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EMPOWERMENT TOOLKIT AND KNOWLEDGE REPOSITORY

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Table of Contents

Introduction to the Empowerment Toolkit 4

 A knowledge repository to help you develop your empowerment as a part of an ENCI initiative. 4

 What does this tool provide and how can it be used? 5

 How to use the Empowerment tool? 5

 Some additional recommendations for using the tool: 7

Introduction to the ENCI concept: what it entails and why might be relevant for you? 8

 What is an ENCI initiative: 10 tentative ENCI-types. 9

 Agency: individual and collective forms 9

 Outcome-orientation: reformative and transformative..... 10

People starting their empowerment journey. 13

 What is meant by empowerment?..... 13

 Fostering individual empowerment..... 14

 Things to bear in mind and do with regard to your self-reliance, capacity, and motivation..... 14

 What do we mean by the term motivations? 15

 Am I motivated? What drives of my behaviour? 16

 Types of motivation and their impact on energy citizenship..... 17

 Fostering collective empowerment 22

 Besides acting pro-environmentally in my own life, how can I participate in shaping the energy system on a broader level? 22

 How to gain empowerment within an ENCI initiative?..... 26

 Why join a hybrid-community-based ENCI initiative? What can it give me? What can I give to it? 26

 Individual versus collective responsibility in shaping the energy system. 30

 Additional resources for your empowerment journey 33

People continuing their empowerment journey..... 35

 Good practices: transforming agency. 36

 Reflections of ENCI actors’ difficulties to gain power..... 39

Resources to overcome disempowerment 44

 Participatory governance 45

 Technical, political, and regulatory knowledge: PESTEL Analysis..... 47

 Social knowledge and interactions with like-minded people: The role of intermediaries 63

List of abbreviations

ENCI	Energy citizenship
EP	EnergyPROSPECT
PESTEL	Political, Economic, Social, Technological, Environmental, Legal

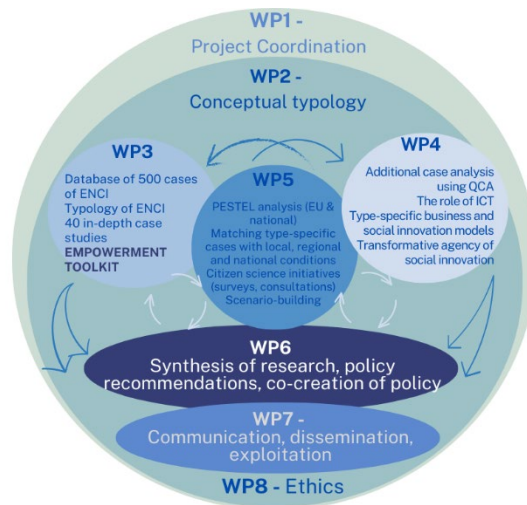
Introduction to the Empowerment Toolkit

A knowledge repository to help you develop your empowerment as a part of an ENCI initiative.

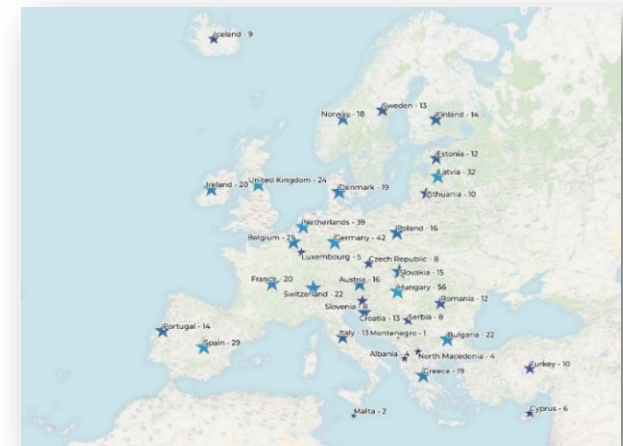
This is a tool designed to help you better understand and practice the concept of empowerment within an [Energy Citizenship \(hereafter, ENCI\)](#) initiative. It includes a number of knowledge resources that have been produced by the EnergyPROSPECTS consortium over the last four three (2021-2024), customised to support your empowerment journey.

The tool has been devised to be useful for citizens and practitioners, both those who feel capable and motivated to act in the energy system, though do not yet know how to approach this, and those who have already embarked upon their journey towards empowerment by participating in this ENCI initiative. This tool's purpose is to provide citizens with a set of resources that may assist them to increase their capacity for control, being heard, and attaining a sense of ownership within the energy system.

The research behind this tool is grounded on a lengthy study process carried out by the EnergyPROSPECTS consortium: firstly, through the theoretical review of the concept of ENCI and its manifestations, outlined through [ten ideal types](#) of citizen involvement in the energy transition; and secondly, by validating the empirical typology mapping ENCI initiatives throughout Europe, alongside an in-depth study of cases from Belgium, Bulgaria, France, Germany, Hungary, Ireland, Latvia, Spain, and The Netherlands.



As part of this in-depth research, the role of different agents – intermediaries – in enabling and promoting ENCI has been examined. alongside the study into the internal factors, a study of external enabling and hindering factors was carried out, both at on a European and national level of each of the aforementioned countries, regarding the development of the different types of ENCI.



The intention with this tool is to highlight a set of good practices developed in different parts of the European territory through initiatives that are currently underway, as to facilitate this contact between ENCI initiatives and citizens, helping them to have a deeper knowledge of the options they must take on board, individually and collectively, in shaping the energy system. It does not seek to be anything other than a guide for citizens, offering support in their journey towards empowerment, because being empowered:

it is something that arises from within, you cannot say, I am going to empower you (...), no, even if I want to, no, I can't. (...) if we must empower people, no, not at all, people empower themselves, sure we can teach things , give information, help, accompany, be there, show them a way, a way, but you cannot demand more from people (Interview 40, Energy Cooperative).

Enjoy your empowerment journey!

What does this tool provide and how can it be used?

This is a document that reflects the theoretical and empirical knowledge, certain real experiences, discourses and resources that aims to be useful for citizens and practitioners on their path to empowerment. This document is organised linearly, although the user can find an interactive format on the [website of the EnergyPROSPECTS consortium](#).



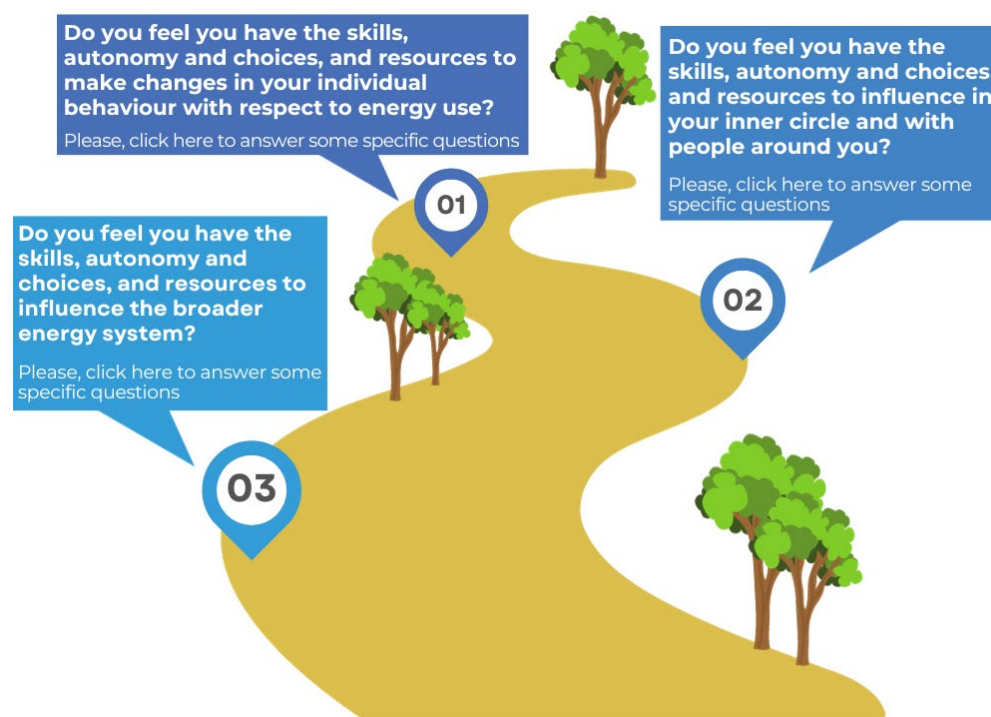
The empowerment journey

As this tool is aimed at a wide audience, we begin by bringing you closer to the core concept of this project: energy citizenship (ENCI), please, feel free to skip this part if you already feel familiar with it. Moreover, we shall briefly outline the typology that has been proposed within the project, which will serve as a common thread for many of the elements to be addressed later, it is advisable for you to view this. From this starting point, several paths are offered in the empowerment process (non-exclusive, so please feel free to return whenever you feel the need) towards your empowerment.

¹ Please, note that we focus on the individuals' empowerment within a collective framework. The starting point is individual abilities, motivations and autonomy, to delve into its implementation within the framework of collective action initiatives, with greater or lesser

How to use the Empowerment tool?

We put forward two paths for you to follow on your empowerment journey¹ (below/click on each bubble to go to additional questions): that of those people who are starting their journey in the collective empowerment, and those whose process is already underway and wish to improve their capacities, benefit from more resources, and increase their sense of control and autonomy. Below, we suggest that you answer a series of questions that are designed to help you make the decision regarding which path to choose.



repercussions in the broader energy system. Please, do not worry if this is difficult for you to grasp, as we will continue working on it in the forthcoming sections.

01

How individually empowered do you feel nowadays?

YES NO

Do you feel capable (e.g., with sufficient knowledge and skills) to make changes to your behaviour and attitudes regarding the energy system?

Do you feel you have been granted the opportunities (e.g., you have material resources, infrastructure, a favourable environment) to make changes to your behaviour and attitudes regarding the energy system?

Do you feel you have autonomy and power when making decisions (e.g. you may choose the way you consume energy at home, the devices you use, how to move from one place to another) within the energy system?

Do you think that your individual actions may have a bearing on the energy system as a whole (e.g., through citizen action initiatives, or participating in public consultations)?

Decide your journey

If you have answered all (or most) of the questions with a "No", we recommend that you begin your path in "People starting their empowerment journey".



02

Do you feel you have the skills, autonomy and choices, and resources to influence in your inner circle as well as the people around you?

YES NO

Have you ever participated in any kind of organization or social movement related to the energy sector (e.g., energy production and consumption cooperatives, energy communities, protest movements such as Fridays for Future, Extinction Rebellion)?

To what extent do you think that participating in such initiatives has/might help you in your commitment to the energy transition (e.g., by feeling part of a community, having a common responsibility and purpose)?

To what extent do you think that these kind of initiatives are/might be a point of support so that you can express yourself and have a voice on energy issues that are relevant to you (e.g. being able to participate in decision-making, feeling that you have a voice and it is heard by the initiative)?

Decide your journey

- If you have answered the first question with a "Yes", we recommend that you begin your path in "People continuing their empowerment journey".
- If you have answered the first question with a "Yes", but "No" to the rest of them, we recommend that you begin your path in "People starting their empowerment journey" by jumping straight to "collective empowerment".
- If you have answered all (or most) of the questions with a "No", we recommend that you begin your path in "People starting their empowerment journey".



03

How empowered do you feel nowadays to influence the broader energy system?

YES NO

Have you ever participated - individually or individually or alongside an initiative related to energy transition - in any kind of assembly, forum or public citizen participation initiative?

Do you feel that your knowledge, skills and resources enable you to participate in making your voice heard in the wider energy system?

Do you feel that participating in initiatives related to energy transition has been/might be useful to have control and power over your own decisions in the wider energy system (e.g., by improving your knowledge, being better informed, feeling more empowered to act by having a supportive community)?

Decide your journey

- If you have answered the first question with a "Yes", we recommend that you begin your path in "People continuing their empowerment journey" (without losing sight to "collective empowerment").
- If you have answered the first question with a "Yes", but "No" to the rest of them, we recommend that you begin your path in "People starting their empowerment journey" by jumping straight to "collective empowerment".
- If you have answered all (or most) of the questions with a "No", we recommend that you begin your path in "People starting their empowerment journey".



Once you have chosen the path with which you feel most identified, let's go for it!

SOME ADDITIONAL RECOMMENDATIONS FOR USING THE TOOL



EMPOWERMENT IS A PROCESS, NOT AN ALL-OR-NOTHING EXERCISE

This resource has been created so that you, as a citizen or practitioner, can become increasingly aware of your capacities and skills to act, with autonomy and control, in making decisions that affect your own life, the lives of those around you (including organisations you are part of, if any) and that can impact on the wider energy system. It is also intended to support you in discovering some (dis)empowering resources in your journey towards empowerment. Of course, generalised information can never fully embody the individual/collective reality of organisations. It is your task to take the information that is useful to you and translate it into your individual and collective imagery.

That is why we also offer you different paths or routes, which you can configure according to your needs, and which you can go backwards and forwards as many times as you wish.

Take your time and enjoy the process!

CASE-STUDY EXAMPLES ARE ONLY ILLUSTRATIONS, NOT UNIQUE REPRESENTATIONS OF REALITY



The examples and quotes we will provide you with are particular experiences that give an account of the complexity of the empowerment process and the barriers that citizens (especially through organisations) face in their empowerment journey. At the same time, they are intended to provide a sample of different possibilities you have to expand your autonomy and control over your energy-related behaviours, your voice and your sense of ownership within an organisation and/or your participation in the wider energy system.

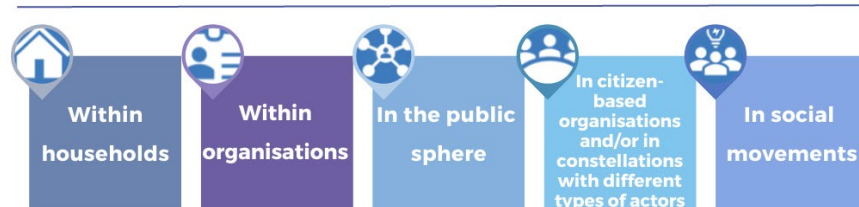
Every story is unique, so get started on creating your own!

Introduction to the ENCI concept: what it entails and why might be relevant for you?

Within the context of the EnergyPROSPECTS project, energy citizenship has been formally defined as

[...] 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. [\(Pel et al., 2021, p. 4\)](#)

This concept has been created to assert the significance of active involvement of citizens in energy systems. It is a social construction. It is not something that can simply be observed. Would you be able to count how many energy citizens live on your street or in your apartment block? Probably not, neither would we, but we can consider how citizens, households, and organisations (both public and private) are enacting and practising energy citizenship in different ways. That is precisely our aim by mapping 596 cases of ENCI across Europe [\(ENCI Database\)](#). These cases cover a highly divergent pool of ENCI (individual agency in household, organisational and public settings, collective agency in citizen and hybrid collectives and social movements).



Energy citizenship is also an emerging set of political ideals that feeds the social construction of the concept. Just as citizenship more generally, it encompasses radical and moderate versions. Across the different interpretations, it refers to

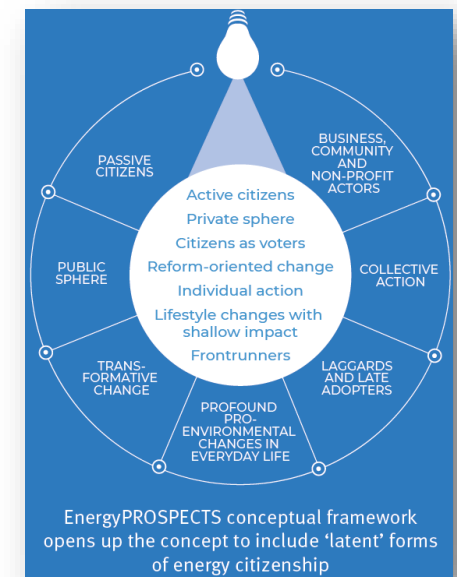
somehow more active, engaged, sustainability-oriented, democratic, or more desirable ways of participating in energy systems. Whilst keeping our eyes open to its less active, empowered, enlightened forms, an analysis has been made of the societal conditions that allow for sustainable, democratic, fair or otherwise desirable forms of ENCI to thrive.

It relates to practices concerning both...



EnergyPROSPECTS opens up the concept of energy citizenship by:

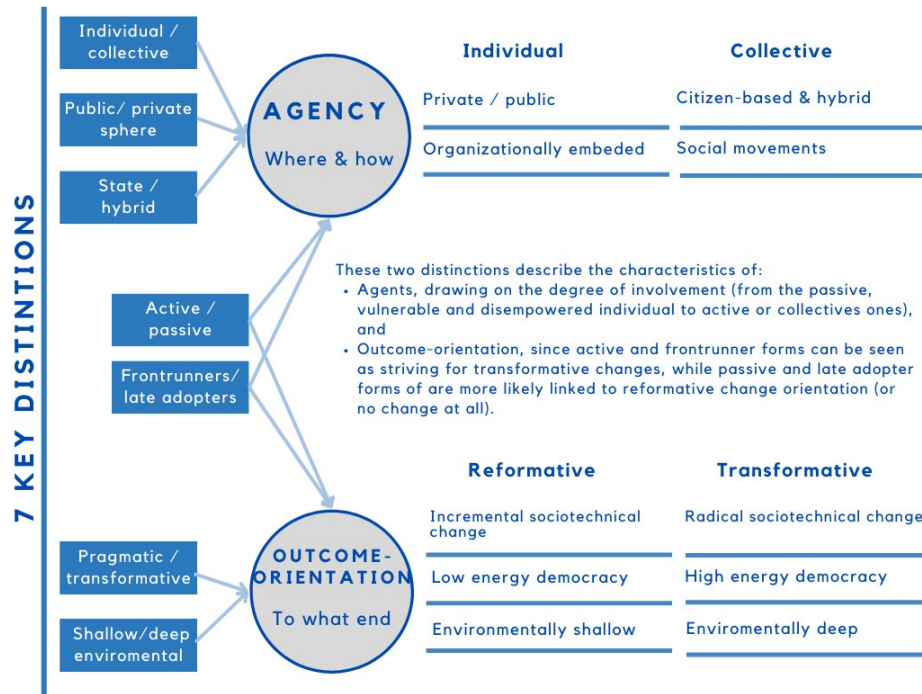
- Examining multiple and heterogeneous manifestations of ENCI across Europe, that set the stage for renewed political decision-making and democratic settings.
- Including multiple 'latent', less visible, forms of ENCI that also form part of the energy transition. These 'manifest', visible and exposed, types of 'active', 'engaged', 'sustainable' or desirable energy citizenship arguably solely unveil a one-sided image of the actual practices enacted across Europe.



More detailed definitions of ENCI are available here
[Synthesis brief No. 1](#)
[D2.1. Conceptual framework](#)

What is an ENCI initiative: 10 ideal ENCI-types.

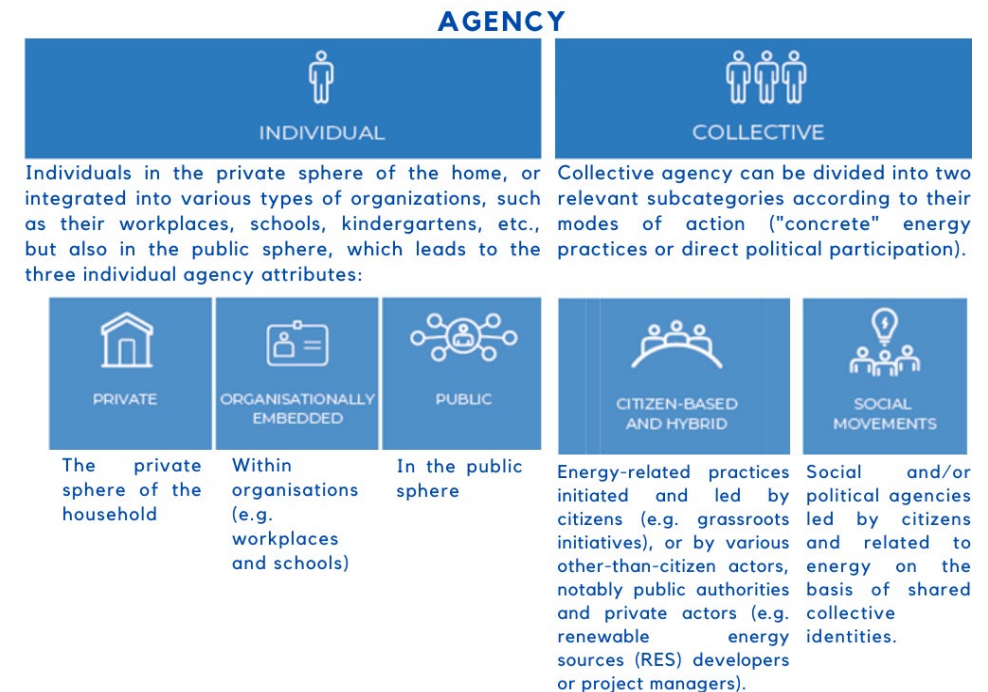
Now that a broad idea of what this complex concept of Energy Citizenship entails, we shall now take a further step by unveiling our typology based on ten ideal ENCI-types, plus a selection of examples from our mapping. We would like to start by briefly explaining the two key dimensions of ENCI derived from the conceptual framework: the **agency** (where and how) and the **outcome-orientation** (to what end).



While the agency dimension basically differentiates between individual and collective forms of ENCI, the outcome orientation encompasses attributes, which refer to the ENCI's commitment to energy democracy/justice and depth of environmental sustainability alongside the resulting focus of contributing towards incremental versus more radical change².

Agency: individual and collective forms

The five categories of agency pertain to the levels, constellations, and spheres of action where energy citizenship can be found and practised.



² These aspects could not be translated directly into the dimensions' attributes or ascribed to particular ideal-types. Rather, they provide an evolutionary backdrop to the typology, acting as a reminder that the ideal types are manifestations of ENCI that, under changing framework conditions in different EU countries, may emerge then disappear.

Outcome-orientation: reformative and transformative.

Outcome-orientation refers to the envisioned contribution of ENCI to energy system changes (transition). The two categories describe the outcomes that different types of energy citizenship envisage or aim for, either oriented towards reform or transformation of the energy system.

OUTCOMES-ORIENTATION

REFORMATIVE

Pragmatic and manifest engagement in the energy system. Limited interpretation in terms of involvement within "concrete projects" or activities and in technological interventions that can be assessed for their costs and sustainability impacts.

- pragmatic and incremental change of the energy system
- limited considerations of energy democracy and justice
- lifestyle and societal changes with shallow environmental ambitions

TRANSFORMATIVE

It tends to embrace "broader energy transition goals and climate change" (Armstrong, 2020, p. 2).

- radical change of the energy system
- strong commitment to energy democracy and justice principles
- profound pro-environmental changes in everyday life and society

The complete matrix classifies in 10 types with the different categories of agency and outcome-orientation.

AGENCY	INDIVIDUAL			COLLECTIVE	
OUTCOME-ORIENTATION	PRIVATE	ORGANISATIONALLY EMBEDDED	PUBLIC	CITIZEN-BASED AND HYBRID	SOCIAL MOVEMENTS
REFORMATIVE	<p>1. DO THEIR BIT (in the household)</p> <p>Complying with the green energy system</p>	<p>3. DO THEIR BIT (within organisations)</p> <p>Energy citizenship within organisations</p>	<p>5. MAKE THEIR VOICE HEARD</p> <p>Participating in societal energy discussions</p>	<p>7. DO THEIR SHARE</p> <p>Joining green energy projects</p>	<p>9. DO THE JOB</p> <p>Facilitating the energy transition through alignment activities</p>
TRANSFORMATIVE	<p>2. DO THEIR OWN (in the household)</p> <p>The change-making energy citizen</p>	<p>4. DO IT THEIR WAY (within organisations)</p> <p>The energy-related change-maker in organisations</p>	<p>6. MAKE THEIR VOTE COUNT</p> <p>Mobilising votes for energy transition</p>	<p>8. GO AHEAD</p> <p>Building, expanding and linking citizen-based organisational forms</p>	<p>10. MAKE THEIR CLAIMS</p> <p>Protesting against the current energy system</p>

More detailed definitions of ENCI are available here

[Synthesis brief No. 2](#)

[D21. Conceptual typology](#)

[ENCI initiatives in the EU context: Country profiles](#)

As to attain a better understand the 10 types of ENCI, an example of each of them is given below.

TYPE 1 (AGENCY: INDIVIDUAL AND PRIVATE; OUTCOME-ORIENTATION: REFORMATIVE)

Do their bit as an individual that complies with the green energy system in the household, e.g., by adopting more efficiency in energy consumption practices, becoming a prosumer through the installation of solar panels, or by using smart meters and appliances.

Case example: The Home Energy Saving Kit in Ireland

The Home Energy Saving Kit was developed by Dublin's energy agency to help citizens understand their energy use and identify key areas of their home that must be improved for energy efficiency. The kit can be borrowed free of charge from libraries across Ireland. It contains five practical tools and six exercises that help citizens to conduct their own home energy audits and to find the easiest and most effective areas to reduce their energy consumption.



TYPE 2 (AGENCY: INDIVIDUAL AND PRIVATE; OUTCOME-ORIENTATION: TRANSFORMATIVE)

Do their own as a change-making individual in the household, for example, by aspiring for self-sufficiency through off-grid energy sources and storage technologies.

Case example: Dr István Dóry in Hungary

Dr István Dóry is a physicist, currently a lecturer at EDUTUS University. More than 10 years ago, he and his wife moved from the capital to Egyházasköte, a small village in the western region of the country. They deliberately chose a place where there are no major roads though which boasts a good train network, and where they can live a sustainable lifestyle. István has been involved as a climate coordinator (i.e. community organiser, leader) for 6 seasons in the EnergyCommunities programme (residential energy saving programme) organised by GreenDependent. He is also the founder and builder of the SunSnail (NapCsiga), an island operated solar-energetic vehicle, which means it uses only the electricity produced by the mounted solar panels. SunSnail can transport 1-2 people plus a 300-400 kg load at a designed cruising speed is 25 km/h.



TYPE 3 (AGENCY: INDIVIDUAL AND ORGANISATIONALLY EMBEDDED; OUTCOME-ORIENTATION: REFORMATIVE)

Do their bit as an individual within an organisation such as a workplace or a school, e.g., through complying with the organisation's climate policies, encouraging the organisation to install solar panels on the roof, or instigating energy saving campaigns.

Case example: Coaches for Energy and Climate (Sweden)

The project Coaches for Energy and Climate was funded by the Swedish Energy Agency and the European Regional Development Fund through the National Regional Fund Programme. Through the programme, the Swedish Energy Agency provided funding and capacity building for municipal Energy and Climate Advisors to specifically target small and medium-sized enterprises (energy use <300MWh/year) and support their efforts to improve their energy efficiency while contributing to the transition to a low-carbon economy.

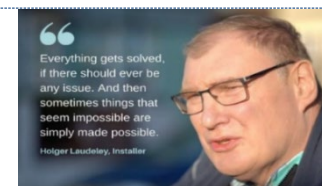


TYPE 4 (AGENCY: INDIVIDUAL AND ORGANISATIONALLY EMBEDDED; OUTCOME-ORIENTATION: TRANSFORMATIVE)

Do it their way as a change-making individual within an organisation, mostly through involvement in energy market newcomers with the ambition to transform the local energy market, e.g., through renewable energy exchange or flexible markets aimed at optimising production and consumption, or by supporting the creation of energy sharing communities.

Case example: Holger Laudeley in Germany

Holger Laudeley, often described as "Mr Energy Transition" or the "Photovoltaic Pope", is an engineer who founded in 1982 the regenerative technology company "Laudeley Betriebstechnik". It came into being renovating flats and company buildings to improve their energy efficiency and, 10 years later, also built passive and low-energy houses. It calls for greater energy autonomy for individuals and launched 25 years ago the first plug-in solar PV modules for installation on the balcony that can provide 10% of a household's electricity consumption and reduce its carbon footprint. The company's self-developed corporate HQ is still considered a showcase project today, as it produces virtually zero energy costs. Laudeley and his team develop state-of-the-art products and services in renewable energies.



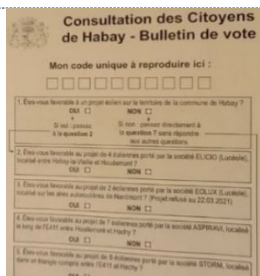
TYPE 5 (AGENCY: INDIVIDUAL AND PUBLIC; OUTCOME-ORIENTATION: REFORMATIVE)

Make their voice heard as an individual in the public sphere by participating in societal energy discussions through citizen consultations, assemblies, committees, or fora, in the forms of institutionalised or isolated events, where citizens are invited to express their views on a specific local project or national energy/climate policy. Organisers are not obliged to comply with participants' recommendations.

Case example: Citizen consultation on wind power in Habay in Belgium

At the end of 2021, the local council of Habay (Luxembourg) organised a citizen consultation open to all inhabitants aged 16 or over. The citizens were invited to vote for or against 4 wind projects by paper or electronic vote.

Participation in the consultation was not compulsory and the results (62% against) were not binding. It is a standout example of Energy Citizenship as it explicitly aims at involving citizens in local wind energy projects' development.



TYPE 6 (AGENCY: INDIVIDUAL AND PUBLIC; OUTCOME-ORIENTATION: TRANSFORMATIVE)

Make their vote count as an individual in the public sphere by mobilising votes for the energy transition, for example, in referenda for a specific energy transition pathway at different geographical scales, or in general elections that are directly targeting climate and energy transition issues.

Case example: Energy Strategy 2050: Referendum on the Energy Act in Switzerland

On 21 May 2017, the Swiss Energy Strategy 2050 was approved in a nationwide referendum. It entails a package of measures (e.g., increase energy efficiency, reduce CO2 emissions, promote renewable energies, a ban on permits for new nuclear power plants) to ensure the country's long-term supply of electricity against the backdrop of the nuclear phase-out while similarly reducing dependence on fossil fuels. It constitutes the setting for a prominent form of citizen engagement in the energy domain in Switzerland. The core of citizen participation consists of casting a vote for or against the proposed law.



TYPE 7 (AGENCY: COLLECTIVE AND CITIZEN-BASED AND HYBRID; OUTCOME-ORIENTATION: REFORMATIVE)

Do their share by joining citizen or hybrid organisations, for example, as minority shareholders in renewable energy projects or by participating in the enactment of governmental public policy at the local level.

Case example: Isbike in Turkey



Alongside recreational and sporting use, bicycles can be integrated into the city's transport network, and a sustainable smart bike-sharing system can function as an alternative transport model. Users can rent a bike from one Isbike station and leave it at another; this form could help to replace short trips of around 3-5 kilometres. Isbike system was developed by ispark, an Istanbul-based company with the broad aim of implementing projects that contribute to reducing urban traffic, particularly tackling parking issues.

TYPE 8 (AGENCY: COLLECTIVE AND CITIZEN-BASED AND HYBRID; OUTCOME-ORIENTATION: TRANSFORMATIVE)

Go ahead by building, expanding, or linking citizen or hybrid organisations, for example, in the shape of energy communities where the power rests in the hands of citizens, in energy cooperatives that promote active engagement for a decentralised energy system, or within initiatives that aspire towards low carbon footprints.

Case example: Enercoop in France



Enercoop is a renewable energy supplier ("100% renewables, 0% nuclear") operated as a cooperative for local and citizen-based action. It works as a cooperative with a democratic and transparent governance, acting against energy poverty via a solidarity fund "Energie Solidaire", and backs delivery of lower energy bills to its customers.

TYPE 9 (AGENCY: COLLECTIVE AND SOCIAL MOVEMENTS; OUTCOME-ORIENTATION: REFORMATIVE)

Do the job within social movements to facilitate the energy transition through alignment activities, for example, in the form of non-profit organisations or unions that launch initiatives such as watt saving competitions in their neighbourhood, or promote debate, and acceptance of renewable energy development.

Case example: Solarna Pecka in Albania

The initiative was an online crowdfunding campaign to raise funds needed to install a system of solar panels and collectors on the roof of the Visitor Centre Pecka, located in the village of the same name near Mrkonjić Grad in Bosnia-Herzegovina. The Centre is in a former school building which was set aside for a group of enthusiasts and nature lovers to use in 2014. The premises was then reconstructed into a centre for sustainable tourism in this rural community.



TYPE 10 (AGENCY: COLLECTIVE AND SOCIAL MOVEMENTS; OUTCOME-ORIENTATION: TRANSFORMATIVE)

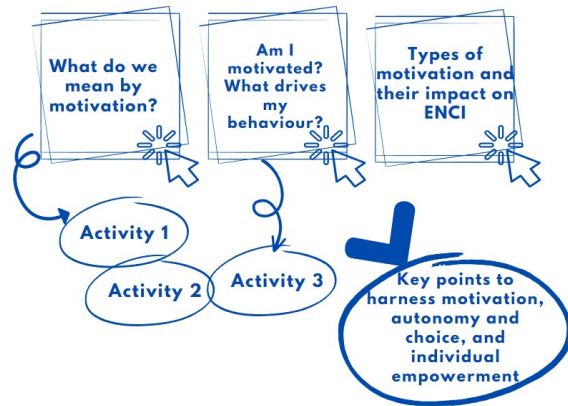
Make their claims within social movements that protest the current energy system in different ways, such as protest movements for the climate, against the construction of new energy infrastructure, or against certain types of energy sources.

Case example: Fridays for Future – Latvia



The FFF movement aims to draw public, media, and political attention to the climate crisis through climate strikes and marches. It insists that politicians pay heed to scientists as to develop policies that adhere to the Paris Agreement while urging immediate action to mitigate emissions and adapt to changing climates. It also stresses global climate injustice while advocating the rights of future generations.

People starting their empowerment journey.



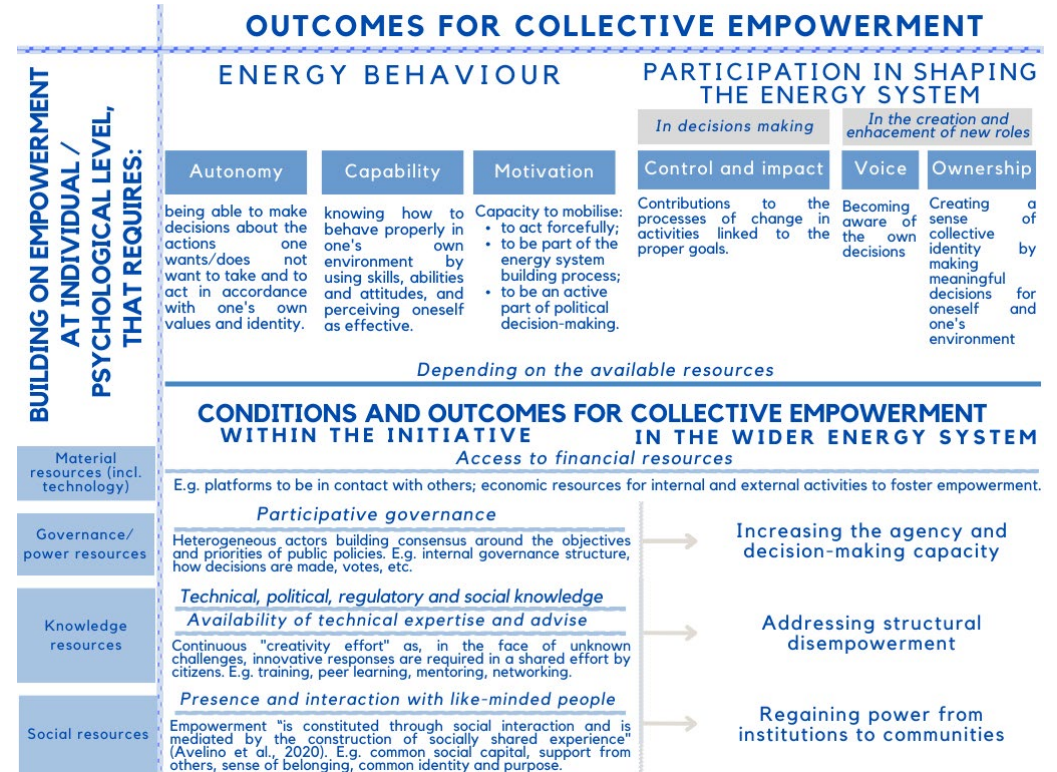
What is meant by empowerment?

The concept of empowerment is increasingly visible in the scientific literature, and also gaining prominence in popular language. Our aim here is not to give you here an exhaustive explanation, moreover a set of ideas to aid understanding. Though different nuances and ways of translating it into different languages, we can refer to it as (a) **autonomy** to make decisions about one's own actions, (b) **ability** to behave appropriately in the energy system by perceiving oneself as effective in the actions undertaken, and (c) **motivation** to act, create and be part of the energy system.

When energy-related behaviours are mentioned, the autonomy, capacities and motivations fluctuate from the individual to the collective, moving on to the concept of **collective empowerment**, that refers to:

- Our efforts to exert control and influence over decisions that affect our lives and that of our immediate environment (that is, inner circle, community, organisations to which we belong).
- The enhancement of our capacity to achieve individual and community goals, including on a structural level.

An example of collective empowerment occurs when we join an initiative, through which a microcosm is created:



- We act collectively and participate in decision-making processes internal to the initiative and to shape the energy system.
- Resources are mobilised (e.g., strategies, qualities, structures or events to respond to a specific problem) to, as a community, group and also individually, take control and make decisions on issues that affect your life and that of your community (e.g., developing awareness of their views and rights) and society (e.g., addressing structural inequality, increasing agency and decision-making capacity, devolving power from institutions to communities).



Before you start reading...

This tool aims to help you in your progressive empowerment by combining information with certain exercises. Each section will have some reflection exercises on your capacities, knowledge and motivations, which will help you decide on the commitments to make in the transformation of the energy system.

The light bulb symbol identifies the exercises that are proposed for you to do.

Activity N.º 1

Tell us about you... (write down your thoughts)

What motivates me to read this information?

Could I take action to change any of my individual behavioural aspects with regard to my energy consumption? Which ones?

Could I make my own contribution to the energy transition? How?

Would it be possible to use my personal interests in further (even collective) actions on sustainable lifestyles?

Fostering individual empowerment.

Things to bear in mind and do with regard to your self-reliance, capacity, and motivation.

The global energy crisis has led to higher energy prices that have hit EU citizens' wallets. The EU needs to hasten its transition away from fossil fuels. Commitment to energy conservation and the deployment of renewable energy sources are on the EU's agenda not only as a matter of climate policy, but moreover as a matter of energy independence and security. Boosting these measures requires levers of technological change and innovations, alongside shifts in citizenry behaviour that enable a safe transition to a net zero emission energy system, while minimising potential risks and trade-offs between policy objectives.

The balance between an increasingly decentralised energy mix that facilitates citizen participation, while achieving greater public participation plus social acceptability for energy and climate policy will determine the success of the EU's ambitions to become the world's first climate-neutral continent by 2050.

In terms of the average household, our lifestyles and energy consumption habits require an overhaul (Lettenmeier et al., 2019) since "[tackling the energy transition and climate change represents the way forward as a society](#)" (Interview 28, Energy Cooperative). Changes in energy-related attitudes and behavioural aspects will be swayed, for everyone, by their own motivations, alongside the opportunities and challenges they face in doing so as to maintain decent living standards, since ultimately, people want to live well:

you feel better about yourself if you do that. Plus, you get some satisfaction from it. And I certainly do take a lot of pride from my work. I'm not grudgingly doing the work; I am enjoying it. It makes me feel good in myself, I like it. (Interview 14, Energy Cooperative).

Indeed, living well entails and what it means to be fulfilled may contrast between different people. For some people it may mean making a small (or large) individual contribution to change, for others it may mean striking a balance between individual desires and responsibility for the environment, or even sharing experiences of fighting together towards sustainability. Now we are turning to a

selection of the motivating factors that have helped other people to make decisions that are not only meaningful for themselves, yet also have a bearing on both on their immediate environment and the wider system.

What do we mean by the term motivations?

The starting point is for you to understand that motivation is our daily fuel. It helps us to mobilise ourselves every day to make choices, decisions, to seek out different solutions to daily problems and, in short, to act. These actions need not always have an interest in sustainability per se. In other words, we may make certain life decisions (e.g. to take public transport instead of a private car) for non-environmental reasons (e.g. because it is cheaper or due to parking difficulties, etc.), yet these still achieve positive environmental outcomes. By means of an example, below are some of the thoughts of ENCI initiative members:

I can give you an example, it's that I don't have a car, so I mainly walk and cycle out of choice. Finally, it's not, I don't know necessarily at the start for energy or climatic reasons, that. Let's say that a few years ago, I preferred to go to work by metro (...) then I started to take the bike a bit. Then in winter, when it was too cold to cycle, I would take the metro again, then afterwards I got used to it. I actually took a liking to taking the bike more often. And now I only ride the bike and all year round, even when it's cold. So suddenly, I don't know to what extent... maybe just down to me. I made the choice. I now have so much more to offer than before (Interview 9, Rail Cooperative Society).

Activity N.º 2

Let's consider and observe my daily life: What are my lifestyle habits?

What kind of food do I eat? where do I buy it? (supermarkets, small shops, cooperatives, self-consumption...).

How do I usually move to my place of study/work? and in my leisure time? (private or shared car, public transport, cycling or walking...).

Would I say that you I have an efficient home (low consumption appliances, heatpump heating, insulation...)? and my behaviour at home (turning off lights, turning off taps, lowering the temperature of water and the room...) is correct?.

Am I informed about low-emission lifestyles through an information resource (e.g. through the written press, social media, by taking some kind of training course ...)?

Am I motivated? What drives my behaviour?

There is no single motivation behind our behaviour, but rather a set of factors drive your actions. It is important to understand what leads you to move, what barriers to progress you encounter and what you can also do to feel supported and while backing others in this process. Feeling supported by others is also a major driver for change ["Individuals display their behaviour, replicate them, and collectives accept and support them thus enhancing behavioural choices in large social groups" (Interview 51, energy citizen association)]. Indeed, it can be something that pushes you to move forward, as you feel the satisfaction arising from taking action, not only for yourself, but also for those around you:

you're actually here in the community, you've felt this before, or before a community where basically I like to organise like that, so this is the assistant position. I think this describes this way of life very well, that basically I am very happy to support good projects, not necessarily on a world-changing level, still I am content to carry the heavy loads. (Interview 23, individual energy citizen).

Making changes to our energy-related behaviour does not have to entail giving up things we like, nor does it have to require such an effort that the commitment to action fades over time until it disappears. Analysing what motivates us to change and what motivates others, as well as feeling part of something bigger, sharing experiences and purpose, can be key to keeping that motivation alive:

So, the thing that motivated me at the start, was that this seemed to have a chance of success. And that it was, how to say it, sort of active, it was not just nice words. Plus it acknowledged the severity of the problem, that most of all. I guess that's what convinced me to join. (Interview 4, Social Movement).

Adopting behaviours related to reducing energy consumption can give us with the opportunity to improve our satisfaction with life by having autonomy through attaining freedom over our decisions, greater control and even self-sufficiency. We may also be motivated by a desire to avoid something, either because since it is harmful to us (our health, our well-being, our wallet, etc.) or because it is harmful to the environment. In addition to alongside our personal preferences, there is also a strong marked influence of social and cultural factors

(Ryan et al. 2019). Motivations related to climate and environmental concerns are at the heart of many of the changes adopted by the population as a whole takes on board, but at the same time a range of social, cultural, economic, and psychological blockages, along with institutional, legal and infrastructural constraints may be behind inaction or slowing down of citizen action, and coupled with disempowerment, feeling lacking the capacity, control and resources to act:

it is not that people are intrinsically unmotivated, opposed, against or indifferent to energy saving endeavours. There's just a certain fatalism, a certain resignation, in the face of tasks that seem impossible to fulfil (except by wholesale demolition and rebuilding). I see that there's quite some individual willingness and motivation to change. Yet there is also a kind of fatalism regarding the incapacity to deliver the change. So, there is this combination. First of all, there are the individuals willing to change, yet sometimes there is this fatalism, regarding the size of the task (Interview 1, institutional campaign).

In this regard, several forms of social innovation, such as community-based lifestyles, cooperative projects for the production and consumption of renewable energies or social protest movements, among others, seem to be a good resource for keeping alive the individual and collective desire and interest in the energy transition. As one of our respondents points out:

if people are empowered through these cooperatives of alternative, ecological energy consumption, where their energy source comes from alternative and ecological sources, if there were more pressure from us, from the people who use the electricity grid, I believe that there could also make a change (Interview 35, Co-housing).

In the forthcoming section, a selection of the factors will be referred to that have encouraged certain people (our case studies) to take a stance in ENCI initiatives – either individually or, above all, collectively. Before beginning, we would like you to reflect on yours:

Activity N.º 3

Let's consider and observe my resources and barriers: Have I ever thought about...? Why not...?

(Here there are some questions about possible changes in your behaviour, so that you can reflect on whether they are feasible in terms of the options you have to introduce them and the barriers that prevent you from doing so)

	Possibilities & resources	Possibilities & resources
Consuming less food and/or consume it more sustainably (in small shops, organic products, locally-sourced consumption...)?		
Commuting to my place of work/ study by cycling or walking?		
Or by using public transport?		
Using an alternative to the private car to get around in my leisure time?		
Making fewer leisure trips?		
Reducing my heating and/or hot water consumption?		
Improving my home's insulation?		
Switching my appliances for more efficient or energy-saving ones?		
Buying fewer products and opting for second-hand products instead?		
<p>One last task for now... Why would I do it?</p> <ul style="list-style-type: none"> ● I have made changes in my consumption patterns because... OR ● I could make changes in my energy consumption if... <p><small>(e.g. I would save money, I would have time at my disposal, I have enough information, I feel a personal responsibility, in my inner circle there are like-minded people that support me...)</small></p> <p><i>(Please write down all the ideas that come to mind when thinking about what might motivate you to reduce your energy consumption patterns)</i></p>		

Types of motivation and their impact on energy citizenship.

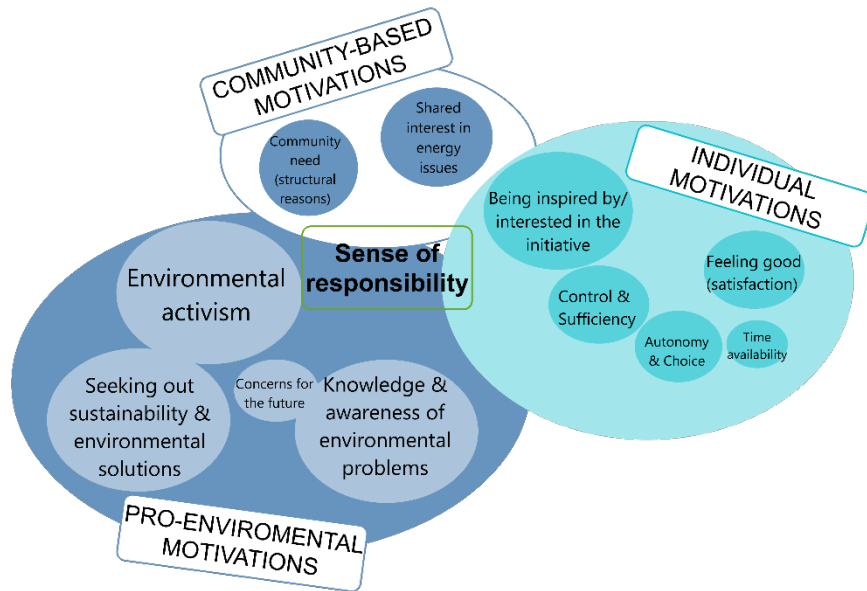
Now that we have answered some basic questions regarding what it means to be motivated, the choices and challenges involved in making changes in one's life, the time has come to place the onus focus on what motivates people (including perhaps yourself) to act, as well as another question we asked at the beginning: *would it be possible to use my personal interests for further (even collective) action on sustainable lifestyles?*

Keep your notes handy, and let's see what other people tell us. Perhaps may well be surprised to learn their motivations are not so far from removed what you yourself have written!

We have conducted in-depth interviews with people whose actions have a positive bearing on the energy transition and who have an impact on others. Either individually (e.g. as social media influencers) or, above all, collectively (e.g. volunteers, workers, founders and members of production and consumption cooperatives, founders and residents of co-housing, policy makers and representatives of citizen participation associations, social movements...). Through these interviews, our aim was to find out what motivates these people to get involved in energy citizenship initiatives, as well as how they have been empowered through these initiatives (but not so fast, for the time being, we will just focus on motivations).

In Figure 1 a series of concepts are displayed. They emerged from asking 52 people regarding their motivations for joining an ENCI initiative. This figure intends to show you the complexity and diversity of human motivations face in moving towards a low-emission energy system.

Figure 1. Factors motivating energy citizenship.



We have tried to simplify it through the large circles that involve three types of motivations: individual, community-based and pro-environmental motivations. Still, care must be taken when interpreting this information! This differentiation is made to contribute to a better understanding of the idea as a whole, although it is clearly difficult to view them as isolated and independent elements. At the heart of everything is a sense of responsibility, both individually, as part of a wider collective and with respect to the environment:

We are not environmental freaks, but we want to contribute to this. The reduction in energy bills is a nice perk. Doing something about the energy transition and climate change since this is the way forward as a society (Interview 28, Energy cooperative).

Firstly, we refer to those motivations with a more individual component (the desire for self-reliance and the ability to choose, control and sufficiency, feeling good, or even there being time on hand to carry out these actions). We also include here

the inspiration that certain initiatives (especially collective ones), which are integrated under the banner of energy citizenship, represent for these people.

Many people make changes in their energy-related behaviour because "There is a choice. I am the one who always says that everyone always has a choice" (Interview 23, individual energy citizen), and it is also important to "start with oneself" (Interview 33, energy cooperative) by incorporating changes in their homes (e.g. DIY solutions, installing solar panels, reducing their use of private transport) which is a first step that people can make in their homes and this is a demonstration of the personal empowerment and choices they feel they have in the matter. Introducing these changes offer people the opportunity to improve their satisfaction with life ["When you do it, it makes you feel good, even if you still don't have much experience." (Interview 6, energy consumption and production association)], even in certain cases by giving people the means that allow them to become self-sufficient ["Owning own energy production micro-solution was an attractive idea to increase self-sufficiency" (Interview 53, cooperation project for renewable energy production)] and regain some control over their lives:

The fact that I use the primary energy of the sun makes me less dependent on energy suppliers who somehow sell gas or oil, and therefore, it makes me more flexible and independent. I can also further increase my degree of independence, technically, by perhaps deciding to install an additional battery storage system at my home, which I have not yet done (...) that makes you more independent, And that's a good feeling (Interview 49, energy cooperative).

Although to a lesser extent, individual motivation related to the availability of time ["Time, on my part, too, time to be able to think about it and devote to it, well, they gave me the tools to get involved" (Interview 39, energy cooperative)]. It is worth noting that people see their time as both a motivation (e.g. in the case of older people, having the time to devote to these issues that matter to them) and a hindrance, which makes many people reluctant to make certain changes or to become actively involved in collective ECNI initiatives (see '[resources and barriers](#)').

Likewise, if you are thinking about whether you can make changes in your energy-related behaviour, whether or not you have the sufficient skillset, bear in mind that you can learn while you practice! Not all people currently involved in these actions

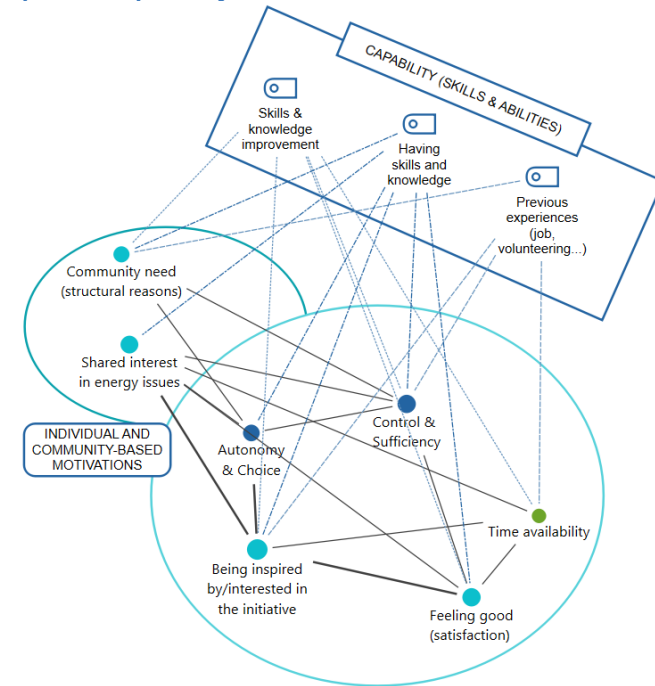
set out from a deep-rooted knowledge of energy-related issues. As one of our respondent points out "at the beginning, I had very little knowledge in this subject. It was not my area of expertise. Definitely. But yes, it's exciting in any case to better understand how it works" (Interview 9, Mobility cooperative).

Indeed, through contact with other people, groups, and organisations users have gained a better understanding of how the energy system works. Inspiration or interest in the characteristics and functioning of collective energy citizenship agency initiatives has been a driving force for many people to become actively involved in the transition to a zero-emission energy system.

I must admit that the examples of project leaders who have made a lot of things happen and who have organised themselves to do something together, give me quite a few shivers. I hear an example where there were maybe half a dozen citizens, and they managed to convince 1000 people to invest in a project. (...) Huge projects like that are extremely enlightening and inspiring (Interview 7, Energy cooperative).

This inspiration was, for some of the respondents, provided not by the initiative directly, rather through people close to them with whom they share an interest. As we said earlier, having people close to them with shared interests is an important driver of behavioural change. It could not be clearer than with this statement: "the first point is that, indeed, you work together to create and work out the project together while having fun together to view a common result" (Interview 49, energy cooperative). In addition to this, there is also the search for community solutions to structurally based needs (e.g. renovation of buildings, supplying electricity in remote places, fighting together against weather phenomena). Thus we turn to what we call pro-environmental motivations, where we refer to a very broad set of factors. Among the most prominent of these is knowledge and awareness of environmental problems:

Figure 2. Links between individual and community-based motivation and their relationship with capability



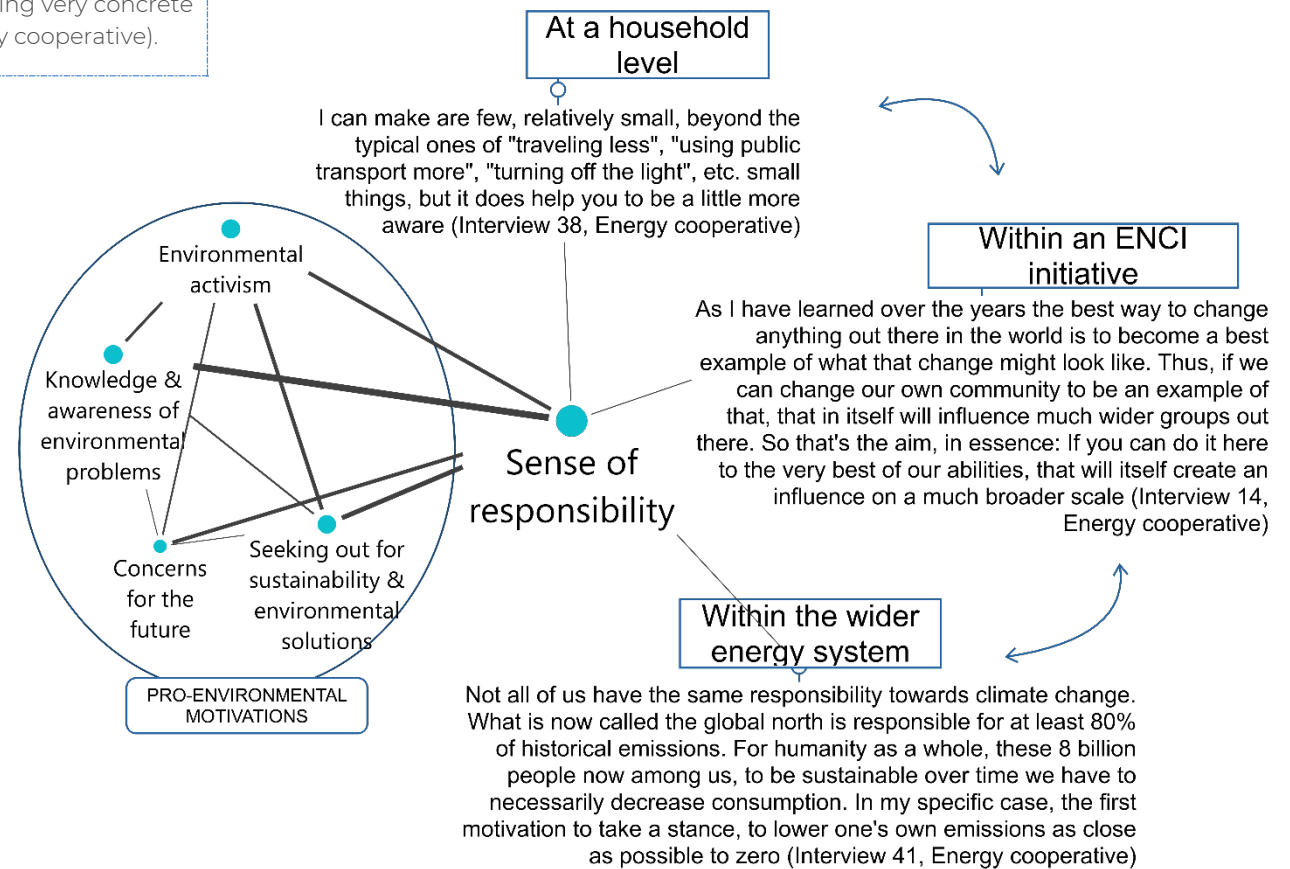
This awareness is a call to action, especially when it is intertwined with concern for the future that will be left behind for coming generations ["We did not inherit this earth from our parents, we have it on loan from our children! That appealed to me enormously. I wanted to try it for my son and for other kids" (Interview 14, Energy cooperative)]. This leads many people to become actively involved in a wide array of environmental movements, organisations, and activist groups to react against social and, above all, political inertia ["we can't expect everything from the state. We also need citizens to get involved, if only to go and prod our elected representatives to spring them into action, but also, I think, to further themselves through these actions" (Interview 6, energy consumption and production association)]. In other cases, instead of getting involved in a visible way, they try to make their small contributions by finding environmental and sustainable solutions

that are helpful to other people ["I don't do it for, you know, honour and glory. It's just that, intrinsically, I think we should also help people or citizens or businesses here to reach the next level in terms of sustainability" (Interview 29, Energy Cooperative). It involves everyone doing our part:

I think that we can act from an individual point of view and that's what will be useful. It's not so much about responsibility or I would say that everybody should take care of producing their own energy. But if you want to be useful, if you want to do something that has an impact, do something very concrete that you can do, that doesn't cost much (Interview 7, Energy cooperative).

Therefore, we conclude by returning to the concept of responsibility that drives most of our respondents to act at different levels (on an individual level, through initiatives and by trying to influence the wider energy system), as we try to illustrate in Figure 3.

Figure 3. Pro-environmental motivations and the sense of responsibility: different levels of action.



List of commitments for action

Being an Energy Citizen is not a matter of all or nothing. It ranges from small steps to big actions. The level of commitment depends on yourself, your motivations and interests, your perception of your capacities, autonomy and choices... we encourage you to start by committing yourself to a few actions. Let's see what you think of these:

- I will reduce my energy consumption through new habits, such as turning off appliances on standby or turning the light off when I do not need it.
- I will start getting involved by making changes in my home, such as controlling my energy consumption with web or mobile applications.
- I will investigate the advantages of installing solar panel and think wheter is worth it to be self-sufficient
- I will participate in a more transformative change, e.g. I will find out about how to install solar panels (or another type of system) in my place and what advantages it would bring to the community to be able to discuss it and carry it out
- I already control my energy consumption at home, but now I want to involve more people and create social awareness, bot in my workplace and within my inner circle. I will propose the idea of participating to some extent in the energy transition and converting the building into an energetically sustainable one.
- I will learn more about energy communities and the energy transition (e.g. going to conferences and workshops where I can learn about others' experiences and gain scientific knowledge)
- I will join a group of people with whom I share the same interest related to the energy transition and who motivate me to move forward in this topic, or even I can even become the motivation for others.
- I am already involved in energy transition but I think that the current legislation falls short and with my experience I can contribute valuable ideas. I will initiate the procedure so that citizens can propose to congress the adoption of legislative measures to promote energy citizenship.
- I will find out about planes and government and European projects to participate in any of them. The se projects can provide me with a lot of knowledge that will enrich me and new companies with which to share ideas and create a community.
- I have knowledge and contacts. I am going to start a transforming energy citizenship project in which different citizens, associations, political parties and organizations can participate, and that has a greater impact on energy sovereignty at the local level.
- I have knowledge and I want to share it with others. I will do informative workshops, both for the general public and for people active in the energy transition. I wan to be a driver and help for others.
- I am willing to actively participate in demonstrations or strikes, even to initiate it with different contacts (NGOs, unions...) to demand changes. We are very concerned and not everything is in our hands, so we demand more responsibility from the rulers and we want the whole world to see it.

Some key points to harness motivation, autonomy and choice, and individual empowerment to contribute to the energy transition:

Ask yourself what motivates you to make choices

You may already be motivated by an interest in sustainability, or you may simply want to start saving on your commute, on your energy consumption at home... Everything counts!



Beware that your motivations and interests are multiple and diverse

They may change throughout your life, as we are talking about processes, not states. Responsibility is at the heart of many motivations. It is important to know what you can commit to in order to change your energy-related behaviours.



Aspects such as time, the perception of individual skills and capacities, or even having a support network (inner circle, community) are important, not only to undertake your actions, but also to make them last over time.

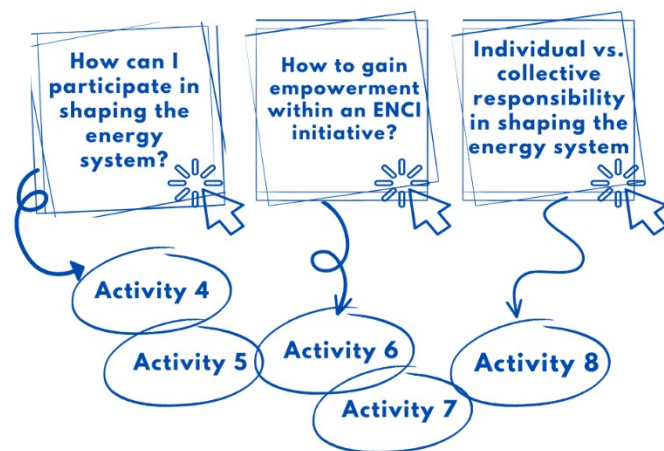


Setting challenges and goals - taking into account your resources and possibilities, and possible barriers - is a first step towards greater autonomy and control in making decisions about your behaviour in relation to the energy system.

Look at your resources and possibilities

And do not forget to start building your list of commitments for action

Fostering collective empowerment



Thus far, we have discussed the individual motivations behind many of the behavioural aspects related to energy use. We have talked about capabilities, autonomy, personal resources... This is a good start, but we can still go further!

People develop within social systems; it is through interaction with other people that many of our behavioural aspects are initially forged, whether it is through receiving advice or help from a person close to us, by being immersed in a group of people active in the energy transition, by observing that other groups of people are mobilised and willing to add their voices... [If you would like to learn more about collective motivations and objectives, and other interesting facts about our mapped cases, please consult our [EnergyPROSPECTS Factsheet Series](#).]

Thus, alongside the many individual actions that we can undertake in our day-to-day lives in our personal setting (e.g. at home, in the way we move around, in our civic participation, in our support or protest for or against public policies...), we can add all those that are generated in our interactions with other people. Thus, in addition to the numerous individual actions that we can embark upon on daily basis in our home setting (e.g. at home, in the way we move around, in our civic participation, in our support or protest for or against public policies...), we can also include all those that are generated in our interactions with other people,

especially those that involve belonging to an organisation or social movement.

Collective energy initiatives can offer you resources and services that contribute to your empowerment. For example, by improving your access to energy through shared energy production and management, or by helping your voice be heard in decision-making processes. They can also support you by providing relevant knowledge and fair conditions when using and buying energy... Equally, as part of a collective initiative you can act by encouraging other consumers to take action in the energy sector with the aim of achieving social, environmental and economic benefits on a local level. These are merely a few examples of how such energy citizenship initiatives can help you to advance your list of commitments with regard to action, gaining control, voice, and capacity to act within an initiative and/or in the wider energy system. Here, of course, we are referring to the diversity of roles and functions that you, as a citizen, can exercise within the energy system, either individually or through involvement in diverse initiatives.

Below, we will provide you with the means to achieve this!

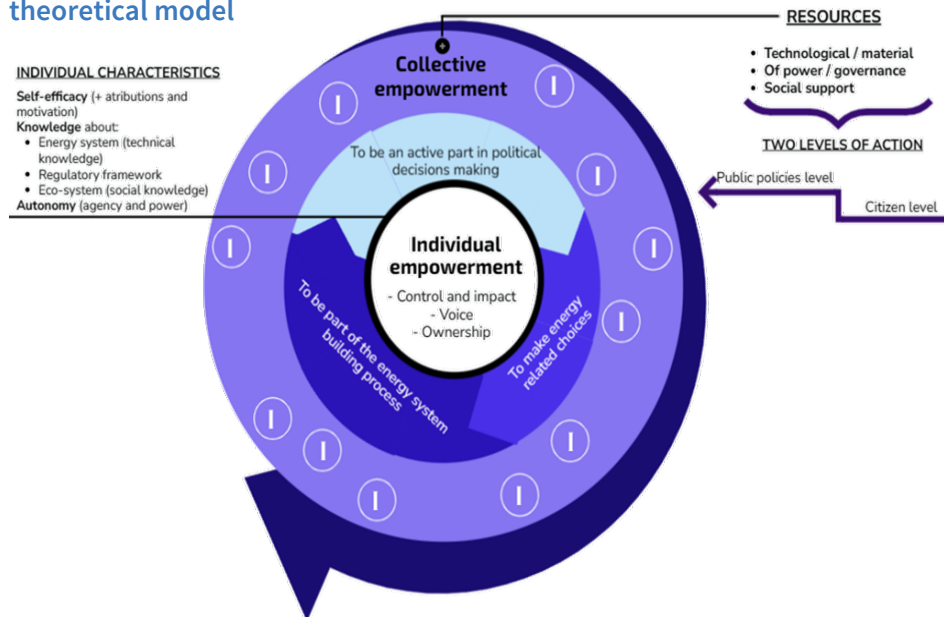
Besides acting pro-environmentally in my own life, how can I participate in shaping the energy system on a broader level?

Concern regarding the pace of climate change has led to a series of transformational engagements based on the development of innovative governance approaches. Against this backdrop, the term *glocalisation* appears to endow an increasingly important role to governance, global institutions, and local governments, leaving national and provincial governments in the background. Why is this important? Because this has translated into political and legal actions committed to the development of smaller-scale solutions (in cities, in rural settings...) and to the monitoring of change, plus the involvement of different actors in service delivery. Focusing on these spaces closer to people allows for decision-making to explicitly consider citizens' visions and needs.

In this scenario, a space is devised that allows new energy actors to appear, highlighting the figure of the prosumer, or consumer of self-generated (renewable) energy, either at home or through organisations, and who use energy

in a smarter and more efficient way. Indeed, the idea of energy consumption based on small community initiatives offers an alternative sustainable social innovation economy (e.g. collaborative economy) that goes beyond renewable energy production, as the aim is to create social capital related to new forms of shared energy generation. ENCI initiatives are therefore a worthwhile resource to help you improve your participation in the energy system. Through them you can experiment with your personal capacities and resources, while receiving support that increases your strength to act in the energy system. This means your ability to make energy-related choices, to be part of the process of energy system building and political decision-making is enhanced (see figure 4).

Figure 4. From individual to Collective empowerment: a theoretical model



A good starting point is to refer to the control you must exercise and the bearing you can have on others, both in your immediate circle and in the wider environment.

Let's take it one step at a time!

Activity N.º 4

Let's think about myself

We have asked some questions to people who are currently involved in ENCI collective initiatives regarding their empowerment. Now we would like to invite you to reflect on the same questions before we show you what others say regarding this.

Please try to consider these questions below:

When it comes to energy-related behaviour, to what extent do you feel you have the autonomy and choice regarding your energy options?

To what extent do you feel you are able to influence what is being discussed and decided upon related to the energysystem?

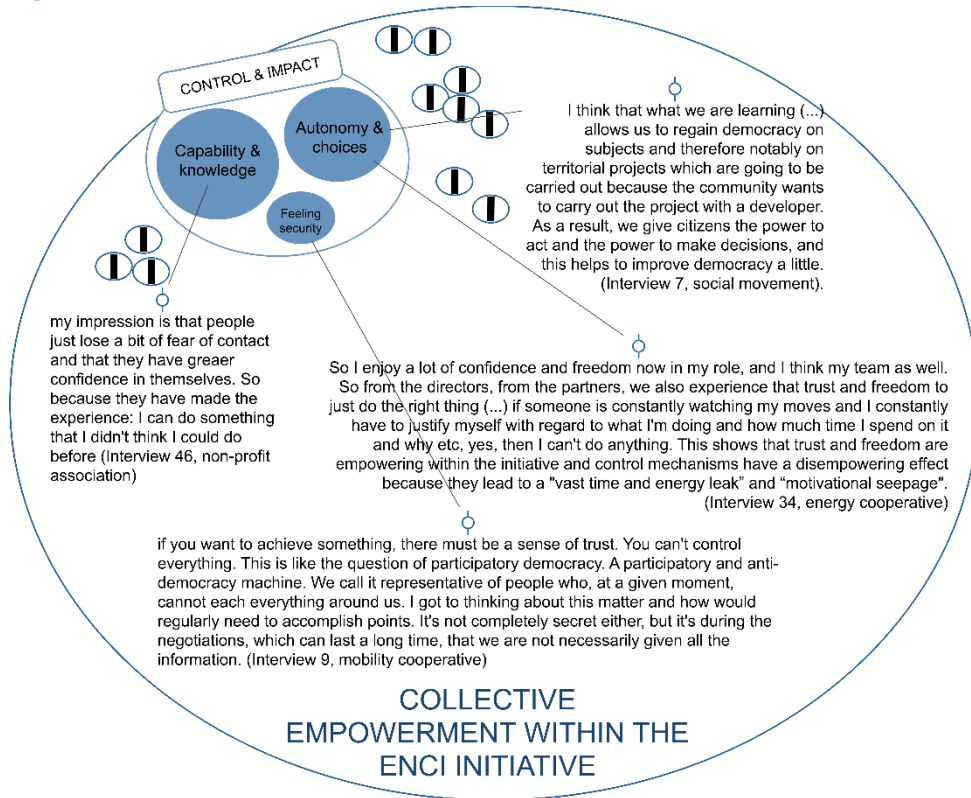
To what extent do you feel that acting to shape the energy system is part of your individual and collective (within the initiative) empowerment?

Now that you have responded, we shall move on to discussing the autonomy and choices you can attain through an ENCI collective initiative and we will approach this once again by referring to some people's experiences who are currently involved in this type of initiative.

ENCI collective organisations can help you gain more widespread freedom and ownership in the decision-making processes that take place within the group you join [Complete autonomy and freedom to act and take decisions. From the very

beginning, we have cultivated the spirit of absolute freedom for all members to pursue their interests, without constraints” (Interview 20, mobility initiative)]. Of course, there are different forms of internal governance in this type of organisation, as will be seen this later in this tool. For the time being, the onus will be placed on what this functioning brings to people and what it may require from you (see figure 5).

Figure 5. Collective empowerment: control and impact.



The efficient running of an ENCI initiative usually requires you to feel free, with autonomy and choice, to participate. If you don't feel this way yet, this need not be cause for concern! The way these initiatives and the people who are part of them are organised often fosters the creation of horizontal relationships, where people

feel listened to though not judged:

I believe that it will not be possible unless we achieve emancipation (...) It's the end of the foundation of this project, you have to be free and emancipated to be able to remain here, as if you can't be here, it's rather complicated (Interview 35, Co-housing).

The role you can play within an initiative will depend on your willingness and desire to be part of it. There are different levels of participation ranging from more passive and distant forms of participation through which you can take more control and voice within the decision-making processes:

The form that a working person can take, from simply going to work and not getting involved in the management of the cooperative and doing a more distant job to a volunteer who can be in the highest spheres of decision and have their voice heard there while bringing proposals to the table (Interview 39, energy cooperative).

If you wish to join an ENCI collective initiative, a basic principle is that of trust. This will be key for you to feel in control of the decisions that are made, while also developing that sense of ownership that we will refer to later on. The feeling of security can be of great help at times, especially when you see that your possibilities to participate actively are decreasing (due to lack of time, availability, knowledge regarding an area you are working on...). Placing your trust in other people and delegating responsibility for some of the actions can keep your interest alive without relinquishing or feeling guilty for not being always wholly committed to it.

Afterwards, if you want it, there must be trust. In a way, too, you can't control everything. This is also a bit like the issue of participatory democracy. A participatory and anti-democracy machine. We call it representative of people who, at any given time, cannot all see everything ourselves (Interview 9, mobility cooperative).

Empowerment Toolkit

An ENCI initiative will not *give you* control or power, yet the options for you to act independently and freely "**which can give you that strength and security because you need security**" (Interview 23, individual energy citizen). Participation in shaping the energy system begins, for many people, in feeling empowered within the initiatives. This power has often been linked to the perceived ability and knowledge to contribute to the initiative and beyond:

my impression is that people just lose a bit of fear of contact and that they have more confidence in themselves. So, because they have taken on the experience: I can do something that I didn't think I would be able to beforehand, they might now dare to do something else, which is perhaps more energy policy or whatever (Interview 46, non-profit association)

It is not a matter of starting from a deep-rooted knowledge of the energy system, as you can gain knowledge and expand your skills as you engage in interaction with others. You can offer your knowledge resources (**all knowledge is useful and valuable!**) and your skills to the group. All of these come together, like a puzzle, with the enthusiasm to develop something as a team ["**They have climbed on board with great verve. You need a good mix of people with a fiscal, financial, legal, and energy-technical background**" (Interview 28, energy cooperative), is at the basis of the foundation and maintenance of many ENCI initiatives:

you get into the topic, you can also work yourself, not only in your own self-construction project, while also continuing to support the association. There is the possibility to carry on supporting the association in any form, with advice or with work, or even financially (Interview 49, energy cooperative).

Do you remember that, when you were shown the [individual motivations](#), we asked you about autonomy and options, as well as capacity and knowledge? **Now it is time to revisit your answers, as here you will be able to complete them with the actions to be developed in group tasks.** For example, we shall look at a previous exercise and add some columns for group tasks.

Activity N.º 5

Let's think and reflect on my resources and barriers: Have I ever thought about...? Why not...?

(Here there are some questions about possible changes in your behaviour, so that you can reflect on whether they are feasible in terms of the options you have to introduce them and the barriers that prevent you from doing so)

	Individual-personal barriers & constrains	Collective-social barriers & constrains
Consuming less food and/or consume it more sustainably (in small shops, organic products, km0 consumption...)?		
Commuting to my place of work/ study by cycling or walking?		
Or by using public transport?		
Using an alternative to the private car to get around in your leisure time?		
Making fewer leisure trips?		
Reducing my heating and/or hot water consumption?		
Improving the insulation of my house?		
Changing my appliances for more efficient or energy-saving ones?		
Buying fewer products and opt for second-hand products instead?		
<p>One last task for now... Why would I do it?</p> <ul style="list-style-type: none"> ● I have made changes in my consumption patterns because... OR ● I could make changes in my energy consumption if... <p><small>(e.g. I save money, I have time at my disposal, I have enough information, I feel a personal responsibility, in my inner circle there are like-minded people that support me...)</small></p> <p><small>(Please write down all the ideas that come to mind when thinking about what might motivate you to reduce your energy consumption patterns)</small></p>		

How to gain empowerment within an ENCI initiative?

Why join a hybrid-community-based ENCI initiative? What can it give me? What can I give to it?

Through ENCI initiatives, many people have been able to put their skills and knowledge on the energy system to the test, while gaining new knowledge and information that enable them to act more knowledgeably:

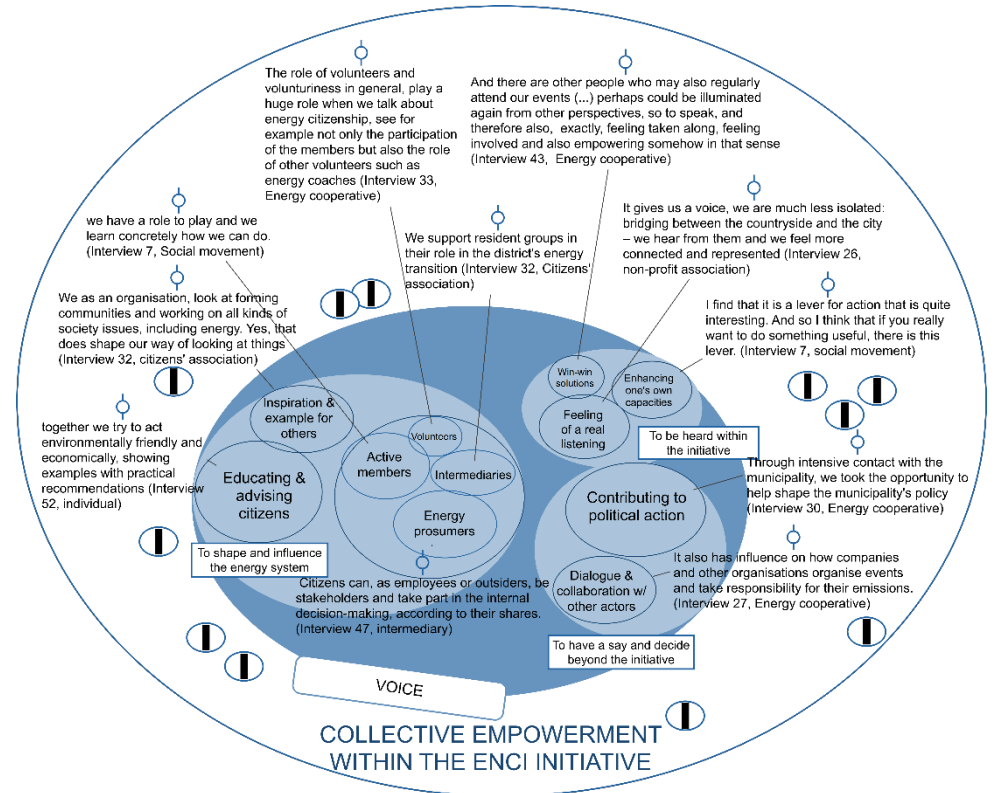
The whole essence of the case provides opportunities in both dimensions: practicing existing knowledge of the stakeholders and obtaining new knowledge necessary to implement goals (Interview 51, energy citizen association)

As citizen-based initiatives, to create and maintain them, efforts must be made to ensure that people have their place within the initiative. Therefore, the initiatives tap into the full potential of human resources based on what each member is capable of achieving, what their potential is and what contribution they can make to the initiative ["It's basically: What is your job profile? And support the evolution of people's function profiles" (Interview 1, Institutional campaign)]. Therefore, anyone can be of service, as the ethos is to build from the ground up, where everyone, through their personal resources, contributes to the functioning of the project. Furthermore, another key point of collective empowerment refers to the possibility of having a voice within and beyond the ENCI initiative (see figure 6).

Being heard within the organisation you are part of, in the political sphere and acting in shaping and influencing the energy system are three key points that appear in our respondents' discourses. People participating in these organisations feel that "having a say" is vital [e.g. "being heard on details of what kind of city you want to live in is something which can motivate members of the cooperative, as opposed to being a responsibility that they have to or should fulfil (Interview 30, energy cooperative)], i.e. a feeling of true listening is generated which empowers members:

The consensus within the community as the basic rule for decision-making does contribute to the feeling of empowerment of each member, of which voice can be seen as decisive (Interview 48, co-housing)

Figure 6. Collective empowerment: voice



By listening to your voice and those of the other, the organisation contributes to encouraging personal skills, helping you feel that you have something to contribute and that this is taken on board. Likewise, initiatives offer spaces for participation in contact with other local actors ["Being a member of project and a

boarder network of project activities, involving other communities, provides opportunity for discussion and selection of solutions to be promoted by the project" (Interview 53, cooperation project for renewable energy production)].

You decide how you wish to participate, become involved and offer your skills and abilities, along with your resources, for it to flourish. For certain people, participation may be less active, contributing capital, attending the odd meeting and/or occasionally exercising their right to vote. In other cases, there are different levels of active participation, with commitment to the construction of elements necessary for its functioning, the preparation of activities, the disclosure of the initiative's aims, etc. For others, it is somewhat relevant to be able to have a voice through initiative in decision-making that affects political life ["Through intensive contact with the municipality of Weert, we took the opportunity to help shape the municipality's policy" (Interview 30, energy cooperative)].

If this is your case, the initiative can become your voice and your connection to local government, contributing to your image of yourself as undertaking change in the immediate context and as a pivotal element in making it happen ["[the municipality] needs support [from the case] to meet their [climate] targets. We can and responsible for shaping the energy system, to some extent at least (interview 28, intermediary)]. Involvement levels in initiatives with local, regional and even national governments may vary depending on the nature of the institution itself, its aims and its results focus (e.g. production and consumer cooperatives, intermediary organisations, associations...). It is therefore significant that you choose your level of participation according to your interests, possibilities, resources..

Activity N.º 6

Let's consider and reflect on my potential commitment to an ENCI initiative by:

Please take a brief pause here so that you can reflect more deeply on what you would be willing to commit to as a member of an ENCI initiative, what are your possibilities and what resources can you offer?

	My knowledge and skills are...	My available resources are...
Finding out how I can reduce my energy consumption at home/in the workplace (e.g. using more efficient devices, installing solar panels on the roof...)	<input type="checkbox"/> Proficient <input type="checkbox"/> Sufficient <input type="checkbox"/> Scarce <input type="checkbox"/> Lacking	
Making changes to my consumption patterns (e.g. reducing hot water consumption and/or lowering the temperature, turning off lights...)	<input type="checkbox"/> Proficient <input type="checkbox"/> Sufficient <input type="checkbox"/> Scarce <input type="checkbox"/> Lacking	
Fostering and backing the creation of energy-sharing communities or neighborhoods by getting involved in an organization.	<input type="checkbox"/> Proficient <input type="checkbox"/> Sufficient <input type="checkbox"/> Scarce <input type="checkbox"/> Lacking	
Involvement in assemblies, consultations and public decision-making debates on energy issues, as a "guest" (virtually or in person).	<input type="checkbox"/> Proficient <input type="checkbox"/> Sufficient <input type="checkbox"/> Scarce <input type="checkbox"/> Lacking	
Being a minority shareholder in a project (e.g. a wind farm launcher by a private company with public support) with the entitlement to buy shares.	<input type="checkbox"/> Proficient <input type="checkbox"/> Sufficient <input type="checkbox"/> Scarce <input type="checkbox"/> Lacking	
Being actively and directly involved in the creation of an organization (e.g. an energy community) where the onus is on you and the other members.	<input type="checkbox"/> Proficient <input type="checkbox"/> Sufficient <input type="checkbox"/> Scarce <input type="checkbox"/> Lacking	
Being actively and directly involved in an existing organization (e.g. an energy community) exercising speaking and voting rights in decision-making in all the processes that take place in the organization.	<input type="checkbox"/> Proficient <input type="checkbox"/> Sufficient <input type="checkbox"/> Scarce <input type="checkbox"/> Lacking	
Contributing to the debate on alternative forms of mobility and energy production and consumption (e.g. power transmission lines, solar farms, wind energy) that is promoted by non-profit organizations.	<input type="checkbox"/> Proficient <input type="checkbox"/> Sufficient <input type="checkbox"/> Scarce <input type="checkbox"/> Lacking	
Engagement in climate protest movements (e.g. Friday for Future) against the construction of new power-lines, anti- or pro- nuclear movements...	<input type="checkbox"/> Proficient <input type="checkbox"/> Sufficient <input type="checkbox"/> Scarce <input type="checkbox"/> Lacking	

¹We refer both to the personal resources at your disposal (e.g. knowledge and skills, information, availability of time, interest and motivation, space and infrastructure, materials..), and social resources (e.g. having a support network nearby or acquaintances, contact with people, organisations and places, proximity to initiatives and information about them...).

Finally, we must not overlook that final point we made at the beginning about how you, through an ENCI initiative, can contribute your standpoint to shaping and influencing the energy system. The responsibility you can hold individually and collectively in the energy system is related to the influence that your behaviour and actions can serve as inspiration or example for other people ["I have realised that my voice has power, as I create content through it every day as to influence people to take action" (Interview 52, individual energy citizen)] and the dynamics that are generated in the organisation you are part of:

Personally, I would like people to see that model, because in fact many people are doing it and are imitating it. (...) I think that there we would like to influence and, above all, in teaching circles. Searching for educational tools to influence that. Yet deep down, what our ultimate aim is to inspire. (Interview 35, Co-housing)

Your impact on the system can be broader if it is through an initiative where different people try to act together; but also, your commitment may also extend beyond by passing on your knowledge and experience to others, offering advice and help, or even educating others. Precisely these collective actions form the basis of creating and promoting new roles in the wider energy system:

I have learned over the years the best way to change anything out there in the world is to become a standout example of what that change might look like. So, if we can change our own community to be an example of that, that will influence much wider groups out there (interview 14, energy cooperative).

Citizenship-based or hybrid collective initiatives and social movements contribute to the creation of diverse and varied roles amongst their constituents by helping them to become part of the actions that take place within them and in the wider energy system, that is to sift away from the role of consumer to that of prosumer

When creating content, an understanding arose about how important proactive citizenship is, since through our actions we also influence how the energy system will develop, therefore I began to display my example more and more actively and point out that with

our actions we are forging a future, including the future of the energy system (Interview 52, individual)..

It entails giving citizens, beyond the people who are part of the initiative, a space for power and decision-making within the energy system ["we give citizens the power to act and to make decisions, and this helps to further democracy a little" (Interview 7, energy cooperative)]. Of course, we cannot overlook the importance of the people who are part of the initiative being able to play an active role within and outside the initiative. The role of active member is facilitated both by the possibilities offered by the governance system of the organisation itself, by the individual's desire to participate, and by the possibilities offered by the energy system to act freely.

there are rules that are forced on us from outside and that can be shifted as to add many voices and draft manifestos, but it is difficult for us to change them. That said, there are still there are many other things such as promoting local communities, promoting people having deeper-rooted knowledge and learning to save energy. Placards can be placed in your home. Facilitating all the above is doable and it is underway (Interview 41, energy cooperative).

Alongside the initiatives themselves, which in themselves can act as an intermediary between you, as an energy citizen, and the wider system, in many cases these initiatives may also require support from third parties. For example, from educational institutions such as universities, which have a privileged place in the social sphere to champion the fight against climate change and promote commitment to the energy transition:

Here the question of energy consumption is directly linked to the matter of sustainability and climate. While also being a stakeholder in society, the university similarly wants to engage. Thus, it takes on a role of exemplarity. In any case, it has a leadership role in the climate emergency and therefore, work must focus on the University's strategic commitments, and how it this is specifically passed on (Interview 1, Institutional campaign).

Other cases are those in which the initiative promotes the creation of new initiatives, such as energy communities. Thus, through its knowledge and experience, it serves as a support for other groups of people to start their own production and consumption projects:

we help to create an energetic community. If the villagers want, we participate in the energy community, if necessary, and if not, we are there as advisors. What we do is promote, normally, through our partners who think they can set one up, we accompany them to develop all of this... by giving talks and so forth (Interview 37, energy cooperative).

This contact between different institutions that share interests, objectives and/or purposes facilitates the creation of networks in which they help each other and in which their active members play a key role:

what I found great is that I was able to contribute my knowledge and my work to support the others in their projects, no, we have a community, a do-it-yourself community means that the others help me and help the others (Interview 49, energy cooperative).

Activity N.º 7

Let's think again about myself:

After reading these stories, would you change anything about the first two questions:

- When it comes to energy-related behaviours, to that extent do you feel that you have the autonomy and choice regarding your energy options?
- To what extent do you feel you are able to influence what is being discussed and decided related to the energy system?

If you already belong to an ENCI initiative	If you are not yet, but it could be...	Answers
I have the freedom to make decisions about what I do and do not want to do within the initiative (i.e. I can take tailor my choices to my interests)	I have the freedom to make decisions about what I do and do not want to do in relation to my energy choices.	<input type="checkbox"/> No <input type="checkbox"/> Yes, but it could be improved <input type="checkbox"/> Yes, totally
There are different options for participating within an initiative (from occasional and sporadic participation to an active participation)	I could increase my autonomy and choices by participating in an ENCI initiative.	<input type="checkbox"/> No <input type="checkbox"/> Yes, but it could be improved <input type="checkbox"/> Yes, totally
In my organization my knowledge and skills are taken into account when making decisions that affect us all.	I have knowledge and skills in energy operations that I could use to find solutions to reduce net emissions.	<input type="checkbox"/> No <input type="checkbox"/> Yes, but it could be improved <input type="checkbox"/> Yes, totally
I have a voice and it is heard (I can express opinions, discuss) and it is listened to (it has relevance within the agreements made) within the initiative	I am interested in getting involved in an ENCI initiative, but I don't know if I have (or will have the time - and I don't know what it will be).	<input type="checkbox"/> No <input type="checkbox"/> Yes, but it could be improved <input type="checkbox"/> Yes, totally
The initiative acts as a loudspeaker for my opinions, thoughts and demands (i.e. through it I feel I can influence the wider system: educating others, inspiring and giving advice...)	I have many things to say about the energy system, and a strong desire to have my voice heard and heeded.	<input type="checkbox"/> No <input type="checkbox"/> Yes, but it could be improved <input type="checkbox"/> Yes, totally
<i>If the answers to any of the above is NO or YES, BUT IT COULD BE IMPROVED, it is important that you try to find out why (e.g. because of the decision-making system set-up in the initiative, because I do not have the time to get more active...)</i>	<i>If the answers to any of the above is NO or YES, BUT IT COULD BE IMPROVED, we recommend you to read on to find out more about how these initiatives work.</i>	

Individual versus collective responsibility in shaping the energy system.

The individual and collective responsibility intermingles in people who actively participate in ENCI initiatives as it is considered that "(...) **this is the way to advance as a society**" (Interview 29, energy cooperative). There is a fine line between a sense of responsibility and having a shared purpose and interest:

I approached the whole thing with a different motivation. So for me, the most important thing was not to get my own solar system as cheaply as possible, but this whole idea of doing it collectively for the community. (...) I had this sense of responsibility before I decided to get for it (Interview 49, non-profit association).

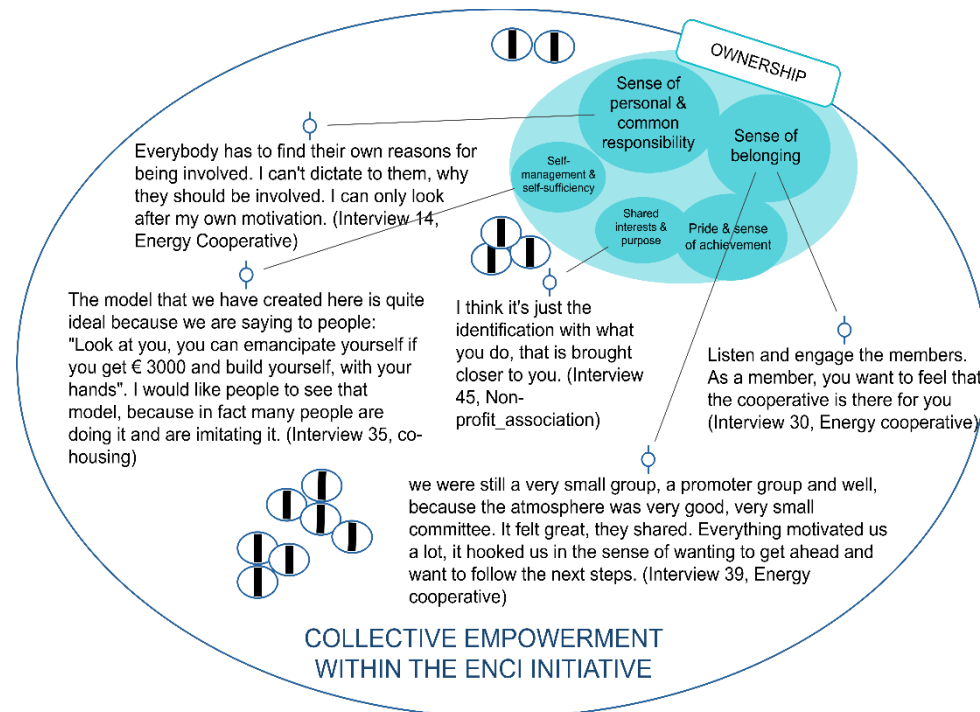
Do-it-yourself (DIY) solutions that are at the core of the philosophy of many of these initiatives are an internal psychological resource that generates pride as "**somehow they have the feeling that they are now part of the energy transition**" and a sense of achievement for many people:

it's hard to say how people feel about it afterwards. Because I rarely see them again. So, I'm around most now when it's newly installed. And then everyone is always happy. Regardless whether they're talking about it there, or amongst friends and acquaintances you can tell they are proud, it stands out (Interview 44, energy cooperative).

People can develop strong bonds with the cooperative and its members ["**you want to feel that the cooperative is there for you**" (Interview 30, energy cooperative). It creates a sense of belonging and shared identity that empowers them ["**it is an opportunity for communities to basically empower themselves (...)** It is not about bringing hay in but working together as a group to make their homes more energy efficient" (interview 12, energy cooperative) and contributes to an environment of mutual help and support ["**we have a community, a do-it-yourself community means that others help me and I help others**" (Interview 49, energy cooperative). This sense of responsibility likewise emerges from pride and a sense of achievement in having succeeded in going where other people or groups have

not yet to tread or have failed to reach.

Figure 7. Collective empowerment: ownership



The sense of ownership and commitment to the initiative has strengthened people's ability to participate more actively in the energy system:

For me to stand up for that, for example, it took community, and I haven't felt this or that anywhere. So if someone had told me before that I would stand up in an online workshop and tell people anything about how they should lead a more waste-free life, I would have laughed (Interview 23, individual energy citizen).

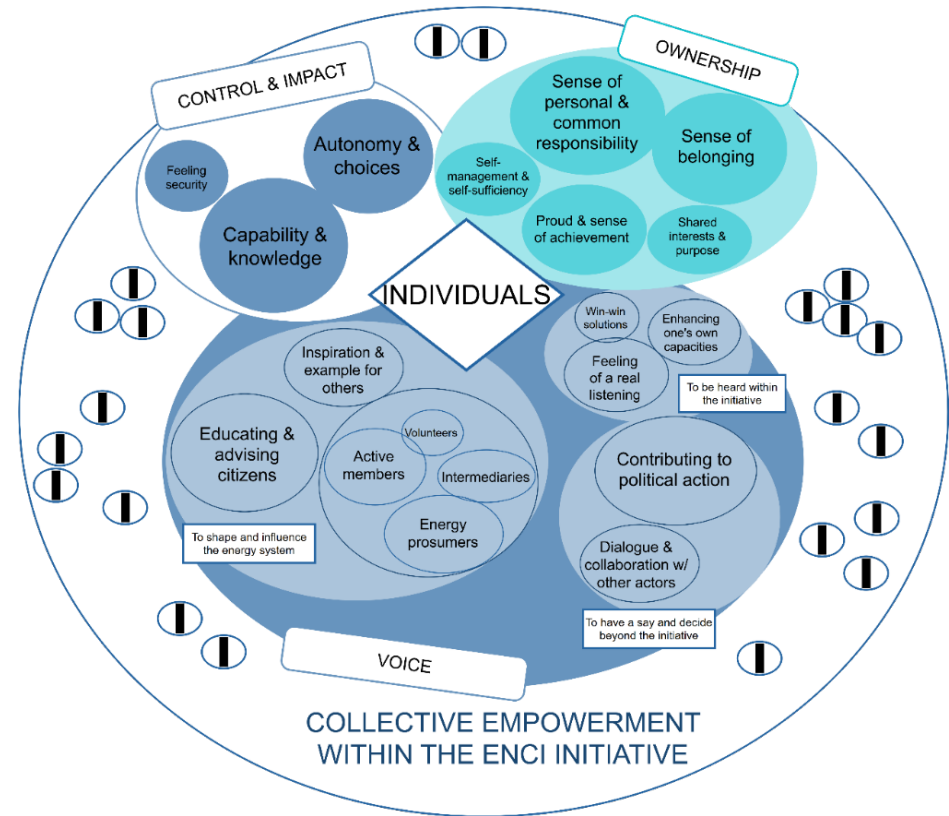
It is linked to having shared interests and a common purpose in relation to energy:

We have an identity, cultural, linguistic, maritime, coastal, farming, weather. We also feel, with our sense of identity, for other communities who can't form that structure. Little villages outside the main cities and hubs, they are all viewed as are extensions of the cities. We are not an extension of anyone (Interview 16, energy cooperative).

To conclude, what has been shown in this section has allowed us to display the other side of empowerment, the one that refers to people acting collectively with their motivations, contributing their knowledge and skills, and exercising their entitlement to participate in decision-making within the energy system autonomously and safely. Likewise, they are granted a voice at different levels and can become part of a wider collective that can assist in the struggle for the democratisation of the energy system to accomplish greater outreach in societies. As one of our respondents points out:

I could do it myself, and I don't have any superpowers or special skills. You can do it too. Supporting this is what makes a little go a long way (Interview 23, individual energy citizen).

Figure 8. Collective empowerment model



Activity N.º 8

Let's think again about myself:

After reading these stories, would you change anything about the last questions:

- To what extent do you feel that acting to shape the energy system is part of your individual and collective responsibility?

The intention of presenting you with these stories of others is to make you reflect on your own perceptions and preconceptions about their capacities and possibilities to influence, individually and as part of an initiative, the wider energy system. Have you found them useful to read? To what extent have they helped you to change your previous answers to these questions? (e.g. varying your perception of your own individual and collective responsibility towards the energy transition, better understanding the roles that third party actors take/should take in this process, etc.)

Here are some examples, which may help you to complete what you have answered above. We suggest you consider whether:

- No, I do not do it because they are not my individual nor collective responsibility
- No, I do not do it, although I consider that they fall within my individual and/or collective responsibility.
- Yes, I do it but I think they are not my individual nor collective responsibility.
- Yes, I do it because I feel that they fall within my individual and/or collective responsibility.

If "NO" and/or "they are not my individual/collective responsibility", please try to reflect on how (is/are) the responsible(s)

<p>Doing your bit as an individual that complies with the green energy system in the household; for instance, by adopting more efficiency in energy consumption practices, installing solar panels, or using smart appliances.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No, I do not do it because they are not my individual nor collective responsibility <input type="checkbox"/> No, I do not do it, although I consider that they fall within my individual and/or collective responsibility. <input type="checkbox"/> Yes, I do it but I think they are not my individual nor collective responsibility. <input type="checkbox"/> Yes, I do it because I feel that they fall within my individual and/or collective responsibility. <p>The responsibility is of:</p>
<p>Doing you own as a change-making individual in the household, for instance, by aspiring for self-sufficiency through off-grid energy sources and storage technologies.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No, I do not do it because they are not my individual nor collective responsibility <input type="checkbox"/> No, I do not do it, although I consider that they fall within my individual and/or collective responsibility. <input type="checkbox"/> Yes, I do it but I think they are not my individual nor collective responsibility. <input type="checkbox"/> Yes, I do it because I feel that they fall within my individual and/or collective responsibility. <p>The responsibility is of:</p>
<p>Doing your bit as an individual within an organisation such as workplace or a school, for instance, through complying with the organisations' climate policies, motivating the organisation to install solar panels on the roof, or initiating energy saving campaigns.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No, I do not do it because they are not my individual nor collective responsibility <input type="checkbox"/> No, I do not do it, although I consider that they fall within my individual and/or collective responsibility. <input type="checkbox"/> Yes, I do it but I think they are not my individual nor collective responsibility. <input type="checkbox"/> Yes, I do it because I feel that they fall within my individual and/or collective responsibility. <p>The responsibility is of:</p>
<p>Doing you own as a change-making individual within an organisation,</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No, I do not do it because they are not my individual nor collective responsibility

<p>mostly through the involvement in energy market newcomers with the ambition to transform the local energy market, for instance, through renewable energy exchange or flexible markets aimed at optimising production and consumption, or by supporting the creation of energy sharing communities.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No, I do not do it, although I consider that they fall within my individual and/or collective responsibility. <input type="checkbox"/> Yes, I do it but I think they are not my individual nor collective responsibility. <input type="checkbox"/> Yes, I do it because I feel that they fall within my individual and/or collective responsibility. <p>The responsibility is of:</p>
<p>Making your voice heard as an individual in the public sphere, for instance, by participating in societal energy discussions through citizen consultations, assemblies, committees, or fora, in the forms of institutionalised or isolated events, where citizens are invited to express their views on a specific local project or national energy/climate policy.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No, I do not do it because they are not my individual nor collective responsibility <input type="checkbox"/> No, I do not do it, although I consider that they fall within my individual and/or collective responsibility. <input type="checkbox"/> Yes, I do it but I think they are not my individual nor collective responsibility. <input type="checkbox"/> Yes, I do it because I feel that they fall within my individual and/or collective responsibility. <p>The responsibility is of:</p>
<p>Making your vote count as an individual in the public sphere, for instance, by mobilising votes for the energy transition in referendums for a specific energy transition pathway at different geographical scales, or in general elections that are directly targeting climate and energy transition issues.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No, I do not do it because they are not my individual nor collective responsibility <input type="checkbox"/> No, I do not do it, although I consider that they fall within my individual and/or collective responsibility. <input type="checkbox"/> Yes, I do it but I think they are not my individual nor collective responsibility. <input type="checkbox"/> Yes, I do it because I feel that they fall within my individual and/or collective responsibility. <p>The responsibility is of:</p>
<p>Doing your share by joining citizen or hybrid organisations, for instance, as a minority shareholder in renewable energy projects or by participating in the enactment of governmental public policies at the local level.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No, I do not do it because they are not my individual nor collective responsibility <input type="checkbox"/> No, I do not do it, although I consider that they fall within my individual and/or collective responsibility. <input type="checkbox"/> Yes, I do it but I think they are not my individual nor collective responsibility. <input type="checkbox"/> Yes, I do it because I feel that they fall within my individual and/or collective responsibility. <p>The responsibility is of:</p>
<p>Going ahead by building, expanding, or linking citizen or hybrid organisations, for instance, in the shape of energy communities where the power rests in the hands of citizens, in energy cooperatives that promote active engagement for a decentralised energy system, or within initiatives that aspire towards low carbon footprints.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No, I do not do it because they are not my individual nor collective responsibility <input type="checkbox"/> No, I do not do it, although I consider that they fall within my individual and/or collective responsibility. <input type="checkbox"/> Yes, I do it but I think they are not my individual nor collective responsibility. <input type="checkbox"/> Yes, I do it because I feel that they fall within my individual and/or collective responsibility. <p>The responsibility is of:</p>
<p>Doing the job within social movements to facilitate the energy transition through alignment activities, for instance, in the form of non-profit organisations or unions that launch initiatives such as watt saving competitions in their neighbourhood, or promote debate, acceptance, and acceptability of renewable energy development.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> No, I do not do it because they are not my individual nor collective responsibility <input type="checkbox"/> No, I do not do it, although I consider that they fall within my individual and/or collective responsibility. <input type="checkbox"/> Yes, I do it but I think they are not my individual nor collective responsibility. <input type="checkbox"/> Yes, I do it because I feel that they fall within my individual and/or collective responsibility. <p>The responsibility is of:</p>




Additional international resources for your empowerment journey

If you have never participated in an ENCI initiative, and if you feel that your knowledge of the energy system may be insufficient, you may want to start by exploring the following resources that can help you improve your individual energy behaviour:


REGISTERS

Tools to foster control over your energy consumption and your carbon footprint, and even saving money.





BEcoop Self-assessment tool

Self-assessment forms for inexperienced users seeking to assess the state of a cooperative/community bio-energy project.





It allow to assess an initiative's status and receive some recommendations.

Carbon footprint calculation (WWF)


Your carbon footprint (CFP) is a simple way of showing how your lifestyle leads to carbon emissions. It's your impression on the planet.





PowerAct

Survey regarding consumption at home to receive suggestions for single behavior changes and save.



COMMUNITY TOOLS

With these tools you can interact with communities and other like-minded people to share experiences and purposes, and learn about energy efficiency at home involving your family and in your workplace alongside your colleagues

Your priorities



Online idea generation and deliberation platform that connects governments & non-profits with citizens.

Users add and share ideas with other people, and take part in a civil deliberation about each idea.

It can both be used in:

- Public projects: large numbers of citizens in decision-making.
- Private projects: smaller groups working together remotely on ideas, deliberation and decisions.






E-learning Start2Act

Free online courses on energy efficiency at home and at work



In addition, if you want to get actively involved in energy communities (ECs), we recommend the following tools to learn the basics as well as more advanced topics:


LEARN ABOUT THE ENERGY SYSTEM




Energy together academy

Knowledge institute for citizen initiatives, governments and other partners in energy transition.


This platform makes accessible the current knowledge within the sustainable energy cooperative movement through a digital library.






Energy Community Platform

A collection of go-to guides, best practices, technical documents, online tools and much more will help you move forward with your EC project at any development stage.






Community Energy: A practical guide to reclaiming power

A handbook for curious individuals, groups starting out on the road to renewable energy or local authorities.

It provides resources to get your project off the ground (e.g. tips on group dynamics, technology recommendations, guidance on overcoming obstacles).



MORE AND MORE PROJECTS
 If you are passionate about this type of research projects, we recommend that you take a look at the following, but there are many more!



EC2: Harnessing knowledge for a citizen-led energy transition

Empirical research, theoretical analysis and co-creation activities to:

1. Provide evidence-based tools and a digital training program to scale-up ENCI and ECs
2. Develop actionable policy recommendations and briefs for policymakers.
3. Supply tested tools to support ENCI and ECs.
4. Deepen our understanding of ENCI and how to empower citizens to become ENCIs.
5. Foster inclusivity of ENCI and ECs
6. Identify legal and economic conditions supporting or hindering ENCI.
7. Understand how ENCI shapes and influences the energy sector, the energy transition, and the achievement of EU decarbonisation goals.



Dialogues: Energy citizenship for a sustainable future

It supports the objectives of the Energy Union with operational research on ENCI that enables citizens' central role in the uptake of low-carbon energy solutions and links all four priorities: decarbonising buildings, renewables uptakes, energy storage and sustainable mobility. It aims to operationalise, contextualize, measure, and support the framework environments, policies and institutions that allow deep, inclusive energy citizenship to emerge by operationalising the concept of ENCI



GRETA: Green energy transition actions

GRETA studies solutions and provides recommendations on how to achieve civic energy empowerment through ENCI. The project has five objectives:

1. To understand who energy citizens are.
2. To understand how energy citizens act and interact.
4. To realize impact by scaling approaches from local to regional, national, and supranational levels.
4. To improve the policymaking process.
5. To develop and test behavioural strategies, approaches and models for facilitating ENCI.



ENCLUDE: Energy Citizens for Inclusive Decarbonization

It aims to rethink and redesign engagement processes between government, business, civil society organizations, and citizens for a decarbonized future for and by all.

1. Assemble, align and adapt disparate ENCI concepts in support of the Energy Union.
2. Operationalize the ENCI concept at all scales of policy making for decarbonization.
3. Catalyze a chain reaction of decarbonization actions across the EU.



And, of course, you are welcome to contact the EnergyPROSPECTS partners for local resources!



People continuing their empowerment journey.

Welcome to this journey of individual and collective empowerment related to the energy system. If you have walked directly towards this option, it is probably because you feel you have confidence in your ability to act autonomously, sufficient knowledge and control over the energy system. What we want to show you here are some additional options that can help you to increase your voice and your options in the wider energy system.

We will do this by starting by introducing you to some good practices that have been developed in different European contexts, as examples of options and opportunities that open up on your path to energy transition, and then we want to alert you to some of the risks that can occur in the process of becoming an empowered energy citizen. We do not want to be alarmist about this, so in addition to showing you the reflections of our informants, we will offer you some tips, ideas, and alternatives that they themselves have adopted to solve their possible disempowerment.

In concluding our journey, and after having started (in the first section of the tool) with individual empowerment and continuing with the internal factors that contribute to collective empowerment, we cannot finish without providing you with information on external factors related to the possibilities of developing energy citizenship in Europe - including some peculiarities of the nine countries that make up the EnergyPROSPECTs consortium.



Good practices: transforming agency.

To address collective empowerment, we must discuss people, organisations and resources. We have previously referred to the individual impetus, capacities and resources that are at the basis of individual empowerment. We would now like to focus on how ENCI structures are arranged at different levels of citizen engagement, participation, and citizenship through some examples of the 40 in-depth cases under analysis. Specifically, you will be shown 20 examples of good practice cases, in a highly synthetic manner, based on a selection and grouping of cases by the EnergyPROSPECTS consortium.

Through these examples, shown in greater detail [here](#), we aim to furnish you with information on the main areas where ENCI can inspire the creation of new value-creating practices and thus new **Business and Sustainable Innovation Models** (BSIMs) or a broader integration of new concerns within existing BSIMs and, conversely, to consider BSIMs that can catalyse and enhance ENCI. Still, we will begin by defining what we mean by Business and Sustainable Innovation Models (BSIM):

By BSIMs we refer to both the “business as usual” or, more precisely, non-innovative framings of activities (for-profit companies, municipal action, NGO, NPO, etc) and the “new ways of doing, thinking and/or organizing energy” that are recomposing the energy system, labelled as social innovations (SI) (Wittmayer et al., 2022).

Our approach on BSIMs differs radically from the usual business model frameworks of value creation, capture and monetisation, to which we substitute single viability of the model, that is. the concrete capacity of a case or an initiative to sustain itself or to endure over time. In such a perspective the value creation is displaced on other issues than monetised value towards a conception of value that is based on various key features of ENCI, that we adopt as basic principles for BSIMs analysis:

- 1) Citizenry participation and collectives which include the possibility of

being involved in the model's decision-making process.

- 2) Transparency, fairness, and openness with regard to the model.
- 3) Affordability and accessibility of the model to a larger audience.

The aim was to identify potential “good practice cases” that appear to be particularly viable while decisively supporting and improving ENCI practices. The findings show, inter alia, that BMSIMs are quite dynamic and unique in each one of the studied ENCI cases. However, the cluster analysis reveals several key features within subclusters that help to shed further light on our understanding of the role of these models in enhancing the positive impact of energy citizenship types. The figure x shows the comparative clustering of the 40 detailed case studies³:

The **community-based ENCI cases** are largely cooperatives, focused whether on RES or housing (and therefore related to different policy frameworks). This should also encompass mobility related cooperatives. However, this was not represented in the 40 cases. The examples of this study are energy cooperatives with single (BEB and CFOAT) or complex organisational structures (Loenen Energy, ECTC and GoiEner).

The cooperative models that are supported or split into other types or associations or foundations display more flexibility and swiftness in decision-making processes which is often necessary when applying for funds or starting new projects. This shows that the traditional cooperative model is not fit-for-purpose especially when initiatives need to make snap decisions, which is essential in a context where applications for funds or tenders appear with little forewarning. Moreover, they are often part of specific local identity-concern as they are open to a certain (limited) geographic perimeter attached to a certain territory and culture (and/or political culture). Engagement and active participation of citizens is desired and part of their cooperative structure. That said, participation is often focused on the local citizenry.

based and community-based cases that are mixing several organisational forms.

³ This clustering aims to be an analytical tool for supporting the data analysis and not at being considered as a fixed and rigid categorisation. It is important to note that some cases might belong to several clusters, considering their possible overlaps, such as between organisation-

COMMUNITY-BASED INITIATIVES

RENEWABLE ENERGY COMMUNITIES

HOUSING COMMUNITIES

The cases with a 'traditional' cooperative model face many challenges in achieving financial security and aiming to continuously diversify their income base. As part of their financial strategies, maintenance of key partners is of key importance for their long-term viability.



CITIZEN ENERGY BERLIN, BEB (DE)



ARAN ISLANDS ENERGY COOPERATIVE - (CFOAT) (IRL)

The cases with complex structures or 'enhanced' cooperative-models exhibit more professionalisation in their employed staff and economic security by spreading out their income stream into various fundings, including public, private or EU grants.



LOENEN ENERGY (NL)



GOIENER TALDEA (SP)



LA BORDA (SP)



LAVIDAVERDE (DE)



ENERGY COMMUNITIES TIPPERARY COOPERATIVE - ECTC (IRL)

The **publicly-run ENCI cases** are initiatives spearheaded mainly by public institutions and/or governments at various administrative and regional levels. In these cases, a hybrid modality may also be adopted (public/private), in which public institutions play a predominant role in their organisational and funding structure. Most relevant distinction with regard to the policy frameworks is observed between infra-national and national or supra-national levels. They place the onus on contributing to common goods linking to more equitable energy transitions and that stems from the commitments of the initiatives to their respective national, regional or local ambitions for tackling climate change and speeding up their energy transition. Although such initiatives have a long-term and stable revenue stream, they are also highly vulnerable since if their support from the public funding is cut off (e.g., due to change in political landscape or national ambitions), it is more likely that they will cease to function. Therefore, business models with single source of public funding are more vulnerable and depend on or are at the mercy of the 'political will' of a 'top-down' stakeholder culture. ENCI still need to be further enforced in such kind of initiatives as citizens

are mostly consulted, with their view seldom coming into fruition. Initiatives spearheaded mainly by public institutions and/or governments at various administrative and regional levels. In these cases, a hybrid modality may also be adopted (public/private), in which public institutions play a predominant role in their organisational and funding structure.

PUBLICLY-RUN INITIATIVES

INFRA-NATIONAL (I.E. LOCAL/REGIONAL)

NATIONAL OR SUPRA-NATIONAL

Initiatives led mainly by public institutions and/or governments at various administrative and regional levels. In these cases, which might also adopt a hybrid form (public/private), public institutions play a predominant role in their organisational and funding structure.



DRECHTSTEDEN ENERGY (NL)



ENERGY TRANSITION OF CITY OF BURGAS (BG)



CONSULTATION: SHAPING OUR ELECTRICITY FUTURE (IRL)



HAUTS-DE-FRANCE PASS RENOVATION (FR)



NAGYPÁLI, THE RENEWABLE ENERGY VILLAGE (HU)

The **organisation-based ENCI cases** display more widespread complexity and diversity in their funding base, stakeholders, partnerships networks as well as in their organisational structures in comparison with public run modalities. The models with simple organisational structures and a focus on citizen participation can be replicated in other contexts and countries provided their set-up and structures remain at a minimum and are deeply rooted to their locality in terms of

support networks and local partnerships.

ORGANISATION-BASED INITIATIVES

INCL. ECONOMIC ACTIVITY

The cases focused on local-scale activities are in general highly anchored at the local scale and exhibit a number of local and informal partnerships which help the cases to self-sustain. Their BSIMs focus on concepts such as degrowth, sociocracy, deep sustainability with an emphasis on citizen empowerment putting the energy transition in the hands of citizens and oriented towards the needs of people.



CARGONOMIA (HU)

NO ECONOMIC ACTIVITY



SOLOCAL ENERGY (DE)

The organisation-based cases with a more national scope and growth ambition are proven to be more long-lasting cases that have survived the course of time with larger networks and partnership coalitions with a focus on policy activities and lobbying. In addition, these initiatives have more professionalised organisational structures (compared to the public-run cases), and the development of some specific tools and financial mechanisms illustrate how their models and activities help to enhance ENCI-related economisation processes.



NATIONAL ASSOCIATION OF ACTIVE RESIDENTS - (LSA) (NL)



Auvergne Rhône-Alpes Energie Environnement SHARED ENERGY



JORI Hydroélectrique d'Ourthe & Sambre



HYDRO ELECTRICITY OUR THE & SAMBRE (BE)



naturstrom ENERGIE MIT ZUKUNFT NATURSTROM EG (DE)



TREEDEPENDENT (HU)

Finally, **individual initiatives** were not represented in the detailed cases to compose a worthy of research. [This does not mean, though, that they are not important in the energy transition. If you wish to get some examples, please check the EnergyPROSPECTS database.](#)

In short, the ENCI cases under study are proven to have business models that focus on multiple value creation activities combining viable financial structures, sturdy partnerships and coalitions with multiple stakeholders on several levels (local, regional, national), participation of citizens or citizen collectives in their decision-making models, accessibility of their model to a wider audience and focus on values such as deep sustainability, sociocracy, degrowth as well as transparency and openness. Echoing Wittmayer et al. (2022) business models that enhance ENCI requires 'new ways of acting, thinking and/or organising energy' in innovative ways.

More detailed information is available here

[D3.2. Catalogue of energy citizenship cases and typologies](#)

[D3.5. Publication of metaanalysis report](#)

[D4.4. Enhancing the transformative agency of energy citizenship](#)

Reflections of ENCI stakeholders' difficulties in attaining power.

Organisations, such as the ones exemplified above, face numerous challenges so that their members can achieve full control and power within the initiative and beyond it. The journey to individual and collective empowerment is progressive. Individuals gradually acquire greater autonomy and control over their lives and learn to experiment with their abilities in a context of interaction with other people. Along the way, they may face a variety of personal challenges and barriers (including those related to control), social, as well as those related to the availability of resources, infrastructure, materials, and services to carry out their objectives.

In section "[How do I translate my individual behaviours into participation in shaping the energy system?](#)" we asked you to write a list of your possibilities and resources, as well as the barriers and difficulties, to make changes in some of your behaviours in relation to the energy system. We will tackle this question a little further on, reflecting on some possible barriers to the development of empowerment in contexts of collective action. For the moment, we would like you to complete this list of barriers so that afterwards, the set of resources with which we could try to face the obstacles that these barriers impose on the development of individual and collective empowerment can be sought.

Activity N.º 9

Let's think and reflect on my barriers and constrains to gain power and to overcome disempowerment:

(Here are some examples of actions you can take as an energy citizen. Keep in mind that there are many experiences of energy citizenship, so here we only show some of them, giving you the opportunity to incorporate those that you consider appropriate, in addition).

	Individual-personal barriers	Collective-social barriers	Material barriers
Reduce my energy consumption at home/work (e.g. using more efficient devices, installing solar panels on the roof, avoiding the use of car...)			
Make changes in my consumption patterns (e.g. reduce hot water consumption and/or lower the temperature, turn off lights...)			
Encourage and support the creation of energy-sharing communities or neighborhoods			
Participate in assemblies, consultations and public decision-making debates on energy issues			
Being a minority shareholder in a project (e.g. a wind farm set up privately with public support)			
Being actively involved in the creation of an organization (e.g. energy community)			
Being actively and directly involved in an existing organization (e.g. an energy community)			
Contribute to the debate on alternative forms of mobility and energy production and consumption (e.g. solar farms)			
Participate in climate protest movements (e.g. Friday for Future, Extinction Rebellion)			
Please, fill in out with additional options if you wish:			

In the exercise proposed, the resources are graded into three generic categories, individual, social and material, as we have also done in the analysis of the interviews with our respondents (see figure 9). We have already discussed some [difficulties that people face individually](#) and the means and resources of coping

that they require, both in their actions as individual agents and collectively, in contact with other like-minded people. It is advisable that, if you would like further information on this matter, to click on the link provided.

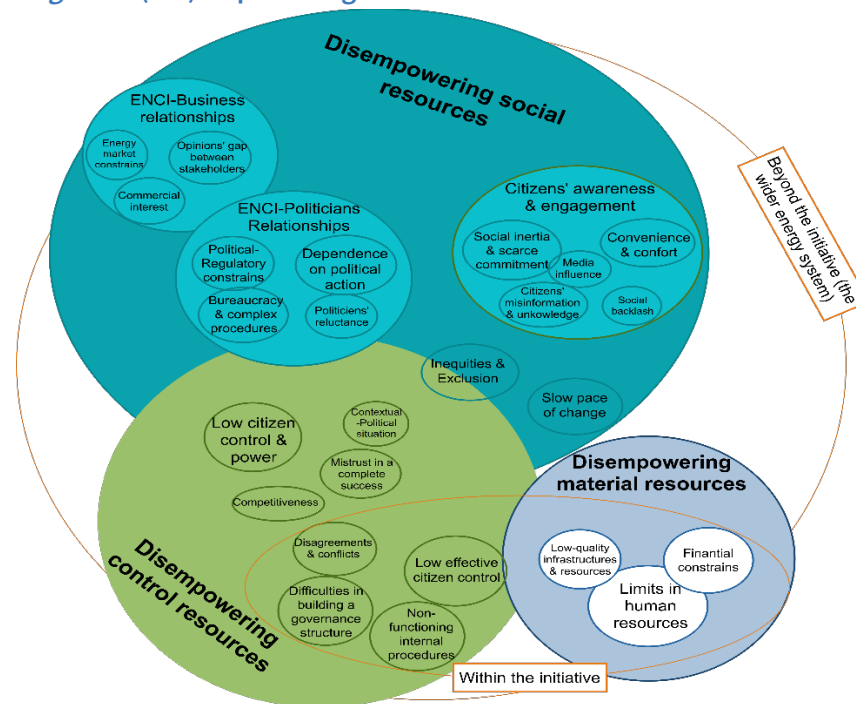
In this section, we intend to introduce you our respondents' views when they were asked about what can hinder their empowerment process or even generate disempowerment. We have already commented, when defining empowerment (link), the relevance for individuals to have resources and capacity to mobilize them with a certain control over them (Avelino & Rotmans, 2009; Zimmerman, 2000) but what happens when people experience a shortfall in resources? What do the people who are part of the entities understand by resources necessary for empowerment, that is what kind of resources do you mention? What are the most demanded resources for their empowerment, or which are those to which they have the most difficulty of access? Is it possible to speak, in a general sense, of resources for energy citizens? Or are there certain latent (non-obvious) limits that confront the just and equitable energy transition? As shown in the image below, with regard to the different barriers or resources that disempower our respondents, those related to the social relations that are formed inside and outside the initiatives, as well as those linked to control, stand out. Some limitations relating to the availability of knowledge and material resources are also mentioned on fewer occasions. Let's start with the latter (Figure 9).

the limits (...), I actually see there, it will become more and more professional and at some point you will reach the limits of the mission or the idea of the association. This means you can't grow beyond a certain size, because you have to professionalise more and at the same time with every project and the longer the association exists, the more volunteer supporters are found, because at some point the first, it can be seen how the initial enthusiasm, also in the general population begins to wane (Interview 49, Non-profit association).

One of the challenges faced by the initiatives is the availability of human resources. Many of the initiatives have a large number of volunteers who, although they benefit in terms of possible commitment to the entity and motivation to act, may be limited due to the constraints of time and individual abilities ["it implies a permanent work of accompaniment, and therefore, my availability being limited, the speed of transformation it is reduced (Interview 1, Institutional Campaign)], as well as available knowledge and, linked to this, the low level of professionalisation

demanded by some associations in the face of their imminent growth:

Figure 9. (Dis)empowering resources



Nor is it easy to find funding to pay the specialised personnel required for certain activities of the initiative ["Here, we have trouble recruiting an engineer, who has scant experience, to work on the project because the salary is not attractive. This means, the person will eventually find a job somewhere else" (Interview 1, intuitional campaign)]. It is, sometimes, a problem that curbs the impetus of the people who are part of the initiative:

there is a bit of this tension with the financial aspect, that is, that we have to do something somehow, getting money to do it, to make a living somehow. And there is a certain idealism. We always want to do a lot of things. But of course, we always have to somehow look at how many resources we have for it (Interview 44, non-profit association).

The difficulty in bearing the costs of their projects (e.g. financing of materials for the construction of houses, solar panels ...) is, without a doubt, a pressing problem for many ENCI initiatives ["There is no money. We don't have a revenue source. We don't make profits that we can turn into a next project. It took us years to reach this point" (Interview 16, energy cooperative)]. Alongside the lack of economic resources is added the low quality of the infrastructures ["the real problem here is the on-grid issues. Those, we have rented properties, these are in need of change" (Interview 29, Energy cooperative)] and how to strike a balance between the state they are in and the message they wish to convey to people..

In more severe cases, difficulties in repaying the initial investment, or in improving existing infrastructure, through sources of financing or self-sufficiency may lead to the initiative having to close its doors:

the project has cost us a lot of money and when I do the accounts, I feel faint. And the idea is that it remains so, that is, if the project is self-sustainable through a gift-based economy, it will continue, and if it is not self-sustainable it will cease to exist (Interview 35, co-housing).

External support to cover costs is very scarce. National and municipal governments are called upon ["There are no huge hurdles to becoming proactive energy citizen, but it requires finances as well sometimes, so could be nice if there would be more financial support from the state or municipalities" (Interview 52, individual energy citizen)].

The current energy system leaves out an important sector of the population that, before the concern for the energy transition, gives priority to other basic needs of their daily lives ["people who are in precariousness have other priorities than the development of renewable energies or the energy transition, when they themselves can't or can't afford to pay the gas bill or the electricity bill" (Interview 6, Energy consumption and production association Income level is important in an initial investment such as the installation of solar panels, as public subsidies are lacking ["Although there are government subsidies, for example, the installation of solar panels is not a cheap undertaking and is not available to all residents (Interview 52, individual energy citizen)]. Some people refer to this as a kind of vicious circle, in which all those people who do not have funds for the initial investment are excluded from the energy system, limiting the energy transition to the hands of a few:

I find big problems. They are not, let's say empowered or able to participate in this energy transition. That's more of a thing and there are more schemes like this. Subsidy schemes for example, for your house. You first must make the investment. And then afterwards you can claim the subsidy. Which means you must collect the money up front. So then, if you have the money up front, you're able to make the investment. And only after you get some money back which is off course weird (Interview 29, Energy cooperative).

There is under-representation of sectors in a situation of vulnerability in the different countries of the European Union when addressing the issue of the energy transition ["It's time and, what we've already had, I think, for example, that some people just don't feel addressed, because the citizen energy scene is white, academic, male and somehow middle-aged, I'd say right now" (Interview 46, Non-profit association)]. Business and political relations impose obstacles to the development of ENCI. Several informants from the countries studied allude to the power of energy companies ["It is not the citizens who are responsible for energy, but the big energy companies, as it was for a long time" (Interview 46, non-profit association)], which are the ones who dictate the rules of the energy market with a clearly defined commercial interest and against which many of these initiatives fail to compete:

They have their lobbies, but we don't have a lobby, it's not our way of acting (...) the rules of the game to be favourable in a capitalist system as we have, (...). As we've come straight out of school, it is the theme of indefinite individual growth, which is closely linked to the capitalist system. We will grow to sell more, to gain more a bigger market share and sell more and more (Interview 41, energy cooperative).

Differences in interest between actors in the energy market can also generate internal problems, even between actors operating in the same line ["there are sometimes misunderstandings or in any case ways of working which are different variants between the policies at the level, on a European Union wide level" (Interview 9, Mobility cooperative). Regulatory and bureaucratic barriers ["strict regulations" (Interview 10, Mobility cooperative); "It's more of a paper, bureaucratic process" (Interview 28, Energy cooperative)], or lack of municipal or local support

["increasingly non-cooperative and reluctant to engage with civil society and non-governmental actors" (Interview 20, Mobility cooperative) stand out.

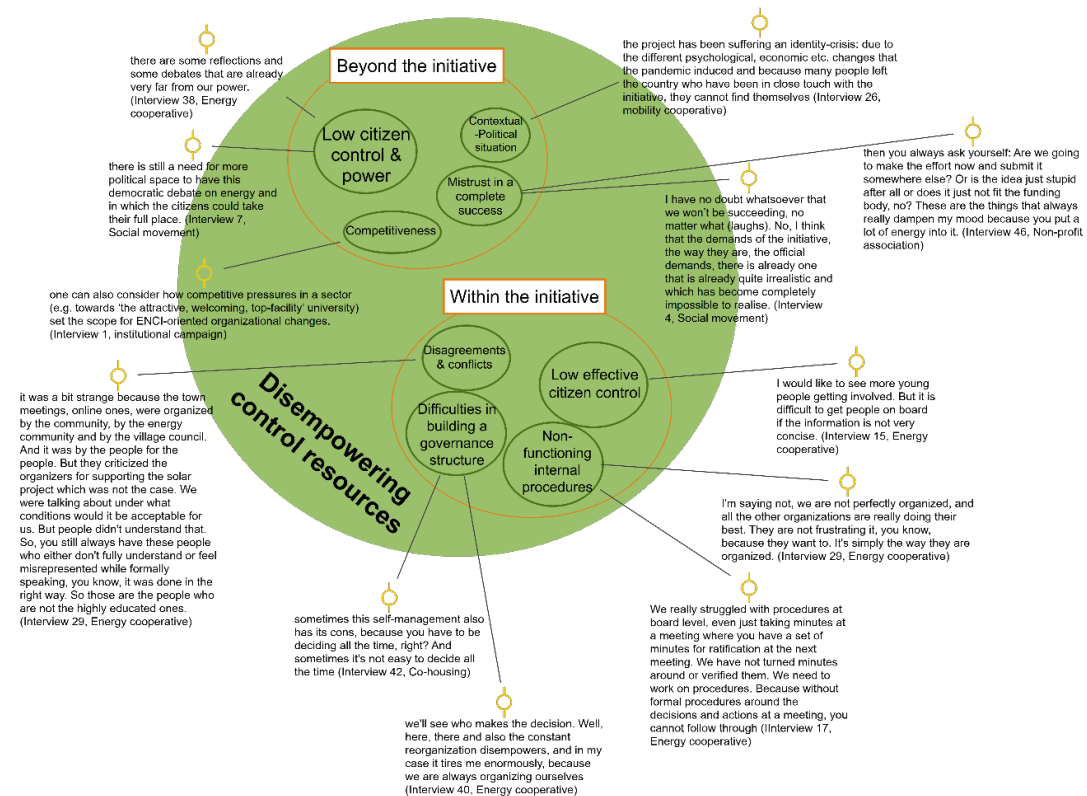
Moreover, citizen awareness and commitment are reduced by a matter of lack of interest, concern and even a certain apathy ["The problem is that people don't react. They have their noses in the wall. And presently, this is not the case yet for one if there are people" (Interview 49, non-profit association)], or for a matter of convenience and comfort:

you need people who are willing to do it, who want to self-build their house, who want to live in the countryside, and I have realised that those of us who come from the city or people normally, do not want to lose home comforts, going without a microwave, for example, here we cannot use the microwave. Not all of us can turn on the water heater at the same time, we must regulate the hours so that we do not run out of everything. That is, there are many limitations of the ideal model of degrowth, and it will always be voluntary (Interview 35, co-housing).

Our responders claim that there is misinformation and citizen ignorance. There is great concern about the lack of knowledge and education of the population about climate change, environmental problems, and the need for a rapid and effective energy transition ["They are not educated regarding this. They are not aware of what needs to be done. They are not aware of how to make changes. We need to educate people make them aware of how and why" (Interview 11, public consultation project). Difficulties in obtaining information, in accessing quality information, in being educated on these issues and in acquiring a critical and deep awareness of environmental problems... are the main barriers that our informants consider regarding citizenship, and that results in a slowdown of change ["changes are happening for the better, but slowly" (Interview 52, Individual energy citizen)].

All the above have a direct impact on the possibilities, means and capacities of people to dispose of and make use of their control resources. We have referred here to two types of control resources: those that are internal to the initiative, and those that involve the broader energy system (see figure 10).

Figure 10. (Dis)empowering control resources within and beyond the initiative



Internally, the main difficulties encountered by our informants refer to the organization and internal functioning of their structure under a governance scheme:

The main issue is in building a governance structure and adopting a set of rules, committee rules, cooperative rules that are mutually agreed upon. We have not really done that. We have adopted a set of principles from another organisation. We have not developed a set of rules and procedures for us. We are a fledgling organisation having picked a very difficult waters to navigate in terms of procedure and cooperation. (...) We have a lot of ideas, but the paperwork and procedures need refinement (Interview 12, Energy cooperative)

Some organizations are built on a strong base of technical knowledge, with adequate financial resources and even support from various intermediaries, but they lack a deep knowledge of how to develop truly participatory, horizontal, and democratic projects. Moreover, disagreements as to the objectives and purposes of the initiatives and the conflicts that result from it may be at the basis of the loss of control on the part of the members of an initiative:

people who are new to it because they just can't have a say in everything yet. And, of course, you might not have such a good basis for decision-making. (...) we're just trying to be aware of that. Somehow it needs to be dealt with. And it probably can't really be prevented. Except to try to really take as much time as possible to pass on knowledge. And not to develop that in any way (Interview 44, non-profit association).

The lack of truly effective control within the institution may also be down to the fact that they question their ability to keep continuously updated on the dynamics of the institution due to the aforementioned lack of time ["any volunteer who combines the follow-up of the initiative with family life, work, follows the information through emails, but cannot get the documents, is not in the day-to-day, loses touch with the working people as they do not see them often" (Interview 39, Energy Cooperative)].

In short, the significance of the above finally reveals that people who participate in energy citizenship initiatives experience difficulties and barriers such as those that, possibly, you also must face as part of an initiative – or have already done so – in this process. We intend to stress the problems, while opening your eyes to how these people face them (an aspect on which we will discuss in more depth later).

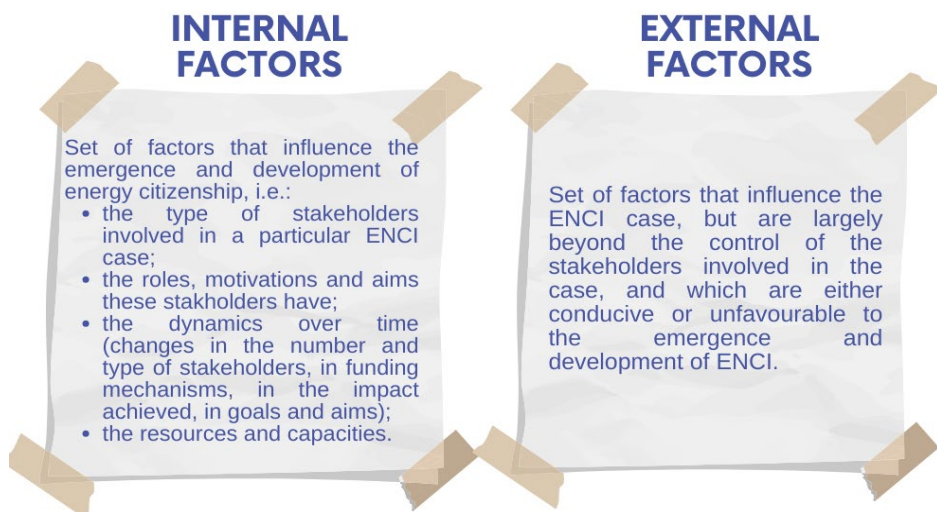
In a synthetic way, it is evident that once again individual aspects such as time, skills and knowledge are at the basis of people's opportunities to develop autonomous behaviour within initiatives, and that economic and social resources, including here relationships with other private and public bodies, can contribute to the initiatives coping, Not only to its internal challenges, yet also to substantial elements in the energy transition, such as the fight against energy poverty, the recovery of energy sovereignty in the hands of citizens, justice, equity and energy democracy..

What do you think? What are your resources to overcome Disempowerment?

Resources to overcome disempowerment.

In the previous sections, you were asked about the resources you can access to overcome disempowerment. Some of the thoughts of people who are part of ENCI initiatives have been shown, in which they informed us regarding their difficulties and challenges to act individually and collectively, through the initiative to which they belong, in the broader energy system. We intend to finish this section by offering you a selection of final resources that may be useful to you as part of your empowerment process through an energy citizenship initiative.

To accomplish this, we must consider that the emergence and development of ENCI depend on a variety of factors. Many of these may be classified as **internal**, the motivations and goals of the specific ENCI cases; the types of stakeholders and their roles in and perception of ENCI; dynamics over time (changes in number and type of stakeholders involved, in funding mechanisms, in impact achieved, in goals and aims, etc.); available resources and capabilities; but equally important are the **external** factors, in tohter words the ones that are relevant to and affect the ENCI case, yet are largely beyond the control of the stakeholders involved in the case.:



Regarding internal factors, we have discussed them in depth throughout this tool. We would like to would stress once again the relevance of the [resources](#) that you

have at your disposal - both personal-psychological, social, and material, which can be of major assistance on the pathway towards your individual empowerment and with a view to collective empowerment within the ENCI initiative:

BUILDING YOUR INDIVIDUAL AND COLLECTIVE EMPOWERMENT

CONDITIONS AND OUTCOMES FOR COLLECTIVE EMPOWERMENT



We draw this section on internal factors to a close by mentioning how to foster [participatory governance](#) within your ENCI initiative. Subsequently, we will refer to the external factors that have been classified into six categories: [political](#), [economic](#), [socio-cultural](#), [technological](#), [ecological](#), and [legal](#). These factors are considered within a methodological tool called [PESTEL analysis](#). Moreover, as a support resource at your disposal, we will conclude by mentioning information regarding [intermediary agents](#).

Participatory governance

In our current societies, effective citizenry commitment, organised through initiatives that work for the energy transition is one of the keys to its success. Throughout these pages we have referred to different typologies of social innovation initiatives, and within these, to the experiences and stories of several stakeholders that form them. We have observed that each initiative displays its peculiarities, which boils down to different ways of treading the path towards individual and collective empowerment.

Despite their differences, all these initiatives share the purpose of experimenting with alternative social relations to embark upon new ways of acting. Their hallmark is the positive social impact they generate and their common search for new forms of trust, cooperation, reciprocity and autonomy, along with respect for the environment (Kemp et al., 2015).

In the pursuit of transformative changes in society, initiatives such as consumer cooperatives, associations, energy communities, amongst others, represent examples of forms of community governance through which standout examples are sought to achieve certain values and ideals, while creating a space for their implementation (Dumitru et al., 2017; Kemp et al., 2015).

The underpinning axis of these initiatives is the construction of a democratically governed organisation that empowers its members and is governed by sound governance principles and institutions so that it can remain in the hands of citizens (d'Herbremont et al., 2022). As several of the stakeholders interviewed pointed out, the adoption of participatory governance requires:



seeking out model of responsible, non-profit production and consumption with reference to the big energy companies) 'no, no, this is a financial business, and the electricity will be made by someone else. What I'm going to do is make money with these businesses. And it's true, this is a business in which you have a monopoly granted by the state and you also have unregulated influence on system regulation (Interview 41, Energy cooperative).

a marked learning process: learning comes to the fore, because you must understand a minimum to be able to decide, meaning there has been major educational strides in the Assemblies so that we could all reach a minimum understanding in order to be able to decide (...) without knowledge you cannot form an opinion (Interview 32, Energy cooperative)

Initiatives usually entail the participation of citizen groups, social enterprises, authorities, and community organisations (Vernay & Sebi, 2020). This is especially important as a result of the contributions that each party can make since the interaction between social structures and formal institutions facilitates the processes of innovative social transformation (Pel et al., 2015). By involving a wide range of stakeholders as to accomplish sustainable and long-term results, particularly incorporating community values into decision-making, there is a greater chance that the community will accept the changes being introduced and wish to engage in the action (Driver et al., 2017). In this case, we invite you to reflect on the way in which the participation of the people who are part of the initiative you are involved in is promoted by answering a series of questions:

Activity N.º 10

Let's consider and observe my level of participation in the ENCI initiative

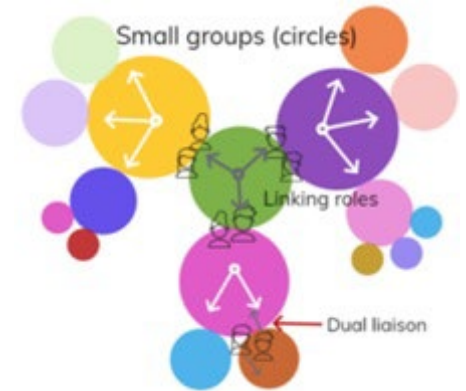
Below is a list of questions which will help us ascertain what participation point you are at within the initiative you are involved in.

In my ENCI initiative, I am informed regarding what is happening, the decisions that are made and how they may affect me. There is no exchange of ideas, discussion, dialogue or deliberation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> I am not sure
In my ENCI initiative, I am consulted when information is required on a topic, issue or process of community interest, with the intention of obtaining opinions, standpoints, ideas, values, solutions or priorities from each of the members who are mainly affected.	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
In my ENCI initiative, I work together with other members based on a common goal to facilitate understanding and the search for a common solution to the problem.	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
In my ENCI initiative, I collaborate with other members on all critical aspects of the initiative, including developing alternatives and finding preferred solutions, which are taken into account.	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low
In my ENCI initiative, I have control and decision-making autonomy as do other members who act as individuals or groups who can influence and/or benefit from the initiative's creation and maintenance.	<input type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low

After making you reflect upon your level of participation in the ENCI initiative and before moving on to the point in which we will focus on addressing the role of external factors in your options for participation in the broader energy system, we would like to mention an element of relevance to generate democratic governance: creating an organisation which ensures that membership and leadership resemble the community. Some of our key respondents in the project told us of the decision-making system based on sociocracy, therefore, we have concluded this point by briefly summarising it should it be of interest and usefulness to you.

Sociocracy is an approach to governing organisations that induces greater engagement, distributed leadership, harmonious adaptability, and increased productivity. It is best suited for organisations that aim to self-manage based on the values of equality. It is based on a set of simple rules (e.g. how to create a circle: The same rule allows any circle to morph into a subcircle, and subcircles to form other subcircles and so on).

- **Circles:** small groups that form the basis of decision-making. Each circle has a definite goal (a description of what it does) and full authority in a domain (over which the circle has authority).
- **Roles and functions:** will be defined by the circles by consent, both to function smoothly and to "package" operations into meaningful pieces. Any member can play one or more roles.
- **Liason roles:** Connect circles with other related circles.

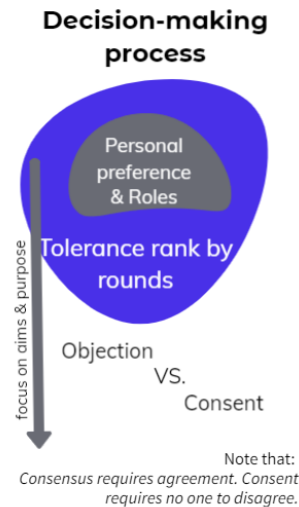


Top-down decisions are usually autocratic decisions in which the superior can override the subordinate. In a model based on sociocracy, each circle or role will have authority in a defined domain. Since domains are nested, there is a hierarchy of domains, yet not an autocratic relationship between people or roles. The combination of top-down and bottom-up links between circles results in a circular hierarchy. To make decisions, consent is used in which there are several phases:

1. **Preparation:** Each circle decides, by consent, which topics to include in its agenda and how much time it will devote to each of them.
2. **Personal preferences and roles:** People are chosen in roles such as circle coordination, secretarial, facilitation, or a self-defined operational role.
3. **Turn-taking:** practice of speaking one by one in meetings until everyone has spoken once in that round. The intention is to listen to all voices. The rounds contribute to greater mutual listening and understanding.

- 4. **Consent:** Decision-making is not based on what the majority decides (majority vote), but the group should strive to integrate each objection until all members give their consent. The underlying idea is that minority opinions matter and that majority voting tends to polarize rather than unite people. There is consent to a proposal when no member of the circle has an objection; That is, no member of the circle has reason to assume that the circle cannot achieve its goal adequately if the circle approves the proposal.

Any member of the circle can highlight a problem in a proposal and make sure that the circle improves the proposal prior to approving it. Consent requires working on problems collaboratively. This means sociocracy requires a commitment to listening, learning, and using its tools. For some, this might require a modicum of "unlearning" from practices from more hierarchical contexts.



Technical, political, and regulatory knowledge: PESTEL Analysis

The EnergyPROSPECTS consortium has made use of the PESTEL analysis tool to identify and describe the external factors that favour or hinder the emergence of ENCI while also obtaining information on the conditions that might affect ENCI cases in the future, identify opportunities to back ENCI, as well as threats or barriers that could thwart its progress. The model is displayed below so that it can be properly applied to the initiative of which it is a part. Certain specific descriptions of the nine countries participating in the project have also been included.

More detailed information is available here

- [D5.1. Analytical report on PESTEL factors in the EU context](#)
- [D5.2. Analytical report on PESTEL factors in the national and local contexts](#)

Political Factors

P1. Key political objectives, targets and goals for the energy transition

National policies and political aims, targets, and goals to reduce the net greenhouse gas emissions, to increase the share of renewable energy production and uptake, while similarly boosting energy efficiency and energy savings. All these energy transition aspects must be considered from the viewpoint of the role played by the citizens and must acknowledge the involvement of citizens and communities in a variety of ways and capacities.

Local example from Spain: [Next Generation Galicia](#): as per the Recovery, Transformation and Resilience Plan, the autonomous Galician government has developed a local transformation plan Next Generation, to build a more resilient, sustainable, and fairer future for the post-COVID-19 world through innovation, plus also providing education and training for the local people. The aim is to increase energy efficiency within the public institutions, expanding the use of renewable energy sources, tackling energy poverty, establishing living labs for renewable energy use, mainstreaming smart mobility systems, fostering the use of alternative fuels and digitalisation of electricity infrastructure including smart electricity systems.



Source: [EGA Asociación Eólica de Galicia \(CC Licence\)](#)

P2. Multi-level energy governance structure of a country

Policies and measures aimed at decentralisation of the energy system, enabling development of decentralised and citizen-led renewable energy production.

Local example from the Netherlands: In the municipality of Horst aan de Maas, citizens have been invited to participate in RE projects in four different ways, which are set forth in the [Dutch Climate Agreement](#) (2019). These are co-ownership (local residents co-own via an association / cooperative), financial participation (via shares, equity holdings, certificates, or bonds), environmental fund (proceeds partially benefit local societal goals) and local residents' scheme (immediate residents receive benefit e.g., via green electricity discounts).



Source: [Drone footage of the village Horst Limburg The Netherlands \(CC License\)](#)

P3. Political support for ENCI

A broad set of procedures and modes of political actions supporting different aspects of citizens' participation in the energy transition whose goal is to ensure that the public is given early and effective opportunities to participate in the preparation of the national energy and climate plans. This would provide citizens with the necessary information

and enable them to express their opinions. Likewise, it intends to establish multilevel climate and energy dialogues with the local authorities, civil society organisations, business community, investors, stakeholders, and the general public.

Local example from Latvia: To promote citizens' involvement in decision-making processes and activate dialogue between the city's municipality and local stakeholders, a consultative and expert council operates under the auspices of the [municipality of Valmiera](#), for example, the Youth Affairs Advisory Commission, and the Entrepreneurs' Advisory Council. One of the tools created is the annual project competition. The municipality also promotes the [neighbourhood movement](#), by providing regular project competitions targeted toward neighbourhood associations. This acts as an instrument through which the residents can join forces to improve the community's living environment and provide for cooperation between residents and municipality.

P4. Political/ democratic culture and traditions

Levels of 'participative governance' of citizens in the energy system and political commitments to energy democracy, as well as the general manifestations of participatory and deliberative practices in policy. These can include various organisations of civil society (NGOs, churches, schools, sports associations etc.), semi-governmental organisations (utilities, housing corporations) and public-private partnerships.

Local example from France: Local development councils are compulsory in [PETR \(Pôles d'Équilibre Territorial et Rural\)](#) and inter-municipalities with more than 50,000 inhabitants. The development councils consist of citizen volunteers and stakeholders from different parts of civil society. This actions provides a space for dialogue, deliberation, and the elaboration of citizen proposals.

P5. Inclusion and empowerment policies

'Inclusion and empowerment policies' allow passive or thus far inactive energy citizens to take the reins in the energy sphere that make accomplish certain goals in terms of sustainability and energy democracy. It captures the range of governmental policies and non-state initiatives dedicated to the empowerment of vulnerable groups (those suffering from energy poverty, those marginalised owing to a lack of energy literacy, and those often overlooked or underrepresented in decision-making on energy matters).

Local example from Hungary: In Budaörs, training courses have been specifically run for pensioners and the "poor" within a local government project in 2021-2022 which helped drafting and popularising the climate strategy. In Budaörs as well as in Kispest (18th District of Budapest) several training programmes have been organised by the local authorities for the local municipal employees to empower them to be more active citizens and energy conscious employees.



Economical Factors

EC1. General economic situation / Inflation rate and purchasing power

The economic situation is of obvious importance to ENCI. It sets constraints on the behaviours of individuals, households, enterprises, and other stakeholders enacting ENCI. It may also pave the way for investment opportunities, e.g., high levels of economic growth might entail (financial) empowerment, innovation, and act as inspiration for individuals to become active ENCI, however, it could similarly 'lull people back to sleep', i.e., into passive energy consumerism.

Local example from Germany: The former German Democratic Republic (GDR) state of Mecklenburg-Western Pomerania enjoys (alongside that of Hamburg) the greatest technological and economic successes. It performs particularly well in the number of companies from the renewable energy sector, about this sector's turnover, direct and indirect employment. These ranking stresses that purchase power and the economic development related to energy transition are not necessarily converging. The higher percentage of wind energy mainly depends on the lower population density in certain rural areas of Eastern Germany where the construction of big wind parks can be carried out more easily compared to densely populated Federal states.



EC2. Energy prices (incl. relative cost of renewables and fossil fuels)

The direct effect of high energy prices is that they necessitate energy savings, increase the likelihood of energy poverty, and make the socio-economic inequality more acutely felt and visible. This could induce a shift in the way society views certain ENCI practices specifically geared towards fostering energy justice and energy democracy. Overly high prices are likely to be economically and socially disruptive and can generate collective action such as protests and may spark social movements. The ensuing political tensions may work towards conscientious and altruistic ENCI behaviours, but they may also work towards egocentric, competitive behaviours.

Local example from Belgium: The extreme energy prices have acted as immediate financial incentives for ENCI initiatives such as the ULB energy efficiency mission (Pel 2023b). The impact this had on HOSe, an institutionally hybrid initiative exploiting hydroelectricity, was somewhat favourable. However, they could use the increasing revenues to bolster their financial balance. Nonetheless, this enterprise operated in a cooperative, not-only-for-profit spirit.



EC3. Energy market

Energy prices are often regulated by governments through a range of instruments (subsidies, taxation, emissions trading) and for a range of reasons (energy security, environment, etc.). The liberalisation and decentralisation of the energy system in

principle work as enablers of ENCI through the development of decentralised renewable energy production, notably citizen-led renewable energy communities.

Local example from Bulgaria: A documentary series "The Independent" created by the [Bulgarian Solar Association](#) unveils stories of Bulgarian citizens who have decided to move away from the grid. Their actions include, through sustainable energy production and consumption, urban farming, and other means. The documentary shows the most common struggles they face, including resistance from the national energy providers, bureaucratic complexities, lack of local support for urban farming, amongst other aspects (BSA, 2021).



EC4. Economic policy instruments

Energy taxation is one way to create price incentives for citizens and businesses to shift to clean energy sources. By making certain types of energy sources more expensive, others then become more profitable, thus possibly enabling ENCI, notably in terms of production and consumption of renewable energy. The state aid can also support ENCI in several ways. (e.g., aids for Renewable Energy Communities)

Local example from Spain: Positive taxation for clean energy users, focusing on a value-added tax (a rate of 21% for energy products) and additional special taxes on hydrocarbons, coal, and electricity. The special tax on electricity is transferred to the regions and can be applied to fund renewable energy support programmes. Furthermore, the regulatory powers of the Autonomous Communities allow them to apply taxes that have a bearing on energy policy; e.g. the Basque Country enforces an Economic Agreement that gives powers to the Regional Government Treasuries to regulate their own [taxes](#).

EC5. Financing and investment opportunities contributing to a more sustainable energy system

It encompasses different funding programmes with the potential to back ENCI in different ways. If they are poorly developed, individuals and organisations struggle to materialise their ENCI ideals due to heavy financial risks. However, if the factor is properly developed, it can be seen how the frontrunners are followed by a large group of late adopters, and how active forms of ENCI are viewed both normal as well as feasible and within reach for a broad range of people. It also influences the social distribution of ENCI, i.e. the degree to which ENCI is either mainstreamed or limited to particular privileged groups.

Local example from Hungary: Since the government does not offer sufficient amounts of support (not enough national funding schemes open for local governments, the larger investment measures require government approval, great part of the former municipal income was taken away (centralised), thus local authorities make strident efforts to obtain direct EC funds (ELENA, UIA, EUCEF, Horizon, EIB, etc.).

Social Factors

S1. Level of income / wealth disparity and energy poverty

Welfare of citizens influences the concentration of energy community initiatives and determines whether citizens hold the purchasing power and sufficient capital to cover such investments. Higher income levels allow for greater investments in ENCI actions (RES installations, energy communities, improving energy efficiency, etc.), while low-income households typically cannot afford major outlays, which will entail an uncertain future. Wealth imbalance among citizens in Europe is expected to grow due to inflation and rising energy bills.

Local example from France: There are [regional differences when it comes to energy poverty](#). Households in the Grand Est (24.3%), Bourgogne-France Comté (24%), Hauts-de-France (18.8%) and Auvergne-Rhône Alpes (18.6%) are especially affected. This can be partly explained by the colder climate in these regions, though factors such as, average income levels, the average surface area and housing type. Finally, the year of construction and the energy used must similarly be taken into account.

S2. Energy literacy, awareness and skills

Literature describes the energy literacy concept as composed of four main aspects: literacy about energy devices, energy actions, energy finances and more general energy-related knowledge. The latter encompasses energy attitudes, values, understandings of energy production and consumption together with energy-related behaviour. People who are more energy literate are supposedly more likely to start saving energy, to inspire people around them to be energy conscious, to join an energy community or even start one.

Local example from Ireland: The [Galway City Council](#) aim to increase citizen awareness of the potential impacts from Climate Change events and how best to avoid or reduce damage to their homes; and the Tipperary County' [Climate Adaptation Strategy](#), it commits to updating the information given to tenants, including how to minimise climate emissions.



S3. Citizen engagement and passivity in society

Active and meaningful engagement on the part of citizens in the energy transition process (such as participation in energy decision-making, community or individual ownership of energy production in the form of *prosumerism*. Participation in social movements or protests) depends on many factors, yet one of the more decisive ones is the general level of citizen engagement/activity. In its essence, energy citizenship means that citizens are actively engaged in taking action towards energy transition and carbon neutrality. Conversely, the term 'passive energy citizen' would describe an individual who is not driven to act despite being aware of the need to take action. The passive energy

citizen goes beyond a non-citizen or a 'deficient' citizen, however, as it also refers to vulnerable, disempowered and alienated individuals. Citizen engagement and empowerment are therefore at the core of the energy citizenship concept.

Local example from Spain: The communities of owners of Montes Vecinales of Tameiga (Mos, Pontevedra) (also called "Mountain Joint Community") manages part of the Monte Faquiña industrial estate, located on its land, and manages its own socio-cultural centre. One of their recent steps has been the creation of one of the first Energy Community in Galicia. The community members have installed photovoltaic panels for self-consumption on the roofs of their socio-cultural centre and two warehouses of the industrial estate they manage.



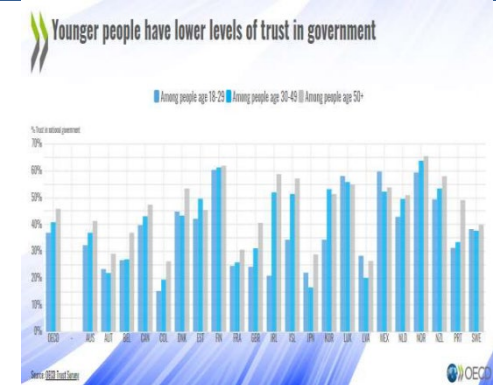
Source: [Paisaje de Mos \(Pontevedra\)](#) (CC License)

S4. Trust (or lack thereof) in institutions and collective endeavours

Lack of trust in energy-related initiatives due to mistrust of social, political and economic institutions is a prominent social phenomenon in many European countries and might even manage to impede the energy transition. The perceived negative connotations associated with cooperatives and different institutionalised and collective forms of organisation in general are especially relevant for Eastern European countries, where the remnants of socialist regimes still influence citizens' perceptions. Hence, the understanding of the terms "community energy" and "cooperative" can often entail flashbacks to communism and therefore be flatly rejected by some people. This is in contrast with some Western European and especially the Nordic countries, which have a strong tradition of social enterprises and community ownership.

Local example from Latvia: Latvian residents still place more trust in local governments. According to the OECD survey, 42.1% of respondents expressed trust in local governments, which is close to the average indicators of OECD countries - 46.9%. 35.24% of respondents trust civil servants ([oecdilibrary.org](#)).

Riga: A survey was conducted among Riga residents in November 2022, in which respondents were asked to assess the performance of the Riga City Council. Out of all the respondents, 45% expressed satisfaction with the council's activities, while 8% identified issues with the council's work as being among the most significant concerns. This included 3% who displayed concerns regarding corruption.



Technological factors

T1. Availability of technologies for the decarbonisation of the energy sector and renewable energy

To be able to participate in the decarbonisation of the energy sector and produce their own renewable energy, citizens need to be able to access the necessary technologies. Solar photovoltaics (PV) and solar thermal technologies can be rolled-out rapidly and reward citizens and businesses with benefits in the form of financial savings, yet also offering protection to the climate. Offshore wind and ocean energy are usually a rather centralised energy supply option, in which citizens are out of the scope, which might consequently foster citizen protests. Hydrogen is an important technology that contributes to the decarbonisation of the energy sector, but ENCI manifests mainly as consumers of such energy.

Local example from Germany: A photovoltaic system with 50 kilowatts power has been built on the façade of a radiology centre near Marburg's main railway station in 2022. Stadtwerke Marburg and the Sonneninitiative association have concluded a PPA for the project, which ensures its long-term financing. A PPA evokes spontaneously large photovoltaic power plants. However, the model can also work on a small scale: The Sonneninitiative association and the Marburg municipal utility wish to display this with an urban flagship project. The façade of the local radiology centre at Marburg's main railway station is to be equipped with a photovoltaic façade system with an output of 50 kW. This will be made possible through a long-term PPA signed between the Sonneninitiative association and the Marburg public utility company.



Before - After: The commercial building from the 1970s was almost completely covered with solar modules. Source: Image © Solarradiology Marburg

T2. Decentralised energy system and storage

Decentralised distribution networks are significant preconditions for citizens to produce their own renewable energy and be able to distribute it.

Local example from Hungary: Decentralisation in Kispeszt is supported by the active grassroots Energy Efficient Wekerle initiative, whose members can support the work of the municipality with expertise, experience, local knowledge and a well-developed community network (Climate strategy of Kispeszt, 2020).

T3. Digitalisation of the energy system

Digitalisation of the energy system can be seen as leverage to enhance citizen participation in the energy markets, to improve the feedback regarding consumption while raising awareness towards lower consumption. These measures include smart grids deployment (consumers can regulate their energy consumption), smart metering (empowerment of consumers through real-time feedback on their energy consumption), smart mobility (non-CO₂ emitting transport) and different ICT solutions for enabling small scale citizen producers of renewable energy to trade it directly or indirectly with consumers.

Local example from France: [FLEXGRID](#) is a deployment programme for the optimisation of energy systems in the Provence-Alps-French Riviera region. A 100% renewable, virtual power plant is part of the projects financed by the programme.

Local example from Bulgaria: The enterprise [ADD Bulgaria](#) is currently a leading force in smart metering and remote control, not only by offering technological solutions, but also by maintaining a blog that provides readily accessible information and resolves misconceptions about the digitalisation of the energy system. That said, local utility companies are likewise involved in the process to varying degrees.

T4. Energy efficient buildings

Buildings account for 40% of total energy consumption in the EU. Buyers and tenants of houses should be informed about the energy performance of buildings to be able to take proper measures regarding building renovations.

Local example from Latvia: The most active citizens in terms of energy efficiency of buildings are the residents of Liepaja, Valmiera, Ventspils, Jelgava, and Riga. Considering that most multiapartment buildings in Latvia are in Riga, the city is lagging behind many other municipalities. In the national competition, Valmiera city won the "Most Energy Efficient Multiapartment Building" in Latvia 2019. The municipal capital company "Valmieras Namsaimnieks", Ltd which is the largest operator of apartment buildings in Valmiera, is very active in the renovation of apartment buildings to improve their energy efficiency. At the same time, it also means the proper operation of the house after renovation. In connection with this, the elders of the houses, are instructed, and information is given to the apartment owners.

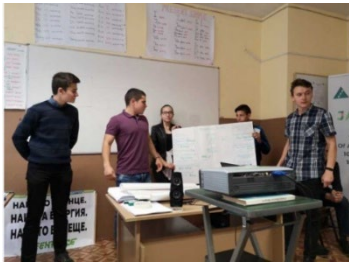


Environmental factors

EN1. Climate vulnerability

Climate change is one of the standout rationales for creating ENCI. Action against climate change, adaptation to it, and the attempt to devise a liveable future are all driving forces behind its development. For comprehensive changes to take place, economic and political regulatory reform is essential, but the role of individuals, their everyday actions and decisions are becoming increasingly important, leading to the flourishing of ENCI.

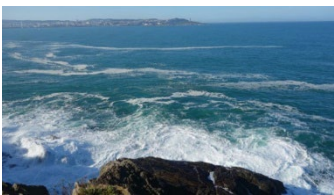
Local example from Bulgaria: Energy citizenship includes protests against deforestation and construction in protected sites and on the coastline. Such protests are conducted frequently in several cities. Most notably, a project for the construction in the Pirin National Park was countered with demonstrations in over ten cities. The protests, which took place in Sofia, Plovdiv, Varna, Burgas, Ruse, Haskovo, Sliven, Smolyan and several other smaller cities, were sparked by a government decision to construct a second gondola lift within the boundaries of a protected area. According to protesters, exceptions could not be made for construction



projects in protected areas, as they are fundamentally unconstitutional, environmentally destructive, and potentially a steppingstone for even greater construction investments (BNR, 2018). Students have proven especially active in promoting ENCI, not only participating in protests against climate change but also establishing collectives and partaking in educational events.

EN2. Availability of resources

Availability of resources (including renewable energy potentials) differs considerably from country to country, and as a result, diverse support schemes are operated on nationwide levels. Transition to a greener lifestyle can be influenced by the possibility and openness to use existing renewable energy producers (e.g., if green electricity can be requested by consumers it could signal a good start in lifestyle changing). Furthermore, an existing initiative can serve as an example for future ones (e.g., Renewable Energy Communities). Thus, the existing renewable energy production and system can also be a key factor in the life of ENCI, plus if the situation is not convivial, it can represent a huge barrier.



Local example from Spain

Parque Nordés (Galicia): an offshore wind farm that has found supporters and detractors. Although the Parque Nordés initiative is being well received by some citizens who view it as a means of placing Galicia at the fore in the construction of offshore wind farms and in the promotion of R&D in offshore wind energy, the project has not been free of criticism. Environmental

organisations lodge claims the negative effect of offshore wind turbines on birds (SEO/Birdlife) or on fishing and the sea (Plataforma Manifiesto de Burela) in a region where a large part of the economy depends on this sector. It has even been considered an "environmental offensive" that endangers fishing activities in the area (Galicia en Común).

Source: [Costa Ártabra \(Galicia\) \(CC License\)](#)

EN3. Pollution

Pollution caused by the energy sources currently used and the environmental conflicts that may arise during the energy transition are linked to our daily lives. Pollution can arise from many different types. Noise pollution caused by the petrol and diesel cars can be a motivation to switch to more sustainable ways of transport (e.g. bikes, electric cars), increasingly polluted air can act as an incentive to develop a range of green solutions from green energy production to more sustainable waste management and changes in mobility. In contrast, the concept of "visual pollution", which includes the degradation of the landscape, arises in the context of newly developed renewable energy systems, especially wind farms. Waste associated with energy production refers mostly to photovoltaic panels and nuclear waste.

Local example from the Netherlands: Noise and visual pollution play a role in sustainable energy generation in Horst aan de Maas, for example. The Framework for Generation of Sustainable Electricity (KODE) describes how there will be disadvantages if renewable energy projects are to be implemented in two selected exploration areas. According to the municipality "the experience of the environment changes and there is potential nuisance, through noise for example". Due to this issue, they engage with residents and landowners through public consultations (KODE, 2020).

EN4. Conflicts and opportunities about land use connected to renewable energy

Finding suitable land for renewable energy can lead to many conflicts, especially when the land in question is or can be used for agricultural purposes or is part of the protected area. On the other hand, in areas that have been previously used for industrial purposes, are polluted or of poor quality, the establishment of renewable energy systems linked to ENCI can be a major benefit.

Local example from Ireland: In 2022, the British-based company Renewable Energy Systems had their application approved by Tipperary County Council for the development of a solar farm on a 42- hectare site in County Tipperary. However, following the approval, significant complaints were submitted to Tipperary County Council objecting to the development, including from local councillors, residents, an elected TD [Member of Parliament]. Among the many objections were the impact that this development would have on the visual beauty of the area and that such a large development was removing a significant amount of viable farming land from use.



Legal factors

L1. Legal framings of ENCI forms

The legal framings of ENCI on a national level can be highly diverse. They may include different forms of consultative and participative processes; giving a legal status to former "alternative" practices; acknowledging the citizen as consumer in the private sphere; improving legal security; simplification of regulatory processes; or simply a provision of information to citizens. Certain legal frameworks, however, might similarly limit the EBCI's scope for action.

Local example from Latvia

Riga city Energy Agency sees the energy communities as an important element and actively participates in EU-wide projects promoting them. The importance of 58 neighbourhoods is emphasised by the Strategy of sustainable development of Riga until 2030. The NGO "Riga Neighbourhood Alliance" has been established. In Valmiera municipality, there is currently a debate about what the energy communities are, how they will be run, and whether and in what way they would be suitable for the development of the municipality. Neighbourhoods have been established and neighbourhood associations have become active. The next year's work plan for the municipality is to promote the development of smart villages in the area.



L2. Legal measures to vulnerable consumers, energy poverty and social inclusion

This factor covers different policy measures that tackle issues related to energy poverty: policies dedicated to tackling energy poverty and vulnerable consumers, issues of accessibility of energy efficiency measures to vulnerable people and enabling participation in the energy market for households that might otherwise not be able to do so.

Local example from Belgium: Energy poverty is, considering the fact that Belgium is otherwise a rather wealthy country, somewhat pervasive. Flanders is the relatively wealthier part of Belgium, but also there one finds high levels of energy poverty, which tends to affect particular demographic groups: "Reporting on energy poverty the Government indicates that around 680,000 inhabitants (11%, or around 280,000 families) live under the poverty threshold in Flanders, and around 16% of all families live in energy poverty. Single-parents and elderly people living alone are especially at risk and those living in social housing. There are several support programmes in place for people affected by energy poverty."

L3. Rights and duties of consumers, prosumers and new producers in interaction with the energy market

National regulatory frameworks that define the rights and duties of consumers, prosumers and new producers, and that define the rights of all consumers to become active in the electricity market. Such rights may include clear information on consumption and costs to enable the consumers to act accordingly (regulating their consumption, comparing offers, switching suppliers), individualisation of energy consumption in collective buildings (relevant for heating, cooling and hot water), easy grid access procedures, cost-covering remuneration for energy fed into the grid, etc.

Local example from Germany: As a distribution system operator (DSO), the Stadtwerke Wolfhagen achieved 100% RES energy consumption in 2015 and then embarked upon a pilot project in DSM. Within this project price signals are exchanged between participating residents and the DSO to encourage load shifting to times of high renewable generation. This project has been developed based on individual requirements. To be able to put their product to market in the long-term, it is necessary to ensure interoperability in the market structure and information technology that is developed around the globe. The traditional energy grid architecture was established decades ago. As the industry faces the emerging fundamental changes towards a smarter infrastructure, Stadtwerke Wolfhagen has introduced its Demand Side Management pilot project to stay ahead of the competition while further benefitting from the high amount of renewable production. The project won the national 'Energy Efficient City' competition, resulting in national funds which support the creation of the DSM pilot project including residential households and the development of an individual technological solution. However, the project apparently did not result in the implementation of a DSM on a local scale.

L4. Bureaucracy and red tape

Lengthy administrative procedures constitute a major administrative barrier while being costly. The simplification of administrative permit granting processes, and clear time-limits for decisions to be taken by the authorities entrusted with issuing the authorisation for the electricity generation installation on the basis of a completed application, should stimulate a more efficient handling of procedures, thereby reducing administrative costs.

Local example from France: [Island and coastal communities in Brittany](#) face many barriers to develop wind turbines. The rule that it must be at least 500 meters from a dwelling, the Coastal Law (that prohibits any new construction in the [100 metres closest to the coastline](#)), Natura 2000, protected areas and historic monuments, all contribute to major administrative hurdles. With the lack of staff in public administration to handle such issues, the process to circumvent these laws is often difficult and lengthy.

Overview of the PESTEL Analysis of ENCI in Belgium

[\[Find more information on the website\]](#)



Belgium (officially, the Kingdom of Belgium) is a Western European country. The population is around 11,6 million (2023).

Belgium has a temperate maritime climate characterized by moderate temperatures, prevailing southerly to westerly winds, abundant cloud cover and frequent precipitation.

An outstanding feature of Belgium is the strongly federalised institutional structure. The three regions Wallonia, Flanders and Brussels are federated entities, just as there are the three language communities: Flemish, French, and German. A specificity of Belgian federalism is the absence of hierarchy between these governmental tiers. The competences are divided on an exclusive basis between the three political-administrative levels. At the middle and lowest political-administrative levels, we find respectively the provinces and the communes (municipalities). This complex multi-level governance is sometimes referred to as the ‘institutional lasagne’, and the ensuing difficulty to reach agreements and make binding decisions is often lamented. This diversified/fragmented institutional structure might weaken federal-level, centralised governmental support for (certain forms of) ENCI. On the other hand, this does not mean that Belgium is an ‘institutional void’, the institutions for energy policy do exist, and abundantly so. The regions have competences for issues such as energy

efficiency, the promotion of renewable energy, public transport, transport infrastructure, urban/rural spatial planning, agriculture policy, and waste management. Meanwhile, the federal level retains important competences such as fiscal policy, norms for products, the safeguarding of national energy security, nuclear energy, territorial waters (including offshore wind energy), public buildings, and the railways. The federal government can thus support regional-level policies about climate, air quality, and energy.

This potential for coherent multi-level governance is reinforced through three deliberation platforms: The coordination platform for energy policy CONCERE/ENOVER, the coordination committee of international environmental policies, and the national climate commission (CNC). In fact, there is a range of governmental, semi-governmental, market, Third Sector and civic organisations that act as empowering ‘intermediaries’ for ENCI.

The current conditions in Belgium seem to be very conducive to the flourishing of ENCI. Several context factors can be conducive to ENCI, whilst they are otherwise widely considered to be undesirable themselves: The Environmental factors indicate vulnerabilities, concerns and pressing problems. These are the typical problems that nobody wants, but for ENCI these problems have a positive significance as they act as mobilizing factors (and in turn, high levels of ENCI promise to be a helpful factor in the resolution of these environmental problems). In similar vein, economic adversity and financial pressures have been marked as positive

factors, as incentives towards ENCI. The particularly pressing technological problem in Belgium of the poorly performing building stock has equally been marked as an ENCI-inciping factor.


A significant part of citizens appears to be falling in the category of ‘passive’, ‘indifferent’ or in any case not fully responsibility-taking citizens. This appears to be linked up with issues of socio-economic marginalisation, and with low levels of trust in institutions. ENCI may remain limited to frontrunners and early adopters in Belgium – notwithstanding otherwise favourable circumstances in terms of wealth, safety, and technological means.

The outlook for the national ENCI ecosystem is, first, that it is going to remain fragmented or federalised. There is a range of means of empowerment that is going to become available from federal level action, but ENCI will remain regionalized and localised. As the energy transition process proceeds, it is quite probably that governmental, semigovernmental and business organisations will remain important leaders-of-action. Together they might undertake a thorough renovation operation, not only of houses but also of Belgian society more broadly. Considering the joint force of the institutions, it is not inconceivable that quite a big part of the energy transition will still be undergone by the Belgian population in not very active roles. The roles of the public will arguably involve a mixture of ENCI, and of the energy consumer roles as they have historically evolved in the Belgian welfare state.



Overview of the PESTEL Analysis of ENCI in Bulgaria

[\[Find more information on the website\]](#)



Bulgaria is a country located in the southeastern region of the European continent, occupying the eastern part of the Balkan Peninsula. The population is around 6,6 million (2023).

Bulgaria is characterized by two climatic regions: a continental climate in the north and a Mediterranean climate in the south. The country's Mediterranean climate tends to be hot and dry in the summers and cool in winters. The mountains that differentiate the northern and southern regions have a significant impact on the country's temperature.

Bulgaria is a parliamentary republic and is a unitary state with a centralised structure. It consists of 27 provinces and a metropolitan capital province (Sofia-Grad). The regional governors are appointed by the government.

The democratic culture in Bulgaria is rather low and most citizens are passive and refrain from involvement with public problems. A distrust towards state institutions is prevalent and most citizens are sceptic that something can change through their participation. This inevitably shapes the attitudes regarding participation in public

activities, including creating or joining a group or community to pursue a certain goal. Such reservations are also valid for different forms of energy citizenship, despite the generally positive inclinations towards participation in the energy transition through generation of own electricity or energy renovation of homes. The existing civic sector often lacks resources (material and human) and expert capacity for active participation in the energy governance. Another considerable obstacle is the inability (or reluctance) of institutions to engage in dialogue with citizens. Mechanisms and venues for involvement of civil sector exist, but they are insufficiently used and often ineffective. As a result, the energy policymaking in Bulgaria is seldom based on broad public debate and real stakeholder involvement.

The Integrated National Energy and Climate Plan of the Republic of Bulgaria until 2030 acknowledges that citizens should have an active role in the energy system, however specific measures that support such a role have yet to be developed. The vague recognition of citizens as active participants in the energy system in the country, not supported by

concrete regulations and measures, hinders the development of ENCI.

In general, political (clear political support for ENCI), economic (energy prices and financing and investment opportunities) and technological factors (availability of RES technologies, green and smart mobility) seem to be predominantly supportive, contributing in different ways to a formation of a (potentially) fruitful field for the ENCI cultivation. Environmental factors are ambiguous – while some act as motivation for ENCI, others represent a considerable barrier (e.g., urgency of action against climate change has accelerated the establishment of energy citizenship in Bulgaria, but there are also numerous constraints to use of renewable energy sources). The analysis show that legal factors are a strong deterrent for energy citizenship in Bulgaria as there are still no clear rules, procedures, and regulation for the establishment of energy communities or other forms of energy citizenship. Social factors proved to be equally discouraging – again a rather inevitable outcome for the poorest EU member state (large wealth disparity and energy poverty, low energy literacy and high distrust towards institutions).

Overview of the PESTEL Analysis of ENCI in France

[\[Find more information on the website\]](#)


Traditionally, the energy governance structure in France has been highly centralized and the French energy system has been characterised by the dominance of nuclear power together with a preference for large state-led projects and strong national utilities. While the traditional network of political and administrative elites is considered to still uphold key power positions in the French energy governance system, the liberalisation of energy markets has opened a window of opportunity for the involvement of local authorities and actors and served to empower other economic actors vis-à-vis the state. The competences accorded to local and regional authorities in France however only gives them a certain degree of power. Key levers of ENCI, such as energy market regulation, price setting, support schemes for renewable energy and energy efficiency are for example under the control of the central government.

The increasing focus on climate change mitigation has however led the state to empower local and regional actors to contribute to national objectives. In terms of governance, the regional and sub-regional levels are bound by the 2015 Law of Decentralisation to implement their own climate and energy transition goals aligned with the overarching national framework described above.

During the 2021-2022 energy price crisis, households, businesses, and organisations have been encouraged by the government to adopt energy sufficiency measures, this is likely to continue in the coming years as sufficiency is becoming increasingly accepted as an important climate mitigation strategy. While support systems such as the energy check and support for low-income households for energy renovations exist, overall, vulnerable groups remain more marginalised than average and/or wealthier citizens in the energy transition. This reveals the fact that energy citizenship mostly relies on the individual capacity to act. There is a lack of collective action and public services that would favour inclusive participation of all. Important barriers remain for the scale-up and access to energy communities, renewables self-consumption, and overall deployment of renewable energy. The new law on the Acceleration of Renewable Energy Deployment that was adopted in the beginning of 2023 does not sufficiently

consider the citizen dimension of renewables deployment.

The biggest opportunities identified for the development of ENCI are the energy price crisis that has incited energy savings, energy sufficiency as a tool for climate mitigation, France's vibrant civil society which has been active in the climate struggle in recent years, the ambition to be a leader in the transition and in climate mitigation in Europe, the geographical potential for renewable energy (especially for wind power and photovoltaics together with the early legal recognition of self-consumption), largely adequate transposition of RECs and CECs (however with much room to improve the support for citizen-led renewable energy projects), and an institutionalised "right to debate".



France

France is located on the western edge of Europe. The population is around 64,7 million (2023). France's climate is temperate but divided into four distinct climatic areas. The oceanic climate of western France, central and eastern France's continental climate, the Mediterranean climate of south-eastern France and France's mountain climate.

France is a semi-presidential republic with a head of government - the prime minister - appointed by the president who is the directly elected head of state. France's territory consists of 18 administrative regions - 13 metropolitan (i.e., European France) and 5 overseas regions. All 5 of the overseas regions, as well as Saint-Martin (a French territory in the Caribbean) are considered part of the EU (with the status of outermost region).



Overview of the PESTEL Analysis of ENCI in Germany

[\[Find more information on the website\]](#)



Germany (officially, the Federal Republic of Germany) is located in central Europe and is divided into 16 states (Länder) commonly, referred to as Bundesländer. The states are further divided into 401 administrative districts, of which there are 294 rural districts (Kreise) and 107 urban districts (Kreisfreie Städte). The population is around 84,4 million (2023)

Germany has a temperate climate throughout the country with warm summers and cold winters, however long periods of frost or snow are rare. Rain falls throughout the year. Germany is a federal parliamentary republic with a head of government - the chancellor - and a head of state - the president - whose primary responsibilities are representative. Each of the 16 states have their own constitution and are largely autonomous regarding their internal organisation.

The Federal Government and the Länder engage in continuous coordination on the implementation of the energy transition. The institutional coordination is complemented by a continuous co-operation and

exchange on technical level. On federal level, the Federal Network Agency for Electricity, Gas, Telecommunications, Post and Railway (BNetzA) serves as the most important regulatory authority for overseeing the regulation of transmission and distribution networks. BNetzA ensures compliance with the Energy Industry Act and its respective ordinances. To achieve that goal, BNetzA has a legislative function by specifying the regulatory regime and it has also various monitoring, investigation, and enforcement tools. Regulatory authorities also exist at state level. They mainly deal with smaller electricity networks that fall outside the scope of BNetzA (that is, networks with less than 100,000 connected customers and that do not cross state borders).

The new RES Act 2023 provides a relevant framework to enhance the development of cooperatives and communities, and therefore, the various related forms of ENCI, notably by ensuring their democratic content and the related citizen control and by preventing possible abuses. Considering citizens willingness to take part in the energy transition, especially through collective ownership of RES, this might become an important

driver for further developments of citizen energy in the coming years. However, some aspects of ENCI support are still lacking in the new German regulations, and especially regarding the energy poverty issue, which is barely addressed and could prove to be a major barrier for part of the German citizens.

The overall situation of ENCI in the country has to be assessed positively, after a short period of doubt with regard to the German pioneer status for the development of RES. The planned phase-out of nuclear power and exit of coal are still an ongoing challenge and the recent policy and economic framework shows that the German Government intends to take back control over the energy transition towards a renewable and decentralised energy system. The national ENCI ecosystem appears currently favourable for the development of a highly diversified ENCI. This requires also that the willingness to get involved within the German population turns into active involvement, a process that is still dependent on the adoption of further facilitating frameworks – such as balcony solar plant or energy sharing.



Overview of the PESTEL Analysis of ENCI in Hungary

[\[Find more information on the website\]](#)

The 90% of the country's total primary energy supply comes from fossil fuel and nuclear sources. It means that Hungary is highly dependent on external fossil fuel and non-renewable resources. The energy system is highly centralised with little intention of decentralisation. Renewable energy utilisation and community energy are not in the forefront either since it would require a more flexible and less centralised system. Due to the rather centralised nature of the Hungarian systems (energy, governance, education, etc.) citizens have limited space to be active citizens, especially if they wish to be prosumers. Specific legal barriers also hinder the development of ENCI and the wider distribution of renewable energy. This situation has slightly changed due to the energy crises started in 2021-22. The biggest barriers to the development of ENCI in Hungary originate from the realm of political decision-making and legal regulations. Although various national strategic documents (e.g., the National Energy and Climate Plan and the National Clean Development Strategy) clearly follow the principles expressed by the EU, in some instances, some of these national documents lack the very same ambition and are not transported with enough details into practice in the Hungarian legislation and policy. In addition, the political communication is also often inconsistent. Another very important overall obstacle is that the central government fixed (put a cap on) the energy prices in 2010 and this weakened the motivation of the public to become active energy citizen.

One of the opportunities is that knowledge about climate change is becoming more widespread in Hungary as well. The country is currently among the more fortunate in terms of climate change impacts, but storm damages and heat island effects are being felt more and more. Personal involvement can also create a stimulating environment for ENCI. The current energy crisis has also raised the level of energy awareness among the population, as rising utility prices have forced many people to pay more attention to these issues and to save (the government lifted the price cap in 2022). Finally, it is also a great opportunity that the general living standards – together with the per capita carbon-footprint – of Hungarians is rather low within the EU.



Hungary is located at the centre of the Central-Eastern Europe. The population is around 9.772.756 (2023).


Hungary experiences a continental climate in the east, maritime climate in the west and a Mediterranean maritime climate in the south. In general, given the average temperatures and precipitation, it corresponds mostly to a continental climate. That means warm summers and cold winters. Hungary is a parliamentary republic with a head of government - the prime minister - who exercises executive power and a head of state - the president - whose primary responsibilities are representative. Hungary is divided into 19 counties, Budapest, and 23 cities with county-level authority.

ENCI initiatives in Hungary are not in an easy position and can often feel that they are going against the flow. However, as in other parts of the world, awareness raising, lifestyle greening and community building are becoming more and more relevant. Some kinds of sustainability related systems are also becoming more and more accepted in Hungary, for example, in the field of mobility. Perhaps, precisely because ENCI initiatives in Hungary are often started from the direction of energy, they tend to take a holistic approach, addressing multiple aspects of sustainable lifestyles or somehow dealing with carbon-footprint. There is a stronger sense of community, where initiatives are successful, tightly knit communities are formed, typically with one or two leading characters.

Top-down initiatives can often succeed because of the low level of proactivity in a post-socialist society. These top-down initiatives are essential because they can often provide the missing initial push, that is natural in Western societies, which can start a resident on the path of becoming an active citizen.

Overview of the PESTEL Analysis of ENCI in Ireland

[\[Find more information on the website\]](#)



Ireland (officially, the Republic of Ireland) is located off the northwestern coastline of continental Europe and the population is around 5 million.

The dominant influence on Ireland's climate is the Atlantic Ocean. Consequently, Ireland does not suffer from the extremes of temperature experienced by many other countries at similar latitude. The warm North Atlantic Drift has a marked influence on sea temperatures.

In 2021 in Ireland, over 60% of electricity production came from fossil fuels, 30.7% from wind power, 3.2% from hydropower and 3.1% from biofuels. Only 0.3% came from solar energy. The price of electricity (taxes included) for domestic consumers in the first half of 2022 is 0.2741 euros per kWh. The share of renewables in energy consumption at EU level reached 21.8% in 2021. The current EU target is to reach 32% renewables by 2030. One of the lowest proportions of renewables were recorded in Ireland (12.5%) in 2021. Ireland is a parliamentary republic consisting of 26 counties, 3 city councils, 2 city & county councils.

In Ireland, decision-making power on energy policy is strongly centralised with the national level holding key competencies. Nevertheless, subnational governments, especially the 26 counties, still play an important role in energy governance through their functions in spatial planning, community development and in implementing national policies. The counties are the main subnational administrative units and governed by elected county councils.

Historically Ireland has lacked a culture of, and political support for, ENCI. Ireland has been, and continues to be, a country that is heavily dependent on carbon emitting fossil fuels for its energy supply. The Irish energy system has traditionally been centralised with neither the technology, funding, nor political will to decentralise it. However, over the past few decades this has begun to change. Recent years have seen a sharp rise in efforts to transition to a low carbon energy system, with ENCI increasingly

becoming a central focus of environmental policies, strategies, and action plans. In line with this, the Irish Government has implemented several policies aimed at developing ENCI in Ireland, including energy literacy campaigns, funding for renewable energy micro-generation and retrofitting programmes, investment in green mobility, providing legislative and legal frameworks to protect and include citizens in the energy sector, creating channels for citizen engagement, and working towards decentralising and digitalising the energy sector. All these actions have started to establish ENCI, as is evidenced by the number of people engaging in retrofitting and micro-generating schemes as well as more than 600 Sustainable Energy Communities (SEC) designated by the SEAI. However, nationally, the development of ENCI has been arguably limited, particularly in contemporary times of rising inflation and energy prices, diminishing real income, a worsening housing crisis and record high levels of energy poverty.



Overview of the PESTEL Analysis of ENCI in Latvia

[\[Find more information on the website\]](#)

The energy and climate policies development and implementation have been transferred to the new Ministry of Climate and Energy. At the same time, certain important functions providing synergy with energy & climate policy remain with the Ministry of Economics (MEC) and the Ministry of Environmental Protection and Regional Development (MEPRD). The political framework can be seen as a moderately supportive factor for ENCI. While political objectives and goals for the energy transition emphasize the importance of promoting civic participation and involving citizens in the energy transition process, they lack clear targets (e.g., there is no clear definition of the specific number of energy communities that should be established).

There are no 2nd-level (regional) municipalities in Latvia, but five planning regions, responsible for regional development planning, are established. Currently, there are 43 first level (local) municipalities. There are two types of administrative territories in Latvia - (i) territories of local governments of State cities, and (ii) territories of local municipality (novads) governments.

Development of municipal-level energy-climate action plans is voluntary; however, they have been elaborated (for the main part or whole area) by more than half of municipalities. On January 1, a new Law on Municipalities came into force, enhancing how local governments now operate by incorporating more of the public into all operations. Regarding

energy citizenship (ENCI), important are the actions of the NECP2030, particularly in the directions of “Public information, education and awareness raising” and “Involvement of society in energy production”. The NECP2030 envisages financial support for the household sector, both energy efficiency improvement and RES utilisation.

Society's involvement in energy self-production using non-emission technologies can generally be assessed as still low, however with a clear growing trend. The boom of solar PV installations in the single-family dwelling sector is the result of the combination of several factors, particularly, a high rise in electricity price, good grid capacity to accumulate micro-generation devices, digitalised and simple permitting procedures, and state programme for equipment purchase co-financing. In turn, communities of apartment owners operate for energy-efficient renovation of multi-apartment buildings. However, current practices are mostly limited to single multi-apartment building, as there are not yet energy communities in Latvia, as provided by the recast REDII.

The specific climate and energy focus of the newly created ministry may also be beneficial for ENCI: even though currently no information directly related to ENCI, this can be an opportunity to improve ENCI's framework conditions in the

Latvia (officially, Republic of Latvia) is a Baltic country situated in Northeastern Europe. The population is around 1,8 million (2023). Latvia is located in the temperate climate zone, relatively flat terrain, the proximity to the sea and air masses from the Atlantic Ocean influence their climate. Climate is mild and humid with four explicit seasons. It is a parliamentary republic, subdivided into 110 one-level municipalities and 9 cities, with their own city councils and municipal administrations.




country. Also In 2023, the National Energy and Climate Plan will be updated, and new actions must be included to meet the targets of the EU “Fit for 55 packages”, so there is a possibility that it will focus more on ENCI. In the context of EU-level priorities, an important role in Latvia's Recovery and Resilience Plan is dedicated also to climate change. The Plan provides for climate and environment-related investments to be concentrated in a separate component to ensure the investment threshold of more effectively 37% for climate goals set in the EU regulation. This could serve as an additional tool to promote energy citizenship, but everything depends on how the government plans to implement this. Another instrument, particularly for the promotion of collective ENCI forms might be the Modernisation Fund, particular programmes of which are under elaboration now.

The recent geopolitical situation and the high prices of energy resources have promoted high interest in installing solar PV panels for self-consumption. Both conditions are a new motivation to act and decide, this has also promoted discussions in society about the current situation in the energy sector.



Overview of the PESTEL Analysis of ENCI in The Netherlands

[\[Find more information on the website\]](#)



The Netherlands is a country located in Northwestern Europe. The population is around 17 million (2023). The Netherlands is located in the 'temperate zone'. Throughout the country, mean winter temperatures are about 3°C and mean summer temperatures are around 17°C. Coastal regions have more hours of sunshine than inland regions and a relatively small annual and diurnal temperature range.

The Netherlands is a parliamentary constitutional monarchy with a head of government - the prime minister - and a head of state - the monarch. A council of ministers holds executive power. The country is divided into 12 provinces and 388 municipalities. It is also divided into 22 water districts, governed by an executive board that has authority in matters of water

management.

The policy and legal environment is generally supportive for the participation of citizens in energy communities, but issues do exist such as professionalisation, energy sharing, supply, and cooperation with the Distribution System Operator which are not adequately acknowledged in legislation/practice and act as regulatory or practical can burden ENCI. Despite this, the funding instruments and support schemes for energy communities and households appear to be favourable and well-developed. Energy consumption and saving is an important part of the energy transition in Netherlands. Overall, reduced energy demand for fossil fuels in response to high prices creates an opportunity to develop new energy sources, thus supporting ENCI.

There are some key barriers to ENCI. The current general economic situation (high income inequality,

low citizen purchasing power) and high energy prices have an inhibiting effect on ENCI because of a scarcity in economic resources to be invested in the energy transition.

In addition to energy poverty, technological factors are currently a key barrier for ENCI in several ways. The structure of the electrical grid constitutes a challenge for decentralisation and energy generation by energy (community) cooperatives and similar ENCI actors. There are also barriers to ENCI caused by a lack of efficiency in the built environment. Another key factor is the lack of available land for RE generation, and the high reliance on the natural gas network.

But also there are many opportunities for ENCI. These are mostly around the advanced support scheme structure of the country. Schemes such as SDE++, ISDE, SCE, have been and are supportive for

ENCI emergence. Moreover, the political acknowledgement of the need for multi-level governance is beneficial for ENCI and this is seen in the progression of the RES (Regional Energy Strategy) programmes. State aid for high energy prices also has a beneficial effect on ENCI as it helps citizens financially. However, it may also have a counteracting effect by sustaining continued use of non-renewables. There is also a culture of citizen engagement, and this is seen in the high number of energy cooperatives and other non-energy related grassroots initiatives (e.g., food banks).

Finally, the increasing scarcity of non-renewables (gas and oil) can present an opportunity for ENCI emergence because the government acknowledges energy insecurity as a key issue which can be partly solved by stimulating energy communities and prosumership. Accordingly, key advancements have been made in the legal system to legitimise ENCI and give rights to actors such as energy cooperatives and citizens/households and community groups in the generation of RE.

The outlook for the future of the national ENCI ecosystem can be projected as positive, given the commitments that the government has made to further developing support structures for citizens in the energy transition and the legitimacy that citizen-based and hybrid ENCI forms have in the country.



Overview of the PESTEL Analysis of ENCI in Spain

[\[Find more information on the website\]](#)



Spain is a country in south-western Europe with great geographical, climatological, and technological potential, as well as political, economic, and social interest for the development of different forms of ENCI. The population is around 47 million (2023).

Due to its complex orography and geographical location, Spain has a remarkable climatic variety, ranging from humid Atlantic conditions, with annual rainfall, to large semi-arid areas, with severe hydrological stress, and even cold alpine climates in some isolated areas. In addition, extreme events such as droughts, heat waves, or severe rainfall and floods are recurrent phenomena.

Spain is a parliamentary democracy and constitutional monarchy with a head of government - the prime minister - and a head of state - the monarch. A council of ministers is the executive branch and is presided over by the prime minister. Spain is a unitary state, composed of 17 autonomous communities and 2 autonomous cities with varying degrees of autonomy. Accordingly, each region have their own parliament; therefore, it could be considered fairly decentralised country.

In Spain, each autonomous region oversees the energy sector in a way that the local governments can authorise certain power plants and energy

networks, also, providing financial and political mechanisms following the national energy strategy which might create relevant political, economic, and infrastructural conditions for the development of different ENCI types.

The most prominent ENCI initiatives in Spain are collective, citizen-based and hybrid. The Autonomous Communities from which the most representative examples can be drawn are Catalonia, the Basque Country and, to a lesser extent, Galicia. This is because these are Spanish regions with outstanding economic, industrial, technological, and social development, together with infrastructures suitable for the development of green technologies.

In Spain a variety of factors converge that can favour the development of ENCI types, above all at the collective level and in a pragmatic or reformist way, as well as at the individual level.

On the one hand, there is evidence of political concern in Spain for the transition to a more renewable energy system, which is materialised in a comprehensive strategic framework and in a broad and updated regulatory development. Likewise, the

Spanish economy has sufficient resources such as human resources, building renovations, business networks and competitive research centres to benefit from the use of renewable energies.

In addition, there are many business actors, large corporations, SMEs, and financing programmes to provide the necessary investment for a resilient and clean energy system. Furthermore, changes in the energy system would have a significant impact on the labour market. Indeed, if the energy sector transition is managed effectively, it would promote job creation.

On the environmental level, the favourable meteorological and geographical conditions of the territory for the use of renewable energy resources can be highlighted.

Finally, at the social level, there are still obstacles to citizen participation in relation to energy use and ownership given the lack of knowledge, training and even trust in institutions. Spain's lack of tradition in municipal public services and the incipient nature of many initiatives linked to the ENCI concept (e.g. cooperatives, EC) may be a brake in this sense, although there is a growing desire to invest in collective ENCI proposals, given the growing awareness of climate change risks, as well as for reasons of economic savings.

Social knowledge and interactions with like-minded people: The role of intermediaries

Energy citizenship projects involve collaboration and transactions with other actors (such as government, finance providers and knowledge institutes) for which intermediation may be needed for crossing these boundaries.



We lead from the premise take as a starting point that intermediaries in ENCI are:

'are actors, organisations, individuals/intercessors that mediate, work in-between, make connections, and enable a relationship between different persons or things'

(Hodson et al., 2013, p. 1408).

These individuals and organisations that interact with ENCI initiatives in a meaningful way can act as supportive agents in the transition to the new forms of governance that are being devised and tested as a means of intervening and seeking to transform and decentralise energy systems.

In the face of pressures to accelerate a rapid energy transition in the context of increasingly polycentric, multi-level or multi-scale governance models and dispersed and distributed control, it seems essential to us that one can identify which intermediary actors can support you in the initiative to which you belong.

We would begin, once again, by asking you some questions that may make you reflect on the role of intermediaries in your ENCI initiative:

- Have you ever considered the extent to which you receive support from third parties and how this support has been or is relevant to the initiative you belong?
- Perhaps the opposite is true: have you had the opportunity to support others in your project?

In the last activity shown below, we would like to invite you to reflect on these questions. Thinking about this will be very useful for you and the members of the

initiative to verify what resources you have at your disposal, which ones you might require and, furthermore, where you could go to look for them.

Activity N.º 11

Let's consider and reflect on the stakeholders who could be/have been significantly involved in the creation and functioning of the ENCI initiative.

Have you required/do you require support:

	Who supported you?	How significant was that support?	When does it stop being necessary?
In instigating-continuing with the initiative's structuring and organisation of the functioning.		<input type="checkbox"/> Vital <input type="checkbox"/> Average <input type="checkbox"/> Lacking	
In funding all/part of the initiative (capitalisation and mobilisation of resources necessary for the case to consolidate and sustain/grow).		<input type="checkbox"/> Vital <input type="checkbox"/> Average <input type="checkbox"/> Lacking	
To networking and coordinating with stakeholders who share similarities with the initiative, enabling cooperation between actors, building and managing multi-stakeholder networks, exchanging knowledge and visions.		<input type="checkbox"/> Vital <input type="checkbox"/> Average <input type="checkbox"/> Lacking	
In making the initiative visible (to the interested public, to general society...)		<input type="checkbox"/> Vital <input type="checkbox"/> Average <input type="checkbox"/> Lacking	
In carrying out technical and scientific expertise activities (e.g. ICT resources, planners, architects, PV or wind energy specialists, project monitoring, facilitating experimentation and pilot projects, facilitating/supporting the adoption and implementation of innovations, etc.).		<input type="checkbox"/> Vital <input type="checkbox"/> Average <input type="checkbox"/> Lacking	
In providing legal advice on how to set up and manage an initiative, how to organise institutionally (lobbying), how to make your voice effective in the public debate (lobbying activities, protest against law projects)		<input type="checkbox"/> Vital <input type="checkbox"/> Average <input type="checkbox"/> Lacking	
Please, complete with additional options if you wish:			

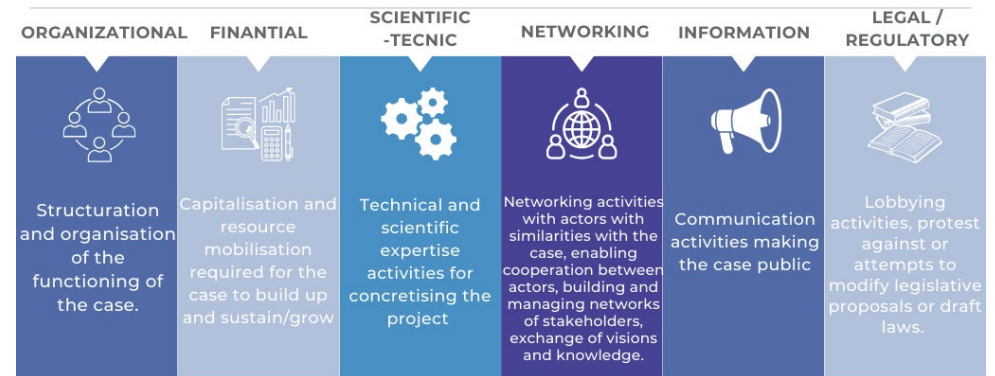
The EnergyPROSPECTS' research found that intermediaries operating in an ENCI

context, can encourage the (further) development of ENCI cases by successfully addressing their needs and fulfilling their goals regarding a fair and sustainable energy production, consumption, and governance.

A wide range of energy intermediaries work between different supranational, national, regional, local and community programmes and may operate within the opportunities and constraints afforded by the 'landscape' pressures, policy priorities and institutional frameworks within which they are located. In Energy Prospects we distinguish five main sorts of intermediaries:

TYPES OF INTERMEDIATION

Intermediaries are often identified by their roles (sometimes referred to as functions)



Organisational intermediation is undertaken by bodies composing the initiative, legal status, coordination of the various activities (capacity building, energy production retail), negotiating with administrative authorities. For example, in [Bike Evolution](#) case from Bulgaria, intermediaries (mainly NGOs) provided consultation on all matters related to organisational set-up, including the statute, registration, and communication with authorities as well as funding organisations.

Financial intermediation refers to the capitalisation and resource mobilisation required for the initiative to build up and sustain/grow. For the [Galway Energy Cooperative](#), for example, a main success that the cooperative managed to attain was enabled by financial support from the national government, namely, to acquire funding for the Energy Master Plan by the Sustainable Energy Authority of Ireland (SEAI). This financial intermediation goes beyond the funding itself but also includes establishing the architecture for Sustainable Energy Communities (SECs) in Ireland, which fosters networking opportunities and mentoring for the participating SECs.

At the other end of the spectrum is the brokerage exercised by [Energy Communities Tipperary Cooperative](#) (ECTC), which assists homeowners in leveraging grants under government schemes to retrofit their homes and improve

TYPES OF INTERMEDIARIES EXAMPLES

COMMERCIAL INTERMEDIARIES

For knowledge-intensive business services: banks who offer a mortgage or a loan (thus connecting capital providers with those that need capital), business lawyers and consultants hired for assisting in deals between two parties.

National and Regional based Banks, European Investment Bank, British Council, Energy regulators, Renewable energy installation companies, Building and engineering firms, Agricultural entrepreneurs and farmers, SMEs, Advisory firms, Audio-visual firms, Legal-law firms, Auditors

GOVERNMENTAL INTERMEDIARIES

E.g. government agencies that manage programmes with loans and funds and technical assistance on, for instance, energy renovation and energy cooperatives, platforms for knowledge exchange.

National, Regional and local governments, Municipalities, Municipal directorates and councils, City councils, Provinces, Ministries (national gov.), European commission, National energy authorities, National environmental assessment agencies.

NON GOVERNMENTAL INTERMEDIARIES

Civil society umbrella organisations (for transition towns), collective actors such as cooperative networks (e.g., REScoop, the European Federation of citizen energy cooperatives), chambers of commerce.

Non-governmental foundation and associations, National Postcode Lottery, Social enterprises, Non-profit associations, NGOs, Associations of ECs, Community coalitions, Coop. unions, village councils, Local cooperative networks and groups, National Park foundations, Regional energy desks, Architects cooperatives, Water coalitions, Housing associations.

OTHER CIVIL ORGANIZATIONS INTERMEDIARIES

Not created explicitly to be intermediaries, non-sector or umbrella organisations.

Environmental and sustainable energy NGOs and associations, Volunteers centres, Local and regional energy agencies, social energy services organisations, Academy of champions for energy, Climate movements, Knowledge based associations.

INTERCESSORS (INDIVIDUALS)

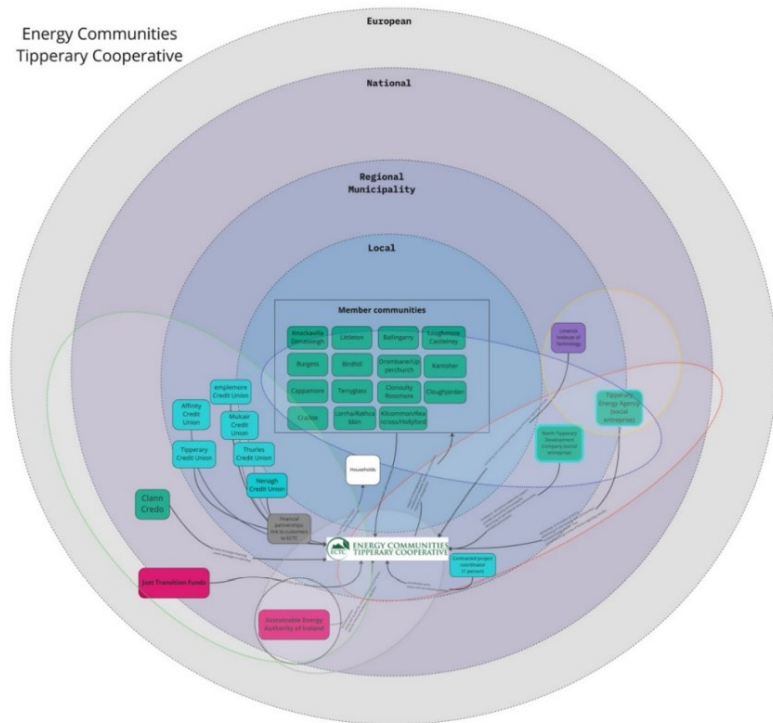
Are individuals who talk to different actors with the aim of learning about possibilities for collective action, cooperation, partnerships, institutional change by learning about the beliefs, material interests, mandates, responsibilities, capabilities and resources of specific actors.

Mayors, teachers, friends that help with the case, case founders-initiators, case-motivators, local volunteers, residents, donors, local farmers, members of the community council

Also, intermediaries are often identified by their roles (sometimes referred to as functions)



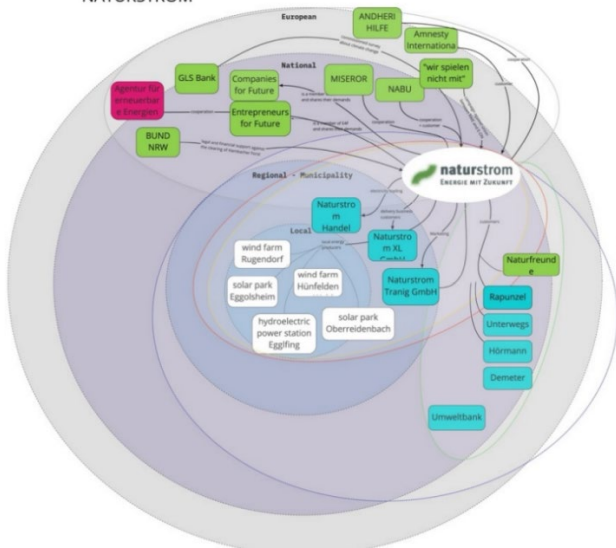
energy efficiency. ECTC is placed at the regional level, in contrast with other more traditional local-based energy cooperatives but links with its 14 member communities at the local level. We also observed that due to the character of the ECTC and its dependency on the support schemes from the Sustainable Energy Authority of Ireland (SEAI) and Just Transition Funds, the type of intermediaries linked with the case are more connected with governmental intermediaries as well as commercial intermediaries (i.e. credit unions) which were deemed important as they offer Green Loans to assist homeowners. Take a look at their intermediation map, which shows the different levels of action and types of intermediary actors, as well as the relationships between them:



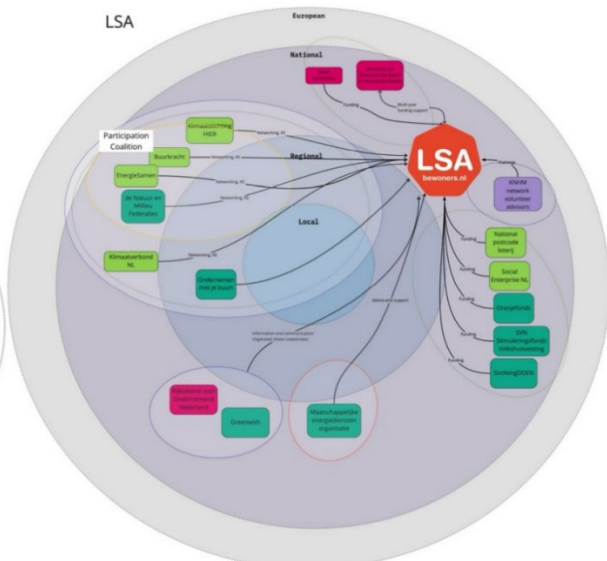
Scientific-technic intermediation is referred to the technical and scientific expertise activities for concretising the project: ICT conception, planners, architects, PV or wind power specialists, monitoring of the project, facilitating experimentation and pilots, facilitate/support adoption and implementation of innovations. In the case [Loenen Energy](#) the technical intermediations are crucial given the highly technical and ICT skills needed for the case projects (e.g., community Virtual Power Plant – cVPP – or the cooperative aggregator, namely Wattflex).

All networking activities with actors of the initiatives enable cooperation between actors, building, and managing networks of multiple stakeholders, exchange of knowledge and visions. [LSA](#) (the Netherlands) and [Naturstrom](#) (Germany) are two of our ENCI cases which can be described as actual intermediaries. Naturstrom and LSA operate at the national level and they both play a key role in connecting with multiple actors. For example, the Dutch intermediary LSA that represents groups of active citizens is working in partnership with 250 partners across the Netherlands and recently they have developed an intermediary network called the 'Participation Coalition' with five main Dutch intermediaries. Through this wide network, the Coalition partners can create a stronger position and a joint voice of residents in energy transition and help to build constructive cooperation between various stakeholders.

NATURSTROM



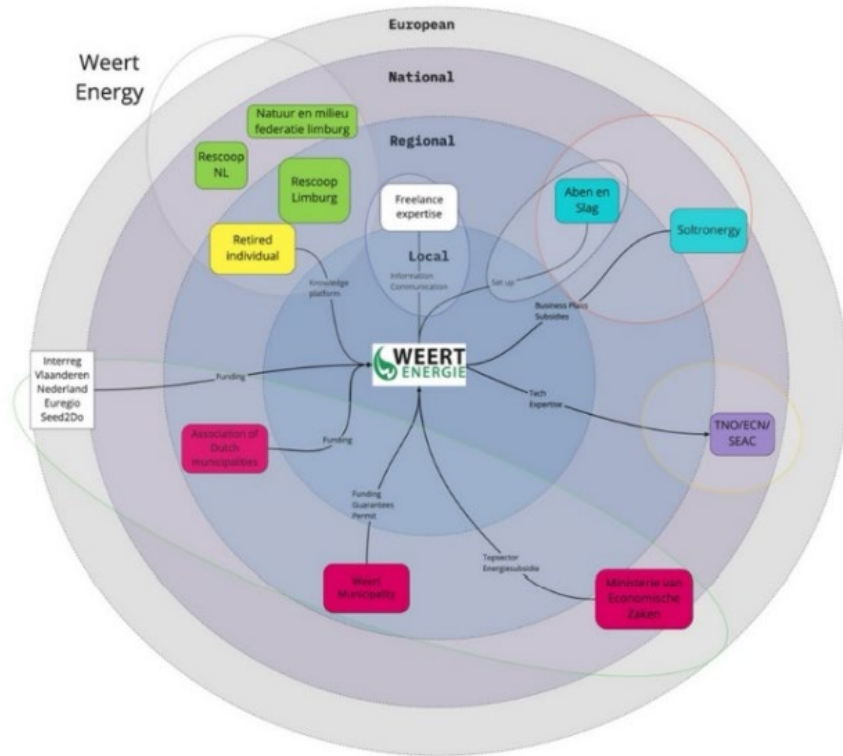
LSA



There are also interesting communication activities that allow the initiatives to increase their visibility (e.g., consult demand-side for implementation, mediation activities, put suppliers in contact with end users).

With regard to Legal/ regulatory intermediation, Lobbying activities, protest or attempts to modify legislative proposals or draft laws. Legal intermediation, especially in small and voluntary based cases (such as the energy cooperatives, [Weert Energy](#) and [Reindonk Energy](#)), the case actors often lack skills related to the legal preparatory works, understanding complex legal frameworks and meeting legal requirements (e.g., statute) for setting a legal company/charity/cooperative. This type of intermediation is instrumental especially in the early stages of the creation of certain initiatives.

Weert Energy



As can be seen, ENCI initiatives have a multitude of ways of interacting with other stakeholders, which can be of great support both at the time of the creation of the initiative and afterwards. In terms of different purposes, we have provided you with some examples within a classification approached by the EnergyPROSPECTS consortium. We hope you will find it useful to view additional resources to support you in the process of collective empowerment.

More detailed definitions of ENCI are available here
[D4.1. Strategic collective system building activities and institutional change](#)

And now that we're done... do you dare to incorporate any additional commitment?

List of commitments for action

Being an Energy Citizen is not a matter of all or nothing. It ranges from small steps to big actions. The level of commitment depends on yourself, your motivations and interests, your perception of your capacities, autonomy and choices... we encourage you to start by committing yourself to a few actions. Let's see what you think of these:

- I will reduce my energy consumption through new habits, such as turning off appliances on standby or turning the light off when I do not need it.
- I will start getting involved by making changes in my home, such as controlling my energy consumption with web or mobile applications.
- I will investigate the advantages of installing solar panel and think whether it is worth it to be self-sufficient
- I will participate in a more transformative change, e.g. I will find out about how to install solar panels (or another type of system) in my place and what advantages it would bring to the community to be able to discuss it and carry it out
- I already control my energy consumption at home, but now I want to involve more people and create social awareness, both in my workplace and within my inner circle. I will propose the idea of participating to some extent in the energy transition and converting the building into an energetically sustainable one.
- I will learn more about energy communities and the energy transition (e.g. going to conferences and workshops where I can learn about others' experiences and gain scientific knowledge)
- I will join a group of people with whom I share the same interest related to the energy transition and who motivate me to move forward in this topic, or even I can even become the motivation for others.
- I am already involved in energy transition but I think that the current legislation falls short and with my experience I can contribute valuable ideas. I will initiate the procedure so that citizens can propose to congress the adoption of legislative measures to promote energy citizenship.
- I will find out about plans and government and European projects to participate in any of them. These projects can provide me with a lot of knowledge that will enrich me and new companies with which to share ideas and create a community.
- I have knowledge and contacts. I am going to start a transforming energy citizenship project in which different citizens, associations, political parties and organizations can participate, and that has a greater impact on energy sovereignty at the local level.
- I have knowledge and I want to share it with others. I will do informative workshops, both for the general public and for people active in the energy transition. I want to be a driver and help for others.
- I am willing to actively participate in demonstrations or strikes, even to initiate it with different contacts (NGOs, unions...) to demand changes. We are very concerned and not everything is in our hands, so we demand more responsibility from the rulers and we want the whole world to see it.



References:

- Debourdeau, A. Schäfer, M. Pel, B., Kemp, R., Vadovics, E., and Dumitru, A. (2021). Conceptual Typology. EnergyPROSPECTS Deliverable 2.2, European Commission Grant Agreement No. 101022492.
- Debourdeau, A. Schäfer, M., and Thalberg, K. (2022). What do we mean when we talk about energy citizenship?. EnergyPROSPECTS Synthesis Brief No.2., European Commission Grant Agreement No. 101022492.
- International Energy Agency (2022). *World Energy Outlook 2022*. IEA.
- European Environment Agency (2022). *Trends and projections in Europe 2022*. EEA. <https://www.eea.europa.eu/publications/trends-and-projections-in-europe-2022>
- Leal-Arcas, R., Lesniewska, F., & Proedrou, F. (2018). Prosumers as New Energy Actors. In M. Mpholo, T. Kuneera, & D. Steuerwald (Eds.), *Africa-EU Renewable Energy Research and Innovation Symposium 2018* (RERIS 2018) (pp. 139-151). <https://doi.org/10.1007/978-3-319-93438-9>
- Lettenmeier, M., Akenji, L., Toivio, V., Koide, R., Amellina, A. 2019. [1.5-degree Lifestyles. Targets and options for reducing lifestyle carbon footprints](#). Sitra Studies 149.
- Pel, B., Debourdeau, A., Kemp, R. Dumitru, A., Schäfer, M., Vadovics, E., Fahy, F., Fransolet, A., and Pellerin-Carlin, T. (2021). Conceptual framework energy citizenship, EnergyPROSPECTS Deliverable 2.1, European Commission Grant Agreement No. 101022492
- Pel, B., & Thalberg, K. (2022). Setting the scene for a critical exploration of the roles of citizens in the European energy transition. EnergyPROSPECTS Synthesis Brief No.1., European Commission Grant Agreement No. 101022492.
- Pienkowski, D. (2021). Rethinking the concept of prosuming: A critical and integrative perspective. *Energy Research & Social Science*, 74, 101967. <https://doi.org/10.1016/j.erss.2021.101967>

- Ryan, R.M. (Ed.) (2019). *The Oxford Handbook of Human Motivation*. Oxford University Press Inc.
- Vadovics, E., Vadovics, K., Zsemberovszky, L., Asenova, D., Damianova, Z., Hajdinjak, M., Thalberg, K., Pellerin-Carlin, T., Fahy, F., Debourdeau, A., Schäfer, M., Pel, B., Kemp, R. and Markantonis, M. (2022). Methodology for meta-analysis of energy citizenship, EnergyPROSPECTS Deliverable 3.1, European Commission Grant Agreement No. 101022492.

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