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**Energy-  
-SHIFTS**

ENERGY  
SOCIAL SCIENCES &  
HUMANITIES  
INNOVATION  
FORUM  
TARGETING THE  
SET-PLAN

# Inclusive Engagement in Energy

with special focus on low carbon  
transport solutions

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Scoping workshop report

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September 2019

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# Executive summary

**T**his report is produced as an integral part of Energy-SHIFTS activities. Energy-SHIFTS is a Horizon 2020 project that aims to enhance dialogue and cooperation between energy-related Social Sciences and Humanities (SSH) stakeholders and improve SSH impact on the European Union's (EU) Energy Union policy. Its main focus is on four topics from the Strategic Technology Energy Plan (SET Plan) of the European Commission (EC), namely: renewable energy, smart consumer-centric energy systems, energy efficient systems, and sustainable transport systems. Inclusive engagement in energy is a cross-cutting theme in the Energy-SHIFTS project.

In order to incorporate inclusive engagement into Energy-SHIFTS, one of the first activities in the project was to get an overview of energy-related SSH research in the field of inclusive engagement and to organise a scoping workshop which gathered key stakeholders to discuss the main controversies and challenges in the field. The literature review is a narrative review and served as a stepping stone for the workshop design. The workshop itself was organised on the 24<sup>th</sup> of June 2019 in Brussels and gathered prominent researchers and selected civil society and policy representatives. It mainly focused on inclusive engagement in low carbon transport solutions, as a sub-field of energy, in order to prompt in-depth discussions on what inclusive engagement means in practice.

This report consists of two key parts. First, it provides a narrative overview of prominent research, debates and perspectives relevant to inclusive engagement. The review shows a growing recognition that there are abundant energy injustices built into today's energy system. These embedded injustices need to be understood as sociotechnical. It is not only the impact of technology, but relations between technology and users that are important in understanding mechanisms of inclusion and exclusion, and their consequences. Catering for inclusive engagement can thus be under-

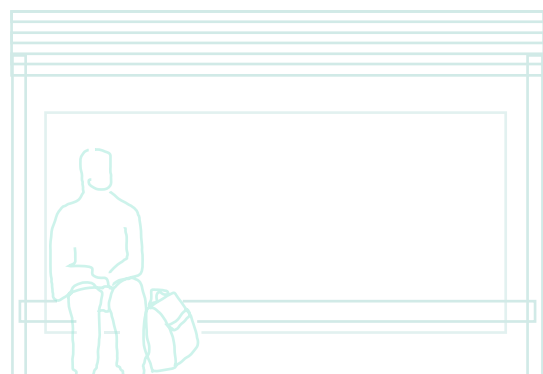
stood in different ways: as purposeful 'imagining' of a plural public during technology development and research, as the need to organise direct engagement of various publics in projects and research, and as a more open-ended process that needs to be orchestrated across different arenas. SSH research demonstrates many dilemmas as to how inclusion can practically be implemented, for instance, debates on whether inclusion should be representative, issue-oriented, or interest-oriented. Often, these types of dilemmas do not have standardised answers, but rather, need to be resolved on a case by case basis.

Secondly, the report gives an overview of the main discussions during the workshop around inclusive engagement in low carbon transport solutions. The discussions revolved around four key topics: meanings of inclusive engagement; experiences with inclusion work in projects and research; challenges and problems with inclusive engagement; and lastly, the role of EU policy in such work. Overall, these discussions highlighted many practical challenges in defining inclusive engagement, finding the most appropriate strategies for inclusion, and developing mechanisms which support the time needed to generate trust, reach out to publics, create dialogue and sustain engagement over time. One of the biggest tensions mentioned by the participants was between the need to accelerate low carbon transitions and the need to slow down transitions in order to include a plurality of voices and possible transition trajectories.

The report concludes by offering recommendations to, first and foremost, future work in Energy-SHIFTS, but also to research and policy more broadly. The overarching recommendation for researchers and policy makers alike is to embrace the ambivalence of what inclusivity means and how it is enacted. However, such work requires reflexivity, sustained dialogue and cooperation, and not least, financial and managerial support.



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# 1. Introduction

Inclusive engagement in energy is vital to construct fair, just and durable energy systems and communities. The term ‘inclusion’ implies that we live in a heterogeneous society that needs to account for a variety of voices (e.g. groups of actors, genders, disciplines, institutions), whilst ‘engagement’ presumes that these diverse voices are actively involved in researching and developing current and future energy systems. However, there are many questions as to how inclusive engagement in energy should be produced, shaped and organised, and what it means in practice. Relevant questions in this regard include: Who should be included? When should they be engaged? Who has control over the engagement processes, by what means, and what are the consequences of this control? This report aims to contribute to a deeper understanding of what inclusive engagement might look like, and how we can cater for processes of inclusive engagement within the transformation to a low carbon energy system, by drawing on insights from a scoping workshop organised as part of Energy-SHIFTS (Energy Social Sciences and Humanities Innovation Forum Targeting the SET Plan). This report will provide recommendations for how to accommodate inclusive engagement within the Energy-SHIFTS project itself, as well as for research and policy work in the broader energy community.

Energy-SHIFTS is a 2-year Horizon 2020 project funded by the European Union (EU). The project aims to enhance dialogue and cooperation between energy-related Social Sciences and Humanities (SSH) stakeholders, and in turn, improve SSH impact on policy relating to the EU’s Energy Union. Its main focus is on four topics from the Strategic Technology Energy Plan (SET Plan) of the European Commission (EC), namely: renewable energy, smart consumer-centric energy systems, energy efficient systems, and sustainable transport systems. Energy-related research, development, innovation and policies are central to the EU’s response to climate change and other pressing environmental concerns. Currently, the EU’s energy-related activities are predominantly technology driven, resting on the science, technology, engineering and mathematics (STEM) disciplines. However, sustainability transitions in general and energy transitions in particular, are inherently socio-technical processes (Geels, 2002; Rutherford and Coutard, 2014). Consequently, SSH research offers important insights connecting the

development and implementation of new technologies to everyday practices, energy cultures, social relations, political processes and so on – knowledge that is pivotal if we are to realise sustainability transitions of our energy systems and societies. The main goal of the Energy-SHIFTS project is to strengthen the impact of SSH within the EU’s energy activities, and in this way, contribute to, among other things, fostering a more just and inclusive energy transition in Europe.

Energy justice represents an area where energy-SSH must make a major contribution. Energy justice scholarship explores how injustices related to energy emerge, how they affect society, and what can be done to provide more equitable modes of energy production and distribution (Jenkins et al., 2016). This means that the production and governance of new low carbon energy systems is not merely a question of technologies and institutions, but also about a wide range of groups who might be impacted by, or draw benefit from, such transitions. Several EU policy strategies have recognised the various ways communities are served by (or possibly not served by) energy production. Some examples are the Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy<sup>1</sup>, Clean energy for all Europeans<sup>2</sup>, and the EU’s Gender Action Plan 2016-2020 (O’Connell and Gavas, 2015). However, these strategies are still on the margin of the EU’s energy policy. More explicit attention to, and practical know-how for fostering energy justice in energy transitions is needed (Eames and Hunt, 2013).

Inclusive engagement in energy is one way of working towards mitigating possible unjust and unfair outcomes of energy-related activities. We have therefore recognised inclusive engagement in energy as a central cross-cutting topic in the Energy-SHIFTS project. We aim to foster inclusive engagement in energy through Energy-SHIFTS activities, but also by contributing valuable inputs regarding how to enhance engagement and active participation in energy policy and technology development activities in the EU.

The scoping workshop on inclusive engagement in energy, organised in Brussels on the 24<sup>th</sup> of June 2019, was one of the first activities within Energy-SHIFTS. Inclusive engagement was one of four key priority themes in the project, the other themes being: (1) social innovation in energy; (2) carbon intensive EU regions; and (3) evidence in energy policy (see Royston, 2019, for further details of these themes). For each of these themes, an initial scoping workshop was conducted to connect interested groups and prospective collabor-

1 <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2015:80:FIN>

2 <https://ec.europa.eu/energy/en/topics/energy-strategy-and-energy-union/clean-energy-all-europeans>



orators, hear wider perspectives on the set themes, and provide recommendations to decision-makers, policy-workers, researchers, practitioners and other relevant stakeholders. As a way of operationalising ‘inclusive engagement in energy’, we decided to emphasise low carbon transport solutions in the scoping workshop. Narrowing down the discussion from the broad topic of ‘engagement in energy’ and focussing on transport and mobility made room for more in-depth discussion during the workshop, yet also elicited insights into debates highly relevant to the energy field more broadly.

In what follows, the report starts with a narrative review of inclusive engagement in energy. This review highlights some of the main advances in energy-SSH research, but also draws on relevant contributions to this field from SSH research more broadly. Then follows a description of the workshop; how it was organised, who participated, and main aims. The fourth part forms the core section of the report where we present the main discussions and findings from the workshop. We conclude with a set of recommendations for the Energy-SHIFTS project, energy-SSH research, and energy research funding policy.



## 2. Social Sciences and Humanities research and inclusive engagement in energy

Energy-SSH research has expanded significantly in the last decades, although it is still underrepresented in energy research overall (Sovacool, 2014; Foulds and Christensen, 2016; Foulds and Robison, 2018). In a recent literature overview of energy-related SSH research, Ingeborgrud et al. (forthcoming) argue that the scope of energy-SSH has expanded from a focus on individual action to a much broader agenda where social capabilities are distributed amongst individuals, groups, and a range of actors across society. Here, focus lies on practices, agency, processes or systemic qualities, and on the socio-technical character of the relationship between humans and technology. Such approaches have opened up energy-SSH research to plural understandings and ontological positions related to the broad role people and society play in low carbon energy transitions.

In this review, we will present some advances energy-SSH research has made in relation to the overarching topic of 'inclusive engagement in energy'. We have structured the review along four main themes. First, we start by presenting SSH studies on energy justice and vulnerability which position the relevance of inclusive engagement in energy. Second, we move on to show how SSH energy research approaches the link between (energy) technologies, on one side, and society or people, on the other. Viewing technologies and humans as interlinked opens new avenues for discussing inclusion in energy. The third section gives an overview of some important debates on public engagement in energy, while the final section links this literature more explicitly to questions of inclusion and power-dynamics in inclusion processes themselves. Throughout this review, we mainly focus on empirical examples from the four energy domains which are prioritised within Energy-SHIFTS, namely: renewable energy, smart consumer-centric energy systems, energy efficient systems and sustainable transport systems.

### 2.1. Energy vulnerability, energy justice and energy systems

Energy-SSH research outlines a range of social adversities connected to the production, consumption, and governance of energy. SSH scholars have produced a well-documented body of work on the politics of energy infrastructures and technologies (McFarlane and Rutherford, 2008; Moss, 2014). This research shows that energy infrastructures and technologies are not apolitical backdrops that merely facilitate energy consumption. Rather, they have political qualities. For instance, liberalisation and privatisation of infrastructure development and maintenance can produce inequalities (for racial, social, economic groups etc.) through their social and spatial arrangements (Graham and Marvin, 2002). It is thus important to ask who is and who is not served by both existing and new energy systems.

There are, for instance, important relationships between energy and poverty. Bouzarovski and Tirado Herrero (2017) point out that energy poverty is persistent across Europe. Energy poverty has been proven to have severe health consequences, to affect gender roles and to have environmental impacts (Sovacool, 2012) and is in itself unequally distributed so that technical, cultural, economic and political structures often sustain such poverty, and certain groups (such as children and disabled people) suffer disproportionately (Snell et al., 2018). Yet, Bouzarovski (2014) argues that there is still too little research and policy targeting energy poverty. There is thus a risk that existing patterns of energy poverty may be reproduced through new energy technologies and energy systems.

In the last decade, energy justice (closely connected to climate and environmental justice) has therefore become an important topic in energy-SSH research. Scholars operationalise energy justice in different ways. A dominant framework highlights three main dimensions of energy justice: procedural justice (justice in decision-making procedures), distributional justice (sharing of benefits and burdens), and recognition justice (acknowledgement of social inequalities) (Jenkins et al., 2016). Sovacool et al. (2016), meanwhile, have outlined an assessment framework highlighting a more nuanced set of dimensions, including: availability, affordability, due process, transparency and accountability, sustainability, equity and responsibility, futurity, fairness and equity. Day and Walker (2013) stress that injustices are evolving and changing and thus better understood as dynamic messy assemblages, with less absolute and di-





chotomous categories of exclusion/inclusion.<sup>3</sup> Overall however, there is a clear need to recognise excluded voices and different situated knowledges (Wolsink, 2007). Day and Walker (2013, p.15) use the term 'energy vulnerabilities' to account for a range of different types of vulnerabilities such as fuel poverty, energy poverty, energy insecurity, and energy deprivation, that might be produced. Such an open and broad framing is useful because it encompasses diverse forms of energy injustices and inequalities we find in SSH research on the four Energy-SHIFTS topics.

One central topic in energy-SSH research is the unequal distribution of burdens and benefits connected to the development of new renewable energy sources. Lijljenfeldt and Pettersson's (2017) study on wind farm siting in Sweden shows distributional inequalities related to this kind of development. They found that building approval of wind farm proposals is statistically higher in areas with higher unemployment, suggesting a correlation between wind farms and economically marginalised communities. Similarly, Yenneti and Day (2016) argue that local communities take on more of the burden and less of the benefits of solar energy development in India, than regional and national level actors. These are just two examples of how development of renewable energy technologies may marginalise groups or reinforce social inequalities. Inclusive engagement in energy-related decision-making processes is one way to minimise or combat these inequalities.

A breadth of SSH scholarship has also highlighted the unequal effects of new low carbon technologies on different scales and in different spaces – in households, buildings, transport systems or cities. Smart metering is a good example of how a seemingly benign technology might impact the daily lives of households. For instance, several studies have warned against normative expectations of energy management as a male-oriented responsibility that may cause gender tension in households (Skjølsvold et al., 2017; Verkade and Höffken, 2017). In relation to the roll out of various smart city technologies, distributional inequalities are recognised as a threat, although many such new technologies claim to bring improvements in line with visions of a low carbon society. Luque-Ayala and Marvin (2015) stress that it is necessary to examine in what way and for whom they really contribute to minimising problems such as poverty and exclusion. For instance, how does the politics behind urban digital data need to be repositioned in a more inclusive way (Kitchin et al., 2015)? There are also concerns about possible loopholes in EU policy on

the introduction of smart metering that could have implications for fuel poor households (Darby, 2012).

At the same time, SSH research on energy efficient building and retrofitting of buildings points to similar distributional issues. For instance, many energy efficiency improvements have targeted higher income groups (Milne and Boardman, 2000), renovation and energy retrofitting can be economically demanding of disadvantaged groups (Mangold et al., 2016), and there is a tendency to forget women and the importance of gender roles for decisions about energy renovations (Tjørring, 2016). However, there is also a potential role of efficient buildings and retrofits in addressing energy poverty; in this case, climate change mitigation and poverty reduction may work together (Urge-Vorsatz and Herrero, 2012). However, this requires integration of the two policy goals.

Finally, in transport studies, debates about the relationship between socio-economic positions, gender, spatial considerations, practices and access to mobility modes (Carlosson-Kanyama and Linden, 1999) have also extended to sustainable transport modes (Lucas et al., 2016). Mattioli (2016), for instance, highlights tensions between equality of access to transport and transitions to more sustainable transport modes, creating a justice dilemma. Mullen and Marsden (2016) question policy solutions which focus on low emission vehicles because these tend to further reinforce power dynamics and privilege those that already use private cars. They argue that it is not enough to only focus on whether people have access to resources such as low emission vehicles, but that we also need to account for how these resources are used.

Overall, these examples are just an indication of the numerous examples of how energy technologies open up discussions regarding energy vulnerability and justice. The above literature, albeit only a small excerpt from the field, points to numerous processes and outcomes which may create or sustain social exclusion, inequality and poverty. Although the development and implementation of new energy technologies has the potential to mitigate energy poverty (Oldfield, 2011), it also demands critical reflection on how to foster inclusive engagement.

## 2.2. Technology-user relations and inclusion

In the previous section, we showed that design, development and implementation of new energy-related technologies and infrastructures can create inequalities across categories such as gender, socio-economic

<sup>3</sup> For an overview of energy-related SSH research, see the SHAPE Energy report by Sari et al. (2017).





status, and age, and potentially generate different types of vulnerabilities such as poor health and poverty. In order to work towards inclusive engagement in energy, it is imperative to understand how inequalities are produced through technology-user relations. Much SSH-scholarship, especially in the field of Science and Technology Studies (STS), explores different ways designers imagine publics (Walker et al., 2010), imagine laypersons (Maranta et al., 2003), configure users (Woolgar, 1990) and create scripted technologies (Akrich, 1992) during the design process. In other words, this literature explores how designers imagine users with specific characteristics, abilities, and attitudes and consequently make assumptions about how users will use the technology that is built into the design.

In relation to renewable energies, SSH studies have found very diverse imaginaries (or constructions) of publics. Through interviews with offshore wind scientists, Heidenreich (2015) shows how scientists and designers often imagine that publics will have positive reactions to new renewable energy systems. However, she and many fellow researchers (Cass and Walker, 2009; Besley and Nisbet, 2013) also find that scientists and policymakers perceive publics who resist such initiatives to be irrational, self-interested and lacking knowledge. In turn, the way policymakers, designers and scientists imagine publics influences the development of renewable energy technologies. For instance, in the UK, Walker et al. (2010) found that industry and policy actors' public imaginaries influenced the way renewable technologies were shaped, their spatiality, and public engagement efforts. The same goes for policies and incentives for electric vehicles in Norway that clearly have been shaped by the way industry and policy actors have imagined publics (Ryghaug and Toftaker, 2016).

Another good example of the role of imagined users of technologies stems from SSH research on smart grids, most notably, the construction of the 'resource man' (Strengers, 2013; 2014). Strengers (2013) argues that smart grid developers' vision of future users reflects a particular type of user that is rational, technology-centred and interested, and usually male. These types of 'ideal' visions of energy consumers exclude a myriad of human experiences and their energy implications (Strengers, 2013, p.155). Visions of ideal resource men are described as unrealistic and the everyday reality of intended use turns out to be messier than the designers imagined (Katzeff and Wang, 2015; Skjølsvold et al., 2017). In effect, the technology does not serve a wide range of groups once in use and part of everyday life. For instance, Alexander (2010) argues that smart metering can have social implications on groups such as children, elderly people and people with a disability.

There is an abundance of similar examples. In the field of transport there are myriad instances of designs catering for a narrowly-imagined 'normal body', excluding groups such as the elderly, children or people with disabilities. This has opened the way for new work at the intersection of transport and disability studies (see for instance, Galis, 2006; Velho, 2017). Hence, the way designers imagine and construct publics or users has critical implications for the use of new technologies and for possible exclusionary effects of these technologies.

However, this relationship between technology and users is not straightforward – users also shape technologies through use. One way of thinking about this is as a domestication process (Sørensen, 2006) where users both transform and are themselves transformed by the technologies they use in daily life. Understanding the impact of technologies as relational or co-produced with users, means that users' everyday practices and understandings of the technology are important and can thus impact societal divisions and inequalities. Many SSH studies highlight this by looking at practices such as cooking, showering, heating, driving etc. (e.g. Ryghaug and Toftaker, 2014; Shove, 2007; Strengers, 2014). One example relates to electric vehicles (EV). Anfinssen et al. (2019) studied how EV users challenged cultural gendered construction of cars through their driving practices. This shows how the user can also challenge stereotypes connected to the design and development of new low carbon technologies. Moreover, this also means that the same technologies might have different impact, depending on the context (Ortner and Ryghaug, 2019). An EV for instance might foster engagement and inclusion in some cases (see for instance, Ryghaug et al., 2018), and divisions and exclusions in other settings. This suggests that researchers, policymakers and designers alike need to account for contextual and situated factors when working with inclusive engagement with new energy technologies and systems.

If consumers actively shape new technologies and energy systems through their use, then inclusive engagement cannot only be about changing imaginaries of the public or democratising technology development processes. Some SSH research has explored how different groups can engage in energy-related issues through the use of technology – also referred to as device-centred participation. Consumers can get engaged in questions related to issues such as climate change through the use of devices and activities such as cooking and cleaning (Marres, 2011; Geelen et al., 2013; Ryghaug et al., 2018). For instance, based on empirical studies of users of electric cars, smart energy technologies and PV systems, researchers have shown



cases where politics and technology have become part of everyday life through material objects, and how the introduction of these material objects has contributed to shaping different modes of energy citizenship. These studies highlight the way material objects can contribute to and anchor energy and climate change-related discourses and practices in everyday life, through processes of material localisation, integration and diversification (Rygthaug et al., 2018). Moreover, users may also reconfigure the developers' and designers' understanding of what new pilots may be developed (Skjølsvold et al., 2018). Overall, these papers address the productive ways users of low-carbon energy technologies can engage in energy transitions. This is an attempt to move away from an understanding based on passive users that just receive the technology. However, within these perspectives, questions of the exclusion of groups are acknowledged as a challenge, and are still relatively underexplored.

This relational and sociotechnical understanding of the technology-user relation also influences debates on inclusive engagement. On one side, a way to foster inclusion is to change the types of imagined users that are constructed during the design of technologies. 'Inclusive design' is central to urban and transport planning in many European design communities. This is, as Walker et al. (2010, p.944) refer to it, "*public participation by proxy*." This approach assumes that designers and developers recognise themselves and their own role in these types of inclusion processes, which is not always the case. Heidenreich (2018), for instance, found that offshore wind scientist did not recognise themselves as socialising agents. Based on interviews with scientists, she questions who should be responsible for engagement work. On the other side, although Walker et al. (2010) recognise the limitations and partiality of including publics by proxy, they also stress that direct public engagement processes produce incomplete representations of publics. Given that technologies continue to be shaped through use and practices, they question the possibility of foreseeing who and what will be excluded. In the next section we will go deeper into some of the main debates around forms of direct and formalised engagement of publics, stakeholders and interest groups.

## 2.3. Public engagement in energy

The main goal of early efforts to involve publics in energy-related issues was to generate acceptance for development of new energy systems and moderate emotions to avoid the famous 'not-in-my-back-yard'

(Nimby) attitudes (Heidenreich, 2013). As previously mentioned, many designers and developers conceived of the public as irrational and illogical when they resisted, for instance, new wind farm developments (Heidenreich, 2015). Moreover, they attributed such resistance to a lack of knowledge. From this starting point, public engagement aims to bridge a public knowledge deficit by transferring knowledge and educating the public. In a recent example, Whitmarsh et al. (2011) explore citizens' (knowledge) capacities to participate in research and development. They argue that policy needs to focus on increasing knowledge and skills, to make people 'carbon capable' to take actions towards low-carbon lifestyles.

A broad SSH scholarly community has mobilised against this understanding of engagement in science and technology development and the so-called knowledge-deficit understanding of the public (see for instance, Miller, 2001; Wynne, 2006). Specifically, in relation to renewable energy, this means overcoming understandings of publics as unintelligent (Devine-Wright, 2011). Acceptance of different reasonings and knowledges is seen as a democratic and inclusive approach to public participation. This means that publics are not passive participants, but actively involved in decision-making processes (Delgado et al., 2011).<sup>4</sup> Stirling (2005) highlights three reasonings for this type of public engagement: normative (right thing to do), instrumental (best way to do things) and substantive (leads to the best results). In terms of energy, public engagement has the potential to align diverse energy research and development efforts with society's needs and demands (Jellema and Mulder, 2016).

SSH research in both the domains of public engagement and the methods for public engagement has grown considerably. Public understanding and engagement in science, participatory and communicative planning, and participatory budgeting and management are just some examples of fields where diverse discussions on engagement are taking place. Similarly, development and research on various methods for public engagement continually expands, including public events, workshops, opinion polls, focus group discussions, citizen juries and councils, online forums, science cafes, urban experiments and living labs, and the Delphi method. Researchers also distinguish between different types of engagement and accompanying methods. Jellema and Mulder (2016), for instance, delineate four types of engagement, namely: consulting, discussing, involving,

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4 Public engagement is closely related to public participation, and the two are often used interchangeably and without a clear distinction (Delgado et al., 2011). In this report, we focus on engagement because it is more encompassing and includes different forms of participation.



collaborating and supporting. Rowe and Frewer (2005) give a somewhat different typology: communication, consultation, and participation. Others again, have expanded on more bottom-up engagement processes, such as efforts to foster community energy systems (Koirala et al., 2016) and recognizing civil society as a source of innovative energy activities (Smith, 2012). These fields, methods and typologies of engagement only give an indication of the breadth of possibilities for and practices of public engagement.

Consequently, numerous debates around different approaches to public engagement have also expanded in the SSH field (in many ways intersecting with energy-related participation and development of new energy systems and technologies). For instance, there is discussion about the effectiveness of public participation and structured methods to assess its impact (Rowe and Fewer, 2004); limitations of the deliberative model for public participation (Hagendijk and Irwin, 2006); conflicts and tensions that emerge from engagement and can halt development processes (Heiskanen et al., 2015); and questions of whether public participation helps rebuild trust or if it is counterproductive (Innes and Booher, 2004).

Overall, many of these debates centre on the gap between public engagement in theory and public engagement in practice. Delgado et al. (2011) present a good overview of these debates through a presentation of five key topics of tension. This focuses mainly on discussions in Science and Technology Studies (STS), but similar debates can be traced to other SSH disciplines. The five key topics are (Delgado et al., 2011, pp.830-836):

1. The rationale: Why should public engagement be done? In practice there are often tensions between different rationales for public engagement, for instance between the normative rational of inclusive governance and a more goal-oriented and instrumental rationale of efficient decision making.
2. Expertise and publics: Who should be involved? There is discussion around definitions of 'the public' and the possibility to involve 'the public'. For instance, whether direct involvement of a representative sample of the public is necessary or possible, the extent to which the selection is a neutral process, or different ways to operationalise a plurality of 'publics'.
3. Invited or uninvited: How should it be initiated? The way publics are engaged is closely connected to how publics are constructed and who frames the engagement processes. Top-down institutionally organised processes are usually invited forms of engagement, whilst bottom-up grassroots en-

agement is usually uninvited and may be based around matters or issues of concern.

4. Upstream, midstream or downstream: When is the right time for public engagement? There are debates about when publics should get involved in research and development (R&D) process. These are closely related to conceptions of R&D as linear processes, competencies of publics to be involved, and the interests/concerns of the public.
5. Universal or context specific: Where should public engagement be grounded? Whilst many agree that context-sensitive specificities need to be accounted for in engagement processes, there are debates on whether models for engagement, such as conferences and citizen's juries, can be universal in practice.

Delgado et al. (2011) also highlight that choices made in each of these key topics influence choices in another topic. Although these do not relate to energy debates in particular, they highlight a wide range of controversies regarding public engagement, which remain open-ended and relevant for inclusive engagement in energy.

The open-endedness of these debates connects well with Chilvers and Longhurst's (2016) argument that public engagement in energy is co-produced, emergent and diverse. However, they argue that this means that we need to depart from traditional forms of engagement which "adopt specific, fixed, and normatively pre-given models of participation itself (e.g. deliberative, individualist, etc.), the public (e.g. as innocent citizens, consumers, etc.), and definitions of the issue at stake" (Chilvers and Longhurst, 2016, p.586). Instead, they point to a form of participation where the 'who, what and how' of participation is co-produced in socio-material collectives (e.g. networks or assemblages of objects, technologies, policies, norms). In a recent publication, Chilvers and Kearnes (2019) characterise this form of participation as a relational co-productionist perspective on public participation and offer four paths for rethinking and possibly remaking participation in practice: "**forge reflexive participatory practices, ecologize participation, prompt responsible democratic innovations, and reconstitute participation**" (emphasis in original, Chilvers and Kearnes, 2019, p.9). In this approach, engagement processes refer to inclusion of both human and non-human agents, centred on diverse and interrelated sets of issues where more than one matter of concern is at stake. Inclusive engagement in energy is then an endeavour that is more ongoing and distributed, but also difficult to steer.



## 2.4. Bringing 'inclusion' to public engagement

Public engagement, by definition, aims to be inclusive. If it is to be meaningful, it needs to include groups and stakeholders excluded from decision-making processes, research and development. But, as we have seen, there is no consensus in SSH research as to who should be included and how. Several scholars specifically press for critical understandings of engagement processes and inclusion, and especially highlight the role of power in the engagement process itself. For example, Barnes et al. (2003) discuss different means of exclusion in public participation processes. In addition to exclusion based on socio-economic reasons, material barriers, poor health, and so forth, Barnes et al. (2003) argue that scholars and practitioners also need to account for micro-political exclusion practices. They highlight four examples of such micro-political exclusion practices:

1. discursive practices, or how problems are framed and presented,
2. competence, or more specifically, who is viewed as competent enough to take part,
3. skills in formulating agendas and strategies,
4. and the practices of participation; that is, where, when and how events are organised.

Several empirical studies delineate similar exclusion or control mechanisms. Martin (2012) points to how imposed rules and norms of such events can work to exclude some voices, for example emotional forms of deliberation. Davies (2011) stresses how dialogic events produce conflicts which might not be connected to the specific forms of knowledge which are subject to debate. These exclusion mechanisms are relevant for discussions of various tensions in the public engagement literature (Delgado et al., 2011).

SSH research also offers some proactive interventions for fostering inclusion through engagement processes. For managerial purposes, Feldman and Khademian (2000) propose to decentralise control of the public engagement processes by 'managing for inclusion' where the process and results of public engagement are shared, while the implementation of participation procedures is controlled by, for instance rewarding participation and training for participation. Hendriks (2008) discusses the potential of network governance (coordination between different policy networks) in energy socio-technical systems and offers suggestions for how to make network governance more

inclusive by making resources and thus also opportunities available, while at the same time attending to internal inclusiveness within networks by making room for different voices and concerns. To ensure equity however, McLaren et al. (2013) argue that it is not enough to look at individual events or the presence/absence of participation; rather one has to ensure procedural fairness of energy systems as a whole.

Chilvers and Longhurst (2016) present a slightly different notion of inclusion and exclusion mechanisms, as mentioned above. Instead of examining exclusion in controlled participation processes, their framework puts the focus on how participation is orchestrated collectively ('collectives of participation'). By this they mean how participation works in several areas; e.g. processes of enrolment, and exclusion around objects, subjects, and procedural formats (2016, p.590). Through this constructivist and co-productionist view on participation (Chilvers and Kearnes, 2019), neither inclusion nor exclusion can be predefined because what constitutes a particular project, object, or energy system is always emerging.

In conclusion, it is important to note that an underlying argument in the overall SSH literature is that there are limitations to inclusion. For instance, Few et al. (2007) explicitly argue that we should carefully try to avoid the illusion of inclusion. This is because there are always power relations at work in technology development, which will always exclude some groups and views; and furthermore, because it is difficult to anticipate and predict future problems, especially in cases such as climate change adaptation.

## 2.5. Summary of SSH research on inclusive engagement in energy

The overview of some SSH-research on the topic of inclusive engagement in energy pinpoints several important subjects specific to energy systems and technologies, as well as debates which remain unresolved in public engagement and participation literature. Since energy systems can produce and sustain societal inequalities and injustices, attending to inclusion when developing and deploying new energy systems is imperative. Current SSH scholarship puts forth a number of avenues where more inclusive engagement in energy can be fostered: through new imaginaries of end-users and publics, through direct engagement in energy-related decision-making and technology development, but also through more distributed (or orchestrated)





processes where publics are both directly involved and more indirectly involved through material participation. Regardless of the approach to fostering inclusion, the processes of inclusion also need critical reflection as they can involve power dynamics that can further exclude and marginalise publics. An overall lesson we draw from this review is that inclusive engagement in energy cannot be closed down to well-defined social groups or publics, spaces for engagement, or time-frames.

These insights informed the organisation of the first scoping workshop for Energy-SHIFTS. First, the breadth of the field and complexity of the debates led to a narrowing down of the topics for the workshop. We decided to focus on low carbon transport solutions because it, on one hand, was still an interdisciplinary

and highly diverse topical field, and on the other, enabled in-depth discussions on ambivalent and difficult questions regarding inclusive engagement. In designing the workshop's world café session, we could in turn allow for more explicit discussion on the meaning or definitions of inclusive engagement. Since the SSH field does not close down discussions or give clear roadmaps for how to foster inclusive engagement, we wanted to see how participants working with such issues deal with this ambivalence in practice. Two of the world café table discussions therefore focused on challenges and successes within participants' own work in the field. The last discussion topic focused on EU policy improvements, which could build on these direct and often difficult experiences with engagement efforts.



### 3. The workshop - “Creating inclusive engagement in low carbon transport solutions”

The scoping workshop was organised on the 25<sup>th</sup> of June 2019 at the NTNU Brussels Office in Belgium. The objective of the workshop was to discuss and tease out key issues connected to inclusive research and innovation on low-carbon transport solutions, and in turn, draw out lessons which can serve to foster inclusive engagement in energy more broadly. The workshop gathered SSH researchers, practitioners, Civil Society Organisation (CSO) and network representatives, and policy-workers who work in the field of transport. Since this was an ‘invitation only’ workshop, we aimed to include participants from different EU member states, with different SSH disciplinary backgrounds, and a gender balance. The final list of attendees included 25 participants: 13 female and 12 male. Geographically, 5 were located in northern European countries, 16 in west/central Europe, 3 in eastern Europe, and 1 in the south of Europe, whilst their research activities were distributed across almost all EU countries and their disciplinary backgrounds included geography, STS, sociology, psychology, urban planning, anthropology and political sciences. Most of the participants at the workshop had worked with or researched matters related to inclusive engagement in energy, or in low carbon transport solutions.

The overall workshop methodology was two-fold. In the first part, the aim was to kick off discussions around inclusive engagement in energy through six short presentations, while the second part of the day aimed to cater for discussion among participants through the more interactive and practice-oriented format of a world café. We wanted to use this opportunity to gather the participants’ own experiences and reflections of working with inclusive engagement, which are perhaps not always reflected in scientific papers or reports. In Table 1 the overall outline of the workshop agenda is presented.







**Table 1: Workshop agenda**

<b>09.30 REGISTRATION AND COFFEE</b>
<p><b>10.00 Session 1: Welcome and short introduction</b></p> <ul style="list-style-type: none"> <li>Energy-SHIFTS: Rationale and expectations for the workshop - Marianne Ryghaug, Professor, NTNU</li> <li>Why Energy-SHIFTS is important to the EU - Gerd Schönwälder, Project officer, EC</li> <li>Short introduction by participants: What is your area of work? Why are you interested in inclusive engagement with energy? What do you hope to gain from the workshop?</li> </ul>
<p><b>10.45 Session 2: Kick-off: Framing the issues</b></p> <p>Speakers:</p> <ul style="list-style-type: none"> <li>Giulio Mattioli, Department of Transport Planning, TU Dortmund University - "Pricing transport fuel: is it bound to be exclusionary?"</li> <li>Ivo Cré, Director Policy and Projects, POLIS - "Structuring local engagement processes for low emission urban mobility"</li> <li>Pascale Blyth, Department of Built Environment, University of Aalto - "Social Justice, Power, and Techno-politics of Emerging Mobilities"</li> <li>Anna Nikolaeva, Copernicus Institute of Sustainable Development, Utrecht University &amp; Urban planning, University of Amsterdam - "Commoning mobility"</li> <li>Caroline Mullen, Institute for Transport Studies, University of Leeds - "Prospects for inclusive transition to low carbon mobility: the necessity of inter-disciplinary approaches"</li> <li>Ralf Brand, LowCarb and Inclusion projects, Rupprecht Consult GmbH - "Inclusive and low-carbon mobility systems - searching for the common ground"</li> </ul> <p>Moderator: Maria Świątkiewicz-Mośny, Institute of Sociology, JU</p>
<b>12.00 LUNCH</b>
<p><b>13.00 Session 3: Group discussions - World café</b></p> <p>Discussion tables around 4 topics:</p> <ol style="list-style-type: none"> <li>Defining inclusive engagement</li> <li>Challenges and problems to inclusive engagement</li> <li>EU policy and inclusive engagement</li> <li>Inclusive engagement in projects and research</li> </ol> <p>Facilitator: Marius Korsnes, Center for Technology and Society, NTNU</p> <p>Co-facilitators: Giorgi Davidovi, Central and Eastern Europe Sustainable Energy Network – CEESSEN Johannes Kester, Transport Studies Unit, University of Oxford Nathalie Ortat, ENTPE, University of Lyon Anna Plyushteva, Cosmopolis, Free University Brussels</p>
<b>14.30 BREAK</b>
<p><b>14.45 Session 3 continues - plenary session</b></p> <p>Different tables will first discuss and then present take-aways in a plenary session. There will be an opportunity to discuss issues not covered across the different topics.</p> <p>Moderator: Aleksandra Wagner, Institute of Sociology, JU</p>
<p><b>15.45 Session 4: Summing up</b></p> <p>Moderator: Ivana Suboticki, Center for Technology and Society, NTNU</p>



For the first part, the presenters were asked to draw on their own experience and expertise, and address one or more of the following questions:

1. How would you define inclusive engagement in the transport sector, and what is the role of such engagement in low carbon transitions?
2. What perspectives are central for creating and understanding inclusive engagement?
3. What are the most challenging/surprising/overlooked aspects of inclusion?
4. What do you see as the role of SSH research and/or EU policy in fostering low carbon transport/energy solutions that are inclusive?
5. How can such perspectives be integrated better in future projects (at local, regional, national or at EU-policy level)?

The presentations varied and offered different points of view on how to think about inclusive engagement, important contributions that have been and are being made in the field, as well as challenges and questions to inclusive engagement. For example: fuel taxes and their impacts on energy poverty and transport poverty; how we can rethink mobility as a form of collective production; the relationship between matters such as housing, employment and car ownership; and the difficulties in balancing allocated project funds and time with more



demanding and personal engagement 'on the ground'. Collectively, these presentations stimulated important points of discussion for the remainder of the workshop.

After lunch, the world café was organised by grouping the participants into four groups. Each group consisted of one member who was mainly responsible for taking notes, as well as one co-facilitator who helped structure the discussion. Each group was predefined in order to group together participants with different disciplinary and professional backgrounds. They were asked to discuss different questions related to four topics (Table 2).

**Table 2: World café topics and questions**

TOPICS 1-4	QUESTIONS
Defining inclusive engagement	<ul style="list-style-type: none"> <li>▪ How would you define inclusive engagement in low carbon transport solutions?</li> <li>▪ In your experience, what different type of meanings of inclusive engagement have you come across? (Overlaps, conflicting views...)</li> <li>▪ What perspectives are central to creating and understanding inclusive engagement? Perspectives can be methodologies, disciplines, specific analytical tools</li> </ul>
Challenges and problems to inclusive engagement	<ul style="list-style-type: none"> <li>▪ What are the biggest challenges for inclusive engagement? Why?</li> <li>▪ What are the biggest risks you see in current research/innovation/policy practices?</li> <li>▪ Are there any specific issues/perspectives you think are overlooked?</li> </ul>
EU policy and inclusive engagement	<ul style="list-style-type: none"> <li>▪ What do you see as the role of EU policy in fostering inclusive engagement? Regulations, funds...</li> <li>▪ How do you see the role of SSH in such efforts?</li> <li>▪ How can perspectives of inclusive engagement be better reflected in EU SET Plan priorities?</li> </ul>
Inclusive engagement in projects and research	<ul style="list-style-type: none"> <li>▪ Have you, in your own work, taken any steps to foster inclusive engagement? Why and how? What worked/did not work?</li> <li>▪ Does your research experience highlight any specifically challenging issues for inclusive engagement practices?</li> <li>▪ What recommendations do you have for inclusive engagement in project-related activities?</li> </ul>



After discussing each topic for about 20 minutes, the groups rotated to the next table. After all groups had discussed all topics, they were asked to draw out some of their biggest ‘take-aways’ during the discussions.

All in all, the participants reported that they were very pleased with the opportunity to discuss these matters in a workshop format. They stressed the importance of the topic and the frustration they felt with the limitations to working more extensively with inclusive engagement in their own everyday activities. The workshop also provided an opportunity to build a community and relationships around the overarching

mission for inclusive engagement around the topic of low carbon transport solutions. Several participants expressed an overall optimism that these types of workshops might improve the conditions for work with inclusive engagement in energy. One participant even noted that this was “one of the best workshops [she had] participated in”, whilst others used words such as “stimulating” and “engaging” and appreciated the provision of space for such discussions. In the next section, we will outline some of the main findings from these discussions.



## 4. Workshop discussions

As outlined in the previous section, the second part of the workshop focused on discussions around four key topics: definitions of inclusive engagement; challenges and problems for achieving it; experiences of pursuing inclusive engagement; and EU policy in this area. Although the participants were guided by a few key questions, the discussions at the table were mostly not systematically structured. In what follows, we present summaries of the main discussions around each of the given topics. We combined findings from each group discussion (of which there were four at each table) into one narrative of the main topics covered at each table.

### 4.1. Defining inclusive engagement

As the literature review highlights, ‘inclusive engagement’ is a relatively fluid concept that can mean different things and that also can be enacted in very different ways. Terms like social inclusion, participatory planning, community engagement and inclusive design are all indirectly linked with the more overarching term of inclusive engagement. This flexibility can be narrowed down in individual projects, research endeavours and SSH debates, but in practice, we can assume that actors involved in research, projects and policy have different understandings of what inclusive engagement might mean. Instead of agreeing on a precise definition of inclusive engagement, we approached this topic in a bottom-up fashion during the workshop. We wanted to bring out different interpretations of what inclusive engagement could mean in different contexts and for different actors. Even though the workshop predominantly gathered stakeholders who worked with low carbon transport, the breadth of this issue was clearly evident. The meanings the participants attached to inclusive engagement ranged from more narrowly defined issues such as who has access to personal cars to how to organise inclusive and democratic societies more broadly; from policy to research methodologies; and from themes regarding the impact of exclusion to how to organise more inclusive research and development processes. In this sense, the first observation from the group discussions, which is evident from the literature

review as well, is that the topic of ‘inclusive engagement’ is a cross-cutting issue characterised by contradictions and controversies rather than clear solutions and closure of debates. In the following, we will point to some of the topics the participants highlighted.

#### 4.1.1. Inclusive engagement as process and outcome

Firstly, the participants discussed the intricate link between inclusive engagement as both a process and an end-product. In other words, there was an intuitive sense of how inclusive engagement was co-produced through the work of multiple actors. There was some disagreement as to what is usually prioritised. Some participants thought that a mainstream understanding of ‘engagement’ emphasised the processes, meaning that research and development practices should be open to the participation and engagement of diverse groups and people. However, they also stressed that we should not forget that the outcome of such a process will need to be inclusive too, in order to achieve inclusive engagement. One participant stressed the need to put more attention on the process of inclusion than on the definite inclusive outcomes. In either case, process and outcome are not seen as having a simple causal relationship. For example, inclusion of a variety of groups in the development of certain technologies, as one participant pointed out, does not by default mean that they will also be inclusive once in use.

Moreover, one participant explained how exclusion might not always be physical exclusion but could be cultural. In both Lyon and Manchester, used as examples in the group discussion, youth were exemplified as specifically uninterested in going into the centre of the city, even though measures were taken to make the cities more accessible by means of transportation. Hence, although some city centres were made more accessible by transport, benefiting previously excluded groups, some groups were still not going to the city centre. It was not only a technological problem or material barrier, but a cultural one; feelings of belonging to a place or feeling safe are as important as the physical space. Thus, one can provide apparently ‘inclusive’ design, but without inclusive effects. In line with the relational co-productionist framework of participation (Chilvers and Kearnes, 2019), the participants therefore emphasised the emergent qualities of inclusive engagement, which likely requires broader work throughout what Chilvers and Longhurst (2016) call an ecology of participation. The question of inclusive development and outcomes is thus highly complex.



### 4.1.2. Inclusive engagement as ongoing

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The second important point made was that inclusive engagement is an ongoing process in all spheres of society, including energy transitions. One participant noted that the process is about continually promoting diversity in policymaking, including the design stages, through participatory policymaking with different stakeholders involved, and with attention to the inclusiveness of policy itself. Inclusive engagement is not something that is achieved, but something that is consistently promoted in a multitude of ways. What inclusive engagement means, thus, needs continually to be redefined and tailored to different stages of policymaking. Although public engagement is traditionally seen as involving organised and formalised processes, this certainly opens up the discussion on where such processes should take place. Defining inclusive engagement as an ongoing process, or processes, also fits well with transformative innovation policy (Schot and Steinmueller, 2018) where innovations and transformations are defined as continually emergent.

### 4.1.3. Inclusion as political

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Continually redefining what inclusive engagement means was also pointed out as a highly political question. For example, the participants pointed to the definitional power that is involved when actors specify what inclusive engagement means and entails in any given situation. In order to breach the power dynamics that usually are present in these types of processes, where professionals often get to set the terms, arrange the process and decide whom to include, and when, a few participants discussed how the scope and meaning of inclusive engagement should be established through dialogue between professional and non-professional actors. This underlines the point that catering for inclusive engagement needs to account for power differences in terms of definitional power and who gets to participate in the definition process. This is in line with the argument (mentioned above) by Barnes et al. (2003) that scholars and practitioners also need to account for micro-political exclusion practices, such as how problems are framed and presented, who is viewed as com-

petent enough to take part, which skills are needed in order to formulate agendas and strategies, and where, when and how events are organised. One participant remarked that we most often see inclusion through a white Western conception of interaction, but that it perhaps would be much more fruitful if one took someone else's perspective.

### 4.1.4. Seeing past insider-outsider divisions

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Another participant suggested that a change of viewpoint could be useful. Namely, instead of thinking about the inclusion of specific group or bringing outsiders in, inclusive engagement could better be understood as a connective practice that has as its goal to "connect the unconnected". In other words, to link together people, groups and issues, which are were previously disconnected or disjointed. This does not mean they will form a new coherent collective, but that new links and ties are established. For instance, if mobility was not understood as an individual freedom but a public good, this could help in creating diverse and inclusive connections between publics. We would then be better equipped to see the collective production of mobility whereby different publics shape each other's lives through mobility. This last point reflected some of the points made by one of the presenters in their introductory paper presentation on 'commoning mobility' which also highlights a relationalist coproductionist view on participation, as pointed out in the literature (Chilvers and Longhurst, 2016).

### 4.1.5. Two dimensions of inclusive engagement

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One participant also brought forth an important reading of inclusive engagement, namely, that it involves two distinct axes – one axis showing low to high 'inclusion' and the other showing low to high 'engagement' (Figure 1). One axis measures the level of inclusion, for instance, how many different groups are included, diversity of representation based on age, sex, geographic area, and so forth. The other axis measures the level of engagement; for instance, the degree of commitment to an issue, frequency of engagement (one off or continual), quality of engagement, etc.





**Figure 1: Inclusion and engagement axes**

Looking at inclusive engagement through this lens, we can see a range of different outcomes. For instance, one can have little inclusion (inclusion with a small group of people) but with in-depth or high engagement. Or, on the opposite side of the quadrant, we could see high inclusion (i.e. very many groups included), but with very little engagement. Some kind of relationship was inferred between these two axes, as it is probably a trade-off: it is probably difficult to be high on both the inclusion and engagement dimensions at the same time. The participants stressed that we therefore need to pay attention to the type of trade-offs the project at hand needs. It might be good to include only a small group of people in order to enable deeper engagement and more trust in some instances, while we would want broader inclusion on other occasions.

Hence, the discussions did not lead up to any specific definition of what inclusive engagement is or should be. Rather, the participants argued against 'locked-in meanings' of inclusive engagement. They stressed that meaning-making is an important part of the inclusive engagement process. Instead of providing concrete solutions, the participants stressed that SSH can offer important tools for thinking about and catering for inclusive engagement. Overall, most of these tools could in some way be categorised as 'bottom-up' tools. This means that they aim to draw on an understanding of inclusive engagement as situated and contextual, based on the participants' own, and possibly diverse, reasonings.

#### 4.1.6. Tools for bottom-up inclusive engagement

Participants mentioned several tools for 'bottom-up' approaches to inclusive engagement. The discussion pointed to how inclusive engagement can be catered for, but also explored how, by applying these tools, local communities and diverse groups can also define/redefine what inclusive engagement should mean in a particular setting. These included:

- Qualitative research methods which elicit the perspectives of communities and individuals outside of the expert community; e.g. ethnographic research, narrative analysis. These methods were often presented as an alternative to more quantitative data and methods; e.g. surveys eliciting generalised views according to predefined indicators.
- Socio-technical perspectives can help bring in local and situated points of view. Energy transitions were described as mostly technically framed, which limits transition efforts. As one participant commented, one should also take into account the local, and how the local place/site/nation frame the discussions (e.g. historically, culturally). Working with socio-technical perspectives can then bring into focus local needs, resources, lived experiences, etc. This can then cater not only for defining what inclusiveness means for particular individuals, but can also refer to any scale: cities, regions, neighbourhoods etc.
- Transdisciplinary perspectives from SSH were drawn out as particularly useful. This refers to perspectives that can connect reasoning from different disciplines as well as different non-professional groups.
- Test cases and pilot projects can allow participants to participate and directly see for themselves what certain new energy technologies and systems entail, and from there, define the type of engagement that is necessary.
- Dialogic methods can be used to foster a back and forth dialogue. As one participant commented: *"Having a very diverse group of people and asking them challenging questions, it was not inclusive engagement and not particularly engaging, either"*. Hence, inclusive engagement should not be a one-sided approach but involve continuous dialogue.

No matter what meanings one attaches to inclusive engagement or what methods one uses to define it, the participants were adamant that it cannot overcome exclusion. As one participant noted: *"Inclusion is by*





*definition exclusion*". Working with inclusion highlights that there are other unrepresented views and groups, in terms of low carbon mobility, for instance; a new mobility system will always open up possibilities for some and close them down for others.

The broad consensus at the workshop was that inclusive engagement needs to be understood as an ongoing process where the objective is always to create more just and democratic energy communities and transitions. As one participant phrased it, inclusion is then a way of thinking rather than providing absolute answers: *"it is more about the process and deliberations about what society one wants to have"*.

## 4.2. Inclusion in projects and research

The discussions around the topic of inclusion in projects and research centred on the participants' own experience in working with inclusive engagement. Here, the focus was less on the challenges of such work and more on good practices.

### 4.2.1. Who is engaged and included?

According to the participants, there are different ways to cater for inclusive engagement in projects and research, and these require different types of considerations. For instance, there is an important difference between fostering inclusive engagement of professional stakeholders and inclusive engagement that caters to end-users (which is especially challenging). This means that projects and research need to include citizens (beneficiaries) directly, and often early on in project activities. Fostering inclusiveness means not only including those citizens you target but catering for a type of engagement which can pinpoint groups and issues that are excluded from the project/research. An important lesson the participants gained from their own work with inclusion was to look beyond the 'usual subjects'. For instance, one participant mentioned that when doing research on EVs, there is a need to also include those who do not have EVs. Another stressed the need to also listen to 'resistance' voices in the case of wind power. Or, within interdisciplinary research, include approaches one is not accustomed to; e.g. modelers in the case of transport. Several participants also pointed out how energy and mobility research both needs to include 'non-transition' actors and also put more focus on 'bad' transition practices. None of the participants thought that working in an inclusive way with the same

old, narrowly-defined imaginary or constructed publics, or publics by proxy as Walker et al. (2010) named it, was sufficient. Pluralising these imaginaries was best achieved in dialogue with end-users, they claimed.

### 4.2.2. Tools and methods

As in the discussion on the meaning of inclusive engagement, the participants suggested tools and ways that SSH can promote bottom-up perspectives. Perspectives from gender studies, energy justice studies, and experiences from the Global South were mentioned as important. Moreover, user-centred approaches that recognise and value end-user voices were deemed important. Although some participants pointed to different methodologies that can help standardise inclusive engagement, most stressed that various groups and views need to be more directly involved in energy research and development.

In terms of methods, several participants stressed the need to combine different approaches. For example, to use ethnographic methods in order to get ground-up understanding of experiences, but also combine this with deliberative workshops. This would give space for different reasonings to be expressed and taken seriously, instead of just the dominant expert-driven reasoning. Another example mentioned was to combine survey and crowdsourced data, which makes use of both expert and lay person data sources. As mentioned in the literature review, urban planning in particular has a history of trying to allow for different reasonings through communicative and participatory planning, where there is a conscious effort to avoid technocratic and expert-driven development. In the discussions, participants thought these approaches should be translated to energy transition efforts more broadly. This is of course difficult to put into practice, especially when many of the new solutions discussed relate to a danger many communities are not yet faced with. Moreover, as the next section will show, combining different methods takes time, which creates tensions when there is pressure to decarbonise rapidly.

Several of the participants' experiences with working on inclusion highlighted a reflexive use of methods. For instance, interviews and focus groups mostly rely on verbal accounts, which can be limited in understanding practices in end-users' everyday lives. Moreover, the technologies used for engagement also have their limitations. Crowdsourcing data from citizens through different apps also has an inclusion/exclusion element as only certain groups make use of them, whilst the algorithms also cater for particular types of engagement.



Moreover, ways of organising workshops or other types of events influence the type of people that show up (similar to the point on where, when and how events are organised, raised by Barnes et al. (2003)). These experiences of participants are very much in line with the SSH research that pointed to how the positionality and power of actors trying to instigate inclusion can be problematic. From the participants' perspective, the best way to support such initiatives is to be reflexive and continually examine what is 'othered' and should be included in the next phase of the project or research. All in all, there are many layers of inclusions and exclusion that can best be targeted through multiple mixed approaches. No one approach can cater to a representative sample of groups and it is therefore important to use different tools.

### 4.2.3. Ongoing dialogue and trust

Most participants agreed that inclusive engagement needs to be present at all stages of a research or project cycle. It needs to be grounded in the context, historically and culturally, and this requires continual feedback loops. It is thus not an ad hoc or one-time event and it is best to draw on dialogic approaches that allow for mutual learning and continual interaction. Through this dialogue, researchers and project leaders can also build up trust with various communities over time. Continual engagement, with follow up, is key to building trust. One method to do this (mentioned as impactful in relation to projects that have climate change objectives) is to include popular leaders or ambassadors to participate in projects. This could get wider communities interested and legitimise the project socially. In an example from Manchester, one person mentioned how people might support certain causes not based on the issues (cycling in this example), but because they liked the appointed ambassador. Meanwhile, in the Netherlands, a Dutch prince was appointed to support EVs.

Drawing experience from participatory planning, one participant also noted that transparency is important in order to keep people's trust. Citizens especially can lose interest and motivation, or get frustrated, relatively quickly if they are not seeing an impact of their involvement. Since many energy-related transitions take a long time, it is important to show ongoing impact, and how their contributions and engagement are being used. Catering to local needs and building relations of trust with communities requires time. Although this is challenging, it is also then that projects have the best impact, according many participants.

### 4.2.4. Tensions between inclusive engagement and accelerating transitions

Lastly, several participants mentioned that there is something particular about low carbon transition focused projects and research; namely a tension between inclusion and the pressure to accelerate transition processes. Inclusive engagement, as it has been described in the literature and experienced by the participants at the workshop, is far from simple and straightforward. If inclusive engagement should be defined together with various interest and non-interest groups, building trust through transparency and ongoing dialogue, and taking participants' knowledges seriously, then it would inevitably slow down transition processes, and make it harder for solutions to be upscaled. Several participants also found inclusive engagement to face a structural problem in the sense that research and development programmes and funds tend to favour acceleration and diffusion of technologies, instead of addressing their equity-related impact.

## 4.3. Challenges, problems and surprises when working with inclusive engagement

The third discussion topic was on the main challenges, surprises, or overlooked issues within inclusive engagement work. The participants highlighted several challenges for inclusive engagement.

### 4.3.1. Limits of imagination and of recognition

Firstly, the participants described limits to forecasting and imagining futures of energy systems as challenging. When including outsiders in research projects, they found it hard to help the possibly-affected participants imagine what a future world might look like; for instance, what the closing of a street might entail. Often, the public is against or sceptical towards changes at the start of a project, but later adapts and becomes more receptive to changes. One participant noted that it is only when publics are able to "experience the change", that they might change their attitude. It is important to note that people's attitudes can change over time, often



depending on the concrete context and their direct experience.

Another matter brought up by the participants, especially in regard to transition projects, is the predominant focus on including new actors. According to one discussant, this marginalises and overlooks those actors who are already partaking in a particular transition or system. One participant mentioned how designers of a new inter-city cycling highway in the Netherlands focused too much on how to get people out of their cars and ways to include car-drivers, but disregarded those already cycling. In response, several participants stressed the importance of maintenance work, both maintenance of sustainable infrastructures and the current body of users.

### 4.3.2. Risks of resistance and time

There are also risks involved in providing for more inclusive engagement, as groups might work to halt projects or the research in question. The risks of public engagement are well known in democratic planning and development debates. However, the urgency of climate change adaptation and energy transitions increases these stakes further. Understanding that inclusive engagement can slow down or derail transition efforts creates several ethical dilemmas. Several participants pointed to a direct conflict between change and inclusion. On one hand, you ideally want to include as many groups as possible in efforts aimed at fostering low carbon transport solutions, but on the other hand, you also want to implement low carbon energy transitions as fast as possible. One participant brought up an illustrative example about cycling infrastructure. She stressed how hard it was to further the development of such infrastructure if voice were given to proponents of parking infrastructures. Similarly, another example mentioned was EVs, which were seen as important tools in the decarbonisation of transport, but at the same time most often driven by high- to upper middle-class men, thus not promoting equal opportunities for all.

Slowing down transition processes might not always be negative. Inclusion of diverse voices can, according to the participants, halt negative technology-centred solutions that are 'pushed' by industry interests, even in cases when they do favour more energy efficient solutions. Many participants noted that innovation is not always good and can be a diversion rather than a solution to environmental problems. For example, automation and autonomous vehicles can lead to a more car-centred city where people use more cars instead of fewer, and new sharing solutions are not necessarily low

carbon. This dilemma regarding 'best' solutions shows that it is necessary to evaluate how different exclusion-ary mechanisms work collectively and continually.

In this regard, the problem of time was recurrent throughout the workshop: the time necessary for animating publics, building trust, and defining the terms of engagement; and on the other side, the lack of time from a policy and funding perspective.

### 4.3.3. Knowledge and interest

Although the debate on public engagement in energy has largely moved away from a knowledge deficit view of participation, several participants at the workshop found a lack of knowledge to be a problem in inclusive engagement work. Including groups outside a narrow expert field (e.g. on new battery storage), often requires specific forms of communication to ensure knowledge transfer and dialogue. This is especially difficult in projects and research where the experts themselves are unsure about the subject in question, that is, what the project they are working on will be or lead to. According to the workshop participants, this may be better fostered by involving SSH research and researchers in energy projects and catering to interdisciplinary inclusion. However, some do see a problem of involving a general public that does not have the necessary expertise in the area. One participant said that a common problem is that people themselves are uninterested. We should therefore not expect that they want to be included. A different argument flagged was that some people consciously resist participation because they do not want to conform to the dominant system. The work of animating public participation on a day to day basis is thus far from easy and takes considerable time, often underestimated in overall project funding and design.

### 4.3.4. Tokenism

Lastly, the participants flagged the danger of inclusive engagement being tokenistic. There are projects which appear to be addressing inclusion, but in reality, some are not followed up or even taken seriously. This problem of tokenism was, in the discussion, connected to questions of responsibility. Researchers and project leaders alike, often, as previously mentioned, do not have time or capacity to implement the type of methods and strategies necessary for inclusive engagement. In effect, participants stressed that the responsibility also needs to be with commissioners and financiers and not only with the individual researchers, as also noted by



Skjølsvold and Lindkvist (2015). This leads into the final discussion at the workshop, which dealt with concrete policy advice.

## 4.4. EU policy and inclusive engagement

The final discussion concentrated on the EU's role in inclusive engagement. One of the most important issues for the participants was the contribution of SSH in creating European energy policy. It was understood in terms of improving the significance and impact of SSH projects, but also particular regulations that would make the processes of research funding easier and more transparent. SSH was described as crucial for building a better and more equal world, and as offering important tools to engage people critically in policymaking.

SSH's contribution has, according to the participants, been largely overlooked by EU institutions and energy funding programmes. An overarching point was that EU research policy should be more focused on social issues (as discussed by Royston and Foulds (2019)), and take greater account of cultural diversity, religious diversity, and issues of age and gender. The social perspective should be taken into account in the development of energy systems and technology and thereby their possible social consequences, social costs, social gains, and potential unintended consequences of technology development.

In addition to recognising SSH contributions, the participants claimed that the EU should create space for participation, encouraging citizens to take part in decision-making processes, and that it should support engagement activities on the regional, state and local level. For instance, the Commission needs to interface and consult with both local decision-makers (cities, municipalities, civil servants) and publics when designing new energy-related systems and solutions. Moreover, they also need to critically reflect on the tools they use for engagement. For instance, the participants discussed the role of the language of EU documents, which often excludes people who do not speak English, as well as highly complicated bureaucratic procedures and self-referencing of EU regulations that create barriers for participation.

It was emphasised that inclusive engagement is especially important in the energy market, as everyone has to participate in it (while in the car market, for example, this is not necessary). Thinking critically of inclusive engagement is therefore imperative. In the current SET Plan objectives, questions regarding gender and age for instance are completely overlooked. Gender and age

should be taken into account mainly because of the influence of these demographic and socio-cultural issues on energy-use. Other important dimensions include religion and existing energy habits.

Participants, referring to their own experiences, highlighted how quantitative research was favoured in EU research funding, which limits the representation of a diversity of SSH perspectives. Qualitative research is important to understand underlying opinions and motivations, and could significantly contribute to creating policy. The participants also claimed that social projects need to be long-term, especially when they are designed for/with a community (e.g. action research). Researchers who want to engage communities for participatory actions need additional time; e.g. for the introductory process. Another issue was representativeness in research. Often, people are not eager to cooperate, and difficulties in encouraging them to participate in research create the risk of researchers being enclosed in a 'social bubble' and excluding important voices and perspectives. This is especially true for those citizens who have limited time and resources. Stimulating engagement through rewards could, according to several participants, be a means to include those with the least economic capital.

## 4.5. Summary of workshop discussions

In summary, the discussions during the workshop reflected many of the debates we outlined in the literature review on inclusive engagement. Questions about who to engage and when, what engagement means, and the sustained effort necessary to build fruitful and fair public engagement processes, were some of the issues touched upon. What sets the more practice-based discussions apart from the scholarly discussions is the overall emphasis on *the long timeframe, persistent and ongoing energy, and methodological plurality* necessary for inclusive engagement. Together, these issues coincide with a view that inclusion requires *building and sustaining relationships, building trust, negotiating meanings of engagement, and continually changing and combining different methodological tools and engagement techniques in order to foster varied forms of engagement and thereby improve outreach*. Unfortunately, it seems, the participants found the EU's policy support for such efforts in the energy field to be insufficient. On a basic level, policies usually overlook SSH contributions to inclusive engagement in energy, and furthermore, they often fail to provide the comprehensive commitment that inclusive engagement processes require.





## 5. Recommendations

### 5.1. For Energy-SHIFTS activities

- Energy-SHIFTS should strive to avoid tokenism and make inclusive engagement a conscious and targeted strategy throughout the project. This means that inclusion should not be an ad hoc activity, but part of the project DNA. This can be achieved by for instance, continually reassessing what inclusion means for the project partners, the activity in question, and overall project goals.
- Both the project as a collective, and individual Working Groups, need to define what inclusive engagement means for their particular activities. In these discussions, it is important to not only focus on the usual suspects or relevant connections, but also critically examine who might be excluded. This would acknowledge the need for bottom-up perspectives and for inclusive engagement as an open-ended, ongoing activity, and not just as formalised actions.
- Project partners should pay attention to potential micro-political exclusion practices when designing project activities (i.e. designing workshops and conferences). This means reflecting on discursive practices (how problems are framed and presented), who is viewed as competent enough to take part, what skills are seen as key in formulating agendas and strategies, what indicators are used to account for diversity, and not least, paying attention to the practices of participation (where, when and how events are organised).
- Project management ought to include stakeholder analysis in order to critically assess possible excluded groups. Such analysis should both focus on the type of stakeholders involved, as well as the more qualitative character of their engagement (e.g. in what way and how are they actively contributing to the project). Consequently, project partners can also analyse potential trade-offs between inclusion and engagement.
- Project partners should try to sustain relationships with external partners and stakeholders over time. This is necessary in order to establish good trust

relationships, which cater for dialogue instead of occasional moments of inclusion.

- It is important to also acknowledge the potential conflicting dimensions of inclusive engagement; e.g. between inclusion and engagement, and between inclusion and transition acceleration. Discussing these dilemmas in relation to the goal of individual project activities will support more reflective decisions.
- Since the project is policy-oriented, it is important to especially focus on engaging its end users – policy makers. Moreover, it can be fruitful to examine what agency existing policies have in possibly creating exclusion and limiting inclusive engagement.

### 5.2. For interdisciplinary energy-SSH research and projects

- SSH research and projects should have an open approach to inclusive engagement. They should not have predefined notions of what inclusive engagement is or what methods will be best. A bottom-up approach can cater for the meaning of inclusive engagement to change over time.
- To account for diverse reasonings, it may be best for researchers and projects to deploy a mix of methods and strategies for engagement.
- Researchers and project managers need to systematically reflect on the ways they stage inclusion activities and the micro-political practices which may exclude certain groups and views.
- Both researchers and project managers should include both professional and non-professional groups. This means critical reflection on how, and for whom, inclusion processes are orchestrated.
- Instead of focusing on bringing outsiders into projects and research, it can be fruitful to think about making relevant connections between a variety of actors, issues and energy systems or relevant technologies. In this way, inclusion becomes not a one-way process of engagement, but an ever-evolving and multifaceted web of connections. In practice this also means that engagement should build relationships and not rest on organising highly structured ad hoc events.
- Especially in relation to research on, and development of, new energy systems, it is important to recognise and include non-transition actors, 'failed transition' cases and opponents' perspectives.



- Project managers and researchers need to design research and projects with longitudinal perspectives that can cater to inclusive engagement, especially considering the time necessary to build trust and define and redefine what inclusive engagement means in a given setting.
- It is also important to improve the transparency of the contribution of citizen engagement to research and development.

### 5.3. For funding of EU energy research

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- EU institutions and funding mechanisms need to recognise the contribution of energy-SSH research and perspectives in energy projects. These contributions can help map energy injustices, cater for situated and contextual inclusion strategies, and build strong community relationships.
- The EU should develop financial and managerial support for inclusive engagement. Mainstreaming inclusive engagement requires time and sustained action, which means that it needs to be a targeted project activity with allocated funding. Policy officers should be aware of the time-consuming work of engagement.
- The EU should acknowledge and cater for diverse spaces of inclusive engagement – from decision making processes, to continual dialogue events, to recognising ways in which objects and technologies may enable participation and energy citizenship
- Accountability systems within EU funding need to assess the quality of inclusive engagement. This means recognising the importance of both inclusion (in terms of numbers, scale or scope) and engagement (in terms of quality and depth). This requires more complex indicators which move beyond the number of citizens reached.
- The EU also needs to critically assess how institutionalised funding strategies require particular discursive practices, competences and skills, which exclude both certain types of SSH perspectives and particular groups from participating in EU-supported energy research and projects.
- Funders should acknowledge the need for continual development and innovation within public engagement. This means going beyond demanding public engagement in technology development projects, and also funding projects where developing and improving processes of inclusive engagement is the core project goal.





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Photo source: Agnete Hessevik



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## Appendix I – Blog

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‘A call for even more inclusive workshops’, by Agnete Hessevik (University of Bergen, Norway) at <https://energy-shifts.eu/a-call-for-even-more-inclusive-workshops/>





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