects. For example, in addition to women participants/speakers, there were three women facilitators/moderators out of five moderators. On the other hand, even though it was essential to include other genders (e.g. inter-, non-binary, trans- or agender-people) in Izmir CAL in terms of gender representation, it was impossible to achieve to have such a network and to ensure such gender diversity in the current conditions in Turkey.

4.3 What measures were put in place to ensure the quality of discussions during the CAL (for example, efforts to make sure that diverse points of views are respected and minorities or underprivileged groups were given sufficient time and space to speak, efforts to stimulate debates and scrutinise information fed into the CAL)? What worked and what didn't work, in your opinion?

The Izmir CAL was designed to encourage participants to convey their opinions, perform individual work, participate in group work, participate in discussions, generate ideas, and document their perceptions and ideas in different stages of the workshop. In this sense, there were group discussions of 5-6 people in round table meetings, and moderators facilitated interactive discussions by giving everyone an equal voice. At the end of each

session in the Izmir CAL, a representative from each group shared the topics discussed in their groups by presenting them to all participants. Each group involved policymakers, NGO representatives and citizens expressing diverse opinions and perspectives regarding energy citizenship. The group moderators provided each participant with sufficient space to express their thoughts. In this sense, the interactive nature of group discussions enabled all participants to convey their opinions on an equal platform.

#### 4.4 What procedures/processes were put in place to elicit reflections on justice and equity issues in relation to the energy transition?

The first session of the Izmir CAL was designed around several themes, which involved questions on the participants' perspectives on energy justice. Accordingly, all participants expressed their opinions on justice and equity issues about the energy transition. Furthermore, there was a sub-question on participants' ideas about gender equality in the energy transition. Participants were also asked whether all segments of society equally benefit from the advantages of the energy transition. In this sense, the topic of justice and equality was discussed in each group of participants. A representative from each group presented on this topic and shared their group discussions and experiences with the other participants. Accordingly, participants provided policy recommendations for energy justice and equity in Türkiye.

#### 4.5 How were the results of the CAL communicated to the i) general public and the ii) public authorities, and how were they received?

As the Izmir CAL implementation partners, the Izmir Metropolitan Municipality (IMM) and Sustainable Urban Development Network (SUDN) representatives were responsible for co-designing the CAL and recruiting participants. In addition, they were participants of the Izmir CAL to convey their opinions, perform individual work, and participate in group work and discussions at different stages of the workshop. In this sense, they also committed to disseminating the results of the Izmir CAL to the general public through their individual and institutional social media accounts. Furthermore, the representatives of IMM and SUDN committed to disseminating the discussions in the Izmir CAL to their institutions by sharing the details of meetings on energy transition and energy citizenship. In this way, they informed the public authorities of their institutions about the new perspectives generated by the discussions in the Izmir CAL. In addition, the participants, including these public representatives, also discussed how competitions on energy saving could encourage people to save more. In other words, the participants pledged to create a series of challenges in their small circles of friends, family and institutions to motivate each other to change their energy-saving behaviours. Thus, the impact of the discussions in the Izmir CAL went beyond the participants as they shared the results of the CAL with their community. The Izmir CAL could influence the behaviours and strategies of the general public and the public authorities via information sharing and mini-challenge games for energy saving.

#### 4.6 What measures were put in place to allow the continuation (e.g., picked up and carried forward by participants or partners) and replication of the CAL, if any?

Izmir CAL was organised as a one-day workshop with two main sessions and covered all the topics in the Implementation Document. For this reason, the CAL team do not have a plan to replicate Izmir CAL soon.

4.7 Please provide any additional information that you believe would be helpful to others, in designing a CAL and towards the replicability of your CAL.

The scientific and implementation partners of the Izmir CAL gave prominence to the group discussions and interactive nature of the Izmir CAL when co-designing it. In this way, they could provide insight into citizens' perspectives on the main concepts of the DIALOGUES project, "energy citizenship" and "energy transition". In addition, the involvement of different target groups (individuals, representatives of municipalities and non-governmental organisations, and policymakers) could shed light on different perspectives on energy transition, energy citizenship, active participation in energy transition and energy justice as well as sustainable mobility (transportation), smart energy implementations for individuals, and household energy behaviours and decisions.

The involvement of mukhtars in the Izmir CAL as local policymakers was significant in terms of their power to interact with the citizens in their neighbourhood. As the closest administrative units to citizens at the local level, they can communicate directly with citizens and mobilise them for behavioural change. In this sense, the mukhtars have the potential to serve as a communication bridge between citizens and public authorities. Hence, as participants of the Izmir CAL, several mukhtars stated that they would initiate energy-saving projects related to education and information transfer to citizens. For this reason, it is significant to consider local administrative units, including mukhtars, as participants when designing future CALs.

#### Appendix: CAL events and data capturing

Please list the different CAL events, their participants, and the data that were captured at the events.

Available to the Consortium?	Total # of participants (include team) / gender breakdown	Video recording	Audio recording	Transcript (English)	Observation notes	Written materials by participants (posters, post-its, etc.)	Other sources of data
Event 1 Izmir CAL 26 October 2022 /10:00 am– 15:30 pm Izmir, Türkiye	34 - 15 male, 19 female (including the participants and moderators)	None*	None*	None**	Notes on age group dynamics (Young participants were more responsive to behavioural change regarding energy transition and citizenship)	Post-it notes, posters prepared upon post-it notes, moderators' notes	Photographs (24)

\*Not all participants allowed the CAL sessions to be recorded.

\*\*The transcripts are unavailable since the CAL sessions could not be recorded. Only the moderators took notes from the CAL sessions and utilised post-it notes that participants prepared.