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EMPOWERMENT TOOLKIT AND KNOWLEDGE REPOSITORY



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List of abbreviations

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



Empowerment Toolkit

Introduction

Knowledge repository to boost empowerment

The Empowerment Toolkit is designed to help you better understand and practice the concept of empowerment within an [Energy Citizenship initiative \(hereafter, ENCI\)](#). The toolkit includes several knowledge resources that have been produced by the EnergyPROSPECTS consortium from 2021-2024. It is customised to support your empowerment journey.

The Empowerment Toolkit has been devised as a practical resource for citizens and practitioners. The purpose of the toolkit is to provide citizens with a set of resources that may assist them to increase their capacity for control, allowing them to be heard and attain 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. This was achieved through the theoretical review of the concept of ENCI and its manifestations. These are outlined through [ten ideal types](#) of citizen involvement in the energy transition.

The research is also informed 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.

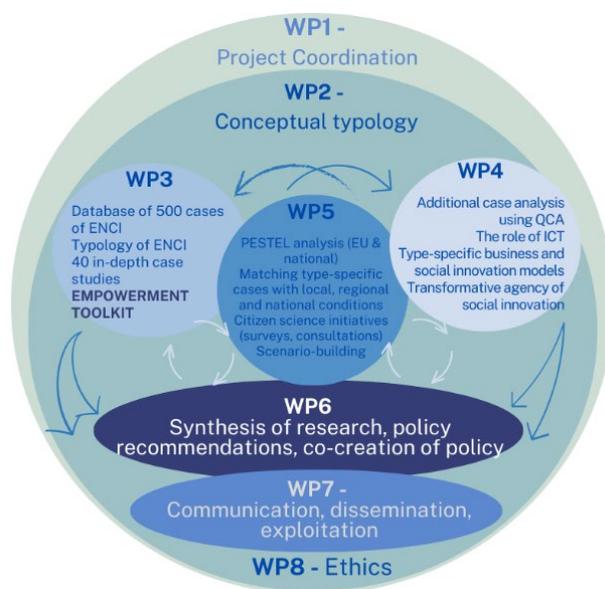
As part of this in-depth research, the role of different agents – intermediaries – in enabling and promoting ENCI has been examined. Alongside an assessment of internal factors and a study of external enabling and hindering factors was conducted.

The intention with the Empowerment Toolkit is to highlight a set of good practices

that have been developed in different parts of the European territory through initiatives that are currently underway. The tool facilitates this contact between ENCI initiatives and citizens, helping them to develop a deeper knowledge of the options they must consider, both individually and collectively, in shaping the energy system.

The Empowerment Toolkit 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).



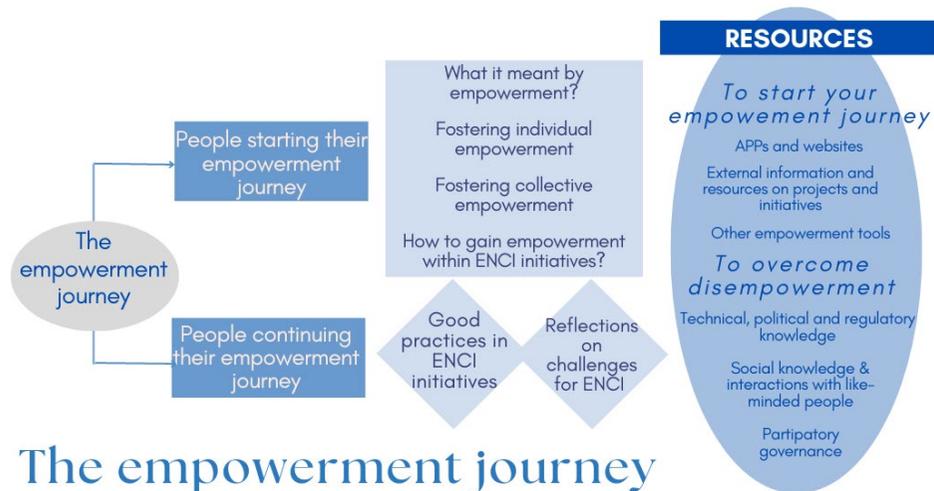
Enjoy your empowerment journey!



Empowerment Toolkit

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

The Empowerment Toolkit reflects on theoretical and empirical knowledge, real life 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 the tool is designed for a wide audience, it begins by bringing you closer to the core concept of this project: Energy Citizenship (ENCI). In this tool, we briefly outline the typology that has been proposed within the project. This serves as a common thread for many of the elements to be addressed later. From this starting point, several paths are offered in the empowerment process; these are non-

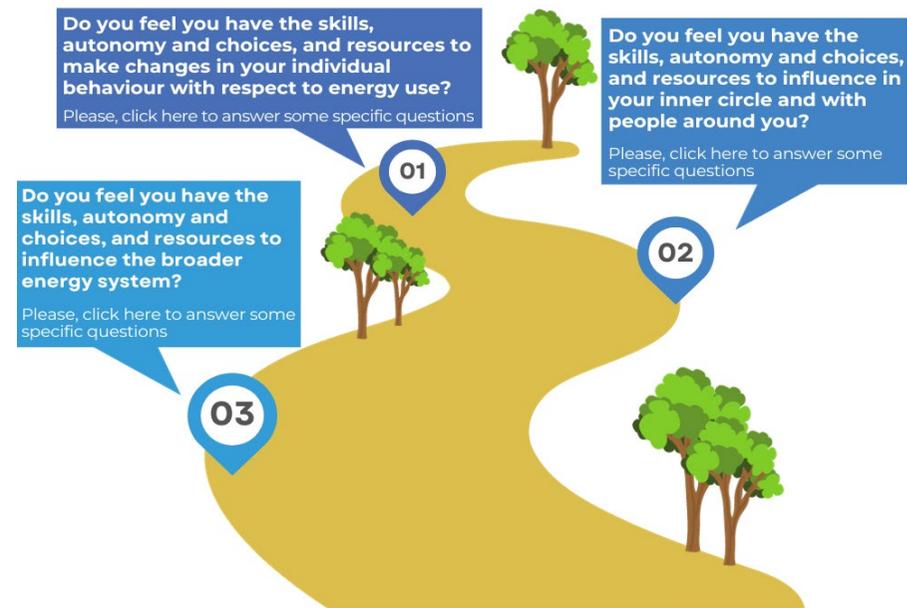
¹ Please note that we focus on individual empowerment within a collective framework. We begin with individual abilities, motivations and autonomy, before delving into its implementation within the framework of collective action initiatives, with greater or lesser repercussions in the broader energy system. Do not worry if this is difficult for you to grasp,

exclusive, so please feel free to return whenever you feel the need.

Use of the Empowerment toolkit

In this tool, we put forward two paths for you to follow on your empowerment journey¹ (below/click on each bubble to go to additional questions). The first path is for people who are starting their journey in collective empowerment, while the second is for 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 choose².



as we will explain more in the upcoming sections.

² As it is a path, we recommend that you stop at each question (Q1, Q2, and Q3) and follow the recommendations indicated in each of them. For example, if your path begins, it is

Empowerment Toolkit

01 How individually empowered do you feel nowadays?

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

YES NO

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".



possible that all or some of the answers to the questions in step 1 will be "No" at some point, so it would be appropriate for you to follow the recommendation at this point, without

moving to the next one yet. You will have the opportunity to do so later.



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 TOOLKIT



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!

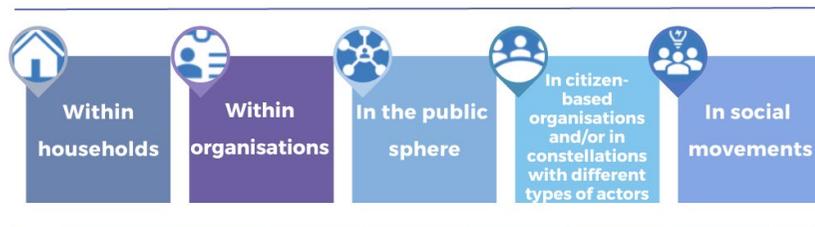


Introduction to the ENCI concept

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)

The ENCI 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, that include individual agency in a 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. As with citizenship more generally, it encompasses radical and moderate versions. Across the different interpretations, it can refer to somehow more active, engaged, sustainability-oriented, democratic. Moreover, it can refer to more desirable ways of participating in energy systems. Whilst keeping aware of its less active and empowered forms, an analysis has been made of the

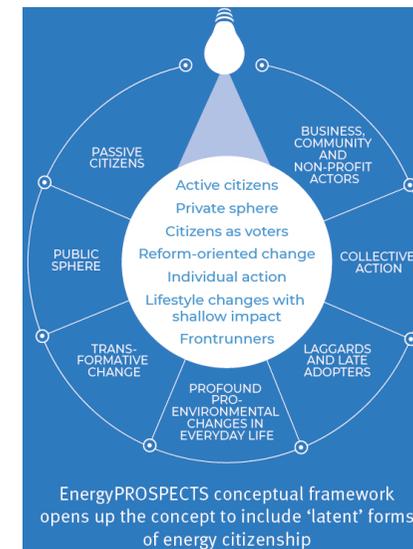
societal conditions that facilitate sustainable, democratic, fair or otherwise desirable forms of ENCI to thrive.

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.
- Incorporating multiple 'latent' (less visible) forms of ENCI that also form part of the energy transition. These 'manifest', visible and exposed, types of energy citizenship unveil a one-sided image of the actual practices enacted across Europe.



More detailed definitions of ENCI are available here

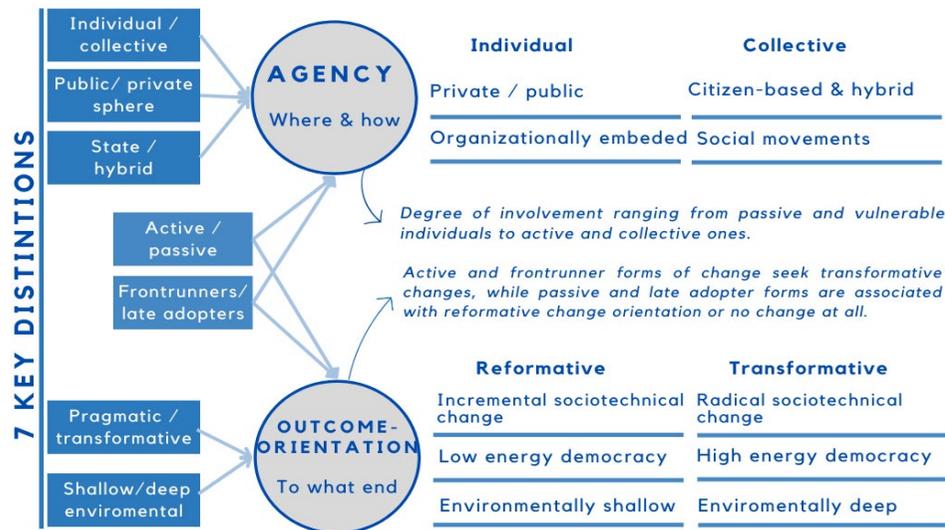
[Synthesis brief No.1](#)

[D2.1. Conceptual framework](#)

Ten ENCI-types

As we have outlined what this complex concept of Energy Citizenship entails, we shall now proceed by unveiling our typology based on 10 ideal ENCI-types while also assessing a selection of examples from our mapping. We would like to start by explaining the key dimensions of ENCI derived from the conceptual framework:

- Agency (where and how)
- Outcome-orientation (to what end)

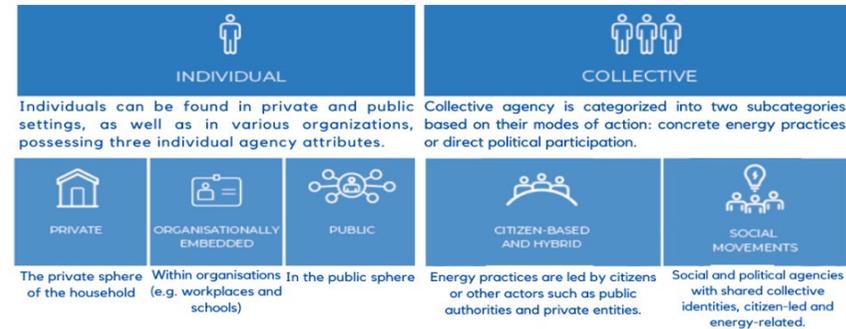


While the agency dimension differentiates between individual and collective forms of ENCI, the outcome orientation encompasses various attributes. These attributes refer to the ENCI's commitment to energy democracy/justice and the depth of environmental sustainability alongside the resulting focus of contributing towards incremental versus more radical change³.

³ These aspects could not be ascribed directly to ideal-types. Rather, they provide an evolutionary backdrop to the typology, acting as a reminder that the manifestations of ENCI, under changing framework conditions in the EU countries, may emerge then disappear.

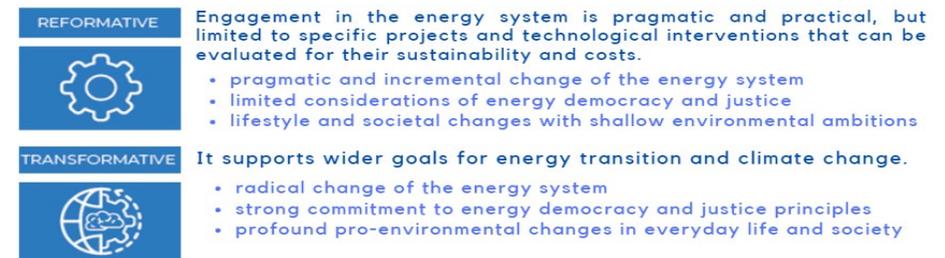
Individual and collective agency

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



Reformative and transformative outcomes-orientation

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 aspire for.



The [complete matrix](#) classifies in 10 types with the different categories of agency and outcome-orientation. As to attain a better understanding of the 10 types of ENCI, an example of each of them is given below.

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TYPE 1 - DO THEIR BIT (in the household)

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 - DO THEIR OWN (in the household)

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 Egyházásfalva, 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 - DO THEIR OWN (within organization)

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 \(Sweden\)](#)

IT was funded by the Swedish Energy Agency and the European Regional Development Fund through the National Regional Fund 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 - DO IT THEIR WAY (within organization)

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.



TYPE 5 - MAKE THEIR VOICE HEARD

**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 - MAKE THEIR VOTE COUNT

**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 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 - MAKE THEIR SHARE

**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 - GO AHEAD

**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.

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TYPE 9 - DO THE JOB

AGENCY: COLLECTIVE AND SOCIAL MOVEMENT

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 - MAKE THEIR CLAIMS

AGENCY: COLLECTIVE AND SOCIAL MOVEMENT

OUTCOME-ORIENTATION: TRANSFORMATIVE

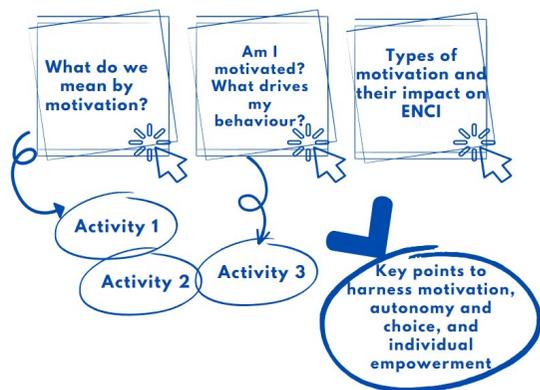
Make their claims within social movements that protest the current energy system in different ways, such as protest movements for the climate, against the construction of new energy infrastructure, or against certain types of energy sources.

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.



Starting the empowerment journey



What is empowerment?

The concept of empowerment is increasingly visible in scientific literature and gaining prominence in popular language. Our aim here is not to present an exhaustive explanation of the concept. Instead, we outline a set of ideas to aid understanding. We present it as:

- (a) **Autonomy** to make decisions about one's own actions
- (b) **An ability** to behave appropriately in the energy system by perceiving oneself as effective in the actions undertaken
- (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. 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.
- 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:

CONDITIONS AND OUTCOMES FOR COLLECTIVE EMPOWERMENT



- 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 take collective control and make decisions on issues that affect your life and that of your community.



BEFORE YOU START READING...

This tool aims to help you in your progressive empowerment by combining information with certain exercises. Each section includes reflection exercises (marked by a light bulb symbol) on commitments you could make to transforming the energy system.



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

Self-reliance, capacity, and motivation

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 as a matter of energy independence and security. Boosting these measures requires levers of technological change and innovations, alongside shifts in citizen behaviour that enable a safe transition to a net zero emission energy system, while minimising potential risks and trade-offs between policy objectives.

At the micro level, our lifestyles and energy consumption habits require an overhaul (Lettenmeier et al., 2019) as "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 by individual motivations, alongside the opportunities and challenges these individuals face. A central challenge is looking to maintain decent living standards. Nonetheless:

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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).

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

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

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. In short, it help us to act. There is no single motivation behind our behaviour, but rather a set of factors that drive our actions. In other words, we may make certain life decisions such as taking public transport instead of a private car. This decision can be for a for non-environmental reasons, perhaps because it is cheaper or due to parking difficulties. Nonetheless, this decision still achieves positive environmental outcomes. Below are some of the thoughts of ENCI initiative members:



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 ...)?

Personal motivation and behavioural drivers

There is no single motivation behind our behaviour, but rather a set of factors drive our actions. It is important to understand what impels you to move, what barriers to progress you encounter and what you can also do to feel supported and supportive. Some of the motivations we have found in people are:

- **Feeling supported.** It is 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 5, energy citizen association). Indeed, support can be something that pushes you to move forward, as you feel the satisfaction arising from acting, 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).

- **Doing our bit.** 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 erodes over time. 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).

- **Improving life satisfaction.** Adopting behaviours that reduce energy consumption can help us attain freedom over our decisions and even self-sufficiency.
- **Avoidance.** We may also be motivated by a desire to avoid something, either

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because it is harmful to us (our health, our well-being, our wallet, etc.) or because it is harmful to the environment.

- **Influence by social and cultural factors.** Motivations related to climate and environmental concerns are at the heart of many of the changes adopted by society, 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, and coupled with disempowerment, result in a lack of 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).

- **Joining collective energy-related initiatives.** Several forms of social innovation, such as community-based lifestyles, cooperative projects for the production and consumption of renewable energies or social protest movements are 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, we highlight certain factors that encouraged people in our case studies to take an individual or collective stance in ENCI initiatives. 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?		
One last task for now... Why would I do it? <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><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>		



Types of motivation and their impact on energy citizenship

Now that we have answered some basic questions on motivation, we now focus on what motivates people (including perhaps yourself) to act. Also, we ask *would it be possible to use my personal interests for further (even collective) action on sustainable lifestyles?*

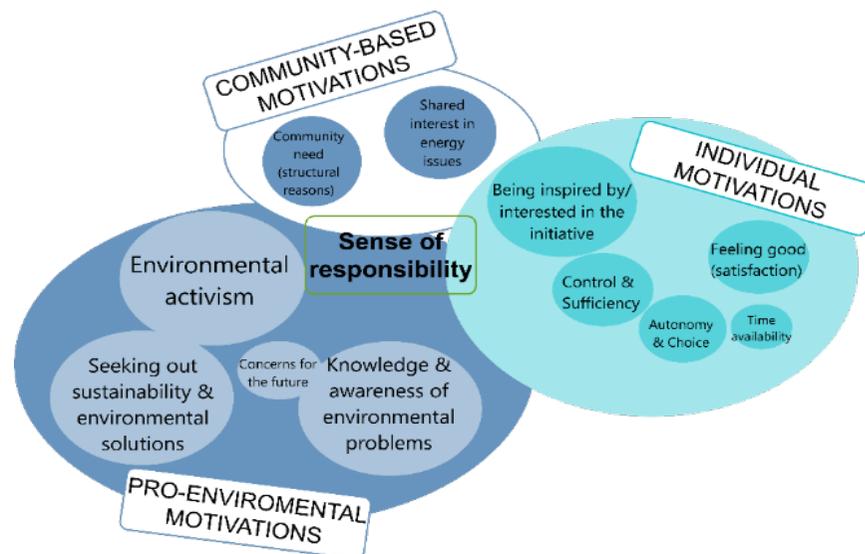
Keep your notes handy, and let's see what other people tell us. You may well be surprised to learn that motivations we encountered are not so far from removed what you yourself have written!

We have conducted in-depth interviews with 52 people whose actions have a positive bearing on the energy transition and who have an impact on others. The aim was to find out what motivates them to get involved in ENCI initiatives and how they are empowered through them. These actions are either:

- individual (e.g. as social media influencers)
- collective (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, etc.)

In Figure 1 a series of concepts are displayed. This figure reveals the complexity of motivations people face in moving towards a low-emission energy system.

Figure 1. Factors motivating energy citizenship.



In the above image, we illustrate in circles three types of motivations: individual, community-based and pro-environmental motivations. We must note that some care must be taken when interpreting this information! The image contributes to a better understanding of the idea of motivation, although it is difficult to view them as isolated and independent elements. At the centre of motivation is a sense of individual and collection responsibility 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).

Individual motivations. It includes the desire for self-reliance and the inspiration for certain collective initiatives, which are integrated under the banner of energy citizenship, and assess what they represent for these people.

- **Autonomy and choice.** Many people make changes in their energy-related

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behaviour because "there is a choice. I am the one who always says that everyone always has a choice" (Interview 23, individual energy citizen). It is also important to "start with oneself" (Interview 33, energy cooperative) by incorporating changes in home, such as DIY solutions, installing solar panels. These changes are a demonstration of the personal empowerment and choices they feel they have in the matter.

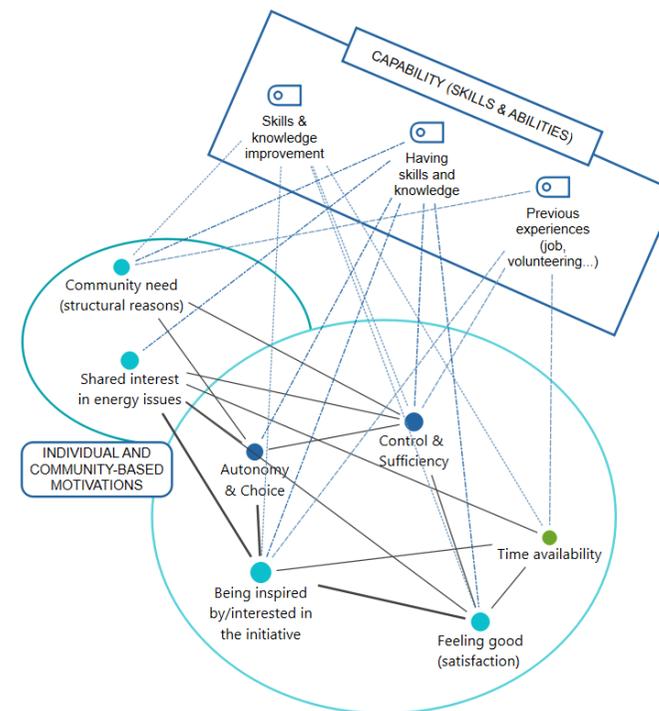
- **Feeling good.** Introducing these changes offer people the opportunity to improve their life satisfaction: "When you do it, it makes you feel good, even if you still don't have much experience." (Interview 6, energy consumption and production association).
- **Control and sufficiency.** In certain cases, they give people the means 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 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).

- **Time availability.** To a lesser extent, people see their time as both a motivation and a hindrance: "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) which makes many people reluctant to make certain changes or to become actively involved in collective ENCI initiatives (see [resources and barriers](#)).
- **Inspiration/interest in a initiative.** Whether 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 respondents 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).

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



Indeed, through contact with other people, groups, and organisations users have gained a better understanding of how the energy system works.

- **Community-based motivations.** 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.



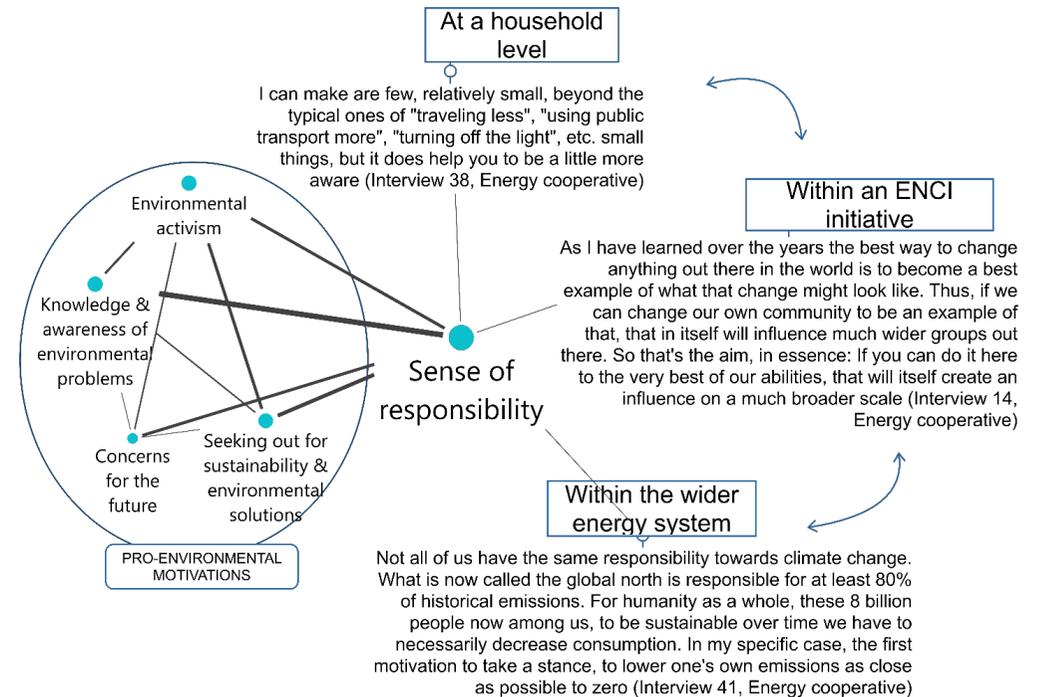
- **Shared interest in energy issues.** For some of the respondents, this inspiration was not, provided by the initiative directly, rather through people close to them with whom they share an interest. Having people close to them with shared interests is an important driver of behavioural change. It 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).
- **Community need.** 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).

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).

Pro-environmental motivations. There is a very broad set of factors within this type of motivations. Among the most prominent are:

- **Knowledge and awareness of environmental problems.** 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)].
- **Environmental activism.** Many people 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)].
- **Seeking out sustainability and environmental solutions.** Instead of getting involved in a visible way, some people 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:

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 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.

Some key points to harness motivation, autonomy, and individual empowerment:

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.



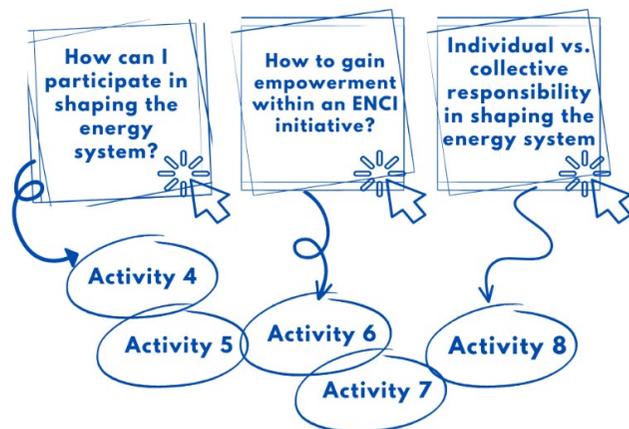
Setting challenges and goals - taking into account your resources and possibilities, and possible barriers - is a first step towards greater autonomy and control in making decisions about your behaviour in relation to the energy system.

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. If you would like to learn more about collective motivations and objectives, 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, we can add all those that are generated in our interactions with other people. In addition to the numerous individual actions that we can embark upon on daily basis in our home setting, 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, they can improve your access to energy through shared energy production and management, or help to amplify your voice in decision-making processes.

Collective energy initiatives 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 encourage other consumers to act 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. Thus, helping you to gain control, amplify your political voice, and 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!

Collective participation in shaping the energy system

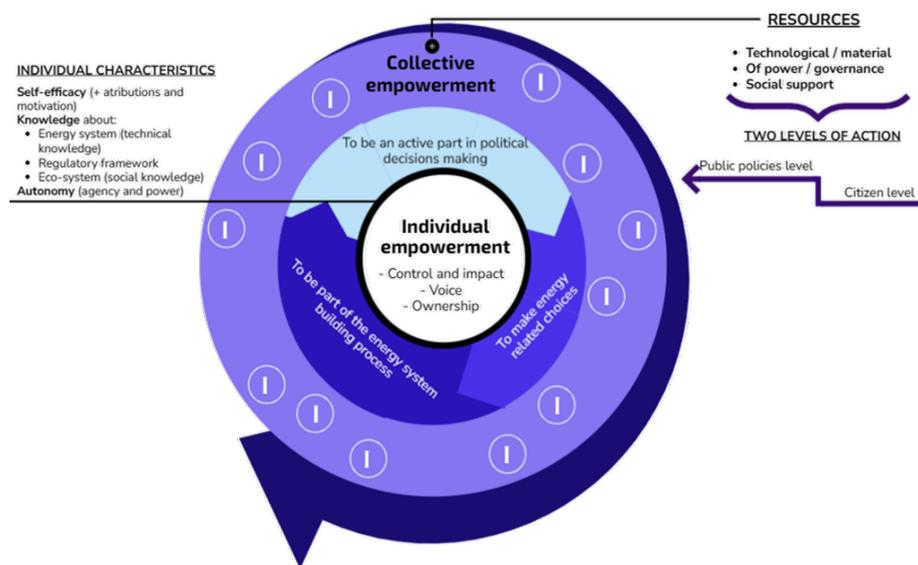
Concern regarding the pace of climate change has led to a series of transformational engagements based on the development of innovative governance approaches. This has translated into political and legal actions committed to the development of smaller-scale solutions and to the monitoring of change, plus the involvement of different actors in service delivery. In 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. This highlights 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. The idea of energy consumption based on small community initiatives offers an alternative sustainable social innovation 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. This facilitates your ability to make energy-related choices, to be part of the process of energy system building and political decision-making (see figure 4).

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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?

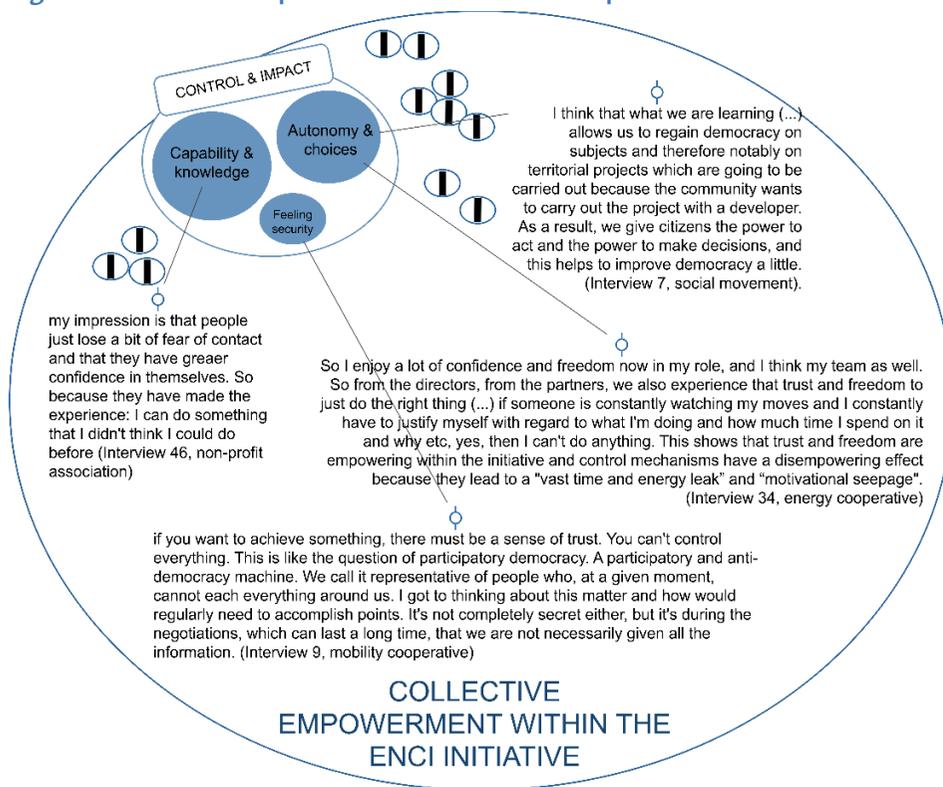
Now that you have responded, we shall move on to discussing the autonomy and choices you can attain through an ENCI collective initiative. We will approach this by highlighting people's experiences.

- **Autonomy and choice.** ENCI collective organisations can help you gain more widespread freedom and ownership in the decision-making processes "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)]. The autonomy and choice are related to different aspects:



- *The forms of internal governance.* For the time being, the onus will be placed on what this brings to people and what it may require from you (see figure 5).

Figure 5. Collective empowerment: control and impact.



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 levels of participation.* 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).

- **Feeling security.** Trust 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. The feeling of security can be of great help at times, especially when you see that your possibilities to participate actively are decreasing. Placing your trust in other people and delegating responsibility for some actions can keep you interested without relinquishing your power..

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).

- 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:

- **Capability and knowledge.** An ENCI initiative will not *give you* control or power. However, 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.

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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 resources 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). This is basis for 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 when 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>		



Empowerment within an ENCI initiative

Why join a hybrid-community-based ENCI initiative

Through ENCI initiatives, people have been able to put their skills and knowledge on the energy system to the test. They also can gain new knowledge and information:

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)

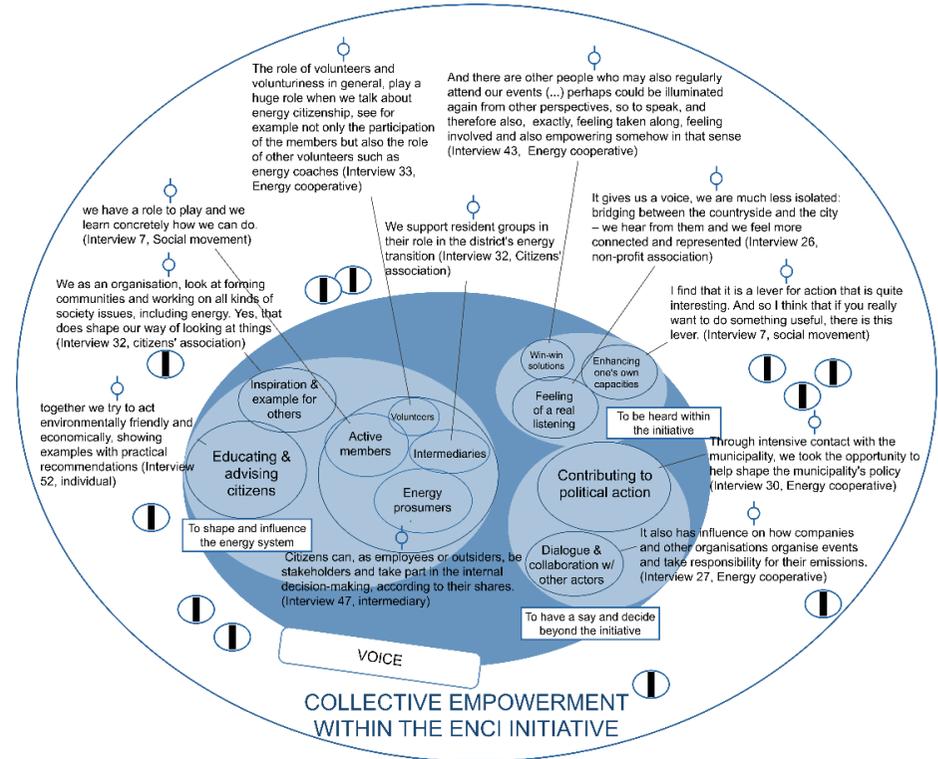
Citizen-based initiatives tap into the full potential of human resources based on what each member can achieve, what their potential is and what contribution they can make to the initiative: "It's basically: What is your job profile? And support the evolution of people's function profiles" (Interview 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, key point of collective empowerment refers to the possibility of having a voice within and beyond the ENCI initiative (see figure 6).

To be heard within an organisation is crucial, or to be of the political sphere and acting in shaping and influencing the energy system are three key points that appear in our respondents' discourses.

- **To be heard within the initiative. The feel truly heard empowers members:** 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. 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).

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



- **To have a say and decide within and beyond the initiative.** You decide how you wish to participate. For certain people, participation may be less active, contributing capital, attending the odd meeting and/or occasionally exercising a right to vote. In other cases, there are different levels of active

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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 important to be able to be involved in effective decision-making: "Through intensive contact with the municipality of Weert, we took the opportunity to help shape the municipality's policy" (Interview 30, energy cooperative).

- **To shape and influence the energy system.** If it applies to you, the initiative can become means of connection with local government, and allows you to contribute as a pivotal element in decision making: "[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. 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, such as knowledge, skills, time, and motivation, and social resources, such as a support network, contact with people, organisations and places, proximity to initiatives and information about them.



Finally, we must not overlook the fact that through an ENCI initiative, you can shape and influence 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)

- **Acting collectively can generate wider impact.** Your commitment may also extend beyond by passing on your knowledge and experience to others, offering advice and help, or even educating others. These collective actions are 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).

- **Moving from the role of consumer to the prosumer.** Various roles can be played in collective citizenship-based or hybrid initiatives and social movements. They achieve by helping them to become part of the actions that take place within them and in the wider energy system. 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).
- **Members of the initiative can be active inside 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).

- **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 sepcifically passed on (Interview 1, Institutional campaign).

- **Initiatives can support the creation of new entities.** For example, energy communities. Through knowledge and experience, it serves as a support for other groups 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).

Empowerment Toolkit

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 (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 and collective responsibility in 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). The sense of ownership and commitment to the initiative has strengthened people's ability to participate 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).

Some aspects highlighted in the sense of shared ownership by people involved in collective initiatives are as follows:

- **Shared interest and purpose.** People can develop strong bonds with a cooperative and its members: "you want to feel that the cooperative is there for you" (Interview 30, energy cooperative), which intertwines an interest in energy with other issues of identity as a community.

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).

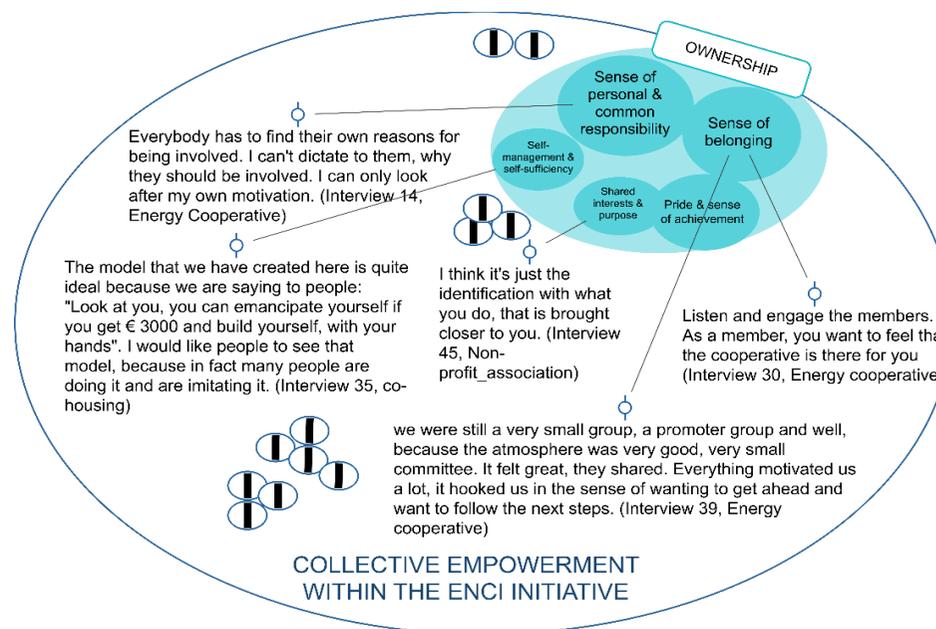
- **Sense of belonging.** The initiatives offer "an opportunity for communities to basically empower themselves (...) It's not about bringing hay, it's about working together as a group to make their homes more energy efficient" (Interview 12, energy co-operative), contributing to an environment of mutual help and support: "we have a community, a DIY community means that others help me and I help others" (Interview 49, energy co-operative).

This sense of responsibility emerges from a sense of achievement in having succeeded in going where other people or groups have not yet gone.

- **Pride and sense of achievement.** They are a result of developing actions on your own, such as Do-it-yourself (DIY) solutions, which acts as an internal psychological resource that generates "the feeling that they are now part of the energy transition" and a sense of achievement:

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).

Figure 7. Collective empowerment: ownership

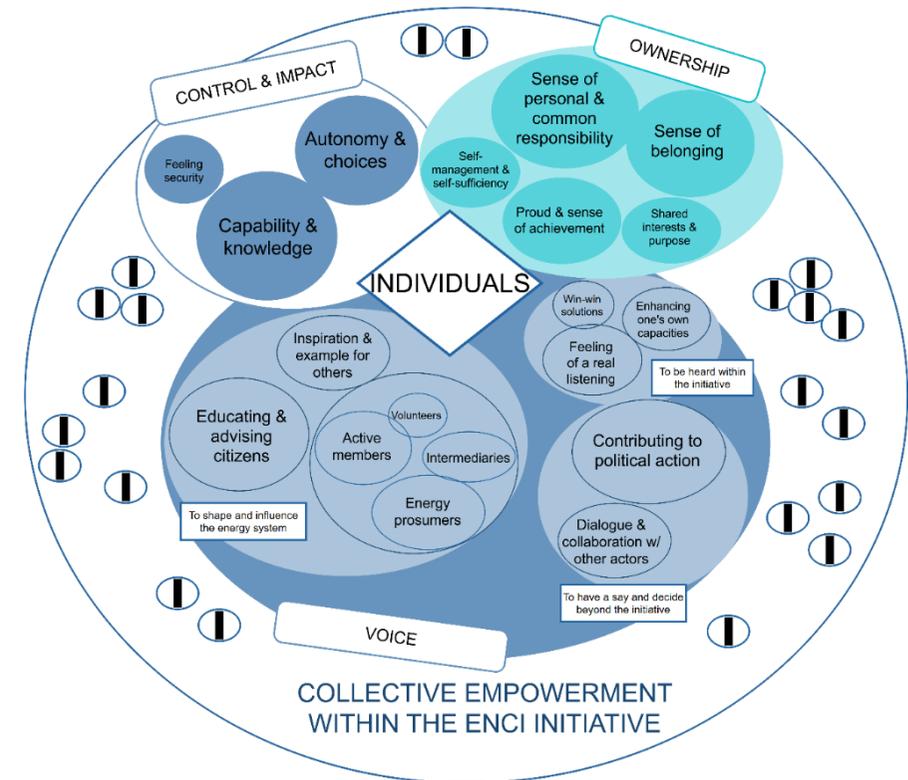


Empowerment Toolkit

To conclude, in this section we have displayed the other side of empowerment. The side 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. Supportting 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>

Empowerment Toolkit

Additional resources

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

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:

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.



POWERPOOR 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



LEARN ABOUT THE ENERGY SYSTEM

energie samen 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.



Friends of the Earth Europe 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. If you have moved directly towards this option, it is probably because you feel confident in your ability to act autonomously. That you have sufficient knowledge and control over the energy system. What we want to show you here are some additional options that can help amplify your voice in the wider energy system.

To start, we introduce some good practices that have been developed in different European contexts. These serve as examples of options and opportunities that open on your path to energy transition. Next, we 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, so in addition to showing you case studies, we will offer you some tips, ideas, and alternatives that people have adopted to solve their possible disempowerment.

We cannot conclude our journey without providing you with information on external factors related to the possibilities of developing energy citizenship in Europe. These include some peculiarities of the nine countries that make up the EnergyPROSPECTs consortium.



Good practices

To address collective empowerment, we must discuss people, organisations and resources. Through 20 examples of good practice cases based on a [selection and grouping of cases](#) by the EnergyPROSPECTS consortium, 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). We begin by defining what mean 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. 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. 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. 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 that BSIMs are quite dynamic and unique in each one of the 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 ENCI types⁴:

⁴ This clustering aims to be an analytical tool for supporting the data analysis and not 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 ENCI cases.** Largely cooperatives that focus on RES or housing; therefore, related to different policy frameworks. This should also encompass mobility related cooperatives. However, this was not represented in the 40 cases. The examples are energy cooperatives with single (BEB and CFOAT) or complex organisational structures (Loenen Energy, ECTC and GoiEner).

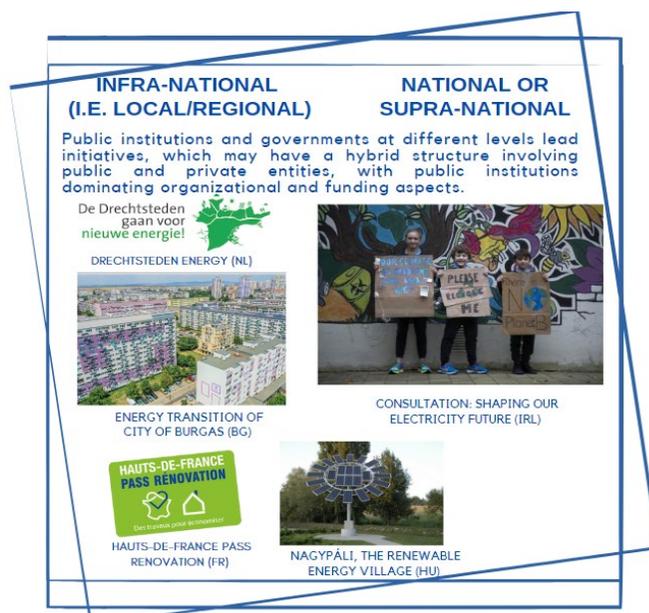


The cooperative models that are supported or split into other types/associations/foundations display flexibility and faster decision-making in applying for funds or launching projects. They're often linked to a specific local identity and encourage active citizen participation, though this is typically focused on the local community..

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

Empowerment Toolkit

- Publicly-run ENCI cases.** Initiatives that are spearheaded mainly by public institutions and/or governments at various administrative and regional levels. A hybrid modality may also be adopted (public/private) in which public institutions play a predominant role in their organisational and funding structure. The most relevant distinction with regard to the policy frameworks is observed between infra-national and national or supra-national levels.



Initiatives for equitable energy transitions are committed to national, regional, or local climate change goals. They have a stable revenue stream but are vulnerable if public funding support is cut off. Business models with a single source of public funding are more vulnerable and depend on the "political will" of a "top-down" stakeholder culture.

- Organisation-based ENCI cases.** They 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.



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

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](#)



ENCI actors and difficulties encountered

Organisations, such as the ones exemplified above, face numerous challenges. 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.

In the 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, 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, 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.

In the exercise proposed, the resources are graded into three generic categories:

- Individual
- Social
- Material,

We have also analysed 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.

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:			

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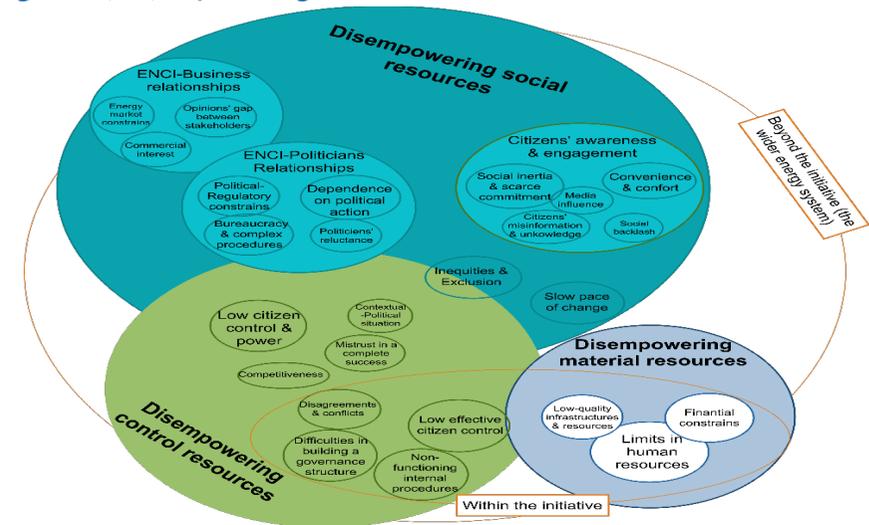
In this section, we introduce our respondents' views when they were asked about what can hinder their empowerment process or even generate disempowerment. We have already commented, when [defining empowerment](#), the relevance for individuals to have resources and capacity to mobilize them with a certain control over them. Yet 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? What are the most demanded resources for their empowerment? Is it possible to speak, in a general sense, of resources for energy citizens? Or are there certain latent limits that confront the just and equitable energy transition? As shown in Figure 9, there are many different barriers or resources that disempower our respondents:

Disempowering material resources

- **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).
- **Knowledge and level of professionalization.** Some initiatives lack professionals with a high level of knowledge and specialisation, which results in a low level of professionalisation. This professionalisation is demanded by some associations in view of their imminent growth:

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).

Figure 9. (Dis)empowering resources



- **Financial constrains.** 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).
- **Low-quality infrastructures and economic resources.** The difficulty in bearing the costs of their projects 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:

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.** 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).

Disempowering social resources.

- **Energy market constrains.** Business and political relations impose obstacles to the development of ENCI. Several informants 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). These companies dictate the rules of the energy market with a clearly defined commercial interest and against which many of these initiatives fail to compete.
- **Differences of opinion.** 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.** It is referred as "Strict regulations" (Interview 10, Mobility cooperative). "It's more of a paper, bureaucratic process" (Interview 28, Energy cooperative)].
- **Lack of public support.** "Increasingly non-cooperative and reluctant to engage with civil society and non-governamental actors" (Interview 20, Mobility cooperative).
- **Inequities and exclusion.** 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 enable 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).

- **Social inertial and scarce commitment.** Citizen awareness and commitment are reduced by a lack of interest: "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).
- **Convenience and confort.** For others, there is a matter of convenience and confort:
- **Citizens' misinformation and unknowledge.** There is great concern about

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 development a set of rules and procedures for us. We are a fledgeling 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)

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,

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public consultation project).

- **Slow pace of change.** 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 regarding citizenship, and that results in a slowdown of change: "changes are happening for the better, but slowly" (Interview 52, Individual energy citizen).

Disempowering control resources

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 (see figure 10):

- those that are internal to the initiative
- those that involve the broader energy system

Internally, the main difficulties encountered by our informants refer to:

- **Difficulties in building a governance structure.** Some organizations are built on a strong base of technical knowledge, with adequate financial resources and even support from various intermediaries. Nonetheless, they lack a deep knowledge of how to develop participatory, and democratic projects:
- **Disagreements and conflicts.** 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:

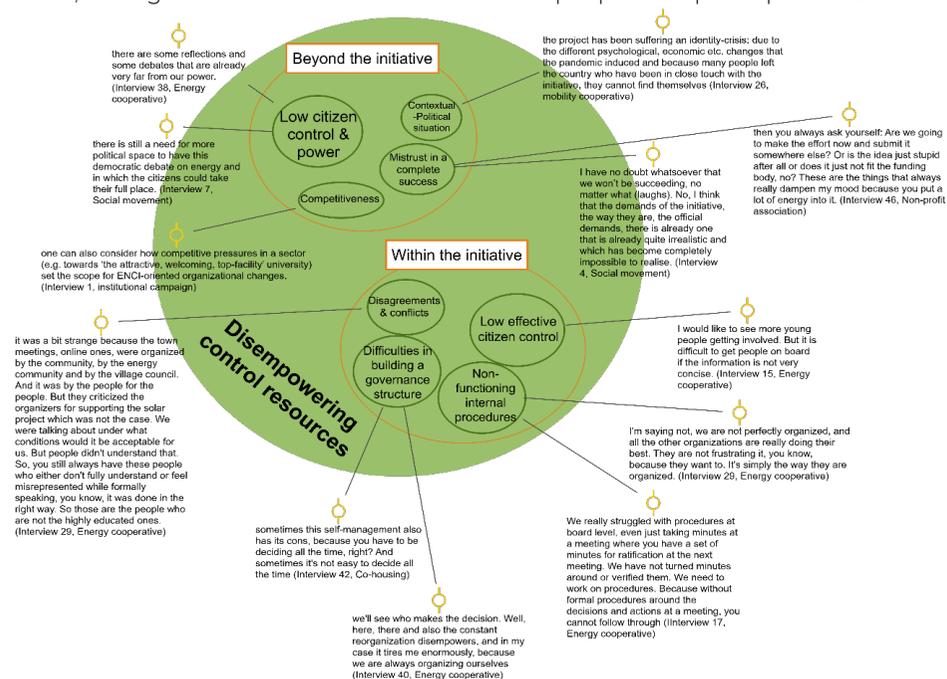
people who are new to it because they just can't have a say in everything yet. And, of course, you might not have such a good basis for decision-making. (...) we're just trying to be aware of that. Somehow it needs to be dealt with. And it probably can't really be prevented. Except to try to really take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

- **Low effective citizen control.** 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).

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

In short, the significance of the above reveals that people who participate in ENCI



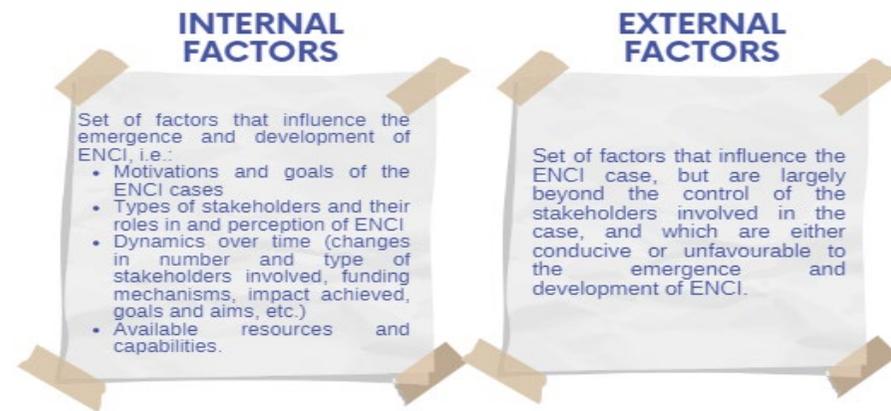
initiatives experience difficulties and barriers. We intend to stress the problems, while opening your eyes to how these people face them. In a synthetic way, it is evident that once again individual aspects such as time, skills and knowledge are at the basis of people's opportunities to develop autonomous behaviour within initiatives.

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

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Resources to overcome disempowerment

We intend to finish this section by offering you a selection of final resources that may be useful as part of your empowerment process through an ENCI initiative. To accomplish this, we must consider that the emergence and development of ENCI depend on a number of both **internal** and **external** factors:



Regarding internal factors, we have discussed them in depth [throughout this tool](#):

CONDITIONS AND OUTCOMES FOR COLLECTIVE EMPOWERMENT



We conclude this section on internal factors, by highlighting how to foster [participatory governance](#) within your ENCI initiative. Subsequently, we will refer to the external factors that have been classified into six categories:

1. Political
2. Economic
3. Socio-cultural
4. Technological
5. Ecological
6. 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

Effective citizenry commitment, organised through initiatives that work for the energy transition is one of the keys to its success. Despite the peculiarities of each initiative, they all share the purpose of experimenting with alternative social relations in order to undertake new forms of action. 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 (Dumitru et al., 2017; Kemp et al., 2015). The backbone is the construction of a democratically governed organisation that empowers its members. 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 (...) 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).

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)

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Initiatives usually entail the participation of citizen groups, social enterprises, authorities, and community organisations. By involving a wide range of stakeholders as to accomplish sustainable and long-term results, there is a greater chance that the community will accept the changes being introduced and wish to engage in the action.

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

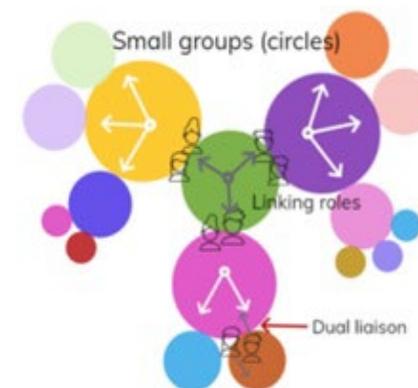
Below is a list of questions which will help us ascertain what participation point you are at within the initiative you are involved in.

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

As you have now reflected on your level of participation in the ENCI initiative, we will soon address the role of external factors effecting your participation in the broader energy system. However, we would like to highlight a relevant point on

generating democratic governance: creating an organisation which ensures that membership and leadership resemble the community. Some of our respondents in the project told us of the decision-making system based on sociocracy, therefore, we have concluded this point by briefly summarising the term.

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).



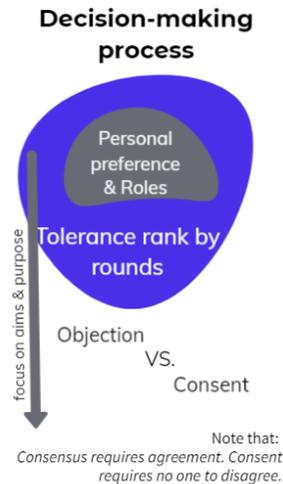
- **Circles:** small groups that form the basis of decision-making. Each circle has a definite goal (a description of what it does) and full authority in a domain (over which the circle has authority).
- **Roles and functions:** will be defined by the circles by consent, both to function smoothly and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

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3. **Turn-taking:** The 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.

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

[D4.1. Strategic collective system building activities and institutional change](#)

[D4.2. Enhancing the transformative agency of energy citizenship](#)

[D5.1. Analytical report on PESTEL factors in the EU context](#)

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

Technical, political, and regulatory knowledge: PESTEL

Political Factors

P1. KEY POLITICAL OBJECTIVES, TARGETS AND GOALS

National policies and political goals aim to reduce net GHG emissions, increase renewable energy production, efficiency, and savings. Citizens and communities should be involved in energy transition in various ways and capacities.

Local example from Spain:

The Galician government has created a transformation plan called Next Generation Galicia to promote sustainability, innovation, and fairness in the post-COVID-19 world. The plan aims to improve energy efficiency in public institutions, expand the use of renewable energy sources, and establish living labs for renewable energy use. It also promotes smart mobility systems, alternative fuels, and digitalization of electricity infrastructure.

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:

The municipality of Horst aan de Maas in the Netherlands offers citizens four ways to participate in renewable energy projects: co-ownership, financial participation, environmental fund, and local residents' scheme, as outlined in the Dutch Climate Agreement (2019). These options allow locals to co-own, financially contribute, and benefit from green energy initiatives.

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. The 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. 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:

The municipality of Valmiera operates a consultative council, Youth Affairs Advisory Commission, and Entrepreneurs' Advisory Council to encourage citizen involvement in decision-making and dialogue with local stakeholders. Regular project competitions and neighborhood movements promote cooperation and community improvement.

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 include various organisations of civil society, semi-governmental organisations, 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 over 50,000 inhabitants. The development councils consist of citizen volunteers and civil society actors. This action provides a space for dialogue, deliberation, and citizen proposals.

P5. INCLUSION AND EMPOWERMENT POLICIES

'Inclusion and empowerment policies' allow passive or thus far inactive ENCI to lead sustainable energy spere aiming to achieve sustainability and energy democracy goals, particularly for vulnerable groups.

Local example from Hungary:

Budaörs and Kispest have implemented training programs for pensioners and the poor, promoting climate strategy and empowering municipal employees to be more active citizens and energy conscious.

Economical Factors

EC1. GENERAL ECONOMIC SITUATION / INFLATION RATE AND PURCHASING POWER

Economic conditions influence ENCI behaviours, potentially promoting financial empowerment and innovation, but also potentially causing passive energy consumption.

Local example from Germany:

Mecklenburg-Western Pomerania (GDR) has seen significant technological and economic success in renewable energy, with a high percentage of wind energy attributed to lower population density in rural areas, enabling easier construction of large wind parks.

EC2. ENERGY PRICES (INCL. COST OF RENEWABLES AND FOSSIL FUELS)

High energy prices increase energy poverty and socio-economic inequality, potentially causing societal shifts in energy justice and democracy practices. They can lead to collective action, protests, and social movements, potentially fostering conscientious or competitive ENCI behaviours.



Local example from Belgium:

Extreme energy prices have boosted ENCI initiatives like ULB energy efficiency mission, benefiting HOSe, an institutionally hybrid hydroelectricity enterprise, allowing for increased revenues to strengthen financial balance.

EC3. ENERGY MARKET

Governments regulate energy prices through subsidies, taxation, and emissions trading for energy security and environment. Liberalization and decentralization enable ENCI through decentralized renewable energy production, particularly citizen-led communities.

Local example from Bulgaria:

The documentary series "The Independent" by the Bulgarian Solar Association explores the stories of Bulgarian citizens transitioning from the grid to sustainable energy sources. It highlights challenges such as resistance and bureaucratic complexities.

EC4. ECONOMIC POLICY INSTRUMENTS

Energy taxation encourages clean energy adoption by making certain energy sources more expensive, thereby increasing renewable energy production and consumption. State aid can also support ENCI.

Local example from Spain:

Clean energy users are taxed positively, with a 21% value-added tax and special taxes on hydrocarbons, coal, and electricity. Regions can fund renewable energy support programs, and Autonomous Communities can regulate their own taxes.

EC5. FINANCING AND INVESTMENT OPPORTUNITIES CONTRIBUTING TO A MORE SUSTAINABLE ENERGY SYSTEM

Funding programs for ENCI can impact individuals and organizations' ability to achieve their ideals. Poorly developed funding can lead to financial risks, while properly developed funding can lead to late adopters and mainstreaming of ENCI, affecting its social distribution.

Local example from Hungary:

Hungary's local authorities are leveraging direct EC funds to recover lost municipal income due to insufficient government support and approval requirements for larger investment measures.

Social Factors

S1. LEVEL OF INCOME / WEALTH DISPARITY AND ENERGY POVERTY

The welfare of citizens impacts energy community initiatives, with higher income levels enabling greater investments, while low-income households face uncertain futures due to wealth imbalance and rising energy bills.

Local example from France:

There are regional differences when it comes to energy poverty. Households in Grand Est, Bourgogne-France Comté, Hauts-de-France, and Auvergne-Rhône Alpes are disproportionately affected by colder climate, income levels, housing type, construction year, and energy use.

S2. ENERGY LITERACY, AWARENESS AND SKILLS

Energy literacy encompasses four main aspects: energy devices, actions, finances, and general energy-related knowledge. It encourages energy conservation, inspires energy consciousness, and encourages joining energy communities.

Local example from Ireland:

Galway City Council and the Tipperary County Climate Adaptation Strategy are enhancing citizen awareness of climate change impacts and updating tenant information on minimizing emissions.

S3. CITIZEN ENGAGEMENT AND PASSIVITY IN SOCIETY

ENCI involves citizens actively participating in the energy transition process, such as decision-making, ownership of energy production, and participating in social movements. Passive energy citizens are those who are not driven to act, including vulnerable, disempowered individuals. The concept emphasizes citizen engagement and empowerment for achieving carbon neutrality.

Local example from Spain:

Montes Vecinales of Tameiga, a community in Galicia, manages part of Monte Faquiña industrial estate and its own socio-cultural center. They recently created the first Energy Community in Galicia, installing PV panels.

S4. TRUST (OR LACK THEREOF) IN INSTITUTIONS AND COLLECTIVE ENDEAVOURS

Mistrust in energy-related initiatives in European countries is a significant issue, potentially affecting the energy transition. Eastern European countries often associate cooperatives with communism, while Western European and Nordic countries have a strong tradition of social enterprises and community ownership.

Local example from Latvia:

Latvian residents trust local governments more than civil servants, with 42.1% of respondents expressing trust (oecdlibrary.org). A survey in Riga found 45% satisfied with the city council's activities, while 8% identified issues and 3% expressed concerns about corruption.

Technological factors

T1. AVAILABILITY OF TECHNOLOGIES FOR THE DECARBONISATION OF THE ENERGY SECTOR AND RENEWABLE ENERGY

Citizens need access to technologies like solar photovoltaics and solar thermal for decarbonisation and renewable energy production. Offshore wind and ocean energy are centralized, causing citizen protests. Hydrogen is crucial for decarbonisation, but ENCI primarily consumes it.

Local example from Germany:

In 2022, a 50-kW PV system was built on a radiology centre's façade near Marburg's main railway station. The project, financed through a long-term PPA, showcases the potential of photovoltaic power plants on a small scale, showcasing the partnership between the Sonneninitiative association and Marburg municipal utility.

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 Kispest 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 Kispest, 2020).

T3. DIGITALISATION OF THE ENERGY SYSTEM

Digitalisation of energy systems improves citizen participation, consumption feedback, and awareness towards lower consumption through smart grids, smart metering, smart mobility, and ICT solutions for renewable energy producers.

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 a leading player in smart metering and remote control, offering technological solutions and a blog to dispel misconceptions about energy system digitalization.

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:

Latvia's residents in Liepaja, Valmiera, Ventspils, Jelgava, and Riga are actively promoting energy efficiency in their buildings. Valmiera won the "Most Energy Efficient Multiapartment Building" in 2019 and is actively renovating and ensuring proper operation, with elders and apartment owners being educated.

Environmental factors

EN1. CLIMATE VULNERABILITY

Climate change drives ENCI, driven by action, adaptation, and a liveable future. Economic and political regulatory reform are essential, but individual actions and decisions are increasingly important.

Local example from Bulgaria:

ENCI protests against deforestation and construction in protected sites and coastlines are occurring in multiple cities. Protests were sparked by a government decision to construct a second gondola lift within protected areas. Protesters argue that exceptions should not be made for such projects, as they are unconstitutional, environmentally destructive, and could lead to increased construction investments. Students are actively promoting energy citizenship by participating in protests, collectives, and educational events.

EN2. AVAILABILITY OF RESOURCES



The availability of resources, including renewable energy potentials, varies across countries, leading to diverse support schemes. Transitioning to a greener lifestyle can be influenced by the openness to use existing renewable energy producers and their potential as models for future initiatives.

Local example from Spain:

Parque Nordés, an offshore wind farm in Galicia, has garnered support from some citizens for its role in offshore wind farm construction and R&D. However, environmental organizations argue it negatively impacts birds, fishing, and the sea, endangering the region's economy and potentially threatening fishing activities.

EN3. POLLUTION

Energy transition impacts daily life, with noise pollution driving sustainable transport, air pollution promoting green solutions, and visual pollution from renewable energy systems.

Local example from the Netherlands:

Noise and visual pollution impact sustainable energy generation in Horst aan de Maas, according to the KODE Framework. The municipality engages with residents and landowners through public consultations to address potential nuisance.

EN4. CONFLICTS AND OPPORTUNITIES ABOUT LAND USE

Identifying suitable land for renewable energy can cause conflicts, especially in agricultural or protected areas. However, in polluted or poor-quality areas, establishing renewable energy systems linked to ENCI can be beneficial.

Local example from Ireland:

Renewable Energy Systems was approved for a 42-hectare solar farm in County Tipperary in 2022, but objections were raised due to its impact on the area's visual beauty and potential removal of viable farming land.

Legal factors

L1. LEGAL FRAMINGS OF ENCI FORMS

ENCI's national legal frameworks can vary, encompassing consultative processes, legal status for alternative practices, citizen consumer recognition, regulatory simplification, and information provision, but may limit its scope.

Local example from Latvia:

The Riga City Energy Agency prioritizes energy communities in EU-wide projects and emphasizes the importance of 58 neighbourhoods in Riga's sustainable development.

strategy. The Riga Neighbourhood Alliance has been established, and Valmiera municipality is debating energy communities and smart villages for the next year.

L2. LEGAL MEASURES TO VULNERABLE CONSUMERS, ENERGY POVERTY AND SOCIAL INCLUSION

This factor encompasses various policy measures aimed at addressing energy poverty, including promoting energy efficiency measures for vulnerable consumers and enabling participation in the energy market.

Local example from Belgium:

Belgium's wealthier Flanders is home to high levels of energy poverty, affecting specific demographic groups. Around 680,000 inhabitants, or 280,000 families, live below the poverty threshold, with 16% of families in energy poverty. Single-parents, elderly, and those in social housing are particularly vulnerable.

L3. RIGHTS AND DUTIES OF CONSUMERS, PROSUMERS AND NEW PRODUCERS IN INTERACTION WITH THE ENERGY MARKET

National regulatory frameworks outline consumer rights and duties. These rights include clear consumption information, individualization of energy consumption, easy grid access procedures, and cost-covering remuneration.

Local example from Germany:

Stadtwerke Wolfhagen, a distribution system operator, achieved 100% renewable energy consumption in 2015 and launched a pilot project in Demand Side Management (DSM). The project encourages load shifting to high renewable generation by exchanging price signals between residents and the DSO. Despite winning the national "Energy Efficient City" competition, the project did not result in a local DSM implementation.

L4. BUREAUCRACY AND RED TAPE

Simplifying administrative procedures and setting clear time-limits for decision-making by authorities can reduce administrative costs and improve efficiency in electricity generation installation authorization.

Local example from France:

Island and coastal communities in Brittany face significant administrative hurdles in developing wind turbines, including Coastal Law, Natura 2000, protected areas, and historic monuments, which can be difficult to circumvent due to lack of staff.

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

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



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).

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 largest 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".

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 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. 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 must be assessed positively, after a short period of doubt about 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

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

90% of the Hungary's total primary energy supply comes from fossil fuel and nuclear sources. It means that the country 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 of 2021-22. The biggest barriers to the development of ENCI in Hungary originate in 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 of the EU, in some instances, many of these national documents lack 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 important overall obstacle is that the central government fixed 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 ENCIs. 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.



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Overview of the PESTEL Analysis of ENCI in Ireland

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

A blue silhouette map of Ireland with the word "Ireland" written in white across its center.

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.

Empowerment Toolkit

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, 2023, a new Law on Municipalities came into force, enhancing how local governments now operate by incorporating more of the public into all operations.

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.



Regarding 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 country. 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”. 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

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

A blue silhouette map of the Netherlands, showing its characteristic shape with the North Sea to the north and the English Channel to the west. The text "The Netherlands" is written in white across the map.

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.

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 begin 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?
- 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.

Empowerment Toolkit

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:

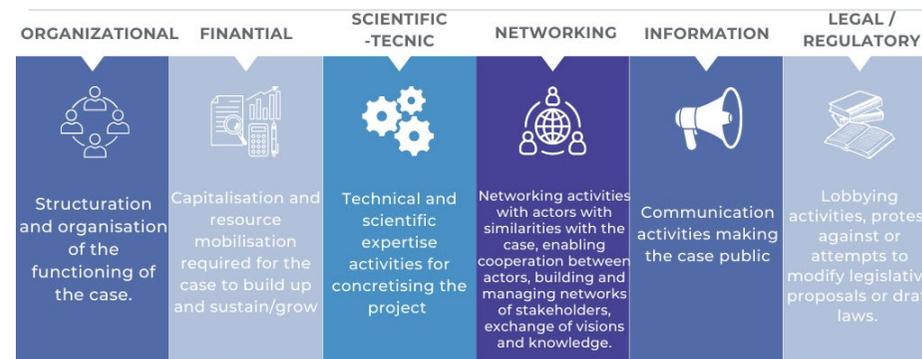
TYPES OF INTERMEDIARIES EXAMPLES

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)

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 the [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.

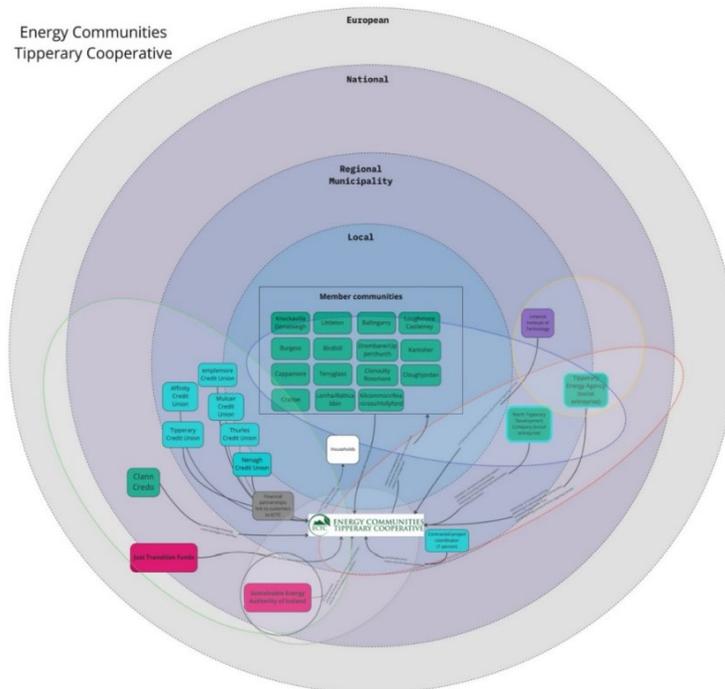
Financial intermediation refers to the capitalisation and resource mobilisation required for the initiative to build up and sustain/grow. For the [Galway Energy Cooperative](#), for example, a main success that the cooperative managed to attain was enabled by financial support from the national government, 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 energy efficiency. ECTC is placed at the regional level, in contrast with other more



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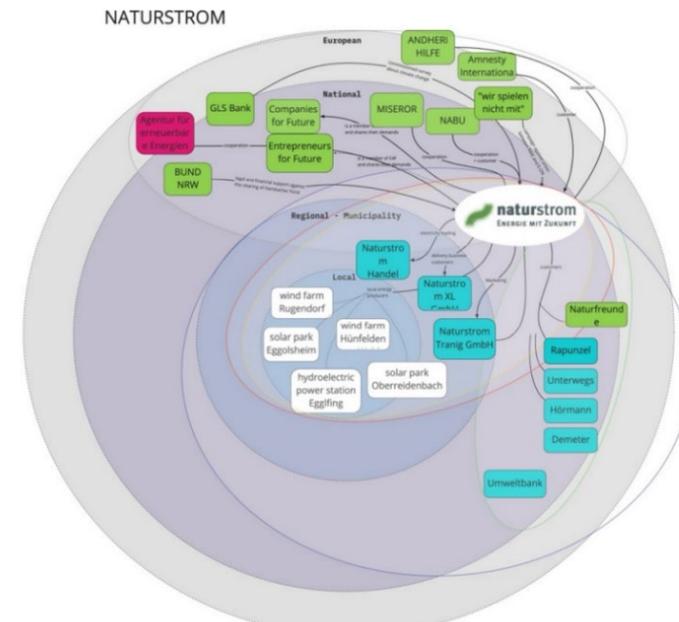
traditional local-based energy cooperatives but links with its 14 member communities at the local level. We also observed that due to the character of the ECTC and its dependency on the support schemes from the Sustainable Energy Authority of Ireland (SEAI) and Just Transition Funds, the type of intermediaries 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. Look at their intermediation map, which shows the different levels of action and types of intermediary actors, as well as the relationships between them:

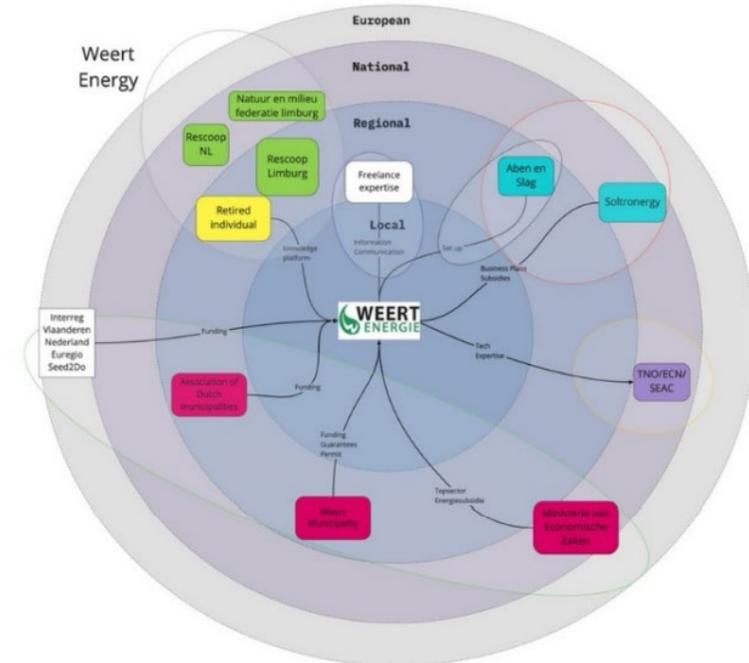
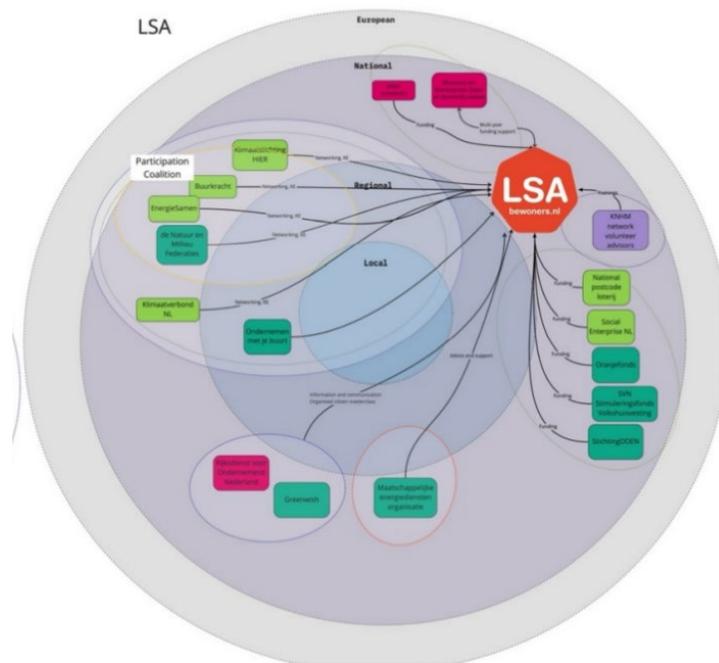


Scientific-technic intermediation is referred to the technical and scientific expertise activities for concretising the project: ICT conception, planers, architects, PV or wind power specialists, monitoring of the project, facilitating

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.

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.





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.

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 information is available here

- [D4.1. Strategic collective system building activities and institutional change](#)
- [D4.5. Viable business models and strategies for growth and expansion](#)

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.

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