**Project acronym:** EnergyPROSPECTS

**Title:** PROactive Strategies and Policies for Energy Citizenship Transformation

**Grant Agreement number:** 101022492

## Deliverable 4.5

# Viable business models and strategies for growth and expansion

## The economic-transactional aspects of energy citizenship cases

**Description of D4.5**: Map of economic-transactional aspects of energy citizenship cases and conclusions about enhancing the positive impact of energy citizenship types

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# Summary

This deliverable examines viable business and social innovation models (BSIMs) of initiatives that enable and promote energy citizenship (ENCI). The aim is to identify how ENCI is embedded in business models that work, thus enabling a viable and growing settlement of ENCI within the energy production, consumption and governance. For each of the 40 ENCI studied cases of EnergyPROSPECTS, we map their organisational forms and entities, their partnerships and key stakeholders, financial inputs/outputs, repartition of costs and benefits, fundings as well as social and environmental values. The key question this deliverable aims to address is, *'what is the business and/or social innovation model of the case and how does (did) it enable the case to achieve its goals and/or to self-sustain?'* Data were collected using a mix of secondary data via desk research (online materials) and primary data (semi-structured interviews) from 40 ENCI cases studies across nine partner countries (see case study data collection methodology in D3.3). Due to the heterogeneity and diversity of the cases, a comparative cluster analysis was undertaken to group similar cases considering the national PESTEL factors (see PESTEL analysis at D5.2) and the main framework conditions that might impact the cases. This resulted into three main case clusters: 1) Publicly-run, 2) Organisation-based and 3) Community-based initiatives.

The clustering analysis revealed common features among distinct different structures/organisations. Publicly-run cases (with high dependency on public funds) are found to be characterised by their focus on common goods and energy transition in accordance with their national and local/regional policies. However, these cases show a rather low citizen participation in the decision-making processes revealing a top-down ENCI character. The organisation-based cases, have a more complex BSIMs picture. The small-scaled cases, with low growth ambitions, portray strong values relating to sociocracy[1] and degrowth, with a focus on citizen empowerment, whereas the more growth-oriented cases are characterised by more complex structures, multiple partnerships, sophisticated tools and financial mechanisms that enhance ENCI-related economisation processes. Finally, the community-based cases (all energy cooperatives), although highly professionalised, undergo ongoing income diversification in order to self-sustain over time and achieve financial security. The analysis also revealed the limits of the cooperative model as a slow decision-making structure which is not 'fit-for-purpose' in a fast-paced funding application landscape.

By enhancing our understanding on BSIMs, this research found that initiatives operating in an ENCI context face many challenges in navigating an ever-changing funding and policy context, trying to achieve financial stability (in the long-run) by implementing various strategies such as partnership coalitions, challenging the traditional 'cooperative' model, or by finding creative solutions by new models of energy production, multiple value (co)-creation with an emphasis on citizen engagement and empowerment.

[1] Sociocracy is a theory of governance that seeks to create psychologically safe environments and productive organisations. It draws on the use of consent, rather than majority voting, in discussion and decision-making by people who have a shared goal or work process (Romme, 1995).



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# List of Abbreviations

**BEB**: Berlin citizen energy

**BSIMs**: Business and Social Innovation Models

**CFOAT**: Comharchumann Fuinnimh Oileáin Árainn Teoranta (Aran Islands Energy Cooperative)

**cVPP:** community Virtual Power Plant

**ECTC:** Energy Communities Tipperary Cooperative

**ENCI:** Energy Citizenship

**DE**: Drechtsteden Energy

**HOSe**: Hydro Electricity Ourthe and Sambre

**LSA:** Landelijk Samenwerkingsverband Actieve Bewoners (National Association of Active Citizens)

**GOU:** Model of grant of use

**SI:** Social Innovation

**RES**: Renewable Energy Source



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# 1 Introduction

Over the last decade, alternative, social and environmental values (such as justice, community cohesion, sustainability or ENCI), have shifted from the periphery to the centre of several business models of energy production, consumption and governance. Following the approaches trying to cross ethical perspective such as energy justice with extended business model frameworks (Hiteva and Sovacool, 2017) or that of sustainable innovation perspective (Mihailova, 2023); this deliverable identifies the main areas in which ENCI can inspire the creation of new practices of value creation – and, therefore, new business and sustainable innovation models (BSIMs), and to account for BSIMs that can catalyse and enhance ENCI. In other words, the aim is to identify how ENCI is embedded in BSIMs that work, thus enabling a viable and growing settlement of ENCI within energy generation, supply and use. 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 organising energy" that are recomposing the energy system, labelled as social innovations (SI) (Wittmayer et al., 2022).

Following Randles and Laasch's (2016) statement that the mainstream approaches on business models cannot be simply adapted to consider societal cares, concerns and values, our understanding of the business and social innovation models that are supportive to ENCI requires to shift the traditional focus on the financial creation of value within a competitive market to a focus that is placed on the creation of ENCI-related values combined with the ability of the business model to endure over time within the energy system. This understanding of the BSIMs comes close to what has been studied as 'organisational forms'. It also approximates the broad understandings of social innovation that include business model innovation (e.g. Pel et al., 2020a).

In a traditional sense 'a business model describes what a firm does to create, deliver and capture value for its stakeholders' (Hitt et al., 2020:113). However, our approach on BSIMs differs radically from the usual business model frameworks of value creation, capture and monetisation, to which we substitute single viability of the model, i.e. the concrete capacity of a case or an initiative to sustain itself or to endure over time. In such a perspective the value creation is displaced on other issues than monetised value towards a conception of value that is based on various key features of ENCI.

These ENCI features are then considered as basic principles for BSIMs analysis in this deliverable and includes three key principles: 1) Participation of citizens and citizen collectives which includes the possibility to take part in the decision-making process of the model; 2) Transparency, fairness, and openness of the model; 3) Affordability and accessibility of the model to a larger audience. Those three principles will be linked to the configurations that enable the case to sustain in order



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to identify the most viable BSIMs conducive to ENCI among the 40 detailed case studies analysed in the EnergyPROSPECTS project.[2]

The viability of the BSIMs is considered here as encompassing various non-business aspects to explore based on Mihailova (2023). These include a) *who is involved, who are partners and what sort of partnership* (how decisive for the model), b) *what form of organisation, what value(s) is/are created* (including social and environmental values), c) *what sort of economic activity is involved* and, if not, what are the sources of funding and d) *how professionalised*[3] *is the case* in terms of formal organisational structures or number of paid professionals.

The 40 detailed case studies of the EnergyPROSPECTS will be analysed further through these lenses, with the purpose of identifying potential *"good practice cases"* that appear to be particularly viable while supporting and enhancing decisively ENCI practices.

The methodology of this first step of our analysis is described in Chapter 2. Chapter 3 consists in presenting the clustering of the selected cases, and Chapter 4 is an overview of main characteristics of the cases selected as examples for this deliverable for the assessment of their viability (20 altogether). We conclude in Chapter 5 by presenting some key features of the different clusters that might support the development of adapted policy measures to enhance the various forms of ENCI.

[2] The 40 detailed case studies conducted in the EnergyPROSPECTS project have been considered for the clustering of cases, before sorting out 20 cases of which BSIMs presented some specificities that could contribute to the general understanding of the BSIMs conducive to ENCI.

[3] The professionalisation (and formalisation) of the initiatives is an intriguing process as it may drive away from civic, citizen-driven action - as pointed out often in grassroots innovation literature.



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# 2 Methodology for data treatment

This analysis is based on the empirical inputs and feedback provided by all EnergyPROSPECTS partners during the detailed case study analysis stage. This section presents how the data were collected and the methodology adopted for their treatment.

## 2.1 Data from the detailed 40 detailed case studies

The detailed case studies template for the 40 cases entailed a thematic question dedicated to BSIMs, focusing on the aspects that enable the cases to persist over time: *"What, if any, is the business and/or social innovation model of the case and how does (did) it enable the case to achieve its goals and/or to self-sustain?"* The sub-questions displayed in Table 1 were answered by the case researchers from the nine partner countries.

**Table I: Research questions as displayed in the research template**

**17. What, if any, is the business and/or social innovation model of the case and how does (did) it enable the case to achieve its goals and/or to self-sustain?**

Describe the current business and/or social innovation model of the case providing details in the table. Please note that your case may not have all the different types of models, or may not have any such models, so just fill in the rows that are relevant.

| The type of business and/or social innovation model, related to: | Description of the business and/or social innovation model | Role in the achievement of goals and self-sustainment |
|---|---|---|
| Organisational (legal) form(s) and entities | | |
| Partnerships and key stakeholders | | |
| Financial inputs/outputs, repartition of costs and benefits, funding | | |
| Social and environmental values | | |
| Other, please specify: | | |

**18. How have these models changed/evolved over time to enable the case to survive/operate in the longer run?**

Describe in cc. 15 lines how this model changed over time detailing which components/aspects of the model changed and how it impacted the organisational and/or financial structure of the case and especially its capacity to last over time.



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To answer the research (sub)-questions, a mixed-data collection was applied combining, desk-research and in-depth interviews with key informants. The 40 cases were selected from the larger EnergyPROSPECTS database of 596 cases of ENCI in Europe. The detailed methodology and selection criteria of the cases are elaborated in detail in the Deliverable 3.3 (Pel et al., 2022).

## 2.2 Data analysis: clustering of the cases and key features

The methodology for analysing the inputs regarding BSIMs consist in this deliverable was developed in three main steps:

First, a comparative clustering of the 40 cases with regard to both BSIMs and main policy frameworks was undertaken. Second, we identified in each cluster case(s) that could be considered as exemplary, or as "good practice", i.e. the cases that present the most viable BSIMs that actively support ENCI. The corresponding inputs for the selected cases were then treated, synthetised and updated to fill the following Table 2, aimed at collecting the critical information to assess the viability of the BSIMs and its contribution to the development of ENCI.

Participation of citizens, citizen collectives, non-governmental organisations and other civil society actors includes the possibility to take part in the decision-making process of the model for example through representational and participatory processes over time and space (Shi et al., 2016). Transparency refers that 'people should have access to high quality information about energy and the environment and fair, transparent, and accountable forms of energy decision-making' (Hiteva and Sovaccol, 2017:633). Affordability is a characteristic of the energy system and should include not only the part of consumption but the whole energy supply chain. 'This would include the access to energy efficient technologies and infrastructure, such as heaters, loft insulation and double glazing. Affordability is one area where there is a closer overlap with a business model perspective, as reducing the cost of any products is seen as a positive way to sell more of it' (Hiteva and Sovacool, 2017:634).

Third, a comparative analysis of the good-practice cases and the BSIMs components enabled to identify some key features for each cluster and subcluster that underline pathways in order to enhance the corresponding ENCI forms.

**Table II: Data treatment of the selected detailed case studies inputs for BSIMs**

| | | |
|---|---|---|
| Who is involved in the initiative?<br>Who are the partners and what are the sort of partnerships (how decisive for the model)?<br>What is form of the organisation?<br>What value(s) is/are created (including social and environmental values)<br>What sort of economic activity is involved and what are the sources of funding? | Participation<br>Transparency<br>Affordability | Endurance across time<br>Diversity and security/reliability of the sources of incomes: secure public fundings, economic activity, etc.<br>Professionalisation |
| **Purpose/intended outcome of BSIM** | | |
| **Who is involved in the value creation** | **Value co-creation activities** | |



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# 3 The comparative clustering of the 40 cases

This section presents the comparative clustering of the 40 detailed case studies, considering the national PESTEL factors (see Hajdinjak et al., 2023, D5.2) and the main framework conditions that might impact the 40 cases.


**Figure 1: Clusters and sub-clusters for BSIMs analysis**

- **Community-based initiatives**: This cluster consists of mostly cooperatives, focused whether on RES or housing (and therefore related to different policy frameworks). It should also encompass mobility related cooperatives, however this was not represented in the 40 cases.[4]
- **Publicly-run initiatives**: This cluster consists of initiatives led mainly by public institutions and/or governments at various administrative and regional levels. In these cases, which might also adopt a hybrid form (public/private), public institutions play a predominant role in their organisational and funding structure. Most relevant distinction with regard to the policy frameworks is observed between infra-national and national or supra-national levels.

[4] Note: Railcoop, although is a cooperative, it was excluded from the good practice cases list because it did not manage to achieve its goals. In addition, Cargonomia was also excluded because it is an example of case that overlaps between different clusters. The clusters are not intended to be an absolute clear-cut categorisations in this deliverable but were applied as an analytical tool.



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- **Organisation-based initiatives**: This cluster consists of initiatives from various types of organisations, such as NGOs, NPOs and companies. These organisations can exert an economic activity as a source of income and endurance, or not exert economic activity, thus depending on external funding sources.
- **Individual initiatives**: This cluster (although an important one) was not represented in the detailed cases in order to compose a category that we can investigate.

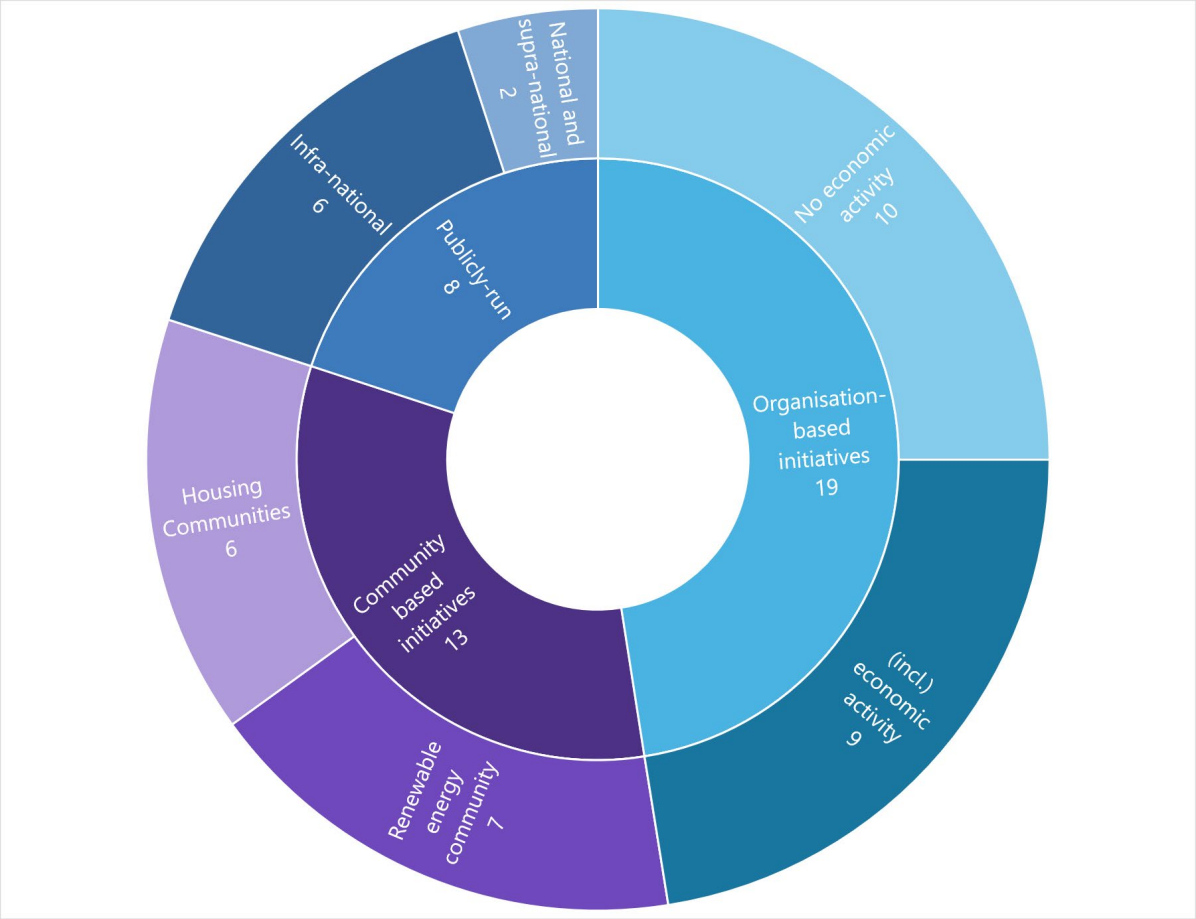


**Figure 2: Distribution of the 40 case studies by clusters and sub-clusters**

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

Based on this three-fold clustering, the case selection was undertaken considering both the quantity and the quality of the data provided for each of the 40 cases[5], resulting in a potential good practice cases list of 20 cases displayed in Table 3 (overview of the cases in Appendix 1).

[5] Indeed, the high technicity of the BSIMs analysis, which was not yet started at the time of the detailed case study analysis impacted a bit the data collection process for this thematic.



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For all the 20 "good practice" cases, the inputs related to BSIMs have been analysed and synthetised in the previously described clustering that are presented in Chapter 4.

**Table III: List of good practice ENCI cases[6]**

| Cluster | Subclusters | |
|---|---|---|
| **Publicly-run cases** | **(Supra-)national level**<br>• Consultation: Shaping Our Electricity Future (IRL) | **Infra-national level**<br>• Drechtsteden Energy (NL)<br>• Energy Transition of City of Burgas (BG)<br>• Hauts-de-France Pass Renovation (FR)<br>• Nagypáli, the renewable energy village (HU) |
| **Organisation-based cases** | **With economic activity**<br>• Shared Energy, Energie Partagée (FR)<br>• Bike Evolution (BG)<br>• Solocal Energy (DE)<br>• Hydro Electricity Ourthe and Sambre, HOSe (BE)<br>• Naturstrom EG (DE)<br>• TreeDependent (HU)<br>• Cargonomia (HU) | **Without economic activity**<br>• National Association of Active Residents - Landelijk Samenwerkingsverband Actieve Bewoners (LSA) (NL) |
| **Community-based cases** | **Renewable energy**<br>• Loenen Energy (NL)<br>• Aran Islands Energy Cooperative (IR)<br>• GoiEner Taldea (SP)<br>• Citizen energy Berlin, BEB (DE) | **Housing conditions**<br>• Energy Communities Tipperary Cooperative -ECTC (IRL)<br>• La Borda (SP)<br>• LaVidaVerde (DE) |

[6] A summary of cases descriptions can be found in the upcoming deliverable D3.5.



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# 4 Overview of the BSIMs viability characteristics for the selected cases

## 4.1 Publicly-run cases

### 4.1.1 (Supra)-National

Consultation: Shaping Our Electricity Future (IRL – National Level)

| Case summary | | |
|---|---|---|
| EirGrid, the state-owned electric power transmission operator in Ireland, has been tasked by the government with transforming the electricity system in anticipation of 70% of Ireland's electricity coming from renewable sources by 2030, as envisioned in the Government's Climate Action Plan (2019). This challenge is being addressed through a strategy outlined in the report, Shaping Our Electricity Future, which presents four different approaches to the development of the grid. Due to the high level of impact and transformative nature of this transition, EirGrid conducted a nationwide consultation process in the form of several online workshops and an online consultation platform to improve engagement with the public and with all stakeholders. Along with the outputs of the workshops, this resulted in several hundred submissions and comments by various stakeholders, including citizens. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| Who is involved in the initiative?<br>The consultation was organised in 2021 and led in-house by EirGrid, which is the state-owned electric power transmission operator of Ireland in collaboration with SONI, the TSO of Northern Ireland.<br>Who are the partners and what are the sort of partnerships (how decisive for the model)?<br>There are different partner organisations involved to ensure a degree of independence in the organisation of a variety of events, namely, Irish Rural Link, National Youth Council, Marie Donnelly who was the chair of the Climate Action Advisory Council.<br>In addition, external experts are also involved and help to provide independent viewpoints (MaREI, ESRI, Friends of the Earth Ireland). | Participation<br>Involvement is fully open, without specific belonging conditions. Issues such as energy poverty, gender and inclusivity are taken into account and foster adaptive measures to guarantee more equity.<br>Widespread inclusion is promoted by: i) collaborating with the National Adult Literacy Agency to ensure that language used is | Endurance across time<br>EirGrid, together with Sustainable Energy Authority of Ireland (SEAI) and ESB networks, started to organise energy citizens roadshows aimed at informing local communities and citizens about the roadmap as outcome of the consultation and at continuing involvement.<br>Sustainable results since the outputs of the consultation were considered seriously by EirGrid.<br>Yet this consultation occurred in 2020, |

<table>
<tr>
<td>What is the form of the organisation?<br>Consultation process, including 6 Rural community workshops, national youth assembly, 7 national youth events, 2 national civil society forums, a deliberative dialog.<br><br>What value(s) is/are created (including social and environmental values)?<br>There is a shift of values within the organisation of EirGrid when it comes to public participation and a more recognised role of community as well as a sustained participation after the project implementation.<br><br>What sort of economic activity is involved and what are the sources of funding?<br>No direct economic activity but seeks long-term value creation.</td>
<td>accessible to all audiences and ii) partnering with Irish Rural Link to ensure representation of rural communities and with the National Youth Council of Ireland (the representative body for voluntary youth organisations in Ireland) to ensure representation of young people.<br><br>Transparency: N/A<br><br>Affordability: N/A</td>
<td>which does not really enable to assess its long-term outputs.<br><br>Diversity and security/reliability of the sources of incomes<br>N/A: as a state-owned company, could make use of considerable internal resources (expertise, administrative capacity).<br><br>Professionalisation<br>Funding came from EirGrid and was implemented by professional paid staff.</td>
</tr>
<tr>
<td colspan="3">Purpose/intended outcome of BSIM<br>Implementing the Irish government’s Climate Action Plan<br>Leading EirGrid into new spaces around participation models and getting stakeholders more involved in project processes<br>Adaptation (of grid) to goals of 80% RES in the electricity mix</td>
</tr>
<tr>
<td colspan="2">Who is involved in the value creation?<br>Eirgrid partners and over 30 local authorities, held 6 rural community workshops (with over 300 attendees), a national youth assembly and 7 regional youth events, two national civil society forum, a deliberative dialogue/citizens assembly.</td>
<td>Value co-creation activities<br>Independent and transparent Consultation Development of the energy citizen’s roadshows<br>Recognised role of community/citizen engagement in energy project<br>Sustained participation after the consultation</td>
</tr>
</table>

### 4.1.2 Infra-national

Drechtsteden Energy (NL – Regional Level)

| Case summary | | |
|---|---|---|
| The Drechtsteden are a number of towns and cities bordering each other in the delta area of the rivers Oude Maas, Noord, and Beneden-Merwede in the province of South Holland. These cooperate in the “joint arrangement Drechtsteden", which performs common tasks for the municipalities in the field of economy, development, culture, and social assistance. In 2017, they were one of the first regions in the Netherlands to create a regional energy strategy (RES) in cooperation with thirty organisations. They are working with many other partners, each with their own interests and the same goal. No matter how you look at it, the generation of sustainable energy affects us and our living environment. There is no denying that we are sometimes faced with difficult choices. The fact that this involves a small energy region, where many people live close to each other, makes the large-scale generation of electricity in the region a challenge. At the same time, the region offers many opportunities for making homes gas-free. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| *Who* is involved in the initiative?<br>Drechtsteden Energie (DE) came into existence in 2017 after the drafting of the Regional Energy Strategy (RES 1.0) for the Drechtsteden region. In 2018, the Drechtsteden Energy Agreement was signed. This established the DE Programme Council.<br>*Who* are the partners and *what* are the sort of partnerships (how decisive for the model)?<br>More than 35 partners in the Drechtsteden region have joined the Drechtsteden Energy Agreement. The partners represent organisations that each have their own ambitions and planning when it comes to energy transition. The partners are willing to deploy their knowledge, people and resources to substantially reduce the region's energy consumption and the use of fossil fuels.<br>*What* is form of the organisation?<br>DE’s acts as a facilitator and intermediary organisation of the partners involved in the energy transition. For example, DE ensures the alignment and correspondence between the seven municipalities for their regional ‘Heat Transition Vision’ programme. DE is a cross-sectoral organisation and operates within the RES Bureau. The Bureau is managed by the programme manager | Participation<br>Citizens participated in the formulation of RES 1.0 but they do not participate in internal decision-making of the case. In terms of RE projects at DE, citizens are given the opportunity to get involved via participation/consultation evenings and online surveys. Everyone can also participate in DE’s public meetings. Decision-making for implementation of DE's aims is done by the municipalities where they map out the opportunities, capacities and resources available.<br>Transparency<br>DE publishes the RES strategy. Other formal structures, or | Endurance across time<br>Funded mainly by the government’s budget, this case can sustain over time as long as it contributes to the national Dutch climate agreement. However, the high dependence and single funding from the government makes it vulnerable and its future depends on the government's decisions.<br>Diversity and security/reliability of the sources of incomes<br>DE is funded by membership fees and national government budget which does not ensure viability and makes the case financially vulnerable. The Programme Council must argue the justification for increases in the budget. Collaboration is key for |

<table>
<tr><td>and cooperates regionally in the implementation of the RES.[7]<br><br>*What* value(s) is/are created (including social and environmental values)<br>Achieving high social return in the energy transition, and with minimal impact on natural values. This is important due to the current (2023) tightness in the labour market and training programmes that are needed to upskill the labour force.<br><br>*What* sort of economic activity is involved and what are the sources of funding?<br>DE is funded by membership fees and the national government's budget.</td><td>decision-making processes are not openly available.<br><br>Affordability<br>Energy citizen's cooperatives can become members of DE, however the membership affordability is unknown.</td><td>transparency in funding, by working closely together each party can see exactly where more funding is needed and whether it is spent effectively.<br><br>Professionalisation?<br>DE is consisted of hired staff. Funds come from membership fees and employees are paid by municipality budgets (municipal budgets have been increased so they do have the capacity). Another stream is from the RES national budget (each region gets a fixed amount).</td></tr>
<tr><td colspan="3">Purpose/intended outcome of BSIM<br>Implementing the Dutch government's Climate Agreement and the Drechtsteden's Regional Energy Strategy (RES 1.0)</td></tr>
<tr><td>Who is involved in the value creation<br>Drechtsteden coalition</td><td colspan="2">Value co-creation activities<br>Sustainable energy generation in Drechtsteden<br>Energy transition with the highest achievable social return</td></tr>
</table>

[7] The Administrative Consultation RES consists of the parties/coalition responsible for drawing up the RES (seven municipalities: Alblasserdam, Dordrecht, Hardinxveld-Giessendam, Hendrik-Ido-Ambacht, Papendrecht, Sliedrecht and Zwijndrech, Province of South Holland and two water boards: Water Boards Hollandse Delta and Rivierenland) on the basis of the national climate agreement.

Energy Transition of City of Burgas: Going Smart and Sustainable (BG – Local, Regional Level)

| Case summary |
|---|
| Fifteen years ago, the Bulgarian town of Burgas was highly energy inefficient, leading to very high energy costs for local authorities and citizens, as well as poor living conditions and environmental inequality. Today, it is a different story. Burgas is a smart, energy-efficient city that implements the most up-to-date energy approaches and measures, which demonstrates the power of local authorities to drive sustainable change. Since 2007, energy efficiency has become one of the priorities of the Municipality. As a result, nowadays, the entire population of Burgas Municipality (232,000 people) has directly or indirectly benefitted from this decision. All public buildings have been retrofitted, providing better living conditions for inhabitants. Children, young people and teachers have benefitted from the retrofitting of 98% of kindergartens and schools, and local businesses have benefitted from investments in energy efficiency and renewable energy sources. Burgas municipality is now leading the country when it comes to energy-efficient living, with more than 200 residential buildings retrofitted under the National EE Programme, and the number of hybrid and e-vehicles in the city is constantly rising. As a result of these activities, Burgas won the energy category of the 2020 edition of the Transformative Cities award. The Transformative Cities initiative inspires people to take action to transform their cities in areas of water, energy, food and housing. |

| Business Model | ENCI principles | Viability components |
|---|---|---|
| *Who* is involved in the initiative?<br>The initiative was planned and implemented by the municipal authorities of Burgas according to the priorities laid down in the strategic documents of Burgas Municipality (Municipal Plan for Development 2007-2013 and 2014-2020, and Sustainable Energy Action Plan of Burgas (SEAP) 2011-2020.<br><br>*Who* are the partners and *what* are the sort of partnerships (how decisive for the model)?<br>The initiative is financed by EU funds, national funding programmes, and the own resources of the Burgas municipality.<br>Different NGOs and CSOs had a consultative and advisory role, especially in the planning stage. Businesses usually participate as implementers and contractors, performing different services for the municipalities. Educational institutions (e.g. kindergartens, schools, universities) and citizens are mostly beneficiaries and recipients / end-users of services.<br><br>*What* is the form of the organisation?<br>Energy transition is one of the main priority areas of the Burgas in its | Participation<br>The municipal administration wanted to involve as many households as possible in the programme for renovation of residential buildings. The municipality organised an extensive information campaign to explain which buildings had the right to apply for funding and what the requirements were. Special administrative units were set up in each neighbourhood to consult and support citizens in preparing the applications. As a result, the city of Burgas became the leader in Bulgaria with the highest number of renovated private buildings (about 250, which is almost one third of all renovated private buildings in the country). To | Endurance across time:<br>The initiative has been relatively durable (started in 2007), however its almost complete dependence on national and EU funding makes its future uncertain.<br><br>Diversity and security/reliability of the sources of incomes<br>Dependence on national and EU funding means that the case is vulnerable. The funding has been secured for 2023, but it remains uncertain whether the funding programme will continue.<br><br>Professionalisation<br>The initiative is implemented by the Burgas municipal authorities, which means that all involved actors are hired professionals and experts in their respective fields. |

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| long-term strategy to transform the city into a sustainably developed municipality. All activities are implemented in a top-down manner, planned, approved, coordinated and supervised by the Municipal Council.<br>*What* value(s) is/are created (including social and environmental values)?<br>Improving living conditions of citizens, including those belonging to socially vulnerable groups, was one of the main priorities of the case. Another important social benefit concerns the children and youth, because many municipal schools and kindergardens were renovated. Regarding the environmental values, the activities aimed at reduction of $CO_2$ emissions, better air quality and improved environmental protection included renovation of the street lighting system (replacement of conventional lamps with LED and solar LED luminaires), replacement of public transport vehicles with internal combustion engines with electric ones, installation of electric charging stations and installation of PV system for the needs of the main administrative building of Burgas Municipality.<br>Overall, the sensitivity of the citizens towards environmental issues gradually increased.<br>*What* sort of economic activity is involved and what are the sources of funding?<br>Main sources of income are, EU funds (OP Regions in Growth, EEA Grants), national funding programmes (Energy Efficiency of Multi-Family Residential Buildings National Programme; state-owned Bulgarian Development Bank grant), and own resources of the Burgas municipality. | further increase the participation of citizens, an Energy Office opened in 2022 helping citizens who are interested in the energy efficiency programme and alternative energy sources.<br>Transparency<br>Annual activity and financial reports are published on the municipality website.<br>Affordability<br>Among the objectives of the case was to alleviate energy poverty in Burgas and increase the participation of vulnerable citizens through inclusive measures. Participation of households from the socially vulnerable groups was ensured through the use of national, municipal and European funding, which covered the costs of the retrofitting process for the citizens who did not have the funds to undertake the renovation themselves. | |
| **Purpose/intended outcome of BSIM**<br>Implementation of energy efficiency measures and uptake of RES in the municipality<br>Sustainable renovation and development of Burgas<br>Measures to alleviate the energy poverty | | |

| Who is involved in the value creation | Value co-creation activities |
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| Municipal authorities of Burgas<br>Local NGOs, CSOs and businesses | Energy efficiency measures implemented in 240 multi-family residential buildings<br>Renovation of the street lighting system in 22 city zones<br>Installation of smart energy meters in public and private buildings |

## Hauts-de-France Pass Renovation (FR – Regional Level)

| Case summary | | |
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| Hauts-de-France Pass Renovation is a public service for technical and financial assistance for renovation, created by the French region "Hauts-de-France" through the regional Public Service for Energy Efficiency. It is implemented in 12 territories or communities of the region. Hauts-de-France Pass Renovation is the first public operator to implement a third-financing mechanism for energy renovation for homeowners (individual or collective properties). It provides upfront financing for undertaking renovation work (43 000€ on average) that will be repaid by beneficiaries (in whole or partly) with their energy savings. The service provides an "all-in-one" solution, with technical assistance for homeowners, from the first energy audit to post-work energy audits, together with an innovative and attractive financing model. It contributes to creating a market for energy renovation in the region and directly pays contractors to undertake the renovation work, acting as an intermediary between homeowners and companies. In turn, the selected companies must be labelled as quality contractors (state label "RGE" Reconnu Garant de l'Environnement, "acknowledged warrant of the environment"). | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| *Who* is involved in the initiative?<br>In 2014 within the frame of its regional energy efficiency programme, the regional government (initially the region Picardie, and since 2020 the newly created region Hauts de France) launched the pilot project "Pass rénovation énergétique" (Energy Retrofit Pass), which is carried by the regional Public Service for Energy Efficiency (SPEE in French). At the time of its initiation, there was a strong political will to pilot third party financing and support households' access to renovation by certain regionally elected representatives.<br>*Who* are the partners and *what* are the sort of partnerships (how decisive for the model)?<br>A regional ecosystem of partnership enables the mechanism to operate, through public institutions such as the public establishment of an | Participation<br>Citizens do not participate in internal decision-making in this case. The case can be described as top-down.<br><br>Transparency<br>Through its annual reporting, the Pass Renovation mechanism proves to be transparent, including the aspect for which the mechanism did not fulfil all the expectations. For instance, the actual percentage of monthly payments covered by the | Endurance across time<br>The case exist since 2014 and overcame the political-uncertainty linked to the fusion of the Picardie and Nord-Pas-de-Calais regions (though it affected communication to the public and signed contracts). The political will and support of regional electives is another component that impacts its endurance over time. It started off with strong support and political will to pilot third party financing from regional electives. Since the last elections in 2021, there is no longer an elected representative that supports the |

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| administrative nature ANAH (National housing agency), the SPEE, the region Hauts de France, local authorities (e.g. municipalities) and more than 700 local companies and craftsmen working with energy renovation.<br>*What* is the form of the organisation?<br>The case is governed by the region, implemented by the SPEE and consists of a financial tool, i.e. a public third-party financing mechanism.<br>*What* value(s) is/are created (including social and environmental values)<br>Social values consist in enhancing the retrofit of housing, including for vulnerable households by enabling them to undertake energy efficiency renovation. Indeed, 26% of subscribers were in a precarious situation before the works, 91% of these homes are no longer classified as F or G label and 63% of these homes have gained at least 2 energy classes, which allows their inhabitants to escape energy poverty. Environmental values consist in a reduction of energy consumption through energy efficiency and switching to cleaner heating systems (e.g., heat pumps), thus potentially contributing to reduced emissions.<br>*What* sort of economic activity is involved and what are the sources of funding?<br>The financing mechanism consists of: 1) Pre-financing of government subsidies and loans; 2) Taking into account the energy savings generated by the work in the financing plan; 3) Long repayment periods (15 to 25 years depending on the work carried out); 4) Collective loans to condominiums, which are currently not widely distributed by the banking sector.<br>The case's profitability mechanism depends notably on the price they charge households to benefit from their services. The Pass has a small deficit every year and receives a public service compensation from the | energy savings achieved on bills is lower (with 58%) than the average estimated in the preceding energy audits (76%). However, this has no impact on consumer satisfaction or on the actual repayment of monthly instalments.<br>Affordability<br>The mechanism enables vulnerable households to realise energy and financial savings while making the retrofitting of their housing affordable. As such, it aims at preventing energy poverty. However, it addresses mostly house owners and not tenants. The public service is highly subsidised, but households still pay 1800 € for technical and financial support. This corresponds to about 50% of the real cost, the rest is subsidised. The information and audit activities are offered for free. | topic at a political level, which weakens the case's viability.<br>Diversity and security/reliability of the sources of incomes<br>It is a public case that is financed through public funding from the EU, national government agencies (ADEME) and the regional government.[8] As such, it is a viable case, though highly depending on the energy policy frameworks at both national and regional levels.<br>At the scale of the case, the Hauts de France Region fully assumes the development of the activity and the financial risks inherent to third-party financing (vs. conventional bank financing).<br>Professionalisation<br>The SPEE is highly professionalised since its operational team comprises 14 employees. |

[8] ELENA-ADEME-FEDER subsidies: € 4 M covering overheads, Picardie Region allowance: € 8 M covering initial renovation projects and European Investment Bank loan (Junker): € 35.5 M.

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| region. | | |
| **Purpose/intended outcome of BSIM**<br>Boost deep energy renovation for homeowners by providing tailored technical and financial assistance<br>Support business and jobs amongst regional construction professionals<br>Develop a dynamic regional sustainable renovation/retrofitting market | | |
| **Who is involved in the value creation**<br>House owners or co-owners<br>SPEE<br>Building retrofitting sector (regionally) | **Value co-creation activities**<br>Turning energy savings into financial resources for households, especially those with limited self-financing capacity<br>Enhancement of the expertise of sector professionals<br>Dynamisation of the territory with energy renovation | |

Nagypáli: The renewable energy village (HU – Local, Regional Level)

| Case summary | | |
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| The Green Road Village Development Program started in 1997 in Nagypáli, the main goal of which was to develop the village into a European-standard, self-sustaining settlement, preserving the traditions of the villages of the Göcsej region in Western Hungary. The directions of the development were determined from the start: the use of renewable energy sources, development of tourism, building a community, environmental protection and environmental awareness, and the production of local products. In two decades, a sustainable, liveable, and well-functioning settlement has been established with all kinds of renewable energy use: a biosolar heating plant, solar collectors and solar panel farms (with very minimal municipal overhead costs), e-mobility (bikes and cars) powered by solar panels, energy plantations, etc. The latest plans include building a biogas plant and turning an old water tower into a lookout tower with a wind turbine that will also generate electricity. In 2007 they opened the Renewable Energy Innovation Eco Centre, which serves as a promotional centre, where they organise temporary exhibitions, conferences, lectures and workshops, the main topics of which are the use and implementation of biomass, biogas, solar and wind energy, and energy plantations. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| *Who* is involved in the initiative?<br>Nagypáli's mayor is a key person in the case; yet, other stakeholders are also involved including residents and especially local enterprises.<br>*Who* are the partners and *what* are the sort of partnerships (how decisive for the model)?<br>Key stakeholders are businesses (mainly logistics/transport related | Participation<br>The municipality tries to involve the public from the very beginning of the development planning process by giving them the opportunity to express their ideas, problems and | Endurance across time<br>This case has quite a long history of more than 25 years when an innovative minded and ambitious mayor started his work in the village (in 1996). It is an enduring case, and remains up-to-date over the course of time. |

businesses) which have been attracted by financial/tax reductions to the village in order to create a financial basis for developments. This business settlement results from bilateral agreements, i.e. negotiations between the municipality and each new potential enterprise, which is offered (or at least used to) reduced tax and "asked" for giving something back to the village in some ways like investing. Some businesses are also involved in the life of the village in terms of sponsorships, investments, social networks, events, sharing ideas.

*What* is the form of the organisation?

The municipality has created a strong non-governmental organisational support around it (Foundation for the Village, Tender management office) in order to utilize all available opportunities and realize as many development projects as possible. Due to the complex requirements of tenders, the municipality alone would not be able to apply and that is why various forms of institutes were established, to maximize success. For example, there are tenders where legal or formal restrictions would hinder the municipality to apply and that is why they have created non-profit organisations to harness more opportunities for the village.

*What* value(s) is/are created (including social and environmental values)

The municipality follows strict environmental values, considering the Paris Agreement and planetary boundaries. The mayor referred to environmental concerns as his main motivation. In addition, the identity and sense of belonging of residents are an indirect consequence for living in such an innovative village.

*What* sort of economic activity is involved and what are the sources of funding?

The case relies mainly European and national project tenders, funds as well as tax incomes, and bilateral cooperation with enterprises in the village. Being a “renewable energy village” also attracts tourism, including expert tourism wanting to get to know local processes.

suggestions in different forums and platforms. Citizens are involved in the implementation process and are partners in various actions to promote environmental awareness. According to the mayor, everyone needs to be listened to but then it is their own responsibility to decide what to act upon.

Transparency

The case is considered as transparent. For example, information can be requested as it is an officially operating municipality with all the appropriate administration. However, residents or other stakeholders are not regularly informed about all the information and how the decisions are made (it is not necessarily hidden from them, they are probably not interested).

Affordability

Nagypáli has improved the life-standards and in the region, for example, real estate is now higher priced than in the past.

Diversity and security/reliability of the sources of incomes

The reliability of its income sources is ensured by the very active mayor, which can raise the question of the possible evolution of the case when the mayor will change/replaced. Its long-term financial viability is not ensured as it depends on who the successor of the mayor will be. At the same time, since the rather long history of the case and all the already established infrastructure and processes, including even the popular moniker of the village as “renewable energy village” that the locals identify with, the continuation after the mayor is changed could be ensured.

Professionalisation

The case is mostly operating with professional staff. The number of hired employees has increased over the years as the village had increasingly more projects and responsibilities.

**Purpose/intended outcome of BSIM**

Sustainability and renewable energy focused business model with a strong local scope, not chasing short-term benefits but long-term innovative changes (kind

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| of a mission beyond political interests) in many aspects (not only energy-related but governance practices). | |
| **Who is involved in the value creation**<br>The municipality<br>Local businesses<br>Citizens/residents | **Value co-creation activities**<br>Socio-economic development of the village, with social benefits for the citizens. Form of local governance oriented towards sustainable development itself rather than ENCI and basically relying on the willingness and proactivity of the mayor and strong strategies to get funding resources, even though kind of tax-dumping practices. |

## 4.2 Organisation-based cases

### 4.2.1 Organisation-based cased that include an economic activity

Shared Energy - Energie Partagée (FR – National, Local Level)

| Case summary | | |
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| Energie Partagée (Shared Energy) is a movement that aims at supporting and financing citizen renewable energy projects. It is composed of an association that promotes citizen energy, an energy cooperative that collects citizen investment and co-develops citizen projects, and an investment facility to directly contribute to citizen energy projects as a shareholder. Energie Partagée was established in 2010 by energy cooperatives and other like-minded organisations to identify and support citizen renewable energy projects based on a common charter that defines the values and characteristics of citizen projects (via their operating company) and is further used to attribute the label "Energie Partagée" following an evaluation process. Strong ownership of local actors, contribution to local development, shared governance, citizen ethical finance, and ecology are the five key aspects that are assessed during the evaluation process. The label aims at increasing the visibility of citizen projects and facilitating their replication. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| Who is involved in the initiative?<br>Energie Partagée is a movement for citizen-based energy created in 2008 through the mobilisation of local citizen-led organisations working in the field of renewable energy, the social and solidarity economy, and | Participation<br>The limited partners are the shareholders who participate and vote at the Annual General Meeting | Endurance across time<br>Energie Partagée was created in 2008 and has since continued to grow through a diversification of their organisation, their |

participatory local development.

### Who are the partners and what are the sort of partnerships (how decisive for the model)?

The case is a movement that unites citizens' organisations and actors that are engaged within and support a citizen-based energy transition, particularly local authorities and citizens' energy communities. Networks and partnerships are a core part of their social innovation model. Energie Partagée has a strong ecosystem of partners including: 1) Advocacy coalition: lobbying, including other networks and actors; 2) Local authorities: to create legitimacy and local anchoring; 3) Regional support networks to support learning processes and promote the growth of citizen-led energy communities across France; 4) Funding partnerships: related mostly to public authorities and public funding; 5) Private partnerships with companies for joint actions.[9]

### What is the form of the organisation?

The case consists of three different legal structures which complement each other: the cooperative (simplified joint-stock cooperative company); the investment tool (partnership limited by shares); and the association (association law).

### What value(s) is/are created (including social and environmental values)

A study on the social impacts of citizen-led energy projects by Energie Partagée showed a range of social values beyond clean energy production and local economic benefits. For example, citizen-led energy projects can function as training and conversion centres for jobs with the energy transition, as a way to expand networks and strengthen

and are represented by a Supervisory Board whose mission is to ensure the proper management of the company. Democratic governance is one of the criteria that a citizen renewable energy project must fulfil in order to be supported and/or part of the Energie Partagée movement and labelled as a citizens' project (Energie Partagee Charter, 2010).

### Transparency

The purpose of the case's legal arrangement is to guarantee the dissociation between the power of the shareholders (the limited partners) and the power of management (the general partner and its management) and thus to preserve the initial purpose of the project carried by the general partner.

There is a balance of power within the organisation and very transparent functioning with the publication of yearly reports with financial statement for each of the three

activities, partnerships and financing. Organisationally, the investment tool was launched in 2008, the cooperative in 2010, and the association in 2010.

### Diversity and security/reliability of the sources of incomes

Energie Partagée is supported by public funding, both national, regional and local, as well as by enterprises and foundations. The case has also received multiple funds from the European Commission, European Regional Development Fund, European Social Fund, Rural Development Programme and LIFE which helps to sustain the organisation over time.

### Professionalisation

The case has become more professionalised (32 employees) and is a well-known actor within the energy scene in France, having a fruitful partnership with the French Agency for the Energy Transition (ADEME) since 2010.

[9] Energie Partagée's first partners are local authorities, which are essential to carry out approaches to renewable energy development that are well-anchored in the territories. Energie Partagée offers them specifications with CNFPT, AMORCE, FNCCR. They cultivate a partnership with the State: ADEME (French agency for the ecological transition) has been supporting them since 2010. Energie Partagée works with CLER and the Climate Action Network; on agricultural/biodiversity issues with Terres de Lien, Solagro, négaWatt and France NatureEnvironnement; Hespul and Centrales Villageoises on photovoltaics. Current funding partners: Ademe, local authorities, foundations (Progrès de l'Homme, TerreSolidaire) and European programmes (FEDER, FSE, LEADER, LIFE).

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| knowledge of the local territory,a driver for involving citizens in energy and environmental politics and help in giving rise to new fruitful collaborations between local authorities and citizens (Energie Partagée 2023).<br><br>What sort of economic activity is involved and what are the sources of funding?<br>Énergie Partagée's Investissement is the first innovative financial tool for citizen investment in the production of renewable energy and energy efficiency in France, called 'The Société en Commandite par actions Énergie Partagée Investissement (EPI)'. The fund collects savings from citizens and invests them in equity in the capital of citizen renewable energy project companies. This tool enables project promoters and regional stakeholders to raise the capital required to launch a project and to maintain citizen control of it. This equity investment allows the project to be consolidated over time and makes it easier to obtain bank financing. Energie Partagée is furthermore supported by public funding, both national, regional and local, as well as by enterprises and foundations. | entities composing the organisation.<br>Affordability<br>Energy Partagée is open to everyone and reducing energy poverty is mentioned as an objective of renewable energy citizen projects in the Charter. For marginalised communities, Energie Partagée's investment tool offers shares for €10 to make shareholding more accessible (the price of one share is otherwise €100). | |
| **Purpose/intended outcome of BSIM**<br>Mobilisation of local citizen-led organisations working in the field of renewable energy, social and solidarity economy, and participatory local development.<br>Support via the Innovative Financial Tool for citizen investment in the production of renewable energy and energy efficiency. | | |
| **Who is involved in the value creation**<br>Local authorities, ADEME, CLER, Climate Action Network, Terres de Lien, Progrès de l'Homme, TerreSolidaire, Solagro, négaWatt, France Nature Environment | **Value co-creation activities**<br>First innovative financial tool for citizen investment<br>Strong network building capacity<br>Fostering citizen-owned local renewable energy projects across France<br>Enabling local residents and communities to produce their own renewable energy on their territory and supporting local actors in setting up territorial renewable energy production projects. | |

Bike Evolution (BG – Local Level)

| Case summary | | |
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| Bike Evolution is a non-profit organisation registered on 7 August 2007. The objective is to promote cycling as a valid alternative to modern urban mobility. To achieve this, Bike Evolution organises events (in association with partners and friends), participates in working groups and other bodies set up by the municipality, and organises and hosts training and design workshops and many other activities to promote safe cycling. Bike Evolution represents its members in discussions with the municipality and other authorities related to urban mobility. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| *Who* is involved in the initiative?<br>Bike Evolution is a non-profit organisation established in 2007. Its main objectives are, to promote cycling as an alternative to modern urban mobility, improving the cycling conditions in Sofia (Bulgaria) and in defending the rights of cyclists. The membership in the initiative is open to all citizens who want to enjoy the genuine freedom to choose how they move around and want to contribute to cleaner and healthier lives of all residents.<br>*Who* are the partners and *what* are the sort of partnerships (how decisive for the model)?<br>Bike Evolution cooperates with all like-minded NGOs and institutions, both from around Bulgaria and abroad. The most prominent partnership is through the National Cycling Network, which brings together 20 cycling organisations in Bulgaria. Bike Evolution acts as the main coordinator of this Network. In the recent past, the municipality of Sofia was an important partner of Bike Evolution, e.g. by hiring the case to develop and write the Plan for the Development of Cycle Transport in the Territory of Sofia Municipality 2012-2017.[10] | Participation<br>Bike Evolution is a membership-based association. Every citizen who shares the goals of the association and pays the annual (symbolic) membership fee can become a member. Members communicate through an online forum and on regular meetings, where suggestions from citizens for the forthcoming activities (campaigns, actions, awareness-raising, protests, participation in public consultations) are collected. Decisions based on suggestions made by citizens become compulsory if confirmed and approved by the three-member Executive Board. Externally, Bike Evolution is attempting to stimulate | Endurance across time<br>Although reduced in terms of membership, the initiative is active since 2007 and is quite successful in pursuing its objectives. It has been widely recognised by the media, authorities and other organisations as a legitimate representative of the cyclist community in Bulgaria and as a credible expert/arbiter on issues pertaining to urban mobility.<br>Diversity and security/reliability of the sources of incomes<br>Bike Evolution has modest financial needs as in recent years its focus has been on legislative changes, which is an activity which does not require substantial funding. For the establishment of the case, a Dutch funding organisation provided the 'start' |

[10] The Plan was approved by the municipal Centre for Urban Mobility, but it was never adopted by the Municipal Council. In recent years, there have been no contacts between Bike Evolution and the municipal authoritie

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| *What* is the form of the organisation?<br>Bike Evolution started as an informal community group and turned into an established and registered NGO with an Executive Board, Director and professional staff. The professionalisation came at the expense of size. In the initial years, between 150 and 200 people were considered to be active members and participated in the initiative in various roles. In 2023, 15-20 individuals represented the core team, which now plans and implements all the activities with the assistance of volunteers and interested citizens.<br>*What* value(s) is/are created (including social and environmental values)<br>Bike Evolution is based on the principles of openness, voluntary involvement, inter-institutional cooperation and equality of participants. All its activities are carried out for public benefit. The case is a strong promoter of citizen activity and participation, and strives to engage citizens in public debates, consultative councils and other forms of involvement on issues of sustainable mobility.<br>*What* sort of economic activity is involved and what are the sources of funding?<br>In order to cover its financial needs, Bike Evolution sells information and learning materials, provides services and consultancy for a fee, conducts training and educational courses, organises excursions, bicycle rides, etc. on designated routes for its members and supporters, but also for external clients (e.g. municipalities, companies, different organisations, etc.). These activities help the initiative to achieve its objectives. In general, Bike Evolution has relatively modest financial needs – in recent years its focus has been on legislative changes, which is an activity that does not require substantial funding. | the participation of citizens, experts and the civic society in the policymaking and decision-taking, which is very low and consequently, the Sofia municipality rarely considers the needs and opinions of the citizens in its political agenda.[11]<br>Transparency<br>All members receive a detailed account of what the funds collected through membership fees and what have been spent on. The initiative publishes an Annual Report in which its activities, organisational development and spending are presented.<br>Affordability<br>Annual membership fee is affordable to everyone for 5 euros. | grant. In addition, a modest sum is obtained from the annual membership fees. Occasional funding is received for different activities and projects from various sources (e.g. EEA Grants – Active Citizens Fund; Open Society Institute; Sofia Municipality). Income is also generated through small-scale business activities (services and consultancy, training and educational courses, organisation of trips and bicycle rides for different clients).<br>Professionalisation<br>Bike Evolution is an independent non-governmental association. It has a three-member Executive Board, elected by all its members for the term of three years. The Board makes decisions concerning financial matters or official statements and opinions. |

[11] Over the past 15 years, representatives of the initiative participated in hundreds of public consultations pertaining to development and improvement of conditions for cycling in Sofia and in Bulgaria in general. On average, Bike Evolution submits 5-7 official positions per year regarding municipal projects, legislative documents or other issues in public interest, expressing opinions, complaints, demands and/or protest.

| **Purpose/intended outcome of BSIM**<br>Promote cycling as a sustainable, healthy and environmentally friendly mode of transport.<br>Effective dialogue and cooperation between citizens and civic groups, businesses, media and institutions.<br>Increase the bicycle share of total trips in Sofia from 2% to at least 10% by 2030 and significantly expand the bicycle network.<br>Represent cyclists and defend their interests and rights before institutions and the wider society.<br>Create legal and infrastructural facilities that provide safe conditions for cycling. | |
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| **Who is involved in the value creation**<br>Members of Bike Evolution<br>Partners from other NGOs and the National Cycling Network<br>Sofia Municipality | **Value co-creation activities**<br>Bike Evolution is carrying out numerous events and campaigns to popularize cycling. They have contributed to the steadily rising number of cyclists in Sofia. Cycling is now firmly placed on the policy agenda in the city.<br>Bike Evolution has been recognised by the media, municipal authorities, NGOs and wider society as the competent interlocutor on all issues related to the development of cycling infrastructure and promotion of cycling.<br>Bike Evolution Public Group on Facebook has over 8,000 members and is a popular platform for exchange of opinions and ideas. |

SoLocal Energy (DE – Local Level)

| **Case summary** | | |
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| SoLocal Energy is part of a proactive and progressive energy transition. On the basis of corporate values oriented at the common good, the initiative intends to simultaneously get people from all population groups on board. For this purpose, they have founded the non-profit association SoLocal Energy e.V. This serves as an umbrella for their various activities, from balcony power plants to neighbourhood circles to the self-build community, supplemented by various workshop and lecture formats. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| *Who* is involved in the initiative?<br>SoLocal energy involves and directly empowers citizens at the local scale through balcony power plants, DIY groups for PV plant | Participation<br>Membership is open to all, with various possibilities according to the | Endurance across time<br>SoLocal is a rather recent case (since 2020). The case's "hybrid" status, i.e. that of a non- |

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| installations and climate neighbourhood.<br>*Who* are the partners and *what* are the sort of partnerships (how decisive for the model)?<br>The case has established several partnerships at the local level, for instance with the Kassel municipality. At a regional level and beyond, SoLocal energy is member of several networks, such as the Social Entrepreneurship Network Germany, and has close exchanges with networks that share most of their visions. Partnerships with institutions played a role in the development of the case. Decisive for the case's model are its networking activities which contribute to anchor the case in social entrepreneurship dedicated to DIY and literacy enhancement with regard to solar energy.<br>*What* is the form of the organisation?<br>The legal form of the case is a non-profit organisation (association). The association also has an economic activity, though not that much profit-oriented but as a source of incomes to sustain – through the solar PV installations. However, this legal form of a non-profit organisation that does also "sell" balcony power plants is not fully "sustainable" in this legal form in that it is facing a constant uncertainty: that of getting its associative status removed because of its economic activity. The legal form of the case thus reflects a strong socio-economic choice i.e. making the organisation belong to the community rather than a number of individuals.<br>*What* value(s) is/are created (including social and environmental values)<br>SoLocal Energy aims at facing the global climate change from bottom-up and at empowering the local community. Their vision consists in putting sustainable energy supply in the hands of citizens in order to achieve climate-just energy democracy. Their basic values are solidarity, justice, sustainability and personal responsibility. In the association's vision, solar energy is central to the energy transition in cities. They consider it as the most important building block for a decentralised energy transition in cities. In addition, it enables a more decentralised solidarity-based economy that is more strongly oriented | time and financial resources of the members.<br>Transparency<br>The basic democratic principles applicable to associations are guiding principles for the case. The statutes underlines indeed that each member have one vote. The right to vote is transferable to other members and each member may represent a maximum of two other members.<br>Affordability<br>Financial capacities are taken into account by the association, which adapts its offers accordingly, either for the membership or for the installation of balcony PV plants. | profit organisation that is exerting some social responsible yet commercial activities represents also a concern, since SoLocal members might always be compelled to create a limited liability company (LLC – GmBh in German).<br>Diversity and security/reliability of the sources of incomes<br>The case was established through a funding (Stipendium) that was granted by Hessen Ideen. Though this funding is dedicated to the development of innovative, knowledge-based entrepreneurial business ideas, SoLocal energy adopted immediately the form of a non-profit organisation generating revenues by selling solar panels installations (balcony power plants). This model did not change much over time enabling the association to endure thanks to regular incomes and also to grow by engaging 3-4 collaborators. Financial aspects are still a constant matter of concern, since the project development is still hanging on the funding and grants that the association receives. However, the 3 building blocks that compose the core of the association´s activities, combined with a 100.000 euros loan, seem to ensure a relative financial stability to SoLocal energy.<br>Professionalisation<br>SoLocal energy has been since the very beginning professionalised, so that the |

<table>
<tr><td>towards the needs of the people.<br><br>*What* sort of economic activity is involved and what are the sources of funding?<br>By adopting the legal status of a non-profit organisation, the case could develop its projects with balcony power plants, DIY building groups and neighbourhood circles while having income that is not fully depending on grants – which also contributes to make their model financially sustainable. Some funding sources have been necessary for launching and developing the association, notably the funding received from Hessen Ideen, some prizes won within competitions as well as the Deutsche Postcode Lottery. The financial inputs and outputs are a matter of concern and of personal issues or conflicts, notably between the idealism of the members and the necessity to pay salaries or to get their work remunerated, at least to enable the association to self-sustain over time.</td><td></td><td>employees of the association (seven now) are doing – (and deciding) things collectively and providing feedbacks to other members, for instance during the Annual General Assembly.</td></tr>
<tr><td colspan="3">Purpose/intended outcome of BSIM<br>Empowering citizens and communities to face climate change from bottom-up<br>Putting the energy system in citizen hands<br>DIY and sociocracy principles</td></tr>
<tr><td colspan="2">Who is involved in the value creation<br>SoLocal association and its members<br>Citizens and communities /neighbourhoods<br>Funding sources<br>Kassel municipality</td><td>Value co-creation activities<br>Installation of balcony PV plant by the citizens themselves<br>Energy literacy and democracy: consideration of the vulnerable people and empowerment<br>DIY groups for PV plant construction - social and solidary economy<br>Community development</td></tr>
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Hydro Electricity Ourthe and Sambre (HOSe) (BE – National, Local Level)

| Case summary | | |
|---|---|---|
| HOSe develops and operates several hydroelectric power plants on two rivers in Wallonia. This enterprise was created by ten renewable energy cooperatives and the company Hydro in order to produce electricity for households. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| *Who* is involved in the initiative?<br>HOSe is a cooperative company and is the result of an extensive collaboration between ten RESCOOP cooperatives. The Emissions Zéro cooperative is the lead partner of HOSe, working closely with the private shareholder (Hydro-B) who is providing technical expertise.<br><br>*Who* are the partners and *what* are the sort of partnerships (how decisive for the model)?<br>The electricity produced is sold to green supplier, with a marked preference for COCITER, a supplier that already provides households with electricity produced by 12 citizen cooperatives - notably wind and photovoltaic. Thanks to this hydroelectric project, COCITER will be able to supplement its sources of green electricity production throughout the year.<br>*What* is the form of the organisation?<br>HOSe is a SCRL (Société Coopérative à Responsabilité Limitée - cooperative company with limited liability), composed of 50% cooperatives and a 50% share of the enterprise Hydro-B. The cooperative company with 50% public shareholding has been set up to develop and operate the new hydroelectric power stations: HOSe scrl for “Hydroélectricité d'Ourthe et Sambre”.<br>*What* value(s) is/are created (including social and environmental values)<br>HOSe has a shared commitment to renewable energy and creative | Participation<br>The cooperative model and the shared commitment to environmental gains and societal surplus, indicates commitments to equity and justice. Overall, there is a focus on the circle of members – whilst pursuing the main goal of sustainable energy production, in the service of the society. The importance of local ties follows from the commitment to democratic, consensual decision-making. The cooperative thrives through the social ties, the connection to the shared undertaking. Especially the associated cooperatives of the case have democratic, horizontal, decision-making as an explicit objective. The commercial partners do not pursue this business model/social innovation model actively, but they have embraced it.<br>Transparency | Endurance across time<br>HOSe was established in 2018 from a single collaborative project with a short-term objective to survive the step towards HOSe as more ambitious, more institutionalised, hybrid organisation. Since then, seven projects have been achieved, which underlines the viability of the model.<br>Diversity and security/reliability of the sources of incomes<br>The returns-on-investment and the financial balance have been rather volatile. Overall, this is at satisfactory level to the investors and project participants.<br>Professionalisation<br>Professionalisation arguably resides in its constitution as a hybrid between citizen-based, voluntary action-based, cooperatives (involving a certain degree of professionalisation and the appointment of paid or semi-voluntary staff) and the by definition the professionalised hydro-engineering company Hydro-B. The step from the single-project Monceau-Hydro to |

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| nature-based solutions. The commercial construction partner is considered a frontrunner in green technology and is an environmentally responsible enterprise. The fascination with hydroelectricity as nature–based solution, a novel technology in this geographical context, is an aspect that brings the company quite close (qua business model and social innovation model) to the cooperatives.[12]<br><br>*What* sort of economic activity is involved and what are the sources of funding?<br>HOSe has been set up as an institutionally hybrid collaboration. It is a cooperative-of-cooperatives, but also includes a private sector partner, Hydro-B. The participation of the latter introduces profit, or return-on-investment, as a secondary goal. Meanwhile, the cooperatives aim to make a modest profit. | HOSe is a stable hybrid organisation with consensual decision-making and trusting relationships among all partners.<br><br>Affordability<br>The membership of HOSe is open, though restricted by financial participation and local ties. In line with the cooperative principles, the financial participation does not have a very high threshold. | HOSe involved the shift to a more professionalised organisation, involving representation of multiple participants and an altogether more extended organigram. |
| **Purpose/intended outcome of BSIM**<br>Promoting an effective democratisation of the energy system by putting it in citizens' hands<br>Move towards democratisation of commercial activity/business: the business partner goes along with the cooperative approach. | | |
| **Who is involved in the value creation**<br>HOSe (Hydro-B and 10 RESCOOP cooperatives)<br>Citizens | **Value co-creation activities**<br>Production of hydroelectricity from a hybrid organisation in which citizens are involved through the 10 cooperatives that own 50% of HOSe<br>Societal benefits from the project development and operation | |

[12] There are several advantages to investing in hydroelectricity. For example, it offers the advantage of stable production, especially during the cooler six months of the year, when energy requirements are high. It is a complement to wind generation, which is at its best in autumn and winter, and photovoltaic generation, which is at its best in spring and summer. Adding to the environmental values, interesting is that hydroelectric plants live twice as long as a wind turbine and river hydropower has the best $CO_2$ balance of all known sources of electricity generation.

Cargonomia (HU – Local Level)

| Case summary |
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| Cargonomia is the formalisation of a pre-existing collaboration between three socially and environmentally conscious small enterprises operating in or near Budapest. Partners within the project include the Cyclonomia Do it Yourself Bicycle Social Cooperative, Zsamboki Biokert, an organic vegetable farm and sustainable agriculture community education center which distributes weekly vegetable boxes to food communities in Budapest, and Kantaa, a self-organised bike messenger and delivery company. Cargonomia and its partner's activities aim to display how environmentally friendly and equity-based partnerships can create sustainable and meaningful community empowerment opportunities which offer concrete alternatives to standard profit-driven social and economic systems. |

| Business Model | ENCI principles | Viability components |
|---|---|---|
| **Who is involved in the initiative?**<br>This initiative is the joint project of three organisations, namely Zsámboki Biokert, a local and organic food production from Zsámbok (village in Hungary) with the cargo-bike messenger company, and Cyclonomia is the initiator of the case.<br>**Who are the partners and what are the sort of partnerships (how decisive for the model)?**<br>Cargonomia connects the distribution of local and organic food production from Zsámbok with the cargo-bike messenger company, and Cyclonomia, which is helping cargo-bike owners with their DIY workshops (to assemble and repair electric devices, clothes, bikes).<br>**What is the form of the organisation?**<br>Cargonomia is a social cooperative/transition initiative. The case is 'based on the existing resources and partnerships of the collective, dominated by reciprocal relations' (Lazányi, 2022:132) i.e. three organisations cooperating organically and the number of volunteers. Their goal is not to become an official organisational entity (so that they do not have to deal with administrative tasks).<br>**What value(s) is/are created (including social and environmental values)**<br>Degrowth values are the core of the case activity, i.e. slowing down, and | **Participation**<br>External members do not have a say in what happens within Cargonomia, however, the co-founders regularly do consult with the wider community, including at various community events and joint learning opportunities.<br>**Transparency**<br>Reciprocal relationships between Cargonomia and the partner organisations is of key importance. There is no subordination, which allows for a democratic way of working together. Its effective openness and transparency activities are unknown.<br>**Affordability**<br>Cargonomia's model is based on reciprocity and donations. | **Endurance across time**<br>Cargonomia was established in 2015. The focus of the case however has shifted, from distributing vegetable boxes to more educational programmes and workshops (since the end of the pandemic), but all the while continuing with the original activity of distributing vegetable boxes using carbo-bikes. This shows how the case has adjusted over time to self-sustain.<br>**Diversity and security/reliability of the sources of incomes**<br>There is a diversity of the sources of income, relying on crowdfunding, in-kind benefits, reciprocity, donations and voluntary work. This helps the case to self-sustain because is based on the community and individuals rather than external funding schemes.<br>**Professionalisation**<br>Cargonomia works solely with volunteers, |

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| not aiming at growing or expanding but remaining in small scale and creating strong relationships within the local community. Values created through Cargonomia operations relate to sustainability, fair trade and reciprocity.<br>What sort of economic activity is involved and what are the sources of funding?<br>Plural and degrowth economic approach based on crowdfunding, donations and in-kind benefits help self-sustainability because it relies on the community and individuals rather than depending on external funding schemes. In addition, income is made through delivering the vegetable boxes using cargo-bikes. | | which means that the participants are dedicating their personal time. The absence of professionalisation is part of the model, yet it might also contribute to fragility of the BSIMs, as the "identity crisis" induced by the covid crisis. |
| **Purpose/intended outcome of BSIM**<br>Improving the local community by promoting creative socio-environmental alternatives in an urban scenario, where resources and spaces are constantly contested by different actors | | |
| **Who is involved in the value creation**<br>Local and organic food production from Zsámbok<br>Cyclonomia<br>Volunteers | **Value co-creation activities**<br>Enactment of slow food and degrowth principles<br>Connections between the food and mobility areas, with a DIY orientation<br>Community building | |

TreeDependent (HU – National Level)

| Case summary |
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| The TreeDependent programme is about providing support to reduce carbon emissions, as well as calculating and compensating them through the services offered within the 'TreeDependent – responsible events, responsible travel' programme. However, this is not a typical compensation programme as only native fruit trees are planted in the form of fully voluntary compensation, and they are planted in school or non-profit gardens, thereby connecting activities related to different sustainable development objectives. This is a programme run by GreenDependent in Hungary. |

| Business Model | ENCI principles | Viability components |
| --- | --- | --- |
| **Who is involved in the initiative?**<br>GreenDependent Institute (GDI) is the core actor of the project, focusing on managing and disseminating activities, including technical help to develop the calculator of measuring a company's carbon footprint, and other calculators measuring travel and lifestyle footprints.<br>**Who are the partners and what are the sort of partnerships (how decisive for the model)?**<br>TreeDependent's key partner is the Business Council for Sustainable Development in Hungary. The Council actively communicate their efforts, including organising responsible low-carbon events in the framework of the TreeDependent programme, company members of the Council have also become clients of the programme.<br>In addition, the nursery providing the native fruit trees, and the schools and NGOs where the trees are planted are very important partners.<br>**What is the form of the organisation?**<br>The TreeDependent programme is a service provided by GDI, a non-profit, public benefit ltd.<br>**What value(s) is/are created (including social and environmental values)**<br>TreeDependent has developed a socially aware and ecological carbon compensation tool. The case connects environmental and social objectives in that the compensation of event, and in the case of | **Participation**<br>TreeDependent is fully open to individuals,collectives/communities as well as organisations.<br>**Transparency**<br>Carbon footprint calculation and compensation are transparent processes (the client can follow what is being calculated and how) and the trees are fruit trees native to the region. The tool avoids the possibility of greenwashing: Clients cannot be companies whose actions are inherently against the environment or are not in accordance with the project's principles.<br>**Affordability**<br>TreeDependent follows socially aware pricing of services. Apart from the environmental aspect, it pays special attention to the people/collectives in need – for | **Endurance across time**<br>TreeDependent was established in 2010 and grew over time by developing their awareness raising and carbon compensation tool.<br>**Diversity and security/reliability of the sources of incomes**<br>There is a continuous need to increase the clientele to help self-sustain the project. Some clients (i.e. companies, organisations, individuals) who have been clients for several years, some of them continuously increasing the services needed from GDI within the TreeDependent programme.<br>**Professionalisation**<br>Two employees work on the programme in addition to some GDI staff. There are no permanent volunteers (except those who plant the trees). |

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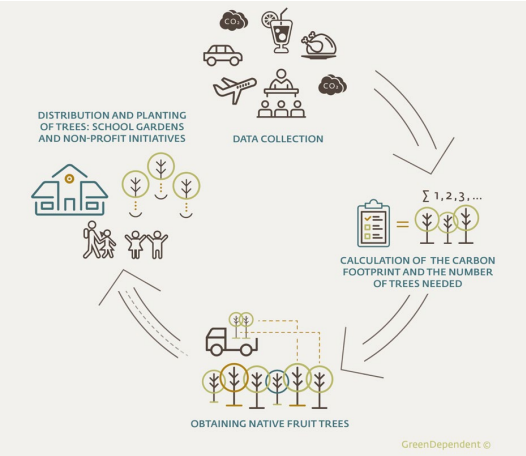
| individuals, travel footprint is done through supporting not just environmental causes (i.e. planting fruit trees and creating local food provision opportunities) but also social ones, i.e. educating students on local fruit varieties, gardening, etc. as well as creating job opportunities as the fruit trees are often planted to create orchards, and later from the fruit harvested jam, fruit juice, etc. making opportunities for disadvantaged people, or contribute to their food self-sufficiency.<br>What sort of economic activity is involved and what are the sources of funding?<br>TreeDependent's economic activities includes: 1) Clients - organisations or individuals/communities - approach the programme because they would like to have either responsible, low-carbon events, or low-carbon travel; 2) Following needs assessment, a contract is drawn up, in the framework of which 3 or 4 services are usually provided by the TreeDependent team; 3) A report is drawn up by the TreeDependent team documenting both the footprint and the planting process; 4) The clients pay for the services. The income supports both the "fairy garden" and the TreeDependent programme, both directly, and more indirectly the schools and non-profit organisations who receive the trees. | example adjusts the price accordingly. |  <br>**Figure 3: TreeDependent ENCI case** [13] |
| **Purpose/intended outcome of BSIM**<br>Elaborated on a fair and sustainable carbon compensation tool that contributes to raise awareness and reduce carbon footprint of individual or collectives in events and transport uses | | |
| **Who is involved in the value creation**<br>GreenDependent Institute<br>Business Council for Sustainable Development<br>Individual or collective (e.g. business) customers | **Value co-creation activities**<br>Carbon literacy: consultation/training on how to organise responsible, low-carbon events/travel | |

[13] Source: https://intezet.greendependent.org/en/node/512

Naturstrom AG (DE – National, Local Level)

| Case summary |
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| Naturstrom AG aims to provide a 'clean, safe and economical' energy supply on the basis of renewable energy. It claims sustainability is the core of its business activity, and more than 250,000 households, companies, and associations are using its energy products, which are focused on the areas of electricity, heating and mobility and include energy delivery, energy production, energy infrastructure and decentralised energy supply. |

| Business Model | ENCI principles | Viability components |
|---|---|---|
| **Who is involved in the initiative?**<br>Naturstrom AG was developed by members of environmental and renewable energy associations (BUND, NABU, BWE, EUROSOLAR). In 1999, it entered the market as one of the first independent green electricity trading companies in Germany. Key stakeholders of the case are the ecoeco AG which has the largest share and small stakeholders that hold 51% of the company. This makeup is deliberate, because Naturstrom has not only financial goals but also goals oriented towards sustainability and the common good more broadly. Naturstrom is currently Germany's largest independent eco-energy supplier.<br>**Who are the partners and what are the sort of partnerships (how decisive for the model)?**<br>Naturstrom's partners include, a) 1600 Shareholders, b) 230 key partners which operate distributed small to medium scale power plants, c) Commercial real estate for district projects and d) Municipalities and local communities.<br>**What is the form of the organisation?**<br>Naturstrom functions as an intermediary between consumers and producers of renewable energy. It is a joint stock company and has two subsidiary companies.<br>**What value(s) is/are created (including social and environmental values)**<br>The case follows an holistic approach with a focus on both social and environmental values. Renewable energy and energy transition are at the core of Naturstrom's activities and concerns. Global South energy issues | **Participation**<br>Citizens can, as employees or outsiders, be stakeholders of the company and in this way take part in the internal decision-making, according to their shares of the company. Citizens, communities, companies that are cooperating with Naturstrom on energy projects/plants have voting rights as well. In addition, employees have the option to buy shares.<br>**Transparency**<br>Financial and sustainability reporting, which are accounting each year in detail for all the activities undertaken by Naturstrom and its current financial situation.<br>**Affordability**<br>1700 shareholders owning more than 50% of the shares, which is a rather high number, though shares are rather seldom offered to avoid the financialisation of the company. | **Endurance across time**<br>Naturstrom was established in 1998, following the liberalisation of the energy markets. From its start as a purely green electricity supplier Naturstrom has continuously expanded its business activities and has through the associated companies and holdings to become an innovative group of companies. Divided into the diverse energy transition activities of the Natustrom Group are divided into three business areas, Energy Supply, Energy Generation and decentralised energy supply, which are involved and cross-company activities at a total of 13 locations in Germany.<br>**Diversity and security/reliability of the sources of incomes**<br>Core initial activity of green power supply has been progressively completed by a large expertise in the RES area, ensuring Naturstrom diverse sources of income.<br>**Professionalisation**<br>The case is highly professionalised with |

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| are also deeply taken into account with many philanthropic projects (e.g. solar power plant for a clinic in Gambia).<br>What sort of economic activity is involved and what are the sources of funding?<br>Green energy supply, support for citizen and publicly led energy projects, tenant electricity, demand-side management with “Naturstrom vor Ort”, mobility solutions. | | 463 employees (in 2021) working for the Naturstrom Group in total. |

**Purpose/intended outcome of BSIM**

Diverse, decentralised and decentralised and citizen-oriented energy supply
Decentralised renewable energies as a contribution to climate protection and the energy transition
Replace the energy supply based on fossil and nuclear fuels by an ecologically, socially and economically sustainable alternative

**Who is involved in the value creation**

Naturstrom AG entities
Shareholders and stakeholders
Local authorities, communities and residents
Green energy customers

**Value co-creation activities**

Added value is created by giving German residents the possibility to be participants in the energy transition process
Regional value chain with local actors through energy-related projects such as those led by Natustrom vor Ort

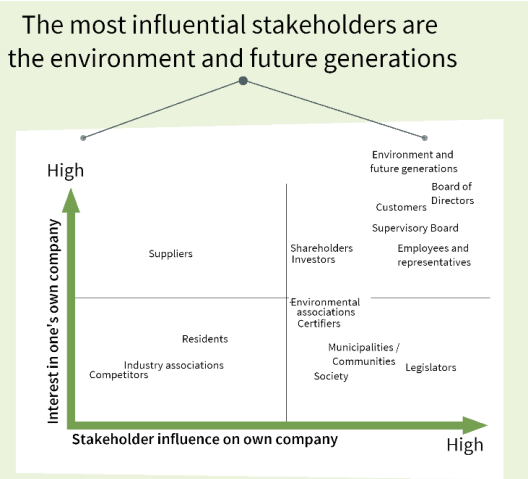


Figure 4: Most influencial stakeholders according to Naturstrom Sustainability report 20129-2020

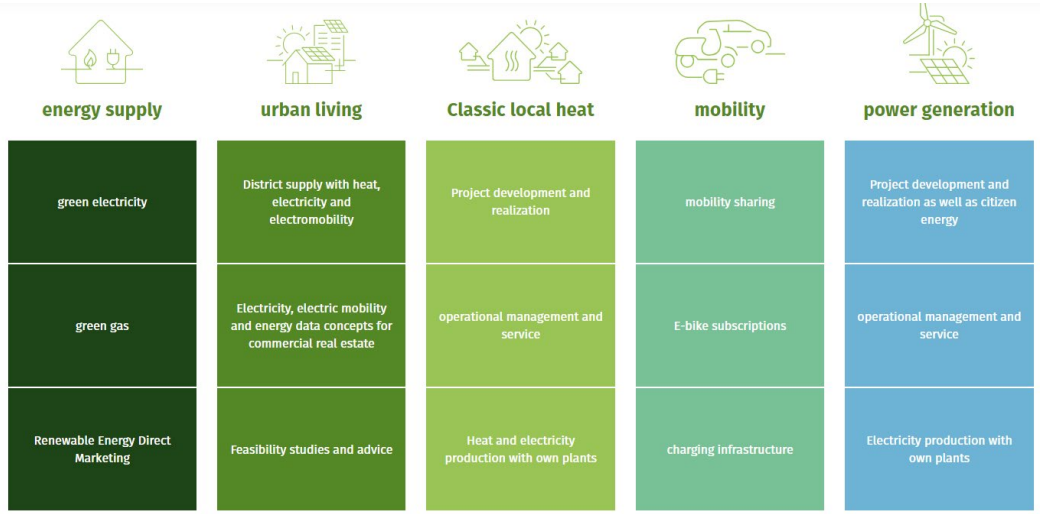


Figure 5: Naturstrom´s business areas

### 4.2.2 Organisation-based cased with no economic activity

National Association of Active Residents (LSA) (NL – National Level)

| Case summary | | |
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| The Landelijk Samenwerkingsverband Actieve bewoners (LSA) is an association of and for groups of active residents. They are a national network of resident groups, independent community centres, neighbourhood cooperatives and BewonersBedrijven (neighbourhood enterprises). They share their knowledge and expertise, including with others. Together they advocate the position of active residents, including to the (local) government. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| Who is involved in the initiative?<br>LSA (Landelijk Samenwerkingsverband Actieve Bewoners) was founded in 1985 as a bottom-up, local and neighbourhood development and national network foundation for active resident groups.<br>LSA is an intermediary and a network organisation of community groups who are actively involved in their own living environment. LSA is working with different types of groups, from residents' businesses to healthcare initiatives and from energy cooperatives to neighbourhood vegetable gardens and residents fighting loneliness among residents.<br>Who are the partners and what are the sort of partnerships (how decisive for the model)?<br>LSA has multiple partnerships with about 250 different organisations across the Netherlands. Their key partnership is the 'Participation Coalition' including the, 1) Natuur en Milieu Federaties (civil society organisation), 2) Energie Samen (non-gov intermediary), 3) HIER (non-governent intermediary), 4) Buurkracht (non-government intermediary).<br><br>What is the form of the organisation?<br>LSA is an not-for-profit organisation with a strong collaborative structure, through its participation coalition. This coalition enables | Participation<br>LSA's aim is to promote the participation of residents of neighbourhoods in improving the living conditions. Residents' groups/clubs can join as members without any precondition. Members attend meetings and cast their votes.<br>Transparency<br>LSA is fully transparent by publishing annually its financial accounts and annual reporting. In addition, employees – including the director – are remunerated in accordance with the Collective Labour Agreement for Social Work.<br>Affordability<br>LSA's annual membership fee is 50 euros. There is no exception or adjustment to the fee to fit e.g. disadvantaged groups. | Endurance across time<br>LSA has 35 years of history working together with the government and is considered to be a bridge between communities needs and national policies. LSA has a strong lobbying role and the participation coalition has strengthened their policy advocacy over time.<br>Diversity and security/reliability of the sources of incomes<br>LSA combines a long-term funding from the government, and various funds which helps the case to sustain over time and provides more stability. Over time the source of income has become more diverse, from depending solely on government funding to getting more external grants.<br><br>Professionalisation<br>LSA is a professional organisation with 12 paid staff and 7 unpaid board members. |

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| more easily access to resources, funding, sharing knowledge and have a 'bigger voice' in advocacy and lobbying because this coalition represents a larger constituency than LSA alone.<br>Value creation<br>The case focus on what matters at the local/community level and helping residents/citizen's groups and initiatives to achieve their goals. LSA does that by addressing issues that are flagged-up also by the government especially in disadvantaged areas.<br>Economic activity<br>LSA receive its main funding from the Dutch Home Office and other ministries. It is mainly funded by the Dutch government, but it is independent on its actions and activities. In addition, they get contributions, donations, and funds/grants from various organisations from national (equity) funds such as Oranje Fonds, VSBfonds, Stichting DOEN, Nationale Postcode Loterij. LSA also have paid clients including municipalities, knowledge institutes, private organisations and they receive membership contributions. | | There are no volunteers working in the case. |
| **Purpose/intended outcome of BSIM**<br>Joint national voice to politicians and policymakers for better support of active residents' initiatives<br>Strengthening community building, equity, and justice | | |
| **Who is involved in the value creation**<br>Participation Coalition (Natuur en Milieu Federaties, Energie Samen, HIER, Buurkracht)<br>National Government<br>Local neighbourhoods | **Value co-creation activities**<br>Residents the starting point of the neighbourhood approach<br>Sharing knowledge and better inclusive local opportunities and local democracy<br>Strong neighbourhoods and districts and<br>Collective agreement of a partnership coalition for lobbying and policy advocacy | |

## 4.3 Community-based cases

### 4.3.1 Renewable energy

Loenen Energy (NL – Local Level)

| Case summary | | |
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| The story of the Dutch cVPP starts in 2013 in Loenen, a small rural village in the Province of Gelderland. In 2013, the village of Loenen won a sustainability competition organised by the municipality of Appeldoorn calling for solutions to make villages energy neutral. Winning this competition by introducing a revolving fund was the start of the implementation of this solution in their own village. Already more than 300 projects with an investment value of close to two million euros have been installed in Loenen buildings (insulation, PV (166), Heat pumps, etc.) thanks to this fund, and more are to come. The ambition of the village is to use all rooftop capacity in Loenen for PV and become self-supporting. Yet, this strategy requires smart energy management, so the rural cVPP was initiated. Currently, Loenen generates 50% of household demand with local PV. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| Who is involved in the initiative?<br>Loenen Energy started by a group of residents from the village of Loenen who won the competition of the 'Energetic village' in the municipality of Apeldoorn in 2013 (200,000 euros subsidy as part of the Academy of Champions for Energy, EU Interreg Programme). As a condition of implementing EU funds, the group needed an entity to do business with, rather than citizens. Therefore, in 2014 the Loenen Energy cooperative was established as an organisation entity to manage the EU funds. The cooperative is comprised by the board, the members and the cooperative council.<br>Who are the partners and what are the sort of partnerships (how decisive for the model)?<br>The cooperative does not have a structured way or a model for collaborations. It works with partners on an ad-hoc basis. One important partner has been the municipality of Apeldoorn offering | Participation<br>Citizens can join the energy cooperative as members by paying an annual membership). Members vote on all matters of the case and can determine the policies and investments of the cooperative via democratic voting in the general members' meetings. The Loenen Energy Fund and energy advice is available to all residents, not only to the members of the cooperative. In addition, there are regular consultations held with the village council and the whole local population on various issues (e.g. | Endurance of the case across time<br>The organizational form of Loenen Energy with the four different foundations has enabled the case to self-sustain over time since decision making sometimes needs to be fast and that cannot be offered from the 'cooperative form' but the foundations which organize the projects and provide the funds (DPL and LEN). The challenge however is how to ensure that resources, time and capacities of volunteers are balanced across the different entities of the case.<br>Diversity and security/reliability of the sources of incomes<br>The diverse income base makes the |

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| advice for funding/subsidies or advice on policy issues. Another key partner is Qirion (engineering firm) which has more specialised knowledge on the ICT and technical field and helped the case to submit the EU tender for the cVPP project.<br>What is the form of the organisation?<br>Loenen Energy is an energy cooperative and is divided into four independent foundations, with different tasks, responsibilities and organisational forms. These include the 1) Loenen cooperative organisational form; 2) De-Dentrale (Foundation for facilitating projects); 3) Loenen Energie Neutraal (Local Energy fund Foundation); 4) Foundation of Sustainable projects Loenen (Dormant foundation for organising funded projects).<br>What value(s) is/are created (incl. social and environmental values)?<br>The cooperative with its activities, projects, funding, and energy advice have created a feeling of 'social cohesion' and togetherness in the village. The village is also known as the 'solar village' and many universities, organisations, institutions ask for their collaboration. Which in turn can act as a motivator for the cooperative to continue achieving its goals.<br>What sort of economic activity is involved and what are the sources of funding?<br>The cooperative has a diverse public and private income base depending on its running projects including the municipality of Apeldoorn, Province of Gelderland, European Commission, memberships, and customers/clients buying electricity from the cooperative. | nature, education) via resident surveys where the cooperative can better account for residents' opinions in their internal decision-making.<br>Transparency<br>Loenen Energy is open and transparent to its decision-making mechanisms. Discussions and debates are held with the local residents when there are new project ideas (such as the cVPP) on what it means for the village and the local citizens. No evidence found on transparency on distribution of benefits or income sources.<br>Affordability<br>Annual membership fee is 10 euros for all members. The only precondition is to live in the village of Loenen as the cooperative aim for the energy to be produced and consumed locally. | cooperative financially secure in the long run. However, Loenen Energy does not have a structural financing model. This part of the business model does not contribute to self-sustain the case as it is based on a 'project financing only structure'.<br>Professionalisation<br>Although Loenen Energy is a cooperative with paid staff, much of its work relies on the work of volunteers. |
| **Purpose/intended outcome of BSIM**<br>Local community centred cooperative, with a pragmatic approach based on efficiency of action (as highlighted by its plural organisational form) | | |
| **Who is involved in the value creation**<br>Qirion (technical ICT company)<br>Municipality of Appeldoorn<br>European Commission | **Value co-creation activities**<br>Social cohesion and role model<br>Renewable energy locally generated and consumed | |

Aran Islands Energy Cooperative - Comharchumann Fuinnimh Oileáin Árainn Teoranta (CFOAT) (IRL – Local, Regional Level)

| Case summary |
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| The Aran Islands Energy Co-operative is a community-owned energy cooperative on the Aran Islands at the mouth of Galway Bay. Through the cooperative, the residents of the three islands aim to become self-sufficient in clean, locally owned energy and to build the local economy of the islands using the benefits that accrue from this. The main activities are related to energy efficiency and retrofitting of houses, renewable energy generation, electrification of mobility, and participation in research projects. |

| Business Model | ENCI principles | Viability components |
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| *Who* is involved in the initiative?<br>CFOAT was constituted in 2012, emerging out of the Comharchumann Forbartha Árann (Aran Development Co-Operative) in which the issue of energy was addressed on a project basis first (1990-2003) and then in a sub-committee (2003-2012).<br>*Who* are the partners and *what* are the sort of partnerships (how decisive for the model)?<br>CFOAT has established over time multiple partnerships including: 1) Organisations on the Aran islands, especially the three development cooperatives as they provide a link between the cooperative and the local communities. The Aran Islands Business Network and the ferry companies that CFOAT works with to reduce fossil fuel emissions on ferries; 2) Academic partners and MaREI with which CFOAT collaborates in EU funded projects; 3) Commercial and social enterprises in Ireland, including EnergyWise Consultants, Energy Co-operatives Ireland, Renergia Ltd; 4) Other groups and communities similar to CFOAT. including Tipperary Energy Agency; 5) Two local authorities both responsible for the area of the Aran Islands, which are Galway County Council and Údarás na Gaeltachta; 5) Sustainable Energy Authority of Ireland SEAI.<br>*What* is the form of the organisation?<br>CFOAT is a cooperative with the Register of Friendly Societies. 12 elected directors constitute the Board, which works on a volunteer | Participation<br>The cooperative structure facilitates the inclusion of representatives of all the three islands under a governance structure that is consent oriented. Membership with voting rights is restricted to residents and businesses located on the Aran Islands. As of 2019, the cooperative had around 100 members, which represents a considerable share of the total of 1300 residents of the three islands (Local Energy Communities, 2019).<br>Transparency<br>The annual meetings are open to the public and not just to cooperative members.<br>Affordability<br>Every resident of the Aran Islands has the opportunity of becoming involved and belonging as a shareholder. Membership is for life with the | Endurance across time<br>A key factor from the beginning was the continuous leadership by a dedicated champion, a person who has guided and shaped the cooperative since its inception. In a second phase, after 2017, collaboration with academic partners in EU-funded projects became a key factor of the case, as this enabled the creation of paid positions. These positions not only enabled capacity building, but also a continued commitment to the further development of the case. However, the dependence on project funding affected to some extent the focus and prioritisation of the case's own goals rather than the ambitions set by these projects.<br>Diversity and security/reliability of the sources of incomes: secure public fundings, economic activity, etc.<br>The current funding model through EU-funded projects poses a significant challenge to the cooperative. Funding for the paid positions is usually tied to the duration of the |

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| basis and meets monthly. Each of the three islands is represented in the cooperative, at least through participation in board meetings. The cooperative aspires to be representative of the communities on the three islands. Decision-making is made consensual.<br>*What* value(s) is/are created (including social and environmental values)<br>Since its founding, CFOAT has facilitated for a high share of all households on the island to get their homes retrofitted and heat pumps and solar panels installed. It acquired funding for setting up an energy agency that will work as a one-stop shop for households and enabled the cooperative in creating two more jobs on the islands outside of tourism. And CFOAT has created societal value by acting as a beacon for other energy communities and by being a voice in energy policy discourse that has put energy communities on the political agenda.<br>*What* sort of economic activity is involved and what are the sources of funding?<br>Main source of income has come from participation in several EU funded projects. This allowed the cooperative to create paid positions. CFOAT is attempting to diversify the income streams. There has also been a small income stream through grants to support job creation and local development by the Údarás na Gaeltachta. Funding from SEAI under the Better Energy Communities program is also of key financial relevance to the case. However, these funds are designated for financing the retrofitting of households and not for the cooperative itself. | purchase of €100 shares.<br>The benefits will be for the whole community and there is no opportunity for private gain. | projects and is thus not long-term secure. Furthermore, dependence on these projects means that the direction of the cooperative's work ultimately follows the projects and not necessarily the direction that the cooperative primarily wants to achieve. An important step on the way to a self-sufficient energy supply for the islands would be to build community-owned renewable generation capacity, e.g. in the form of a wind turbine. This could also create a steady stream of income from the cooperative's own energy production, which CFOAT would like to sell to households on the islands. This would give CFOAT much more financial security - in addition to the gain in self-sufficiency. Despite significant efforts, there are significant obstacles in this area, primarily due to construction permitting procedures. These include the risk of having to finance an environmental impact study to appeal negative approval decisions.<br>Professionalisation<br>Participation in various EU-funded projects has enabled the cooperative to create a handful of paid positions. This critical step began in 2017, when a project gave the cooperative the funding to hire its first employee, which significantly increased the capacity of the CFOAT and strengthened its commitment to its goals. However, the increasing number of paid positions is also seen as a future challenge, namely when the |

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| | | paid staff will have more and more influence on the management of the cooperative due to their large time commitment and knowledge advantage. |
| **Purpose/intended outcome of BSIM**<br>CFOAT pursues to "make the Aran Islands self-sufficient in clean locally owned energy and build its economy on the related benefits that accrue from this" (Energy for EU Islands, 2019). This aspiration is ultimately supposed to serve the well-being of the island communities, to preserve population, language, culture and landscape while being a beacon to others. The energy transition is a means for community empowerment as well as a means to address climate change and the biodiversity losses. | | |
| **Who is involved in the value creation**<br>CFOAT in collaboration with other organisations and residents of the Aran Islands | **Value co-creation activities**<br>Participation in EU-funded projects, leveraging grants for home retrofits from SEAI, support for other energy communities, development of Energy Master Plan | |

GoiEner Taldea (SP – Local Level)

| **Case summary** | | |
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| GoiEner believes that electricity is now a need that is as basic as that for food, and wants consumers to reclaim their energy sovereignty and make them aware of its importance. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| Who is involved in the initiative?<br>GoiEner has more than 17,000 members and about 70 municipalities have signed up to the cooperative – mainly those that share the values of local, respectful and long-term development. The case has also set up NAFARKOOP, a cooperative whose purpose is to pass on donated funds for the development, promotion and acquisition of further renewable energy generation projects. These funds are being used to buy a hydroelectric plant, and in the spirit of international cooperation, are also providing financial support for photovoltaic projects in France through I-Ener cooperative. | Participation<br>In the governance model of the cooperative, volunteers make up half of those in the decision-making. The geographical proximity of the members and participants in the organisation to become actively involved in the cooperative is officially required. | Endurance across time<br>GoiEner was established in 2012. Some of its goals have not been realised due to a failure to channel demands for internal participation (e.g. volunteers), to reach financial stability towards self-financed and democratic energy generation, as well as a greater emphasis on the technological aspect as opposed to energy savings. |

### Who are the partners and what are the sort of partnerships (how decisive for the model)?

Key partners of GoiEner are the market agent, banks (offering loans), non-governmental cooperation networks, Basque Government and local councils.

### What is the form of the organisation?

GoiEner is an integral cooperative with legal personality, structured into four companies that are organised around the Goiener Taldea group (cooperative group). Goiener Taldea represents the co-operative group that includes the Ordizia headquarters and another three distributed throughout the Basque Country and Navarre.

### What value(s) is/are created (including social and environmental values)

A responsible, rational, efficient, and sustainable consumption model. GoiEner understands energy as a basic good of society, and it is the citizens who must take control over this good and become aware of its importance, making a responsible and sustainable consumption.

### What sort of economic activity is involved and what are the sources of funding?

Non-profit (benefit for the members). All profits from the sale of (green) electricity among members revert back to the cooperative, and the Assembly decides how the profits are to be used. The members can invest in renewable generation projects, the production of which is consumed by the cooperative itself. The aim is for the amount of energy generated to be equivalent to that consumed by the members.

### Transparency

For GoiEner all profits from the sale of (green) electricity among members revert back to the cooperative, and the Assembly decides how the profits are to be used. The members can invest in renewable generation projects, the production of which is consumed by the cooperative itself. The aim is for the amount of energy generated to be equivalent to that consumed by the members.

### Affordability

Externaly, by its ability to adapt to the requirements of the Spanish regulatory system. In recent years, the company has evolved from providing service only for domestic tariffs to covering the full range of services in the electricity market. Its activity is focused on the Basque Country and Navarre due to its philosophy of proximity, participation, and local development, a key factor in its success. Internally, the ability to combine different profiles of people and to adapt to changes have been important.

### Diversity and security/reliability of the sources of incomes: secure public fundings, economic activity, etc.

Financial stability has not been reached yet, so the security of incomes has not been achieved.

### Professionalisation

Professionalisation is relevant and necessary from the moment “the organisation acquires a volume, so it needs professionalisation and people who are dedicated to it full time” (GoiEner interview quote).

**Purpose/intended outcome of BSIM**

Enable citizens to regain control on the energy system and become aware of its importance
Collective empowerment, the achievement of energy sovereignty in the Basque country

| Who is involved in the value creation | Value co-creation activities |
|---|---|
| Goiener Taldea group (cooperative group)<br>Municipalities | Providing services and distribute products related to the RES commercialisation.<br>Defending, informing, and promoting the rights of consumers and users through actions that aim to boost the visibility of the co-operative model of consumption.<br>Promoting energy sovereignty for citizens by entering the currently liberalised parts of the electricity sector, commercialisation (purchasing) and generation. |

## Berlin citizen energy (BEB) (DE – Local Level and beyond)

| Case summary | | |
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| BEB - BürgerEnergie Berlin eG - is a cooperative that brings together citizens to work together for a sustainable, climate-friendly and citizen-owned energy system in Berlin. It is a free cross-party association of citizens. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| Who is involved in the initiative?<br>Berlin citizen energy (BEB) was founded in 2011 as a cooperative with the aim to enable citizens to take part in the decision-making processes regarding the energy supply in Berlin and transform it into a decentralised, sustainable and socially oriented industry. It is a free, cross-party association of citizens. In 2021, the co-founder Arwen Colell became part of the supervisory board of the re-municipalised Berlin energy grid. BEB aims to be a platform where citizens can gain information about the energy infrastructure, the energy transition and citizen participation.<br>Who are the partners and what are the sort of partnerships (how decisive for the model)?<br>The main partners of BEB are the, EWS schönau for green electricity supply, the Laudeley Betriebstechnik helps BEB by providing PV technology. BEB provides also WG Neukölln with solar panels for the tenant electricity project called Mieterstrom.<br>What is the form of the organisation? | Participation<br>The cooperative membership is not limited to the citizens of Berlin. People from other parts of Germany or other countries can also become members of BEB. Minors and young adults can also become members of the cooperative. However, this requires the consent of the legal guardian.<br>Transparency<br>All members of BEB have the right to vote in the General Assembly. The members can decide on the use of profits, how to deal with losses and they are also involved in all trend-setting decisions about the BEB. | Endurance across time<br>Though focused on the public ownership of the Berlin energy grid since 2011, BEB progressively enlarged its scope by developing partnerships with EWS Schönau for the electricity supply, citizen-owned renewable energy projects as well as tenant electricity projects.<br>Diversity and security/reliability of the sources of incomes: secure public fundings, economic activity, etc.<br>Although BEB is facing financial difficulties, it does not threaten its existence in the short and medium term.<br>Professionalisation<br>BEB's board is composed of highly skilled members, yet they are all operating on a |

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| BEB is an energy cooperative. The legal form of the cooperative was chosen because the case actors want to make it easier for citizens to be part of the decision-making process concerning the energy grid of the city of Berlin and the energy system in general.<br><br>What value(s) is/are created (including social and environmental values)<br>BEB's principle is that at least 10 percent of the annual surplus is used in projects for the development of a socially and ecologically compatible and sustainable energy system geared towards renewable energy sources, provided that the economic situation of the cooperative allows this.<br>What sort of economic activity is involved and what are the sources of funding?<br>Financial inputs come mainly from the cooperative members and other interested citizens. BEB would not be able to operate without the help of the shareholders in the form of financial support or "time, energy and experience". The cooperative shares and the trust funds are not used for running costs. Only a small part is invested in climate protection projects. BEB cannot finance their campaigns to participate in the electricity grid entirely from its current income (own energy systems). BEB is also supported by individual donations. | The obligations of the cooperative members include also financial liability with their shares. There is however no obligation for the members to make additional payments, so they are not liable with their private assets. BEB also publishes online its annual reports with all the financial aspects reassuring openness and transparency.<br>Affordability<br>Each member subscribes at least 5 shares of 100 euros each. However, BEB can also accept members to join with just one share. | voluntary basis. The cooperative only has a part-time paid position. |
| **Purpose/intended outcome of BSIM**<br>Contribution to the achievement of the climate goals for 2050<br>Public ownership of the Berlin power grid (re-municipalisation) / Put the Berlin energy system in citizens' hands | | |
| **Who is involved in the value creation**<br>BEB cooperative (community) and its members<br>EWS Schönau<br>Laudeley Betriebstechnik<br>WG Neukölln | **Value co-creation activities**<br>Citizens RES projects<br>Tenant electricity (Mieterstrom)<br>Citizen energy lobbying (power grid ownership)<br>Supporting projects for the development of a socially and ecologically energy system | |

### 4.3.2 Housing

Energy Communities Tipperary Cooperative (IRL – Local Level)

| Case summary | | |
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| Energy Community Tipperary Cooperative ECTC is an organisation bringing together 14 communities in the Tipperary region to reduce the amount of money leaving the local economies in the form of energy and fuel bills every year. ECTC facilitates energy efficiency work on older houses and community buildings by leveraging grants from the SEAI under the Better Energy Communities scheme. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| Who is involved in the initiative?<br>ECTC is made up of 15 local communities in County Tipperary (and beyond), which themselves are represented by local community councils and development association.<br>Who are partners and what are the sort of partnerships (how decisive for the model)?<br>Tipperary Energy Agency and North Tipperary Development Company provided essential start-up support for the case in the early phase. They remain important stakeholders, not least through their representation in the board of the cooperative. The Sustainable Energy Authority of Ireland (SEAI) and Just Transition Fund are key stakeholders as they provide the financial support schemes around which the main work of the case is designed.<br>What is form of the organisation?<br>ECTC is a co-operative. Unlike other cooperatives, the members of ECTC are not individuals but community groups, representing a certain community/area in the wider Tipperary region. Member communities need to set up a 'Sustainable Energy Community' (SEC) through the SEAI to get funding under the Sustainable Community grants scheme.<br>What value(s) is/are created (including social and environmental values)<br>ECTC helps homeowners in member communities to leverage grants | Participation<br>The cooperative consists of local communities, which themselves are represented by local community councils or development associations, which are perceived as being democratic institutions. A board of directors, comprising representatives from all member communities, exercises oversight over the cooperative. Decisions are made on a consensual basis and not on a majority vote principle. Every member community is represented in the cooperative board with two volunteer directors. Furthermore, the North Tipperary LEADER Partnership and the Tipperary Energy Agency are represented with a director at the board.<br>Participation in energy governance:<br>ECTC makes submission in public | Endurance across time<br>ECTC was founded in 2014 after running as a pilot scheme since 2012/2013. ECTC has grown substantially in the number of member communities, from 4 in 2015 to 15 in 2022, which required developing the current management model ensuring two representatives of each community in the cooperative board. This growth is not least due to the paid work of a community coordinator. This required further administrative capacities, which were provided by a contracted project coordinator, thus further fostered a (partial) professionalisation of the case.<br>Diversity and security/reliability of the sources of incomes: secure public fundings, economic activity, etc.<br>The support scheme from Sustainable Energy Authority of Ireland (SEAI) has been essential for financial viability of the model. However, this also created considerable |

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| under government schemes to retrofit their houses and improve energy efficiency which aims to develop and strengthen the resilience of local communities in County Tipperary by creating jobs and keeping money in the local economies instead of spending it for expensive energy imports.<br>What sort of economic activity is involved and what are the sources of funding?<br>The main focus has been to use economies of scale when leverage funding under different governmental retrofit programs (e.g. Better Energy Communities scheme, Just Transition fund) to support households in member communities. This concerns finding contractors and organising financing for several houses together instead of doing this for each house individually. | consultations related to energy governance, for example to the County Tipperary Development Plan 2022 – 2028. Furthermore, ECTC It has gained legitimacy through its expertise and working "on the ground" and has thus become a trusted point of contact for the Sustainable Energy Authority of Ireland (SEAI) for questions of community engagement in energy related governance.<br><br>Transparency<br>Monthly board meetings are open to all members.<br><br>Affordability<br>N/A | dependency on the grant scheme. With the successful application to funding through the Just Transition Fund, the case secured another funding. Furthermore, the presence of Clan Credo as financial institution was important as it provides credits and bridge finance in situations where grants were only used to reimburse completed work.<br>Professionalisation<br>The majority of the work, including the board, is carried out exclusively by unpaid volunteers. Since 2019, ECTC has had one paid staff member, a development coordinator. Recently, ECTC has been able to hire two more part-time staff for the Just transition project and two part-time staff under the Community Climate Action Programme. |
| **Purpose/intended outcome of BSIM**<br>Enabling communities in Tipperary and surrounding areas to create local employment and community benefit through reducing their carbon footprint and generating community-owned energy, thus approaching a vision of a community-led energy transition, which benefits communities, creates warmer, healthier homes while saving homeowners money, helps tackle climate change, and helps create new employment in a post-Covid world. | | |
| **Who is involved in the value creation**<br>ECTC, member communities, participating households | **Value co-creation activities**<br>Leverage funding under different governmental retrofit programs | |

LaVidaVerde (DE – Local Level)

| Case summary |
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| With the LaVidaVerde project, a diverse assembly group is realising a jointly developed idea of future-oriented living in Berlin's Weitlingkiez, thought to be an answer to current ecological and social challenges in the form of a residential project. LaVidaVerde is an energy-plus house for a colourful group of committed young and older people who have consciously decided to engage in a project that enables communal living as well as resource-saving life and political work in and for the neighbourhood. The community is not limited to living together in the house but is also visible in the realisation of common goals. |

| Business Model | ENCI principles | Viability components |
|---|---|---|
| *Who* is involved in the initiative?<br>LaVidaVerde is the first German multi-generation and energy-plus house in an inner-city location in Berlin. The project started in 2008 and became inhabited in 2014. The case founders aimed for LaVidaVerde to have a high degree of community with self-determined and resource-saving living.<br>*Who* are the partners and *what* are the sort of partnerships (how decisive for the model)?<br>LaVidaVerde's key partner is *Mietshäuser Syndikat*, which networks and supports more than 100 houses with a similar organisational structure in Germany.[14] The case has also benefited from the KfW Program which is a Governmental Bank that provided low-rate credit. Future Construction Research Initiative (*Zukunftbau)* also helped the financing of LaVidaVerde, notably through the KfW program. Finally, North-South Bridges Foundation (Stiftung Nord-Süd Brücken) provided low-rate credit from the project. | Participation<br>The participation is limited to LaVidaVerde's residents, and those who are active in the working-group for the maintenance of the building. All decisions about the project are made on a consensual basis. The voting rights are defined in LaVida-Verde's contract and are not linked to the number of shares, as is usually the case. The house association and the Syndikat have also voting parity in the case on issues concerning the sale of the property, so that sale or conversion to ownership is only possible by mutual agreement and can thus be prevented. In decisions | Endurance across time<br>Although the project started in 2008, in recent years, due to the departure of several residents, LaVidaVerde found it challenging to bring new tenants which can impact its endurance and long-term survival.<br>Diversity and security/reliability of the sources of incomes<br>With the production of solar electricity and the reduced operation costs, the project is considered financially robust. The house generates annual rental income of approximately 120,000 euros.<br>Professionalisation<br>The case is operating based on the resident's volunteering participation. There are no professional paid staff involved. |

[14] This form of organisation legally excludes the possibility that the housing association could decide to sell and thus privatise the building in the future. This is the only way to guarantee that the house is removed from the real estate market in the long term and is thus always owned by those who live in it.

*What* is the form of the organisation?
LaVidaVerde is a member of the *Mietshaüser Syndikat.* As part of this organisation form, the house is not owned by a cooperative, individual residents or a residents' association, but by a separate limited liability company, LaVidaVerde GmbH. The company has two shareholders: the house association in which the residents are organised (MustAhaus e.V.) and the *Mietshäuser Syndikat*.

*What* value(s) is/are created (including social and environmental values)
Social values are deeply part of the business model, since it has been organised to avoid any ownership of the building. The environmental values that have shaped the building project (Plus-Energy housing), are also impacting the tenament and operating costs, which makes the renting of a flat more affordable compared to the private market. Social and environmental values are at the core of LaVidaVerde's concept because the environmental performances of the building are directly impacting the costs paid by the tenants.

*What* sort of economic activity is involved and what are the sources of funding?
LaVidaVerde collects rents and manages its own finances. There are no other financial benefits within the case than the equal distribution of the costs and paying off the mortgages.

on the design and management of the house, such as the tenants' association generally has sole voting rights on decisions concerning the design and management of the building, such as the allocation of flats, financing, rent levels and the design of the building.

Transparency
LaVidaVerde is financially transparent to all the members and those who are supporting the project through direct credits. Further information could not be accessed.

Affordability
Affordability and efficiency are key principles of the case. If the "cold rent" per m2 is a bit above the average in Berlin in 2016, it is below that of new buildings. Furthermore, the efficiency measures enable to lower the ancillary charges. The limited number of the available flats is a limiting factor to have access to the community.

**Purpose/intended outcome of BSIM**
Creating a sustainable housing community within a Plus building, organising themselves and managing an energy efficient building out of the property market.

**Who is involved in the value creation**
Residents of the project – House association, (MustAhaus e.V.)
*Mietshäuser syndikat*
Direct credit providers

**Value co-creation activities**
Planning, construction and management of a Plus-Energy building
Sustainable lifestyle
Neighbourhood activities, community building

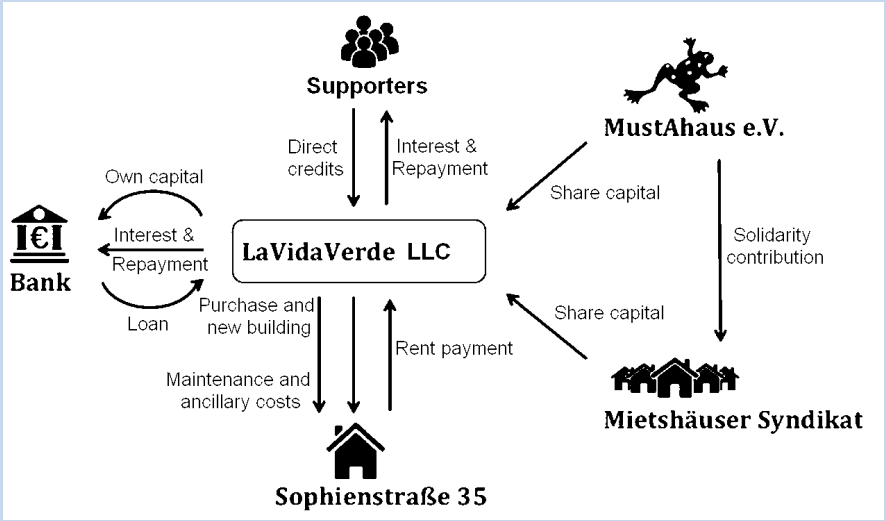


Figure 6: The Business model of LaVidaVerde's ENCI case[15]

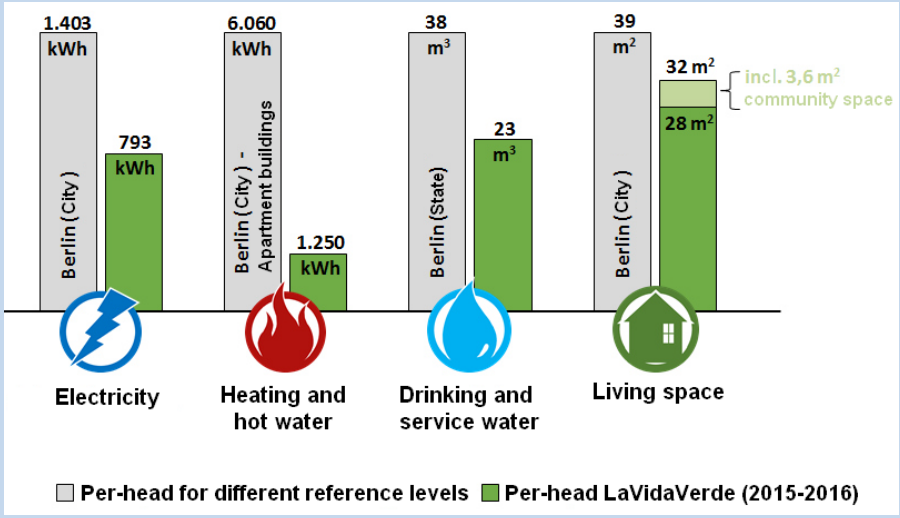


Figure 7: Comparison of energy and water consumption as well as residential space use per capita of LaVidaVerde and different reference levels for one year (2015-2016)

[15] Source: https://lavidaver.de/wordpress/

La Borda (SP – Local Level)

| Case summary | | |
|---|---|---|
| A housing cooperative that follows a model of cooperative housing ruled by grant of use, were the property will always be collective, while use is personal. The model eliminates property speculation and profiteering. Members belonging to the cooperative have the ability to decide on juridical, legal and economic aspects and on the housing infrastructure itself. One of its main objectives is to give priority to environmental aspects, which is economically achievable through creating homes with a passive design or low energy consumption, with the local, decentralised and self-managed generation of renewable energy. Less total energy and materials are consumed by sharing major appliances and amenities. | | |
| **Business Model** | **ENCI principles** | **Viability components** |
| *Who* is involved in the initiative?<br>La Borda is a housing cooperative defined as: "a co-housing complex initiated by a new residents' cooperative, which was collectively designed and self-organised by the members of the cooperative" (Brysch, 2018, p. 2) that was established in Sants, a neighbourhood with a long tradition and presence of cooperatives. It is the result of a cooperation between many different actors (i.e. citizens, professionals, and the municipality).<br>*Who* are partners and *what* are the sort of partnerships (how decisive for the model)?<br>Various actors have been involved in La Borda's design and development, with the challenge of establishing a cooperative for the transfer of use. This project has been possible thanks to the support of various management intermediaries (legal support), financing (from interested citizens, to social and ethical institutions), also including the land use assignment agreement with the Barcelona City Council. The technical support of social (Lacol) and educational (university) institutions for the design of the house has also been fundamental in its creation. Even more relevant was the initial intermediation by the neighborhood as a pressure group to help the city council give up the land to the residents. For its maintenance, it has also relied on intermediaries from direct (La Dinamo) and indirect (*Fundación Punto* | Participation<br>All those involved in the project are active participants, which generates a constant feeling of belonging to the institution, of achievement and self-efficacy within the initiative and the system in general, as well as commitment due to the adoption of dialogic leadership. La Borda's residents are obliged to attend the assemblies and participate in at least one committee. Several of its members point out that such participation "through a horizontal and democratic organisation has been crucial to launch and consolidate the initiative (...) (and) has been promoted and channelled through dialogic and participatory spaces, among which the general assembly and the working commissions stand out" (Girbés-Peco et al., 2020:5). | Endurance across time<br>The creation and initiation of the La Borda project began in 2015 with a neighbourhood protest to demand the need to make use of an uninhabited space, at a time of housing crisis. It continued with a process of negotiation with the Barcelona City Council, which culminated in the transfer of the use of a plot of land by this body in 2018. From there, a participatory process of design and construction of a sustainable and efficient building began, in which families and individuals have been living together since 2019.<br>Diversity and security/reliability of the sources of incomes: secure public fundings, economic activity, etc.<br>It is a non-profit and non-speculative model. After a negotiation process with Barcelona City Council, La Borda was able to lease the public land for subsidised housing (Girbés-Peco et al., 2020). This was decisive for the |

| | | |
|---|---|---|
| *de Referencia)* mediation networks, as well as dissemination (press, social networks, scientific and informative fields).<br>*What* is form of the organisation?<br>La Borda is a non-profit, non-speculative and innovative cooperative that arises as a part of "the wider urban project Can Batlló" (Brysch, 2018, p. 4). It is a model between renting and buying where the cooperative is created for an indefinite duration. The right of use is acquired based on an initial returnable deposit and is maintained with the payment of a soft monthly rent. It eliminates property speculation and profiteering on a fundamental right like housing. Members cannot sell or rent the flat. Ownership of the housing always remains with the cooperative.<br>*What* value(s) is/are created (including social and environmental values)<br>La Borda is based on the SostreCivic model where the ownership of the housing is in the hands of the cooperative and its members participate and have the right of indefinite and inheritable use of the housing on the basis of a soft rent, representing an "alternative model of housing access to the traditional ownership and rent, with a strong commitment with the use value above exchange value"[16]. La Borda's democratic organisation can be considered as a driver of achieving the main goal of their members – access to affordable housing – while at the same time, it has brought them benefits in terms of capacity building, leadership, and a sense of belonging (Girbés-Peco et al., 2020).<br>*What* sort of economic activity is involved and what are the sources of funding?<br>La Borda has a wide economic base comprising of, members and inhabitants' contributions, participatory titles, housing loan and grants. It is a model between renting and buying where the cooperative is | Transparency<br>Participation has been organised through working groups (commissions) that meet monthly in the General Assembly (Brysch, 2018), which is the central decision-making body and the Assembly is the people of La Borda. The need to reach a consensus for which there has not always been sufficient time for, as well as the need for time and learning to achieve adequate self-organisation of the cooperative and the collective decision-making process. Even so, the aim is to achieve maximum consensus among its members, leaving open the possibility of achieving at least relative consensus.<br>Affordability<br>La Borda gives provides affordable and decent housing, avoiding speculative uses, and that is accessible to all. La Borda has adopted a bottom-up approach that prioritises sustainability and affordability over profitability. This project arises in a context of financial crisis in Spain, added to numerous cases of real estate speculation that | emergence of the initiative, aimed at replicating the Model grant of use (GOU model), the social and solidarity economy, and the construction of a sustainable and affordable building.<br>Professionalisation<br>Knowledge is considered a key tool for participation. All the people who live in La Borda are volunteers, have the obligation to attend the Assemblies and participate in, at least, one commission, accompanied by professionals who compensate for the limitations that cooperative members have in terms of knowledge and availability. So, even though they have one person hired as a coordinator to address bureaucratic and administrative issues, "the hiring ratio is very low, that is, it is very self-managed" (interview quote, La Borda member). |

[16]Source: http://masqueunacasa.org/es/

| | | |
|---|---|---|
| created for an indefinite duration. Ownership of the land is not necessary for the development of the model. The right of use is acquired based on an initial returnable deposit and is maintained with the payment of a soft monthly rent. Members cannot sell or rent the flat. Ownership of the housing always remains with the cooperative. The funding, which has amounted to around EUR 3 million, comes mainly from the financial support of social and ethical funding institutions (40%); inhabitants' financial contributions (19%); state aid and grants (18%); participatory loans (15%), and voluntary contributions made by collaborating members (8%) (see, Figure 6). | has sometimes privileged private interests over the general interest. (Cabré and Andrés, 2018). | |
| **Purpose/intended outcome of BSIM**<br>SostreCivic Model (Democratic and self-managed organisation) is an alternative societal model, which gives rise to new forms of coexistence, social relations, and community self-organisation<br>Development of a new model of production, management and ownership of housing<br>Access to affordable and decent housing, avoiding speculative uses | | |
| **Who is involved in the value creation**<br>It is the result of a cooperation between many different actors (i.e. citizens, professionals, and the municipality):<br>La Borda's residents, citizens<br>Barcelona City Council<br>Lacol<br>La Dinamo<br>Fundación Punto de Referencia | **Value co-creation activities**<br>Participation of members in the design and management of the cooperative Reducing costs and facilitate social interactions (social and governance/power resources)<br>Affordable housing model (75-year lease of use)<br>Communal living spaces, facilitating a sustainable use of space and resources | |

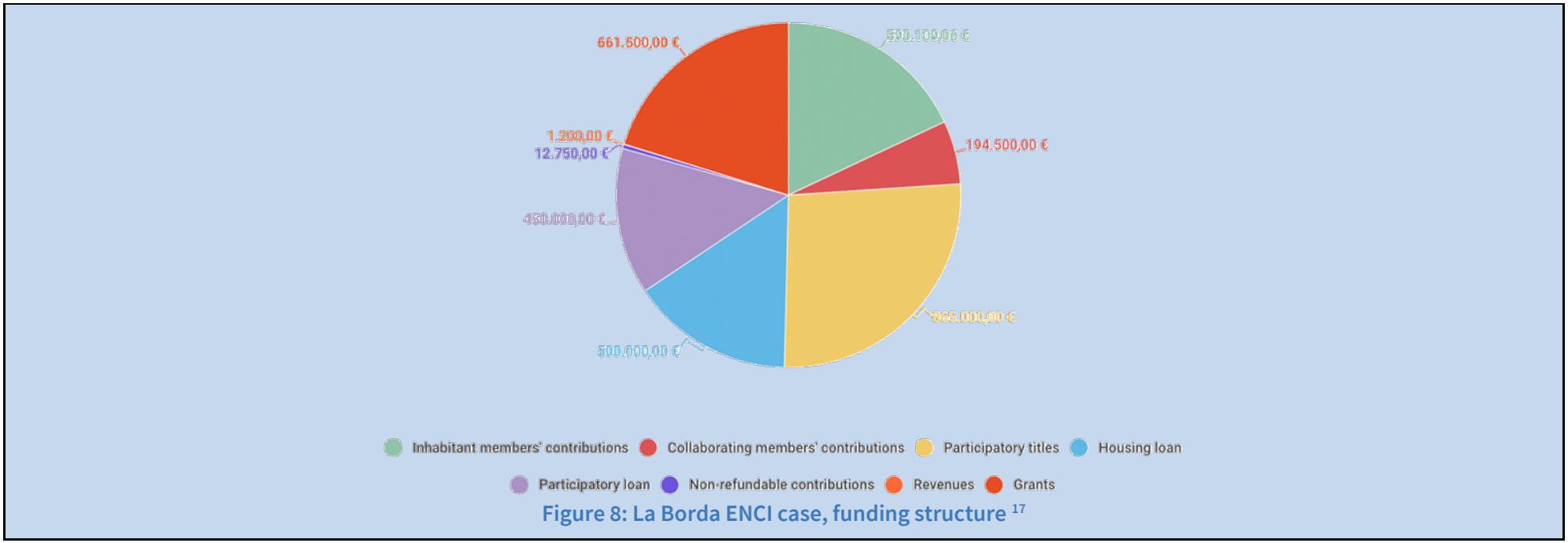


Figure 8: La Borda ENCI case, funding structure [17]

[17] Source: http://www.laborda.coop/en/project/funding-structure/

# 5. Clustering analysis

## 5.1 Characteristics of the cases

In D3.3 (Pel et al., 2022), we have conceptualised ENCI as a normatively rich concept, situated at the crossroads of political ideals commitments. The selected cases can further substantiate this by relating to notions of 'effective citizen control', 'sustainability' and 'justice'. Within this section we analyse the 20 good practice cases based on key characteristics of the cases: equity and justice, environmental sustainability, and effective citizen control. The classification scale that we used to measure these three characteristics stretch from 1 (the lowest score, no relevant to the case) to 4 (the highest, being core to the initiative), (see Appendix 2 for their definitions, detailed classification scales and how the characteristics were displayed/asked in the research template).

The following conclusions can be drawn from the cluster analysis:

- Publicly-run cases score higher in terms of the importance of equity and justice with 3,8 and the lowest in terms of the importance of environmental sustainability (3,4) and citizen control (2,8) in comparison with the other clusters. This can be explained by the fact that cases funded by governments (top-down), often are linking with national climate and renewable energy targets. In addition, the analysis shows that this cluster scores the lowest in terms of effective citizen control which is often the case for top-down initiatives. Within the studied public-run cases, the Drechtsteden Energy case appears as exemplary by the fact that Drechtsteden Energy is the only studied case which is solely funded by the national government with the main purpose to stimulate energy transition in accordance with the 2019 Dutch Climate Agreement such as the 50% local ownership in renewable energy projects. The case focus on issues of environmental sustainability and equity and justice as defined in the Drechtsteden Regional Energy Strategy 1.0 (RES).



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Table IV: Clustering analysis of the good practice ENCI cases

| Cluster | Subcluster | ENCI Case | Level of recognition on equity/ justice | Average | Level of recognition on environmental sustainability | Average | Level of effective citizen control | Average |
|---|---|---|---|---|---|---|---|---|
| Publicly-run cases | (Supra)-National | Citizens' Assembly on 'How the State can make Ireland a Leader in tackling Climate Change' | 4 | 3,8 | 3 | 3,4 | 3 | 2,8 |
| | Infra-national | Drechtsteden Energy | 4 | | 4 | | 3 | |
| | | Energy Transition of City of Burgas: Going Smart and Sustainable | 4 | | 3 | | 3 | |
| | | Hauts-de-France Pass Renovation | 4 | | 3 | | 2 | |
| | | Nagypáli: the renewable energy village | 3 | | 4 | | 3 | |
| Organisation-based cases | Incl. economic activity | Shared Energy | 3 | 3,1 | 4 | 3,6 | 4 | 3,5 |
| | | Bike Evolution | 0 | | 2 | | 3 | |
| | | SoLocal Energy | 4 | | 4 | | 4 | |
| | | Hydro Electricity Ourthe and Sambre | 3 | | 4 | | 3 | |
| | | Cargonomia | 4 | | 4 | | 4 | |
| | | TreeDependent | 4 | | 4 | | 3 | |
| | | Naturstrom AG | 3 | | 4 | | 3 | |
| | No economic activity | National Association of Active Residents | 4 | | 3 | | 4 | |
| Community-based cases | Renewable energy | Loenen Energy | 3 | 3,2 | 2 | 3,2 | 4 | 3,9 |
| | | Aran Islands Energy Cooperative | 3 | | 3 | | 4 | |
| | | GoiEner Taldea | 4 | | 4 | | 3 | |
| | | Berlin citizen energy | 4 | | 4 | | 4 | |
| | | Energy Communities Tipperary Cooperative | 3 | | 2 | | 4 | |
| | Housing | LaVidaVerde | 3 | | 4 | | 4 | |
| | | La Borda | 3 | | 4 | | 4 | |

- **Organisation-based cases** have the highest score regarding environmental sustainability (3,6), followed by the effective citizen control (3,5) and lastly on their contribution to equity and justice of the energy system (3,1). This cluster scores the highest of all studied clusters in their environmental and sustainability goals. Based on our analysis and the overview of BSIMs and their viability characteristics (Chapter 4), this can be due to their specific focus on the value creation which is linked to social, environmental and sustainability values. For example, SoLocal Energy focus on addressing global climate change from the bottom-up and empowering the local community, Bike Evolution's activities for more sustainable mobility are carried out for public benefit, whereas, TreeDependent has developed a socially aware and ecological carbon compensation tool. In this organisation-based cluster, two cases appear as particularly meaningful, namely Cargonomia and SoLocal. Both cases have business models that fulfil the ENCI principles (i.e. citizen's participation, transparency, affordability) and with a key focus social and environmental values. For example, Cargonomia's key concepts focus on degrowth, sustainability, and fair-trade values.
- **Community-based cases** have the highest score in the effective citizen control (3,9) across all clusters. That is not surprising considering that this cluster of cases are community based, initiated by community, citizens or local residents/inhabitant groups and most of them have developed over time to established energy cooperatives. Among those cases, the Berlin citizen energy (BEB) stands out as a unique energy cooperative (Europe wide) aiming to engage citizens in taking part in the decision-making processes regarding the energy supply in Berlin and help to transform the energy industry into a decentralised, sustainable and socially oriented industry. What is interesting is that the cooperative membership is not limited to the citizens of Berlin. Citizens from other parts of Germany or even other countries can also become members of BEB.

## 5.2 Key features and replicability of the clusters

This section elaborates on the key features and replicability of the three clusters 1) Publicly-run, 2) Organisation-based and 3) Community-based ENCI cases as examined in the overview of the BSIMs viability characteristics for the selected cases (Chapter 4) and their cluster analysis (Chapter 5.1).

### 5.2.1 Publicly-run cases

- The publicly-run cases are found to have an **orientation towards common goods and public services at various scales** (mostly local or regional), with just and equitable energy transition being considered as a core value for the communities, in accordance with their national and/or regional energy policies and strategies.
- **The successful publicly-run cases involve a very wide and large range of multiple stakeholders and have a rather complex structure/organisation** (e.g. Drechtsteden Energy – cross-sectoral organisation involving seven municipalities, two waterboards and a province, Hauts-de-France Pass Renovation which consists of a regional public third-party financing



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mechanism).

- With an exception of the consultation Shaping our Electricity Future case, all the other publicly-run cases show a **rather lower citizen participation** in the decision-making processes, which are in the hands of public authorities. Those cases are mainly public-led where energy transition is done *for* the citizens rather than *by* the citizens themselves. Citizens are consulted, but their view seldom prevail and never oblige.
- **There is a high dependency of the majority of publicly-run cases on public funding,** which can ensure both the viability and the fragility of the BSIMs. The publicly-funded cases can ensure long-term and stable income especially if they are designed to achieve national climate change agreements, however, if the public funds stop or there are changes in political priorities that will jeopardise their survival and endurance over time. The cases prove notably to be more viable when they are able to mobilise and ensure various types of funds at various scales from the EU to national, regional funds or even from the municipalities.
- Innovative publicly-run cases are also showing various **processes of "economisation"**, through the development of financial mechanisms aimed at enhancing new markets (for the retrofit in Hauts de France Pass renovation) or through a strategy of attractivity for businesses to settle there and take part in the local transition process (Nagypáli).

**The replicability / translatability of the public-run cases depends highly on how pro-active policy makers or political actors at the local/regional levels are, and their capacity to mobilise a wide range of stakeholders to support their views on energy transition.**

**ENCI is not really developed and still need to be further enforced in such kinds of initiatives.**

### 5.2.2 Organisation-based cases

The data analysis shows that the organisation-based cases can be largely divided into two groups based on the local scale and the action levels that they build more than the economic activities.

1. **Cases that are focusing on the local and small community scale** and do not want to enlarge or expand their operations and activities[18] (Cargonomia, SoLocal Energy, Bike Evolution).
2. **Cases that have a national scope and ambition to induce change at a larger scale**, notably through regional and local anchorage (LSA, Naturstrom, HOSe, Shared Energy, TreeDependent).

The common features of the three ENCI cases focusing on local-scale activities – Bike Evolution, SoLocal Energy, Cargonomia – are elaborated below (Table 4):

[18] This inclination to stay small and institutionally rather independent applies to quite a range of social innovation initiatives, see for example the institutional independence pursued by Hackerspaces (Pel et al. 2020b).



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- **All cases exhibit large local networks and informal partnerships** that help the case to self-sustain. For example, SoLocal Energy have several local partnerships, and Cargonomia connects (informally) with several local and organic food producers and/or distributors.
- **The cases are single type of organisations**, such as social enterprises, associations, non-profit, NGO (or no formal organisation), with a rather simple legal structure. Most of their operations and activities rely on the unpaid work of volunteers. The example of Cargonomia is also somehow illustrative. The initiative works solely with volunteers/ employees, a characteristic which is part of its business model and its core values of degrowth, not aiming to expand or professionalise. Cargonomia is beyond a single organisation, since it is not an organisation, but an initiative at the crossroads of various organisations' activities.
- **All three cases exhibit in their business models strong social and environmental values focusing on concepts such as deep sustainability, sociocracy, degrowth**. SoLocal Energy's vision is to be part of the worldwide movement that test approaches of a community-based economy with renewable energies, solidarity-based agriculture and global solidarity. Another example is Cargonomia which has degrowh movement as a core way of thinking promoting biodiversity, healthy food and promoting conviviality. Its wider aim is to restructure the current economic system and create a degrowth-based system, moving towards a more sustainable one through encouraging people to establish communities which are e.g. fossil-fuel-free.

> "The mission of this group is to contribute to sustainable transformation toward a socially and environmentally just future by questioning the dominant economic system through practical, educational and research activities." (Cargonomia ENCI case, Lazányi, 2022 p.82)

- A key characteristic of the cases is their **financial "independence"**, and the fact that they are creating by developing economic activities to sustain over time, with limited use of public funding sources. This is reflected for example in the Bike Evolution case which has modest financial needs and does not require substantial (external or public) funding. Annual membership fees, small-scale business activities (e.g. consultancy services, trainings) and some occasional funding is enough for its economic viability. The Cargonomia case has similar financial goals based on crowdfunding, donations and in-kind contributions, relying in that way on the community and individuals rather than depending on external funds.



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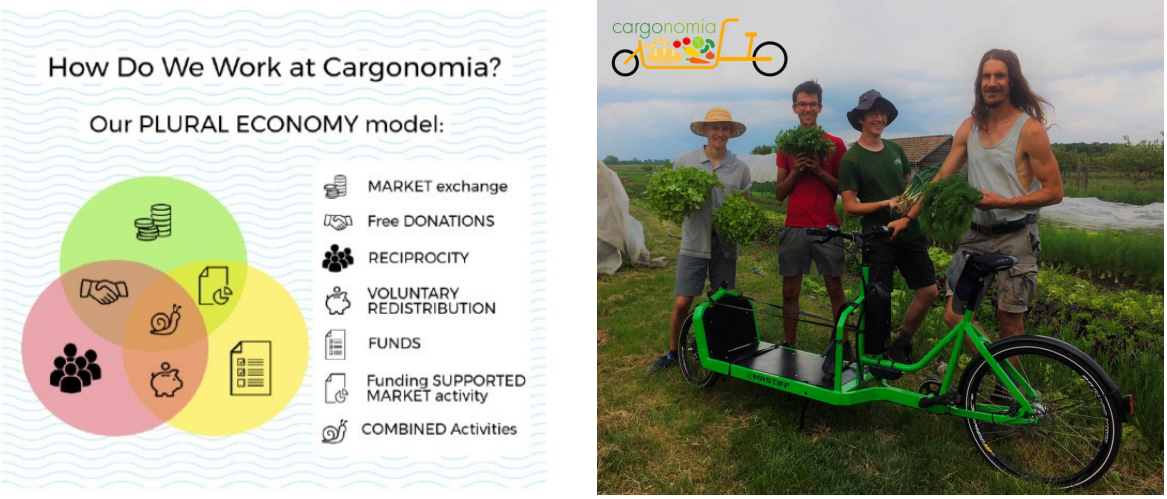


**Figure 9: Cargonomia ENCI case**[19]

- **Emphasis on citizen empowerment** is a key feature of the cases. As an illustrative case, SoLocal Energy's vision consists in putting sustainable energy supply in the hands of citizens in order to achieve climate-just energy democracy. SoLocal promotes indeed the empowerment of citizens through balcony PV plants, enabling the people to install the panels themselves, as well as DIY groups for mutual help in installing PV on rooftops or as literacy with the development of neighbourhood climate circles. Furthermore, democratisation as well as equity and justice are given a key role in the organisation, even internally with regard to its sociocracy principles. SoLocal Energy considers the empowerment of all the people, including the most vulnerable, as a core concern and intends to be part of a just transition process.

> For the members of SoLocal, empowerment is closely tied with their business model, in that it consists in acting collectively, making energy practices and opportunities public, spreading the willingness to engage in the energy transition. H.L. (member): "…empowerment is when you take something to the streets and motivate people to show and muster energy and personal commitment in order to bring a certain thing forward, to publicize it, to actively collaborate, both practically and communicatively." (SoLocal Energy ENCI case).

[19] Source: https://www.facebook.com/cargonomia



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The common features of the five ENCI cases with national wide and ambitious goals – Shared Energy, HOSe, TreeDependent, Naturstrom, LSA – are elaborated below (Table 4):

- **The majority of the organisation-based cases is characterised by their long-term existence.** For example, LSA was set up in 1980's whereas Naturstrom in 1998 and TreeDependent in 2010 showing their long-lasting structure and endurance over time.
- **All the cases have numerous partnerships and large networks such as advocacy coalitions and policy activities**. LSA is an illustrative case with multiple networks and partnerships with about 250 different organisations. Since 2019, the LSA has also been working together with four other civil society organisations (i.e. Nature and Environment Federations, Energie Samen, HIER and Buurkracht) as part of a "Participation coalition" to help 150 Dutch neighbourhoods take steps towards a neighbourhood energy plan. The business model of LSA is to mainly work in a collaborative manner (e.g. through its participation coalition) to get access to resources, funding, sharing knowledge and having a 'bigger voice' in advocacy and lobbying as the coalition represents a larger constituency than LSA alone.

> "The added value of this Participation Coalition is in advocacy and lobbying, our voice is much bigger. Because you represent a broad constituency and a large constituency, then you can also ensure that you are sitting at the right table to join in discussions on policy and legislation and have influence in that... advocacy and lobbying, which we do at national level. At Ministries, Lower House, ministers, where we support our supporters to promote their interests locally. So we train people in how to lobby, what the process around municipal elections looks like, for example, and support on how to make your point locally" (Interview LSA, ENCI case).

- **Rather complex structures and entangling several sorts of organisations** is another common feature of this group of cases. One of them is Shared Energy which consists of three different legal structures which complement each other: the cooperative (simplified joint-stock cooperative company); the investment tool (partnership limited by shares); and association (registered under the association law). Another example is HOSe is a company comprised of ten RESCOOP cooperatives. HOSe is legally a cooperative company with limited liability, composed of 50% cooperatives and a 50% share of the commercial enterprise Hydro-B. The cooperative company with 50% public shareholding has been set up to develop and operate the hydroelectric power stations.
- The analysis also shows a **high and/but diversified citizen involvement among the cases**, notably in financial terms. Naturstrom has about 300,000 private and business customers (but a deliberately limited number of shareholders – 1700), whereas in HOSe the production of hydroelectricity is from a hybrid organisation in which citizens are involved through 10 cooperatives that own 50% of HOSe (more than 15,000 citizens shareholders).



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- **The development of specific tools and financial mechanisms** that enhance ENCI-related **economisation processes** are also found to be a common feature of the cases. Among these is the Shared Energy Investment Tool (The Société en Commandite par actions Énergie Partagée Investissement - EPI), the first innovative financial tool for citizen investment in the production of renewable energy and energy efficiency in France.

> Énergie Partagée Investissement is the first innovative financial tool for citizen investment in the production of renewable energy and energy efficiency. This tool enables project promoters and regional stakeholders to raise the capital required to launch a project and to maintain citizen control of it. The Société en Commandite par actions Énergie Partagée Investissement (EPI) is a citizen investment tool, benefiting from the solidarity finance label (Fair- Finansol). The fund collects savings from citizens and invests them in equity in the capital of citizen renewable energy project companies. The fund thus represents the citizens in the governance of the project in a long-term vision (Shared Energy ENCI case).

This tool enables project promoters and regional stakeholders to raise the capital required to launch a project and to maintain citizen control of it. The investment tool also offers shares for 10 euros to make shareholding more accessible (the price to buy one share in 2022 was 114,40 euros). From a different perspective, TreeDependent has developed a carbon compensation tool for individuals as well as collectives to learn about and take responsibility for their carbon footprint in several ways. The innovation lies in the fact that carbon footprint calculation and voluntary compensation are transparent processes (the client can follow what is being calculated and how) and the trees are fruit trees native to the region.



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**Table V: Common features of organisation-based ENCI cases[20]**

| | Cases focused on local-scale activities | Cases with national scope/ambitions |
|---|---|---|
| ENCI Cases | • Bike Evolution<br>• Solocal Energy<br>• Cargonomia | • Shared Energy<br>• HOSe<br>• TreeDependent<br>• Naturstrom<br>• LSA |
| Common features | • Many local networks and informal partnerships<br>• Single organisations (or no formal organisation), with a rather simple legal structures<br>• Strong values focusing on, deep sustainability, sociocracy, degrowth<br>• Transformative cases at the local scale<br>• Financially "independent" cases, that develop an economic activity to sustain over time, with limited use of public funding sources<br>• Emphasis on citizen empowerment | • Long-lasting cases (e.g. LSA up to 35 years)<br>• Numerous partnerships and large networks (advocacy coalitions and policy activities)<br>• Key importance of regional/local relays<br>• Rather complex structures, entangling several sorts of organisations (cooperative, association, LLC, investment fund)<br>• High citizen involvement, incl. financially (15,000 citizens shareholders in HOSe, 300,000 customers for Naturstrom)<br>• Multiple activities for value (co)-creation, up to finance-intensive cases (HOSe, Naturstrom)<br>• Development of specific tools and financial mechanisms that enhance ENCI-related economisation processes (Énergie Partagée's Investissement, Mieterstrom, TreeDependent's $CO_2$ footprint tool) |
| Replicability | **Good replicability of such cases in other contexts**<br>**Highly depending on engaged individuals** | **Challenging replicability of such cases in other contexts**<br>**High potential for transformative change** |

[20] The local-national distinction answers the question to which political community ENCI refers in a particular case.



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### 5.2.3 Community-based cases

The community based ENCI cases (all of which are cooperatives) are analysed in this section fall into two sub-groups:

1. **Efficiency and renewable energy cases** with single (Berlin citizen energy, Aran Islands energy cooperative) and complex organisational structures (Loenen Energy, Energy Communities Tipperary cooperative and GoiEner Taldea).
2. **Housing and efficiency cases**, all comprising complex organisational structures

#### 5.2.3.1 Efficiency and Renewable energy

The two cases with a single organisational structure, Berlin citizen energy (BEB) and Aran Islands cooperative (CFOAT) have several key features:

- **Difficulty in achieving financial security**. For example, for BEB securing a stable flow of income in the cooperative has been a challenge. The case would not have been able to survive without the support of its shareholders and the help from people who donate their "time, energy and experience". In its current form BEB is supported by individual donations. On the other hand, CFOAT's current financing model through EU-funded projects poses a key challenge to the cooperative. To be dependent on these projects means that the direction of the cooperatives work ultimately follows the projects, and not necessarily the direction the cooperative prioritises to achieve (source: Interview CFOAT).

> "It is only possible because many people with time, energy and experience support us free of charge. The cooperative shares and the trust funds are not used for running costs. Only a small part is invested in our climate protection projects - the majority remains for our cooperative participation in the Berlin electricity grid. We cannot finance our campaign to participate in the electricity grid entirely from current income from our own energy systems. It is only possible because many people support us with small or large donations" (Interview BEB ENCI case).

- **Ongoing diversification of foci** towards sources of incomes characterise both cases. For example, BEB's financial inputs comes from cooperative members and other interested citizens, these include, a) the partnership with EWS in electricity contracts contributing to finance the running costs of the cooperative, b) its cooperative shares which cannot be used for running costs and c) sales revenue from various activities such as services/sponsoring, subsidies or renting/leasing, cooperation with green electricity and self-construction. CFOAT is also aiming to diversify its income streams. There has been a small income stream through grants to support job creation and local development by the Údarás na Gaeltachta, which the cooperative tries to broaden. Importantly, this income enabled the cooperative to create three paid positions within the cooperative. Ultimately, the goal of the cooperative is to establish a



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steady stream of income coming from own energy generation, which they would like to sell to the households on the islands. This would give CFOAT considerably more financial security, in addition to the autonomy gain.

- There are **various key partnerships** that need to be sustained in the long-term for the cases to survive. One of BEB's key partner is EWS Schönau. The cooperative provides electricity contracts with green energy and cooperates with the electricity company Schönau (EWS) for the electricity supply. This is a vital cooperation providing a source of income for BEB for the running costs of the cooperative. CFOAT also relies on key partners. Especially its academic partners are important including the University of Galway (e.g. RESPOND 2017 project which gave the cooperative financial means to employ a first employee), Atlantic Technological University and MaREI with which CFOAT collaborates in various EU funded projects which constitutes the mainstream of income for the cooperative.

> Partnerships with academic institutions were hugely important for the development of the Aran Islands Cooperative. On the one hand, the outcomes of projects are useful with research related to Smart technology for homes, hydrogen fuel research, and developing systems for the purchase of micro-generated energy. On the other hand, participation in those projects gave access to EU funding with which the cooperative was able to create several paid positions, which also took over general management work in the cooperative. Apart from funding from SEAI, this EU funding coming through the collaborative projects is a key income stream (Aran Islands Cooperative, ENCI case).

The cases with more complex organisational structures are also characterised by a set of key features:

- **Cooperative models that are combined with other kinds of organisations**, are able to (re)act faster in getting funds or starting projects. An illustrative case is Loenen Energy with an organisational structure consisting of four different entities - foundations which is enabling the case to self-sustain over time. Since decision making often needs to be fast to apply for funds or getting involved in projects, that cannot be offered in a traditional cooperative structure mainly because all decisions need to go through the cooperative board and decided (voted) among members. Loenen Energy has found a way to overcome this hurdle by establishing different foundations for getting involved in projects or findings.

**Various sources of funding**: production and supply of energy combined with public grants. Loenen Energy for example has a very diverse public and private income base depending on its various running (EU) projects including the municipality of Apeldoorn, Province of Gelderland, European Commission, membership contributions, and customers/clients buying electricity from the cooperative. ECTC's financial inputs comes through grants from Sustainable Energy Authority of Ireland (SEAI, a government-funded agency providing policy advice and programme implementation), the Just Transition Fund and Clan Credo as financial institution which provides loans and bridge financing of retrofits for homeowners participating in ECTC whereas reimbursement through SEAI funds is only provided after the end of the year while contractors need to be paid beforehand (Clann Credo also cover shortages in cash-flow of ECTC) (Watson et al., 2015).



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- There is a **high degree of professionalisation** throughout the cases with some paid staff and dedicated employees or project managers. However, it is often argued during the interviews that is not enough. For GoiEner professionalisation is relevant and necessary from the moment the organisation acquires a volume, so it needs professionalisation and people who are dedicated to it full time. Similarly, in Loenen and ECTC, although they have paid staff, most of its work relies on the board of directors and volunteers which are made up entirely of unpaid volunteers.

  ECTC is structured as a co-operative. Unlike other cooperatives, the members of ECTC are not individuals but community groups representing a certain community/area in the wider Tipperary region. Every member community is represented in the cooperative board with two volunteer directors. The North Tipperary LEADER Partnership and the Tipperary Energy Agency (TEA) are represented with a director at the board. The member communities need to set up a 'Sustainable Energy Community' SEC through the SEAI to get funding under the Sustainable Community grants scheme (Energy Communities Tipperary Cooperative ENCI case).

- **Citizen empowerment throughout the cooperatives.** An illustrative case is GoiEner Taldea. GoiEner understands cooperatives as local entities that promote an economy close to the environment and, thus, they work on a small scale, but they also help to promote local cooperatives throughout Spain. The profits from the commercialisation of electricity among its members revert to the cooperative, and to renewable generation projects whose production will be consumed by the cooperative. This form of organisation has allowed the entity to survive over time and has been awarded as a model of social innovation in citizen empowerment for the direct management of energy as a reference for other citizen-based initiatives. Loenen Energy also focus in empowering local inhabitants and citizens more widely by educating, raising awareness, knowledge dissemination as well as running programmes with primary schools and organise/participate in a variety of energy activities: fairs, information evenings, festival, competitions and has been portrayed as the 'solar village Loenen' in the Netherlands. The community Virtual Power Plant (cVPP) of Loenen has also been an anchor for genuine participation of citizens in the village of Loenen for gaining control over energy consumption (for more detailed analysis of Loenen Energy's cVPP see Kemp et al., 2023, D4.2).



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**Table VI: Common features of community-based ENCI cases**

| | Single organisational structure | Complex organisational structure |
|---|---|---|
| Cases | Berlin citizen energy (BEB)<br>Aran Islands Energy Cooperative (CFOAT) | Loenen Energy<br>Energy Communities Tipperary Cooperative (ECTC)<br>GoiEner Taldea |
| Common features | • Difficulty in achieving financial security<br>• Ongoing diversification of foci towards sources of incomes<br>• Key partnerships to sustain | • Cooperative completed by other kinds of organisations, to be able to (re)act faster (projects, fundings, etc.)<br>• Various sources of fundings: production and supply of energy combined with public fundings<br>• Citizen empowerment through the cooperative<br>• High professionalisation |
| Replicability | **Challenging replicability / translatability of such cases in other contexts**<br>**Long pathway towards self-sustainability**<br>**Local community focus and potential contribution to change**<br>**Limits of the cooperative model with slow decision-making (not fit for fast-pace funding applications)** | |

### 5.2.3.2 Housing and efficiency

This category comprises of two ENCI cases with rather complex organisational structures related to housing cooperatives, LaVidaVerde in Berlin, Germany and La Borda in Barcelona Spain. The key features of their BSIMs are summarised below:

- **Both LaVidaVerde and La Borda represent new models of creation, management and ownership of sustainable housing communities**. In LaVidaVerde, the house is not owned by a cooperative, individual residents or a residents' association, but by a separate limited liability company, LaVidaVerde GmbH with two shareholders: the housing association (MustAhaus e.V.) and the Mietshäuser Syndikat, to ensure the building will always stay out of the usual estate market. On the other hand, La Borda is based on the SostreCívic model. It is a model between renting and buying where the cooperative is created for an indefinite duration. The right of use is acquired based on an initial returnable deposit and is maintained with the payment of a soft monthly rent. It eliminates property speculation and profiteering on a fundamental right like housing. Ownership of the housing always remains with the cooperative. La Borda's organisational scheme shows that it is possible to create new non-speculative housing schemes based on a horizontal and cooperative organisation, even in scenarios where the dynamics of the free market is strongly rooted. In addition, it highlights the potential of communities and how they can mobilize their knowledge and capacities to improve their



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living conditions.

> The Mietshäuser Syndikat networks and supports more than 100 houses with a similar organisational structure as LaVidaVerde, in Germany. This form of organisation legally excludes the possibility that the housing association could decide to sell and thus privatise the building in the future. This is the only way to guarantee that the house is removed from the real estate market in the long term and is thus always owned by those who live in it.

- **Create and promote an alternative societal model, which gives rise to new forms of coexistence**, social relations, and community self-organisation. La Borda is an illustrative case of the SostreCívic model (Democratic and self-managed organisation). That is, a grant of use, non-speculative and non-profit cooperative model where "the ownership of the housing is in the hands of the cooperative and its members participate and have the right of indefinite and inheritable use of the housing on the basis of a soft rent" representing an "alternative model of housing access to the traditional ownership and rent, with a strong commitment with the use value above exchange value"21. In LaVidaVerde's case, social values are also deeply part of its business model since it is based on consensual decision-making and has been organised to avoid any sort of speculative ownership of the building.
- **High focus on environmental sustainability.** One of LaVidaVerde's key achievement's is their model character, both as a solidarity- and sustainability-oriented community. The environmental values that shaped the building project, i.e. a Plus Energy housing, are also deeply impacting the tenement and operating costs, which makes the renting of a flat a more affordable compared to the private markets. Sustainability and environmental aspects are key founding objectives of La Borda through its passive design or low energy consumption, with the local, decentralised and self-managed generation of renewable energy. And, in the same sense, promote during the life of the dwelling the achievement of local and closed cycles of energy, water and waste (La Borda Statutes [22]).

LaVidaVerde and La Borda are illustrative cases of complex types of organisations, especially because of the housing element of their cooperative form. Below we discuss key elements of their organisational structures.

[21] Source: http://masqueunacasa.org/es/
[22] Source: http://www.laborda.coop/wp-content/uploads/2017/05/ESTATUTS-BORDA.pdf



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- **Superimposition of other kinds of organisational structures to the cooperative model" to overcome some barriers**, notably to get out of the speculation. Such case is LaVidaVerde's model where the cooperation with the key actor Mietshäuser Syndikat played a decisive role because it enabled the project to get out of the scope of financial private ownership and speculative actors. It also contributed to shape the good functioning of the case from both organisational and all-day life points of view.

> "Well, the housing market in Berlin is very competitive and there are actually no more affordable flats. And everything that is being built now, or that currently exists, is to be converted into condominiums. And we want to explicitly bring a counter-design to this, together with the Mietshäuser Syndikat in Berlin. That is, we build our house with bank loans, obtain loans from private individuals and then live there for rent and the rent then pays back the loans. And at some point, the house is paid off and we then finance, so to speak, reconstruction measures, renovation and house projects all over Germany…"
>
> "The Mietshäuser Syndikat is an association of houses all over Germany that was founded in Freiburg and now includes 70 house projects, some of which have already been paid off and which transfer a large share of their rent to the syndicate and the syndicate can then use it to buy half the share of the new houses. And thus support the new houses by injecting a little money into them".
>
> (Interview, LaVidaVerde ENCI case)

- **Key partners are crucial for the viability and long-term existence of the case.** La Borda and LaVidaVerde are both relying on the collaboration of key intermediaries (for the role of intermediaries see Markantoni et al., 2023, D4.1). The core intermediary for the LaVidaVerde's case is undoubtedly the Mietshaüser Syndikat, not only because it is the main organisational and networking intermediary of the case, but also in that the form of organisation from the Mietshäuser Syndikat enable LaVidaVerde to develop a specific Business and social innovation model that enables to escape from any speculation on the building. La Borda on the other hand relied on a number of intermediaries, including Barcelona's city council (land use assignment agreement), La Dinamo (signed a participatory loan), Coop57 (finances cooperative projects and with whom they signed a loan). These collaborations have been decisive for the emergence of La Borda, aimed at replicating the model of "grant of use" (GOU), the social and solidarity economy, and the construction of a sustainable and affordable building.

> "The funding [for La Borda], which has amounted to around EUR 3 million, comes from the financial support of social and ethical funding institutions (40%); inhabitants' financial contributions (19%) (microcredits from contributions from people), from collaborating partners; state aid and grants (18%); participatory loans (15%), and voluntary contributions made by collaborating members (8%)" (Peborde, 2016).



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- **Various sources of fundings**: energy production, public fundings, academic partnerships. Both cases show a diversity of economic incomes (see Markantoni et al., 2023). LaVidaVerde has benefited from the KfW Program which is a sustainability-oriented Governmental Bank that provided low-rate credit. The Future Construction Research Initiative (*Zukunftbau)* also helped with financing the project and North-South Bridges Foundation provided low-rate credit. La Borda, on the other hand, developed a financing scheme that moves away from the traditional bank-financing model present in Spain.

**Table VII: Common features of community-based - Housing and efficiency ENCI cases**

| | Housing – Complex organisational structure |
|---|---|
| Cases | • La Borda<br>• LaVidaVerde |
| Key features | • New model of production, management and ownership of housing<br>• Create and promote an alternative societal model, which gives rise to new forms of coexistence, social relations, and community self-organisation<br>• High focus on environmental sustainability |
| Complex organisation | • Cooperative completed by other kinds of organisations, notably to get out of the speculation<br>• Key partners (e.g. Mietshäuser Syndikat)<br>• Various sources of fundings: energy production, public fundings, academic partnerships<br>• Citizen empowerment beyond ENCI and consensus culture: the citizen empowerment exceeds the single energy issue to form an alternative more sustainable model (so beyond the single ENCI), which entails also consensus culture (beyond the majority rules then) |
| Replicability | **Challenging replicability / translatability of such cases in other contexts (yet replicated)**<br>**Limited citizen participation (due to housing community limits)**<br>**Development of alternative socio-economic model** |



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# 6 Conclusions

Mainstream definitions and approaches on business models and 'business as usual' need to be adjusted or 'repurposed' when we talk about BSIMs for initiatives that focus on notions of energy citizenship. The observed models in the 20 ENCI cases, demonstrate a rather complex picture of organisational structures with diverse level of citizen's engagement, participation and citizenry (Chapter 4).

The findings show, *inter alia*, that BSIMs are quite dynamic and unique in each one of the studied ENCI cases. However, the cluster analysis followed in this deliverable reveals several key features within subclusters that help to shed more light into our understanding of the role of these models in enhancing the positive impact of energy citizenship types.

Starting with the **publicly-run ENCI cases**, the analysis showed that these cases have a focus towards contributing to common goods linking to more equitable energy transitions and that stems from the commitments of the initiatives to their respective national, regional or local ambitions for tackling climate change and speeding up their energy transition. Although such initiatives have a long-term and stable public funding base (e.g. Drechtsteden Energy), they are also vulnerable because if their support from the public funding stops (e.g., due to change in political landscape or national ambitions), it is more likely that they will cease. Therefore, business models with single source of public funding are more vulnerable and are dependent on or are at the mercy of the 'political will' of a 'top-down' stakeholder culture. We found also that ENCI still need to be further enforced in such kind of initiatives in which citizens have seldom their say. In terms of replicability in other countries we conclude that this depends first on the institutional context and especially the (power) relationships between the national and local levels, second on how proactive political actors are and their capacity or ability to mobilise a wide range of stakeholders to support their views on energy transition.

The **organisation-based ENCI cases** show more complexity and diversity in their funding base, their stakeholders, partnerships networks as well as in their organisational structures in comparison with the publicly-run cases. Especially the cases that focus on local-scale activities (i.e., Cargonomia, SoLocal Energy) are in general highly anchored at the local scale and exhibit a number of local and informal partnerships which help the cases to self-sustain. What characterises these ENCI initiatives is that their BSIMs focus on concepts such as degrowth, sociocracy, deep sustainability with an emphasis on citizen empowerment putting the energy transition in the hands of citizens and oriented towards the needs of people. On the other hand, the organisation-based cases with a more national scope and growth ambition (i.e., LSA, Naturstrom, HOSe, TreeDependent, Shared Energy) are proven to be more long-lasting cases that have survived the course of time with larger networks and partnership coalitions, some of them also with a focus on policy activities and lobbying. In addition, these initiatives have more professionalised organisational structures (compared to the public-run cases), and the development of some



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specific tools and financial mechanisms illustrate how their models and activities help to enhance ENCI-related economisation processes. When comparing the replicability of their BSIMs, we found that the models with simple organisational structures and a focus on citizen participation can be replicated in other contexts and countries as long as their set-up and structures are kept to a minimum and are deeply connected to their locality in terms of support networks and local partnerships.

The **community-based ENCI cases** of this deliverable are energy cooperatives with single (BEB and CFOAT) or complex organisational structures (Loenen Energy, ECTC and GoiEner). The analysis indicates that the cases with a 'traditional' cooperative model face many challenges in achieving financial security and aiming to continuously diversify their income base. As part of their financial strategies, maintenance of key partners is of key importance for their long-term viability. On the other hand, the community-based cases with complex structures or 'enhanced' cooperative-models exhibit more professionalisation in their employed staff and economic security by spreading out their income stream into various fundings, including public, private or EU grants. We found that the cooperative models that are supported or divided into other types or associations or foundations display more flexibility and speed in decision-making which is often needed when applying for funds or starting new projects. That shows that the traditional cooperative model in not fit-for-purpose especially when initiatives need to take quick decisions, which is essential in a context where applications for funds or tenders come in a very short notice. Another key characteristic of these community-centred cases is that they are often part of specific local identity-concern as they are open to a certain (limited) geographic perimeter attached to a certain territory and culture (and/or political culture). Engagement and active participation of citizens is desired and part of their cooperative structure, however, often participation is focused on the local citizenry.

This study concludes that business and social innovation models that help to enhance or stimulate energy citizenship are rather complex and highly specific in their structures and in the ways that support or promote ENCI. The clustering offered in this research provides a useful lens to understand how and to what extent different types of BSIMs provide a seedbed to organise and sustain ENCI. In line with Radles and Laasch (2016) and Mihailova (2023), the traditional approaches on business models cannot simply be adjusted by adding social values and citizenry concerns. It goes deeper than that by encompassing 'new relationships, behaviours, and actions in the context of the energy transition' (Mihailova, 2023:1).

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



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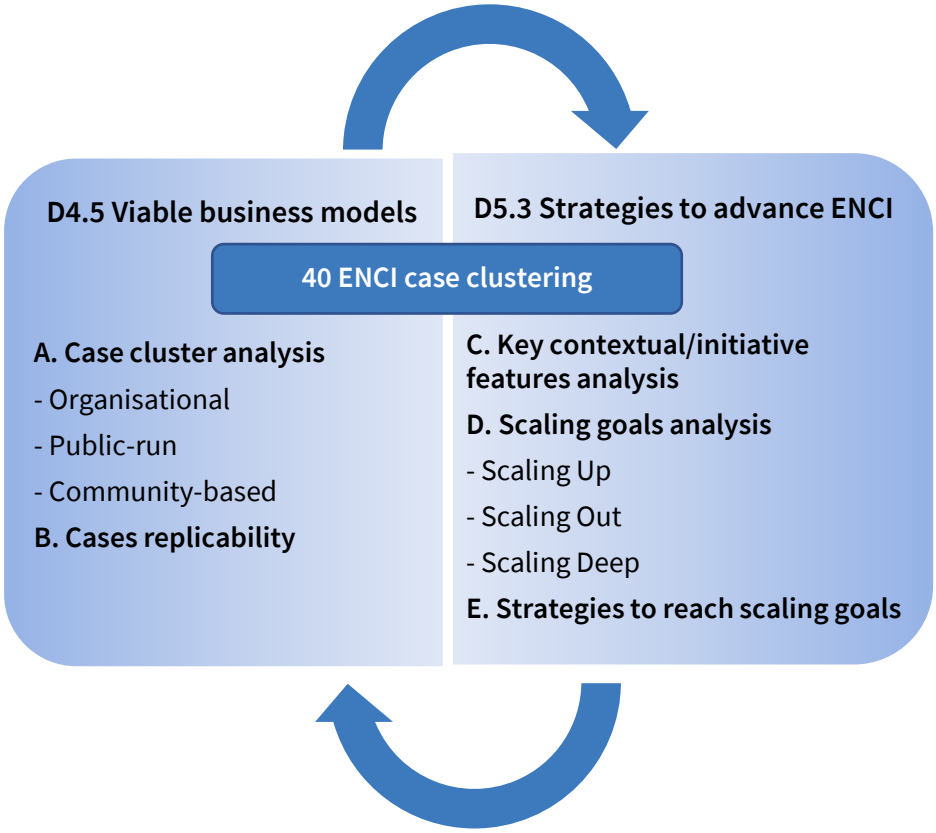


**Figure 10: The interconnected BSIMs analyses in D4.5 and D5.3**

Moving forward in our analysis, the deliverables D4.5 and D5.3 are interlinked in exploring and analysing viable business and social innovations models that enhance and/or advance energy citizenship types. D5.3 takes the BSIMs analysis a step further and is considered as an extension of the D4.5. The follow-up D5.3 furthers the analysis of BSIMs of D4.5 by exploring 1) *the key contextual and initiative features*, 2) their *'scaling up, out and deep' goals* and 3) what *strategies they apply to reach their goals and ambitions* (see Figure 10).



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# Appendix 1: Overview of the 20 ENCI cases selected for detailed analysis

| Case no. | Title of case in English | Partner | Country | Main focus | Special focus | Criterion 1 GEN: Outcome orientation | Criterion 2 GEN: WP4 relevance | Criterion 1 QCA: Citizen power | Criterion 2 QCA: ideal-type | Criterion 3 QCA:Level of operation | Criterion 4 QCA: When did it start to operate? | Cluster |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | As in mapping survey: Energy Mobility Holistic | Disadvantaged/ Gender/ None | Reformative/ Transformative | Intermediary (INT)/ Business model (BM)/ ICT | Must be: * Low/ *Medium (negative) * High (positive) | Must be: citizen-based and hybrid (Type7 *or* Type 8 in typology, see D2.2) | Must be: * Local *or* * Municipal *or* * Regional | Must be: no later than 2020 | Comparative clusters |
| 1 | Bike Evolution | ARC Fund | BG | Mobility | None | Reformative | INT, ICT | Medium | Type 7 | Municipal | 2007 | Organisation based |
| 2 | Energy Transition of City of Burgas: Going Smart and Sustainable | ARC Fund | BG | Holistic | None | Reformative | INT, BM | Medium | Type 7 | Municipal | 2006 | Publicly-run |
| 3 | Nagypáli, the renewable energy village | GDI | HU | Holistic | None | Transformative | INT, BM | High | Type 8 | Municipal | 1997 | Publicly-run |
| 4 | TreeDependent | GDI | HU | Holistic | None | Reformative | INT, BM | Medium | Type 7 | Regional | 2011 | Publicly-run |
| 5 | Energy Community Tipperary Cooperative (ECTC) | NUIG | IRL | Energy | None | Transformative | INT, BM | High | Type 8 | Regional | 2011-2015 | Community-based |
| 6 | Solocal Energy | TUB | DE | Holistic | Disadvantaged | Transformative | INT, BM | High | Type 8 | Municipal, Regional | 2020 | Organisation based |
| 7 | Berlin Citizen Energy (BEB) | TUB | DE | Energy | None | Transformative | BM, INT | High | Type 8 | Municipal | 2011 | Community-based |

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8 | GoiEner Taldea | UDC | SP | Energy | Disadvantaged | Transformative | INT, BM | High | Type 8 | Regional | 2011-2015 | Community-based |
| 9 | La Borda. Housing cooperative | UDC | SP | Holistic | None | Reformative/ Transformative | BM | High | Type 7 and Type 8 | Local | 2011-2015 | Community-based |
| 10 | HOSe | ULB | BE | Energy | None | Reformative | INT, BM, | low | Type 7 | Regional | 2016-2020 | Organisation based |
| 11 | The Drechtsteden cooperative | UM | NL | Energy | Disadvantaged | Reformative | BM | Medium | Type 7 | Regional | 2016-2020 | Publicly-run |
| 12 | Cargonomia | GDI | HU | Holistic | Gender - partially | Transformative | INT, BM | | Type 8 and Type 10 | Local, Regional | 2021 | Organisation based |
| 13 | Hauts de France Pass Renovation | JDI | FR | Energy | None | Reformative | INT | | Type 1 and Type 9 | Regional | 2011-2015 | Publicly-run |
| 14 | Energie Partagée | JDI | FR | Energy | Disadvantaged | Transformative | INT | | Type 8 and Type 10 | National (but also Regional and Local) | 2006-2010 | Organisation based |
| 15 | Public Consultation: Shaping Our Electricity Future | NUIG | IRL | Energy | None | Reformative | ICT | | Type 5 | national | 2021 | Publicly-run |
| 16 | Aran Islands Cooperative | NUIG | IRL | Energy | None | Transformative | BM | | | Regional | 2012 | Community-based |
| 17 | LaVidaVerde | TUB | DE | Holistic | Disadvantaged | Transformative | BM | | Type 8 | Local | 2011 | Community-based |
| 18 | NATURSTROM AG | TUB | DE | Energy | None | Transformative | INT/BM | | Type 8 and Type 4 | National | 1998 | Organisation based |
| 19 | Loenen Energy | UM | NL | Energy | Disadvantaged | Transformative | BM/ICT | | Type 8 | Local/ Regional and multi-country | 2016-2020 | Community-based |
| 20 | National Association of Active Residents (LSA) | UM | NL | Holistic | Disadvantaged and gender | Transformative | INT | | Type 10 and Type 8 | National but also local and neighbour-hood level | 2016-2020 | Organisation based |

# Appendix 2: Research Template Questions on Equity, Sustainability and Citizen control

**9. How important are goals of equity and justice (A), environmental sustainability (B), staying under the 1.5 C target of the Paris Agreement (C) and other ecological limits (D)? Please respond to these sub-questions from your point of view as researcher.**

9.A In terms of equity and justice, please indicate the level of equity/justice pursued, as they are defined in D2.2 (pg. 31.):

1. Equity and justice issues are not relevant to this case in the sense that they are not addressed by case goals or activities.
2. Justice or equity are essentially out of scope, or restricted to equal access to markets
3. Equal access is granted to all concerned citizens, but the framings tend to limit them to a certain geographical area or amount of financial contribution, which does not guarantee "real" equity.
4. Involvement is fully open, without specific belonging conditions. Issues such as energy poverty, gender and inclusivity are taken into account and foster adaptive measures to guarantee more equity.

Please explain and illustrate your selection briefly, in cc. 5-8 lines, using concrete evidence from the case wherever possible (e.g. examples of activities, numbers illustrating related achievements from reports, pictures, etc.)

**9.B In terms of environmental sustainability, please indicate the importance thereof, based on the definition of various levels of environmental sustainability in D2.2 (pg. 31.):**

1. Environmental sustainability issues are not relevant to this case in the sense that they are not addressed by case goals or related activities.
2. Environmental sustainability issues are mostly seen as self-evident and not explicitly taken into account. In the lowest forms, environmental sustainability tends to be dealt with as a positive or negative externality.
3. Environmental sustainability is part of the process or case, but this concern is addressed in a superficial (non-radical) way (focus on efficiency strategies) and without dedicated assessment. Energy remains the main focus.
4. Environmental sustainability is a core issue, and it is even considered in goal setting, which is followed with a holistic strategy (mix of efficiency, consistency and sufficiency measures). Its assessment through indicators is seen as desirable.

Please explain and illustrate your selection briefly, in cc. 5-8 lines, using concrete evidence from the case wherever possible (e.g. examples of activities, numbers illustrating related achievement from reports, pictures, etc.)



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**12. Does (did) the case exhibit strong elements of effective citizen control?**

You already answered this question in the mapping of this case. Based on the deeper insights into the case that you have now gained, please make the assessment again.

1. No effective voice citizen power/control
2. Low level: when expressed (e.g., within "invited" deliberative processes), citizens' voices remain hardly heard or taken into account. Being a minority, citizens' voices do not really count or in a voting process, the framings tend to limit the possibility of expressing an opinion.
3. Medium level: citizens can express their views, but their voices are not compulsory (within deliberative, representative or consultative processes). Within organised / participative structures, citizens remain a minority group, i.e., unable to impose their views to other groups.
4. High level: citizens exert the effective control, and their votes are mandatory. This governance takes place mostly in an "invented" process (as opposed to "invited" ones by Radtke et al., 2020). Citizens represent a majority group, empowered enough to control the process, and thus make their voices predominant.



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