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Conceptual Typology: Key insights for EnergyPROSPECTS Project

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Summary

This deliverable elaborates the fundamentals of the conceptual framework (D 2.1) into a conceptual typology of energy citizenship (ENCI). This document provides a background report on the process of grouping the key conceptual distinctions of ENCI into empirical observable analytical categories. This report synthesises the extended version of the report and especially the main methodological steps and related definition process that led to the elaboration of the ten ideal-types of ENCI. This innovative conceptual typology captures the breadth of energy citizenship in terms of conceptual forms, thus encompassing both existing and possible types. The typology will be modified or refined according to the project's forthcoming empirical results (WP3-6).



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1 Introduction: an iterative typologisation

Within the EnergyPROSPECTS proposal, the typology has been conceived as an iterative process at the junction of conceptual WP2 and empirical WP3, as the proposal's depiction and the figure 1 above underline:

Task 2.2 according to the EnergyPROSPECTS Proposal

“This task elaborates, systematises and operationalises the key conceptual distinctions into empirical observables and examples, analytical categories, and sensitising concepts – with as key task the development of a conceptual typology that captures the main theoretical dimensions. This provides inputs for further empirical analyses (WP3-6) and for activities in dissemination (WPs 1 and 7). This involves an elaboration of the conceptual framework in terms of:

- (a) relevant ideal-types and empirical manifestations,
- (b) case demarcations (temporal/ geographical/ functional scope),
- (c) relevant units of analysis and processes, and
- (d) relevant impacts pertaining to sustainability as well as energy justice.

The conceptual framework also indicates:

- (e) the range of relevant contextual constraints and conditions that shapes energy citizenship (as unpacked into a coherent set of well-defined and recognisable ideal-types). Specifying the resources and contextual constraints shaping particular types of energy citizenship, the conceptual framework also supports differentiated and tailored development of instruments and dissemination (informing WP 4, 5, 6 and 7).”

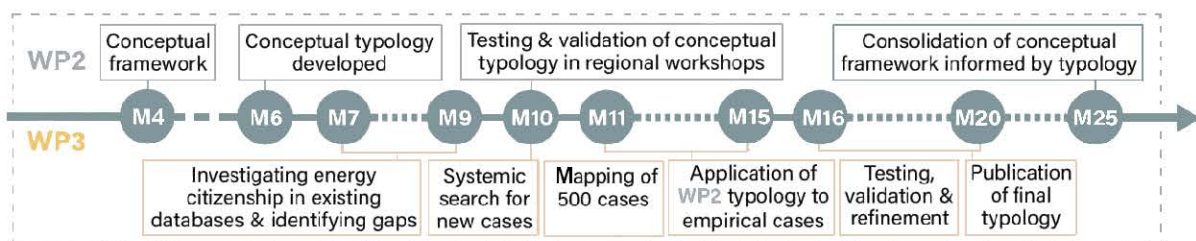


Figure 1: Iterative typology development process informed by theory and practice

Conceived as the second step of conceptualisation towards empirical work, this first draft of the typology is primarily shaped by the conceptual framework and especially its delineation of the concept of energy citizenship to be used in the EnergyPROSPECTS project. To address the heterogeneity of citizens' involvements within the energy system and its transformation, the approach adopted within WP2 relies on this definition resulting from the general conceptualisation task, i.e.:

“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, energy citizenship (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)

In accordance with the conceptual framework elaborated in the D 2.1, the typology seeks to derive from the key conceptual distinctions to analytical types and categories that account for the multiple forms of energy citizenship (ENCI). As such, the typology intends to fit the core principles of a typology, defined as “an organised system of types that breaks down an overarching concept into component dimensions and types” (glossary attached to Collier *et al.*, 2012). At the same time, this typology development entails a “prospective” intention: following Pallett *et al.* (2019) in their proposition for an innovative way of mapping participation in the energy system, the process of elaboration of this typology pursues three main aims: first, providing a broad view on the diversity of forms through which ENCI may come to reality; second, endorsing an open approach of the ENCI, that welcomes also unexpected forms or outcomes related to ENCI; third, a willingness to improve the understanding of a current reality, and to contribute to strengthening energy citizenship by underlining some emerging possibilities.

The EP typology takes up the preliminary definition of a case of ENCI “as any form of individual or collective practice through which citizens engage with a particular part of the energy system or a direct energy-related issue” (adapted from Pallett *et al.*, 2019). This provisional definition — which WP3 D 3.1 will revise and stabilise — enables a broad and open view on the multiple forms ENCI may take, even beyond the empirically-feasible case studies¹, while avoiding the trap of an empty shell (or a buzzword).

Relying on the vision of active (and less-active) citizenship and on the many components and distinctions used for differentiation of ENCI in D 2.1, the purpose of the following typology is to circumscribe in both a rigorous and creative way the main dimensions of ENCI and the components and categories specifying each dimension.

A typology refers to an “organised system of types” with the purposes to (a) increase complexity in making heterogeneity explicit (which works against stereotype-based forms of thinking and analysis) and – at the same time – (b) reduce complexity in breaking down the variety to a number of distinct cases. Both exercises have value. The motives, generating process and shaping factors are likely to differ across types as something to uncover. But

¹. Both the conceptual framework and the typology intend to account for a broad range of possible ENCI forms, exceeding the scope that can be covered in the empirical studies, for various pragmatic reasons such as private-individual practices within households, that can hardly be investigated outside of a dedicated project.

when doing this, one should be aware that not all diversity can be fully considered because of the complexity reducing element. The typology developed here, as Collier, LaPorte and Seawright (2012) pointed out, aims at contributing to various “analytic tasks:

- forming and refining concepts,
- drawing out underlying dimensions,
- creating categories for classification and measurement,
- and sorting cases.”

The EnergyPROSPECTS typology intends to undertake these tasks and to support a discussion about ENCI in which ideals, empirical forms, and variations are clearly distinguished from each other, as well as to refine the conceptual framework developed in Deliverable 2.1, deciphering the underlying dimensions and relevant categories, through constant go-and-return between conceptual and empirical work.

Aimed at developing a conceptual typology, deliverable D 2.2 first introduces briefly the general characteristics of conceptual typologies as well as the key terms and outputs it provides. Then it presents the process set up to develop a typology of ENCI, and explains and exemplifies the resulting ideal-types. It concludes with some key remarks on the contribution of the typology to the empirical investigation and on the difficulties and challenges for the forthcoming ENCI analyses.

Disclaimer: This document synthesises the main results from the typology elaboration process which have been used for the rest of the project. Page numbers indicated next to the figure or table numbers are corresponding to the quoted pages from the extensive version of this synthesis.

2 Key inputs informing the typology development

Next to the literature on the theoretical approaches of typology development, the methodological background consists of various sorts of inputs:

- the conceptual framework as the core of the typologisation process;
- insights on the team's orientations and main concerns through a collective brainstorming;
- additional insights from literature on approaches of energy democracy and justice;
- a first validation check with a first collection of cases.

The inputs of the conceptual framework, the brainstorming and the validation check will be described in the following paragraphs, the insights from additional literature review.

2.1 Conceptual framework

The conceptual framework elaborated in the D 2.1 provides consistent insights into the problematisation of energy citizenship that will drive the EnergyPROSPECTS project in general, and the conceptual typology in particular.

As a research object to be built, ENCI has been captured as a multifaceted political ideal, encompassing a series of key distinctions (or dichotomies). Adapted from D2.1, the Figure 2 synthetises the conceptual framing and its seven distinctions, which form the basis for the typology development.

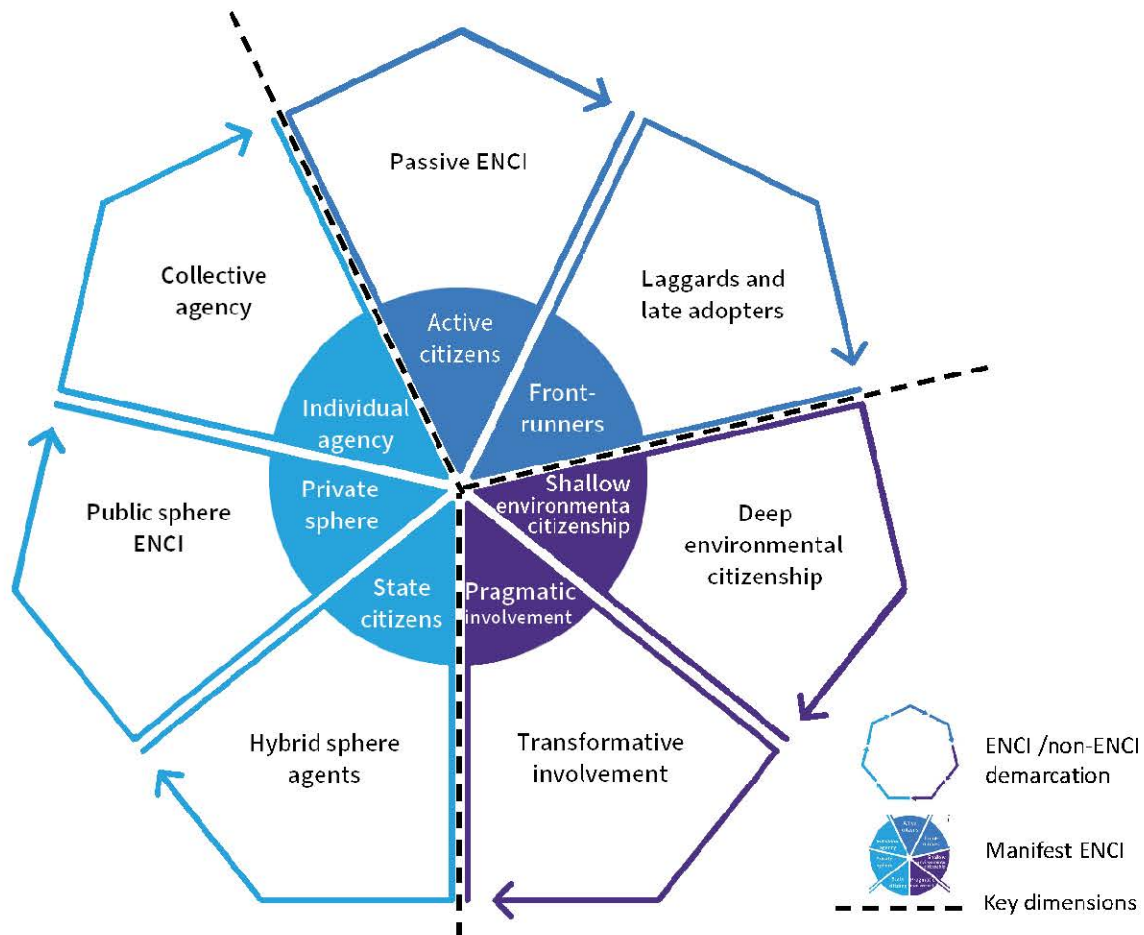


Figure 2: ENCI Overview: Manifest/latent forms and key dimensions
(from Pel et al., 2021:61 and adapted by A. Debourdeau, 2023)

It is noticeable here that the “latent” and “manifest” forms of ENCI represent a flexible yet transversal differentiation that encompasses all the seven distinctions through which the concept of ENCI has been unpacked. Though not composing a dimension of ENCI, the latent or manifest character of ENCI is seen as an important modulation factor that shall be kept in mind, especially when deepening the analysis of cases in the empirical phase and looking for trajectories between latent and manifest forms. And all the more since the resulting demarcation between ENCI and non-ENCI seems flexible as well, as represented by the dotted line running across the many latent forms of ENCI.

The conceptual framework, which outlines various distinctions, provides a large “space of attributes” to be reduced. Based on the described methodological steps and a preliminary check with empirical cases, a transparent reduction process was possible.

2.2 EnergyPROSPECTS collective brainstorming

WP2 team used the opportunity offered by the July 2021 EnergyPROSPECTS monthly meeting to carry out a quick brainstorming with all the project partners devoted to the delineation of ENCI key criteria and core problematics. The purpose of such “brainstorming” was not to contribute to the theoretical work on ENCI as such, but to provide a better understanding of the concerns and perspectives that matter within the consortium. This brainstorming which collected “immediate associations” of the EP team members with ENCI², resulted in some valuable insights for the conceptual framework and the conceptual typology development.

- Within the conceptual framework, it influenced the idea that ENCI should not be defined in “neutral” terms, but that there are certain ethical commitments and political ideals (energy democracy as a key concept that captures many of them) that are essential for the conceptualisation of ENCI.
- Within the typology, it strengthened the idea that the variety of forms of participation (based on the related concepts of energy democracy and energy justice) should serve as a core aspect of the type description.

Moreover, the importance devoted to decision-making processes underlined a strong linkage between citizenship and democratic ideals, at least with regard to political theory approaches of democracy. According to those approaches, democracy mostly implies a focus on the procedures and mechanisms associated with decision-making (Van Veelen, 2019). This aspect is reinforced by the very content of the problematics associated with ENCI – and especially all concerns regarding energy justice, energy inequalities, poverty and environmental citizenship –, thus converging towards problematics that are associated in many studies around “energy democracy”. This points out heuristic linkages between ENCI and energy democracy issues (Van Veelen, 2019), but also the necessity to be aware of the challenges associated with such a slippery term as “democracy”.

2.3 A first empirical validation check

A first overview of the empirical breadth of ENCI resulting from a first collection of more than sixty cases (mostly in the German context)³. Aimed at providing an overview to support typology development, these sixty cases have been collected before the

². On that purpose, all the attending team members were asked to fill in sticky notes with the criteria and problematics that they consider as essential to understand energy citizenship within the project. At the end of the item collection, they were all asked to vote for the points they consider as the most fundamental.

³. The many case studies realised in France and Belgium during the last decade by the first author of this deliverable have been also mobilised as a complement to the German cases, notably to underline some country-specific aspects.

achievement of the conceptual framework; thereafter, their relevance has to be checked accordingly. From a methodological point of view, the sampling of cases was based on the various examples of possible ENCI mentioned in the EnergyPROSPECTS proposal, which were extended along the case collection process. The cases were shortly described in terms of type of actions and objectives, and ordered in several intuitive categories⁴. The German cases from the H2020 Energise Project were added in the database (extending it to about 130 cases). One important practical application of the eventual typology will be to facilitate dialogue across the various empirical investigations on ENCI and related topics. For now, this first sample of cases has been notably used to realise the first validation check of the matrix.

Figure 3 summarises the core role played by the conceptual framework, and the additional information that has been mobilised to enable the typologisation process.

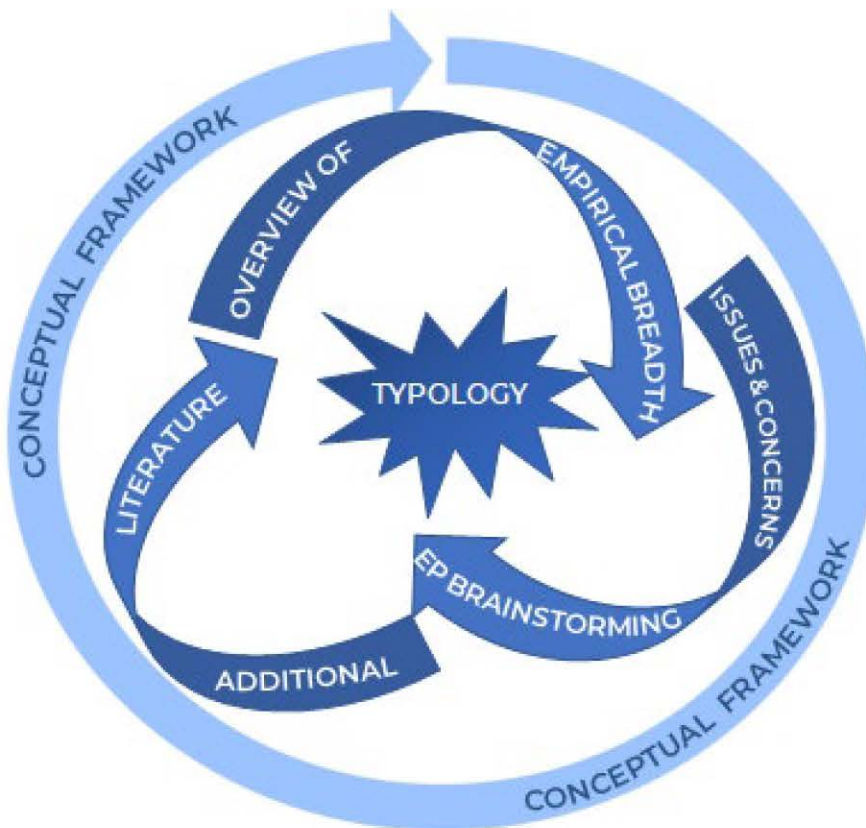


Figure 3: Knowledge inputs which informed ENCI typology development

⁴. These categories are: networks, initiatives and projects, short time experiences, individual initiatives, living labs, business-related projects and protest movements.

3 Typologisation process

Following Collier *et al.*'s template for the elaboration of conceptual typologies, the ENCI typologisation process is characterised by the following building-blocks that are summarised below.

Overarching concept: the concept of energy citizenship (first order construct), resulting from the combination of attributes (latent and manifest forms, seven distinctions) identified within the conceptual framework.

The key dimensions (second order construct) which result from the overarching concept of energy citizenship and the distinctions that were outlined in the conceptual framework (Deliverable 2.1). In a conceptual reduction process, these distinctions are assigned to two key dimensions: ENCI “agency” and “outcome orientation” (figure 4).

Variables (or dimensional attributes): The variables are cross-tabulated to form a matrix.

The dimension “agency” is first decomposed in the attribute “individual” and “collective”, and the two attributes are further differentiated to form five categories of agency:

Three on the individual side: 1. private; 2. organisationally embedded; 3. public.
Two on the collective side: 4. citizen-based or hybrid; 5. social movements.

The dimension “outcome-orientation” is described along two poles:

Reform-oriented / reformative orientation (pragmatic and incremental change resonance), low energy democracy, shallow environmental sustainability.

Transformation-oriented / transformative orientation (radical change resonance), high energy democracy, deep environmental sustainability.

The matrix: This cross-tabulation creates a 5×2 matrix (cf. *infra*).

The types: The ten forms of engagement located in the resulting cells are corresponding to ten ideal-types of ENCI, of which they collectively provide a conceptually exhaustive picture.

3.1 Reducing the conceptual framework’s “space of attributes”: synthetic diagram

Figure 4 gives an overview of the reduction process that was carried out to identify the two key dimensions of the typology based on the seven distinctions of the conceptual framework. The distinctions were categorised as describing either characteristics of “agency” or “outcome orientation” and the related attributes were reduced and assigned accordingly.

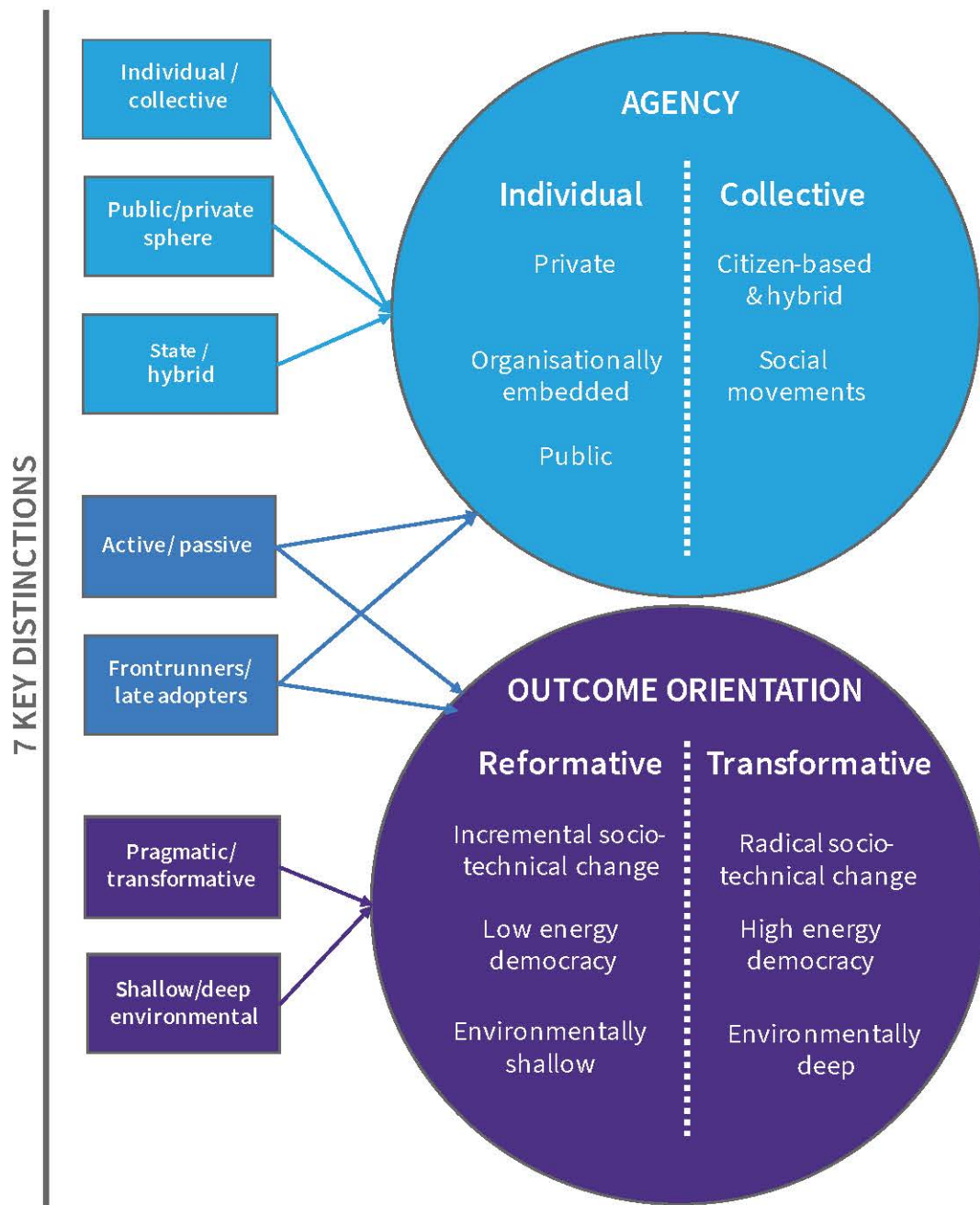


Figure 4: Reduction process: from seven distinctions to the two key dimensions of the typology

3.2 Two main dimensions: Agency and outcome-orientation

3.2.1 Agency

Table I [p23]: Operationalisation and examples of the categories composing the agency dimension

AGENCY	CATEGORY	OPERATIONALISATION	EXAMPLES
INDIVIDUAL	PRIVATE	Energy practices within the household	Change in energy practices (e.g., energy saving habits, prosuming, using smart appliances).
	ORGANISATIONALLY EMBEDDED	Energy practices outside of the household (workplace, school)	Behavioural change within the organisation Change of organisational purpose
	PUBLIC	Energy practices within the public sphere	Participation in public consultation for RES projects
COLLECTIVE	CITIZEN-BASED AND HYBRID	Energy practices of collectives whether citizen-based or composed of heterogeneous actors (hybrid)	Grassroot initiatives Local RES projects that are initiated by citizens or in which citizens can acquire shares
	SOCIAL MOVEMENT	Energy practices of collectives composed primarily of citizens following innovative socio-political and sustainable energy targets	Trade Unions, NGOs Climate activists, protests against new power lines or renewable energy projects

3.2.2 Outcome-orientation

Table II [p.29]: Operational definitions of the outcome-orientations

OUT- COME- ORIENTA- TION	ASSOCIATED OUTCOMES	OPERATIONAL DEFINITION
REFORMATIVE	INCREMENTAL SOCIO- TECHNICAL CHANGE	Corresponding to the “pragmatic” ENCI, this form of change is principally system-compliant and relies on the adoption of new technologies and behaviours to turn the passive consumers into active ones to achieve transition purposes. Energy is still viewed as a commodity: supply, demand, and price remain its main properties, and choice, individualism, private sector-orientation compose its central values.
	LOW ENERGY DEMOCRACY	Centred around top-down forms of energy democracy (information, campaigns, “invited” forms of participation, minority shares), in which the citizens do not control or govern the energy system. Poverty, gender or inclusiveness issues are subsumed under the citizen-as-consumer figure (Devine-Wright, 2007; Lennon <i>et al.</i> , 2020).
	SHALLOW ENVIRONMENTAL SUSTAINABILITY	Environmental issues are dealt with in a superficial way, focusing mostly on efficiency, incentives and regulatory measures. In the shallowest forms, environmental issues are not addressed as such but somehow taken for granted, as a positive externality of the functioning of energy markets (ecological modernisation).
TRANSFORMATIVE	RADICAL SOCIO- TECHNICAL CHANGE	In line with the “transformative ENCI” described in the conceptual framework, the main views on energy, the social, economic and power structures of the energy system are contested by citizens who incline to change it radically. Energy is ideally seen as a common: accessibility, affordability, common property are its main properties, and participation, community/ collective forms and public interest are its central values.
	HIGH ENERGY DEMOCRACY	Centred around bottom-up or grassroots forms of energy democracy (“invented” forms of participation, cooperatives), in which the citizens control and govern effectively the energy system. Poverty, gender and inclusiveness issues are taken into account as part of the transformation process. Issues of energy justice – integrating the needs of disadvantaged groups in North and South – are an integral part of an engagement that aims for high energy democracy.
	DEEP ENVIRONMENTAL SUSTAINABILITY	Environmental and climate issues are considered as core aspects of ENCI engagement. Outcome-orientations are framed in terms of meeting climate targets, staying within environmental limits, shifting to sustainable modes of living, e.g., by combining efficiency, sufficiency, and consistency approaches (Vadovics and Živčič, 2019).

3.3 Matrix: Configuration and variations

3.3.1 Configuration of the matrix

On the basis of the merging process and elaboration of the two dimensions, the latter have been crossed, resulting in the following matrix (Table III):

Table III [p. 30]: Matrix configuration

OUTCOME-ORIENTATION	AGENCY				
	PRIVATE	INDIVIDUAL ORGANISATIONALLY EMBEDDED	PUBLIC	COLLECTIVE CITIZEN-BASED AND HYBRID	SOCIAL MOVEMENTS
REFORMATIVE INCREMENTAL CHANGE LOW ENERGY DEMOCRACY SHALLOW ENVIRONMENTAL SUSTAINABILITY	Type 1	Type 3	Type 5	Type 7	Type 9
TRANSFORMATIVE RADICAL CHANGE HIGH ENERGY DEMOCRACY DEEP ENVIRONMENTAL SUSTAINABILITY	Type 2	Type 4	Type 6	Type 8	Type 10

Each type has to be considered as a *form of engagement* that is describing a specific mode of energy citizenship and encompasses more “latent” or “manifest” forms that can only be detected empirically. The outcome-orientation dimension consists of a bundle of attributes that points out the existing “poles”. It does not account for the variations and degrees the two outcome-orientations may take, which are summarised in the following table IV.

Table IV [p. 31]: Variations and degrees of ENCI outcome-orientations

DEGREE OF	LOW	MEDIUM	HIGH
PERSONAL & IDENTITY ENGAGEMENT	Citizens devote little attention and time to energy matters, which are subsumed under other concerns (e.g., financial, reputational). There is a limited connection between climate-energy issues and individual identity.	Citizens' involvement remains limited (in terms of duration, intensity of engagement, initiated actions), thus inducing some identity forming aspects but not to the point of becoming a significant part of it, citizens can consent to one-shot engagement (e.g., buy cooperative shares).	The personal involvement in terms of time and intensity are high, and the belonging (to the project, social movement, community initiative, group, etc.) is strong enough to become part of one's identity.
CONTESTATION OF CURRENT ENERGY SYSTEM	Citizen involvement/action is essentially system-confirming, which means that citizens generally go along with the basic structures of the energy system.	Some system-contesting aspects are part of the process, yet not really appropriated by citizens or considered as a full part of their involvement. Contestation of the system remains "idealistic" or even "utopic", and is not really meant to come into being.	Citizens are committed to deeply renew and restructure the energy system, toward a more democratic and sustainable one. Narratives, actions and proposals are part of the contestation of the dominant system, and result in critics and protests against energy policies and actions as well as in forms of engagement that aim at fundamental changes (e.g., achieving autonomy).
EFFECTIVE CITIZEN POWER/ CONTROL	When expressed (e.g., within "invited" deliberative processes), citizens' voices remain hardly heard or taken into account. Being a minority, citizens' voices do not really count or in a voting process, the framings tend to limit the possibility of expressing an opinion.	Citizens can express their views, but their voices are not compulsory (within deliberative, representative or consultative processes). Within organised / participative structures, citizens remain a minority group, i.e., unable to impose their views to other groups.	Citizens exert the effective control, and their votes are mandatory. This governance takes place mostly in an "invented" process (as opposed to "invited" ones by Radtke <i>et al.</i> , 2020). Citizens represent a majority group, empowered enough to control the process, and thus make their voices predominant.
JUSTICE/ EQUITY	Justice or equity are essentially out of scope, or restricted to equal access to markets.	Equal access is granted to all concerned citizens, but the framings tend to limit them to a certain geographical area or amount of financial contribution, which does not guarantee "real" equity.	Involvement is fully open, without specific belonging conditions. Issues such as energy poverty, gender and inclusivity are taken into account and foster adaptative measures to guarantee more equity.
ENVIRONMENTAL SUSTAINABILITY	If given any consideration, environmental sustainability issues are mostly seen as self-evident and not explicitly taken into account. In the lowest forms, environmental sustainability tends to be dealt with as a positive or negative externality.	Environmental sustainability is part of the process or initiative, but this concern is addressed in a superficial way (focus on efficiency strategies) and without dedicated assessment. Energy remains the main focus.	Environmental sustainability is a core issue, which is followed with a holistic strategy (mix of efficiency, consistency and sufficiency measures). Its assessment through indicators is seen as desirable.

3.3.2 First validation test

The first validation test aims at assigning cases to each combination of attributes and compare them with each other in order to check the consistency of the matrix configuration.

On the basis of the two dimensions described above, the matrix was tested by checking whether forms of engagement that can be found empirically, correspond with the outlined categories. The cases mentioned are directly inspired by a preliminary collection of German cases.

The ten cells delineated by the matrix could quite easily be filled with some of the cases collected mostly in Germany. Many other cases of the sample could as well be associated with only one of the cells, which tends to confirm that the matrix allows the identification of independent types. Indeed, for each cell — i.e., on the level of the type —, the cases collected tend to resemble each other to a large extent, whilst the high heterogeneity between the types is confirmed on the level of the typology.

Some other empirical cases seem to be a mix of at least two of the ten ideal-types, which also confirms the relevance of the types (further validation relies on more extensive empirical investigations).

This first test can be seen as a step for further development of our conceptual typology, and not as any sort of empirical validation. The empirical validation of the typology requires a much-elaborated methodology and a structured validation process which will be undertaken in WP3.



Table V [p. 33]: Testing the matrix by exemplifying possible forms of engagement

OUTCOME-ORIENTATION	AGENCY				
	INDIVIDUAL			COLLECTIVE	
	PRIVATE	ORGANISATIONALLY EMBEDDED (WORKPLACE)	PUBLIC	CITIZEN-BASED AND HYBRID	SOCIAL MOVEMENTS
	Manifest and latent forms can be differentiated				
REFORMATIVE INCREMENTAL CHANGE LOW ENERGY DEMOCRACY SHALLOW ENVIRONMENTAL SUSTAINABILITY	<ul style="list-style-type: none"> - Adoption of more efficient practices - Replace appliances by energy saving ones - Prosuming - Change to a 100% renewable energy provider 	<ul style="list-style-type: none"> - Adoption of new internal rules for saving energy at the workplace - Employees or students financing a solar installation at their workplace/ university 	<ul style="list-style-type: none"> - National events such as the 2020 French Citizen convention for climate - Citizen consultation (often legally mandatory), e.g., for the implementation of a wind farm in communal areas 	<ul style="list-style-type: none"> - Local renewable energy utility with public-community co-ownership, such as in Wolfhagen Stadtwerke (25% citizen share) - citizens minority share owning in a wind or solar farm project 	<ul style="list-style-type: none"> - “Debating the power grid” (<i>Bürgerdialog Stromnetz</i>), initiated by ngo/ npo such as Germanwatch - Renewable grid initiative
TRANSFORMATIVE RADICAL CHANGE HIGH ENERGY DEMOCRACY DEEP ENVIRONMENTAL SUSTAINABILITY	<ul style="list-style-type: none"> - Autarky-oriented housing (individuals and group of individuals) - Self-sufficiency oriented practices 	<ul style="list-style-type: none"> - Individuals working for climate or energy communities - Individuals involved in hybrid companies, such as Naturstrom in Germany 	<ul style="list-style-type: none"> - Vote at a referendum on the energy policy (nationally, regionally or locally) - Vote locally for a specific project 	<ul style="list-style-type: none"> - Active energy communities (citizen majority shareholding) - Energy cooperatives 	<ul style="list-style-type: none"> - Friday for future, Extinction Rebellion - Anti-nuclear movements - Protest against renewable energy projects or new power lines

4 Ten provisional types of ENCI

In this third chapter, the ten types resulting from the matrix are described and — if possible — exemplified, in order to provide a robust basis for empirical investigations and critics.

In accordance with typology theory, these ten types are mutually exclusive and exhaustive. However, each type entails a large range of possible actual configurations and situations that compose a sort of type-specific continuum (which must be explored further and described through empirical case studies). This type continuum often extends to various latent forms of ENCI, as counterparts of the manifest forms (as described in the conceptual framework). Those latent forms can be identified more clearly and described based on empirical analyses.

Table 6 on the next page summarises the ten types in a synthesising overview.

The types are then described alongside the main attributes that have been outlined in chapter 2.

Table VI [p. 35]: Overview of the ten ENCI types

OUTCOME-ORIENTATION	AGENCY				
	INDIVIDUAL			COLLECTIVE	
	PRIVATE	ORGANISATIONALLY EMBEDDED (E.G. WORKPLACE)	PUBLIC	CITIZEN-BASED AND HYBRID	SOCIAL MOVEMENTS
	Manifest and latent forms can be differentiated				
REFORMATIVE INCREMENTAL SOCIO-TECHNICAL CHANGE LOW ENERGY DEMOCRACY SHALLOW ENVIRONMENTAL SUSTAINABILITY	1. DO THEIR BIT (in the household) Complying with the green energy transition	3. DO THEIR BIT (within organisations) Energy citizenship within organisations	5. MAKE THEIR VOICE HEARD Participating in societal energy discussions	7. DO THEIR SHARE Joining green energy projects	9. DO THE JOB Facilitating the energy transition through alignment activities
TRANSFORMATIVE RADICAL SOCIO-TECHNICAL CHANGE HIGH ENERGY DEMOCRACY DEEP ENVIRONMENTAL SUSTAINABILITY	2. DO THEIR OWN (in the household) The change-making energy citizen	4. DO IT THEIR WAY (within organisations) The energy-related change maker in organisations	6. MAKE THEIR VOTE COUNT Mobilising votes for energy transition	8. GO AHEAD Building, expanding and linking citizen-based organisational forms	10. MAKE THEIR CLAIMS Protesting against the current energy system



Figure 5 [p. 58]: Exemplary illustration of the ten types of ENCI

TYPE 1: “DO THEIR BIT (IN THE HOUSEHOLD)”

Complying with the green energy transition

Agency

Type 1 refers to individuals who try to “do their bit” by changing their individual practices and equipment in their household towards more energy efficiency and/or prosuming. Type 1 encompasses passive as well as more active energy citizens (see below) and frontrunners (e.g., smart technologies user) as well as late adopters.

Personal and identity engagement

This type may be fostered by various form of concerns and motivations that do not belong to ENCI as such. The individualistic forms of engagement encompassed in type 1 entangle energy transition issues with various other sorts of concerns (that may even predominate), ranging from narrow to enlightened self-interest (on the narrow side: financial/economic ones; on the enlightened self-interest: related to health, e.g., desire for cleaner air).

Outcome-orientation

Rooted in the private sphere, this type of engagement takes mostly the form of a “compliant participation” and often reacts to “top-down” public or NGO-led campaigns and other sorts of information. These activities aim at reforming the energy system by targeting the “citizen-as-consumer” and turning the passive consumer into a more active one, by e.g., enhancing the acceptance for energy saving technologies or “low cost” change of behaviour.

Reformative Incremental change

Rooted in the private sphere, this type of engagement takes mostly the form of a “compliant participation” and often reacts to “top-down” public or NGO-led campaigns and other sorts of information. These activities aim at reforming the energy system by targeting the “citizen-as-consumer” and turning the passive consumer into a more active one, by e.g., enhancing the acceptance for energy saving technologies or “low cost” change of behaviour.

Consequently, this type 1 of ENCI results from the various possible modes of conformation to emerging / new social norms, normality and constraints associated with mainstream energy transition. Compliant individual citizens become involved in transition processes in an atomistic way, and the energy transition process is

Confirmation of the basic principles of the current energy system

Confirmation of the basic principles of the current energy system

*Low energy democracy
Empowerment*

Energy justice

Environmentally shallow

Examples

resulting from the aggregation of these separate entities, limiting the induced change potential to incrementalism.

Considering its confirmative-reformative features, the “do their bit” type does not question the basic structural characteristics of the current energy system.

This type of involvement is associated with a low level of energy democracy: individualised citizen’s engagement is limited to the small to medium changes of practices in the private sphere, not encompassing empowering participation beyond the household.

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Questions of energy justice do not necessarily play a major role in the engagement of this type. However, there are certain campaigns / activities that combine the issue of saving energy with social questions (e.g., support for low-income people to reduce their energy costs).

In line with the low level of engagement, the degree of commitment to environmental sustainability is variable but mostly shallow, when existing. Engagement is mostly aimed at increasing energy efficiency and/or providing renewable forms of energy, which encompasses the risk of rebound effects. More fundamental sufficiency-oriented practice changes are less prominent in this type.

Type 1 can be found on a whole continuum, from the most latent forms (i.e., the passive energy user that makes a tiny step toward more efficiency) to more committed ones (i.e., user equipped with smart meter and appliances) up to the most manifest and visible ones (i.e., the prosumer, for which environmental and energy issues may play a role alongside considerations of efficiency and financial opportunity). This type is particularly manifest through the visible “pragmatic” energy citizens. Some examples of type 1 are:

- Individuals changing their energy consumption behaviours and practices in the household (energy

- savings, more energy efficient appliances and careful attention to energy uses and dissipation).
- Prosuming (through e.g., installation of solar panels on the rooftop, mostly connected to the grid).
 - Use of feedback devices to monitor one's consumption (smart metering).
- Use of nudges and other gamifications to increase energy efficiency at home.



TYPE 2: “DO THEIR OWN (IN THE HOUSEHOLD)”

The change-making energy citizen

Agency	Type 2 refers to individuals who make the choice to “do their own” in their household as a form of engagement toward energy transition, notably by seeking ethical consumption as well as conscious energy choices such as self-sufficiency or even autarky to complement energy efficiency practices. This type tends to include a higher share of active energy citizens and frontrunners for a more fundamental energy transition.
<i>Personal and identity engagement</i>	Thus, this form of individual ENCI commitment implies a high degree of personal, affective and identity engagement, since it relies on a broad set of alternative practices towards more sustainable lifestyles, from energy production/ consumption, to mobility, to food practices.
Outcome-orientation	If deployed in the private sphere, this type of engagement is mostly rooted in a sociotechnical environment that enables such individualised “bottom up” and alternative practices aimed at departing themselves from the citizen-as-consumer scheme.
<i>Transformative Radical change Contestation of the current energy system</i>	Consequently, this type refers mostly to transformative forms of individual engagement in the energy transition, that are meant to break radically with the current centralised energy system. Reflecting upon their role as individuals in the energy system, those individuals are attempting to act accordingly (for instance, by opting for off-grid energy systems).
<i>High energy democracy Empowerment Energy justice</i>	The degree of energy democracy associated with this type is noticeably higher than for type 1. Indeed, seeking for more autonomy and self-sufficiency implies a high degree of self-empowerment, and radical choices in terms of allocation of financial resources and capabilities. In that respect, this type cannot be strictly “individual”, but refers more to a “libertarian” view, that is not mainly driven by individualistic concerns. Also, it includes individuals who contest the current consumption-based economic system and are concerned with the social effects of such a system.
<i>Environmentally deep</i>	Similarly, the adoption of proactive and self-sufficient

practices in type 2 is largely induced by a high level of awareness of the ecological limits and the need for more far-reaching changes of the production/ consumption patterns. Individuals see themselves as part of structural changes towards a more resilient, flexible and controllable energy system linked to the visions of “small is beautiful” and “soft technologies”.

Examples

Some examples of type 2 are:

- Autonomous / self-sufficient housing (combining off-grid energy sources and storage technologies).
- Autonomous “nomadic” ways of life (e.g., in a truck equipped with solar panels...).



TYPE 3: “DO THEIR BIT (WITHIN ORGANISATIONS)”

Energy citizenship within organisations

Agency

Type 3 refers to individual practices as embedded in various sorts of organisations individuals are engaged in, such as the workplace, the kindergarten, schools, universities, and so on. More and more organisations are currently endorsing energy transition as an added logic of actions. Thus, the individuals who are embedded in such organisations are meant to adopt this logic and to conform with the behaviours that are considered as organisational citizenship behaviours. In some cases, they are also the ones who are initiating the integration of this logic.

Personal and identity engagement

Therefore, the degree of personal and identity engagement in this type is highly tied with the ones that initiated this added logic within the organisation:

When the added logic emanates from the organisation itself (equivalent to a “top-down” form), the individuals have at least to cope with it and with the related normativities. For instance, they are encouraged to adopt new efficiency practices within the organisation’s buildings and/or to take this new logic into account in their everyday work. (However, they can also take a very active role in supporting organisational changes.)

When the energy transition logic is raised by individuals (equivalent to a “bottom-up” form), the level of engagement depends on the acknowledgement by other colleagues and the organisational leaders. This latter case can also lead to quite substantial organisational changes.

Outcome-orientation

If the impulse towards energy transition comes from the organisation itself, it allows the embedded energy citizen to participate to a lower or greater extent with their own ideas and engagement in advancing organisational energy related issues. The other possibility is that the individuals involve themselves in raising energy awareness in the organisation, starting energy action staff groups, and motivating low- or high-cost measures.

Reformative

As described, the degree of change associated with such “manifest” added logic appears to be highly variable, but

<i>Incremental change</i>	belongs mostly to the reformative and incremental forms of change. The individuals of this type of ENCI are acting within a given organisational structure which in its core is following another main logic than energy transition (“good education” in Kindergarten and schools, “developing new products or services for a competitive market” in companies, etc.). The added energy transition logic has to be compatible with the respective main logic and dominant organisational structures and routines. Depending on that compatibility and openness of the organisational leaders for change the leeway for ENCI and its forms can be very different.
<i>Confirmation of the basic principles of the current energy system Low (to medium) energy democracy</i>	This type of ENCI contributes only to a small extent to changes of the basic structural characteristics of the energy system: outside of the energy sector in a large sense, there is little probability that energy transition can become a main concern for any organisation with a remote field of activity (public or private).
<i>Empowerment</i>	At the individual level, such incremental goals may result from a strong engagement and growing energy and climate concerns within the organisation. For instance, when employees or students of a university decide to finance solar panels on the organisation’s rooftop, the individuals feel empowered, notably because they managed to overcome a certain organisational inertia.
<i>Energy justice</i>	Within these forms of ENCI, the focus is seldomly placed on energy justice or environmentally deep sustainability: the inherent rationality of organisations makes it hardly possible for individuals to engage beyond “doing their bit” within an organisation they belong to. Yet, this type might also be oriented toward energy justice by creating favorable settings and/or endorsing structural changes for sustainable energy production and consumption.
<i>Environmentally shallow (to medium)</i>	Organisational engagement of ENCI can take very different forms, which are linked to low or medium environmental outcomes. Leeway for changes can be motivated and/or strengthened by financial motives (saving energy as cost reducing strategy) and respective governmental incentives (for example, installing renewable energy, or changing the heat/cooling system). Organisations can also see the

Examples

possibility for improving their image by acting as pioneers in the energy transition process.

Some examples of type 3 are:

- Individual(s) involved in motivating the organisation to install solar panels on the roof of its building (e.g., school, university, public facility, company).
- Individuals initiating energy saving campaigns in their organisation (technical and behavioural changes).
- Individuals involved in setting up an internal energy policy within their organisation, e.g., with the goal to reach “climate neutrality” until a certain point of time (e.g., university, municipalities).

TYPE 4: “DO IT THEIR WAY (WITHIN HYBRID ORGANISATIONS)”

The energy-related change maker in organisations

Agency	Type 4 refers to the form of ENCI in which organisationally-embedded individuals endorse an energy transition logic up to the point of turning the organisation into a fully-fledged ENCI actor. Therefore, this type pertains mostly to organisations that are entering or already belong to energy-related sectors. It can also include citizens in (mostly) public organisations who make the energy transition a core part of their identity by implementing innovative technological, engineering and human behaviour interventions. This type of ENCI encompasses mainly active forms and mostly frontrunners.
<i>Personal and identity engagement</i>	The organisational context is characterised by a true organisational culture towards energy transition. Citizenship strongly shapes the identity and practices of individuals who are involved in it and constantly nurture their engagement.
Outcome-orientation	To do so, energy transition must become at least a key logic of the organisation, thus making it evolve accordingly by developing new practices, business models, technological innovations, partnerships, and so on.
<i>Transformative Radical change</i>	Individuals within such organisations are somehow committed to turn them into fully-committed ENCI actors, combining common good perspectives with other aims such as financial performance. The contribution of these organisationally-embedded individuals to radical transformation of the energy system may be decisive by providing new capacities and innovation proposals that are the basis for potential radical change.
<i>Contestation of current energy system</i>	For instance, they may intend to renew energy markets by introducing alternative market devices and framings aimed at contesting the current energy system and its core principles, while enhancing energy democracy, e.g., through local energy markets. As such, the current view of energy as a commodity may be transformed and critical changes in the functioning of the energy system might be introduced. It is particularly the case of those who are

embedded in the numerous “intermediary” and “change agent” organisations that enact the energy transition and have the capacity to push it forward.

High energy democracy
Empowerment
Energy justice

Oriented towards energy commons, taking part in renewable energy projects and initiatives such as energy cooperatives and communities, this “Do it their way” type of ENCI tends to deal with energy democracy, citizens’ empowerment and energy justice as a high value, and attempts to foster these values.

Environmentally deep

Regarding the environmental outcome orientation, the type tends to a deep understanding and favours far-reaching structural changes in direction of a more resilient, flexible and risk-minimising energy system.

Examples

Some examples of type 4 are:

- Individuals involved in energy market newcomers and other start-ups, who are ambitioning to transform the energy system (for instance, at the local scale), through renewable energy sharing/exchange or flexible markets aimed at optimising production and consumption.
- Individuals who are willing to support the creation of energy sharing communities or neighbourhoods through the organisation they are involved in, with a concern for the “common good” at all the stages of the process.

TYPE 5: “MAKE THEIR VOICE HEARD”

Participating in societal energy discussions

Agency	<p>Type 5 refers to individuals who engage publicly towards energy transition by expressing their voice and expecting their voices to be heard. This type encompasses a range of more or less active ENCI.</p> <p>Acting within the general framings of the deliberative democracy, this type comes mostly into being through (1) legally prescribed consultations in which citizens are invited to express their views on energy transition in general, or regarding a specific project or initiative; (2) long-lasting and often institutionalised consultative agencies or committees, in which selected citizens are invited to get access to information and express their concerns on energy-related issues; (3) digital participation platforms that are adopted as regular consultation and (limited) proposal-making citizen bodies.</p>
<i>Personal and identity engagement</i>	<p>By participating in such deliberative processes, some citizens become a lot more aware of energy transition issues, and as a result, they might engage themselves actively in ENCI thereafter through other means than sole deliberation. Also, Type 5 can represent an intermediary stage towards more committed forms of ENCI.</p>
Outcome-orientation <i>Reformative</i> <i>Incremental change</i>	<p>Constrained by the very framing of the consultative or deliberative process (notably because the mode and scope of participation are mainly predetermined by the incumbents — projects managers, political actors, etc.), this type of ENCI is mostly on the reformative side and aims at taking part in incremental changes. These forms of citizen participation from above (or “top down”) tend to enhance acceptability and acceptance of certain measures. Most of the time, citizens are asked to react to plans and measures developed by experts, which already implies information and power imbalances.</p>
<i>Confirmation of the basic principles of the current energy system</i>	
<i>Low energy democracy</i>	<p>Citizen voices are not powerful enough to become mandatory. Consequently, the control and governance of the process is not in citizens’ hands, though they can influence further developments (depending on the aim</p>

<i>Empowerment</i>	and design of the participation process). Within the processes themselves, citizens empowerment remains limited. However, deliberative procedures may also provide unintended consequences, for instance when the debates escape from the predetermined and closed space of what can be discussed. Local legal-compliant consultations regarding energy projects sometimes result in an enlarged scope and a re-appropriation of the process by citizens.
<i>Energy justice</i>	Designed to foster acceptance, the processes related to this form of ENCI consider energy justice in a formal-procedural and, consequently, often limited way. Generally, the ways participants are selected and the information they receive indicate the considerations given to energy justice — which is, for instance, deeper when participants are chosen by drawing lots and are informed by a diverse panel of experts.
<i>Environmentally shallow</i>	In such processes environmental concerns are either taken for granted or considered as constraints to overcome, which does not leave much space for deep environmental ENCI.
Examples	Some examples of type 5 are: <ul style="list-style-type: none"> - Citizen consultations, fora, etc., i.e., events in which citizens are “invited” to express their view on the national energy policy or a specific local project. - Institutionalised consultative committees such as the local information commission (CLI) and/or the local information and monitoring committee (CLIS) in the surroundings of the French nuclear plants. - Digital consultation platforms such as Decidim (Barcelona), which has been adopted in several other European countries.

TYPE 6: “MAKE THEIR VOTE COUNT”

Mobilising votes for energy transition

Agency	This type refers to individuals who are taking part publicly and vote in decision making processes related to energy transition. Grounded on the basic principle of citizenship in a democratic context, this type encompasses some passive forms as well as very active ones, and can mobilise late adopters as well as frontrunners.
<i>Personal and identity engagement</i>	Consequently, this type of ENCI, though relating on the idea of “making one’s vote count” may go far beyond the sole act of voting. It depends on a sociotechnical and sociospatial and democratic context, and especially on the ability of collective and organised groups to open up the political space for alternative choices.
Outcome-orientation <i>Transformative</i> <i>Radical change</i>	This type proceeds from the most traditional forms of citizen engagement and participation in democratic contexts, since it consists in the ability of citizens to make their perspectives and convictions taken into account through voting. By giving citizens the final say in voting, democratic processes aim to make the majority of citizens prevail, which at least theoretically opens up the possibility for radical changes in policies. Whether through a national or local referendum on energy transition issues, or in the course of national or regional elections, citizens are entitled to vote in favour of one or another energy transition proposal and thus to decide collectively about (parts of) their energy future. Therefore, this type requires an appropriate “political offer” that enables the citizen to opt for a transformative and system-contesting orientation (e.g., by voting for the re-municipalisation of the grid property and management at the local scale).
<i>Contestation of current energy system</i>	From the concerned individuals’ point of view, this type of ENCI entails a high degree of energy democracy.
<i>High energy democracy</i>	Within this type of ENCI, citizens tend to consider themselves as empowered, since their votes count and decisively impact on the decision-making process. However, empowerment here depends on whether the voting options are framed to allow for the manifestation of
<i>Empowerment</i>	

Energy justice

truly diverse opinions. These framings can stimulate a perception of empowerment or one of disempowerment. Relying on the procedural equity “one citizen, one vote”, this type of ENCI conveys a formal consideration for energy justice, which can become actual according to the specific context in which citizens are embedded.

Different environmentally orientation (from shallow to deep)

Just like energy justice, a deep environmental sustainability orientation is part of the space of the possible choices in that type of ENCI, yet it still has to be enunciated as such — which is seldom the case in “normal” general elections — but more conceivable at the local scale or in a referendum process. This type encompasses the whole continuum from shallow to deep environmental sustainability.

Examples

Some examples of type 6 are:

- Citizens’ votes are directly targeting climate and energy transition issues (e.g., if climate-change and energy transition have been put at the centre of political debate in the context of a general election campaign).
- Citizens decide by referendum for a specific energy transition pathway (for instance, at a local or regional scale)⁵.

⁵. The referendum here is not assumed as a “consultative” procedure (which would refer back to type 5), but as one with a binding effect.

TYPE 7: “DO THEIR SHARE”

Joining green energy projects

Agency	Type 7 mostly takes the form of a collective hybrid or a citizen-based agency that enacts citizens’ willingness to be part of the energy transition along with other sorts of actors, such as businesses and public authorities. So, type 7 refers to the many ways through which citizens are collectively involved in the energy realm, e.g., by taking part in renewable energy projects in which local citizens are offered to buy some shares (though remaining a minority shareholder group). This type is mostly on the active side of ENCI.
<i>Personal and identity engagement</i>	The “do their share” type results obviously from the aggregation of the “goodwill” of citizens who are eager to do their part for the energy transition, but are little inclined to high time-consuming and deeply engaging commitments in energy-oriented collectives.
Outcome-orientation <i>Reformative</i>	This type of ENCI rests upon the idea that those committed in the collective are “doing their part” for energy transition, mostly through compliant forms of participation, assigning type 7 to the reformative side.
<i>Incremental change</i>	The “do their part” type encompasses incremental changes of many sorts, notably those induced by the development of new business models such as the local energy markets or that of renewable energy thanks to public and/or private and citizen fundings.
<i>Confirmation of the basic principles of the current energy system</i>	The related energy transition realm in which citizens are entitled to get involved remains a little system-challenging. Within such (hybrid) collective agencies, multiple goals and perspectives are entangled, such as profits, reputation, political considerations, and so on, which contribute to confine this type of ENCI to a confirmation of the basic structures of the current energy system. Moreover, such hybrid agencies may even lead to a sort of instrumentalisation of ENCI, in which local citizens are entitled to become shareholders to foster local acceptance of a project.
<i>Low energy democracy</i>	The energy democracy potential associated with this type

<i>Empowerment</i>	of ENCI is low, notably because it is embedded into quite closed (and mostly “top-down”) frameworks that are including the possible (minority) participation of citizens and/or inhabitants. Therefore, the projects or initiatives composing this type are seldom in the hands of the citizens, limiting the depth of induced energy democracy. Consequently, the citizens’ engagement of this type cannot be seen as highly empowering, since it does not allow citizens to exert a real control over the process or project — even if they are embedded in a (rather anonymous) collective.
<i>Energy justice</i>	Similarly, energy justice issues are given little consideration here, especially when participation is conditioned by a financial contribution that is not affordable for the less wealthy. Low consideration for energy justice also appears in a series of restrictive conditions for the citizens to get involved, such as the place of residence, being a houseowner (and not a tenant), and owning many high-tech appliances.
<i>Environmentally shallow</i>	This type of ENCI induces a shallow environmental concern, since the focus is primarily on energy issues, whilst the environment is often either presumed or simply neglected “in the name of” energy requirements.
Examples	Some examples of type 7 are: <ul style="list-style-type: none"> - Citizens as minority shareholders in a wind or solar farm project (launched by a private company and possibly with public support), and in which only local inhabitants are entitled to buy shares (notably to foster local acceptance). - Citizens’ participation in a process that enact governmental public policy at the local scale according to a legal framework (e.g., Energy-climate territorial plan in France or PCET), which defines both the requirements and limits of citizen participation, while decision-making remains in the hands of local authorities. According to their characteristics, some energy communities can also belong to this type.

TYPE 8: “GO AHEAD”

Building, expanding and linking citizen-based organisational forms

Agency

Type 8 relates to a collective citizen-based and/or hybrid agency engaged in pushing forward the energy transition. This type often takes its origin from a grassroots initiative (or equivalent) in which citizens have been initiating some innovative and alternative energy transition project, group or community. Many cooperatives and energy communities can be seen as part of this type of ENCI, whose purpose is to “go ahead” in the energy transition through direct involvement of active citizens. Consequently, this type is more inclined to attract frontrunners.

The organisational principles of this type of ENCI are meant to be as democratic as possible (e.g., the seven cooperative principles⁶) and to enable an effective engagement of the members of the collective. However, this type refers mostly to hybrid collectives, since “pure” citizens’ organisations are rarely sustaining as such, especially in the energy realm, and thus tend to hybridise with local authorities, for instance, or numerous intermediaries who contribute to the concretisation of the project(s) or initiative(s) pursued by the collective.

Personal and identity engagement

Thus, Type 8 can be considered as a frontrunner form of ENCI highly embedded in supportive relations and networks that foster high social capital, knowledge and material resources. Distributed across the collective, these resources are also associated with a high degree of personal and identifying commitment.

Outcome-orientation

*Transformative
Radical change*

In this type, citizens’ governance and decision-making open the possibility of transformative and radical change orientations such as promoting a decentralised and sustainable energy system, fighting energy poverty and inequalities or creating innovative local energy markets

⁶. The seven principles are: 1. Open and Voluntary Membership; 2. Democratic Member Control; 3. Members’ Economic Participation; 4. Autonomy and Independence; 5. Education, Training, and Information; 6. Cooperation Among Cooperatives; 7. Concern for Community.

<i>Contestation of current energy system</i>	grounded on sharing principles rather than neoliberal ones.
<i>High energy democracy</i>	Centred on social innovation and concrete actions to “go ahead” toward energy transition, this type of ENCI is an active and committed one. However, it can be more or less oriented toward an explicit political engagement in favour of a radical transformation of energy systems (e.g., by keeping this engagement implicit or at the local level).
<i>Empowerment</i>	A high level of energy democracy is at the root of this type of ENCI, both as a basic principle and as an ideal to enact. Therefore, in this type, citizens are meant to govern, control and take decisions regarding the initiative or the project throughout its evolution across time (and eventually space). Resources such as space to define and align values, articulate goals, foster specific skills and competencies, as well as connectedness and networks for concerted action are in place, which foster empowerment.
<i>Energy justice</i>	As part of energy democracy, equity and energy justice are mostly given a high consideration.
<i>Environmentally shallow/deep</i>	In a similar way, this type of ENCI generally extends its focus to deep environmental concerns, that are seen as inseparable from the energy issues.
Examples	<p>Some examples of type 8 are:</p> <ul style="list-style-type: none"> - Energy communities in which power is and remains in citizens’ hands independent from the hybrid character of the collective. - Energy cooperatives and networks, especially the active ones, that promote active engagement rather than “simple” investment. - Groups or initiatives seeking for low carbon footprint

TYPE 9: “DO THE JOB”

Facilitating the energy transition through alignment activities

Agency	Type 9 refers to collective actors who aim at enhancing the acceptance and acceptability of the energy transition in a pragmatic way. They are mostly sticking to the changes promoted by policies and key actors of the current energy sector. This type encompasses very different actors, from trade unions to NGOs and some actions of climate-oriented political parties.
<i>Personal and identity engagement</i>	It is characterised by more active forms of ENCI. This type entails highly heterogeneous forms and degrees of personal engagement. It may correspond to some early stages of ENCI, for instance, within groups or collectives that have been recently created, and who have not yet acquired sufficient knowledge and resources to go beyond the mainstream perspectives on energy transition. On the opposite side of the continuum composing this type, social movements can be found that deliberately endorse the role of an “objective ally” of mainstream energy reform views.
Outcome-orientation	As a result of its highly pragmatic orientation, the “do the job” type of ENCI has to be placed on the reformative side, and it can prove to be efficient in terms of concrete actions and propositions towards energy transition. In that respect, the collectives who represent this type can be seen as “facilitators”, “intermediaries” or “mediators” of energy reforms between the citizens and public authorities, by enhancing dialogue toward acceptability and local compromises on energy issues.
<i>Reformative Incremental change</i>	Considering that energy transition is reachable only through cumulative small steps, this type of ENCI is mostly supporting incremental change. The collectives are supporting more or less explicitly the mainstream policy views on energy transition.
<i>Confirmation of the basic principles of the current energy system</i>	This type of ENCI tends primarily to confirm the basic principles of the current energy system. Their contributions tend to fit to the existing frameworks, whether by endorsing them or at least by adapting their

<i>Low energy democracy</i>	action to stay in line with the mainstream views regarding energy transition.
<i>Empowerment</i>	<p>Yet, this very pragmatic positioning also induces a limited contribution to energy democracy issues, due to a relative lack of critical perspectives on the energy system that are generally inducing more transformative approaches.</p> <p>Consequently, though enhancing awareness and acceptability, this type of ENCI does not prove to be either directly empowering or necessarily disempowering. Particular behaviours are facilitated but not the skills or resources to effect change by defining goals, aligning them with values and interests, and creating space for ownership and decision-making.</p>
<i>Energy justice</i>	Energy justice is not given any specific consideration within this type, and, if addressed, it remains bounded by the current sociotechnical structures of the energy system.
<i>Environmentally shallow</i>	Since this type of ENCI focuses primarily on energy issues, the environmental commitment and the respective actions often remain rather shallow.
Examples	<p>Some examples of type 9 are:</p> <ul style="list-style-type: none"> - Non-profit organisations that are promoting debate on and acceptance of transmission power-lines and grid development as a requirement for renewable energy development (Germanwatch or Renewable grid initiative in Germany). - Non-governmental or non-profit organisations committed to enhance the acceptance and acceptability of wind-power or solar farms.

TYPE 10: “MAKE THEIR CLAIMS”

Protesting against the current energy system

Agency	Complementary to type 9, type 10 refers to social movements that are protesting against the current energy system or certain forms of energy transitions, by arguing powerfully for the climate change emergency or by opposing themselves to certain policy-orientations (e.g., off-shore wind power) or to specific projects (e.g., solar or wind farms, or new power-lines) aimed at contributing to energy transition. This type of ENCI includes the most active forms of ENCI, and encompasses frontrunners and early adopters.
<i>Personal and identity engagement</i>	Though defined by a clear political positioning and shared matters of concern, this type is far from constituting a homogeneous form of ENCI. On the contrary, it may take various forms according to its scale of action (from the very local to international movements), its modes of action (such as manifestations, direct action, public campaigns, protest networks, occupying movements, and so on) and its main focus. Yet, it is mostly a type that induces a high personal and identity engagement, as in any social movement.
Outcome-orientation <i>Transformative</i>	This type of ENCI refers to collectives who are engaged in social movements, thus deploying very explicit and transformative political claims regarding energy transition. Yet, with regard to everyday life practices and fostering the energy transition process, the performativity of this type remains uncertain and hardly assessable.
<i>Radical change</i>	The “make their claims” type is the most visible type of ENCI, at least within the public space, and all the more since it is opting for radical changes. As such, it turns ENCI into a highly political matter.
<i>Contestation of current energy system/</i>	This type of ENCI is mostly contesting the main characteristics of the existing energy system and claiming for major transformations such as its decommodification, (re)nationalisation and/or drastic decentralisation.
<i>High energy democracy</i>	In line with these radical views on the transition of the energy system, energy democracy represents a key issue

<p><i>Empowerment</i></p> <p><i>Energy justice</i></p>	<p>for such collective forms of ENCI.</p> <p>Demands for empowerment and energy equity and justice are consubstantial with this type of ENCI, in that they are the basis for their claims.</p>
<p><i>Environmentally deep</i></p>	<p>This type of ENCI is also deeply involved with environmental sustainability, and addresses both local critical environmental problems and global issues such as climate change. However, this type is also the one in which the ENCI realm proves to be potentially highly controversial, for instance, when environmental concerns are highlighted as being incompatible with the development of renewable energy (e.g., wind turbines endangering the migration of birds) or when the modes of action are splitting public opinion.</p>
<p>Examples</p>	<p>Some examples of type 10 are:</p> <ul style="list-style-type: none"> - Climate protest movements such as Friday for future, Extinction rebellion. - Protest movements against the construction of new power-lines in Germany, that are claiming for a more decentralised and participative energy transition. - Anti- or pro-nuclear movements. - Protest networks against certain forms of producing renewable energies (e.g., due to environmental or health concerns) such as wind or solar farms.

Conclusion: an ENCI typology *in the making*

This deliverable has elaborated the fundamentals of the conceptual framework (D 2.1) into a conceptual typology. It elaborates, systematises, and operationalises the conceptual distinctions into analytical categories and sensitising concepts for further empirical analyses (WP3-6). The heuristic value of the typology is illustrated by examples which are based on a first explorative empirical check. Within the wider EnergyPROSPECTS project, this deliverable represents the second stage in conceptualisation. It helps to translate the conceptual distinctions of the framework into categories that can be taken up in the empirical analyses throughout the project, but also as inspiration for policy advice and dissemination activities (WP 1 and 7).

Following a robust methodology, ten ideal-types have been elaborated on the basis of the conceptual framework. For bundling the various attributes, the seven distinctions of the conceptual framework are merged into two key dimensions: the “agency” and the “outcome-orientation” dimensions. The resulting 2x5 matrix built on the cross-tabulation of the dimensional attributes provides the ten ideal-types. For each of them, a consistent description highlights conceptual characteristics. These characteristics are illustrated with salient examples. This conceptual typology captures the breadth of ENCI in terms of conceptual forms, thus encompassing both existing and possible types.

The agency and outcome-orientation dimensions and the related attributes provide relevant categories for case demarcation and the empirical case study analyses. While the agency dimension basically differentiates between individual and collective forms of energy citizenship, the outcome orientation encompasses attributes, which refer to the ENCI’s commitment to energy democracy/justice and depth of environmental sustainability as well as the resulting orientation of contributing towards incremental versus more radical change. These conceptual dimensions, and especially the bundle of attributes that compose the outcome-orientation, can only be validated empirically. They will be modified or refined according to the forthcoming empirical results.

The ideal-types are of a conceptual nature, they are constructions of social reality. They do not necessarily have to be found in their pure form in reality. Within case study analysis they give an orientation for the identification of characteristics that point to a predominant type or mixture of two or more types. Depending on the limits of the methodological mix used in the empirical analyses (e.g., due to constraints of personal

resources) it might be more difficult to detect characteristics of some of the types in comparison to others (e.g., manifestation of characteristics of the individual types of ENCI).

The conceptual typology calls for further empirical analyses. An interesting avenue for empirical and theoretical research are the ENCI trajectories across time. In the context of an ongoing energy transition process, it would be interesting to trace the development from one form of ENCI to another, on the individual or collective level, from passive to more active commitments, from latent to manifest forms, from “late adopter” to “frontrunner” pathways. Also, worthwhile to explore are the geographical (country or region related) differences between e.g., frontrunners and late adopters. These differences are not integrated within the conceptual typology, but they can be clarified through subsequent empirical analyses. Most importantly, empirical analysis will clarify the contextual constraints and the conditions that shape the performance of energy citizenship. After all, EnergyPROSPECTS seeks to identify the societal conditions that are conducive to the realisation of ENCI ambitions towards democratic, just, sustainable energy systems.



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