

Energy Citizenship; Ideals, Ideology and Ideal types in the Energy Transition

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Abstract

The importance of social and institutional innovations in the energy transition has become increasingly evident in recent years. The quest for new institutional arrangements and social relations has been accompanied by the proliferation of new concepts: Energy democracy, energy justice, energy poverty and energy literacy are interrogating and opening up the social relations that carry the energy system. These concepts serve analytical purposes, but they also provide tools for critical diagnosis and transformative action. Scholars, activists and politicians deploy these terms to introduce new social constructions, counter-narratives and imaginaries of an energy system that – by certain standards – is more sustainable and organised in a just manner. A particularly prominent example of these new imaginaries is energy citizenship. Coined originally as an emancipatory concept and as an alternative imaginary of capable and involved citizens, it has also been proven to be vulnerable to ideological appropriation and narrow instrumental interpretations. The tendencies towards responsabilisation, exclusion and reproduced power inequalities are well-known in studies of participatory governance, empowerment and sustainability transitions.

This paper argues however that ENCI should not be mistaken for yet another buzzword. Rather than rejecting the concept, it needs to be taken seriously as an emerging governmentality and as a set of ideals that are meaningful to people that try to make sense of the current phase of the energy transition. Our critical-constructive analysis identifies three interrelated clusters of challenges in ENCI research: These pertain to, 1) the multiplicity of ideals; 2) the performativity of idealizing social constructions and 3) the associated methodological challenges of operationalizing the concept into concrete empirical observables and relevant ‘cases of energy citizenship’. This operationalization is arguably a crucial step in the scientific-societal co-production of models and practices of sustainable, democratic or otherwise desirable forms of energy citizenship.

1 Introduction

The energy transition involves innovations in multiple elements of socio-technical energy systems. Among those, the importance of social and institutional innovations has become increasingly evident in recent years (Wittmayer et al. 2020). The quest for new institutional arrangements and social relations has been accompanied by the proliferation of new concepts such as energy democracy (Wahlund & Palm 2022), energy justice (Jenkins et al. 2016), energy poverty (Bouzarovski et al. 2012) and energy literacy (Chodkowska-Misczuk et al. 2021). Scholars, practitioners, activists and politicians deploy these concepts to introduce new social configurations, counter-narratives and imaginaries of a re-defined energy system that is organized in a more – by certain

standards – ‘sustainable’ and ‘just’ manner. Therefore, apart from their analytical purposes, they also inform critical diagnosis and transformative action: They challenge the social relations that sustain the energy system, and propose ways to change them.

A particularly prominent example of these new concepts is energy citizenship (hereafter ENCI). Coined originally as an emancipatory idea and as an alternative imaginary of capable, energy-aware, involved citizens (Devine-Wright 2007), it has also been proven to be vulnerable to ideological appropriation and narrow instrumental interpretations: The narrative of empowered, self-organizing citizenship becomes constraining, the less means and capacities one has to become that active citizen (Lennon et al. 2020). Such tendencies towards (overdemanding) responsabilisation, exclusion and reproduced power inequalities are well-known in studies of participatory governance, empowerment and sustainability transitions (Swyngedouw 2005; Taylor Aiken 2019). Meanwhile, ENCI remains under the cloud observed earlier for community energy (Radtke & Ohlhorst 2016) and for political participation more generally: It tends to be enacted mainly by particular social groups, notably the more affluent and the higher-educated citizens.

Against this background of reasonable doubts, this paper argues that the ENCI concept should (nevertheless) be taken seriously. Rather than dismissing it as yet another ‘buzzword’, it deserves attention as an emerging governmentality (Rose et al. 2006) that introduces new roles, responsibilities and identities of individuals. Ringholm (2022) underlines for example how ENCI can be appreciated as an initiative towards institutional innovation. Likewise, ENCI is relevant as an emergent knowing-of-governance (Voß & Freeman 2016): ENCI exists as concrete activities of citizens, but also as a set of shared assumptions across the energy field about the importance of energy transition governance through citizen-led governance, civic duties, and individual rights and capabilities. This individual-focused imaginary of change distinguishes ENCI from energy democracy discourses (Wahlund & Palm 2022).

As far as it is adopted widely - and it seems to be case that research projects, governments, NGOs as well as energy suppliers (Cf. Figure 1) have developed a fondness for the discourse - ENCI discourse creates new perspectives for, and acknowledgement of, the roles and responsibilities of citizens in the energy transition. Moreover, other than similar knowings-of-governance such as ‘social innovation’ or ‘transition’, ENCI is a normatively pronounced concept. It corresponds with a set of ideals, often rooted in long traditions of citizenship and community action,- that are meaningful to individuals and organisations who try to deal the current advanced phase (Markard 2018) of the energy transition.



Figure 1: ‘In which phase of the energy transition are you?’ Advertisement (in Dutch) of energy supplier Engie (Belgium). Web capture 28/05/22

Given these multiple meanings and uses of the ENCI concept, it is clearly not a straightforward research subject. It indicates both a set of energy transition ideals and ideologies as well as a set of concrete energy-transitioning activities. It is both a label and an empirical phenomenon. Both of these aspects need to be taken seriously. When neglecting the former, ENCI research is vulnerable to drifting into uncritical empiricism and simplistic instrumentalist accounts in which ENCI features as the unequivocal solution to certain problems. When neglecting the latter, ENCI could remain stuck in abstract and practically irrelevant critiques.

Our critical-constructive analysis therefore identifies three connected challenges that ENCI research needs to address¹ to do justice to its research object. These pertain to:

- 1) the multiplicity of ideals, and the need for a **normative** framework;
- 2) the challenge to address the gaps that exist between idealizing social constructions and ENCI practices, i.e. the need for a **critical social-theoretical** framework;
- 3) the methodological challenges of operationalizing the concept into concrete empirical observables, relevant ‘cases of energy citizenship’ and insights into key conditioning factors. *What are the societal conditions conducive to the thriving of engaged, sustainability-oriented, democratic or otherwise desirable forms of energy citizenship?* The latter indicates the need for an **empirical-operational** framework.

The latter operationalization is arguably crucial in the scientific-societal co-production of energy citizenship models and best practices: *What is (and isn't) energy citizenship? Is it more about energy or more about citizenship? Where can we find it?* The key point is that ENCI research needs to develop coherence between these three frameworks: The considerations of normative aspects (‘ideals’), the understanding of the gaps between ideals and practice (‘ideology’) and concrete empirical investigation (‘idealtypes’) need to inform each other.

2 Ideals: ENCI as crossroads of political projects

ENCI is a relatively new concept – even for those who apparently have been practicing it for a long time already (Pel et al. 2022). Certain ethical values and political ideals of energy citizenship have been around for a longer time. This reminds of the political ideals associated with the concept, and of the normative dimension of ENCI research. This normative dimension needs to be handled with care: ENCI is not a normatively well-defined and widely agreed upon notion, but rather a crossroads of ethical orientations and political projects. ENCI research therefore requires a compass, a normative framework: *Which are the key ideals that define ENCI?* And paraphrasing Solis-Navarrete et al. (2021): *What do we consider not ENCI, or false ENCI or non-desirable ENCI?* A normative framework should include a specification of 1) relevant ideals/ethical commitments; 2) the actors upholding them, and 3) a consideration of the respective transformative and reformative ambitions.

¹ In our ongoing research we have developed our own assumptions, empirical observations, methodological choices and theoretical framings regarding these three requirements, and we present some of them in this Viewpoint paper. Importantly, this paper is not meant to advocate our particular solutions and approach. It serves to identify the key challenges of ENCI research more generally.

Featuring as a research priority in the recent EU H2020 program², ENCI can be retraced to mission-oriented innovation policy and attempts to meet ‘grand societal challenges’. This science-policy context raises research questions about the conditions and empowerment practices conducive to the flourishing of energy citizenship. In this context, ENCI is associated with goals of sustainability, democracy, justice, inclusivity and social equality. In light of these widely shared values, ENCI is often positioned as a set of unequivocally good behaviours that needs to be stimulated (Figure 2): *How to support ENCI, and how to empower European citizens towards ENCI?*



Figure 2: ENCI as a set of unequivocally good behaviours to be stimulated.

Similar questions have guided recent research programs designed to stimulate, for example, social innovation, renewable energy prosumerism, or circular economy. As Moolaert et al. (2017) evaluate critically with regard to these social innovation research programmes, the prevailing instrumental approaches underestimate the normative complexity at hand – social innovation is not a bolt-on instrument to support technological innovation (see also Wittmayer et al. 2020). Furthermore, the promises of unequivocally good innovation may be self-defeating: Kovacic et al. (2019) expose in detail how the similarly ‘sustainable’, profitable, empowering concept of the circular economy is marking an ideal that cannot be realized – unless one is doing magic with circularity indicators. Unsurprisingly therefore, these concepts of unambiguous and multi-dimensional progress are after some time dismissed as vague ‘buzzwords’. The concepts are discarded, after going through the familiar trajectory of confusion, deconstruction, ridicule and rejection. Particularly heavy critiques have been launched against the *normative* vagueness of these concepts – *what, precisely, is ‘prosumerism’ good for* (Brown et al. 2020)? *What is social innovation good for, beyond the intermediate goals like collaboration and participation* (Ziegler 2017)?

² This is also the funding source behind this paper.

Is ENCI such an 'empty signifier' as well? Various studies have aimed to map the meanings given to it in practice (Rodhouse et al. 2020). By asking practitioners in the energy field what the concept means to them, we generated the following word clouds (Figure 3) in Germany, Hungary, Belgium (Wallonia) and Spain (Galicia).

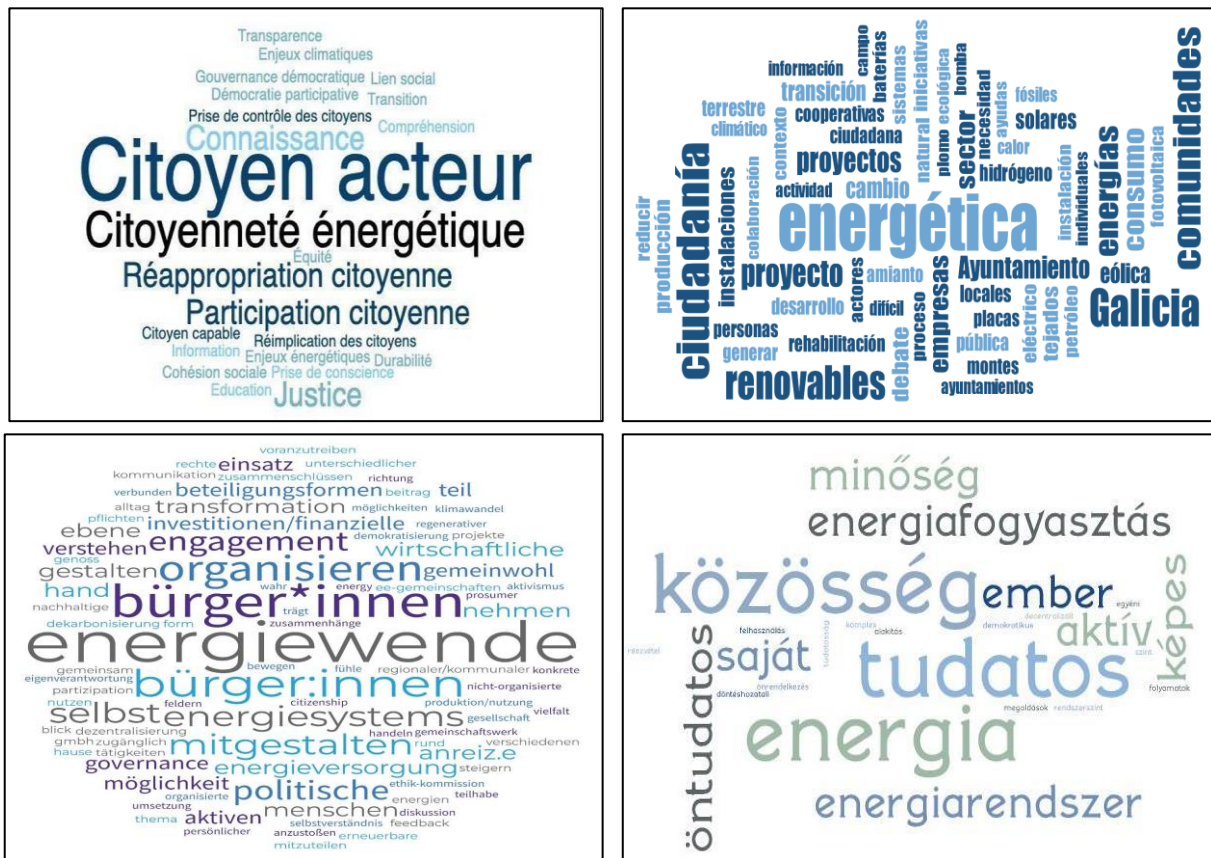


Figure 3: ENCI interpretations in Belgium, Spain, Germany and Hungary

The word clouds illustrate³ the following points.

- The ENCI concept (in the various European non-English languages) is used only seldomly by practitioners. Whilst generally endorsed, sometimes it is even mistrusted, or associated with particular social strata rather than with the citizenry as a whole. The latter became apparent in our Hungarian workshop.
- The concept appears to be relevant and motivating, at least to practitioners in the energy field. It is associated with ideals of democratization, energy justice, fairness, sustainability, and awareness-raising for the energy transition.
- Most importantly, ENCI appears to be associated with a multitude of ideals, ethical orientations and political projects, promoted by citizens, associations, governments, consultants, researchers and energy suppliers. Promoted by different actors for different reasons, ENCI is at the crossroads between projects of democratization, appeals for participatory decision-making, environmental awareness, consumer awareness, energy security, as well as the opening up of new markets for the self-reliant consumer.

³ Illustrating, as we are presenting not an empirical study but a conceptual contribution.

ENCI is thus far from normatively empty or vague. On the contrary, it is a normatively rich and complex notion. ENCI discourse is combined with various adjacent notions (energy democracy, energy communities, energy justice, energy literacy, energy poverty, but also the – not specifically energy-oriented - discourses on active citizenship, environmental citizenship, resilient citizenship, empowerment, citizen awareness, prosumerism, social innovation, and various discussions on the ‘new social contract’). Some of these examples remind how ENCI discourse builds on more longstanding discourses on citizenship (Ringholm 2022). Overall, these adjacent notions indicate a broad variety of ideals.

A normative framework should arguably also be specific about *whose* ENCI ideals the research is focusing on. The discourse is co-produced by different actors: Horizon2020 research programmes, European, national, regional and local-level policies, the transformation narratives of NGOs and social movements, the professional field of renewable energy technologies, and various expressions in the visual culture (Figure 4) of commercials, arts, and social media.



Figure 4: ENCI in cultural representations: Energy Autonomy (Carl Fechner)

Each of these ENCI communications emphasise particular aspects, and they juxtapose ENCI against various adjacent notions:

- **Beyond the passive energy consumer.** Devine-Wright (2007) coined ENCI as a counter-imaginary to challenge the (sometimes self-fulfilling) assumptions of the passive, ‘deficient’ energy consumer and to move beyond deficit perceptions of publics.
- **Beyond commercialized prosumerism.** The adjacent notion of (renewable energy) prosumerism has come under a cloud. This much-celebrated move towards decentralized energy systems has proven vulnerable to commercialization (Brown et al. 2020; Lennon et al. 2020). ENCI is in this regard a reassertion of communitarian values of responsibility, trust and reciprocity.
- **Beyond ‘token participation’.** Discussions on participatory decision-making have frequently pointed out the need to reach beyond participatory arrangements that are formally participatory but de facto providing little voice to citizens. ENCI fits in these attempts to deepen, or radicalize, participation. It calls attention to practical, material participation, often implying immediate investments and gains.
- **Beyond expert-led transition.** Some accounts of ENCI underline how it revolves around expertise, know-how, awareness, and energy literacy. Other than as a matter of democratic voice or of environmental impacts, ENCI is then taken as an ideal of emancipation, of re-appropriation of technology, and of changes in the relations between expert and laymen.
- **Beyond energy-dependency.** The Ukraine crisis has reminded all Europeans of their (material and political) energy citizenship. In that context, ENCI indicates ambitions to reduce the dependence on politically mistrusted energy suppliers. Apart from the above considerations and the general considerations of sustainable energy production, this political dimension marks how ENCI can be promoted for reasons only indirectly related to either energy or citizenship.

There are thus good reasons to take an affirmative stance towards this fuzzy

concept. ENCI bundles political ideals that are relevant to various people and organizations. Beyond the specification of ideals and the actors inscribing them into the concept, a third aspect to consider is a difference that cuts through the various ENCI understandings: The concept is sometimes used along a transformative logic, i.e. to mobilize resistance against the deep power inequalities that continue to define the energy system and the energy transition. Yet on the other hand there is also a rather pragmatic, reformative line of ENCI discourse: On these accounts it appeals to basic, widely shared, traditional values of efficiency, pragmatism, assuming one's responsibilities, the roles of the public in energy transitions and collective maintenance of collective goods like the energy system. This divide between transformative and reformist ideals indicates the need for critical-theoretical engagement with ENCI.

3 Ideology: Beyond idealizing social constructions

It is important to conduct ENCI research with a framework that is explicit about the normative ideals and ethical essences of the term. Yet this only works well when minding the gaps that exist between ideals and practice, essence and process. Lennon et al. (2020) usefully indicate how the imaginaries of energy citizenship and energy prosumerism can turn from empowering narratives into disempowering ones: They introduce responsibilities and expectations of contributions to the energy transition that not everybody is in the position to fulfil. Energy *citizenship*, in contrast with the idea of energy *communities or energy democracy*, refers explicitly to individual rights, duties, resources and capabilities, and political participation of *individuals* (Wahlund & Palm 2022, Cf. previous section). ENCI – as far as it has become an influential discourse – is a strongly performative and normalizing notion. One example of its performativity is this ubiquitous question: *Have you, dear citizen, already switched back your thermostat?* Importantly, ENCI discourse develops along with technologies that allow citizens to see how other household members are adjusting that thermostat – this comes with blends of care and control (Sovacool et al. 2021). Furthermore, the appeals to civic responsibilities become more pressing as long as it is primarily the landlord, the electricity supplier, or the national and local government setting the controls. ENCI ideals cannot be fulfilled single-handedly by individuals – they are realized in spaces formed around technological objects (Latour 2005).

ENCI research therefore needs to work with a *critical social-theoretical* framework as well. This means being sensitive to the contradictions between ENCI ideology and ENCI practice. It means exploring the societal conditions that ENCI imaginaries and practices are shaped by. It means being attentive to the ways in which ENCI discourse – including the adjacent notions outlined above – is itself shaping society. A key task for a critical-theoretical framework for ENCI research is to reach beyond the idealizing social constructions and the associated ideal-types: The ideals of emancipated, active citizens may encourage individuals, but they also idealize and create expectations of individuals 'doing their part'.

There are many ways in which research can silently reproduce naïvely optimistic, empirically misguided or overdemanding and as such disempowering assumptions. A particular difficulty for ENCI research – and for similar 'mission-oriented' research – are the various incentive structures and inclinations of researchers to focus on the best practices, the immediate associations with certain pioneering innovators, and the stock images of beneficial innovation through which everybody wins (Godin & Vinck 2017).

ENCI research should be fixated less on such *manifest* cases (Pel & Kemp et al.

2020). It should shed more light on the relatively mundane and less heroic energy citizenship cases. Well-known manifest forms of ENCI are the politically engaged citizens, organised citizen summits, the environmentally conscious consumers, and the citizens collaborating and associating in energy communities. These are the ENCI hits one gets through Google images (Cf. Figure 3.1). Yet these recurring (and perhaps over-exposed) examples are arguably only a subset of the energy citizenship as it exists in 2022. In the near and distant future this picture will change further. The societal context has evolved significantly since the early ENCI formulations of Devine-Wright (2007). ENCI is arguably more diverse than the typical attempts to create a ‘dialogical democracy’ as described by Callon et al. (2009:225). ENCI develops in the context of an energy transition that has moved well beyond its initial stages. This also means that a broader range of individuals becomes involved, and that ‘followership’ becomes as important as leadership (Geels 2021). It means that individuals struggling with eco-powerlessness (Kennedy and Givens 2019) become more important. Similar to the analysis of Ekman & Amnå (2012), it is useful to look beyond the tip of the iceberg of ‘manifest’ political participation. Beyond the actions of civic leaders and pioneers, it is important to consider more mundane forms of energy citizenship. For example, Ryghaug et al. (2018) call attention to the new technological affordances through which citizens rather silently shift into more active forms of energy citizenship. Making invisible energy visible, these technologies evoke increased awareness and environmental action (Marres 2012).

Addressing the gaps between ENCI ideals and practice, a critical social-theoretical framework should also disclose the range of *latent* ENCI forms that exist alongside the prominent, relatively more ‘manifest’ ones. This general insight is not easy to operationalize⁴ (Cf. next section on this important aspect of ENCI research), but the general striving to ‘look beyond the tip of the iceberg’ (Figure 5) is in itself straightforward.



Figure 5: Critical social-theoretical framework: ENCI beyond the tip of the iceberg

Figure 6 sketches how we ourselves have identified a range of these ‘latent’ forms. They are the relatively underexposed counterparts to seven forms of relatively more prominent, manifest ENCI:

⁴ Our project has set itself this challenge in its ambitious project proposal.

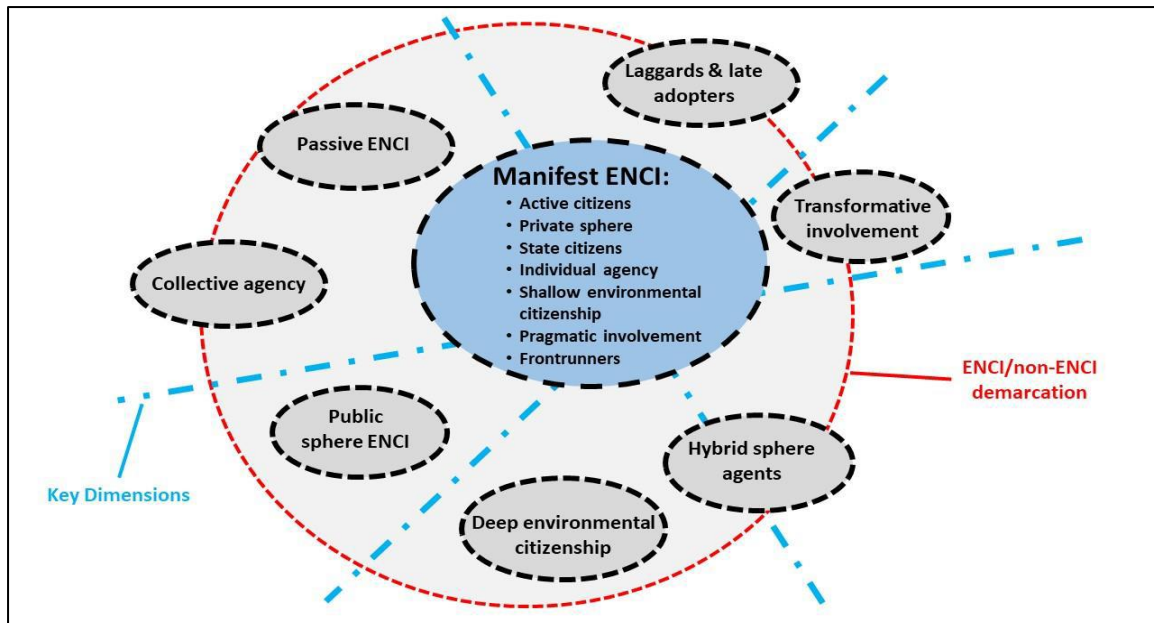


Figure 6: ENCI: manifest/latent forms along 7 key distinctions (Pel et al. 2021:61)

Latent energy citizenship can arguably be found in the following seven categories:

1) **Passive ENCI.** The political ideals of energy citizenship tend to assume a certain active, engaged, empowered form of citizenship. Its counterpart of ‘passive’ ENCI would then appear to be an oxymoron. Yet this is too simple, considering that activity presupposes activation processes (Pel et al. 2016). The longstanding theorisation of citizenship has in fact shown certain shades of grey. One can think of Dobson's (2003) account of Bryan Turner (1990), ‘A Theory of Citizenship’, in which both the active/passive and top-down/bottom-up distinctions are underlined as key dimensions of citizenship. ‘Passive ENCI’ also seems to correspond roughly with various forms of ‘latent’ political participation, as pointed out by Ekman and Amnå (2012: 287-288). Examples of this are blank voting or non-voting, and more generally the various politically behaviours of citizens that *on the surface* appear semi-political or non-

political. One could similarly consider ‘passive’ citizenship as the lowest steps on Arnstein’s famous ‘participation ladder’. ‘Passive’ ENCI usefully calls attention to the citizens who have not even started mounting Arnstein’s ladder – whether due to disempowerment, disillusionment, or disinterest. Figure 7 by the Norwegian artist Hariton Pushwagner exemplifies the visual discourse on ‘passive’ energy citizenship, which exists alongside the abundant images that express the active forms.

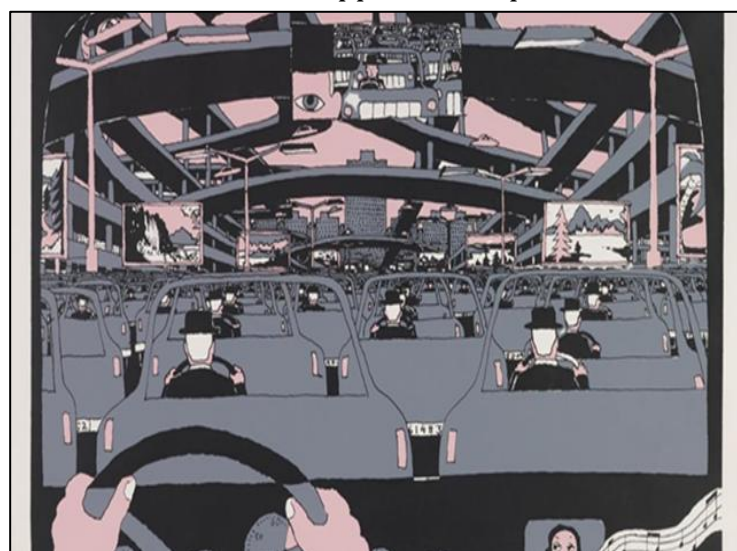


Figure 7: Passive Energy citizenship (Source: Pushwagner – ‘Soft City’)

More generally, ‘passive’ ENCI is a complex remainder category. It arguably indicates individuals with limited capacities, motivation and action, who supposedly need to be ‘nudged’⁵ into ENCI. Yet what to think of those citizens who are actively involved with the energy transition, yet not in ways immediately in line with prevailing ENCI political ideals and ethical commitments? The Yellow vest movement is but one example of such active citizens – whose actions have often been characterized however as undermining and *counteractive*.

2) **Collective ENCI.** Who exerts energy citizenship? The individual citizen could be considered the default understanding (Wahlund & Palm 2022)– citizens vote individually, for example, and they have rights as individuals. Also from the psychological point of view one can consider how the empowerment into ENCI revolves around individual motivations, behaviours and identities. From the political science point of view, it is also very relevant that political participation, and ENCI is arguably a form of it, is often starting from the rights and duties of individuals (Ekman & Amnå 2012). However, many of the ENCI ideals are hinting at groups, and *embedded* individuals. The associated ideals like energy democracy, energy justice and community-based energy seem to suggest that ENCI can be exerted by collectives like households, families, neighbours, communities, and companies. It seems reasonable to understand ENCI broader than in terms of the manifest, atomistic-individual forms, and acknowledge collective forms of ENCI and embedded energy individuals. This fits with the transactional perspective in social and environmental psychology, which incorporates interactions with the spatial, physical, and material dimensions of contexts as key to human agency and human action (Altman 1992; Bronfenbrenner 1974).

3) **Public sphere ENCI.** The political ideals of energy citizenship – as expressed, for instance, by policy-makers and EU-institutions – seem often to embrace the political agency of individuals and groups within the boundaries of the private sphere. Yet there are also relevant counterparts to this ‘manifest’ side of ENCI. Traditionally, both liberal and civic republican approaches of citizenship consider it even as a strictly public matter – the private sphere has to remain private, and cannot be part of citizen life. ENCI could thus be taken to comprise relatively latent ENCI practices as enacted in the public sphere: Individuals acting on ENCI ideals in schools, or in the workplace - there is also ENCI in universities. Furthermore, also the material side of ENCI gives reason to not confine ENCI to its relatively prominent private sphere manifestations – the very boundaries between public and private spheres are becoming more porous (Van Veelen 2018).

4) **Hybrid sphere agency.** When Devine-Wright (2007) formulated ENCI as a political ideal, it was juxtaposed against the figure of the passive consumer. Along this logic, energy citizenship can indeed be considered the institutional innovation (Ringholm 2022) counterpart to the *business model* innovation that renewable energy prosumerism revolves around (Brown et al. 2020). The view of ENCI as primarily a citizen-state relationship has recently become more prominent as governments are calling upon ENCI behaviours to reduce dependency on Russian exports. Against this backdrop, ENCI as exerted in the hybrid institutional sphere remains relatively latent. It seems important to acknowledge these ENCI forms, however, considering for example how local energy cooperatives are driven by *mixed* motivations and *multiple* institutional logics (Hicks &

⁵ Started up by two social psychologists, the company ‘Bureau Duwtje’ (‘little push’) produces amongst others doormats with the ‘gas free’ welcoming text as seductive message. [Mensen laten doen wat je wil? Draai eens aan één van de vier gedragsknoppen - NRC](#)

Ison 2018). In similar vein, ENCI research should consider how various intermediary actors and boundary spanners are not only supporting ENCI, but also arguably constitute forms of ENCI themselves.

5) **Deep environmental citizenship.** ENCI is often considered as a specific form of *environmental* citizenship. This understanding is prominent in the political programs that consider it a lever towards a transition towards sustainable energy. It is hard to say which forms of environmental citizenship prevail in ENCI discourse – the global consensus on the need for ‘sustainable’ energy hides this from view. Yet what does transpire through the various communications is that ENCI is sometimes taken as *shallow*, and sometimes as *deep* environmental citizenship (Stern 2000). Shallow environmental citizenship lacks the profound shift towards ecocentric worldviews and values. In these shallow forms of environmental citizenship, ENCI stays within the realm of declared intent – the willingness, endorsement and ideological adherence to ENCI ideals as often measured in surveys. Taking ENCI between these shallow forms of declared ideals, we should arguably raise the bar, and limit ENCI to *deep* environmental citizenship (ENCI as principled internalization as environmental impacts). *Yet how high can we raise the bar, given the argued need to disclose the broader range of ENCI ‘below the tip of the iceberg’?*

6) **Transformative involvement.** ENCI is quite commonly taken to refer to a rather pragmatic involvement in the energy system, in which, for instance, joint ownership is viewed as a functional aspect. The policy discourses on ENCI emphasise participation in decision-making processes on energy projects, and various concrete actions – ranging from home insulation to initiatives towards renewable energy prosumerism. These concrete activities can be assessed for their costs and their sustainability impacts. Representing the tangible, consequentialist side of ENCI, these pragmatic forms are prominent in the newspapers (Figure 8). This pragmatic understanding of ENCI is reasonable. Early accounts like Devine-Wright (2007) already characterize ENCI as a shift from ‘deficient’ to knowledgeable, capable, self-organising and practically effective citizens.



Figure 8: Pragmatic involvement in the energy system. Source: le Soir (2021)

Beyond these manifest pragmatic forms there are also less visible counterparts to consider. Armstrong (2020:2) indicates for example that public involvement in the energy system often transgresses the confines of specific projects: *“Instead of looking at an individual project, regulation, or policy in its own right and the local effects, mobilised publics and social movements may approach them from the perspective of broader energy transition goals and climate change.”* Furthermore, Taylor Aiken (2019) highlights how governmental programmes towards energy communities are prone to instrumentalising approaches, neglecting the longing of involved citizens for community, solidarity, authenticity, and for an altogether less rationalist mode of handling energy

provision. In fact, the less pragmatic-utilitarian and more explicitly counterhegemonic forms of ENCI are not that latent anymore: This transformative ENCI has been documented in literatures on grassroots innovation (Smith et al. 2016) and social innovation (Wittmayer et al. 2020), amongst others. What these transformative accounts typically emphasize, is that the decarbonisation targets are not the only thing that matter – and that democratization, justice and reconfiguration of power relations are urgent transformative goals in their own right (Cf. Stirling 2014). In summary, there is thus a broader range of transformation-minded ENCI to take into account – beyond its relatively more visible and visualized pragmatic forms.

7) **Laggards and late adopters.** ENCI, in its various idealised forms, corresponds with the ‘early adopters’ of innovations, the so-called ‘frontrunners’ in transitions, the pioneers, the trend-setting citizens. On the scale of countries, it also appears to refer to the guiding, leading member states in the EU that have somehow ‘advanced’ in developing energy citizenship. The frontrunners and laggards model (Rogers 1983, Cf. Figure 9) is based on postulated psychological features of adopters: Innovators (the first 2.5%) are venturesome, early adopters (the next 13%) are respectable (serving as peers for others), the early majority is deliberate (but less venturesome and less independent than earlier adopters), the late majority (34%) is sceptical and the laggards (16%) are traditional (they are said to possess almost no opinion leadership).

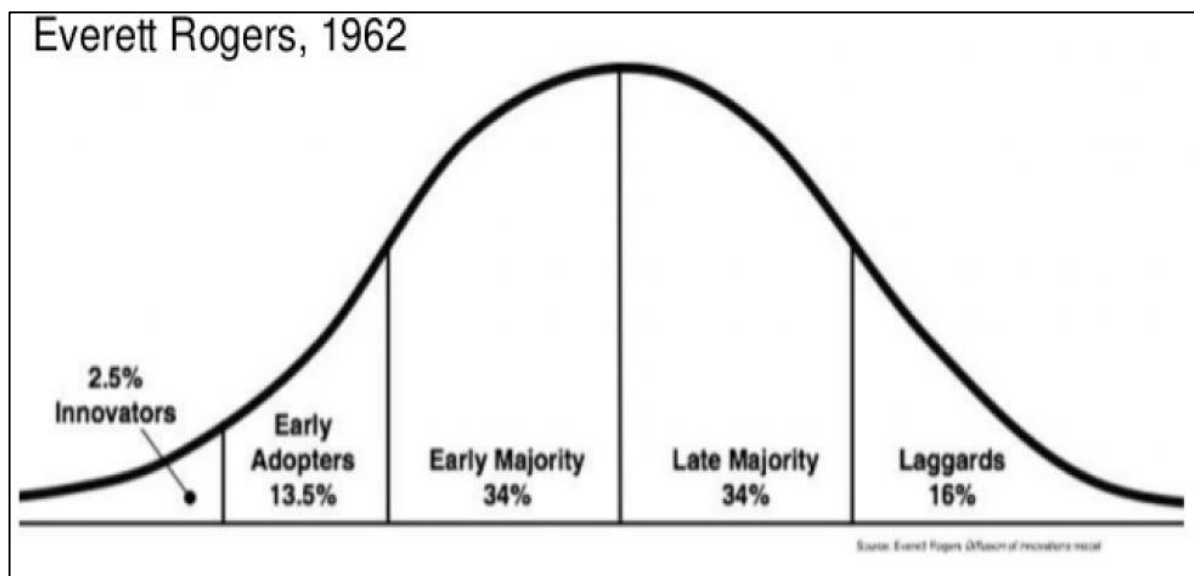


Figure 9: Innovation diffusion and the associated ‘frontrunners’ and ‘laggards’

As indicated earlier, these ‘early adopters’ are the archetypical tip of the iceberg that is systematically over-exposed in innovation thinking (Godin & Vinck 2017). In transition management, these ‘frontrunners’ are considered pivotal trailblazers of transformative change (Loorbach 2010). Yet importantly, this kickstarting role of the ‘frontrunner’ is closely tied to the first phases of transition, ‘pre-development’ and ‘take-off’. Arguably, the energy transition has in various contexts already passed these initial stages (Markard 2018). Geels (2021) therefore argues to direct attention to ‘followership’ rather than leadership. In other words, there are also several *innovation-theoretical* reasons to look beyond the manifest forms of ‘frontrunner’ ENCI. The innovation diffusion bell-curve and the distinctions of transition phases are particularly useful. Locating the manifest ‘tip of the iceberg’ in broader schemes of innovation dynamics, they are one of the advances that

helps with the crucial third requirement for ENCI research: *How to operationalize these critical social-theoretical conceptualizations?*

4 Ideal-types: Cases and conditioning factors

ENCI research requires a normative framework that specifies the political ideals at stake (**section 2**). A critical social-theoretical framework helps to account for the gaps between these ENCI ideals and ENCI practices (**section 3**). But it is important to operationalize these insights in terms of concrete cases, and in observable ENCI agency. For adequate communication on ENCI, we need appropriate and telling examples. For policy, we need heuristics and strategic insight on active, sustainable, or otherwise (by certain normative standards) desirable forms of ENCI. In the end, research needs to identify the key conditioning factors that shape the further evolution of ENCI. The crucial third task for ENCI research is an *empirical-operational framework*. Three key elements of it are typology development, context analysis, and analysis of conditioning factors.

A first important step is *typology development*. This translates the relatively abstract normative and conceptual considerations into more sharp categories of ENCI phenomena. Operationalizing the complex ENCI concept into a set of well-defined and empirically recognizable ENCI ideal-types, typology development prepares for systematic empirical research. In recent years we have therefore seen various attempts to classify ENCI, and adjacent concepts such as public participation and social innovation in energy transitions (Chilvers & Longhurst 2016; Pallett et al. 2019; Wittmayer et al. 2021; Rodhouse et al. 2021; Ringholm 2022; Wahlund & Palm 2022). These studies also show how difficult it is to demarcate and map the ENCI territory, and to systematically account for the ENCI forms below the tip of the iceberg.

Having explored this bottom of the iceberg along 7 key distinctions, we do have conceptual insights about the kinds of ENCI that seem relevant, yet are easy to overlook – especially when limiting our understanding of ENCI to the idealized forms and ‘best practices’ that we find in political visions, innovation programs and LinkedIn communications. We have used the manifest/latent scheme as an *explorative* device: Referring to social constructions, ideologies and perceptions of ENCI, it does not provide a classification scheme for empirical analysis. What it does achieve, is call attention to relevant distinctions and remainder categories. In Debourdeau et al. (2021) we have risen to the challenge of condensing the various ENCI categories into a conceptual typology. This condensation raises questions of conceptual delimitation: *Do we consider ‘passive ENCI’ part of ENCI, or would that overstretch the concept? Shouldn’t we rather limit ENCI to the active forms of it – whilst keeping the analysis of its passive counterparts as analytical reminders of alienation phenomena, empowerment processes and differences in resources?* Although still a conceptual exercise, this typology development also introduced questions of observability: *The seven distinctions make sense conceptually, but how could we tell empirically? Distinctions such as individual/collective or shallow/deep environmental citizenship indicate relevant spectra of ENCI – but can they act as distinctive characteristics of ENCI ideal-types?* Key to the condensation into defining characteristics is that the seven kinds of relatively ‘latent’ ENCI display several overlaps. Accordingly, we have developed a conceptual

typology⁶ along two dimensions of 1) agency (disclosing a range including not only the individual-atomistic but also the organisationally embedded and collective forms of ENCI) and 2) reformative-transformative orientations (covering both the pragmatic/shallow forms as well as the counterhegemonic forms of ENCI, a dividing line that runs through the ethical-political discussions on the topic).

The adequacy of such conceptual typologies depends considerably on empirical testing and refinement. Empirical testing clarifies to what extent the typology discloses the empirical diversity of ENCI, and to which extent it takes us beyond the tip of the ENCI iceberg. Further empirical analysis will also bring out to what extent the set of ideal-types helps to anticipate the emergence of future ENCI forms (ENCI enacted through different forms of agency, for example), and in which ways it clarifies the evolution of ENCI practices: Similar to the ideal-types of Rogers (1962), one can consider how apparent 'laggards' can become 'frontrunners' – and vice versa.

This work towards systematically defined ideal-types calls attention to the societal conditions in which these ENCI forms develop. A second element of an empirical-operational framework is the empirical mapping of ENCI across countries, and the comparative analysis of (more or less favourable) ENCI contexts. The production of such comparative, systematic insight into ENCI contexts is of course a key promise of the European H2020 research program on this topic. Important work on this front has been done already, through national-focused or comparative surveys and context analyses. This clarifies how ENCI is a geographically embedded and politically diversified phenomenon. As indicated in Figure 3, the English-language term is translated and interpreted differently across European contexts. European contexts differ in historical legacies and citizenship traditions, and in energy systems as well– the European-scale ENCI initiative REPowerEU to ban Russian gas runs counter to the latter differences in fossil fuel dependency.

Also in these comparative analyses we encounter the challenge to look beyond the tip of the ENCI iceberg. Empirical overviews of frontrunners (in ENCI, or in renewable energy prosumerism, or in energy communities) abound, and various citizen surveys continue to monitor progress and experienced challenges. The persistent methodological challenge is here that frontrunners tend to *seek* exposure (as part of their attempts to raise awareness and gain support), and that it is relatively much more difficult to recruit 'passive energy citizens' for surveys. Neither do they tend set up websites on their 'passive ENCI' practices, or on their lives as 'laggards' in the energy transition.

Still it is very well possible to chart and analyse how particular ENCI ideals have strong roots in some contexts⁷, and less so in others. It can also be analysed how particular ENCI ideal-types are more prominent - or recognizable – in particular contexts: Energy cooperatives build on different Social Economy traditions across Europe, and in these particular contexts they form regular parts of the institutional landscape already. Likewise, the very individualized forms of ENCI are naturally more prominent in the countries with an individual-focused culture. Comparative analysis can also bring out how the 'frontrunners' are prominent groups in countries in which processes of energy

⁶ The typology will be refined through further empirical and conceptual work. The consolidated version will be disclosed through separate publications. In the context of this paper, the typology construction serves to illustrate the connections between critical social-theoretical and operational-empirical frameworks.

⁷ The project is preparing for a PESTEL analysis of such contextual factors. It is too soon to build on the proceedings – this element of the paper could be elaborated through existing comparative studies on ENCI.

transition are just starting, whilst the followers and ‘laggards’ are gaining more attention in the countries going into the next transition phases of acceleration and stabilization. Such comparisons give a more empirically concrete and diversified insight into the ENCI iceberg: Just as shadows move over the course of the day, it shows how particular forms of ENCI become more and less ‘manifest’ along with changing societal circumstances, inherited political systems and policies with different impacts on ENCI. Or put otherwise, it shows how certain idealized forms and theorized ideal-types may be more relevant in Brussels than they are in the various corners of Europe.

Yet there remains a third element of an empirical-operational framework that is as important as it is hard to achieve. The key question for ENCI research⁸ is arguably the following: *Which conditions are conducive to its flourishing (i.e. its rise and growth)?* This involves ‘distal’ and ‘proximate’ factors. Regarding the ‘distal factors’, the general contextual factors, the aforementioned comparative analyses have already brought forward relevant insights. The German ‘Energiewende’ has been intensively researched, and there is increasing work on the countries that appear to be trailing behind this frontrunner country (in passing, this shows how ENCI research has already started to look beyond the ‘tip of the iceberg’).

Particularly elusive are the proximate factors, the concrete empowerment mechanisms that explain how ENCI can flourish and specify what can be done about it. There are abundant general insights on the usefulness of supporting (socio-economic-legal-technical) structures, ‘intermediaries’, boundary spanners and ecosystems. Yet ENCI is a complex concept, and a very unstable explanandum: *Which kinds of causal linkages to focus on?* The normative and critical social-theoretical frameworks help to specify this search for explanation. Seeking to explain negative and positive outcomes of ENCI processes, a normative framework clarifies what could be considered ‘positive’ and ‘negative’ outcomes, and in which respects. It makes it more transparent that certain ‘positive outcomes’ are measured in line with certain ethical commitments and ENCI ideals, and less so with others. Furthermore, the critical social-theoretical framework provides the continuous reminder that ENCI should not be reduced to its manifest tip of the iceberg. Which conditions are conducive to the flourishing of *which type* of ENCI? ENCI typologies help to narrow down the issue: Analysis could focus on the factors influencing individual ENCI, or ENCI in the context of organisations, or forms of ENCI that are transformation-oriented rather than pragmatic and reformist.

5 Conclusion: Ways forward for ENCI research

Energy citizenship research is in particular need of well-considered, critical research approaches. As indicated, ENCI is both an empirical phenomenon as well as a discourse, a label. As a result, ENCI researchers are at risk of winding up in (and contributing to) an echo chamber of normative calls for ENCI, empirical observations of ENCI, mappings of ENCI, explanations of ENCI, policy instruments for ENCI - and on each occasion ENCI means something different. We have proposed to untangle, or deal with, this label/empirical phenomenon duality by describing three frameworks that are needed for ENCI research:

- 1) A **normative** framework that specifies the associated ethical commitments,

⁸This is the main question for our project, but also for the research program and policy context that it forms part of.

- political ideals and actors;
- 2) a **critical social-theoretical** framework that clarifies the gap between these ENCI ideals and ENCI practices;
 - 3) an **empirical-operational framework** that elaborates the above two into observable ENCI phenomena, and into systematic insight on the societal conditions that shape them.

Developing these frameworks for our own ENCI research, we have arrived at the following working definition: *“Energy citizenship refers to forms of civic involvement that pertain to the development of a more sustainable and democratic energy system. Beyond its manifest forms, ENCI also comprises various latent forms: it is an ideal that can be lived up to and realised to varying degrees, according to different framework conditions and states of empowerment.”* (Pel et al. 2021: 64).

This definition summarizes, first, how ENCI is in the political-normative aspect not an empty buzzword term. On the contrary, it appears to be a relevant term for various people and organizations involved in the energy transition. It forms a crossroads of political ideals. Second, the definition explicitly reminds of the various ‘latent’ forms that can be discerned beyond the manifest (active, individual, pragmatic, etc.) forms. This critical-theoretical consideration of ENCI ‘beyond the tip of the iceberg’ applies the critical innovation thinking of Godin & Vinck (2017) and the account of latent political participation by Ekman & Amnå (2012) to a topic where it seems particularly needed. Third, the normative and critical-theoretical insights are captured in the differentiating, conditional expression that the enactment of ENCI depends on different framework conditions and states of empowerment. Analytically, this emphasises the importance of solid research into these framework conditions. Ethically, this is an inclusive definition: It acknowledges that ENCI cannot be simply presupposed or demanded, given unequally distributed resources, capabilities and contextual conditions. The potentials of energy citizenship are recognised in the literature (and by governments), but according to Deflorian (2021) this may hide from view structural constraints to transformative change. Rather than prefiguring system change, it can also introduce illusions of power.

We do not want to insist on any particular definition of ENCI. For example, it can also be defined more straightforwardly as *‘people’s rights to and responsibilities for a just and sustainable energy transition’* (Hamann et al. 2021:72). By contrast, Montalvo et al. (2021:21) are less specific about the essence of ENCI, underlining more the processual aspect of how *‘energy citizens can transition between engagement levels’*. This shows how one can start ENCI research from either of the three normative, critical theoretical or empirical-operational frameworks.

But whatever way one defines and investigates ENCI, in any case it is essential to develop the three indicated frameworks to *some* degree, and with some coherence between these frameworks⁹. If not, ENCI research falls back into distant critiques (lacking operationalization), politically naive instrumentalism (overlooking how ENCI forms a crossroads of different ethical commitments and political ideals), or empirical overviews that do not do justice to the diversity of ENCI practices underneath the tip of the iceberg.

⁹ Ideally, EnergyPROSPECTS will at its conclusion be able to specify its particular ways of achieving such coherence, and to visualize it in a conceptual diagram.

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