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# Towards More Community and Less Consumption?

## Democratic and Sufficiency-Oriented Practices in an Energy Community. The Case of Energía Bonita in La Palma, Canary Islands

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"One who knows they have enough is rich"

~Tao Te Ching

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# Abstract

Motivated by the democratic and environmental shortcomings of traditional energy governance models, this research investigates how democratic governance within an energy community (EC) influences members orientations and practices towards energy sufficiency. This study conducted an in-depth case study of the island-based cooperative Energía Bonita in La Palma, Canary Islands. Responding to critiques that technological and market-driven transitions insufficiently address socio-ecological crises, the study examines whether EC can foster energy sufficiency practices among EC members by redistributing ownership of renewable energy sources and embedding decision-making at the local level. This research explores the mechanisms linking democratic and sufficiency-oriented practices focusing on participation and shared decision-making, identity formation, empowerment, and collective norm, elements derived from the literature. A qualitative research design was employed, drawing on semi-structured interviews with thirteen EC members, complementary document analysis, and direct observations. Findings demonstrate that democratic governance repoliticises energy by reframing energy consumption as a collective rather than individual concern. Participation fosters ongoing social learning, strengthens members' sense of belonging, and cultivates multiple identities of consumers, co-owners, and energy citizens. These processes generate shared norms of responsibility, mutual accountability, and solidarity, which in turn support voluntary reductions in household energy use. The study concludes that democratic governance influences sufficiency-oriented practices by embedding energy use within social relations, collective deliberation, and shared norms. This study contributes to the research on degrowth and ECs by demonstrating that energy sufficiency is shaped by socio-institutional transformation rooted in democratic participation.


**Keywords:** Degrowth, Democracy, Energy Sufficiency, Energy Community, Cooperative, Island

# Executive Summary


## Problem Definition

Most states have relied on market-based energy systems to address the energy transition. However, these systems have failed to fulfil this task (Blazquez et al., 2020; Kellett, 2007; Keppler et al., 2022; Lebeau et al., 2024; Newbery, 2018). In 2023, renewables comprised 13.5% of total final energy consumption, while fossil fuels continued to account for nearly 80%, underscoring the dominance of carbon-intensive energy sources in the global energy system (Renewable Energy Policy Network for the 21st Century [REN21], 2025). Market-based solutions and techno-managerial approaches have not succeeded to achieve decarbonisation, and they have also led to increased energy demand. This failure has prompted scholars to question the dominant green growth paradigm and to call for alternative models grounded in democratic participation and reduced energy throughput. Degrowth scholarship argues that sustainability requires not only to move away from fossil fuels, but also it necessitates a socially just reduction in energy and material consumption (Parrique, 2019). Therefore, energy communities (ECs) have emerged as promising institutional forms with the potential to redistribute ownership, foster democratic governance, and enable sufficiency-oriented practices. Islands, such as La Palma, offer a particularly compelling context for ECs due to their fossil-fuel dependence, infrastructural vulnerability, and strong potential for community-led renewable energy transition (Tsagkari et al., 2021).

## Aim and Research Question

The aim of this study is to contribute to the ongoing debate on degrowth and ECs by examining whether democratic governance can foster a transition towards sufficiency-oriented practices among EC members. EC are particularly relevant focus as they exemplify a novel governance model, in which citizens become prosumers - simultaneously producing and consuming energy (Campos & Marín-González, 2020; Reis et al., 2021). Considering the collective nature of ECs, these initiatives empower communities to act as citizens, rather than consumers (Coy et al., 2023; Islar & Busch, 2016). Therefore, beyond the deployment of renewable energy technologies, ECs promote new forms of governance that emphasise participation and collective decision-making (Lowitzsch et al., 2020). ECs are increasingly regarded as a cornerstone of the European Union's (EU) energy transition strategy, promoting decentralised and participatory energy models (Faria et al., 2025). With approximately 10,000 ECs mobilizing more than two million individuals, they represent a significant and expanding institutional form within the European energy landscape (Smart Energy Europe, 2022,). Despite this growing relevance, much of the existing research has concentrated on the challenges, opportunities, recommendations (Ahmed et al., 2024; Lazdins et al., 2021; Neij et al., 2025), business models (Barabino et al., 2023), potential of scaling up ECs (Savini et al., 2024) as well as behavioural and psychological aspects of participation (Sloot et al., 2018). However, the broader meaning and implications of democratic involvement on energy demand reduction practices within ECs have not been widely explored (Petrovics & Savini, 2025). Consequently, the present study seeks to examine the extent to which democratic participation in EC initiatives motivates energy sufficiency practices. To address this objective, the following research question (RQ) has been formulated: ***RQ: How does democratic governance within energy communities influence members' orientations and practices regarding energy sufficiency?*** This question moves beyond mere decarbonisation measures to examine whether collective decision-making and shared governance structures foster new social norms and a sense of communal responsibility to reduce energy consumption. By focusing on the transition from a private consumer mindset to that of a citizen, this research seeks to determine if these organisations actively transform practices or simply attract already eco-conscious members. This research seeks to achieve this by examining practices

among EC members at both the institutional level (i.e. democratic governance) and individual level (i.e. energy sufficiency practices) and by clarifying the elements that may connect these levels. The following mechanism may be considered: ***Democratic governance*** - participation and shared decision-making - identity formation, empowerment - collective norms - ***sufficiency-oriented practices***. Nonetheless, it is important to acknowledge that the presumed causal relationship between democratic governance and sufficiency-oriented practices remains an assumption and requires an empirical examination. Additionally, this presumed relationship is based on the broad set of the literature (please refer to Chapter 2) and examines the mechanism in the specific case being studied. Against this backdrop, the present study investigates the initial motivations of EC members, as well as subsequent behavioural changes and orientations associated with participation in collective decision-making. In doing so, it seeks to assess the extent to which democratic energy governance can reshape community relationships to energy use.

**Research Design**

A qualitative single-case study design was conducted employing a cooperative Energía Bonita, an island-based EC in La Palma, Canary Islands, as a case study. The EC was selected due to its alignment with the degrowth principles, namely small scale, democratic governance, non-profit orientation, and commitment to demand side energy reduction. The data consisted of thirteen semi-structured interviews with the EC members, complementary document analysis (e.g. the EC statue, EU legal frameworks, media reports), direct observations (e.g. book club meetings, community events, field visits). Together these materials provide a triangulation of data and contribute to a better understanding of the EC governance and practices. The analysis of the data was guided by the theorical framework; however, it also remained open to inductive insights. Considering qualitative nature of this research, this study does not claim direct causality but rather it seeks understand the mechanism that possibly connects democratic governance and sufficiency-oriented practices within the EC. Moreover, the study was subject to potential limitations related to self-selection bias, language constraints and researcher's experiences, background and assumptions.

**Results and Findings**

Members consistently emphasised that democracy extends beyond the formal voting procedures, encompassing continuous participation, deliberation and collective learning. Through working groups and interactions, members develop awareness of energy issues and consequently reduce their energy consumption. Participation functions as an ongoing process of social learning. Knowledge is shared through newsletters, book club meetings, and peer-to-peer exchanges, enabling EC members to reinterpret energy not as a technical commodity but as a social and political concern. Working groups on energy savings and energy poverty translate abstract concepts into practical, achievable actions. The learning processes were described as an ongoing, participatory processes, showcasing the plurality and collective knowledge formation within the community. Democratic engagement also fosters empowerment and identity formation. Members perceive themselves as co-owners, consumers, and energy citizens rather than passive consumers. This shift is rooted in their sense of collective agency and collective efficacy, reflected in the notion that individual action may feel small, but collective action does not. Therefore, participation strengthens feelings of belonging and shared responsibility, enhancing members' commitment to sufficiency-oriented practices. These processes contribute to the emergence of collective norms centred on shared responsibility, mutual accountability, and solidarity. Thus, members feel accountable not only for their own consumption but also influencing others within the community. Energy is understood as a shared resource rather than private commodity. Interestingly, some members expressed their willingness to share surplus of their "saved" energy with vulnerable households. Such norms create a social environment in which energy sufficiency becomes both expected and valued. As a result, members reported

adopting a range of concrete energy sufficiency practices, including reducing use of washing machines, reducing shower frequency, lowering water heater use, reducing car dependence, monitoring energy use with domestic meters. Many members articulated the importance of energy sufficiency must accompany sole decarbonisation efforts. At the same time, members expressed reservations about imposing limits on energy use, raising concerns about fairness and structural constraints.

**Conclusion and Recommendations**

The findings demonstrate that democratic governance reshapes the EC members' relationship with energy use. Accordingly, the analysis shows that democratic governance within the studied EC fosters sufficiency-oriented practices by embedding energy use within participation and shared decision-making, identity formation, empowerment, and collectively defined norms and values. Answering the RQ, these elements are strengthened through peer influence, mutual accountability, solidarity and willingness to question consumption habits through democratic processes. The study concludes that democratic governance influences members' sense of shared responsibility, collective stewardship, and solidarity regarding sufficiency-oriented practices. A key strength of this research lies in its integration of everyday practices with the potential for structural transformation of energy initiatives, illustrating how democratic and sufficiency-oriented principles contribute to reshaping energy governance. The interaction of these principles supports the emergence of new social imaginaries and opens pathways towards broader societal and environmental change. Consequently, this research contributes to the academic debates on degrowth and ECs by demonstrating that meaningful transformation - rooted in political, social and normative dimensions - depends on socio-institutional change rather than purely techno-economic considerations. Therefore, the reformation of societal systems is essential to prioritise human and ecological well-being over economic growth, and community-led initiatives such as ECs can provide a viable foundation for such a shift. This transformation promises not only environmental benefits through reduced consumption but also enhanced local decision-making, conviviality, and strengthened social connections. Such forms of social innovation enable the principles of degrowth (i.e. democratic governance and energy sufficiency) to materialise in tangible, community-anchored actions with the potential to drive systemic change. Therefore, for meaningful change, it is relevant to move away from extractive, profit-oriented hierarchies of energy governance and to relearn forms of abundance that celebrate community and care.

This research and fieldwork clearly demonstrated the importance of co-creating a shared sense of meaning while prioritising fundamental human needs over consumer-driven wants. Consequently, the findings call on EC practitioners to strengthen direct, deliberative, participatory processes and integrate sufficiency into everyday practices through fostering peer learning and shared responsibility. EC members and local communities are encouraged to engage actively in deliberation, reflect on personal energy behaviours, and cultivate solidarity-based relationships that make sufficiency a lived reality. For policymakers and EU-level institutions, the study highlights the importance of embedding energy sufficiency into policy frameworks, recognising ECs as social innovation spaces, and investing in capacity-building to reinforce democratic governance and social capital within ECs. Given that the research is based on a single island-based EC operating within a unique context, future studies should examine democratic and sufficiency practices across diverse ECs to assess the generalisability of these dynamics. Further research is also needed on institutional reforms to strengthen democratic governance in sustainability transitions, exploring how policymaking and local institutional arrangements can support reclaiming community agency and create spaces for deliberation, meaning-making, social connections, and ecological and social well-being.

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# Abbreviations

| | |
|---|---|
| AGM | Annual General Meeting |
| CEC | Citizen Energy Community |
| EC | Energy Community |
| ECEEE | European Council for Energy Efficient Economy |
| EU | European Union |
| GDPR | General Data Protection Regulation |
| GHG | Greenhouse Gas |
| IPCC | Intergovernmental Panel on Climate Change |
| PGB | Post Growth Business |
| PV | Photovoltaic |
| REC | Renewable Energy Community |
| REN21 | Renewable Energy Policy Network for the 21st Century |
| RESCoop | European Federation of Energy Communities |
| RQ | Research Question |
| SIT | Social Identity Theory |
| UNEP | United Nations Environment Programme |

# 1 Introduction

The continued global dependence on fossil fuels is the primary driver of anthropogenic climate change, which threatens human well-being and the health of the planet (Intergovernmental Panel on Climate Change [IPCC], 2022). Addressing this crisis requires more than technological substitution to clean energy but calls for structural, institutional transformations in patterns of production and consumption (D'Alisa et al., 2015; Hickel, 2020; Kallis, 2011; Parrique, 2019; Raworth, 2018). However, existing hierarchical governance models have proven insufficient to accelerate a socially just and environmentally sustainable transition away from fossil fuels. The top-down structures unequivocally frame energy as technical, managerial problem and exclude citizens from meaningful participation (Chanteloup et al., 2025; Dudka, 2025; Gonda & Bori, 2025). Consequently, leaving social and institutional dimensions of energy under-attended while privileging expert driven, efficiency-oriented perspectives (Bauwens et al., 2022; Chilvers & Noel, 2016; Labanca et al., 2020; Urban et al, 2025). This imbalance between the far reaching societal and environmental impacts of energy systems and the limited opportunities for public participation put the delivery of a successful energy transition and achieving structural change necessary to shift consumption patterns, at risk. Addressing this deficit requires political change aimed at reshaping governance structures towards more direct, participatory, deliberative, and inclusive organisation (Bauwens et al., 2024; Chanteloup et al., 2025; Schwanitz et al., 2023). Such changes are increasingly advocated for in response to growing critiques that traditional hierarchical models of governance are ill-equipped to address contemporary and future energy challenges (Henman & Mont, 2026).

Energy Communities (EC), therefore, emerge as promising response to the democratic and environmental shortcomings of traditional energy governance models, by redistributing ownership of renewable energy sources and embedding decision-making at the local level. ECs are defined as decentralised energy sources, owned and managed by a local community (Walker & Devine-Wright, 2008). These initiatives by reframing the energy system as a matter of public deliberation, offer a promise for meaningfully involved and decarbonised society. In doing so, ECs also open up pathways for rethinking patterns of energy use, including the potential for demand side reductions (Dudka, 2025; Petrovics & Savini, 2025). Their potential to challenge top down, growth dependent models is especially relevant in island contexts, which despite their renewable resource potential (such as solar and wind), islands often suffer from fossil fuel dependence and high energy costs. At the same time, these contests present distinct opportunities where their spatial and social scale create a unique setting in which principles such as democratic governance and energy sufficiency can be meaningfully examined in practice (Tsagkari et al., 2021). Therefore, these favourable conditions for community led decarbonisation offer a compelling case of investigating these principles in practice.

## 1.1 Problem Definition

Most states have relied on market-based energy systems to address the energy transition. However, these systems have failed to successfully fulfil this task (Blazquez et al., 2020; Kellett, 2007; Keppler et al., 2022; Lebeau et al., 2024; Newbery, 2018). In 2023, renewables comprised 13.5% of total final energy consumption, while fossil fuels continued to account for nearly 80%, underscoring the dominance of carbon-intensive energy sources in the global energy system (Renewable Energy Policy Network for the 21st Century [REN21], 2025). Market-based solutions have not only adequately achieved the desired decarbonisation, but rather, they led to an escalation in the total energy demand. According to Hickel (2020), the current annual production of clean energy is eight billion megawatt hours more each year, in comparison to

the year 2000. During this period, the demand for energy, driven by economic growth, has increased to 48 billion megawatt hours. Even if the output of clean energy were to be doubled or tripled, it would have no effect on reducing greenhouse gas (GHGs) emissions, as "growth outstrips best efforts to decarbonise" (Hickel, 2020, p. 116). Lange and Schmelzer (2025) claim that mere decarbonisation efforts are like running down the escalator that continues to accelerate upward. Nevertheless, energy consumption is predicted to increase in tandem with economic growth (Perera et al., 2024).

These dynamics have led scholars to question purely technological and market-based responses to environmental crises. Santarius (2016), for instance, argues that green consumerism cannot provide a solution to unsustainable consumption, particularly in light of the rebound effect, "a phenomenon where unintended consequences offset the anticipated environmental gains" (Ferrante et al., 2026, p. 377). The United Nations Environmental Program (UNEP, 2017, p. 12) portrays that resource efficiency is not enough to achieve sustainability, claiming that "productivity gains [efficiency] in today's linear production system are likely to lead to increased material demand through a combination of economic growth and rebound effects". Building on these critiques, Hickel and Kallis (2020) conclude that the pursuit of green growth is a misguided objective rooted in and constrained by the logic of privatised market systems. Therefore, rather than attempting to reconcile continued economic expansion with ecological sustainability, the authors maintain that policymakers should consider alternative societal goals.

A large body of scholarship calls for a reduction in overall energy demand and emphasises the importance of democratically owned and governed energy systems (Durand et al., 2024; Geelen et al., 2013; Gunderson et al., 2018; Petrovics & Savini, 2025; Pholboon et al., 2016; Wahlund & Palm, 2022; Weinrub & Giancatarino, 2015). At the same time, the literature underscores that this position is far from uncontested, highlighting a persistent tension between efficiency-driven approaches associated with ecomodernist thinking and sufficiency-oriented paradigms (Petrovics & Savini, 2025, p. 2). This tension reflects fundamentally different understandings of growth, whether it is perceived as the root of ecological problems or as their solution (i.e. sustainable growth) and manifests in the divide between alternative economic models and techno-managerial approaches, as well as between public planning and the primacy of privatisation and market-based mechanisms (Gómez-Baggethun & Naredo, 2015). In response to these competing interpretations of growth and the broader interrelated socioeconomic and environmental crises the Degrowth Movement emerged, drawing on the fields of ecological economics and environmental justice (D'Alisa et al., 2015; Demaria et al., 2013; Hickel, 2020; Schmelzer et al., 2022; Sekulova et al., 2013; Trainer, 2012).

Degrowth advocates for socially sustainable reduction in production and consumption of environmentally damaging goods in developed countries, to remain within planetary boundaries and enhance human and environmental well-being (Parrique, 2019). Although degrowth started as a critical thought against the capitalist system, it soon turned to be a wider criticism of systems of domination, such as patriarchy, colonialism, imperialism, racism and other systemic issues facing society today, such as decline in democratic governance (Schmelzer et al., 2022). Consequently, the concept of degrowth is multifaceted in nature. The subject functions as both a critique and a visionary goal for socio-ecological transformation, which can render it conceptually complex and difficult to delineate. Nonetheless, proponents of degrowth share a common perspective, asserting that technical and market-based solutions are insufficient to address the numerous crises currently afflicting society. In addition, they claim that social innovations are imperative for a meaningful socio-ecological transformation (Alexander & Yacoumis, 2018; Kallis, 2011). This vision, emphasised by Schmelzer et al. (2022) roots change in the democratic process to a more just, sustainable and less material and less

energy-intensive society. Moreover, conviviality occupies a relevant position within the theoretical framework of degrowth, drawing etymological roots from the Latin term "con vivere", which translates to "live together" (Parrique, 2019). This concept is delineated as a normative vision of social organisation. It signifies a societal model characterised by cooperation and reverence for the natural environment. It presents a paradigm shift away from conventional, individualistic, and growth-oriented notions of well-being (Jarvis, 2019).

Tsagkari et al. (2021) argue that the degrowth approach to the energy debate is grounded in the principles of energy democracy, self-sufficiency, localised production, and revitalizing the local economy. Degrowth does not view energy efficiency and decarbonisation as ultimate solutions to environmental crises. However, it places importance on reducing energy use and facilitating the transition to a low-carbon future from the bottom-up approach through citizen empowerment. From a degrowth perspective, small-scale, community-owned, or local renewable energy projects, such as ECs, are of interest for investigation as they have potential to challenge growth-dependent energy models (Tsagkari et al., 2021). Building on this perspective, Zeiss et al. (2025) argue that social enterprises, non-profit organisations and collective action initiatives represent practical manifestations of degrowth principles. These organisational forms are characterised by democratic governance, voluntary participation, and transparency, enabling citizens to engage directly in processes of social and ecological changes. Therefore, such initiatives are viewed as important vehicles through which degrowth can be operationalised at the community level, fostering alternative modes of production, consumption and social organisation that prioritise collective well-being (Demaria et al., 2013; Petridis et al., 2015; Sekulova et al., 2013). Nonetheless, Rommel et al. (2018, p. 1751) caution against embracing overly idealistic visions of ECs, stating that they are at the "at a crossroads" between a green growth or degrowth pathways. The authors argue that such initiatives may risk reproducing market-oriented logics rather than challenging prevailing growth paradigms. As a result, there is concern that green consumerism may come to dominate ECs, limiting their transformative potential.

## 1.2 Aim and Research Question

The aim of this study is to contribute to the ongoing debate on degrowth and ECs by examining whether democratic governance can foster a transition towards sufficiency-oriented practices among EC members. Energy sufficiency refers to meeting the basic needs of society and reducing energy consumption. This research focuses on the latter aspect.

EC are particularly relevant focus as they exemplify a novel governance model, in which citizens become prosumers - simultaneously producing and consuming energy (Campos & Marín-González, 2020; Reis et al., 2021). Considering the collective nature of ECs, these initiatives empower communities to act as citizens, rather than consumers (Coy et al., 2023; Islar & Busch, 2016). Therefore, beyond the deployment of renewable energy technologies, ECs promote new forms of governance that emphasise participation and collective decision-making (Lowitzsch et al., 2020). As such EC projects can illustrate a broader transformation of citizenship, shifting it from a primarily political status to a social and collective practice (Capellán-Pérez et al., 2018; Islar & Busch, 2016).

ECs are increasingly regarded as a cornerstone of the European Union's (EU) energy transition strategy, promoting decentralised and participatory energy models (Faria et al., 2025). With approximately 10,000 ECs mobilizing more than two million individuals, they represent a significant and expanding institutional form within the European energy landscape (Smart

Energy Europe, 2022). Despite this growing relevance, much of the existing research has concentrated on the challenges, opportunities, recommendations (Ahmed et al., 2024; Lazdins et al., 2021; Neij et al., 2025), business models (Barabino et al., 2023), potential of scaling up ECs (Savini et al., 2024) as well as behavioural and psychological aspects of participation (Sloot et al., 2018). However, the broader meaning and implications of democratic involvement on energy demand reduction practices within ECs has not been widely explored (Petrovics & Savini, 2025). Consequently, the present study seeks to examine the extent to which democratic participation in ECs initiatives motivates energy sufficiency practices. To address this objective, the following research question (RQ) has been formulated:

***RQ: How does democratic governance within energy communities influence members' orientations and practices regarding energy sufficiency?***

This question moves beyond mere decarbonisation measures to examine whether collective decision-making and shared governance structures foster new social norms and a sense of communal responsibility to reduce energy consumption. By focusing on the transition from a private consumer mindset to that of a citizen, this research seeks to determine if these organisations actively transform practices or simply attract already eco-conscious members. This research seeks to achieve this by examining practices among EC members at both the institutional level (i.e. democratic governance) and individual level (i.e. energy sufficiency practices) and by clarifying the elements that may connect them. The following mechanism may be considered:

***Democratic governance*** - participation and shared decision-making - identity formation, empowerment - collective norms - ***sufficiency-oriented practices***

Nonetheless, it is important to acknowledge that the presumed causal relationship between democratic governance and sufficiency-oriented practices remains an assumption. The expectation that democratic governance fosters participation and shared decision-making, processes such as identity formation, empowerment, and the development of collective norms, which may in turn support sufficiency-oriented practices, requires empirical examination. Additionally, this presumed relationship is based on the broad set of the literature (please refer to Chapter 2) and examines mechanisms in the specific case being studied.

Against this backdrop, the present study investigates the initial motivations of EC members, as well as subsequent behavioural changes and orientations associated with participation in collective decision-making. In doing so, it seeks to assess the extent to which democratic energy governance can reshape community relationships to energy use. The need for further scholarly inquiry into the relationship between democratic governance and the reduction of energy consumption has been highlighted by Petrovics and Savini (2025). The authors argue that research on ECs within a degrowth framework should more systematically examine the tensions and interdependencies between these dimensions, noting that "much of the degrowth thinking does not clarify the institutional and regulatory pathways needed to downscale overall energy use while guaranteeing democratic control over energy production" (Petrovics & Savini, 2025, p. 1). This observation points to a clear research gap, particularly regarding understanding how such pathways can be operationalised and examined in practice.

## 1.3 Scope and Delimitations

This paper studies local energy initiatives on islands and employs Energía Bonita - an EC on La Palma in the Canary Islands - as a case study (Energía Bonita, 2026a, May 12). Tsagkari et al. (2021) argue that islands are an ideal setting for reflecting on degrowth and clean energy

transitions due to their spatial characteristics. Moreover, islands present a particularly compelling case, as they are abundant in renewable energy resources, yet they often are dependent on fossil fuel-based energy systems. The empirical material for this study was collected through interviews with members of Energía Bonita. Although the EC consists of 278 individual members and 20 organisations, the present research focuses on practices of individual members (Energía Bonita, 2026a, May 12). This focus reflects the study's aim to examine how democratic governance (i.e. institutional arrangements) shape sufficiency-oriented practices at the household level. This can be a relevant consideration given that households are major contributors to GHG emissions through their consumption patterns (Kalubowila & Arambepola, 2025). Therefore, this research investigates the context of ECs, where individuals can contribute to decarbonisation not only by producing clean energy but also by reducing their energy consumption. Accordingly, the study does not investigate how organisational members engage in decision-making processes or enact sufficiency-oriented practices but instead focuses how democratic governance influence or shape individual engagement with energy sufficiency in EC.

## 1.4 Ethical Considerations

This research employs qualitative research design collecting materials through semi-structured interviews, complementary document analysis and direct observations. Participants in the semi-structured interviews were informed that the research focuses on democratic governance and sufficiency-oriented practices, rather than explicitly on degrowth, to avoid influencing their responses through a concept that is often perceived as controversial, politically charged and/or abstract. The participation in this study was voluntary, and those participating were assured of full anonymity and their right to withdraw from participating in the interview at any moment. Personal information and identities were not collected to maximise response rate, ensure respondents' honesty and maintain confidentiality (Creswell & Cresswell, 2023, p. 100). All data has been processed and stored in accordance with the General Data Protection Regulation (GDPR). The data has been securely stored on a personal computer with restricted access, and Lund University secured cloud, ensuring confidentiality, integrity, and protection against unauthorised access and use. This study's research design has been reviewed against the criteria for research requiring an ethics board review at Lund University and has been found to not require a statement from the ethics committee. Finally, adopting a post-positivist stance, this study acknowledges that the researcher's disciplinary background, professional experience, and epistemological assumptions may influence the research process, including, for instance selection of literature or interpretation of empirical findings (Creswell & Creswell, 2023, pp. 7-9).

## 1.5 Audience

This thesis is intended for an audience across both research and practice. While it engages with academic debates on degrowth and ECs, it also aims to be relevant for practitioners and policymakers involved in shaping democratic energy transitions and concerned with energy sufficiency. These audiences include organisations such as the European Federation of Energy Communities (RESCoop), island-based EC initiatives, the Clean Energy for European Union Islands programme, and other EU institutions. Across these contexts, ECs are increasingly understood as a pathway towards locally grounded renewable energy transition and more participatory forms of energy governance. More broadly, this study seeks to stimulate debate among ECs themselves, encouraging reflection on their role in advancing these transitions, signalling their potential impact on reduction of energy consumption within their democratic structures.

## 1.6 Disposition

Chapter 1 introduces the research topic, subsequently underlying the research problem, aim and emerging RQ. Then the chapter explains study's scope, ethical considerations and intended audience. Chapter 2 reviews the relevant literature on energy communities, degrowth, energy democracy, sufficiency, participation and decision-making, empowerment, social norms, and collective identity formation. Chapter 3 presents theoretical framework and how it was developed. Chapter 4 details the research design and methodology. Chapter 5 provides background for investigated study, including legal background on EC, insights on the energy system of La Palma and information on Energía Bonita as a case study. Chapter 6 presents the empirical findings. Chapter 7 discusses the implications for theory and practice, and Chapter 8 concludes with reflections, limitations, and avenues for future research.

# 2 Literature Review

This chapter provides an overview of literature on the topic of degrowth, democratic governance, energy sufficiency and energy communities, treating these as interconnected analytical concepts. It further identifies relevant theories, tentative explanations and conceptual frameworks to that underpin this study. Subsequently, different components of this literature review form a foundation for developing an analytical framework to examine the relationship between the democratic governance and sufficiency-oriented practices (please refer to Chapter 3).

## 2.1 Power to the People: How Energy Communities Emerged

Throughout history, cooperative forms of organisation have been a persistent feature of human societies, including citizen-participatory energy initiatives. However, recognition of their potential as key actors in achieving a sustainable and just energy system is relatively recent (Peeters et al., 2025). This emerging recognition is closely linked to the ECs' ability to transcend the conventional producer-consumer divide and facilitate a more active and meaningful citizen participation (Campos & Marín-González, 2020). Wielring et al. (2018, p. 2) point to the common characteristics of energy cooperatives that enable this potential, including "the involvement of the wider public (enabling the direct participation and ownership of members), the pursuit of non-commercial benefits (such as the fostering of community spirit) and the motivation to accelerate the transition to sustainable energy systems (e.g., phasing out nuclear power, regaining local ownership and control of energy provision)". This process entails a redefinition of citizenship within the energy system, where participation is no longer confined to market exchange but includes learning, deliberation, co-ownership, and collective decision-making (Campos & Marín-González, 2020). The literature distinguishes four waves of EC over the past five decades, reflecting how citizen participation in ECs has evolved under changing external conditions, particularly with respect to market disruptions and political decision-making (Peeters et al., 2025).

The initial wave of citizen-led energy initiatives emerged in the 1970s in the aftermath of the oil price shocks, which catalysed discourse around resource scarcity (Capellán-Pérez et al., 2018). Describing this period, Burke (2025) suggests that issues of energy and development gained prominent attention, particularly through a growing focus on clean energy alternatives. Sorrell et al. (2020) further note that the term "energy conservation" emerged as a direct response to the energy price shocks. Subsequently, there had been a heightened awareness of resource limits and alternative energy pathways, interest in eco-villages and self-sufficiency surging across Europe. For instance, there was an increase in cooperative renewable energy wind projects in the Netherlands in the 1970s (Agterbosch et al., 2004). The second wave of the ECs is characterised by institutional support for clean energy projects. Examples come from the numerous private and small-scale collective investments in wind energy projects that emerged in Denmark in the mid-1980s and continued into the 1990s. Governmental support for these projects helped leverage private capital and increase societal acceptance. The global financial crisis of 2008 and the aftermath of the 2011 Fukushima disaster sparked a third wave of energy cooperatives, for instance, illustrated by the growing number of energy initiatives in Germany (Wielring et al., 2018). This third wave occurred alongside a decrease in trust in international companies, including large international producers. As a result, it sparked a movement among citizens to reduce energy dependency and increase energy stability from clean energy sources. De Moor (2013) characterizes this wave by considering how the proliferation of citizen-led initiatives extended beyond the energy sector into domains such as healthcare. The fourth wave is marked by the recasting of the European Renewable Energy

Directive (Directive 2018/2001) and the Internal Electricity Market Directive (Directive 2019/944), with substantial institutional and financial support from regional, national, and EU levels. The fourth wave is also distinguished by the growing energy crisis related to the ongoing war in Ukraine (Peeters et al., 2025).

## 2.2 Degrowth and Energy Democracy

Democracy is a fundamental tenet of degrowth (Durand et al., 2024; Jackson, 2017; Phōtopoulos, 1997). Accordingly, the academic literature identifies social enterprises, non-profit organisations, and collective action initiatives as promising spaces for enacting degrowth principles in practice. These structures are typically characterised by democratic, voluntary, open, and transparent forms of organisation, which enable direct participation in social and economic change (Demaria et al., 2013; Petridis et al., 2015; Sekulova et al., 2013; Zeiss et al., 2025). Within this framework, ECs can be understood as spaces where democratic governance may foster broader transformations in how energy is produced, governed, and consumed (Sekulova et al., 2017; Walker & Devine-Wright, 2008).

The concept of energy democracy closely aligns with degrowth as both call for fundamental reimaging of energy politics. Energy democracy is defined as "a normative proposal that aims at articulating prospects for reduction of consumption, resource efficiency, use of renewable sources of energy and community empowerment" (Alarcón Ferrari & Chartier, 2018, p. 1754). In this paradigm, authority for decision-making is situated in the hands of the local population, energy consumers are recognised as energy citizens, and energy is conceptualised as a common, democratically governed good (Tsagkari et al., 2021). This reimagining of energy politics is also connected to the degrowth criticism of the current representative democratic systems. Accordingly, degrowth proponents advocate for strengthening participatory forms of democracy, particularly direct democracy over reliance on representative decision-making (Demaria et al., 2013; Kallis, 2018; Muraca, 2013; Schneider et al., 2010; Trainer, 2012; Weiss & Cattaneo, 2017; Zeiss et al., 2025). This imperative is grounded in critiques of representative democratic systems, which are often characterised by lobbyism, political elites, and power struggles that function as catalysts for economic inequality and social injustice (Zeiss et al., 2025). Building on this critique, Trainer (2012) argues that the prevailing governance system is underpinned by an adversarial, conflictual, and patriarchal conception of democracy, which privileges competition and elite dominance over collective deliberation and community-centred decision-making. The author claims that the "right" decision for the community is contingent upon its knowledge, insights, values, history, traditions, ecology, personalities, and relationships (Trainer, 2012, p. 596). Consequently, the notion of distant (i.e. representative) democracy emerges, asserting that state bureaucracies lack the capacity to determine the best interests of local communities. Weinrub and Giancatarino (2015, p. 4) envision that democratised energy "includes an informed and conscious community that understands the right relationship of people to natural resources and the need to live in ecological balance". Accordingly, attention has shifted from individual responses to climate and environmental challenges toward a collective rethinking and redesign of the processes and institutions through which basic needs are met (Schlosberg, 2013). Subsequently, local collective action has been identified as a potential catalyst for cooperation, thereby facilitating the emergence of shared values (Tam, 1998).

Consequently, the principles of democracy and energy sufficiency are fundamental to the degrowth paradigm (see Figure 2-1). Within this framework, ECs are increasingly recognised as viable alternatives to prevailing growth-oriented energy systems, as they integrate participatory decision-making with more sustainable patterns of energy use (Petrovics & Savini, 2025). Degrowth scholarship argues that efficiency measures alone are insufficient to address

rebound effects, information-behaviour gaps, or the institutional changes required for systemic transformation (Wallenborn, 2015). Thus, to achieve social justice and environmental benefits, a decentralised and democratic community should also reduce its overall energy throughput (Lage et al., 2023; Petrovics & Savini, 2025). Moreover, the degrowth paradigm is premised on the idea that empowered individuals making direct decisions about resource use and energy throughput lead to more equitable social outcomes (Petrovics & Savini, 2025, p. 4). This standpoint underscores the pivotal function of democratisation in the context of degrowth, signifying that governance should be founded in collective deliberation as opposed to the pursuit of individual gain. In this context, energy initiatives can operationalise these principles by granting each member an equal vote in decision-making processes (Walker & Devine-Wright, 2008). As Fominaya (2010) notes, regular face-to-face assemblies are particularly important for newly established participatory groups, as they foster the development of collective identity, commitment, and a sense of belonging. Thus, achieving meaningful decarbonisation requires further research into energy reduction practices and participatory decision-making to better understand the beliefs, intentions, expectations, and perceptions of EC members operating within decentralised, local, renewable energy governance systems.

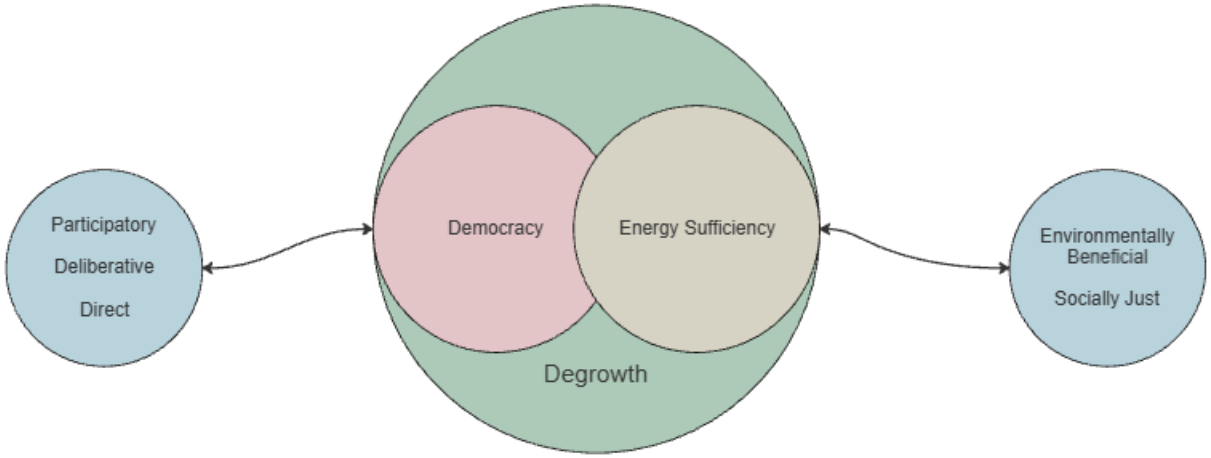


*Figure 2-1. Relationship between the Degrowth Paradigm and Principles of Democracy and Energy Sufficiency*

*Source: Own illustration (the Figure was made in the Miro software)*

## 2.3 Democratic Governance and Deliberation in Energy Communities

A recurring thread across governance literature is that how decisions are made shapes what decisions become acceptable (Cornwall, 2002; Liu et al., 2020). Arnstein's (1969) ladder of participation distinguishes genuine citizen power from superficial or directed participation. In this framework, direct participation, where citizens exercise meaningful influence over decisions and outcomes, represents the highest level of empowerment and is central to shaping a shared vision through collective deliberation and acceptance.

Consequently, the question of how democracy is organised in the ECs is a subject that arises within academic literature. Walker and Devine-Wright (2008) note that energy initiatives adhere to the one-actor, one-vote principle in their governance structure. This finding indicates that ECs have the potential to act as institutional spaces where citizens can participate more directly in shaping energy decision-making (Zeiss et al., 2025). Moreover, deliberative approaches, such as open assemblies, workshops and informal gatherings, provide individuals

with the opportunity to engage in dialogue and reach a consensus on shared priorities (Dryzek et al., 2019). This understanding informs how participation is conceptualised in energy democracy and in collective renewable projects, where formal inclusion is not sufficient unless it translates into real influence. Kunze and Becker (2015, p. 426) propose a working definition of collective and politically motivated renewable energy projects that emphasises political aspirations beyond energy generation, embedded in organisational structures of "participation, collective ownership, collective benefit allocation mechanism, or collective decision-making processes". In other words, it is imperative that the participation and ownership structure of politically motivated renewable energy projects is founded on the incorporation of its normative objectives. This definition is particularly relevant in the literature, as it links governance forms, such as participation and ownership, to normative goals, including political aspirations and collective benefit.

However, Tsagkar et al. (2021) have raised questions regarding the democratic nature of the energy commons in terms of their organisation and whether they genuinely value democracy. In particular, the question of inclusive membership and relationship between the participation in assemblies and representative governance, such as steering committees emerges. As mentioned in previous section, ECs across Europe adhere to the one-actor, one-vote principle, showcasing strong democratic practices (Walker & Devine-Wright, 2008). However, within scholarship, it has been acknowledged that many of these energy initiatives elect steering committees for overseeing day to day operations, while only major decisions are taken in the yearly general assemblies. Especially within larger ECs, participation in assemblies may decline, leaving decisions in the hands of a small group of representatives (Zeiss et al., 2025). Yet the authors argue that even when members do not regularly use their right to participate, the formal structure still guarantees every member the possibility to influence decision-making. Therefore, the authors claim that smaller ECs may more closely resemble degrowth ideas of direct democratic participation, while larger initiatives may face challenges with sustaining broad member engagement. Nevertheless, the repositioning of citizens as active participants in democratised energy systems is not without risk, as it could enable tokenistic or symbolic forms of participation that conceal the persistence of top-down control (Jánová et al., 2025). This phenomenon has been observed in contexts characterised by limited institutional trust or political accountability, particularly in regions such as Southern Europe (Esposito et al., 2025).

In their study, Hanke et al. (2021) utilised the energy justice paradigm to assess the capacity of ECs to integrate underrepresented and vulnerable demographics, in addition to addressing energy poverty. Their findings indicated that ECs may be at risk of perpetuating exclusionary practices. Regarding the gender dimension, the authors emphasise that governance boards in energy initiatives are often male dominated, which may reproduce existing power imbalances and limit the diversity of perspectives in decision-making processes. It is crucial to acknowledge the influence of gendered patterns on representation, meaning whose voices are amplified, whose expertise and who sets the organisational priorities. Rommel et al. (2018) further contend that ECs may fail to include marginalised groups. For instance, the authors note that EC members in Germany are predominantly "highly educated, above average age and wealth, autochthone, males with an engineering background, while excluding women, youth, allochthone, and underprivileged people" (Neij et al., 2025, p. 4). Furthermore, Euler (2018) suggest that the mechanisms essential to the establishment and maintenance of common governance, such as the delineation of user boundaries and the enforcement of reciprocity, have the potential to exclude disadvantaged groups, including low-income households and those lacking technical expertise. This, in turn, can serve to reinforce existing social hierarchies.

Thus, scholars question the "romanticised" portrayal of the EC in literature and policymaking, which may fail to recognise who specifically benefits from the EC at the local level. Therefore, it is important to ask whether ECs contribute to a just energy transition system. Peeters et al. (2025) acknowledge that scholarship often focuses on the advantages of ECs. The authors note that this enthusiasm may be related to the promise of decentralised nature of the energy system. However, these framing risks "optimism bias," a phenomenon in which initial literature on EC is subject to many citations, thereby self-reinforcing the bias. Additionally, in the context of general assemblies of energy commons, Hannoset et al. (2019) emphasise that open voting procedures, such as the raising of hands during assemblies, have the capacity to generate social pressure among members. In such settings, individuals may feel reluctant to express differing opinions, particularly if their views contrast with those of more vocal members. This dynamic has the potential to hinder meaningful deliberation and compromise the inclusivity and democratic integrity of collective decision-making processes.

## 2.4 Participation and Decision-Making

Participation in energy governance is defined as the involvement of the public in the energy decisions and policymaking (Bokolo, 2026; Radtke et al., 2020). A meaningful participatory approach engages the local community via meetings, events and deliberative decision-making (Hindmarsh & Matthews, 2008). Radtke (2025) suggests that participation may be constrained to the dissemination of information or consultation, however, this approach offers minimal empowerment. On the other hand, Coy et al. (2022, p. 1) claim that "empowerment is facilitated by community members developing knowledge, skills and the capacity to work together". Webler and Tuler (2021) suggest that a deliberative approach in a democratic process should encourage learning, foster engagement with diverse perspectives, and "challenge or refine" people's beliefs through practical reasoning. This, in turn, should contribute to the establishment of a shared understanding, underpinned by collective learning and open dialogue. The authors distinguished effective participation which promotes a more thorough understanding as people share plurality of perspectives, experiences and knowledge. Therefore, the higher the degree of participation, the more meaningful process of sharing and learning occurs. Furthermore, scholars of public participation have recognised the importance of examining the composition of agendas, recommending that participants be granted an equal opportunity to suggest items for the agenda and that they be accorded equal votes in shaping the Annual General Meeting (AGM) plan (Webler, 1995).

Participation extends beyond the mere dissemination of knowledge. According to Tuler et al. (2017) the focus ought to be on the form and application of knowledge rather than the internalisation of isolated facts. Thus, meaningful participation requires an understanding of both the underlying rationale (the "why") and the practical approaches (the "how"). Building on this understanding of participation, involvement in a local energy community can be seen as extending beyond pro-environmental behaviour (Neves et al, 20225). It is also closely associated with the pursuit of shared objectives and the strengthening of social connections among community members (Bamberg et al., 2015). As such, the success of these initiatives is contingent on the active and meaningful engagement of their participants. Previous research highlights the growing importance of enhancing the inclusivity of citizen participation in the energy system (Koirala et al., 2018). In this context, a consistent finding across the literature is that the success of local energy initiatives depends on broad community engagement, with social acceptability emerging as a pivotal factor (Kola-Bezka, 2023). The literature suggests that social learning, through accessible energy education and training for citizens, can enhance social acceptance of EC initiatives (Rai & Maheshwari, 2025). It also highlights that citizens

possess diverse skills and resources, which shape their ability to participate in and meaningfully engage with these initiatives (Watson, 2020).

## 2.5 Identity Formation in Energy Communities

### 2.5.1 Social Identity Theory

In the context of EC identity formation, existing literature highlight Social Identity Theory (SIT) as relevant analytical framework (Neves et al., 2025). SIT posits that individuals derive their self-identity concept from the social group they are exposed and to which they feel belonging. As such behaviour is shaped by group membership and norms associated with it. The concept of social identity posits that individuals internalise values, roles, expectations and responsibilities of relevant social groups, which in turn informs their self-concept and patterns of behaviour. Accordingly, identity formation is understood as relational process, in which individuals define themselves through their affiliating with the collective (Tajfel, 1978). Regarding ECs, these initiatives can be understood as social networks that facilitate interaction, knowledge exchange and shared experiences among members. Through such interactions, individuals continuously negotiate and reinforce shared identity. As members self-concept becomes increasingly intertwined with group membership, they are more likely to align their behaviour with community's norms and values, consequently reinforcing both individual identity and collective practiced within ECs (Oliveira et al., 2023)

### 2.5.2 Citizenship: Energy, Ecological, Environmental, Sufficiency Focused?

The literature on EC identifies a range of identity orientations, including energy-focused, ecological, and sufficiency-oriented forms. Broadly citizenship can be described as "a collection of social processes through which individuals and groups engage in expanding their rights" (Islar & Busch, 2016, p. 306). More specifically, citizenship is a compilation of "practices (cultural, symbolic, and economic) and an assembly of rights and duties" situating an individual within the institutional regime (Islar & Busch, 2016, p. 306). Considering these definitions, citizenship is more than legal obligations and rights associated with the relationship between individual and nation state. It also includes the practices in which individuals and groups formulate new rights or maintain existing ones. In the context of social processes concerning environmental issues, Islar and Busch (2016) describe ecological citizenship as an ongoing process of extending rights, recognition, representation, and participation in ecological practices or reasoning. Subsequently, this concept enables the incorporation of "communitarian" practices of citizenship into the understanding of duties and responsibilities (Islar & Busch, 2016). The concept of ecological citizenship holds potential for the field of ECs due to its "socializing role as a facilitator of ecologically conscious citizens" (Valencia Sáiz, 2005, p. 171). As one example, ecological citizens frequently employ private spaces in the same neighbourhood as venues for organizing forums to engage in political discourses. In their conceptualisation of ecological citizenship, Kenis (2015) calls for a shift away from the individualistic logic of the sustainable consumption paradigm and for a move towards more collective and politicised forms of ecological engagement. Instead of framing environmental responsibility as primarily a matter of personal lifestyle choices, Kenis (2015) emphasizes the importance of collective action, shared responsibility, and systemic transformation. Similarly, Silvast and Valkenburg (2023) argue that energy citizenship should not be equated with formal membership in an energy initiative. As simply belonging to a group does not automatically confer the status of an energy citizen. In this sense, energy citizenship differs from conventional notions of membership tied to affiliation. Rather, the concept operates more metaphorically, capturing political and subjective dimensions of engagement, including how

individuals understand their role, responsibilities, and agency within energy systems (Silvast & Valkenburg, 2023). In their research, Neves et al. (2025) argue that the fullest dimension of the pro-environmental behaviour is environmental citizenship, defined as civic engagement in sustainable actions, such as voting or supporting policies. The authors posit that this constitutes more than mere knowledge sharing (i.e. social environmentalism) or engagement in a conservation lifestyle (e.g. energy saving), but rather solid civic engagement. Building on this perspective, Petrovics and Savini (2025) shift attention to questions of reduced energy throughput and democratic decision-making. Their work points to the potential for conceptualizing a sufficiency-focused form of energy citizenship, in which citizens are not only active participants in energy governance but also consciously engaged in practices of reduction, learning and collective deliberation. This opens an avenue for exploring how norms of sufficiency can reshape the meanings and practices of energy citizenship, extending it beyond participation toward more transformative forms of engagement.

## 2.6. From Individualism to Commoning, Collective Norms and Social Influence

### 2.6.1 Commoning

According to Schmelzer et al. (2022) commoning can be understood as the creation of alternative infrastructures, solidarity-based cooperatives, and non-capitalist forms of collective production and livelihood. In this sense, commoning refers not only to shared resources but also to the social practices and institutions through which communities collectively manage and reproduce them. The authors describe these practices as forms of "nowtopia," a term denoting realised utopias that exist in the present and emerge from critiques of capitalism and globalisation. Within this framework, commoning initiatives emphasise the development of local democratic commons, processes of decommodification, and the scaling up of collective organisation as ways of challenging and potentially overcoming the logic of capitalist exchange.

In the communitarian approach, the common good is shaped through open dialogue. The objective of this discourse is to facilitate open discussions that transcend ideological and political boundaries. The objective of these deliberations is to cultivate a consensus on a collective vision of the "good life" or the common good that is held by all members of the local community (Kenis, 2015). According to Euler (2018), energy commons are conceptualised as models capable of redistributing power from hierarchical, centralised structures to more collaborative and inclusive forms of governance. Similarly, Kostakis et al. (2018) argue that commons-based peer production fosters participatory decision-making through peer governance. Taken together, these perspectives align with broader scholarly calls for advancing energy justice, energy citizenship, and more democratic forms of energy governance.

Gibson-Graham (2006, p. 196) argues that "the community that commons is not pre-given; rather, communities are constituted through the process of commoning". Building on this statement Euler (2018) claims that the success of commoning is not contingent upon the presence of a coterie or a homogeneous group. Proponents of this theory argue that communities thrive because of the presence of diverse and fluid social arrangements that are developed through shared practices and objectives. This perspective emphasises that collective identity formation is an ongoing outcome of participation, rather than a precondition for successful commoning. Collective identity is defined as "a shared sense of 'one-ness' or 'we-

ness' anchored in real or imagined shared attributes and experiences among those who comprise the collective and in relation or contrast to one or more actual or imagined sets of 'others'." (Snow and Corrigall-Brown, 2015). Within the paradigm of energy commons, the term "others" may encompass individuals or groups who adopt a more individualistic approach to energy production, distribution, and consumption and are not part of the "common." Snow and Corrigall-Brown (2015) claim that the concept of "we" is inherently associated with a sense of "collective agency". Furthermore, the concept of collective identity and a sense of communal belonging significantly influence an individual's propensity to engage in collective actions. According to Islar and Busch (2016), citizens who opt to invest in renewable energy technology collectively and gradually increase their ecological awareness during this process. As demonstrated by these scholars, a demonstrable correlation exists between ownership of renewable energy and ecological citizenship.

Nevertheless, it is imperative to exercise caution and avoid excessive optimism regarding ecological citizenship and commoning. Conventional understandings of the commons have the potential to fall short in addressing questions of justice across commons. In such cases, the failure may result in the emergence of a "gated community energy" model, wherein the benefits and participation are constrained to individuals already possessing specific social, economic, or cultural capital. One potential solution to this challenge could be the involvement of the municipality or state government. However, this approach introduces a tension between the principles of direct community control and those of more centralised public management. This tension has the potential to diminish the sense of empowerment among community members (Burke, 2021). Similarly, Flipo et al. (2025) clam that the social homogamy based on the preference of collective of like-minded people may hinder the transformative potential of energy grassroots initiatives for decarbonisation.

### 2.6.2 Social Norms and Collective Influence

According to Middlemiss et al. (2024), understanding social norms and relations is imperative for explaining behaviour and decision-making. Social norms are conceptualised as perceived social pressures that influence individual's decision to act or refrain from a specific behaviour. This perspective is reflected in the EC literature, which showcases that citizen participation and engagement are shaped by social norms, particularly peers' expectations regarding energy related behaviour (Perry et al., 2021). Plohl et al. (2026) found that individuals implement pro-environmental behaviours and practices when they perceive these actions to be broadly accepted and considered a norm. The authors showcase that individuals do not act in isolation, however, their energy related practices are embedded within social contexts in which expectations and behavioural patterns are collectively formed and sustained. Accordingly, this finding is embedded in the social practice theory, which proposes that human actions not merely the consequence of individual choices, but rather, are embedded in collective routines and habits that evolve over time and space (Dudka, 2025).

Dudka (2025) claim that community-based management of ECs offers a substantial capacity for reshaping energy-related practices. This is due to the fostering of strong interactions and collective reflexivity among EC members. The author underscores the transformative potential of the social relations within the EC as members may be more prone to adopt new energy consumption practices. This notion is closely aligned with the argument of Middlemiss et al. (2024), who suggest that contexts in which energy-related interactions are already taking place have a greater potential to drive change, as existing engagement among members of EC makes behavioural shifts easier to foster. This could be explained by the coexistence of multiple purposes of the ECs, pursuing range of environmental and social goals. Literature demonstrated that strong ecological motivations frequently emerge, or are strengthened,

because of members' participation (Ceglia et al., 2022; Coenen & Hoppe, 2022). Thus, the ECs are increasingly recognised as spaces for accelerating demand side energy transition (Barnes et al., 2022). Moreover, Elf et al. (2019) recognise that feelings of belonging to a group and the influence of social factors do not necessarily imply pressure and expectation. Indeed, the adoption of a collective mindset has been demonstrated to facilitate the mobilisation of shared resources, solidarity, and support. Consequently, according to the authors, these factors can result in the maximisation of positive spillover effects and collective efficacy within the ECs. In this context, Geskus et al. (2024) recognise the interplay between social relations and energy related practices, where social bonds can play a pivotal role in reshaping energy consumption.

## 2.7 Energy Sufficiency: Practices, Behaviours and Structural Conditions

Key debates in the literature on degrowth and EC reveal a tension between the efficiency measures, linked to eco-modernist thinking, and the sufficiency-oriented principles (Petrovics & Savini, 2025). Building on discussions about reducing energy demand and rethinking energy systems, it is necessary to distinguish between the concepts of energy efficiency and energy sufficiency. The IPCC defines sufficiency as "a set of measures and daily practices that avoid demand for energy, materials, land and water while delivering human well-being for all within planetary boundaries" (IPCC, 2022, p. 1815). Consequently, making well-being a focal point of sufficiency (Samadi et al, 2017).

The term "sufficiency" is derived from the Latin word "sufficere", which translates to "to be enough" and refers to the lower and upper limits of a given measure (Spengler, 2016). According to Iten et al. (2024), sufficiency can be described as meeting the essential energy and material needs of society, while continuously decreasing unnecessary consumption. The application of sufficiency to energy consumption and energy services is largely influenced by the contributions of the Wuppertal Institute in Germany and the activities of the European Council for Energy Efficient Economy (ECEEE) (Sorrell et al., 2020). Since the early 2000s, they have argued that achieving climate targets requires not only the decarbonisation and efficiency improvement of energy systems, but also a reduction in energy consumption. A relevant example is the imperative for prioritising fuel efficiency in vehicles, which, according to Sorrell et al. (2020) ought to be accompanied by a reduction in private vehicle mobility. This quest for sufficiency has been prevalent among ECEE and Non-Governmental Organisations (NGOs) lobbying for an EU action plan on energy sufficiency (Rijnhout et al., 2018). In contrast to sufficiency, which emphasises reducing overall demand, energy efficiency focuses on optimizing the ratio between energy input and useful output. Rather than questioning the level of consumption itself, energy efficiency aims to deliver the same or greater level of services with fewer energy inputs. Energy efficiency refers to "using less energy to produce the same number of services or useful output" (Patterson, 1996, p. 377).

Princen (2005) critiques the efficiency of modern economies as the prevailing organising principle. While efficiency promises maximum output at minimum cost, it frequently results in harmful effects, such as overexploitation of natural resources, ecological degradation, and intensified social inequality. These effects ultimately undermine the very systems on which prosperity depends on. As efficiency is frequently associated with the optimisation of industrial processes, Baumgartner et al. (2022) assert that sufficiency is a voluntary concept. Additionally, it is important to note that this practice is in direct opposition to the concept of forced deprivation. Sufficiency is defined as a lower and upper boundary, indicating that individuals can meet their fundamental needs without expending excess energy. According to Vita et al.

(2019) and Thredgold et al. (2022), both individual households and grassroots communities have been identified as potential sources for fostering voluntary lifestyle changes. Authors, like Schmelzer et al. (2022) posit that these actors present a meaningful opportunity to foster the development of a thriving society, characterised by private sufficiency and public abundance. In this sense, sufficiency is not merely an individual lifestyle choice, rather, it is part of a broader socio-economic transformation that reshapes production and consumption patterns. In line with this argument, Breucker and Toulouse (2024, p. 5) claim that "for lasting change, sufficiency cannot rely solely on individual responsibility and action but requires a societal debate and creating supportive social, infrastructural, and regulatory conditions to overcome the barriers that individuals face to implement lifestyle changes." Thus, sufficiency goes beyond individual decisions and behavioural change heavily relying on structural factors (Flipo et al., 2025).

As the previous paragraph draws distinction between energy sufficiency and energy efficiency, it is equally relevant to distinguish these concepts from related terms such as self-consumption and self-sufficiency. According to Simoiu et al. (2021), the term "self-consumption" is defined as the amount of energy produced that is subsequently consumed internally by the (power) system. "Self-sufficiency" is described as the extent to which a given system can meet its own energy demands through internal production and consumption. A substantial and expanding volume of research has been dedicated to the study of EC and self-sufficiency, as evidenced by the extant literature (Dudka, 2025; Reis et al., 2021; Tsagkari et al., 2021).

## 2.8 Democracy and Sufficiency

There is a growing body of research investigating how democratic governance relates to sufficiency measures. Flipo et al. (2025) argue that because sufficiency policies aim to reduce overall resource use while safeguarding collective well-being, decisions about resource allocation should be grounded in democratic governance. Such an approach ought to prioritise fairness and equity, particularly by ensuring the protection of the most vulnerable groups in the context of limited resources. The authors argue that the development of civic capacity for autonomous governance is essential for the effective exercise of influence over decision-making processes. According to Arnstein (1969), direct participation, through mechanisms such as voting and the exercise of real influence over decisions and outcomes, represents the highest level of citizen empowerment and the cornerstone of energy democracy.

Flipo et al. (2025) advocate for democratizing sufficiency through the establishment of binding rules. These rules should prioritise energy use and curb overconsumption, while also providing appealing alternatives through sufficiency infrastructures. This is particularly limited in the context of national and EU-level policymaking, which often prioritises efficiency and the growth of renewable energy sources over citizen-prioritised sufficiency-oriented measures (e.g. evident in the EU's Fit for 55 package). Lage et at. (2023) find that citizen assemblies have exhibited a greater disposition to support sufficiency policies in comparison to many national governments. Consequently, scholarship underscores that incorporating sufficiency measures should be met with high approval rates of citizens. Chanteloup et al. (2025) discovered that the randomly selected citizens participating in their study expressed a desire for a transformation in the energy system, underscoring the necessity of achieving energy sufficiency. The citizen respondents in this study articulated two distinct interpretations of sufficiency: (a) the reduction of energy waste and (b) the collective and political organisation of a reduction in energy consumption. This distinction highlights that sufficiency is understood by citizens not only as an individual or technical effort to eliminate waste, but also as a fundamentally collective and political project that requires coordinated governance and shared responsibility for reducing energy consumption.

However, Flipo et al. (2025) caution that grassroots initiatives, such as EC, may rely on social homogamy. Individuals involved in such initiatives frequently exhibit commonalities, including shared worldviews. The presence of individuals with similar outlooks, a phenomenon attributable to social selection, is likely to result in the formation of social categories - in- and out-groups. Consequently, the diffusion of culture, the social norms that underpin it, and the similar economic status of these individuals may act as a limiting factor in the democratisation and taking collective decisions about reduction of energy consumption within these grassroots initiatives. In this context, insights from research raise significant questions about the organisation of democracy in the face of socio-ecological crises (Willis et al., 2022). Given the growing recognition that rapid and far-reaching policy interventions are necessary to address these challenges, there remains a limited understanding of how existing democratic systems can support and sustain sufficiency-oriented policies. This points to a research gap regarding the institutional and participatory conditions under which democracy can effectively support the implementation, legitimacy, and durability of sufficiency-focused transformations.

# 3 Theoretical Framework

The analytical framework for this study is based on the broad set of literature presented in Chapter 2 (Arnstein, 1969; Henman & Mont, 2026; Islar & Busch, 2016; Kunze & Becker, 2015; Lage et al., 2023; Petrovics & Savini, 2025; Phōtopoulos, 1997; Snow & Corrigall-Brown, 2015; Sorrell et al., 2020; Tam, 1998; Tsagkari et al., 2021). The analytical lens aims to shed light on practices within the individual level (i.e. sufficiency practices understood as reduction of energy consumption within one's household) and the institutional level (i.e. democratic governance within Energía Bonita, the EC located in La Palma, Canary Islands). This research aims to clarify whether and how the elements connect these two levels (see Figure 3-1). However, the presumed link between democratic governance and sufficiency-oriented practices remains a theoretical assumption, drawing on concepts and theories such as energy democracy, social practice theory or energy citizenship. Moreover, the presumed relationship does not imply causality. One element does not necessarily precede the other, nor do they follow any specific order. Therefore, any assumed link between the two levels of practice and the possibility of the elements connecting them requires empirical research.

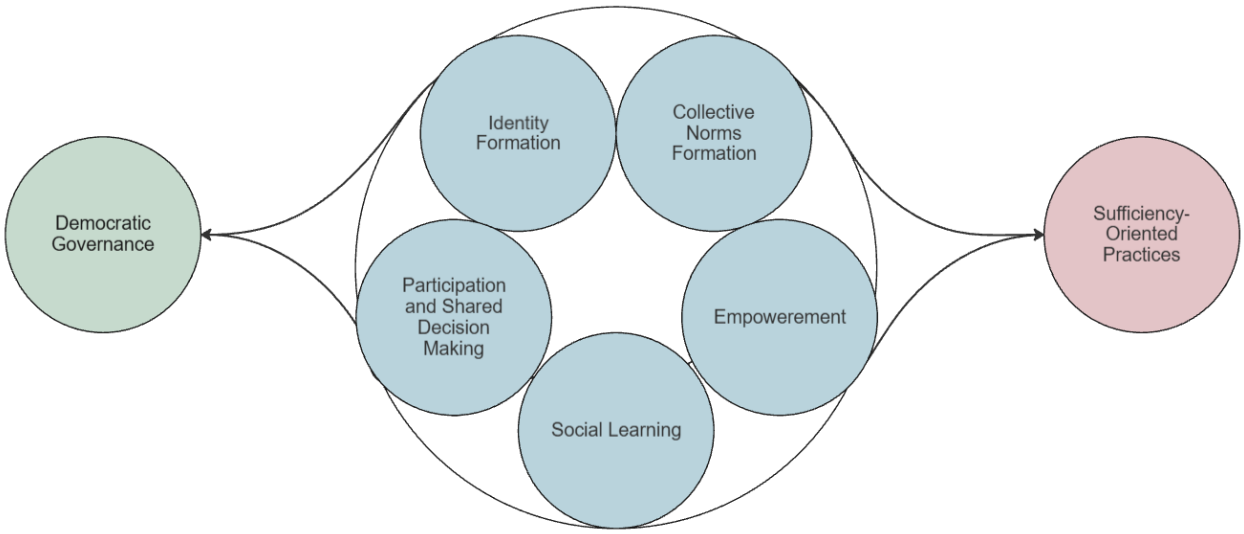


*Figure 3-1. Theoretical Framework – Presumed Link between Democratic Governance and Sufficiency-Oriented Practices*

*Source: Own illustration (the Figure was made in the Miro software)*

# 4 Research Design, Materials and Methods

This chapter outlines and justifies the research design that underpins this study. It further describes methods employed and materials collected for this research and concludes with describing what methods were used to analyse this data.

## 4.1 Research Design

This research employs a qualitative methodological approach, which is well-suited for understanding the meanings that individuals or groups hold about specific social problems (Creswell & Creswell, 2023, p. 193). Through this approach, the study seeks to generate rich, contextualised insights into how participants construct and make sense of their lived realities within the EC. Thus, the goal of this study is not to generalise but rather to shed insights on the mechanisms between democratic governance and sufficiency-oriented practices regarding energy consumption. The considered mechanism under study is as follows:

***Democratic governance*** - participation and shared decision-making - identity formation, empowerment - collective norms - ***sufficiency-oriented practices***

However, it is important to emphasise that the proposed mechanism remains a theoretical assumption and should not be treated as evidence of causal determination. According to Creswell and Creswell (2023, p. 217), qualitative research is based on different assumptions than quantitative research. Thus, this study does not claim direct causality, but instead, it offers an interpretive explanation based on the empirical material. It is imperative to note that the elements within the mechanism do not adhere to the prescribed sequence. For a more illustrative representation of the mechanism and the assumed elements, please refer to Figure 3-1. In this study, the relationship between democratic and sufficiency-oriented practices is investigated through five elements to examine whether and how these elements influence these both democratic governance and sufficiency-oriented practices. Although the primary analytical focus is on these practices, the study acknowledges the possibility of a reciprocal or reserve pathway. Nonetheless, the current RQ and presumed mechanism emerge from academic literature presented in this study. Accordingly, this absence of direct causality can be attributed to the inherent complexity and non-linear nature of social phenomena. Consequently, the research seeks to address this complexity by providing a thorough and detailed account of the issue under investigation. This involves incorporating multiple perspectives, acknowledging the various factors that influence a given situation and placing these within a broader contextual framework. Rather than presenting a linear model of cause and effect, qualitative inquiry conceptualises social reality as a dynamic configuration of meanings and processes that emerge through complex interrelationships (Creswell & Creswell, 2023 p. 195).

### 4.1.1 Single Case Study

This research investigates practices of members of Energía Bonita, employing this EC as a single case study. According to Cresswell and Cresswell (2023, p. 149), case studies involve a "detailed description of settings or individuals, followed by an analysis of data for themes or issues". This definition is applicable to the present study, which aims to gain a profound understanding of the governance and sufficiency-oriented practices in the EC. The consideration is particularly relevant to this study, as capacity to adopt degrowth principles (i.e. democratic governance and sufficiency-practices) cannot be understood as a straightforward or universally applicable process. Rather, it is deeply contingent upon the specific regional,

cultural, and political contexts within which practices are embedded (Hankammer et al., 2021, p. 12). Yin (2009, p. 13) states that a case study "investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident". Therefore, the value of a case study lies in its detailed descriptions and the themes developed within a specific context, rather than in its generalizability (Tsang, 2014). However, this research acknowledges that based on case-based interference traditions, insights may be helpful to other ECs, regarding their governance and sufficiency-oriented practices and plausible mechanisms that connect them (Yin, 2016). Importantly, Yin (2009) distinguishes between descriptive, explanatory, and exploratory case study designs. In line with this typology, the present study takes an exploratory approach, seeking to investigate an emerging area of research and to offer preliminary empirical insights to inform future practical and theoretical considerations. As qualitative research typically relies on the purposeful selection of sites or participants that are particularly relevant to the research question, Energía Bonita was selected as the case study for this research (Tajik et al., 2025). The criteria guiding this selection are outlined below:

*Table 4-1. Selection Criteria for Purposive Sampling of the Case Study*

| | |
|---|---|
| General Selection Criteria | • Legal Form: EU Energy Community framework in accordance with the Directive 2018/2001 of the European Parliament<br>• Community framework: cooperative<br>• Generating 100% renewable energy<br>• Projects already in place (i.e. operating EC)<br>• Island-based EC |
| Degrowth Selection Criteria | • Operating in small, local scale<br>• Deviation from profit maximisation<br>• Democratic governance<br>• Promoting demand side energy sufficiency |

*Source: Own illustration inspired by selection criteria presented by Bartling (2023), Duprez (2024), Kunze and Becker (2015), Tsagkari et al., (2021)*

Energía Bonita serves as a compelling case study, as it fulfils these selection criteria. To verify the information, an extensive review was conducted using a variety of sources. These sources included the RESCoop website, Energía Bonita's website, organisation's statute, direct communication with the organisation's board, media coverage, and EU websites. However, given its alignment with all the criteria associated with degrowth, the EC does not explicitly self-identify as degrowth-oriented. According to Kallis (2018), degrowth is a normatively shaped concept and, in the context of ECs, it may be perceived as controversial or politically charged. Building on this point, Bartling (2023) argues that ECs may not explicitly refer to degrowth, as it currently functions as a conceptual framework, often characterised by its academic, abstract, and visionary nature. For these reasons, the term is sometimes avoided in practice to remain more inclusive and to prevent alienating participants who may hold different personal, political, or ideological perspectives. Consequently, practitioners within ECs may engage in activities consistent with degrowth principles without necessarily employing the term itself, as evidenced by the case of Energía Bonita. Moreover, it is relevant to note that purposive sampling is not free of limitations, especially regarding generalizability and the potential for researcher bias, which may constrain the generalizability of findings to the broader populations (Tajik et al., 2025). Nonetheless, its flexibility and capacity to generate in depth,

information rich data render it valuable for qualitative research, particularly when exploring social phenomena (Creswell & Creswell, 2023, p. 218).

## 4.2 Methods Used and Materials Collected

This research draws on multiple sources of data, a common practice in qualitative research that enables a more comprehensive understanding of the topic by capturing both the perspectives of actors and the broader institutional context (Creswell & Creswell, 2023). These sources in this study include semi-structured interviews, complementary document analysis, and direct observations, all of which are described in greater detail in the following paragraphs.

### 4.2.1 Semi-structured Interviews

The present study is primarily based on semi-structured interviews with open-ended questions, which are intended to provide first-hand insights into democratic and sufficiency-oriented practices among members of Energía Bonita. The objective of these interviews is to obtain the perspectives and experiences of cooperative's members regarding these processes. Semi-structured interviews are a methodological approach that allows participants to elaborate on their motivations, practices, orientations, habits, and feelings of engagement. However, interviews might offer "indirect information filtered through the views of interviewees," which may not necessarily be representative for a wider group of individuals (Creswell & Creswell, 2023, p. 200). This limitation can be mitigated through the inclusion of a sufficient number of participants in the study to reach data saturation (i.e. a moment in qualitative research when new data collection no longer brings new insights, themes or codes) (Saunders et al., 2018). Therefore, within scholarship there is a difference between code saturation, meaning that no new codes emerge, and meaning saturation, when there is an understanding of the issue being investigated. According to Hennink and Kaiser (2022), saturation occurs between 9 and 17 interviews, with the lower number referring to the code saturation and the higher number referring to meaning saturation. Guest et al. (2006) posit that thematic discovery occurs within the first twelve interviews. Additionally, the range criterion considers whether there is enough diversity in codes, shaped by the opposing views, which suggests that all perspectives are represented (Nelson, 2017).

To identify and invite potential participants in the research, an invitation to take part in the study was distributed through Energía Bonita's internal communication channels, namely through the organisation's newsletter. This approach ensured a systematic and transparent recruitment process, providing all members with an equal opportunity to express interest in participating in the interviews. However, the response rate to the newsletter was low. To mitigate this limitation, the researcher engaged in direct, in-person outreach by attending various events where members of the EC were present and personally inviting them to participate in the interviews. The interviews with the members of EC were conducted in person and on-line and lasted between 30 and 90 minutes. A total of thirteen interviews were conducted for this study, of which nine took place in person and four were conducted online. The use of online interviews was necessitated by geographical and climatic constraints, including distance and adverse weather conditions, such as a tropical storm that affected the island during the fieldwork period.

The interviews that were conducted in person enabled the research to take place within the natural setting in which participants experience and engage with issues under study. Conducting interviews face-to-face allowed the researcher to interact directly with participants in their local context, facilitating more nuanced insights into their experiences and perspectives.

As qualitative research emphasises the importance of collecting data in the setting where social processes occur, this approach has been shown to facilitate the capture of contextual dynamics that might not emerge in more detached forms of data collection (Creswell & Cresswell, 2023, p. 193).

All thirteen interviews were conducted in English, as the researchers' level of Spanish was not sufficient to conduct interviews in Spanish. This language constraint constitutes a limitation of the study, as it may affect the depth of expression and exclude potential nuances that participants could articulate more fully in their native language. To mitigate this limitation, the researcher ensured that the participants had a firm grasp on the concepts discussed. Translations into Spanish were provided when feasible or necessary. For instance, the English term "sufficiency" was translated into Spanish "suficiencia." However, the researcher also recognised that the participants might not be acquainted with the concept of energy sufficiency. Consequently, the reduction of energy consumption and its translation to Spanish, "reducción del consumo de energía" or simple wording of "using less energy" were employed in the study.

With the authorisation of the participants, the interviews were documented through audio recording and transcribed using university-approved software, SunetScribe. Recording, transcription files, and personal contact information were treated as sensitive personal data and handled in accordance with established ethical guidelines. The ethical considerations were based on: a) the Lund University PULU registration, which outlines the ethical guidelines for this research, as it is part of the Post-Growth Business: Exploring the role of Business in post-growth economy (PGB) research project (project activity number: 160125), b) the use of informed consent forms explaining how the data is securely stored on a dedicated Lund University Box folder belonging to the project and detailing participants' rights (please refer to Appendix A); and c) the ethical approval granted by the Swedish Ethical Review Authority (Etikprövnings Myndighet: 2025-02145-01) for the PGB research project.

The interview guides were made available to participants in advance upon request. This approach was adopted to ensure transparency in the research process while enabling participants to familiarise themselves with the topics to be discussed. Conversely, when the interviewee did not request the guide in advance, it fostered greater spontaneity during the interview, thereby facilitating more in-depth and candid responses from members. At the same time, using a semi-structured interview guide consisting of open-ended questions ensured consistency and comparability across the interviews (Yin, 2018). The interview guide can be found in the Appendix B.

Moreover, the study was subject to potential limitations related to self-selection bias among members. Participants who chose to take part in the interviews were likely to be individuals already actively engaged in the EC, especially in decision-making and/or sufficiency-oriented practices. Such individuals may be more inclined to participate in the study due to their familiarity with, and interest in, the research topics. As a result, the sample may disproportionately represent more engaged, knowledgeable, or motivated members, while underrepresenting fewer active participants or those with limited awareness of these issues. This introduces a potential bias in the data, as the perspectives captured may reflect a more informed or favourable view of democratic and sufficiency-oriented practices than is present across the broader community.

### 4.2.2 Complementary Document Analysis

A complementary document analysis was conducted to support the findings from the qualitative interviews and to provide contextual background to the investigated case of Energía Bonita, with particular focus on its governance and sufficiency-oriented practices (Bowen, 2009; Creswell & Creswell, 2023). Document analysis can be defined as a "procedure for reviewing or evaluating documents, both printed and electronic" (Bowen, 2009, p. 27). Document analysis is commonly used alongside qualitative research methods to enrich and validate other forms of data collection. Employing multiple sources and methods in qualitative research is particularly advantageous, as it allows for triangulation of findings and enhances the internal and construct validity of the study (Bowen, 2009; Creswell & Creswell, 2023).

For the complementary document analysis, a range of institutional, legal, and media sources relevant to the case study were employed (please refer to Chapter 5 Case Background). First, the statute of Energía Bonita was examined to understand the organisation's formal rules, governance structure, and decision-making procedures. This internal document offered insights into how the cooperative is organised and how participation and responsibilities are structured within the cooperative. Second, relevant Spanish legislation on collective self-consumption was reviewed to situate Energía Bonita within the national regulatory framework. In Spain, collective self-consumption is regulated by several legal instruments, including Royal Decree 244/2019 (BOE-A-2019-5089 Real Decreto 244/2019). This decree established the administrative and technical conditions for shared self-consumption. Subsequent amendments, such as Royal Decree-Law 20/2022 (BOE-A-2022-22685 Real Decreto-ley 20/2022), extended the permitted distance between generation and consumption points to two kilometres, and during the time of writing this thesis it was extended to five kilometres through Royal Decree 7/2026 (BOE-A-2026-6544 Real Decreto-ley 7/2026). These regulations are particularly relevant to the EC initiatives because they define the spatial and technical conditions under which locally generated renewable energy can be shared among members. Third, media and organisational publications on Energía Bonita were analysed to understand how the initiative has been represented publicly and within the EC initiatives. This included articles and case studies published by organisations such as RESCoop. Finally, European Union policy documents and informational resources were consulted to contextualise the case study within broader European energy governance frameworks. These documents included EU policy summaries and official webpages outlining the regulatory and policy environment for EC and citizen participation in energy transition.

### 4.2.3 Direct Observations

In addition to semi-structured interviews and document analysis, direct observations were conducted to gain more in depth, contextually grounded understanding of lived experiences of members of Energía Bonita regarding democratic and sufficiency-oriented practices. Yin (2009, p. 102) emphasises that conducting a case study in real-life environment constitutes a central methodological advantage, as it facilitates the collection of empirical insights through direct and contextually situated observation. According to the author, the observations range from formal to casual data collection. Observational evidence can be a useful tool in providing additional information about the subject being studied. This additional information can take the form of new dimensions, as "it is an attempt to capture the whole picture that reveals how people describe and structure their world" (Cresswell & Cresswell, 2023, p. 219).

These direct observations covered a range of events and activities, allowing researcher to examine settings in which community interaction and decision-making processes take place.

Observed activities included participation in a community book club, where discussions and collective reflections provided insight into shared meanings and value formation. Engaging in environmental practices, such as almond tree planting activity, which illustrated dimensions of ecological engagement and social interactions. In addition, attendance at the information session in Tijarafe offered insights into how knowledge is disseminated and discussed in a semi-formal setting. Further observations were conducted during a visit to the community's new office and shared space. This provided an insight into how spatial arrangements reflect the institutional practices. Broader socio-political contexts were also included, through conversations with local residents, which shed light on the local governance dynamics. Moreover, participation in the Las Juanas women entrepreneurship fair offered perspectives on local production, gender dimensions, empowerment, social relations and discontent with globalisation. Finally, a visit to the Los Guinchos power plant enabled an understanding of the energy production infrastructure and its relation to the community's energy discourse. Together, these observational sites provided a multifaceted empirical basis for analysing how democratic participation and sufficiency-oriented practices are situated within everyday life and institutional contexts.

## 4.3 Methods Used to Process Information

Firstly, transcriptions were manually checked for mistakes. Then all collected material was transferred into NVivo, qualitative data analysis software accessed via the Lund University software database. Subsequently, a thematic content analysis (TCA) was employed to identify, analyse and interpret recurring patterns within the data. This approach is particularly well-suited to structuring qualitative material and deriving key themes from participants' perspectives, as it enables a coherent and transparent analytical process (Braun & Clarke, 2006; Creswell & Creswell, 2023). However, it is important to acknowledge that the coding process is shaped by the researcher's interpretive decisions. The selection, categorisation and prioritisation of codes are influenced by subjective judgements, which may introduce a degree of bias into the analysis (Creswell & Creswell, 2023, p. 222). Consequently, reflexivity was maintained throughout the coding process to critically engage with these potential influences and ensure a transparent interpretation of the data.

Collected data was coded deductively based on the themes and concepts that emerged from the literature review (please refer to Chapter 3 Theoretical Framework). It is imperative to acknowledge that the assumed relationship between democratic and sufficiency-oriented practices based on theory was used to guide the data analysis, the analysis was not fully predetermined by it. In line with the qualitative inquiry, the research design acknowledges reflexivity (i.e. researcher's values, personal background etc.) (Creswell & Creswell, 2023, p. 194). This approach enables an iterative engagement with the data allowing initial assumptions to be revised throughout the analytical process. Accordingly, the study adopts an inductive approach to results that facilitates refinement of the analytical framework, as new insights might emerge from the empirical material. While the theoretical framework informed the initial coding scheme, they were not applied in the deterministic manner. Instead, coding remained open to new patterns and novel themes arising from the data. This methodological openness strengthens the validity of the findings by ensuring that interpretations are responsive to the complexity of the data, rather than constrained by prior assumptions.

# 5 Case Background

This chapter provides contextual background for the case under study. The material presented is derived from the complementary document analysis, which aims to situate the study within its specific geographical, institutional and socio-political setting. By incorporating these sources, the chapter facilitates understanding of the context in which the case is embedded.

## 5.1 Energy Community as a Legal Entity

ECs are decentralised energy initiatives that are collectively owned and democratically governed, enabling citizens and local stakeholders to participate in energy production and management (Walker & Devine-Wright, 2008). Within the EU, ECs have received growing attention following their formal recognition by legislative frameworks, including the European Renewable Energy Directive (Directive 2018/2001) and the Internal Electricity Market Directive (Directive 2019/944) (Peeters et al., 2025). In particular, the advocacy efforts of the European Federation of Energy Communities (RESCoop) have been instrumental in elevating the EC model onto the European policy agenda, resulting in ECs being recognised as legal entities (Huybrechts et al., 2018; Petrovics & Savini, 2025).

The introduction of this concept into European legislation made it possible to distinguish between Citizen Energy Communities (CECs) and Renewable Energy Communities (RECs). These two types of energy communities bear some resemblance to each other due to the overlap between REC and CEC (please refer to Appendix C). The European Directive 2018/2001 defines REC as legal entities, "(a) which, in accordance with the applicable national law, is based on open and voluntary participation, is autonomous, and is effectively controlled by shareholders or members that are located in the proximity of the renewable energy projects that are owned and developed by that legal entity; (b) the shareholders or members of which are natural persons, Small and Medium Enterprises (SMEs) or local authorities, including municipalities; (c) the primary purpose of which is to provide environmental, economic or social community benefits for its shareholders or members or for the local areas where it operates, rather than financial profits". The concept of CEC, as promoted in the Internal Electricity Market Directive (IEMD) (EU 2019/944), has a broader spatial extent than the REC, but slightly narrower features (Barabino et al., 2023). RESCoop attempted to compare CEC and REC (please refer to Appendix D). However, the legal differences described in the European Directives are not central to this thesis. Nevertheless, it is relevant to distinguish between the two concepts, as this research will focus on REC, taking the Energía Bonita as a case study.

## 5.2 Energía Bonita

This research focuses on Energía Bonita, an EC located in La Palma. La Palma is one of the eight islands in the Canarian archipelago, an autonomous community of Spain, located in the Atlantic Ocean near the coasts of Western Sahara and Morocco (please refer to Appendix E). The island has an area of approximately 708 square kilometres and a population of around 82,000, with Santa Cruz de La Palma serving as a capital of the island (European Commission, 2026a, May 12). Embedded in the island community, Energía Bonita operates within this local context with the aim of producing and consuming renewable energy locally, managed and controlled by the island's residents. This insular EC relies on solar power as its primary renewable energy source.

The EC was launched in August 2021 as a legal entity in the form of a non-profit consumer and user cooperative within the framework of Directive (EU) 2018/2001 of the European Parliament and Royal Decree-Law 23/2020 (La Palma Renovable, 2021). As of May 2026, the Community consists of 278 individuals and twenty organisations (Energía Bonita, 2026a, May 12). Energía Bonita is composed of individuals, small and medium-sized enterprises, and local administrations. A core component of the community's mission is to participate in the clean energy transition, reduce energy consumption, lower energy costs, and combat energy poverty by ensuring inclusion regardless of socio-economic background (Energía Bonita, 2026b, May 12). In this context, Energía Bonita promotes projects to produce and share renewable energy among shareholders to build a new energy model based on saving and efficiency. Beyond renewable energy production, Energía Bonita acknowledges that the "greenest" electron is the one that is not used, reflecting its commitment to energy sufficiency as central pillar of the energy transition (Energía Bonita, 2026a, May 12). Accordingly, Energía Bonita seeks to engage energy community stakeholders in collective efforts to reduce energy consumption. The EC is developing several self-consumption projects across the island that are progressing through various stages of implementation. The EC plans to establish twenty collective self-consumption installations, with at least one in each of La Palma's 14 municipalities (Energía Bonita, 2026c, May 12).

### 5.2.1 Objectives and Actions

The objectives of Energía Bonita encompass two primary goals. Firstly, the organisation seeks to educate members about energy consumption and provide training to help them reduce their own usage. Secondly, it aims to initiate discussions concerning the socioeconomic changes that are imperative for achieving 100% renewable energy on the island. Energía Bonita's actions include providing pilot training materials and workshops on energy consumption and practical energy savings. Moreover, the organisation emphasises that debates are crucial for the formulation of strategies that catalyse island-wide socio-economic transformations (European Commission, 2026b, May 12). According to Energía Bonita this community-driven transformation should be rooted in strong engagement among members. The energy community engages in activities, such as two-day retreat with communal meals and overnight stays, which aim to strengthen community relationships and share a sense of purpose. However, a challenge arises as there is a small group of highly engaged members. Thus, as acknowledged by the team the struggle is not to prioritise high participants numbers but rather see the value of current engagement (European Commission, 2026b, May 12).

### 5.2.2 Governance and Decision-Making in Energía Bonita

The formal governance and decision-making within Energía Bonita occur through Governing Council and General Assembly. According to the Statute, the Governing Council functions as the "governing, management, and representation body of the Cooperative, which is responsible for direct and permanent control and supervising its management" (Article 47) (Energía Bonita, 2023). The Council is responsible for several functions, including the admissions and dismissals of members (Article 9, Article 13) and the presentation of annual accounts (Article 35). The organisation's nine members, who serve without compensation, are elected to three-year terms, with one-third of the members being renewed annually (Article 49, Article 50). The General Assembly of Energía Bonita convenes on an annual basis to reach pivotal decisions within the cooperative. The decision-making process is conducted through a democratic majority vote, with the option of raising one's hand to indicate one's vote. All members of the EC are invited to participate in the Assembly (Energía Bonita, 2023).

## 5.3 Energy System in La Palma

La Palma's power grid functions as an isolated island system. This means that it is not interconnected through submarine cable with other islands or with the peninsular power grid, making the energy system structurally vulnerable (Fernández Arozena, 2025, May 8). Accordingly, the system lacks the capacity to receive assistance from other components in the event of unexpected grid disruptions (Peña et al., 2025). As a result, the management and operation of La Palma's grid differ significantly from interconnected systems, requiring higher reserve capacity to maintain reliability. For instance, the ratio of total installed capacity to peak demand exceeds 2.6 on the island. Moreover, the system is characterised by a relatively large number of generation units for a small island, contributing to elevated generation costs (Fariña-González et al., 2025). Currently, the thermal power plant of Los Guinchos, situated in Breña Alta (north of Santa Cruz de La Palma), stands as the sole facility with sufficient capacity to meet the electricity demands of the entire island (for picture see Appendix F). In 2017, peak demand on La Palma reached 43.84 megawatt, according to hourly data (Clean Energy for EU Islands Secretariat, 2020). This single conventional power plant is responsible for generating approximately 92% of the island's electricity, as illustrated in the Appendix G (Fariña-González et al., 2025). Constructed between the 1970s and the early 2000s, the plant's generators consist of large displacement diesel engines that have already surpassed 400,000 hours of operation in many cases. This volume of hours is double the technical limit recommended by the manufacturers and based on operational experience with this type of machinery (Fernández Arozena, 2025, May 8).

Regarding consumption, households constitute the primary source of electricity demand in La Palma. In 2023, the residential sector accounted for approximately 52% of total electricity consumption on the island (see Table 5-1). Kalubowila and Arambepola (2025) emphasise that globally, households play a leading role in GHG emissions due to their consumption behaviours, shaped by geographic, economic and lifestyle factors. The primary factors contributing to a household's carbon footprint are electricity consumption, transportation, and the use of fuels for cooking (e.g. liquified petroleum gas, firewood). Consequently, households could be considered the primary actors in decarbonisation plans, as they can both support the electricity generation and reduce own electricity consumption (La Palma Renovable, 2026, May 12).

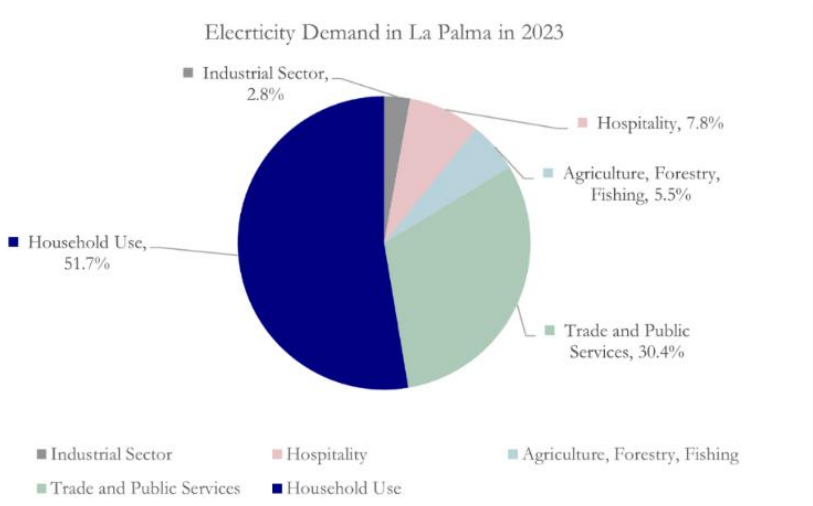


*Figure 5-1. 'Electricity Demand in La Palma in 2023'*

*Source: Own illustration, information from La Palma Renovable (2026, May 12), (made in Excel)*

# 6 Results and Findings

This chapter presents results and findings from the qualitative data collected through semi-structured interviews and direct observations. The analysis is guided by the conceptual framework outlined in Chapter 3. However, this framework is not applied in a rigid manner, instead it serves as a guiding lens, allowing for themes and findings to emerge from the data.

## 6.1 Democratic Governance

### 6.1.1 Democratic Access to Influence

Throughout interviews, members placed significant emphasis on Energía Bonita's democratic governance structure in decision-making processes. Members noted that there are numerous formal and informal opportunities through which they can influence energy governance. These opportunities include the ability to vote in the General Assembly (with one person one vote decision-making structure), the role of a board member of the Governing Council, and involvement in collective spaces, such as energy saving working groups or book club meetings. A particularly significant empirical insight emerging from the data shows how members perceive and define democracy itself. Several members distinguished between a narrow definition of democracy understood as voting and a broader view of engaged democracy understood as active participation, learning and shared responsibility, for instance illustrated by one of the members:

> "It depends on how you see democracy. If democracy is a matter of voting, then I don't know how much it actually influences it [energy reduction]. If democracy includes education, which I think it should, then I do think it has an influence. By being a more active and actively informed citizen, I think you're automatically going to make some change in your energy behaviour. And maybe the fact of having or feeling that you have more power also makes you more willing to do your part." (Member 8)

This quote illustrates that the EC members' direct involvement in decision-making processes offers them the space for learning and becoming more aware of the energy system and consumption. Throughout the interviews, it became apparent that becoming more informed and engaged within the EC fosters changes in energy behaviour. This occurs not because of pressure, but because of interaction with others and learning or being reminded of the reasons to reduce energy consumption and how to accomplish this goal on a practical level.

> "The world is changing because of energy consumption. So, a democratic process will put that into your face because you are active around the table. It is educational really." (Member 7)

A number of members described the General Assembly as "most devoted to the bureaucratic parts" (Member 1), with limited space for ideological discussions. However, to increase participatory governance, Member 13 mentioned that, before the General Assembly, the EC hosts pre-assembly spaces where people can raise issues in a more informal setting. These issues will subsequently be addressed in the General Assembly. Currently, these meetings are more informal, but one of the Governing Council members hopes they will become more formalised in the future.

Subsequently, most members pointed out that discussions mostly happen in smaller settings, such as working groups or book club meetings. Members emphasised that in the context of Energía Bonita, voting in a General Assembly that happens once a year is insufficient to change

energy behaviour. Instead, members noted that participation impacting reduction of energy consumption occurs when it includes opportunities for learning and deliberation.

Members also indicated that active democratic participation within the EC is challenging. Some noted that current societies are not used to participatory democracy, and that learning to govern collectively takes time. One of the members pointed out that in the face of rising far-right populism, it is more important than ever to "fix our democracies" (Member 8) and provide opportunities for people to (re)learn how to actively participate in decision-making processes.

> "Our democracies are not in good shape. And I think part of it is how they are being managed, like how the systems work. And I feel like energy communities or energy cooperatives have a different system, which is more direct, there is more of a stake that people have. (...) It's not easy. We're not trained to participate in a more active democracy yet." (Member 8)

Across the interviews, a recurring theme is the diversity within the EC membership, particularly in terms of participants' knowledge of socio-environmental issues and levels of engagement. Several members noted that some individuals attend General Assembly meetings with limited understanding of the EC's activities, sometimes joining the EC simply because they were encouraged by people in their close environment. However, this perspective is not universally shared. In contrast, one member suggested that those who attend General Assemblies are generally well-informed and share a common understanding of key issues, as illustrated:

> "I think everyone who goes to these meetings (General Assembly) already has a fair idea of what the problems are… I think we're all on the same page, really, with the problems of self-sufficiency on the island." (Member 12)

This view implies that, for some members, participation in assemblies reflects a baseline level of awareness and alignment, particularly around shared local concerns such as self-sufficiency. Nonetheless, it does not imply that people who join have the tools to address these problems yet.

Additionally, it has been mentioned by several members that it is challenging to mobilise people to participate in the General Assemblies, since the democratic decision-making within the cooperatives on the island are associated with the banana plantation cooperatives, which focus on profit maximisation. These cooperations in the view of members offer limited space for meaningful democracy, as power is concentrated in the hands of the few people. Therefore, throughout the interviews, it was highlighted that people on the islands do not understand a cooperative model, since they are mainly familiar with unjust banana plantation organisations, as noted by one of the members:

> "They didn't work properly as a cooperative, the entity was a cooperative but inside they didn't work as a cooperative, because they have a CEO and they decide everything and the farmers just bring the bananas to the cooperative. So now in the Canary Islands we are last these five years, six years, the new cooperative that really wants to have this democracy inside and are moving to fight for a different model of cooperatives." (Member 3)

Therefore, the historical and cultural context of the local democratic decision-making process also influences people's involvement and perception of governance. In light of these considerations, one member expressed satisfaction with the number of individuals who attend the General Assembly and exercise their right to vote, stating:

> "There is actually quite a lot of scepticism towards cooperatives because of the banana cooperatives, which are more commercial and aren't actually democratic. So even people are surprised at how many people show up at our Annual General Assemblies and that you actually get to vote." (Member 8)

Furthermore, it was also noted during direct observations and conversations with members that the current capitalist system leaves little room for volunteering and leisure time, hindering people's ability to allocate their free time to initiatives like Energía Bonita. It was noted during informal conversations that the Board members are not remunerated for their work, therefore it can be challenging for the EC to gather interest in or diversify the board of the Governing Council.

### 6.1.2 Local Democratic Action in the Face of Systemic Inaction

Across interviews, members framed energy use and energy consumption not as merely private household matters, but as political issues embedded in relations of power, inequality and systemic dependence on powerful fossil companies. Currently, energy governance and consumption in the perspective of members' is inseparable from state-corporate collusion, geopolitical dynamics and private market structures that limit democratic control over basic societal needs, as illustrated:

> "Everyone knows that politicians are in the pocket of these energy companies. I believe they share the same interests to protect these big companies. In Spain, for example, many politicians leave parliament to work for one of these companies." (Member 4)

> "I don't trust the system. We're in the hands of politicians, multinationals, banks. And I think that's wrong by definition. I think our world is already wrong" (Member 11)

Energy prices were frequently described as artificially stimulated through speculative markets and geopolitical events far removed from the lived realities of island residents. Members drew attention to how global conflicts or decisions taken in political centres such as the United States, or the Middle East directly affect energy prices in La Palma, despite the island having no say in these processes. Within this context, the substitution of fossil-fuel-based energy with locally owned renewable infrastructure was not viewed solely as a technical transition, but as a political intervention. By reducing reliance on fossil fuel companies, members understand renewable self-production as a partial withdrawal from a system they regard as unjust, extractive, and externally imposed. Importantly, members linked energy reduction itself to political action. Mitigating demand of energy consumption was described as a way of reducing dependence on political elites and corporations, rather than a lifestyle choice alone. In this sense, energy sufficiency practices are not framed as sacrifice, but as a form of resistance within the limits of what individuals and communities can control:

> "The very existence of Energía Bonita gives me some kind of hope that maybe we can organise some resistance and resilience." (Member 12)

Thus, members claimed that they do not respond with apathy. Instead, they articulate a form of localised political engagement, grounded in the belief that change is most feasible where

people have direct influence. For many, the motivation to join Energía Bonita stems from a desire to move away from what they perceive as a harmful, exploitative system and towards forms of organisation where decision-making power is distributed more evenly.

> "We tend to look at power like it's something undefined above, big guys, rich people making decisions for us, which is true. But in democratic countries, we also have a say." (Member 11)

Even though members are aware of the contradictions and inaction of politicians, there remains a hope in community processes, and the notion that the collective voice of individuals hold some influence over the top-down organised world. An interesting finding concerns how members of the EC navigate perceived contradiction between political inaction at the higher levels of governance and meaningful action at the local level. A considerable number of members articulated a degree of scepticism regarding domestic and international politics. This scepticism was expressed in the perceived absence of substantive responses to pressing issues such as climate change and environmental degradation. Climate denial, short-term economic interests, and electoral calculations were frequently cited as barriers to effective top-down change, as illustrated:

> "There's a contradiction between what we, as consumers, can do and what politicians do. They don't care much. You hear Donald Trump speak, and he doesn't care. He doesn't think it's a problem that the Earth's temperature is increasing. He doesn't believe in any of that. So, that's where we are. So, we can do things that are in our hands, maybe it's not that much, but it is something." (Member 4)

Yet another example comes from the member, who points to the power big energy companies hold over the energy system and their control over the finite fossil fuel resource. Subsequently, they characterise ECs as a tool to address this contention. Participation in the EC is therefore viewed as a move away from harmful, privatised energy markets.

> "We have to dispute the energy [system], and make it a public domain. But the most effective way of doing that, in my point of view, is not top down, it's bottom up. (...) With the energy communities (...) you start to dispute, you are taking away the most powerful tool from big players, which is scarcity and control. This is where it should go. But it has to be bottom up because forget about trying to make a systemic change otherwise." (Member 7)

Among members, there is discontent with the current system and disbelief that systemic change will happen in the top-down manner, instead, there is hope in the participatory democratic shift away from the powerful elite who controls the energy governance with economic power.

## 6.2. Participation and Shared Decision-Making

### 6.2.1 Learning as Ongoing Participatory Process

Throughout interviews it has been prevalent that learning is a continuous process that is intentionally embedded within the EC. Many members mentioned a monthly newsletter, which does not only contain updates on the work of Energía Bonita, but also includes a training component related to energy or broader socio-economic issues. For example, Member 13 mentioned that the purpose of this component is for people to learn new things and to

"influence a way of thinking around energy and also how to use energy". There are also social media accounts of the EC on LinkedIn and Instagram, where information is disseminated in a more accessible way. Therefore, participation and learning are not limited to physical attendance at meetings, instead they are diffused through multiple channels. However, one of the members (Member 6) highlights the dependency on technology for participation and formalities, pointing to the challenge of digital exclusion among vulnerable groups, such as elderly. Importantly, the content of learning extends beyond technical measures on how to reduce energy consumption to include alternative economic models and solidarity-based thinking, which aligns with the depoliticisation of energy discussed in the previous section.

Several members also highlighted efforts to reduce barriers to learning, such as making book club materials available through libraries. This signals an awareness that learning must be inclusive and low-threshold if it is to reach a diverse group. Building on this point another finding emerges (based on interviews with e.g. Member 6 and 13) that learning ought to accommodate diversity of people's starting points and needs regarding reduction of energy consumption. People are at different stages of their life, some of them might be young parents with small kids, elderly, disabled people. In this context, it is imperative to acknowledge that individuals demonstrate a diverse array of needs and different energy consumption patterns and habits. Therefore, the emerging findings of the present study indicate that a reduction in energy consumption can be considered as a spectrum.

Furthermore, one member expressed their opposition to imposing limits on energy consumption, drawing attention to the diverse circumstances and needs of individuals. Several members expressed reluctance regarding such restrictions, often associating them with interference in personal needs and everyday life (Member 6). Also, Member 13 notes: "We learned that we have to have different solutions for different people. We cannot put the solution for everyone." Consequently, in the view of members, learning about reduction of energy consumption is bound to one's needs and ability to implement it on a personal level. Therefore, learning does not convey a single "correct" model of energy behaviour but rather invites reflection within the community, recognising that energy practices are shaped by income, household composition, health, and infrastructure. Consequently, this finding suggests that learning is an adaptive and plural process, rather than a prescriptive end goal.

In the context of energy poverty, educational initiatives have been shown to illuminate an additional facet of energy use. Accordingly, the EC makes an effort to educate vulnerable groups on their rights in the energy market. Individuals encountering difficulties in meeting their electricity bill obligations may be formally documented within the public registry. In the event of their inability to settle their account balance, they are guaranteed legal protections, including the assurance that their electricity will not be disconnected. However, one of the members highlights that many people are not aware of it and acknowledges limits of the EC to reach vulnerable groups: "The reality is that it's difficult to reach a lot of people that are vulnerable." (Member 13). This finding underscores a pivotal tension that participation fosters learning among engaged members, whilst structural barriers impede the accessibility of these processes. This suggests that a degree of caution should be exercised in regard to the assumption that democratic participation is indicative of learning, given that learning is unevenly distributed.

Moreover, members noted that the initial motivations to join the EC vary. For instance, Member 1 indicated that they joined not only because of the environmental and economic reasons, but because they wanted to be more involved in the social issue, to be able to learn, deliberate and participate in the meetings. Some of the members were not even receiving the

renewable energy from the photovoltaic (PV) plants due to the Spanish law that restricted the radius of connection between households and PV plants to two kilometres. Consequently, it is an interesting finding that some of the members were not even directly benefiting clean energy, but rather they joined for community support and space to learn and deliberate the alternative energy system and energy use.

While most members described themselves as already energy aware when joining the EC, they noted that participation in the cooperative broadened their awareness from environmental concerns to social, political and justice-related dimensions of energy use. For instance, Member 12 articulated this transition in their perspective by stating:

> "I've become aware of the different dimensions to the problem. You know, I would have come in worrying about the environmental aspects and nowadays, I can see more the social aspects. It's been an education for me." (Member 12)

A key empirical insight is that participation does not merely reinforce environmental values but reframes the meaning of the problem. Energy consumption becomes connected to issues such as poverty, inequality and collective vulnerability, issues amplified in the island context where "everything is interconnected, and there is no social justice or environmental protection without an equitable distribution of resources" (Member 10). Therefore, involvement and collective decision-making with the EC demonstrate that reducing energy consumption is not merely an environmental concern, but it is also situated within social structures.

During the interviews, when asked about the reflection on their energy use and particular moment, experience or decision-making, members were generally unable to identify a single event or decision-making mechanism that had changed their perspective. Instead, they described learning as an ongoing, participatory process, shaped by various reading materials, meetings and deliberations, as exemplified by the quote:

> "My views were actually shaped by the reading materials I was offered, the books we were recommended and the links that appeared in the monthly newsletter sent by the main council to all members. (...) The book club is very important, not only because of the actual books that we read, but also because of the discussion that appears." (Member 1).

This is further reflected in observations of the cooperative's book club discussions, which frequently engage with topics such as economic alternatives, governance systems, the politics of energy and consumption, the state of democracy, local activism, and market privatisation. Through direct observations, these discussions were characterised by a diversity of viewpoints and lively exchanges, highlighting the plurality of perspectives within the group. This variation in learning trajectories reinforces the idea that participation is not a one-off moment, but a cumulative and evolving process through which awareness develops unevenly across members. Additionally, members during the interviews noted how participation functions as a learning process that links democratic engagement to behavioural change. For example:

> "I think [Energía Bonita] changed my idea because the more you get involved, the more you know, the more you are influenced and the more you are concerned about the crisis. You try to change your habits, or at least I do. (...) In the world, we think we can just vote, for me, it's about changing my habits and my life. [Participation] influenced my habits, [showing me] parts where I could do more things." (Member 2)

This member describes a cumulative mechanism, as deeper involvement leads to greater knowledge, which in turn increases concern about the crisis and motivates changes in everyday habits. Thus, in the view of the members, making a difference in the world extends into personal daily practices. The member rejects the idea that one can only make a difference by voting in political elections, instead they believe that change is meaningful at the institutional and personal levels, as it requires changes in habits and lifestyles. This suggests that participation within the EC makes consumption choices relevant sites of action. Moreover, the quote highlights that participation does not directly impose behavioural changes but rather it reveals possible spaces for action, showing where members can improve their consumption habits. This reflects an awareness-raising process in which individuals come to recognise their own capacity to act within structural constraints. The emphasis on "at least I do" also indicates voluntariness, reinforcing that sufficiency-oriented practices emerge through learning rather than coercion. Therefore, energy sufficiency is not viewed as a sacrifice, but it is an outcome of increased understanding and engagement.

### 6.2.2 Knowledge Acquisition Through Workshops

Workshops, established energy poverty and energy savings groups emerge in the data as a crucial bridge between learning and action. Throughout interviews, this participation was described as giving people tools that translate knowledge into practical measures and competencies. These in turn, enable members to take control over their energy practices and market relations. Member 10 described how a workshop on understanding electricity bills led to a change in the energy provider:

> "After a workshop organised by Energía Bonita that taught us how to understand an electricity bill, I realised that the rate the multinational energy company was charging me was exorbitant. I switched my contract to Som Energia. (…) Also, Energía Bonita organises energy-saving workshops with the participation of its members. We try to learn every day and improve our relationship with energy." (Member 10)

These quotes illustrate an outcome of participatory learning, where the knowledge gained enables members to question existing market arrangements and make more conscious choices. Importantly, members emphasised that while the amount they pay for energy, often perceived as significant, it is not the primary motivation for participating in this alternative governance system. Rather, greater emphasis is placed on who benefits from the energy system. In this sense, the knowledge acquired through participation plays a key role in enabling members to critically assess and, in some cases, consciously reject the extractive structures associated with major fossil fuel companies.

Through social interaction and sharing members experiences and practices on how members reduce energy usage, spread their knowledge, and become "energy saving experts." In the interviews it was noted that people would prefer to speak in positive terms on what has worked for them, rather than criticizing someone for their overuse of energy. An example comes from Member 13:

> "I did that and it worked for me. So, these people are learning and sharing with others, then suddenly like they're becoming kind of experts and that's something good (...) That's the goal, kind of like, we get more experts." (Member 13)

Moreover, members, notably those on the Governing Council, have asserted that there should be a reduction in the dependency on the small number of individuals who are members of the Council. The EC's objective is to disseminate knowledge of energy reduction practices to all

individuals, thereby enabling them to spread their knowledge further. This is an instance of interpersonal communication by way of mouth-to-mouth exchange, in which the significance of interpersonal relationships is highlighted. As one member described participation in the EC provides not only a space for learning about energy, but also an opportunity to connect with others engaged in broader socio-environmental initiatives:

> "It has helped me to learn and become more aware of some things related to energy, to meet other people from the Island who are part of associations or cooperatives of the social and solidarity economy that fight for food sovereignty, the recovery of land for organic agriculture, the empowerment of women (for example: Kooperativa La Cernícala and Oficina Agroecológica)." (Member 10)

This highlights how the cooperative functions as a social and educational space, where learning extends beyond energy issues to include exposure to alternative models of food production, land use, leading to community empowerment. This aspect allows people to connect and give them space to address wider socio-ecological issues and expose them to tools that solve problems locally. Therefore, a finding that emerges from the data shows that there are spillover effects of participation in the EC in the context of sufficiency, regarding food sovereignty, or less privatised vehicle dependence in transportation. Through direct observation and interaction, it became evident how interconnected these initiatives are. For instance, I was invited to an event for women entrepreneurs in La Palma "Las Juanas," where representatives from the EC were present alongside members of Oficina Agroecológica Cooperative. Such encounters illustrate the strong links between energy, food systems, and local social networks, highlighting how the cooperative functions as a space for mutual learning and growing awareness. At the same time, this interconnectedness also reveals a potential limitation - participation tends to concentrate among a relatively small group of highly active individuals who are engaged across multiple initiatives. Additionally, the cooperative fosters engagement and learning through cultural initiatives such as the co-organisation of the "Beautiful Energy Festival" (*Festival de la Buena Energía*), where interaction with art plays a central role in shaping how energy issues and consumption are understood and experienced. As described by one of the members, the event brought together a wide range of art and educational activities over several days:

> "We went to a museum, we had DJs, we had different activities, talks, art. (...) We had courses for the members and also for learning about energy poverty, for how to reduce your consumption, understand your energy bill." (Member 3).

This illustrates how the cooperative moves beyond conventional, information-based approaches to energy education by embedding learning within art and cultural expression. Through music, exhibitions, and creative workshops, concepts such as energy consumption and energy poverty are translated into more accessible, engaging, and emotionally moving forms. For example, members mentioned film screenings, where to watch the movie, participants first had to cycle to generate the necessary energy to project the film. This setup helped illustrate the amount of energy required to power everyday activities. They also referred to dance performances, violin concerts, and storytelling activities, including competitions where participants could submit written stories and win a prize. Collectively, these engagement with art formats offers a shift in how energy is perceived and translates it into lived, sensory experiences, making consumption more visible and socially meaningful.

## 6.3. Identity Formation and Empowerment

### 6.3.1 Feeling of Belonging

A central finding emerging from the collected data is the importance of identity formation within the EC. Throughout interviews, members emphasised how participation fosters a sense of belonging, shared responsibility, and collective awareness. As one of the members stated, "You feel like you're part of something, you're more aware of the things you do" (Member 10). It has been emphasised that awareness of energy use is not only produced through information and education, but also through the emotional bond of belonging and the social experience of cooperation.

Most members mentioned that the unique characteristics of island life, such as short distances and limited anonymity, make Energía Bonita a space for social connection and trust-building. Member 3 made an analogy between the cooperative and family settings, saying that being part of the EC is "a way to share, to communicate, to feel a family, to know each other." They stated that the collective feeling is imperative to participation in the community. In this context, participation is not automatic, but depends on interpersonal relations, familiarity and a feeling of belonging. Therefore, in La Palma, where "everyone knows you," social dynamics can either discourage open discussions due to a fear of conflict or provide a space for people to speak up, engage, and collaborate. This community creation is necessary for people "to feel comfortable, to talk and to participate." Accordingly, it became evident from the interviews that the cooperative functions as a social infrastructure beyond the PV installations. However, meaningful participation and a sense of belonging come with time. Member 3 highlights that it is a process:

> "You can participate, and you can give your opinion, and you have open spaces, and you have people that can hear you. Inside this community is super powerful to change things. It's difficult to reach that level because it needs a lot of work. But once you have it, it is beautiful." (Member 3)

This quote illustrates what members highlighted during interviews, stating that the EC offers open spaces and opportunities to participate, however reaching a point where participation becomes truly empowering requires time and effort. Subsequently, meaningful participation and empowerment is built through repeated interactions, engagement and trust. The member's description of "beautiful" community indicates the effort involved is perceived as worthwhile, producing a strong sense of collective efficacy.

Moreover, according to the members, the sense of affiliation is derived from the principles of inclusivity and the collective understanding of the underlying concepts of the EC. One of the members acknowledges that "people in different ages are understanding the model," emphasizing that the cooperative is not limited to a narrow group but is gradually becoming more inclusive. Subsequently, this comprehension offers a sense of pride, tied to emotional attachment and recognition, as one member explains: "when you love something, you feel part of something" and "they are proud to be part of Energía Bonita" (Member 3). This emotional dimension strengthens the community by making it more meaningful and personally significant.

### 6.3.2 Empowerment Through Collective Influence

Members noted that participation in the EC builds on the individuals' sense of agency, however most of the members emphasised that the feeling that change comes from belief in collective

influence. For example, Member 9 highlighted that goal of the EC is twofold. They claimed that the reason for the cooperative to exist is not only to reduce GHG emissions, but also to "empower the people to own the energy that they consume." The quote showcases empowerment through collective influence. Ownership of the energy infrastructure is not solely perceived as an environmental benefit, but a collective political capacity to intervene in the system. The focus on people's empowerment reflects a shift from passive acceptance of an externally governed energy system towards understanding energy governance as something that should be owned and governed democratically.

Therefore, in the perspective of the members, transformation is not solely based on isolated individual efforts but rather framed as a collective belief that the change in the energy governance is possible. This perspective can be exemplified by Member 11, who noted that individual actions may appear insignificant in isolation, but acquire transformative potential when aggregated: "One person maybe is not noticeable, but if we're more than one, eventually it makes a big difference." (Member 11). This statement highlights a shift from individual responsibility towards collective efficacy. While individual reductions in energy consumption are acknowledged as important, their significance lies in their accumulation within a collective framework. Therefore, coordinated change has the potential to gradually alter demand patterns and change existing systems of domination.

This emphasis on collective influence is also acknowledged by Member 9, who links empowerment to the ability to act together: "we have the power to force change". This quote illustrates a sense of bottom-up empowerment, where members pierce participation as a means to actively contest the status quo. The language of "forcing change" suggests that collective influence can exert real pressure on the energy system, by withdrawing support from fossil fuel incumbency. Additionally, Member 6 acknowledges that many people are not yet in a position to enact change. Empowerment, therefore, appears in the data as something the community must actively nurture and work on: "We need to work more to empower people to make this change" (Member 6).

Another example comes from Member 9 emphasizing shared understanding of the cooperative. They claim that the idea behind the EC is not to install and produce energy, "but really help the community in some way to share information and experience." This collective thinking is rooted in the idea of exposing people to alternative imaginaries of energy governance; the objective is to "help other users to start to think that there are other ways to obtain the electricity for your home." Yet another example comes from Member 11, stating "I cannot change world politics, but I can change my neighbourhood.", highlighting the feeling of empowerment and strong sense of local responsibility. Thus, throughout interviews it has become evident that members participate in the cooperative with the aim of sharing a common understanding of the possibility of community-based models that are based on renewable energy production, sufficiency and solidarity.

Additionally, when discussing the collective influence, it is relevant to mention eco-anxiety that appeared in a couple of the interviews. Some members brought out eco-anxiety in the context of personal consumption, warning against putting guilt and responsibility on individuals. Members recognised that reduction of the energy consumption on the individual level does have an influence, however, changes also "need to be implemented at higher levels: governments, large multinational corporations, businesses, the media, and so on. But raising awareness at an individual level is also important, as long as we don't succumb to eco-anxiety" (Member 10). Moreover, Member 13 acknowledges that people who are more energy aware

can fall into the feelings of eco-guilt and eco-anxiety, and points to the book club meetings as spaces for finding understanding and working through these feelings together. They stated: "we always leave these places. in a good spot," but there is also a space to get angry and be listened to. This shows that within the EC there is space to discuss feelings, making people bond over common emotions they experience in the energy world organised by the fossil fuel incumbents.

### 6.3.3 Energy Citizenship

A significant finding derived from the interviews is the way the EC members self-identify in relation to the energy system. Majority of the members identified themselves as having multiple roles, simultaneously positioning themselves as consumers, co-owners, and energy citizens. This plurality of identities reflects the non-linear nature of selfhood within the cooperative, where individuals identify not only as end-users of energy but also as active stakeholders in energy governance.

Only a few members identified themselves as solely consumers, however, among these individuals the identification was often accompanied by a sense of internal responsibility. Some described themselves as consumers while simultaneously aspiring to become energy citizens, indicating a tension between their current position within the system and their desired role. Across the interviews, a recurring theme was the perception that the existing energy system is structured to incentivise increased consumption, as higher levels of energy use generate greater profitability within a privatised market. Several participants highlighted the paradox inherent in such a system. While this system encourages consumption, it also shifts responsibility for environmental degradation onto individuals. As one member expressed, "I'm a consumer, but I'm a consumer and I feel guilty about it." (Member 11). This tension reflects a deeper sense of contradiction, where individuals are embedded in a system, they perceive as inherently harmful yet find it difficult to fully disengage from it. Consequently, some members expressed a desire to withdraw from this system, alongside experiencing feelings of psychological discomfort associated with their participation in it.

A further example is provided by Member 6, who explicitly linked co-ownership to a form of withdrawal from an energy governance system perceived as primarily profit driven. As they explain, "using a more democratised resource and being co-owner, I think that the use of the energy is more democratic… and nobody is trying to get money from it." (Member 6). In this sense, co-ownership is understood as a mechanism for reclaiming control over energy and distancing oneself, at least partially, from extractive market structures. By having a direct stake and a voice in the system, EC members reduce their participation in models that primarily benefit large fossil fuel companies. This critique is reinforced by broader reflections among members on the nature of the conventional energy system. As Member 12 noted, "The system wants to make you a consumer and completely passive," highlighting how dominant energy regimes want individuals to be compliant, high-consuming users. Accordingly, members identified the EC as seeking to disrupt this passivity by fostering more active and engaged roles within the system. Across the interviews, it becomes clear that members perceive themselves as occupying multiple, coexisting roles within the energy system. While some aspects of consumption remain unavoidable, participation in the cooperative enables a shift in how individuals understand and enact their position. As Member 13 stated, the work of the EC is "to take people away from the idea that they are passive consumers," suggesting that this reorientation is crucial in the cooperative's mission. In this context, the emergence of energy citizenship can be understood as a collective and ongoing project. It is not a fixed identity, but rather a process of socialisation and learning through which members are encouraged to see themselves as active participants and shapers of energy governance. Importantly, during

interviews energy citizenship was closely connected to energy literacy and the ability to understand how the energy system operates. Member 12 describes learning how the energy market is structured - divided into producers, distributors, and commercialisers - and how this knowledge enables local agency: "We needed to learn about the way the market was broken up (...) and then it became more like, what can we do locally about this?" (Member 12)

Some members emphasised that energy should be considered a basic right, arguing that "traditional energy companies do whatever they want, and they don't care of the simple right that we should have as citizens" (Member 6). Accordingly, individuals are shaped into consumers by institutions and market arrangements that benefit from their passivity. In this view, the current energy system is perceived as unjust, having removed citizens' ability to manage and control energy. While the dominant model is centred on consumption, members instead seek to establish a different relationship to energy, one grounded in participation and collective agency. Consequently, members attribute their passive role as consumers not to personal failure, but to systemic design.

Members further situate this passive consumer role within a broader philosophy of self-sufficiency and production. Member 12 draws an analogy between local food systems and energy, emphasizing the value of "being a producer rather than just a consumer." They note that although La Palma has strong traditions of agricultural self-sufficiency, increased comfort and convenience have shifted many people toward dependence on supermarkets. These findings point to a broader cultural tension between passive convenience and active provisioning regarding issues of production and self-sufficiency within capitalism.

## 6.4 Collective Norms Formation

### 6.4.1 Norms of Shared Responsibility

Throughout the interviews, members expressed a shared responsibility for the planet, often describing environmental protection as their main motivation for joining the EC. However, this global responsibility becomes action primarily through local engagement and "doing your part" within the collective, where one has influence. An example of this spatial logic comes from Member 3, who describes how they perceive responsibility and how they make sense of their lived obligation, exemplified by this illustrative quote:

> "First my island, then my country, then the world. I start locally. I feel so proud and special for being, for living here in this island. That is a paradise in the world (...) and I feel a responsibility to take care of it. I don't have kids, but my friends have. And I want to leave them a better place to stay. So maybe I can do a little. But if we all behave like that, the world will be such a different place, you know? And we are destroying the place. We are destroying the world now, the crazy worst we have going on. So, it's my legacy, I just try to make things better. And that's all." (Member 3)

This quote illustrates several layers of normative responsibility. First, it shows that environmental responsibility is rooted in a place of attachment, the island is described as a "special place" that deserves protection. Second responsibility expands beyond the sense of place into intergenerational responsibility. This member connects current energy consumption measures to the well-being of future generations. Several members emphasised that accountability, expressing their commitment to making a world a better place within their local community. They articulated a moral logic of collective accumulation, even individual

contributions matter when shared incorporated more broadly, as illustrated in the quote above "If we all behave like that…." Thus, members showcased that responsibility is both personal and collective, linking environmental values to everyday actions.

### 6.4.2 Shared Ownership

Another dimension of collective norms' formation concerns the responsibility within the cooperative. Several members explained that the collective ownership of infrastructure changes how energy use is perceived: because resources are shared, consumption becomes socially meaningful. Member 3 described this shift as "extra responsibility" created by shared facilities:

> "I feel responsible [about energy consumption] because the facilities are shared, so they are not mine. I have to be responsible, pay the bills, and, you know. It's an extra responsibility because it's shared. It's like when you live on your own or you live in a shared apartment with more students, for example. You can clean for yourself or not, because you're not affecting others, but when you are with others, you have to be more careful." (Member 3)

This quote highlights that collective ownership produces norms of a considerate energy use. The analogy with a shared apartment captures a key mechanism, when actions affect others, responsibility becomes more pronounced. Therefore, responsibility is not perceived primarily as a moral pressure or control, but as a practical awareness of interdependence. Members are "not on their own," but they are embedded in a shared system that requires cooperation and reliability. A similar point was made by Member 8, who expressed their responsibility towards other members in a broader understanding of a global shared responsibility: "I feel a responsibility towards other members the same way of how I see energy as a global shared responsibility." (Member 8). The finding emerging from the data is that the EC fosters the responsibility into two directions: inwards - towards the other cooperative's members and outwards - towards the broader planetary concerns. Therefore, it can be argued that many members described this as a form of systems thinking, where individual behaviour is understood as part of a wider system of consequences and dependencies.

Moreover, members also framed participation in the EC as a responsibility itself, emphasizing that action is preferable to inaction ("something is better than nothing"). Member 13 also introduced a broader crisis framing, claiming that collective responses are essential because isolated reactions risk becoming fear-based and competitive. In this view, cooperation is not only ethically desirable but necessary for a humane response to a crisis.

### 6.4.3 Perceived Accountability to the Group

Across the interviews, energy consumption was repeatedly described as socially embedded. Members spoke about conversations with neighbours, sharing advice, encouraging participation, and discussing ways to reduce consumption. Member 7 expresses this norm of community responsibility, framing it as a duty that extends beyond one's own household.

> "If you see your neighbour is wasting energy for absolutely no reason, then it is just, I feel it my duty to have a conversation ... Clearly, this is a joint responsibility. I mean, what's the point otherwise? Otherwise, we're not going to go to any true transition. You have to go outside your own boundaries. This is within your community."

Many of the members agreed with enacting accountability to others in soft measures based on feelings, opinions and experiences. This accountability to the group would have a form of

conversation and advice. The quote above also shows that meaningful transition is imagined collectively, and change requires stepping on one's private sphere and engaging with the community. This displays the finding that the norms are produced through communication, everyday interactions, and mutual influence.

At the same time, some members acknowledged that deeply caring about clean energy and sufficiency can make them be perceived differently from others. Three members reported that they are seen as "freaks" in their energy commitment and energy reduction efforts. This highlights a social tension, a finding that shows that norm diffusion involves vulnerability and risk of being perceived as "different." Nonetheless, members still feel accountable to have conversations and influence others.

This social responsibility also includes recruitment efforts. Most members described their responsibility to encourage friends and family to join Energía Bonita, to participate in discussion and reconsider their relationship with energy. One member described their long-term friend who also has a public position, whom they were trying to convince to join the EC for years, showcasing that conversations with others is an ongoing process, and it might take longer to convince someone to change their energy provider or energy behaviour. In the experience of the members, it is hardly ever the outcome of a single conversation. This was especially prominent during direct observations when attending the information session for people who are interested in joining the community. People would first hear about the EC from the neighbour, friend, colleague and then they would participate in the information session. Accordingly, this finding underscores the relevance of cultivating participation through dialogue and accessibility, and that accountability in the group is related to people's understanding of the cooperative's model, which can be inspired by peer interaction. However, not all members shared this sense of accountability. Very few framed it through the notion of "everyone is free to do as they wish in their own home," reflecting a belief in individual autonomy within one's own household. In this view, members felt it was not their place to advise others on how to use their energy, recognising that they may not fully understand others' needs, constraints, or capacities.

### 6.4.4 Energy as a Shared Resource

A further finding emerging from the interviews is the notion that energy should be treated as a common resource, and not as a private commodity. This view was predominantly shared between the members, especially taking the island context, where 90% of the electricity is produced from fossil fuels and depends on imported fuels. In the perspective of the members that shapes the energy system's vulnerability and produces volatile energy prices. This energy as a resource was described as privatised by the majority of the members. Additionally, several members extended this argument beyond energy itself to the infrastructure, stressing that the grid and cables should also be publicly or collectively owned. Member 13 compared Spain with other European contexts, emphasizing that privatised infrastructure concentrates power in the hands of the powerful few, exemplified by this illustrative quote:

> "It's rotten and especially in Spain because I know in Europe most of the countries the cables are publicly owned, then in some places they are managed by the public and some are managed by private companies. But what's the particularity, like the ownership, it's public. But in Spain, even that is private. So it's a big problem. They have so much power, these companies, and it's very difficult to do anything because

> also they have power for us to... When we ask if we can connect a new PV plant, very often they answer no."

Most members expressed that privatised infrastructure produces power imbalances where companies can prevent renewable energy expansion and shape the composition of the consumption within the energy system. Members also highlighted that the powerful energy companies refuse to pay for the excess energy fed into the grid, showcasing legal disobedience, unfairness and structural barriers. Consequently, treating energy as a shared resource becomes inseparable from questions of infrastructure access and ownership. Member 6 expressed a stance rejecting the profit-making from the energy: "Energy should be a common good, a common resource. It should not be privatised, because you shouldn't make money with this resource." In the interviews, this argument intersected with the social justice concerns. Most members described access to energy as a fundamental requirement for a dignified livelihood and viewed market-driven provision as reproducing inequality, as those with greater financial resources can afford higher levels of consumption while others struggle to meet basic needs. Therefore, a key finding from the data shows that energy has been framed as a common good, linked to universal access and solidarity, especially in crisis conditions when vulnerability is exacerbated.

A relevant finding emerging from the data also links energy poverty and surplus of clean energy. Several members expressed that they would be willing to share their clean, "saved" energy with others, particularly those in vulnerable financial circumstances. An example can come from Member 4, who stated: "Energy should be for sharing, within the community. (...) If I have some energy, extra energy, somebody can use it". Around one third of the members expressed their willingness to share excess renewable energy with others. However, some also mentioned infrastructural limitations, pointing to outdated electrical grids preventing the realisation of the sharing ideals. This finding highlights how material constraints, in addition to social barriers, limit the potential for meaningful change. Overall, amid persistent structural shortcomings, the system remains deeply unequal, however, the findings also indicate the continued presence of pro-social values and motivations among individuals.

## 6.5 Sufficiency Oriented Practices

Most of the members were found to be aware about the relevance of reduction of energy consumption. For example, Member 10 claims: "Reducing energy consumption is fundamental to trying to curb climate change." Their sufficiency measures had various points of departure, some of them have practiced reduction of energy consumption since childhood, and pointed to the ways they were brought up, some others pointed that sufficiency is "something that culturally works quite well in the Canary Islands" (Member 8). Also, it has been prevalent that many members have been exposed to the concrete sufficiency-oriented behaviours through means of participatory democracy within the EC.

### 6.5.1 Concrete Consumption Reduction Behaviours

Throughout interviews, a number of sufficiency-oriented practices could be identified. Many members pointed to having simple meters in their houses that show how much electricity they have been using. Moreover, some of the members stated that they consume energy according to their needs, especially during the day when the demand is low and the production of the PV plants is the highest. For instance, Member 7 stated that they are interested in demotics (i.e. the automatic and electronic control of household features, activities, and appliances) to "gauge energy consumption versus energy consumption, versus needs". Therefore, knowing how much renewable energy is produced influences how much and when the energy is consumed.

Most of the members mentioned change of daily routines and habits to reduce the energy consumption. For instance, Member 6 pointed out that they tried to change some "very basic habits", like reducing the number of showers and switching on the washing machine only during the weekends instead of daily or every other day. As a result, in this case, their bill completely changed, it was cut in half. Importantly, the reason for change was not economic, but it was based on interactions with other people, participation in discussions. As mentioned by the member, it was "thanks to all these people" that they implemented energy saving behaviours. Importantly, many members expectation that switching to clean energy would result in energy cost savings. However, several members emphasised that a transition to clean energy alone does not necessarily lead to reduced energy bills. Some reported that their costs had not decreased following the switch to renewable sources, arguing instead that economic savings are more closely linked to conscious reductions in overall energy consumption. In other words, switching to renewable energy does not automatically translate into lower costs, but rather, active energy-saving behaviour is required. Furthermore, Member 13 explicitly argued that financial savings should not be the primary motivation for joining Energía Bonita.

Another relevant finding emerging from the interviews is that members demonstrated a strong awareness of which electrical appliances consume the most energy. This knowledge was often disseminated during the energy saving working group meetings, where individuals had the opportunity to utilise the device that monitors which appliances are the most energy intensive. In this context, members frequently highlighted the water boiler as the most energy-intensive appliance. Many of the members mentioned their energy saving solutions, such as taking shorter or cooler showers, or utilising the water heater exclusively in the morning hours, prior to work. Member 13 mentioned that gaining this awareness and knowledge is a process, at first:

> "Maybe some people do not even know what the difference is between putting the oven on and switching off a LED light. It is not having the same impact. So that's a step knowing that it has a different impact. But also, where this impact starts, it's produced from electricity, from oil that is coming not even from democracy and all the impacts in nature. All this is connected." (Member 13)

Overall, members demonstrated a high level of awareness regarding energy sufficiency practices, with some even prioritising them over grid decarbonisation. These members argued that energy sufficiency should be considered the first step in sustainability transitions, suggesting that consumption should be reduced prior to, or at least alongside, switching to clean energy. In this view, sufficiency and decarbonisation are seen as complementary and interdependent strategies, rather than separate processes "sufficiency and decarbonisation go together".

> "It only makes sense; you always have to talk about energy sufficiency first. Analyse your actual use. and see if you can and how you can adjust that to bring it down and then you have a true value of your requirement [needs], then at least in my opinion you then can look into energy production, truly renewable, but this is actually on the second level. First level is you have to bring your energy down to get a true measure of what you actually require [need]. If you go the other way around, the thing is, if you still just continue consuming, you have all your machinery running, you could probably do without it running, but since you're creating energy for, say, renewable, you no longer pay attention. But that itself has got a footprint. So, the smart thing is to look first at your consumption and bring it down, energy sufficiency first." (Member 7)

Interestingly, it was also brought sufficiency measures regarding the amount of the solar panels needed for the household, suggesting that it is best to get to know your basic needs of energy consumption. In this context, one also has to think about the environmental footprint of the solar panels.

> "Because if you can actually lower your consumption from 8 kilowatts down to 2 kilowatts, why have 8 kilowatts of solar panels? They themselves have got a footprint. Unless, of course, you are going to, well, I can put 8 kilowatts in, then I can inject into the grid, and thereby help my neighbours who are maybe not on the same level, who have got that." (Member 7)

Additionally, a recurring theme regarding sufficiency practices was the transportation issue on the island. Members pointed out that there is a need not only to decarbonise the energy system but also to reduce dependence on privatised vehicle mobility. It can be noted that the sufficiency practices had a spillover effect. Members noted that sufficiency is present not only in their energy practices, but also influences what they buy, how they eat, where they live, it has an effect on their leisure activities and commute to work, pointing out that collectively we need to "reorganise our lives and limit the use of energy" (Member 6). Member 6 highlighted proximity to the workplace and the availability of sustainable commuting options as key considerations in the decision to relocate to an apartment closer to work, thereby enabling commuting within walking distance. In addition, they described adopting sufficiency-oriented practices, such as leaving the car at home and combining walking with public transport. For instance, walking to a destination and returning by bus rather than using a private vehicle for both parts of the journey. It is also pertinent to note that direct observations afforded the researcher evidence indicating that public transportation on the island is provided free of charge to its residents.

Members also raised concerns regarding the use of electric cars on the island. Some argued that electric mobility is not necessarily sustainable in the local context, as electricity generation heavily relies on fossil fuels. In addition, members pointed to a perceived contradiction in being encouraged to "buy devices that consume more and more energy, like a car," noting that "I could save energy from one side, but then I use double from the other side." In this sense, several participants implicitly referred to rebound effects, as savings in one domain are offset by increased consumption elsewhere. Some attributed this to systemic design choices, arguing that the promoted solution may not be environmentally optimal when compared to avoiding private car ownership altogether in favour of public transport. Accordingly, a few members emphasised the need to reduce reliance on private electric vehicles and to improve the reliability and frequency of public transport infrastructure. Furthermore, members noted EC plans to introduce a car-sharing initiative. For instance, Member 8 suggested that while such an initiative is unlikely to eliminate car ownership entirely, it could encourage households to reduce the number of privately owned vehicles, for example, by shifting from multiple cars to a single shared vehicle per household.

Another relevant recurring insight from the interviews is linking sufficiency practices to independence. For instance, Member 11 stated: "The idea is to become more independent and become freer, to gain independence is to switch off the lights. If you don't need electricity, you don't depend on anybody else". In the case of the island that heavily relies on imports of fossil fuel, sufficiency offers some sort of detachment from the "non-democratic" fossil fuel companies. This member mentioned that the overconsumption of energy made us dependent, as the society became more comfortable, as one member mentioned "we're spoiled", so the best solution for a healthy, independent, life is "to consume less of everything", however, still

within the limits of what is needed. Considering the desire for energy independence, many members mentioned the current political events that contribute to energy dependence on oil production and powerful players. For instance, Member 7 stated: "I think this has become incredibly clear over the last few months how vulnerable we are." in the context of the global political turmoil. As a solution, members suggested that globally and locally "each and every one should start to have control over their own energy if they can".

### 6.5.2 Limits on Energy Use

Interviews also touched upon the possibility of imposing limits on energy usage. Most members claimed that they do not think it is feasible to introduce energy limits. Some of them claimed that as a society as a whole "we are not there yet" or that considering the extent of the environmental collapse, the response would need to be top-down. A quote comes from Member 12 "the circumstances are going to have to force people to reduce their consumption. I'm not sure it's going to come grassroots (...) I am afraid it would be top-down."

Moreover, another member noted that the decision to introduce limits on energy use would be met with societal discontent, and they do not think it is politically feasible at the moment. They also mentioned that they think that market mechanisms, such as introducing a tax on the excessive use of energy is more feasible; however, even taxing people who are wealthier would require a government that prioritises social reform and forward-looking administration. This, in the view of one member, shows evidence that significant progress is yet to be made in Spain before such an occurrence can be anticipated, as exemplified by the quote:

> "I don't think any government has the political will to put caps on energy usage anytime soon. (...) What I think is more feasible, in my opinion, would be to progressively tax an intensive use of energy. I mean, not a direct cap, but a financial or a tax cap, on taxing heavily the overuse of energy. That's more feasible, but at the same time, you need a very progressive government to implement those measures. And I think we have a long way to go in Spain before that happens." (Member 5)

It was further emphasised by several members that any changes in energy practices should be gradual, on the basis that demands exceeding individuals' capacity to adapt are unlikely to result in meaningful behavioural change. Consequently, it was observed that behaviour change initiatives must consider individuals' capacity to implement such changes, thereby ensuring the feasibility of proposed measures to prevent disengagement or apathy. Member 13 stated that expectations of one another also have limits, as "if people feel that it is too far from where they are, they will feel that there is nothing they can achieve". Throughout all interviews, members emphasised that within the EC, there are members with diverse energy knowledge, awareness and practices. Nonetheless, one of the members stated, "it's good that in a workshop there are people at different levels so we can feel that we can help each other" (Member 13). This diversity of energy reduction behaviours can be seen as a productive space for peer-to-peer learning, as members observe and exchange different approaches to practice. In this context, it is also acknowledged that individuals are unlikely to implement all measures "perfectly", and that a degree of imperfection is both expected and acceptable.

# 7 Discussion

This chapter presents a critical discussion and interpretation of the key findings, situating them within the existing academic literature. This discussion is structured around three overarching themes: 1) democratic governance as repoliticisation of energy and consumption, 2) the social boundness of energy consumption, and 3) energy consumption as normative and just practice under structural constraints. This thematic organisation provides a framework for presenting the empirical results against the backdrop of the scholarly literature. This chapter further seeks to critically reflect on the study's limitations, considering methodological choices underpinning the study and discussing the extent to which the findings may be generalisable beyond the specific case study.

## 7.1. Situating the Findings within Existing Literature

### 7.1.1 Democratic Governance as Repoliticisation of Energy and Consumption

Academic literature has long noted that dominant top-down governance structures tend to frame energy as a technical, managerial or private matter, thereby depoliticising questions of energy production and consumption (Hickel, 2020). This depoliticisation removes energy issues from the public arena and obscures their profound social and environmental implications. However, as energy demands continue to increase against the backdrop of the global crisis, energy governance has reemerged as a site of public contestation (Chanteloup et al., 2025). Energía Bonita illustrates this shift, as members strongly expressed their aspiration to regain control over how energy is produced, distributed and consumed, signalling a clear repoliticisation of energy (Bauwens et al., 2024; Phōtopoulos, 1997; Walker & Devine-Wright, 2008). This resonates with research by Tsagari et al. (2021), describing an energy democracy rooted in redistribution of decision-making power to citizens and local communities and reframing energy as a pubic, political, and collective concern rather than a private commodity.

The empirical findings further show that many members are dissatisfied with existing governance structures dominated by political elites and powerful energy companies. This discontent aligns with critiques in the literature of representative democracy influenced by lobbyism, elite interest, and adversarial politics (Zeiss et al., 2025). Thus, scholarship points to the cooptative model offering a pathway towards more participatory and just energy governance (Alarcón Ferrari & Chartier, 2018; Van Veelen, 2018; Wahlund & Palm, 2022). This shift enables communities to resist extractive logics and reclaim agency over their energy. Trainer (2012) argues that ECs offer a governance model embedded in the local knowledge, shared values and collective thinking, elements that are essential for decisions that genuinely reflect community needs. This attention is expressed in Energía Bonita's democratic governance shifting towards community needs, and in building resilience and resistance to the extractive, profit-driven energy systems. This echoes the findings by Kunze and Becker (2015), who show that collective ownership and management structures are tied to the pursuit of collective benefits and political goals.

However, both the literature and empirical material caution against assuming that democratic governance within ECs automatically leads to inclusive processes and outcomes. Within Energía Bonita participation levels vary, and members noted difficulties in recruiting members for more demanding roles, such as serving on the Governing Board. This reflects scholarly concerns about "optimisation bias" in ECs governance, where idealised versions of participation may overlook the uneven capacities and motivations among members (Watson, 2020). To address this issue, Energía Bonita convenes preassemblies - informal meetings where

members can shape the agenda of in-person General Annual Meetings (GAMs). This practice reflects efforts to enhance deliberative quality and inclusivity, aligning with scholarship that underscores the importance of face-to-face assemblies and agenda setting (Fominaya, 2010). Yet the findings also reveal that many citizens lack experience with democratic participation. In the case of La Palma, this could partly be due to the past negative experiences with local cooperatives, such as the aforementioned banana plantation cooperatives that were democratic in name only. Similarly, the literature shows that the organisation of decision-making and its inclusivity shape levels of engagement and participation, and subsequently, the outcomes are perceived as legitimate and acceptable (Butler et al, 2013; Kola-Bezka, 2023). Similar to existing literature, the collected data shows that when members felt they were part of the energy system through co-ownership, participation, or direct involvement, this would impact their energy sufficiency practices. When energy is perceived not as something controlled and delivered by an external provider, but as a collectively governed resource, members are more prone to reflect on how much energy they use and why. Consequently, direct participation and ownership promote sufficiency-oriented behaviour because of the different relationship to one's energy consumption. This finding demonstrates that the adoption of sufficiency-oriented practices is closely linked to the process of citizen empowerment and by extension, to democratic governance more broadly.

Another dimension of (re)politicisation of the energy is exemplified in how members of the EC perceive their identity. Most members were reluctant to identify themselves as solely energy citizens; instead, they expressed a multiplicity of identities in relation to energy, including roles of consumer, co-owner and energy citizen (see Figure 7-1). This is especially relevant against the backdrop of the energy citizenship concept, emphasising the political and subjective dimensions of democratic engagement. This concept addresses how individuals understand their roles, responsibilities and agency within the system, which consequently affects their identity and practices (Islar & Busch, 2016; Neves et al., 2025; Oliveira et al., 2023; Schmelzer et al., 2022; Snow & Corrigall-Brown, 2015; Tajfel, 1978). In the case of Energía Bonita, there is a clear shift in self-understanding - from that of a passive consumer to a more engaged actor with agency and responsibility within the energy system. While recent scholarship, particularly by Petrovics and Savini (2025), highlights the growing relevance of sufficiency, reduced energy throughput, and democratic deliberation, it is still too early to claim the emergence of a fully articulated sufficiency-focused form of energy citizenship in the EC. Within Energía Bonita, practices of learning and collective reflection on energy sufficiency suggest a movement in this direction; however, these remain tentative and uneven. Rather than a consolidated identity, sufficiency-focused energy citizenship is ongoing and evolving within Energía Bonita. However, the EC alludes to the possibilities identified by Petrovics and Savini (2025), even if these have not yet crystallised into a solid form of sufficiency-focused citizenship.

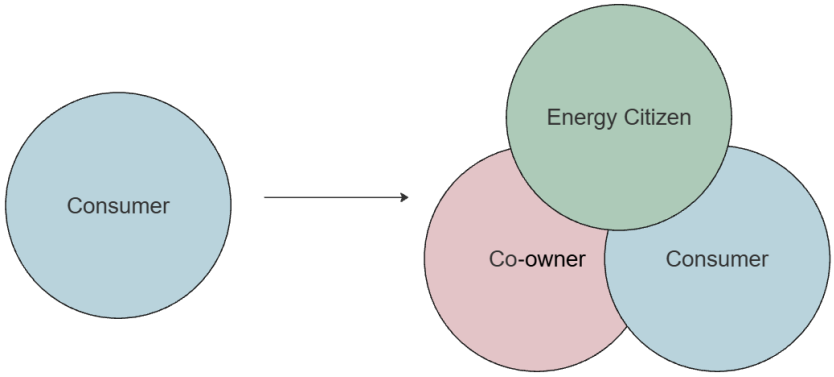

*Figure 7-1. Shift from Consumer Identity to Multiplicity of Identities (i.e. Energy Citizen, Co-owner, Consumer)*

*Source: Own illustration (the Figure was made in the Miro software)*

Moreover, a few members claimed that they do not perceive themselves as activists, despite their influence over energy politics and their sense of responsibility to engage others in discussions about energy consumption practices. This finding displays that some members have a rather narrow perception of their political participation. This reluctance to identify themselves as activists suggests that repoliticisation does not necessarily manifest through traditional political identities, but through everyday practices of collective governance, local engagement and democratic governance. As some members noted, our society has to relearn many things, and through the case of Energía Bonita, this relearning on how to be part of energy governance unfolds more effectively through interactive processes rather than top-down structures. Although energy behaviours differ in terms of practices and views, they become socially bound within the relational environment of EC. Within such a context, patterns of consumption are not merely personal choices, but they are collectively shaped, reinforcing the social character of energy use.

### 7.1.2 The Social Boundness of Energy Consumption

Literature on the sufficiency claims that "consumption is deeply social (…) and so the process of reconsidering it", therefore, one "should not underestimate the power of interpersonal interactions in reshaping sufficiency attitudes" (Henman & Mont, 2026, p. 151). This underpinning is especially relevant in the findings of this study, as members emphasised that they changed their energy consumption practices as a result of interacting with others. Throughout interviews, participation in the EC has been experienced as most meaningful when it functions as an ongoing learning process rather than being limited to formal decision-making procedures such as voting. Instead, changes in energy awareness and everyday practices arise within continuous, participatory spaces that combine information exchange, deliberation and social learning. These in turn enable processes of education and reflection among the EC members and foster a more nuanced understanding of energy systems, consumption patterns, and their broader social implications. However, this finding should not be interpreted as diminishing the importance of voting or attendance at the AGM. Rather, it indicates that formal decision-making processes, such as voting, have a more limited influence on sufficiency-oriented practices in comparison to ongoing, participatory forms of engagement. This conclusion finds support in the literature on social practice theory, which assumes that individual actions are not the outcome of isolated decision-making but are shaped through social interactions and sustained exposure to shared habits and routines across time and space (Dudka, 2025; Tajfel, 1978). Similarly, Henman and Mont (2026) argue that sufficiency-oriented ideals are easier to embrace after deliberation. However, the authors note that such a change is evolutionary. It requires time, effort, repetition, interaction, and ongoing relations with others. This perspective resonates with the empirical material from Energía Bonita, where members could not point to single points of information or discussion that changed their energy behaviour. In this sense, behavioural change does not stem from isolated moments, but it is embedded within social contexts that consolidate energy sufficiency practices, showcasing that energy consumption is socially bound.

At the same time, this finding aligns with Arnstein's (1969) ladder of participation, which suggests that higher levels of participation and engagement are associated with greater degrees of citizen empowerment. Within this framework, the lower level of participation is a mere matter of information dissemination. A higher level constitutes a social practice that enables

learning and the formation of preferences. Studies of deliberation further support this view, demonstrating that group discussions foster shared understandings and allow individuals to reinterpret problems and possible courses of action through collective reflection. Therefore, deliberative processes can make sufficiency-oriented practices more accessible and, consequently, build legitimacy for reduced consumption practices. In this context, a shift in energy sufficiency has been emphasised on different tiers, ranging from better understanding the reasoning, which in literature has been described as the underlying rationale (the "why"), and providing EC members with practical tools on saving energy (the "how") (Tuler et al., 2017). As Neves et al. (2025) emphasised, participation in the EC goes beyond individual pro-environmental behaviour, encompassing a broader commitment to collective goals and reinforcement of social bonds within a community. Therefore, similar to the results, the success of energy initiatives depends on the meaningful participation of their members. Based on this thesis, it can be argued that active engagement fosters positive outcomes for both social relations within the community and the adoption of energy sufficiency practices. Consistent with literature on sufficiency, ECs replace individual ownership with shared access, framing abundance in terms of collective experiences and resource sharing rather than resource accumulation, thereby generating both societal and environmental value.

Euler (2018) also highlights that the success of commoning is not contingent on the homogenous group; instead, what benefits the community is the presence of diverse and adaptive social arrangements in which shared practices can be developed. However, the materials in this thesis showcased twofold findings. On the one hand, several members expressed their dissatisfaction with the heterogeneity of value orientations within the cooperative. Some members noted that some individuals presumably joined the community primarily to reduce energy costs, rather than out of commitment to sufficiency-oriented practices. Members emphasised that this rationale is misaligned with the cooperative's broader objectives, also claiming that mere decarbonisation of the energy supply is unlikely to yield substantial energy savings, but rather, energy bill reductions depend on decreasing overall energy consumption. Consequently, some members expressed their sense of disconnection, perceiving divergence between their own motivations and those of others within the cooperative. On the other hand, several members highlighted the potential of membership diversity. They argued that differing perspectives can create opportunities for mutual learning, especially when supported by participatory and deliberative governance processes, as engagement in these processes over time may potentially shift their views. At the practical level, the diversity of sufficiency-oriented practices was also perceived as advantageous. Through workshops and energy saving groups, members have an opportunity to learn from one another about energy consumption, for instance, by identifying which households' appliances consume the most energy or by sharing effective habits to reduce energy use. Therefore, individual energy practices become socially conditioned when embedded within the EC's shared environment. Within this collective context, patterns of consumption are reshaped in ways that extend beyond individual preferences, as energy use is collectively mediated through shared norms, expectations, and interactions. This demonstrates that energy consumption is not merely a personal behaviour, but it is clearly socially bound.

### *Limiting Energy Use Faces Barriers*

While members of Energía Bonita expressed their role in moderating their own energy consumption, they also found community-imposed limits difficult to sustain in practice. In contrast, they viewed broader institutional interventions, particularly involving market mechanisms, as a more feasible and effective pathway to reduce energy use. Members pointed to economic measures, such as adopting pricing strategies, as promising tools for reducing

demand on the consumption side. Similar to the literature, Flipo et al. (2025) propose that progressive electricity tariffs can incentivise more sustainable consumption patterns by ensuring that basic needs remain affordable while discouraging excessive use. This reluctance could be partly explained by the EC's small scale in relation to the wider island population. Members suggested that the differentiated, locally imposed limits might be perceived as unfair, as EC members would expect to be treated in the same way as other residents on the island.

Yet, the findings also indicate that consumption exists on a spectrum. Members underlined that individuals are at different life stages and occupy different social positions, such as young families with children, older adults, people with disabilities, or other vulnerable individuals, which shape their energy needs, practices and capacities to reduce energy consumption. Reflecting on this diversity, the interviews note scepticism toward limits on energy, as such measures may fail to account for varying individual circumstances. Noteworthy, members tended to associate limits on energy consumption with constraints on basic needs and everyday comfort, which contributed to their scepticism. However, according to Spengler (2016), sufficiency in energy consumption is not intended to restrict basic needs but rather to curb excessive use. In principle, these measures could target individuals with disproportionately high levels of consumption associated with luxury practices, rather than people who aim to reduce energy consumption to secure well-being. Therefore, members of ECs may benefit from a deeper understanding of this distinction that could help address concerns about fairness and improve the perceived legitimacy of energy reduction measures.

### 7.1.3 Energy Consumption as a Normative and Just Practice under Structural Constraints

Regarding the normative aspect of energy consumption, members questioned what constitutes a "correct" behaviour within the energy system. According to the literature, these views showcased what members perceived as a contradiction embedded in the green growth narrative (Hickel & Kallis, 2020; Jackson, 2017; Kallis, 2011, Parrique, 2019; Raworth, 2018). A recurring point concerned the promotion of electric vehicles as a marker of sustainable behaviour. Members of Energía Bonita expressed scepticism about whether purchasing new electric cars can genuinely be considered socially and environmentally sustainable, given the resource intensity of vehicle production and lifecycle impacts. Moreover, the collected material and the literature emphasised that the extended environmental performance of electric mobility depends on whether the electricity is generated from renewable sources or from fossil fuels, thereby questioning the assumption that electrification alone serves as a sustainable solution (Rani & Jayapragash, 2024).

According to Sorrell et al. (2020), even when the electric vehicle is fully powered by clean energy, there is a risk of rebound effects which may lead to increased overall energy use. For instance, it can result in more frequent or longer trips, offsetting anticipated environmental gains. Moreover, Strengers et al. (2020) claim that renewable energy can be perceived as abundant and guilt-free, which in turn can lead to overuse of energy. Thus, the use of electric vehicles does not automatically translate into reduced emissions, particularly when mobility patterns remain unchanged. Concerns regarding the electric vehicles were further contextualised by the spatial and infrastructural conditions, considering infrastructural lock-ins of a car-dependent island (Mattioli et al., 2020). Although public transportation is free for island residents, members characterised it as unreliable and infrequent, enough to limit its viability as an alternative to private motorised vehicles. As a result, structured constraints reinforce car dependency, even among individuals who are motivated to reduce their energy consumption. This critique of infrastructure aligns with arguments made by Breucker and

Toulouse (2024), who emphasise that sufficiency should not be framed solely as a matter of individual responsibility. Instead, sufficiency-oriented approaches require transformation of structural conditions to remove barriers and enable more sustainable practices. In this sense, the reflections of EC members point to a broader tension between individual consumption-based solutions and the need to change structural conditions.

Consistent with the empirical findings in this study, existing scholarship conceptualises energy sufficiency as a matter of justice, and as access to energy is regarded a basic right (Flipo et al., 2025). The interview data and complementary document analysis (i.e. the Statue of Energía Bonita) foregrounded concerns about energy poverty. This resonates with the academic work of Hanke et al. (2021), which examines the extent to which EC can include vulnerable groups and meaningfully address conditions of energy poverty. Interestingly, within Energía Bonita, members expressed their commitment to solidarity, indicating willingness to voluntarily share the surplus of saved clean energy with neighbours in vulnerable situations. Such statements point to a sense of collective responsibility and the importance of local social relations. However, these intentions are constrained by existing infrastructural arrangements. The current energy system in La Palma is characterised by a centralised grid rather than a ring or a star-organised infrastructure, which limits the capacity of peer-to-peer distribution. Therefore, even if there is a willingness to share energy with others, the technical infrastructure does not readily enable such practices. Furthermore, large and powerful energy companies shape both the expansion of cooperative renewable energy and patterns of consumption within the system. Members reported that dominant energy providers act unjustly by refusing to pay compensation for the clean energy fed into the grid and by restricting the integration of new PV installations. Therefore, sufficiency-oriented practices can be particularly challenging when embedded within power asymmetries, which constrain agency and undermine the perceived effectiveness of individual efforts.

Furthermore, energy poverty working groups with the EC play a crucial role in supporting vulnerable households by providing guidance on practical and legal matters, including how to safeguard their rights when they are unable to pay energy bills and risk disconnection from the electrical grid. Such initiatives have the potential not only to enhance individuals' capacity to navigate institutional systems but also to contribute to more equitable energy access. Similarly, in the literature, Flipo et al. (2025) argue that sufficiency aims to reduce resource use while maintaining well-being for all. Accordingly, the authors claim that this redistribution of resources makes it essential to adopt a democratic approach grounded in fairness, equity and protection of the most vulnerable. While findings underscore the potential of sufficiency-oriented practices to drive change within the EC, their transformative capacity remains contingent upon addressing the structural constraints that limit systems change.

## 7.2 Reflections and Limitations

### 7.2.1 Methodological, Theoretical and Analytical Choices

This study adopts a qualitative research design, which enables an in-depth exploration of meanings, perceptions and practices held by members of the EC. While the case study approach provides context-sensitive insights, it does not account for quantifying outcomes. It could be interesting to measure the relevant relationships, perspectives and meanings of EC members regarding democratic and energy sufficiency practices, beyond the sample size of this study. However, it is noteworthy that an attempt was made to adopt a mixed-methods approach by distributing a survey to the EC members via cooperative's newsletter. A total of

three responses were received, making it insufficient to support any significant quantitative analysis. Moreover, it could be valuable to measure the extent to which energy throughput reductions were achieved by EC members, as this would have provided a more nuanced, complementary insight into energy sufficiency practices. However, scholars who have developed degrowth frameworks for business emphasise the relevance of qualitative understanding of alignment with the degrowth paradigm, rather than solely relying on quantitative indicators (Hinton, 2021, Nesterova, 2020). Nonetheless, such an approach could be advantageous for complementing the research design. Furthermore, other methodological choices are shaped by ethical considerations. For instance, this study does not account for gender dimensions, despite the literature pointing to the exclusion of women in the governance structures within energy initiatives (Hanke et al., 2021). At the same time, scholarship suggests that women play an essential role in the adoption and maintenance of sufficiency-oriented practices (Flipo et al., 2025). The omission of the gender dimension reflects ethical considerations, as the collection of such sensitive data would have required additional approval from the Swedish ethics committee. Consequently, the analysis does not capture potential gender differences among EC members regarding democratic and energy sufficiency practices.

Although issues of self-selection bias, language constraints and researcher's positionality have already been addressed in Chapter 4, it is important to reiterate the potential effects of these issues on the research process and findings. Regarding self-selection bias, participants in the study were more likely to be more engaged in the EC, which may have led to an overrepresentation of active and informed perspectives. Moreover, all interviews were conducted in English due to the researcher's limited proficiency in Spanish. This may have constrained members' ability to express nuanced meanings, despite the researcher's efforts to ensure conceptual clarity and provide translations when necessary. Furthermore, in line with a post-positivist stance, this study acknowledges that the researcher's background, experiences, and epistemological assumptions could have influenced various stages of the research process, including the selection of the literature and the development of the theoretical framework derived from it (Creswell & Creswell, 2023, p. 7). Alternative approaches could have identified additional concepts, prioritised different analytical categories, or developed a more nuanced conceptualisation within the theoretical lens. The researcher's positionality may also extend to the formulation of the RQ, the design of the interview guides, interactions with members of Energía Bonita, and the interpretation of the empirical findings.

### 7.2.2 Relevance and Legitimacy of the Research Question

The RQ is grounded in ongoing academic and policy debates over sufficiency- and efficiency-oriented measures, situating it in the degrowth paradigm. Considering these deliberations, this research examines the promise of ECs to advance demand-side energy sufficiency through democratic governance enabled by participation, shared decision-making, identity formation, empowerment and collective norm formation. The relevance of the research lies in connecting the political, social and normative dimensions of governance and energy sufficiency practices with empirical insights from the applied example. Thus, this study highlights institutional conditions that shape individuals' energy consumption practices. The findings of this study contribute to a better understanding of how politics, social norms and justice considerations influence the implementation of sufficiency-oriented practices within the democratic governance structure of the EC. At the same time, the legitimacy of the RQ is reinforced by the critical engagement with assumptions about behavioural change and energy reduction. Rather than treating energy sufficiency as an individual responsibility, the study situates it within the broader political and socio-economic contexts, recognising that sufficiency-oriented approaches require transforming structural conditions to enable meaningful sustainable practices.

### 7.2.3 Generalisability and Limitations

When assessing the generalisability of findings, it is imperative to consider the specific geographical context of the case study. Although the research was conducted in a territory geographically located on the African continent, the Canary Islands constitute an autonomous community of Spain and are part of the EU. Thus, the case is embedded within the Western European context, which may be considered a limitation of the study, as the findings reflect dynamics shaped by European political and socio-economic factors. However, the island was colonised by Spain in the fifteenth century, which left a lasting mark on its system formation. Moreover, the island context introduces unique characteristics, and the interplay between democratic governance and energy sufficiency may not translate to other settings. However, the findings may be relevant to other EC in island contexts, where comparable spatial, infrastructural and socio-economic conditions may shape governance and sufficiency practices in a similar way. Additionally, generalising findings to other ECs requires caution, as the case examined in this study is organised as a cooperative, with specific governance structures that may influence the relationship between democratic and sufficiency practices. Therefore, ECs with different organisational models may exhibit different dynamics. Furthermore, the small scale of the EC relative to the wider island population may shape members' perceptions of fairness, legitimacy, feelings of belonging, collective efficacy and other elements discussed in this study. This contextual factor further limits the broader applicability of the findings.

# 8 Conclusion

Motivated by the need to better understand how principles of democratic governance interact with energy sufficiency within the degrowth paradigm in island-based ECs, this study investigated the following RQ: *How does democratic governance within energy communities influence members' orientations and practices regarding energy sufficiency?* To address this question, the study examined the institutional dimensions of democratic governance alongside sufficiency-oriented practices among members of the EC, employing Energía Bonita as a case study.

The findings demonstrate that democratic governance reshapes the EC members' relationship with energy use. Through democratic, participatory, direct, and deliberative governance structures, the community moves towards sufficiency-oriented practices that generate dual environmental and social benefits. Accordingly, the analysis shows that democratic governance within the studied EC fosters sufficiency-oriented practices by embedding energy use within participation and shared decision-making, identity formation, empowerment, and collectively defined norms and values. Answering the RQ, these elements are strengthened through peer influence, mutual accountability, solidarity and willingness to question consumption habits through democratic processes. The study concludes that democratic governance influences members' sense of shared responsibility, collective stewardship, and solidarity regarding sufficiency-oriented practices.

A key strength of this research lies in its integration of everyday practices with the potential for structural transformation of energy initiatives, illustrating how democratic and sufficiency-oriented principles contribute to reshaping energy governance. The interaction of these principles supports the emergence of new social imaginaries and opens pathways towards broader societal and environmental change. Consequently, this research contributes to the academic debates on degrowth and ECs by demonstrating that meaningful transformation - rooted in political, social and normative dimensions - depends on socio-institutional change rather than purely techno-economic considerations. Therefore, reformation of societal systems is essential to prioritise human and ecological well-being over economic growth, and community-led initiatives such as ECs provide a viable foundation for such a shift. This transformation promises not only environmental benefits through reduced consumption but also enhanced local decision-making, conviviality, and strengthened social connections. Such forms of social innovation enable the principles of degrowth (i.e. democratic governance and energy sufficiency) to materialise in tangible, community-anchored actions with the potential to drive systemic change. Therefore, for meaningful change, it is relevant to move away from extractive, profit-oriented hierarchies and to relearn the forms of abundance, celebrating community and care. This research and fieldwork clearly demonstrated the importance of co-creating a shared sense of meaning while prioritising fundamental human needs over consumer-driven wants.

## 8.1 Practical Implications for the Audience

The practical implications of this research extend across the diverse audiences engaged in shaping democratic and sufficiency-oriented energy practices and transformations. For practitioners within ECs - such as island-based ECs, RESCoop, and Energía Bonita - the findings highlight the importance of strengthening direct deliberative, participatory democracy, beyond formal voting, and embedding energy sufficiency considerations into everyday community practices. This includes fostering deliberative spaces and encouraging peer-to-peer learning that reinforces social responsibility for energy reduction. For EC members and local communities, this research recommends active engagement in deliberative processes,

reflection on personal energy practices, and the cultivation of solidarity-based relationships that make democratic and sufficiency-oriented practices a lived reality.

For policymakers and EU-level institutions, the study underscores the need to integrate energy sufficiency into policy frameworks, supporting democratic governance structures and recognising ECs as actors of social innovation rather than as sole renewable energy producers. Therefore, these institutions could strengthen the EC's social capital by investing in capacity-building initiatives that could further strengthen ECs' ability to foster democratic and sufficiency-oriented practices. Collectively, these recommendations aim to support ECs and related institutions in advancing democratic, socially grounded, and ecologically aligned energy transformations.

## 8.2 Recommendations for Future Research

Although this study offers relevant insights into the mechanism linking principles of democratic governance and sufficiency-oriented practices, it is essential to be aware that these conclusions are derived from a single case study. Accordingly, there could be a risk of overstating the transformative potential of ECs pathways, given that the research focused on a highly specific island-based EC, on an island where over 90% of electricity comes from fossil fuels and the island operates as an isolated energy system. Future research could therefore benefit from examining democratic and energy sufficiency practices across different contexts to enable cross-comparability and to assess whether similar dynamics emerge in other ECs. Moreover, considering the broader socio-ecological crisis, this study points to deeper questions about the collaborative organisation of democracy, highlighting the need for further investigation into the forms of institutional reform and support required to strengthen democratic governance in advancing sustainability practices. Such research could explore how institutional arrangements and policymaking could strengthen democratic governance within energy initiatives, to reclaim community agency and create spaces within local environments for deliberation, meaning-making, social connections, and ecological and social well-being.

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# Appendix

## Appendix A – Interview Consent Form



**Democratised Governance and Sufficiency Practices in Energy Community**

**Case of Energia Bonita (La Palma, Canary Islands)**

**CONSENT FORM**

**Information about participation**

We would like to ask whether you wish to participate in a research project. In this document, you will find information about the project and what participation entails.

**What is the project about and why are we asking you to participate?**

Although decarbonisation is receiving increasing attention, it has not met the desired targets as overall energy demand continues to grow. This dynamic is closely linked to a growth imperative embedded in private market mechanisms, where rising energy consumption has gone hand-in-hand with economic growth. In response, energy communities have been identified as an alternative governance model that seeks to shift the role of individuals from consumers to active energy citizens, with democracy and sufficiency emerging as practical organising principles of this energy system. Therefore, this study seeks to explore how democratic governance and sufficiency connect to emerging debates on post-growth business models in the context of energy communities.

Our objectives are to understand:

1. **Democratic Governance:** How is democracy conceptualised and practised within the energy community? Which forms of participation, ownership, and decision-making structures are emphasised, and how do they shape social relations?
2. **Sufficiency Practices:** How is sufficiency interpreted in the context of community energy? To what extent do energy communities influence reduced demand, conscious consumption, and collective definitions of "enough"?
3. **Transformational potential:** To what extent does the sufficiency focused energy citizenship support a broader socio-ecological transformation of island energy system, and how does it connect to the exploration of post-growth-oriented business models?

The research principal for the project is Lund University. The research principal is the organisation responsible for the project.

**As part of this project, we invite you to participate in interviews.**

We seek to learn more about:

- participants' reasons for joining Energía Bonita and how their energy attitudes and behaviours have changed since joining the energy community
- experiences with collective decision-making, rules, and influence over community energy governance
- how membership shapes energy use, identity, social expectations, and sufficiency-oriented practices
- whether participation influences beliefs about collective energy governance and socio-ecological change

You will be interviewed by Karolina Panko, a Master's student.

**How will the project be conducted?**

- You are invited to share your experiences as a member of the energy community
- Please describe your involvement in the community and your experiences related to energy use, participation, and collective energy governance

You decide which experiences you wish to share and what you prefer not to discuss.

The interview may be audio-recorded with your consent.

**What will happen to your data?**

The project will collect and register information about you. Your responses and results will be processed in a way that prevents unauthorised access.

Research data will be archived and deleted in accordance with the research principal's rules on the preservation and disposal of research documents, in line with the General Data Protection Regulation (GDPR), the Archives Act (SFS 1990:782), the Archives Ordinance (SFS 1991:446), and the Public Access to Information and Secrecy Act (SFS 2009:400). Data will be handled in accordance with existing routines at Lund University, including data management plans. Lund University is the data controller, and data is stored on the university's servers for 10 years after the project is finalised.

Personal data, including name and contact details, is processed as necessary to conduct research in the public interest (GDPR Article 6(1)(e)) and handled in accordance with the GDPR. Only pseudonymised data will be shared in publications or public presentations related to the project.

As long as you can be identified, you have the right to know which personal data we store about you, to receive a copy of your personal data, and to request correction or deletion of your data. Personal data is collected when you participate in an interview as part of our research. These data include your name, contact details, and, if deemed relevant, your workplace.

If you wish to access your data, please contact the principal investigator, Oksana Mont (XXX, +XX XXX XXX XXX). The Data Protection Officer can be reached at dataskyddsombud@lu.se

If you are dissatisfied with how your personal data is handled, you have the right to lodge a complaint with the Swedish Authority for Privacy Protection (Integritetsskyddsmyndigheten), which is the supervisory authority.

**Are there potential consequences or risks of participating?**

The potential risk identified concerns data breaches and the dissemination of personal data, though it is very small. To prevent this, we apply the principles described above along with additional safeguards. Beyond this, we see no risks associated with participation. Only pseudonymised data will be shared when reporting results, for example, in scientific publications. You will not be pressured to answer questions or discuss topics you do not wish to address. You may always decline to answer a question.

**Participation is voluntary**

Your participation is voluntary, and you may withdraw at any time. If you choose not to participate or to withdraw, you do not need to provide a reason. If you wish to withdraw, please contact the person responsible for the project (see below).

**How will you receive information about the results?**

We intend to use information from the interview when writing public reports and articles. If you would like a copy of our publications, please contact Oksana Mont (XXX).

**Responsible for the project**

The Master's Thesis is conducted by:

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**Democratised Governance and Sufficiency Practices in Energy Community - Case of Energia Bonita (La Palma, Canary Islands)**

| | |
|---|---|
| ☐ | I have received and reviewed the information about the study and have had the opportunity to ask questions. I understand that I may ask additional questions at any time. |
| ☐ | I understand that I may withdraw from the study at any time. If so, I should contact Professor Oksana Mont (oksana.mont@iiiee.lu.se). If I withdraw, I understand that information about my participation will be retained, although my responses will be deleted. |
| ☐ | I understand that I may end my participation at any time and/or decline to answer a question without this affecting my participation. |
| ☐ | I understand that the information collected will be kept confidential and handled in accordance with GDPR. |
| ☐ | I understand that my personal information, such as my name, will not be shared outside the research project. |
| ☐ | I consent to collected data in pseudonymised form being used for research purposes (for example in research articles). |
| ☐ | I understand that collected data may be stored at Lund University for up to 10 years after being made publicly available (only in pseudonymised form where my identity is protected). |
| ☐ | I consent to audio recording and to the use of quotations. I understand that my name will not be used. |
| ☐ | I agree to be interviewed for the above-mentioned study. |

Please, sign below to confirm your consent:

| | **Participant(s)** | **Researcher(s)** |
|---|---|---|
| **Name(s)** | | |
| **Signature(s)** | | |
| **Date(s)** | | |

# Appendix B – Interview Guide

1. Prior Joining the EC

These questions aim to distinguish self-selection from transformation by exploring participants' prior practices and motivations. Here, I will discuss the efficiency-sufficiency shift, clarifying that energy sufficiency is defined as a reduction in energy consumption. I will also provide a translation of sufficiency to Spanish – suficiencia.

- What motivated you to join Energía Bonita?
- Before joining, how would you describe your energy use?
- How would you describe your relation to energy (e.g., consumer, co-owner, citizen)? Has it changed since joining EC?
- Were you already concerned about reducing consumption before you became a member?

2. Experiences of Governance

These questions focus on rules, procedures, and collective mechanisms.

- Can you describe how decisions are made in the energy community?
- What opportunities do members have to influence decisions in practice?
- Can you walk me through a recent decision-making process you were involved in?
- Has your involvement in collective decision-making influenced your everyday energy habits? If so, in what way and through what experiences?
- Have you noticed a difference in sufficiency outcomes when you were involved in the decision-making process compared to when you simply received a rule or recommendation?

Questions that could be posed to the Governing Council/ Board:

- How are formal rules, targets, and strategic priorities determined within the community in your experience? What processes, criteria, and actors are involved in setting them?
- How are decisions regarding sufficiency measures or collective targets, such as collective tariffs, shared investments, or energy caps, proposed, deliberated, and approved?

3. Perceived Empowerment or Norm Shifts

These questions examine how participation influences identity formation and collective norms.

- How do discussions, assemblies or votes influence what you think is "appropriate" energy behaviour?
- Do you feel expectations from other members regarding energy use?
- Have you received encouragement, recognition, or feedback regarding energy savings?
- Do you feel that members care about how others use energy? How is this expressed?
- Does participation in community decision-making change how much control you feel over your own energy consumption? How?
- Do you think of energy more as a shared resource or a private commodity?
- Have you ever changed your behaviour because you felt accountable to other members?
- Would you have made the same change if you were not part of the cooperative?
- What principles or priorities guide your thinking about energy use and organisation, such as environmental protection, fairness in distribution, cost considerations, or treating energy as a shared resource?

- Did these values change after you became a member?
- What experiences contributed to that change?

4. Reflection on Causality

The final section identifies whether and how participation actually led to changes in attitudes or practices.

- Do you think democratic participation influences change in your habits? Why?
- How does knowing that energy is collectively organised affect your decisions about energy consumption?
- Can you link specific changes in your energy use to particular moments, decisions, or experiences within the energy community?
- Has participating in Energía Bonita influenced your belief that individual or collective energy use affects environmental outcomes?

# Appendix C – Relationship between Concepts of Citizen Energy Community (CEC) and Renewable Energy Community (REC)

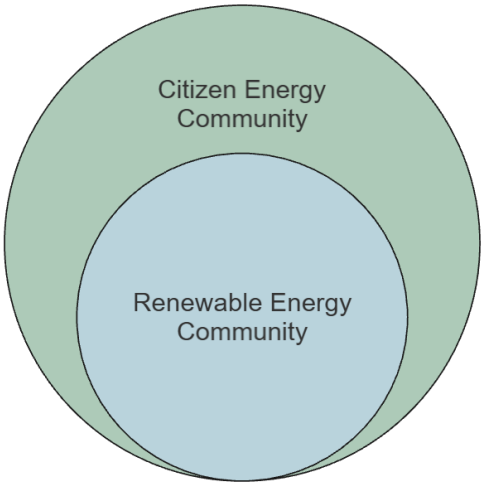


*Figure Appendix C. Relationship between Concepts of Citizen Energy Community and Renewable Energy Community*

*Source: Own illustration, information from the European Federation of Energy Communities (RESCoop, 2019), (the Figure was made in the Miro software)*

# Appendix D – Comparison between REC and CEC

*Table Appendix D. 'Comparison between REC and CEC'*

| Article 2(16) Recast Renewable Energy Directive<br>Renewable Energy Community (REC) – A legal entity: | Article 2(11) Recast Electricity Directive<br>Citizen Energy Community (CEC) – A legal entity that: |
|---|---|
| (a) which, in accordance with the applicable national law, is based on **open and voluntary participation**, is **autonomous**, and is **effectively controlled by shareholders or members that are located in the proximity** of the renewable energy projects that are owned and developed by that legal entity; | (a) is based on **voluntary and open participation** and is **effectively controlled by** members or shareholders that are **natural persons, local authorities, including municipalities, or small enterprises;** |
| (b) the shareholders or members of which are **natural persons, SMEs or local authorities,** including municipalities; | (b) has for its **primary purpose to provide environmental, economic or social community benefits** to its members or shareholders or to the local areas where it operates **rather than to generate financial profits**; and |
| (c) the **primary purpose** of **which is to provide environmental, economic or social community benefits** for its shareholders or members or for the local areas where it operates, **rather than financial profit** | (c) **may engage** in generation, including from renewable sources, distribution, supply, consumption, aggregation, energy storage, energy efficiency services or charging services for electric vehicles or provide other energy services to its members or shareholders; |

*Source: Information from the European Federation of Energy Communities (RESCoop, 2019)*

# Appendix E – Geographical Location of La Palma


*Figure Appendix E. 'Geographical Location of La Palma'*

*Source: Encyclopaedia Britannica, Inc. (2026)*

## Appendix F – Power Plant Los Guinchos

*Source: Own picture*

## Appendix G – Gross Electricity Generation in La Palma in 2023

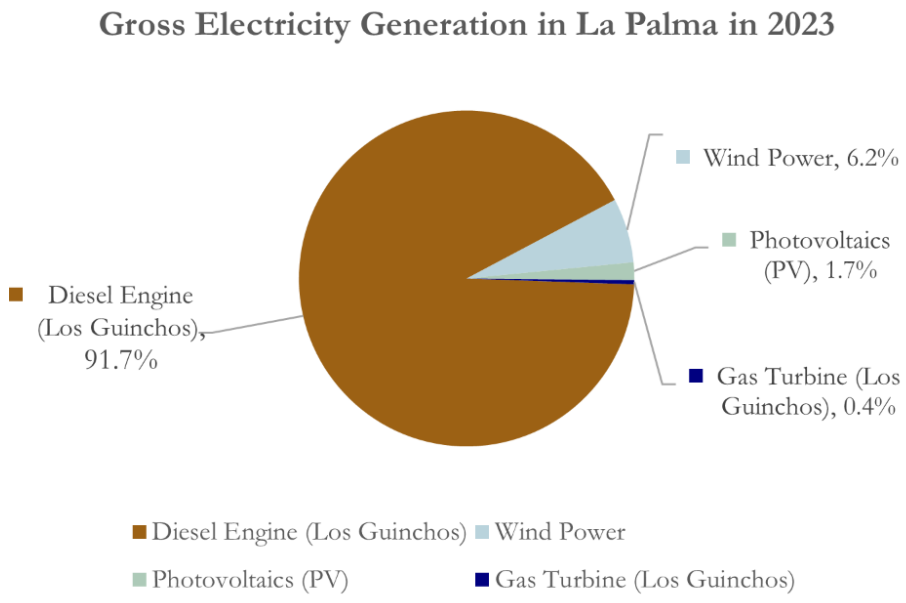

*Figure Appendix G. 'Gross Electricity Demand in La Palma in 2023'*

*Source: Own illustration, information from La Palma Renovable (2026, May 12), (made in Excel)*