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# Disconnected: Unpacking policy framing processes of energy exclusion in Spain

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ARTICLE INFO	A B S T R A C T
Keywords: Energy precarity Energy exclusion Framing analysis Energy deprivation Disconnections	This paper examines the process of policy framing and narrative construction in the context of energy exclusion. Through qualitative analysis of case studies of collective, systematic, and recurrent electricity disconnections at the neighbourhood level in Spain, the study identifies two policy framings, the 'criminalisation' and the 'degradation' framing, in the process of building the phenomenon of energy exclusion as a policy problem. Highlighting the central role of problem construction in policy development, the research shows how this stage shapes the whole policy trajectory, not only determining the character of the problem but also how to solve it. The research uses textual material collected through in-depth qualitative interviews, news and press, and policy documents to critically analyse the framing process and narrative construction. The results show how conflicting interpretations of a policy situation can lead to different policy messages and the influence of structural elements, such as the dominant electricity model, in reinforcing these interpretations.

# 1. Introduction

In recent years, research on energy deprivation has grown exponentially. Although the phenomena related to energy deprivation are diverse and multidimensional, one conceptualisation has stood out: the notion of energy poverty. This is partly because it was one of the seminal terms to be used in the academia (Boardman, 1991), but also because it has been widely used in legal and policy documents, particularly in the European Union context. Initially, discussions within the energy poverty scholarship focused mainly on the economic challenges associated with paying energy bills and the discomfort caused by inadequate thermal conditions (Bouzarovski and Petrova, 2015). Over the years, research has broadened our understanding of the situations in which human well-being and dignity are affected by lack of access to energy (Grossmann and Trubina, 2021; Liddell and Morris, 2010; Thomson et al., 2017), and a number of concepts closely connected among them have emerged, such as energy vulnerability (Bouzarovski et al., 2014) or energy precarity (Petrova, 2018). Similarly, energy disconnection in the context of energy poverty has traditionally been associated with disconnection by the supplier for non-payment of energy bills. More recently, other situations of lack of access to energy have been considered, such as voluntary disconnection when using prepaid meters, or under-consumption of energy to avoid debt and high energy bills (Hernández and Laird, 2022). As some authors have pointed out,

conceptualisation and operational definitions in the field of energy deprivation can have political and policy implications (Sareen et al., 2020).

Some authors underscore the critical role of problem definition as a social construct, describing it as an integral part of the policy process that significantly shapes the involved actors and the specific public actions implemented (Subirats et al., 2008, p. 125). They understand it as an "ongoing discursive struggle" (Fischer and Gottweis, 2012, p. 7) over the policy process. This perspective contrasts with a more rigid cyclical approach that presupposes the pre-existence of a public problem (Jann and Wegrich, 2007), independent from the policy process. Other scholars, like Schon and Rein (1994), emphasize the paramount importance of politically defining the problem, highlighting its influence on the selection of intervention strategies (Peters, 2005).

The novelty of this paper is that it presents one of the first qualitative investigations that examines the problem of systematic and recurrent power disconnections in Spanish neighbourhoods, analysing them as a particular expression within the broader paradigm of energy deprivation. For some years now, various social movements, neighbourhood associations and NGOs have been denouncing the situation of collective disconnection of entire communities in certain neighbourhoods and areas of Spain. These are situations of lack of access to electricity, not only for economic reasons, but also because of other factors related to the quality of the supply and the infrastructures, as well as collateral

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elements that put a strain on the electricity infrastructures.

Systematic and recurrent collective disconnections in specific neighbourhoods are situations of energy deprivation that are rarely analysed and studied, given the political and social disputes surrounding the causes and factors that lead to large-scale blackouts. This manuscript analyses a fundamental element in the public policy: the policy framing process surrounding the phenomenon.

The research question addressed in this paper is 'Which policy frames emerge in the process of defining energy exclusion as a policy problem?' It uses a qualitative approach, based on three case studies, to explore how different actors frame situations of extreme energy deprivation and identify their causes and approaches to solutions. The case studies selected for this research are three neighbourhoods in three cities in Catalonia - Girona, Figueres and Sant Adrià de Besòs - in the north-east of Spain. These neighbourhoods represent typical lowincome and vulnerable areas on the periphery of medium-sized cities and, as we will see, although each case has its specificities, they present a scene that is repeated in other neighbourhoods and cities throughout the country.

# 2. Energy deprivation and extreme energy poverty

Energy deprivation is generally described as 'inadequate access to energy (Bouzarovski and Petrova, 2015). As many authors have pointed out, this general notion is connected with multiple terms well-developed both in the field of research and policy-making, including energy poverty (Boardman, 1991), energy vulnerability (Bouzarovski et al., 2014; Gouveia et al., 2019; Middlemiss and Gillard, 2015), and energy precarity (Petrova, 2018). Traditional perspectives have often linked energy deprivation primarily to economic factors (Ürge-Vorsatz and Tirado Herrero, 2012), a view this paper aims to expand upon.

As some authors have pointed out, the concepts of energy deprivation and energy poverty has been often used as synonyms (Bouzarovski and Petrova, 2015). This is partly explained by the fact that the term energy poverty has been the one widely adopted by the European Union policymakers and included in regulatory processes to address this issue. This has led, for example, to very different definitions of energy poverty, as each of the countries may have defined – and operationalised - the issue in a very different way (Grabar Robina et al., 2022).

From a conceptual perspective, we also connect our theoretical framework to the notion of energy precarity defined as a combination of economic and spatial factors that contribute to energy deprivation in homes (Bouzarovski and Tirado Herrero, 2017; Petrova, 2018). This is exemplified in our case studies by electricity disconnections in certain peripheral urban areas with high levels of infrastructure and building degradation. While disconnections are often seen as a secondary effect of energy poverty, this paper highlights the need to consider a variety of social, economic, and spatial factors.

Teschner et al. (2020) explore energy deprivation in ethnic minority communities, labelling as 'extreme energy poverty' situations of limited access to energy, frequent disconnections, and irregular grid connections. Ruiz-Rivas et al. (2023) also use 'extreme energy poverty' to describe severe energy deprivation. However, from the author's point of view, this terminology can lead to confusion, particularly in policy development. Energy poverty policies typically focus on economic factors, which may not address other types of energy disconnections. The present paper distinguishes periodic and systematic disconnections as a severe form of energy deprivation, using the term energy exclusion. The notion of energy exclusion, conceptually linked to the idea of social exclusion as a multifaceted phenomenon, allows for a more complex perspective and diagnosis of the specific situations of extreme energy deprivation in our case studies. These factors go far beyond the classical triangle of energy poverty drivers (Boardman, 2010), namely income level, energy efficiency of buildings and energy prices, often associated with techno-economic approaches (Jenkins et al., 2017).

### 3. Policy problem definition: a framing approach

The policy process model applied in this research is based on Subirats et al. (2008), following a cyclic optic of the policy sequence process in its first steps, which is enriched with a critical policy approach that defies the material and conceptual separation of the policy cycle stages as units of analysis (Barbehön et al., 2015). In this direction, the problem definition is a basic discursive process to construct reality or a structuring practice of a more extensive policy process (Barbehön et al., 2015, pp. 243–246). On the contrary, traditional agenda-setting approaches centre their attention on the topic selection process of the political agenda (Peters, 2005), usually using a rational choice approach but do not focus on problem definition as a socio-political practice.

This paper adopts Carol Bacchi's problem-questioning approach to policy analysis (2012), challenging established perceptions of public problems and their definitions (Cox, 1981; Deleuze, 1994). By shifting the focus from solutions to questioning 'What is the representation of the problem?', Bacchi highlights the political and socially constructed nature of problem definition (Elder and Cobb, 2003; Turnbull, 2006).

We focus on the framing analysis contributions in public policy, particularly those by Schon & Rein (1994), and later Van Hulst and Yanow (2016) distinguishing their epistemological approach from the hypothesis-validation focus in social movement studies (Gamson, 1992; Morris and Mueller, 1992; Snow and Benford, 1988). Rein & Schön (1977) describe framing as a process of selecting and omitting certain aspects to form a cohesive understanding of a public issue, emphasizing the construction of 'frames' in policy-related discussions. Van Hulst & Yanow emphasize, revisiting the conceptual roots of frame analysis (Goffman, 1974), the relevance of advocating for a dynamic, interactive understanding of framing practices. According to the authors, a frame is conceptualized as an organizing principle that structures the perceptions of situational participants, guiding how they perceive their social realities and present these realities to themselves and others (van Hulst and Yanow, 2016, p. 94). This perspective complements culturalist theories, explaining how groups attach to specific frames and construct shared histories based on social solidarity (Nev, 2009).

Van Hulst and Yanow (2016, p. 102) articulate their framework for analysing policy framing in a double-dimension structure. First, they identify three acts through which the dynamic framing process takes place: sense-making, naming (which here includes other acts such as selection and categorization), and storytelling. This perspective is closely tied to an intersubjective view of the framing process in which actors are in constant interaction and dialogue. The second axis of the framework refers to the type of entities in which the policy framing process unfolds. Van Hulst and Yanow identify three entities: the substance of policy issues, which refers to the "world of ideas relevant to the policy issue at hand"; the identities and relationships of the actors involved in the policy; and, finally, the policy process itself. In this article, we focus on the first entity: the substance of the policy, that is, how the policy problem is defined and understood.

Framing analysis is pivotal in the energy poverty and vulnerability domain, influencing how the problem is defined. Koďousková & Lehotský's study on public officials' discourse in the Czech Republic reveals three main frames: individual responsibility, structural conditions, and individual vulnerability, each with significant implications for policy design and implementation (Koďousková and Lehotský, 2021).

# 4. Methods

This investigation is built on a qualitative perspective from a policy

analysis approach. It uses a constructivist and interpretivist approximation to the public problem definition, understanding it as a social and political construction. This approach is materialized through a framing analysis to better understand how the policy problem is represented in the cases of energy exclusion studied. Note that the results presented here are part of a broader research project<sup>1</sup> encompassing various related research questions and objectives.

#### 4.1. Data collection and materials

The qualitative research process involved multiple phases, from data collection—employing interviews, participant observation, and document analysis—to data analysis, including coding, content analysis, and framing analysis.

The research included individual interviews with 18 participants and group interviews<sup>2</sup> with 30 interviewees, totalling 48 participants. Participants included affected neighbours, activists in the neighbourhoods, political actors related to the cases (municipal councillors) and technical staff, policy makers and civil servants both at the local and regional level. Selection was based on a snowball sampling method, aiming for a diverse and balanced representation of profiles and actor types (see Appendix A). The criterion for stopping the process of collecting data from participants was based on the principle of data saturation. This research followed an iterative process in which data collection and analysis were conducted in parallel. Data saturation was reached when new interviews and complementary sources of evidence would not add new information for our research purposes, but would fit with the existing analysed information.

Most interviews were recorded and transcribed, while for some, detailed notes were taken to respect participant preferences and ensure data integrity, adhering to a 'participant-centred approach' (Ruta-kumwa et al., 2020; Shaver, 2005). Media played a vital role in shaping frames and narratives in our case studies. Newspaper articles from local, regional, and national levels were analysed to understand their portrayal of the phenomenon and the inclusivity of voices, impacting public policy (Kennamer, 1994). Finally, minutes from City Council Plenary Sessions relevant to the phenomenon were also included as data sources. The qualitative data was collected between July 2019 and December 2021, summarized in the following table (Table 1).

In this research, in line with Schwartz-Shea and Yanow (2012), we will not use the concept of triangulation to explain the use of different types of qualitative data in the same investigation. Instead, we opt for a constructivist perspective on combining different types of data to "increase understanding through producing new insights, not to confirm the existence of a single 'true' reality" (Grant, 2019, p. 102). Therefore, in this paper we recognise this practice as intertextual analysis through multiple sources of evidence (Schwartz-Shea and Yanow, 2012, p. 88).

#### 4.2. Analysis method: framing policy analysis

In this paper, we concentrate on examining framing practices within public policy, utilizing narrative analysis techniques, and drawing on the analytical method initially introduced by Rein & Schön (1977) and later expanded by Van Hulst and Yanow (2016).

Regarding the identification of the object of our framing analysis, following the suggestion of Van Hulst and Yanow, this research focuses on two of the three entities identified by the authors. In this case, we analyse the substance of the policy issue and, to a lesser extent, the policy process. The substance of the policy issue refers to the "meaning (s) for different issue-relevant interpretive communities" (van Hulst and Yanow, 2016, p. 102). As the authors point out, it is important to note that even if - for analytical purposes - we select specific meanings from different policy positions, this static character is only for the purposes of description and analysis, as in reality they are always in motion and changing. To a lesser extent we also introduce the framing activity applied to the policy-making process. However, this research, even if it takes into consideration the actors in play to analyse the substance of the policy issue, it does not focus on the framing on the actors' identities and relationships.<sup>3</sup>

The cognitive mechanism for bridging these analytical dimensions comprises three main steps: holistic text analysis for sense-making, categorizing key policy frames, and reconstructing policy narratives. This research took an iterative approach to both data collection and data analysis. This means that both research activities were conducted in parallel and complemented each other. This iteration not only strengthens the analysis but is also key to determining the point of data saturation, especially in the case of the final step of reconstructing policy narratives, where the "story" is somehow circled and closed.

# 4.3. The neighbourhood as the unit of analysis: La Mina, Culubret-Sant Joan, and Font de la Pólvora

The spatial unit selected for this investigation is the neighbourhood, conceptualized as a "localized network" where residents and businesses forge social relations and a shared sense of identity (Anderson, 2017). Neighbourhoods emerge as relevant units of analysis because of the social and spatial dynamics within them. Here we find the theory of the 'neighbourhood effect', which links spatial segregation to social outcomes and the perpetuation of social exclusion (Cano Hila, 2011). This theory posits that residing in a vulnerable area exacerbates the residents' social conditions, establishing a causal relationship between spatial and social factors (Nel·lo, 2021, p.20). While neighbourhood studies offer valuable sociospatial insights, they also present methodological challenges such as potential selection bias and endogeneity (Johnston, 2009; Ruiz-Tagle et al., 2016). Acknowledging these challenges, we adopt an ecological perspective, recognizing that residential segregation and poverty concentration are social consequences of broader structural forces, with institutional influences playing a crucial role (Harvey, 1989; Wacquant, 2010).

To delve deeper into these issues, three neighbourhoods from midsize cities in Catalonia (Spain) have been selected as case studies (see Fig. 1). The selection criteria for these neighbourhoods were multifaceted including location, characteristics, demographic profiles, and public interventions (see Table 2).

Located in the city of Girona, a medium-sized city in northern Catalonia, the Font de la Pólvora neighbourhood consists of a group of buildings originally built as social housing in 1977. In order to better understand the peculiarities of the area, we need to situate the construction of these buildings within a longer-term process of relocating the population that had been living in the city's historic shantytowns since the 1950 s

Culubret and Sant Joan are two adjacent small neighbourhoods in the western part of Figueres, a small city in northern Catalonia, less than fifty kilometres from the French border. Although the two neighbourhoods date from a similar period, the reasons for their creation were different, and this has influenced the demographic profile of their residents. Culubret is a group of detached houses constructed in the 1960 s and expanded in the 1970 s, originally built for migrant workers from southern Spain. Sant Joan, on the other hand, is a more complex

<sup>&</sup>lt;sup>1</sup> This paper partly presents the results of the Ph.D. thesis: Varo, A. (2022) Vivir a oscuras: la construcción analítica de la exclusión energética como problema de política pública [Doctoral dissertation, University of Girona]. http: //hdl.handle.net/10803/687366

<sup>&</sup>lt;sup>2</sup> See the differences between group interviews and focus group interviews in Gibbs (2012).

<sup>&</sup>lt;sup>3</sup> For an analysis that focuses on the actor's relevant identities and relationships framing process and construction of policy target populations, see Varo (2024).

# Table 1Research data summary.

Data collection method	Type of Raw Data	Number	Disaggregation method	Data processing	Final data for analysis
Qualitative interviews	In-depth personal and group interviews	48	By cases and by actors.	Transcript and anonymization.	Text
Text analysis	Press articles in which the case studies were relevant	109	By cases	Screening, selection, and text cleaning.	Text
Text analysis	Policy documents and regulatory texts, both at the local and regional level	12	By cases	Automated search, screening, selection, and text cleaning.	Text

Source: elaborated by the author.

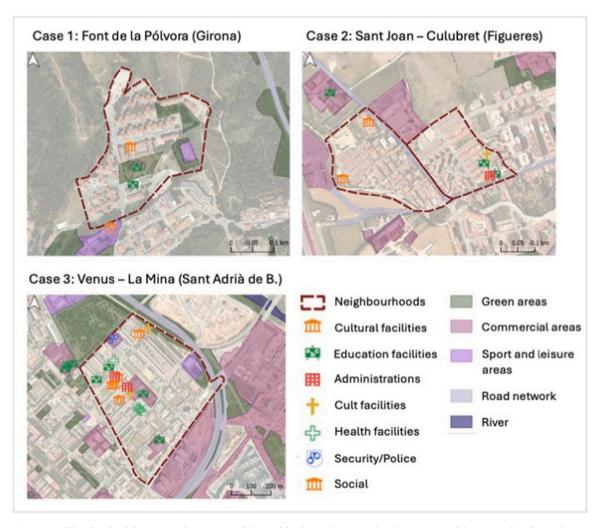


Fig. 1. Neighbourhoods of the case studies. Source: elaborated by the author using data from ICGC and the Generalitat de Catalunya.

neighbourhood from an urban planning point of view, since it comprises different groups of buildings constructed at different times and for different purposes. The area includes social housing for migrant workers, as well as buildings built specifically to meet the need to resettle 60 Roma families displaced by severe flooding in 1962.

Finally, La Mina is one of the six districts of Sant Adrià de Besòs, located at the southern end and bordering the city of Barcelona. It was created in 1969 following an urban plan to relocate families living in informal urban settlements (shantytowns). Since La Mina's original dimensions make it a much larger case than the other neighbourhoods analysed, we have focused on a small part of the neighbourhood in this study: the building of Venus. The main reason for choosing Venus is that it was the first and most affected building in La Mina to suffer from energy precarity. Furthermore, it was the first area selected to implement specific measures to address the situation of energy exclusion.

The Venus building is one of the historic buildings in the 'Mina Nueva' area. It consists of 244 apartments. At the beginning of 2021, 180 flats were owner-occupied, 48 were temporary social housing managed by the Consorci del Barri de La Mina and the City Council, 15

#### Table 2

Criteria for the case studies selection.

Criteria	Description
Peripheral Location	All three neighbourhoods are situated in the outskirts of medium-sized cities, providing a contrast to more central, politically powerful areas like Barcelona.
Similar Origins and Characteristics	The selected areas were established as social housing around the mid-20th century, sharing urban and housing characteristics.
Demographic and Socioeconomic Profile	The neighbourhoods have comparable demographic and socioeconomic profiles, with a few exceptions, ensuring consistency in the comparison.
Public Interventions	Each neighbourhood has witnessed various public interventions to address energy precarity, allowing for an examination of different approaches and their effectiveness.

Source: elaborated by the author.

were illegally occupied<sup>4</sup> and one was boarded up. The Venus building is also at the centre of an ongoing conflict in the neighbourhood in relation to the urban transformation plan for the area.

Table 3 summarises the basic characteristics of the analysed neighbourhoods, including the origins of each of the neighbourhoods, a general demographic and socioeconomic profile, as well as basic information on the main political actors in the cases. In addition, extended and complementary demographic, and housing indicators for the three neighbourhoods included in the analysis and the Catalan average are presented in Appendix B.

# 5. Unveiling energy exclusion: massive energy disconnections and supply quality

To better understand the context of the case studies, it is relevant to briefly present an overview of the electricity provision model in Catalonia and Spain. The electricity supply chain, from generation to delivery, is divided into four stages: generation, transport, distribution, and retail. While the generation and retail activities are 100% liberalized, the transport and distribution activities are regulated. In this paper, we will focus on the activity of distribution, which, together with retailing, is the activity with more direct contact with citizens. Distribution involves the transport of electricity from the transmission system to the final consumers. It is carried out through a network of medium and low voltage lines that cover specific geographic areas. In the case of Spain, Distribution System Operators (DSOs) are the grid owners, as well the responsibles for maintaining and operating the distribution network to ensure a reliable supply of electricity to homes and businesses. In the case of Catalonia, in addition to historical small strongholds controlled by local, or even public, DSOs, the distribution network is owned and managed by the private DSO E-Distribution (part of the Endesa business group, which is part of the international Enel group). Beyond the distribution activity, as widely analysed in other studies, the Spanish electricity model is characterized by an oligopolistic structure, meaning that most of the main stages of the energy cycle are controlled and owned by a literal handful of private companies, one of which is the Endesa group (Palazuelos, 2019; Velasco, 2015). This means that the electricity companies in Spain have a significant amount of power and influence, which must be taken into account when analysing the causes and responsibilities of energy exclusion and energy deprivation

# Table 3

Basic characteristics of the case studies.

	Font de la Pólvora	Culubret - Sant Joan	La Mina (Venus)
Location	East zone of the city of Girona.	West zone of the city of Figueres.	South zone of the city of Sant Adrià de Besòs
Year(s) of construction	1977	1960 s and 1970 s (different stages)	1969
Origin	Social public housing built during the Franco dictatorship. Part of a larger process of relocating the population that had been living in the city's shantytown since the 1950 s	Social housing built during the Franco dictatorship. Part of the project to (1) provide housing for migrants from the South of Spain, and (2) Relocation of Roma population from other areas of the city.	Social public housing built during the Franco dictatorship. Part of a larger process of relocating the population that had been living in Barcelona's shantytown since the 1950 s
Demographic profile of the neighbourhood Socioeconomic	Younger than average population, with a significant percentage of children and adolescents. Low rates of immigrant population. Significant percentage of Roma population. 57 (Girona =	Younger than average population, with a significant percentage of children and adolescents. Moderate rates of migrant population and high rates of Roma population. 55 (Figueres =	Younger than average population, with a significant percentage of children and adolescents. Low rates of immigrant population. Significant percentage of Roma population. 71.6 (Sant Adrià
profile of the neighbourhood (ISTª) in 2018	100,5)	74,9)	de B. = 88.6)
Social movements and NGOs	NGOs and social associations working in the area; Cultural Associations; Platform for the Dignity of Font de la Pólvora.	NGOs and social associations working in the areas; Cultural Associations	NGOs, social and religious associations working in the areas; Cultural Associations; Roma people Associations
Neighbours' Associations	Neighbours Association of Font de la Pólvora	Neighbours' Association of Culubret; Neighbours' Association of Sant Joan	Platform of Neighbours and Associations

<sup>a</sup> The "Índex Socioeconòmic Territorial" (IST) in Catalonia is a composite indicator designed to measure the socioeconomic level of different territories. It integrates various indicators related to income, employment, education, and living conditions to provide a comprehensive assessment of the socioeconomic status of municipalities and other territorial units. The IST is a relative index. A reference value for Catalonia is set at 100, and a value is established for each territorial unit in comparison with the average value of Catalonia.

#### situations.

In Font de la Pólvora and Culubret - Sant Joan, electricity disruptions began sporadically around 2013, escalating to over 15 occurrences and up to 12-hour blackouts weekly. La Mina experienced a different pattern, with widespread outages in 2016, particularly in the Venus building, severely impacting the community. Quick local administrative actions brought temporary relief until a resurgence in autumn 2021.

Identifying energy exclusion as a policy issue has been challenging due to its multi-causal nature, leading to varied approaches and difficulty in accessing quality technical information. Multi-causal origin refers to the various factors that are intertwined in these types of

<sup>&</sup>lt;sup>4</sup> Occupying a dwelling without a legal title (ownership, lease, cession, etc.) is illegal in Spain. However, as highlighted in the literature on housing occupations, there is a diversity of forms of occupation depending on the causes or motivations, ranging from political motivations (Martínez Lopez and Cattaneo, 2014) or criminal interests to squatting due to poverty (Esposito, 2022). With the current data from this research, it is not possible to determine the motivations behind the 15 illegal occupations of the Venus building.

situations, such as the condition of the low and medium voltage grid, the consumption levels of the neighbours (both residential and non-residential), the amount of power that the DSO allows into the grid, etc. All cases share issues of outdated electricity infrastructures and indoor marijuana cultivation,<sup>5</sup> which significantly increases electricity consumption, often fraudulently (Cano-Paños, 2021; Weinberger et al., 2019).

Although the argument of excessive demand caused by electricity fraud has been very visible, especially in the press, the actual data has not been fully disclosed.<sup>6</sup> However, a relevant counter-argument is that while excessive demand may lead to overloading of the network, the grid should be sufficiently prepared and updated to prevent collective blackouts affecting large sectors or areas. In other words, a problem in a small part of the network shouldn't cause a blackout affecting neighbours in relatively distant sectors, even creating a situation of "collective punishment".

Following this line of reasoning on the excessive power of DSOs, electricity fraud, defined as unauthorised access to electricity, includes interventions in networks and meters (Casas et al., 2016; ESYS, 2019; Mendoza Losana, 2015). Despite legislative efforts and potential criminal and judicial sanctions, enforcement is difficult and requires proof of guilt. DSOs often resort to immediate disconnection and the imposition of fines (without the intervention of a public institution), a practice that has been criticised for its lack of procedural guarantees and for leaving considerable discretion to DSOs, potentially violating citizens' right to the presumption of innocence (Defensor del Pueblo, 2021; Gallego Igea, 2015).

# 6. Identifying the framing processes on the energy exclusion problem building

In explaining a framing process, we focus on how frames are constructed, but also on how they are explained, which is the work of storytelling. Thus, policy framing involves relevant work on creating a narrative that seeks to explain not only "what went wrong" (i.e., the definition of the policy problem), but also "what needs fixing" and what policy solutions are available (Schon, 1993; van Hulst and Yanow, 2016). In this paper, we focus primarily on the policy problem construction part of the narrative, but we also present some insights into how policy solution narratives are shaped in each of the framing processes.

Through the analysis we have identify two framing processes: the 'criminalisation framing' and 'degradation framing'. The relationship between the framing processes<sup>7</sup> and specific actors is visualized in Fig. 1's Sankey Diagram. This diagram illustrates how the frames interact and relate to different actors, providing a comprehensive overview of the actors' roles, perceptions, and perspectives.

We see that the DSO - e-Distribución – narrative is totally aligned with the criminalisation frame, through which they attribute the main cause of the problem of energy exclusion to the practices of electricity fraud and, secondly, to the phenomenon of indoor marijuana cultivation. In the same vein, although to a lesser extent, both the regional

<sup>7</sup> This visual analysis can be complemented with a co-occurrence analysis available in Appendix C of this paper.

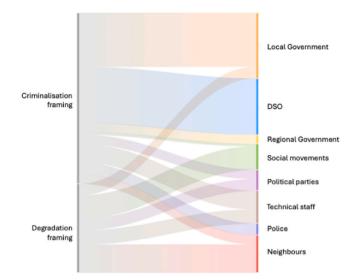


Fig. 2. Sankey Diagram showing the relationship between causes and actors. Source: elaborated by the author.

government (especially through the General Directorate of Energy) and the police are also aligned with the criminalisation frame. It is noteworthy that there is little internal dissent among these agents in the framing process, presenting a uniform narrative.

Next, we see that the remaining actors show greater internal diversity in terms of frame alignment. Among them, we highlight the actor of the local government, which, although he is mainly aligned with the criminalisation frame, they also includes other perspectives more in line with the degradation frame. Similarly, the neighbours point to infrastructure problems as a systemic deficiency, so their narratives mostly fit the degradation frame. However, these alignments have evolved over time, as have the changing relationships between groups of neighbourhoods and communities within the same case study.

Discussing the framing process is also a way of problematising the phenomenon and constructing energy exclusion as a policy issue. This view is consistent with a more interactive view of the framing process, understood as co-construction (van Hulst and Yanow, 2016), which includes an intersubjective dimension. To achieve this, in addition to identifying frames, we have located the elements of conflict and interaction to explore this intersubjective dimension.

The municipal governments and the neighbours are the actors that most openly recognise this continuous interactions and are open to negotiation and/or co-construction. These actors are followed by social movements and technical staff. In the case of technical staff, this is reflected in statements like the following, which shows how certain actors move between different framings:

The distribution network and infrastructure are very old and were designed at the end of the 1970 s and have not been properly maintained since. However, it is also true that the problem of blackouts began in 2014, coinciding with the increase in the cultivation of "marijuana". It cannot therefore be ignored (Interview FP/T/36).

This interaction between frames is also reflected in the conversations and exchanges that took place during the group interviews, in where the same profile actors, in this case residents of the neighbourhoods of Sant Joan and Culubret, not only frame their narratives from different perspectives but also combine them along the same dialogue:

@CSJ/C-A/43: Marijuana is the big problem. If there are incidents, they send out a raid to cut off the connections... this usually happens once a month or when there are a lot of complaints.

<sup>&</sup>lt;sup>5</sup> Marijuana cultivation in Spain has surged, transitioning from resin to herbal cannabis production, with families sometimes resorting to cultivation as an economic alternative post the 2011 economic crisis, occasionally in connection with external clans (Departamento de Seguridad Nacional, 2022; Ortega and Arroyo, 2020; Presidencia del Gobierno, 2019).

<sup>&</sup>lt;sup>6</sup> It is important to note that since the grid is owned and managed by a private company, only the DSO has access to all the actual data on demand and consumption. As an example of information opacity, in all the cases analysed, the public administrations didn't have access to the DSO's detailed data on blackouts. They also failed to systematically document these interruptions, relying on manual records kept by residents.

@CSJ/C-A/42: That's true, but it's also true that after 40 years, I haven't seen one cent invested in improving the facilities... As a matter of fact, there are still aerial electricity grids! Whereas in the rest of the city, they have been taken care of.

@CSJ/C-A/43: It's a bit of everything...

These findings confirm that the frames identified are not static and immobile. On the contrary, they are in constant negotiation.

#### 6.1. Criminalisation framing

The criminalisation framing includes a policy framing story, mainly supported by a number of actors, primarily DSOs, public administrations and, to a lesser extent, some of the neighbours, that includes a particular diagnosis of the situation, as well as a policy solution path (see Table 4).

The two main perceived causes of the energy exclusion phenomenon, which are also complementary, are those that identify the electricity fraud, on the one hand, and the rise of indoor marijuana cultivation in homes, on the other, as systemic deficiencies and articulate them within a criminalisation frame. These two causes are closely linked, as they are not mutually exclusive. On the one hand, actors identify the boom in indoor marijuana cultivation in neighbourhoods as the main trigger of energy exclusion as they associate these plantations with electricity fraud schemes. Regarding the type of fraud in our case studies, the dominant "voice" identifies it with interventions on the networks, i.e., direct connections or illegal connections without supply contracts.

However, a closer analysis reveals a nuanced distinction between different types of electricity fraud. The most common cases of electricity fraud (or the cases that are often discussed publicly) are perceived as related to marijuana plantations and indoor growing (Interviews CSJ/T/ 1 and LM/T/7; Minutes of the plenary session of the City Council of Figueres of 2 November 2019, and the plenary session of the City Council of Girona of Girona of 11 February 2019). Nonetheless, the interviews also revealed that irregular connections were not necessarily linked to criminal activity. This identification was expressed in the interviews as follows:

(...) The cause [of the fraud] is often the lack of economic resources. Sometimes there are resources, even if they are not so stable, but you know "for every law there is a loophole" ... if you can avoid paying for the electricity, you won't pay it. I look away, I get an illegal connection for 10 or 15 euros, and I save my money. There is always a bit of cheating (Interview LM/T/8).

The line between considering a case as vulnerable or not is a thin one, and sometimes the variables involved in defining the specific situation of each household do not depend on material factors. This ambiguity is also evident in other interviews, for example:

[...] Not all of them [households with illegal connections] fall into the category of energy poverty and social exclusion, there is some guile. We talk about people who are not rich but could afford electricity with better and more responsible management... But many think it is better to save the money and "in time, it will all go away' (Interview LM/T/7).

Concerning the construction of target groups, this process of identifying specific justifiable or unjustifiable reasons for the illegal

#### Table 4

Criminalisation Framing Elements for Energy Exclusion.

Framing	Main actors	What went wrong?	How does it need to be fixed?
Criminalisation	DSOs Public Administrations Neighbours	Electricity fraud Indoor marijuana cultivation	Punishment

connections, is not as much the result of a confluence of identifiable factors but the intersection of self-identification processes and power relations among different actors (Fungisai Chipango, 2021).

Although electricity fraud is often linked to indoor cannabis cultivation, the qualitative approach also reveals other cases. Firstly, the existence of situations of electricity fraud due to a situation of social and/or economic vulnerability. These cases usually refer to a variety of circumstances. Firstly, households that previously had a regulated energy supply lose it for economic reasons (disconnection for non-payment). Faced with the costs of reconnection (which usually include payment of the debt, interests, and reconnection costs or, in cases where the distributor cancels the contract, the cost of a new supply<sup>8</sup>), some families choose irregular connection because they cannot afford these expenses. Our research identified this type of case in families that were disconnected for non-payment before the entry into force of Law 24/2015<sup>9</sup> in Catalonia, which establishes a precautionary principle that prohibits disconnection for non-payment in all cases before the utility company verifies that the household is in a state of social vulnerability.

From another point of view, there are families who, for various reasons, occupy a property illegally (without an authorizing title, such as a lease). In these cases, irregular electricity connections are usually related to difficulties in accessing the process of regular registration and formalization of supply contracts. Also derived from Catalan Law 24/2015, in 2021 there was an agreement between the regional public administrations and the DSO with the aim of providing a regularization channel for these extreme cases (that is, to regularize illegal electricity connections). However, according to the social movement Aliança contra la Pobresa Energètica (APE), one year after the agreement of the policy, the measure has not been developed, with barely 15 cases of regularization in the whole Catalan territory.<sup>10</sup>

As APE points out, while some of the obstacles come from local authorities - such as administrative barriers to registering residents or the failure to issue the required social reports - the DSO has also failed to take the necessary steps to make the measure provided for in the agreement a viable option. This includes the task of informing those affected of their rights. An example of this inaction by the distributor is the recent case of energy exclusion in the Plutó building in Barcelona, as pointed out by APE in one of the interviews (Interview G/C-A/37). In this case, although all the households - which were connected to the electricity supply irregularly - were willing to regularise their situation,

pobreza-energetica/

<sup>&</sup>lt;sup>8</sup> Here, each supplier can charge different costs: the costs of registering the supply with the distribution company (which usually include: access rights, extension rights, connection rights, inspection rights and the bond); other costs, such as the issuance of the electrical installation certification by a certified installer, or the cost of any work that may be required if the installation is not updated enough to obtain the certification.

<sup>&</sup>lt;sup>9</sup> Law 24/2015, enacted in the Spanish region of Catalonia, represents a pioneering legislative effort to address energy poverty. This law is significant because it mandates that essential utility services (electricity, gas, and water) cannot be disconnected for vulnerable populations identified as at-risk. It also requires utilities to notify social services before disconnecting services to a household, ensuring a safety net for those in financial distress. Only if social services verify that the household is not in a vulnerable situation can utilities proceed with disconnection.

<sup>&</sup>lt;sup>10</sup> Release from the Alliance against Energy Poverty, 29 March 2022: "The Alliance against Energy Poverty and the Third Sector Table call for the best use of the Energy Poverty Agreement".Available on: https://pobresaenergetica.es/es/2022/03/29/la-alianza-contra-la-pobreza-energetica-y-la-tabla-del-tercer-sector-reclaman-aprovechar-al-maximo-el-convenio-que-regula-la-

the DSO did not give them the opportunity to do so.<sup>11</sup>

The lack of information about the administrative circuits, the standardised channels for regularisation and the ways of accessing the protection mechanisms in force without resorting to illegal means (Oficina d'Inclusió Social de Figueres, 2021) are other relevant elements.

Lastly, irregular connections can also be understood as social practices that are rooted in society. From this point of view, irregular connection to utilities has been a socially accepted and normalised practice in these neighbourhoods for several decades. Comments from the interviews conducted in the La Mina neighbourhood point to the historical nature of this practice:

(...) the problem of illegally tapping the utility lines in the neighbourhood is already historical (Interview LM/C-A/10).

Similarly, the interviews reinforce the idea that irregular connection, as a practice rooted in the territory, is perceived as normalised:

(...) Tapping electricity, water and gas or any other supply, is something that has always been done here... Irregular connection is 'regularised' (Interview LM/C-A/9).

These findings align with previous research, particularly those that have identified or attempted to analyse energy consumption and demand from the perspective of everyday routines and practices (Shove et al., 2012; Shove and Walker, 2014). From this perspective, energy practices should be understood as social constructs, especially from a policy perspective (Shove, 2014). Therefore, when addressing irregular electricity connections as entrenched practices and proposing policies for behaviour change (e.g., regularisation programmes), this social dimension and the transformative capacity of specific programmes should be considered. The inherent resistance in this type of practice can be reinforced if the lack of change has no practical consequences. It is for this reason that the technical staff express the need to implement control and/or sanction mechanisms as an integral part of the policies aimed at regularising and redirecting these practices. This feeling is often expressed as "perceived immunity" (Ajuntament de Girona, 2021, p. 3). The following table (Table 5) shows the variation in the number of dwellings with or without a contract in the Font de la Pólvora neighbourhood, according to data from the Ajuntament de Girona (provided by the DSO), between 2014 and 2019. We can see two relevant elements. First, that the number of households without regular electricity con-

#### Table 5

Households with and without electricity supply contract 2014–2019 in Font de la Pólvora.

	2014 (#)	2014 (%)	2019 (#)	2019 (%)	Variation 2014–2019	
Households with contract	306	58.20%	283	53%	-5.20%	
Households without contract	209	41.70%	250	47%	5.30%	
Total Households	525		510		-15	

Source: elaborated by the author based on data from Girona City Council.

tracts is extremely high compared to other city areas. A second element is that the number of dwellings without a contract increased by 5.3%, despite the existence of active regularisation programmes and changes in the neighbourhood's practices regarding irregular connection to the electricity supply.

In terms of framing of the policy process, the results of this research also show how resistance to change, and the consolidation of irregular connection practices are explained not only by historically rooted practices but also by residents' negative experiences and low expectations of change in these neighbourhoods. In this regard, the interviews revealed a sense of frustration and a lack of expectation of improvement, particularly among residents who have regular contracts but continue to experience service interruptions:

It's got worse, before people were paying stratospheric electricity bills because here, they were paying a lot for electricity but, in practice, almost nobody had electricity, there were people who had blackouts for long periods (...) then people got tired of paying and many people just stopped, losing their meters. After that, they started tapping the lines because, anyway, they didn't get what they were paying for (Interview FP/C-A/21).

This has gotten worse over time, it has not happened all at once, it is not true that people have suddenly decided not to have a meter and to be illegally connected... It is a lie. Here everyone had a meter and paid for electricity, but the wiring is inadequate because since the 1970 s, when the apartments were built, nothing has been done, nothing has been renovated. .... (Interview FP/C-A/22)

As we have already mentioned, the framings analysed are not sealed containers, but have porous borders and interact with each other. As we will see in the next section, these last two quotes are also closely related to the degradation framing, in the sense that one of the consequences of a process of urban and social degradation can also be the emergence of illegal practices, or at least practices that are outside the "legal routes".

Finally, as we mentioned at the beginning of this section, criminalisation framing is underpinned not only by a specific diagnosis and description of the problem, but also by a vision of potential policy solutions. That is, policy framing stories seek to answer not only 'what is wrong' but also 'what needs to be fixed' (Rein and Schon, 1977). The criminalisation frame, as we have understood through exploring the construction of the policy problem, sees the problem as a criminal one, so the natural solution is punishment. So, we can see how this vision is constructed through the ideas of fighting 'impunity' (Interview LM/T/7) and the reassertion of fairness and justice between those who are seen as deserving or undeserving affected neighbours (Interview FP/T/22). This orientation of the policy solution is based on the idea of a criminal behaviour as the original problem that needs to be addressed, for example through the installation of security cameras in all neighbourhood buildings to avoid meter tampering (Minutes of the plenary session of the City Council of Figueres of 5 April 2018) or through individual legal proceedings against specific individuals (Minutes of the plenary session of the City Council of Girona of 22 July 2019). From this perspective, this type of action should not be mixed with other contextual factors, such as the socio-economic inequalities of the population concerned.

#### 6.2. Degradation framing

The second framing in play is the 'degradation framing'. From this perspective, the situation of energy exclusion in the neighbourhoods is linked to a more general idea of the social, economic, and urban degradation process of the area, linked to specific problems with the electricity infrastructure and its lack of maintenance. As before, this framing includes not only a vision of the policy problem, but also a policy message about the potential solutions (Table 6).

Starting from the identification of the main causes of energy

<sup>&</sup>lt;sup>11</sup> The Plutó building is a group of six dwellings - owned by an international investment group - that have been irregularly occupied for some years by six vulnerable families. These families were irregularly connected to the electricity supply. On 9 March 2022, the DSO, with the support of the police, disconnected the families. No alternative was offered to the resident families (such as the measure provided for in the agreement). The precautionary principle provided by the Catalan regulation was also not considered. According to APE, the disconnection of these families was a sign of the DSO's unwillingness to use the path foreseen in the agreement as a viable option to access electricity regularisation (Interview G/C-A/37).

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#### Table 6

Degradation Framing for Elements Energy Exclusion.

Framing	Main actors	What went wrong?	How does it need to be fixed?
Degradation	Social Movements Neighbours	Deficiencies and lack of maintenance of the infrastructures.	Integral interventions

exclusion, the deficiencies and lack of maintenance of the electrical infrastructures and the low-voltage distribution network are reflected in various sources of analysis: interviews, press, minutes of plenary sessions of city councils and policy documents. The overall analysis of the different sources shows that this specific framing is relevant and plausible according to many relevant actors. However, it is very difficult to substantiate it in concrete terms and with material evidence.

Neighbourhoods and social movements have been vocal in denouncing the state of the electrical infrastructure, with local governments also playing a crucial role in this frame:

These are very old installations that have never been maintained (...) when they came with machines to remove the earth to build the boulevard, we had power cuts because nobody knew where the installations were, they weren't even on the plans (Interview LM/C-A/10).

The electricity lines have not been renovated. They are not even underground (Interview CSJ/C-A/23).

For us, the problem is that there is a company [Endesa], which is the distributor in these neighbourhoods and is the larger company in Catalonia, which is not maintaining the network properly. As a result, the neighbourhoods suffer systematic blackouts (Interview G/C-A/37, clarification added by the author).

The city of Figueres emerges as a notable example, where the local council actively confronted the distribution company, highlighting the need for an improvement in infrastructure maintenance. A member of the local government expressed the conflict between different frames on the policy problem and the importance of infrastructure:

We know that this [increase of cases of indoor marijuana cultivation] is happening all over the Empordà and in other areas of the city, and from our point of view, Endesa has not carried out adequate maintenance of the network. For us, Endesa is 100% responsible. Yes, there are other parts of the city with problems of marijuana growing; recently the police raided a block with seven growing houses, but they didn't cut the electricity there (Interview CSJ/P/35).

In this sense, the issue of the state of the distribution network has been debated in various plenary sessions of the city councils involved, using terms such as "absence or age of the electrical infrastructures or obsolescence of the installations" (Minutes of the plenary session of the Sant Adrià de Besòs City Council of 25 January 2002). Similar words were used in the case of Girona, in relation to the Font de la Pólvora neighbourhood, and an audit of the state of the electricity network in the area was requested in order to determine the measures needed to update the infrastructure (Minutes of the plenary session of the Girona City Council of 9 December 2019).

The framing analysis reveals a dynamic evolution in the framing process surrounding responsibility for infrastructure issues and their role in energy exclusion. While lack of maintenance has consistently been identified as a cause, it has often been sidelined in favour of other explanations, with the dominance of the DSO's public voice limiting the influence of alternative narratives. However, although the criminalisation framing predominated in the beginning, the degradation framing gained strength over time.

The storm Filomena, which caused widespread power cuts in January 2021 (Oficina Catalana del Canvi Climàtic, 2021), was the first

turning point of this process:

With Filomena, the cuts that had been taking place or that we had detected in these vulnerable and very complex neighbourhoods, where it is very difficult for the administration to intervene, spread to other neighbourhoods that were not so vulnerable, and even to the centre of cities such as Badalona. It was after Filomena that every-thing exploded, the problem exploded, and the town councils demanded that Endesa do something, as did the Generalitat, driven by the situation (...) all the arguments that Endesa had used for years regarding these neighbourhoods, that it's just a marijuana problem, ended up collapsing under their own weight (Interview G/C-A/38).

In this context, in 2021, the Catalan Directorate-General for Energy opened a series of reports and files regarding the responsibility of the DSO for the cuts and interruptions in supply during the winter months (Redacció 324, 2021).

The second significant moment was a fire in a building in the Sant Roc district of Badalona in January 2019, which was the result of tampering with an electrical installation. This fire was particularly serious, with three deaths and thirty injuries (Sanchez, 2019). Through the data collected, it is clear the importance of this episode in the collective imagination to situate energy exclusion as a major social problem but also to reposition the responsibility of the DSO:

A relevant event in the case of La Mina was the fire in Badalona in which people died. This case was decisive in highlighting Endesa's responsibility for the meters and was a turning point for them to take some responsibility for the situation. Endesa must do their share, otherwise it is impossible (Interview LM/P/48).

The debate on the state of the infrastructure, which has already been referred to, needs to consider the fact that access to technical information on the network's condition is very difficult since the owner of the grid is the DSO. On the one hand, the DSO is only obliged to provide the technical information required by law, which is not territorially disaggregated to the level of neighbourhoods, so not being useful to determine if the grid in one specific area is in an adequate state. On the other hand, in the case of Girona, where an external energy audit was carried out by the City Council, a critical analysis of the audit shows that its scope was very limited since it just assessed the legality of existing installations. In addition, the audit document stated that complete information was not available and that it was impossible to undertake all the appropriate measurements due to the lack of authorisations from the grid owner, that is, the DSO (BVIT, 2021).

A final remark regarding the degradation framing process is that this specific frame is often connected with a more general systemic condition, stemming from neighbourhood's social degradation process. In this case, energy exclusion can also be seen as a further consequence of this process:

Insecurity, disrespect, the presence of squatted houses, "pateras" apartments<sup>12</sup> or those used to grow marijuana, the non-observance of opening hours or the opening of unlicensed businesses are some of the daily problems faced by neighbours in their daily lives. On top of that, there are constant blackouts (Minutes of the plenary session of the Figueres City Council meeting of 2 September 2019).

On the other hand, this process of social degradation can be recognised as a symptom of a process of expulsion (Sassen, 2014). Janoschka (2018) in his research on gentrifying processes, identifies some crucial elements that can be identified in our case studies. In this research we can relate the process of degradation to the notion of productive

<sup>&</sup>lt;sup>12</sup> 'Pateras' apartments is an informal way of saying overcrowded apartments. The term "pateras" is primarily associated with a type of makeshift boat often used by migrants attempting to reach Europe from North Africa. These boats are notoriously unsafe, overcrowded, and ill-equipped for the journey

gentrification, resulting from urban renewal policies and public policies to transform areas, and symbolic gentrification, understood as the introduction of biopolitical practices that impose behavioural models and neoliberal civility in urban areas (Janoschka, 2018). The Venus Block's degradation process in La Mina is an example of this phenomenon. It is also a consequence of the urban planning and legal process of demolition and relocation of the inhabitants. It is worth pointing out that the energy supply began to fail systematically in 2016, coinciding with a peak moment in the process of degradation of the building, in which no intervention of any kind was carried out until the reactivation of the urban development project:

(...) It was mainly from 2016 onwards, and mainly because of the degradation of the building... no interventions were made to the building and the facilities started to fail. Today, these facilities are already seriously deteriorated (LM/C-A/14).

Degradation framing is not only linked to the material conditions of the areas, but also to a degraded perception of the population living in these neighbourhoods. This neglect can be seen in situations such as the poor service provided by the DSO and the sense of abandonment felt by residents.

Some of the main bad practices identified by the DSOs include poor telephone service in the event of an outage, leaving neighbours on hold for hours; transferring calls from one operator to another without dealing with users for long periods of time; refusing to deal with outages while neighbours remain without power, and others. Experiences such as the following emerged from the interviews:

My father has breathing problems and needs an apnoea machine to sleep. During one of these blackouts, I called Endesa and finally managed to speak to someone. When we asked for the incident to be repaired as it was a health issue, we were told that if it was that serious, he should go to hospital (CSJ/C-A/44).

The cumulative effect of poor service delivery by the DSOs and general inaction by the authorities is to create frustration and a collective sense of neglect among the local population. This aspect is crucial, as it is directly linked to feelings of disenfranchisement. Again, as in the case of the criminalisation framing, there is a crucial impact on the policy process. In this case, the dominant idea that has a direct impact on perceptions of the policy process, shared not only by neighbourhood residents but also by other relevant actors, is abandonment.

This abandonment feeling is constructed through the collective perception of not being considered relevant at a political and policy level. Expressions such as being 'the corner neighbourhood, unseen and undemanding' (Interview FP/C-A/16), 'the neighbourhood they don't care about' (Interview FP/P/9), and 'the neighbourhood that has been abandoned by public administrations' (Interview G/C-A/23) give a general idea of how this policy perception has grown over the years.

This abandonment, in the case of the degradation framing, refers not only to the state of the infrastructure, but in a more general sense. For example, residents point to the lack of assistance, but also the lack of support in improving knowledge of how things work (at the municipal and bureaucratic level), associationism, etc. (e.g. Interview FP/C-A/16, Interview CSJ/C-A/27).

Finally, in terms of policy messages and how potential solutions to the energy exclusion phenomenon are projected, the 'degradation framing' highlights the need for integral policies. These interventions, in the form of a combination of social, economic and energy measures, go beyond specific programmes to combat electricity fraud, as happens with a more punitive orientation. Integral interventions refer to holistic programmes that address not only the problem of energy deprivation and all its consequences, but also other factors that may have caused and provoked a process of degradation of the neighbourhood as a territory (Interview FP/T/22). This integral approach should be characterised by an interdisciplinary and interdepartmental nature (Interview CSJ/T/2), avoiding purely technical measures (Interview G/T/15), and understanding that the social, cultural and economic dynamics of specific territories require these consensual and multifaceted programmes (Interview FP/T/22).

# 7. Conclusions and policy implications

Through our research we have identified two main framings of energy exclusion: the 'criminalisation framing' and the 'degradation framing'. The criminalisation frame, mainly held by DSOs, public administrations and to some extent by some residents, interprets energy exclusion primarily as a result of electricity fraud and indoor marijuana cultivation. In terms of policy solutions, it therefore proposes punitive measures and stricter enforcement. It is important to note that in terms of accepting the intervening factors in the energy exclusion phenomenon, all actors involved in the policy situation recognise the existence of electricity fraud and criminal behaviour that exacerbates the energy exclusion situation. However, the distinguishing feature of those aligned with a criminalisation framing perspective is that they do not recognise the other factors at play and consequently opt for a reductive policy approach through a punitive perspective.

In contrast, the degradation framing, supported by social movements, some local governments, and most residents, links the phenomenon to wider socio-economic and infrastructural neglect and advocates global and integrated interventions. In this case, criminal behaviour is also acknowledged, but as a consequence rather than a cause. Thus, the 'degradation framing' includes criminal behaviour - i.e. marijuana cultivation or meter tampering - as social practices that emerge and occur in extremely degraded contexts, where social and material conditions are the main explanatory factors.

These existing tensions do not appear to be diminishing over time. Growing social inequalities in urban contexts, combined with an energy transition scenario, seem to point to a future in which systematic and periodic blackouts caused by strained electricity networks may become more common. As research has shown, the role of the distribution and transmission grid in a future renewable model is truly significant (Dalala et al., 2022). The lack of maintenance, which has been denounced on several occasions, could be a serious obstacle to the implementation of renewable energy in certain areas of the Spanish territory, as well as causing future blackouts and energy restrictions.

This study has explored the complexities of energy exclusion, highlighting the multifaceted nature of policy framing and narrative construction within policy formulation, through three case studies of energy exclusion. Our findings confirm the importance of distinguishing the phenomenon of collective and massive energy disconnection, from the more common notion of disconnection in situations of energy poverty, which is mostly caused by economic reasons. Accordingly, in this paper we have chosen to use the term 'energy exclusion', a term deliberately chosen to emphasise the active and deliberate choices, embedded in a power dynamic between the actors involved, that lead to the denial of energy access. The concept thus allows us to better understand this extreme manifestation of energy deprivation and to give it the meaning and concreteness needed to address it effectively, highlighting the social, territorial and structural determinants of the phenomenon.

Our analysis focuses on how conflict and interaction transforms social problems into policy challenges, and on the perspectives of different actors in the framing process. These perspectives reveal the complex nature of policy formation, influenced by power dynamics and structural factors. The study shows that the diversity of interpretations of a common scenario – repeated and systematic disconnections - is not only tied to individual viewpoints but is also shaped by structural elements such as the dominant electricity model, which frames the citizen-electricity provider relationship as private, perpetuating energy exclusion. In this sense, the relationship between these two actors is shaped as a customersupplier relationship, mediated by commercial law and competitive markets. This perspective makes it difficult to incorporate other elements, such as the perspective of energy as a right (Hesselman et al.,

### 2019).

However, it is also important to recognize our study's limitations, given its specific focus on policy framing. While our findings provide indepth insights into framing processes, we have not delved into the specific policies applied and/or proposed for each of the energy exclusion situations. While we have highlighted the policy messages implicit in each of the policy framing processes analysed, further research is needed to examine how specific measures are negotiated and implemented.

Building on the theoretical framework of social energy practices (Shove et al., 2012; Shove and Walker, 2014), further research could delve more deeply into the daily lived experiences of residents. Examining the social routines and communal interactions that contribute to collective energy patterns could reveal the tacit social norms and practices that perpetuate energy exclusion.

# **CRediT** authorship contribution statement

Anaïs Varo: Writing – review & editing, Writing – original draft, Methodology, Investigation, Conceptualization.

# **Declaration of Competing Interest**

The authors declare that they have no known competing financial

### Appendix A. : Coding structure and list of Interviews

#### Table A1

# Co

Coding structure						
Code Structure	XX	/	XX	/	XX	
Description	Case code	/	Profile interviewees code	/	Number	
Example	FP	/	C-A	/	1	

The example code shows that the interviewee is a resident of the Font de la Pólvora neighbourhood.

#### Table A2

Codes used in the anonymization process.

Profile interviewees codes			
Letter	Description		
C-A	Citizens resident in the neighbourhoods that are part of the case studies or Activists of the neighbourhood.		
Р	Political actors related to the case		
Т	Technical staff, policy makers and civil servants related to the case		
Case codes			
Letter	Description		
FP	Font de la Pólvora (Girona, Catalonia, Spain)		
CSJ	Culubret and Sant Joan (Figueres, Catalonia, Spain)		
LM	La Mina (Sant Adrià de Besòs, Catalonia, Spain)		
G	Regional or State level actors related to all cases		

The final sample of interviewees is detailed in Table A3, in which we detail their particular profile, and the type of interview administered.

Table A3
Final Sample of Interviewees

Case code	Profile Interviewee Code	Interviewees number	Type of Interview
CSJ	Т	1	Individual
CSJ	Т	2	Individual
G	Т	3	Individual
FP	Р	4	Individual
FP	Р	5	Individual
CSJ	Т	6	Individual
LM	Т	7	Group interview
LM	Т	8	Group interview
LM	C-A	9	Group interview
LM	C-A	10	Group interview
FP	Р	11	Individual
CSJ	Р	12	Group interview
CSJ	Т	13	Group interview

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interests or personal relationships that could have appeared to influence the work reported in this paper

### Data Availability

Data will be made available on request.

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LM	C-A	14	Individual
G	Т	15	Individual
FP	Р	16	Individual
G	Т	17	Individual
G	Т	18	Group interview
G	Т	19	Group interview
FP	C-A	20	Group interview
FP	C-A	21	Group interview
FP	C-A	22	Group interview
CSJ	C-A	23	Group interview
CSJ	C-A	24	Group interview
CSJ	C-A	25	Group interview
CSJ	C-A	26	Group interview
FP	C-A	27	Group interview
FP	C-A	28	Group interview
FP	C-A	29	Group interview
FP	Р	30	Group interview
FP	Р	31	Group interview
FP	C-A	32	Group interview
FP	Р	33	Group interview
FP	Р	33	Group interview
CSJ	Т	34	Individual
CSJ	р	35	Individual
FP	Т	36	Individual
G	C-A	37	Individual
G	C-A	38	Individual
G	Т	39	Individual
G	Т	40	Individual
CSJ	C-A	41	Group interview
CSJ	C-A	42	Group interview
CSJ	C-A	43	Group interview
CSJ	C-A	44	Group interview
LM	Т	45	Group interview
LM	Т	46	Group interview
LM	Р	47	Group interview
LM	Р	48	Group interview

# Appendix B:. Summary table of key indicators for the case studies

The data presented are taken from the 2021 Population and Housing Census, which represents the most updated and disaggregated data possible regarding the neighbourhoods as a unit of analysis.

# Table B1

Summary of demographic and housing indicators for the three neighbourhoods

Indicator	Font de la Pólvora	Culubret - Sant Joan	La Mina (Venus)	Catalunya
Population	1780	1383	1665	1524,67
Percentage of women	48,4%	49,9%	48,8%	50,7%
Percentage of men	51,6%	50,1%	51,2%	49,3%
Average age	31,23	36,07	36,91	43,71
Percentage of population aged under 16	30,5%	27,8%	22,1%	15,4%
Percentage of population aged 64 and over	6,4%	14,5%	11,1%	20,0%
Percentage of foreigners	12,1%	17,5%	10,2%	15,0%
Percentage of foreign born	12,9%	19,7%	11,4%	19,3%
Percentage of population with tertiary education in the population aged 16 and over	2,2%	3,2%	8,9%	34,3%
Percentage of unemployed population as a percentage of the active population	64,8%	58,5%	45,9%	12,9%
Employed population as percentage of population aged 16 and over	16,6%	17,5%	27,8%	49,0%
Population receiving disability pensions as percentage of population aged 16 and over	6,7%	4,6%	8,9%	2,5%
Old-age pension beneficiaries as percentage of population aged 16 and over	7,0%	14,7%	11,6%	18,9%
Percentage of the population in another situation of inactivity out of the population aged 16 and over	36,1%	35,5%	24,7%	17,1%
Main dwellings	86,4%	84,5%	91,8%	76,4%
Non-main dwellings	13,6%	15,5%	8,2%	23,6%
Owner-occupied dwellings	51,0%	58,6%	62,0%	52,8%
Rented dwellings	30,7%	17,5%	17,0%	17,7%
Dwellings in other tenure forms	4,7%	8,5%	12,8%	5,9%
1-person households	16,7%	21,0%	21,8%	25,5%
2-person households	18,7%	19,5%	25,2%	29,2%
3-person households	17,5%	18,0%	16,4%	20,8%
4-person households	17,9%	16,1%	14,9%	16,7%
Households with 5 or more persons	29,2%	25,4%	21,6%	7,8%

Source: elaborated by the author using data from the 2021 Spanish Population

and Housing Census.

### Appendix C. : Complementary Co-occurrence analysis

To complement the qualitative and main analysis presented in the following sections, Table E illustrates the co-occurrence of these frames with various actors and stakeholders, providing insights into the positions and roles of each actor involved. The table displays the absolute frequency that the code in the column (causal frames) and the codes in the rows (actors) coincide, as well as the coefficient of co-occurrence. The coefficient is a normalized value that shows how often both codes (actor and theme) appear together relative to the total number of quotations. This is calculated as follows:

 $Coefficient = \frac{\text{Number of } co - occurrences}{Total \ quotations \ of \ the \ actor(Gr)}$ 

The coefficient provided in the table offers valuable insights into how often both codes appear together in relation to the total number of quotations, helping to clarify the positions and roles of each actor involved.

#### Table C1

Co-occurrence table between frames identifying underlying causes and actors.

	Criminalisation Framing Gr=75		Degradation Framing Gr=48		
	#	Coeff.	#	Coeff.	
Local Administration Gr=110	23	0,14	5	0,03	
DSO Gr=60	24	0,22	0	0,00	
Regional Administration Gr=13	4	0,05	0	0,00	
Social Movements Gr=28	1	0,01	10	0,15	
Political Parties Gr=24	4	0,04	5	0,07	
Гесhnical Staff Gr=12	8	0,10	6	0,11	
Police Gr=15	5	0,06	0	0,00	
Neighbours Gr=48	4	0,03	12	0,14	

Source: elaborated by the author.

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