Country Sections

Spain

Handbook Update CLR II

Support service for citizens led renovation projects - ENER/2023/OP/0036

DIRECTORATE-GENERAL FOR ENERGY

Directorate B – Just Transition, Consumers, Energy Efficiency and Innovation Unit B1 - Consumers, Local Initiatives, Just Transition

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Date: 26/03/2026

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Introduction

This country factsheet offers a concise overview of Spain's building stock, the status of renovation efforts, the development of energy communities, and the policy and funding landscape that supports them. It summarises the energy performance of Spain's existing buildings and the progress made in improving them, then outlines the current scope of community energy initiatives, including established projects and those under development. Key barriers and opportunities shaping the expansion of energy communities are highlighted, followed by a brief explanation of how relevant EU directives have been integrated into Spanish legislation and the national rules governing renovation and renewable energy. The factsheet concludes with an overview of the main Spanish and EU funding schemes available for energy efficiency, renewable energy, and community-led projects, along with a selection of practical tools that help make the renovation process easier.

Top view of Barcelona, Spain

Current Outlook

Overview of the building stock

Approximately 76% of Spain's building stock are residential in nature and most of these residential buildings serve as primary residences, with a significant portion of them being multi-family homes.[1] The housing tenure indicates a high degree of private ownership, with 75.3% of households owning their homes and the remaining 24.7% renting. 65.5% of these residences are flats while single-family homes account for 34.4%.[2] Spain's building stock is relatively old, with approximately 50% of residential buildings erected before 1980 and a significant portion of the total built portfolio (residential, institutional and commercial buildings) being constructed during the same period. 58% of the buildings were constructed before the introduction of the first thermal-insulation regulation (NBE-CT-79)[3], demonstrating the significant potential for improving energy-efficiency within the current building stock.

Energy efficiency of the existing stock

The energy efficiency of the Spain's existing building stock is considered to be poor, with the Energy Performance Certificate (EPC) data classifying 85% of its buildings into the poor energy classes E, F, and G.[4] Most of these buildings, having been constructed before 1980, lack modern heating systems and insulation. Newer buildings, on the other hand, have been proven to be energy efficient but only accounts for 10% of the building stock of the country. Renovation rates remain under 1% each year, lying well below the 3% rate targeted by the EU for decarbonisation. The average annual energy consumption from buildings comes up to 29.5% as a result of Spain's warmer temperature.[5] Roughly 60% of domestic household energy use is for heating and Domestic Hot Water (DHW) services, while only 1% of energy is used for cooling.[6] It is important to mention that energy poverty exists in Spain. As per 2022 reports, 17.1% of households reported not being able to keep their houses sufficiently warm[7], predominantly rural households. This does not mean the problem is only seen in rural areas. Regional disparities in the country's energy poverty are evident; regions in the south of Spain such as Andalusia and Extremadura display a higher rate of energy poverty due to poor building fabric and low incomes. However, energy poverty is also noticeable in urban areas such as Madrid and Catalonia as a result of older multi-family buildings and higher rental prevalence.[8]

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[1] Comprehensive study of building energy renovation activities and the uptake of nearly zero-energy buildings in the EU – Link

[2] Housing in Europe (2024 edition) – Link

[3] Ministerio Para La Transicion Ecologica Y El Reto Demografico: Residential, commercial and institutional – Link

[4] Comprehensive study of building energy renovation activities and the uptake of nearly zero-energy buildings in the EU – Link

[5] Energy renovation of buildings in Spain and the EU. Lessons learned and main recommendations. – Link

[6] Drivers of and Barriers to Energy Renovation in Residential Buildings in Spain—The Challenge of Next Generation EU Funds for Existing Buildings – Link

[7] Eurostat: Inability to keep home adequately warm – Link

[8] Sources of Energy Poverty: A Factor Analysis Approach for Spain – Link

Renovation status of the building stock

As mentioned in the previous section, a large share of Spain's building stock lacks sufficient insulation but has a potential for energy savings. Energy retrofitting in Spain has shown an upward trend in recent years. Studies reveal a 10.1% growth in renovation visas for building rehabilitation and a 35.6% rise in budgets for the same between 2017 and 2019, resulting in a total investment of €4.2 billion and this growth has reflected more in residential buildings.[9] 'Renovation visas in this context, refer to official validations or *visados* that are issued by professional associations such as *Colegio de Arquitectos*. They are responsible for certifying that renovation project plans align with the technical and legal standards before municipal grants are issued.[10]

Despite this progress, the country's overall renovation rate has not been enough to meet the EU's climate objectives. To address this challenge, Spain has launched several programmes such as PEV (MITMA State Housing Plan 2018-2021), the ICO line and the €200 million PAREER-CRECE scheme.[11] These initiatives were aimed at supporting the objectives of the Long-Term Strategy for Energy Renovation of Building Sector (ERESEE 2020), a project that aims to achieve deep renovation of 7.1 million by the year 2050.[12] However, the progress is slow paced with hurdles such as high intervention costs and complex decision-making in multi-family buildings under the Horizontal Property Law.[13] Renovations are predominantly focused on the wealthier regions of the country while energy poverty suffering households face difficulty with accessing finances and upfront costs. Without quick intervention and significant scaling up, the renovation targets of Spain will remain far from being met and it risks the deepening of social and regional inequalities.

Status of Citizen and Renewable Energy Communities

Renewable Energy Communities (RECs) and citizen-led initiatives are emerging as powerful drivers of building renovation and several EU Directives mandate Member States to foster the participation of energy communities. EU Directives 2018/2001 (RED II) and 2019/944 (International Electricity Market Directive) have recognised Energy Communities and this has drawn attention to their significance.[14] Spain has made efforts to incorporate these directives into their national laws. The country has mostly fulfilled its obligations under RED II by including the definition of RECs in its national legislation and granting them rights such as energy sharing and market participation, while the transposition of IEMD in Spain, although fairly limited, has brought about positive changes in the country's energy community landscape *(see section 'EU Directives transposition in Spain' for further details)*.

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[9] Energy renovation of buildings in Spain and the EU. Lessons learned and main recommendations. – Link

[10] Mandatory nature of the professional association certificate ("visado colegial") in the building industry – Link

[11] Energy renovation of buildings in Spain and the EU. Lessons learned and main recommendations. – Link

[12] 2020 Update of the Long-Term Strategy for Energy Renovation in the Building sector in Spain (ERESEE) – Link

[13] Energy renovation of buildings in Spain and the EU. Lessons learned and main recommendations. – Link

[14] Cross-Case Analysis of the Energy Communities in Spain, Italy, and Greece: Progress, Barriers, and the Road Ahead – Link

Universities in Spain such as the University of Valencia have introduced postgraduate courses on building renovation and energy efficiency[15], which goes to show the depth in which Spain is planning on planting the idea of citizen led renovation and developing the necessary expertise for large-scale retrofitting. Legislation, regulation, finance and citizen empowerment are all looking positive in the country. PNIEC and IDAE both highlight and address the importance of RECs and the role they play in promoting energy efficiency, specifically in building renovation.[16] This focus and emphasis on education and community engagement is crucial to tackle the current barrier of skilled workforce in the field.[17]

[15] RERU Masters: Building Renovation and Urban Regeneration – Link

[16] Guia para Desarrollo instrumentos fomento comunidades energeticas locales: IDEA – Link

[17] The Shortage of Skilled Labor Impacts Over 50% of Construction Companies – Link

Energy Communities in Spain

Overview of Spain's Progress and Current Trends

The adoption of the EU Renewable Energy Directive (2023/2413) and the ongoing amendments and revisions in the Energy Performance of Building Directive (EPBD) has incentivised Spain to introduce measures that strengthen participation of citizens in the renovation process. The Recovery, Transformation and Resilience Plan (PRTR), an initiative launched by the Spanish government in April 2021, introduced one-stop shops to guide citizens, owners' associations, companies and renovation agents through the renovation journey by offering technical, administrative and financial aid application assistance. The ultimate aim is to make renovation more accessible to citizens and offer localised support. A notable example for this is the regional initiative *Rehabilita Aragón*, a pursuit by the Official Association of Architects of Aragon and other professional associations. The initiative operates through dedicated support offices that offer technical guidance and financial guidance for energy-efficient, accessible and safe building renovation.

Efforts to tackle energy poverty, a challenge that 17% of Spain's households encounter, have found its way into the national strategies like ERESEE 2020 and PNIEC. These strategies aim at targeting funding for vulnerable consumers, offering tax relief on renovation aid, and introduction of programs to address energy poverty indicators and alleviate it.[18] Moreover, the government's updated PNIEC (2023-2030) reinforces this plan by placing energy poverty alleviation within a broader push towards green transition that boosts, competitiveness, public health and social cohesion.[19] As an addition to this momentum, Spain has welcomed a wave of community-led initiatives with open arms; since the eradication of the 'Sun tax' (*see section 'Challenges and Opportunities' for additional information about this tax*), close to 200 local energy projects have taken birth, which are backed by €148.5 million in funding from the government's IDAE, and this indicates a strong shift towards decentralised, citizen-led initiatives in the country[20] Spain's approach emphasises the need to conjoin technical and financial assistance to make the benefits of the renovation measures and improved energy efficiency accessible to low-income households and also the importance of inclusive policy and grassroot engagement to empower these low-income households as well.

Additionally, frameworks that facilitate citizen-led renovations have been put in place. Spain has encouraged Building Renovation Passports and strengthen energy communities. Also, the recent 2025 launch of Plan Nacional de Renovacion de Edificios (PNRE) proposed a long-term strategy for decarbonising the national building stock by 2050. Along with setting clear milestones for deep renovation, prioritising vulnerable households and quantifying the investment needs, it also shines light on coordination between regional authorities, professional associations and citizen groups to make sure

[18] Assessing Progress in Decarbonising Spain's Building Stock – Link

[19] The Government approves the update of the National Integrated Energy and Climate Plan 2023-2030, the axis of Spain's economic, social and environmental opportunity, for its contribution to the modernisation and transformation of the production model – Link

[20] The Guardian - 'We're proud to be pioneers': inside Spain's community energy revolution – Link

that these renovation initiatives are scalable and inclusive.[21] Combined with financial incentives, legislation reforms and digital aids,[22] these initiatives put communities and individuals at the forefront of this renovation.

Energy Community Case Studies

Spain has the presence of several active energy communities, with some key examples being GoiEner in Ordizia, Viure de l'Aire in Barcelona, Som Mobilitat in Mataro and Som Energia in Catalonia. These energy communities showcase diverse approaches, from cooperative renewable energy generation to community-driven wind projects and shared electric mobility services. Ongoing regulatory adjustments in Spain are expected to support the further development and expansion of energy communities.[23]

Active Energy Communities

Som Energia, Catalonia: Som Energia pioneered Spain's energy cooperative movement in 2010 when 150 citizens joined forces to promote renewables. Inspired by similar initiatives in Belgium and France, the cooperative offered a way for individuals who could not afford large-scale projects alone to collectively support clean energy. Initially, it sourced green electricity from local providers to supply members at fair prices, later investing in its own solar plants and new renewable projects. The ambition was to generate enough power to cover all members' needs. Membership surged from 47,000 after seven years to nearly 68,000 today, with over 6,000 members contributing €15 million. When government subsidies ended, Som Energia introduced its innovative Generation kWh model to finance projects at market rates.[24]

GoiEner, Ordizia: GoiEner is a non-profit, cooperative project established in 2012 that is focused on the generation and consumption of renewable energy. With a community of over 19,000 members, it seeks to restore energy sovereignty by operating in the liberalized segments of the electricity sector (supply and generation). All revenues from supplying green electricity are reinvested into the cooperative, with members collectively deciding how to allocate these benefits. Even though GoiEner has the capacity to supply energy across Spain and Portugal, it concentrates on the Basque Country and Navarra and actively extends support to the creation of local energy cooperatives throughout Spain.[25]

Viure de l'Aire, Barcelona: Founded in 2011, Viure de l'Aire is Spain's first community-owned wind turbine project. Following years of preparatory work, the turbine was installed in 2017 in the Pujalt municipality of Spain and has been generating energy since 2018, supplying energy to 2000 families. The initiation of the project was a result of the contribution from 615 families, organisations and the private company Eolpop that oversees the permits and other formalities related to the project.[26]

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[21] Build Up: National Building Renovation Plan – Link

[22] Assessing Progress in Decarbonising Spain's Building Stock – Link

[23] Energy Communities in Rural Areas: The participatory Case study of Vega de Valcarce, Spain – Link

[24] Community Energy in Spain Briefing – Link

[25] Energy Community Platform: GoiEner – Link

[26] Viure de l'Aire, Eolpop – Link

Som Mobilitat, Mataro: Born in 2016, Som Mobilitat is a non-profit consumer cooperative that promotes sustainable mobility solutions. With a community of over 3,000 members and 1,800 clients, it offers shared electric vehicles as an option when walking, cycling, or public transport are not possible. The cooperative operates a fleet of 80 electric cars, saving approximately 330 tonnes of CO_2 emissions annually, and has employed nine staff members to support its ongoing activities. The project was created with the intention of transforming the idea of transportation and promoting the reduction of car dependency and environmental impact.[27]

Planned Energy Communities

Vega de Valcare: Vega de Valcarce is a rural town in Castilla y Leon with approximately 200 residents. Despite having socio-economic challenges like aging population, youth migration to urban areas and limited access to vital services, it still holds a strong potential for renewable energy deployment and rural revitalization. A local non-profit recognised its potential and partnered with the municipality and the initiative has since engaged two EU-funded projects. RENAISSANCE and SCORE.[28] This collaboration is hoping to replicate an EC model where local knowledge and expert support can collaborate, paving way for sustainable energy transition in rural Spain.

The drOp project (Ermua, Basque Country): The drOp project is an EU funded initiative targeted at transforming social housing districts into inclusive smart neighbourhoods. The aim of the project is to enhance urban spaces through constructive, digital and energy upgrades as well as creating a connection across physical, social and digital dimensions. The primary location of the project is in the Santa Ana neighbourhood of Ermua (Basque Country). The project adopts a human-centred design and where advanced technologies are used to promote economic growth and social innovation. Among the seven co-created initiatives in this pilot, one key effort involves establishing a local energy community, which is currently being rolled out. These initiatives aim to revitalize the neighbourhood by fostering stronger social connections, driving sustainability, and promoting smart urban development.[29]

[27] Energy Community Platform: Som Mobilitat – Link

[28] Energy communities in rural areas: The participatory case study of Vega de Valcarce, Spain – Link

[29] Technological And Social Perspective On Local Energy Communities Development: A Case Study In The Basque Country, Spain – Link

Challenges and Opportunities for Energy Communities in Spain

Challenges and Gaps

Administrative, Legal and Regulatory barriers

Although Spain has passed laws pertaining to communal self-consumption and community energy, the regulations are still ambiguous and provide no direction for establishing energy communities or including local stakeholders. Renewable Energy Communities are yet to be fully regulated, and more clarity about contracts, tariffs, and compensation mechanisms are required. [30] Rescoop's EU policy transposition tracker (2022) also notes the gaps in the regulatory progress for RECs in Spain.

Spain has partially transposed the EU Renewable Energy Directive (RED II) and the Internal Electricity Market Directive (IEMD), which advice and require Member States to form enabling frameworks for energy communities (*See section 'EU Directives transposition in Spain' for further details*). However, implementation is incomplete and is causing administrative issues. Energy Communities in Spain face complicated and time-consuming procedures for grid access, project implementation is often delayed by lengthy and fragmented permitting processes (environmental assessments, operational licenses etc.) and the country's unclear framework causes uncertainty around governance and contractual arrangements.[31]

Awareness and Trust issues

Public interest in participating in the energy sector remains low, largely due to misinformation and a lack of understanding of the benefits these initiatives offer. There is an absence of social facilitators who can engage communities and promote participation. Citizens often distrust such projects, fearing mismanagement or bad practices, and the concept of energy communities has very limited penetration in society.[32]

Legislative decisions in the past have negatively impacted ECs as well. In 2011, the 'Sun tax' or 'Solar tax' was imposed on energy produced from solar panels. This controversial legislative move in Spain set back energy communities significantly. Although the tax was later on repealed in 2018, its impact still affects public participation.[33]

Financial and Technical constraints

There is a notable lack of clear guidance and technical information on how to start, finance, and implement projects, leaving many communities uncertain about the process. Support schemes are scarce and poorly defined during planning and execution phases, while regulatory and administrative hurdles further reduce agility. Securing initial funding is difficult, especially for communities without a financial track record, and solvency requirements add complexity. Additionally, the absence of well-documented success stories makes it harder for new initiatives

[30] Regulatory barriers in Spain: findings and recommendations – Link

[31] Cross-Case Analysis of the Energy Communities in Spain, Italy, and Greece: Progress, Barriers, and the Road Ahead – Link

[32] Analysis of the Barriers Hampering Energy Communities – Link

[33] A Review on Energy Communities Development, Opportunities and Challenges in Germany, Spain, and Italy – Link

to build confidence and replicate proven models, creating a cycle of hesitation and limited growth.[34]

Market Competition

Spain's renewable energy sector is largely controlled by a few dominant companies, including Iberdrola, Endesa, Naturgy, EDP España, and Repsol. This concentration of power limits opportunities for community-driven projects and risks making the energy transition dependent on corporate interests rather than citizen participation. Most of the national funding in the country goes into the country's biggest renewable energy source – wind energy. Yet, wind and hydro energy projects see very less participation from communities, and this may be due to the monopoly larger renewable energy developers hold. This monopoly, paired with administrative and bureaucratic burdens prevent communities from actively participating in these renewable energy sectors.[35]

Enabling Factors: The increased efforts to educate, support and guide citizens create pathways for citizens to engage in citizen-led renovation meaningfully. Increased awareness and simplified procedures create an incentive for citizens to take part.

Opportunities & Enabling Factors

Legal Recognition and Enabling Frameworks

The legal system of Spain has adopted the definition of Renewable Energy Communities and under the Royal Decree Law 23/2020 and has given them the rights to take part in auctions. The creation of renovation offices under Royal Decree 853/2021 provided citizens with practical entry points for renovation and energy transition participation and support.[36] These offices serve as One-Stop Shops that help simplify administrative processes and offer guidance in other areas (*See section 'Useful tools – One Stop Shops (OSS) in Spain' for details on such initiatives)*. Energy communities in Spain are increasingly supported by innovative technology that promote grid stability and optimize renewable integration. The necessity for effective energy transfers and storage systems to control fluctuating solar and wind output is emphasized by programs like REPowerEU.[37] Up until recently, the legal framework only permitted collective self-consumption and self-production within 500 meters, but this has now been increased to 2000 meters, and it has been positively spreading across Spain, thanks to the support extended through the IDAE.[38]

Local Engagement Models

One-stop shops are making an effort to address these awareness and trust issues. The Valencian Energy Office is a prime example. This energy office offers free personalised advice, workshops and mobile units to reach vulnerable households. By concentrating their services in

[34] Analysis of the Barriers Hampering Energy Communities – Link

[35] Community Energy in Spain Briefing – Link

[36] Entry into force of the Royal Decree on Renovation Offices ('one-stop shops') – Link

[37] A Review on Energy Communities Development, Opportunities and Challenges in Germany, Spain, and Italy – Link

[38] The Guardian - 'We're proud to be pioneers': inside Spain's community energy revolution – Link

neighbourhoods and connecting them to social programs, Valencia has had the opportunity to catalyse several energy communities.[39] This success model from Valencia gives us an example for the huge impact of the support from municipalities and other local authorities can make in the success of OSS. National OSS initiatives and digital platforms have found its way in Spain, strengthening citizen participation by providing step-by-step guidance (*See 'Useful tools – One Stop Shops (OSS) in Spain')*.

Funding Solutions

Spain uses EU recovery funds and national programs like CE IMPLEMENTA and EC OFFICES to channel over €190 million into energy communities through grants and advisory support.[40] OSS initiatives also play a role in navigating renovation financing, making technical processes more manageable.

Citizen-Centric Alternatives

The increased efforts to educate, support and guide citizens create pathways for citizens to engage in citizen-led renovation meaningfully. Increased awareness and simplified procedures create an incentive for citizens to take part.

Energy Poverty as a Driver for Action – and Integrated Support

With 17% of households in Spain unable to keep their homes warm, the case for community-driven solutions for energy generation are stronger than ever. The country is expecting to use its energy communities as a tool for energy poverty reduction.[41]

Further Action

There are certain actions that can be taken to provide the right space for energy communities in Spain to flourish:

- **Adopting a clear regulatory framework:** there is a lack for clear instructions and a regulatory framework for energy communities. A clear regulatory framework for distribution tariffs, contracts and rewarding methods must be put in place.
- **Training and Capacity building:** adequate measures must be adopted to increase awareness among local stakeholders on how to best support their local energy communities and on how they can increase their expertise in the matter.
- **Financial support and incentives:** Current programs for financial aid have short deadlines and complex formalities. Simplifying these funding mechanisms and offering low-interest loans and tax benefits can create incentive for citizens to participate.

Efforts to create Awareness and Accessibility: Clear public campaigns and real success stories can build trust and drive engagement in energy communities. At the same time, granting fair and prioritized grid access will reduce delays and make participation easier for citizens.

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[39] Inspiring Cases for citizen-led renovation projects - phase II: The Valencia Energy Office (Oficina de l'Energia de València) – Link

[40] Analysis of the Barriers Hampering Energy Communities – Link

[41] Cross-Case Analysis of the Energy Communities in Spain, Italy, and Greece: Progress, Barriers, and the Road Ahead – Link

Relevant Legislation

Over the years, Spain has created a legal framework for energy communities, showcasing political commitment and financial support through resources like the NextGenerationEU and the Recovery, Transformation and Resilience Plan (RTRP). Billions of euros have been assigned towards renewable energy deployment, community-led programs and self-consumption schemes through these resources.[42] The EU has advised Spain to amend its national laws for it to align with EU Directives like the Energy Performance of Buildings Directive (EPBD), the Energy Efficiency Directive (EED) and the Renewable Energy Directive (RED-II), in combination with regulations mentioned in the Energy Union Framework.[43]

EU Directives Transposition in Spain

Energy Performance of Buildings Directive (EPBD)

PNIEC (National Integrated Energy and Climate Plan) has managed to include the EPBD principles, aiming at long-term renovation and energy efficiency. Although EPBD requirements are seen in Spain's building codes and efficiency measures, the country has prioritized renewable energy integration and self-consumption initiatives over implementing renovation passports or near-zero energy building standards.[44]

Energy Efficiency Directive (EED)

Spain's PNIEC and national laws embed energy efficiency measures, encouraging demand-side management and public sector leadership. Yet, the spotlight remains firmly on renewable generation and self-consumption initiatives, leaving broader efficiency strategies in the background.[45]

Renewable Energy Directive (RED-II) / International Electricity Market Directive (IEMD 2019/944)

Spain launched its transposition of RED-II (EU Directive 2018/2001) through the Royal Decree-Law 23/2020, which altered the Electricity Sector Act (Law 24/2013) and Royal Decree 1955/2000 to incorporate Renewable Energy Communities (RECs) and introduced mechanisms for energy storage systems and independent aggregators. This decree operationalised RED II by incorporating its definition of RECs ad giving them the rights to participate in energy markets, grid access and renewable auctions.[46] It was later on when the concept of Citizen Energy Communities was formalised in the Royal Decree Law 5/2023 which also partially transposed the Internal Electricity Market Directive 2019/944, expanding the provisions for consumer empowerment and aggregation.[47] As per these frameworks, RECs and CECs may take on any legal structure as long as their primary purpose is economic, social, and environmental benefit rather than profit. Individuals, SME's and local authorities are welcome to participate, and specific provisions are set in stone for vulnerable households. However, the Draft Royal Decree (RD Project), which

[42] Analysis of the Barriers Hampering Energy Communities – Link

[43] Analysis of Spain's Climate Change and Energy Transition Act 7/2021 – Link

[44] Analysis of Spain's Climate Change and Energy Transition Act 7/2021 – Link

[45] Analysis of Spain's Climate Change and Energy Transition Act 7/2021 – Link

[46] Implementing European Union Provisions and Enabling Frameworks for Renewable Energy Communities in Nine Countries: Progress, Delays, and Gaps – Link

[47] Energy Regulatory developments under Royal Decree-Law 5/2023 – Link

seeks to specify proximity standards, governance guidelines, and market access, still lacks complete statutory clarity.[48]

Self-Consumption Framework

Royal Decree 244/2019 marked a turning point for Spain's energy community landscape, laying down the administrative, technical, and economic foundations for self-consumption. It opened the door for installations under 15 kW to enjoy full consumption rights, while systems between 15 and 100 kW gained structured savings and fair benefit-sharing among participants. Other amendments that followed this, such as RD-L 29/2021, eradicated restrictions on low-voltage connections and required Distribution System Operators (DSOs) to ensure transparency in the information and open communication channels for self-consumption promoters.[49]

Regulation on the Governance of the Energy Union and Climate Action

The PNIEC emphasizes on the country's national targets when it comes to renewable energy, energy efficiency and GHG emission reduction. Energy communities are highlighted to have a major role, and a self-consumption target of 19 GW is aimed for by 2030. Also, measures to strengthen public participation and steps to simplify administrative procedures are highlighted.[50]

Social Climate Fund and National Support

Spain makes use of state initiatives like CE IMPLEMENTA and other EU recovery funds, which distributed more than €170 million across several calls to promote pilot energy communities, aiming at eliminating energy poverty, speed up green transition and promote citizen participation.[51]

Institutional responsibilities and initiatives

While MITECO (Ministry for the Ecological Transition and Demographic Challenge) leads policy development, IDAE (Institute for Energy Diversification and Saving) manages funding initiatives and oversees the national energy community registry. National efforts are complemented by regional bodies like IVACE in Valencia and initiatives like the Community Transformation Offices help guide emerging energy communities.[52]

Renovation-Related Legislation

Spain is looking to achieve climate neutrality by 2050 and building renovation plays a central part in it. The National Energy and Climate Plan -NCEP/PNIEC (2023-2023) talks about the need to transform Spain's aging building stock into more efficient, low-emission spaces. This goal is reinforced by regulatory measures such as the Technical Building Code (Código Técnico de la Edificación – CTE), updated through Royal Decree 732/2019 to impose stricter energy efficiency standards, mandate renewable energy integration, and require nearly zero-energy buildings (NZEB). These changes are not just limited to new

[48] Analysis of the Barriers Hampering Energy Communities – Link

[49] A Review on Energy Communities Development, Opportunities and Challenges in Germany, Spain, and Italy – Link/ Energy Regulatory developments under Royal Decree-Law 5/2023 – Link

[50] Analysis of Spain's Climate Change and Energy Transition Act 7/2021 – Link

[51] Analysis of the Barriers Hampering Energy Communities – Link

[52] Analysis of the Barriers Hampering Energy Communities – Link

constructions but also incorporates significant renovations, guaranteeing these upgrades contribute to Spain's energy transition process. As previously mentioned, the PRTR offers financial aids to back up these initiatives and offers streamlined permitting for housing rehabilitation and urban regeneration. While Spain has not fully transposed EU directive measures into its regulatory system, these reforms mark a clear shift toward empowering households and communities to modernize their homes, improve energy efficiency, and integrate renewable technologies.

The table that follows lists the key Spanish laws, regulations and initiatives shaping this transformation and explains their relevance for renovation led by citizens.

Policy/ Law/ Program	Purpose and Core Measures	Relevance to the Citizen-Led Renovations
Spain's Recovery and Resilience plan (RRP – 2021)	NextGeneration EU plan financed by the EU driving green and digital transformation: large-scale energy-efficiency renovations of residential buildings (≥510,000 units), new social housing, renewable energy, sustainable mobility, and digitalisation of public services, alongside labour market reforms and strategic innovation projects (PERTEs).	Delivers essential renovation financing and offers key resources for pilot programs. Offers support to citizen-led projects that contribute towards renewable energy deployment and building renovation.
Long-Term Strategy for Energy Renovation of Building Sector (ERESEE 2020)	ERESEE 2020 sets a roadmap to decarbonize the building stock by 2050 through deep energy-efficiency upgrades, renewable integration, phased renovation targets for millions of homes, financial incentives, and citizen-focused support tools such as one-stop shops and technical assistance.	Simplifies renovation processes and reducing administrative barriers, making it easier for citizen participation. Provides financial incentives and tailored funding instruments. Promotes collective renovation for multi-family buildings, fostering community-led decision-making.
Royal Decree Law 5/2023	RDL 5/2023 formalised the concept of Citizen Energy Communities, although Renewable Energy Communities was already recognised in RDL 23/2020, also leading to the amendment of the Electricity Sector Law (Law 24/2013). The law extends renewable project deadlines, updated remuneration scheme and promotes electric mobility with tax incentives.[53]	Aligns with EU renewable Energy Directive. Provided legal recognition to RECs and CECs, empowering citizens and local groups to collectively generate, consume, store, and share renewable energy, which can be integrated into building renovation projects.

[53] Energy Regulatory developments under Royal Decree-Law 5/2023 – Link

Royal Decree Law 244/2019	Established administrative, technical, and economic conditions for self-consumption of electricity in Spain, promoting renewable generation, enabling surplus energy compensation, and authorizing collective self-consumption for communities and multi-family buildings.	Enables collective self-consumption models, allowing communities and multi-family buildings to share renewable generation facilities. Simplifies administrative and economic conditions for small-scale renewable integration.
National Integrated Energy and Climate Plan 2021-2030 (NCEP/PNIEC)	The updated NCEP was submitted in 2024 highlighting its targets for energy efficiency and building renovation and enforce minimum energy performance standards. Incorporates regulatory measures, financial incentives, and support tools like renovation offices.	Empowers households and communities through self-consumption and promoting energy communities. Provides financial incentives and advisory support.
National Building Renovation Plan (2025)	Strategic national roadmaps under the 2024 recast Energy Performance of Building Directive (EPBD) to achieve a highly energy-efficient, zero-emission building stock by 2050. They define policies, measures, and investment needs, with strong stakeholder participation. A consolidated draft of the Spanish NBRP to be forwarded to the EU on 31 December 2025.	Requires active participation from citizens and local authorities. Supports affordability and transparency through mechanisms like renovation offices, clear minimum performance standards, and feedback loops that empower communities to co-design renovation pathways.

Legislation on Engagement of Neighbours and Volunteers

Policy/ Law/ Program	Purpose and Core Measures	Relevance to the Citizen-Led Renovations
Ley de Propiedad Horizontal (Horizontal Property Law – 49/1960	Regulates coexistence and management of buildings divided into private units and shared communal areas. Establishes rights and obligations of owners, governance structures and decision-making rules for maintenance, improvements, and financial contributions.	Sets clear voting rules and allows digital participation, making it easier for communities to organize and approve citizen-led renovation projects, including sustainability upgrades. Mandates reserve funds, enables special levies for major works, and simplifies approval for eco-friendly improvements, promoting

		accessible and community-driven renovation initiatives.

Funding Bodies and Schemes

Funding Bodies in Spain

Institution/Body	Role/Funding relevance
Ministries and National Managing Authorities	
Ministry for the Ecological Transition and the Demographic Challenge (MITECO)	Leads Spain's energy and climate strategy, channelling national and EU funds through programs like PREE and NextGenerationEU to finance energy-efficient building renovations, renewable integration, and citizen-led sustainability projects.[54]
Ministry of Transport, Mobility and Urban Agenda (MITMA)	Coordinates housing and urban regeneration strategy, managing funds in NextGenerationEU funds through the Recovery, Transformation and Resilience Plan (PRTR) to finance residential building renovations, neighbourhood upgrades, and energy-efficiency improvements.[55]
Dedicated National Funds and Institutions	
National Energy Efficiency Fund (NFEE)	National fund providing grants and financing for energy-efficiency retrofits and renewable integration in buildings. Central to Spain's PRTR and NECP objectives, managed by IDAE to mobilize large-scale investments in sustainable renovation.[56]
Fondo JESSICA-F.I.D.A.E. (Energy Saving and Diversification Investment Fund)	National fund financing urban sustainable development projects through loans and equity, focused on energy efficiency and renewable integration. Central to Spain's sustainable urban agenda, managed by IDAE in collaboration with the European Investment Bank.[57]
EU-Level and Multilateral Financial Institutions	
European Commission	Massive grants provided through the Recovery and Resilience Facility (RRF), Cohesion Funds, and InvestEU for building renovation, energy efficiency, and renewable integration, along with technical assistance and compliance monitoring under Spain's PRTR and NECP frameworks.
European Investment Bank (EIB), European Investment Fund (EIF) and European Bank for	Provides long-term financing and technical assistance for large-scale energy-efficiency and renovation projects through ELENA and green infrastructure loans (EIB), offers credit enhancement and risk-sharing instruments to unlock household renovation

[54] Energy Efficiency: MITECO – Link

[55] Housing rehabilitation and urban regeneration plan – Link

[56] Global Sustainable Buildings Guide: Spain – Link

[57] Official Journal of the EU – Link

Reconstruction and Development (EBRD)	financing (EIF), and supports sustainable building upgrades and climate resilience investments in Spain via blended finance and advisory services (EBRD).
Council of Europe Development Bank (CEB)	Provides financial aid for affordable housing, social infrastructure, and urban development.
Municipalities and Local Authorities	
Regional Autonomous communities	Act as managing authorities for EU renovation funds (ERDF, Cohesion Fund, NextGenerationEU). They allocate these funds to municipalities, housing associations, and citizens through regional calls and rehabilitation offices.[58]

Funding Schemes in Spain

Programme/Instrument	Purpose & Funding Mechanism
National Grant programmes	
PRTR – Housing Rehabilitation & Urban Regeneration (Component 2)	Core national scheme under NextGenerationEU that grants direct subsidies for residential renovation (single-family, multi-apartment buildings, and neighbourhoods). Implemented via regional Rehabilitation Offices with calls run by Autonomous Communities.[59]
Operational Programmes (ERDF / Cohesion Fund 2021–2027)	Regional grant programmes (shared management) financing energy-efficient building renovations and low-carbon measures across Autonomous Communities. [60]
National Financing Facilities	
ICO Guarantee Line for Building Renovation (PRTR)	€1.1 bn national guarantee facility delivered via Instituto de Crédito Oficial (ICO) to de-risk bank loans for homeowners & homeowners' associations undertaking PRTR-compliant renovations.[61]
Regional Resilience Fund (Fondo de Resiliencia Autonómica)	EIB/EIF–Ministry of Economy platform that channels NextGenerationEU loans to the Autonomous Communities for strategic investments (incl. social/affordable housing, urban

[58] European Commission - Press release – Link

[59] Spain | Global Sustainable Buildings Guide – Financing – Link

[60] European Commission - Press release – Link

[61] Spain | Global Sustainable Buildings Guide – Financing – Link

	regeneration, energy transition). Regions participate in Investment Councils to select & monitor projects.[62]
Loans, Credit lines and Blended Finance	
IFI Loans from EIB, EIF, CEB	Loans, credit lines, and blended operations for energy efficiency and housing renovation, often combined with regional/national grants.[63]
Commercial Bank Loans	Domestic lenders (banks) extend renovation loans/green mortgages backed by ICO guarantees or EIF/InvestEU risksharing-. Eligibility aligned with PRTR/ERDF calls and energy performance criteria.[64]
Technical Assistance and Project Preparation	
ELENA (EIB/EC Technical Assistance Facility)	Project development assistance for large-scale renovation programmes (audits, design, tendering, aggregation), accelerating investment readiness and improving absorption of ERDF/PRTR funding.[65]
Complimentary EU and National Sources	
InvestEU / LIFE Clean Energy Transition	EU-level financing & grants for energy efficiency; InvestEU provides guarantees & advisory; LIFE CET funds capacity-building and replicable renovation solutions.
Just Transition Fund (JTF)	Targeted cohesion funding to coal/CO_2intensive territories (e.g., Asturias, León, Palencia, Teruel, Córdoba, Almería, Cádiz, La Coruña, Balearic Islands) that can complement renovation and -districtlevel- measures in vulnerable areas.[66]
Social Climate Fund	The SCF sets aside more than €3 billion with the aim of combating energy poverty. The scheme offers full financial support to vulnerable households, while middle-income families can access partial grants.[67]
REPowerEU Addendum (PRTR 2023)	PRTR Addendum expands green transition components and creates additional disbursement windows (incl. pre-financing) to accelerate renovation & energy security investments; seven upcoming disbursements planned to 2026.[68]

[62] Spain: EIB Group and Spanish Ministry of Economy sign agreement to implement the Regional Resilience Fund – Link

[63] CEB news - Link

[64] ICO Crecimiento – Link

[65] ELENA – European Local ENergy Assistance – Link

[66] European Commission – press release – Link

[67] Social Climate Fund – Link

[68] The European Commission approves the Addendum to the Recovery Plan, which will mobilise all the resources allocated to Spain from the NextGeneration EU funds – Link

Useful Tools

One-Stop Shops (OSS) in Spain

The number of OSS for building renovation in Spain is still evolving as they are progressively implemented under national and EU programs. The framework for these OSS was established by Royal Decree 853/2021, which mandates the creation of Renovation Offices (Oficinas de Rehabilitación) linked to Spain's RRP and the EU Renovation Wave targets.[69] The following are the current Spanish physical and digital OSS initiatives:

Initiative and region	Funding Source
BUILD-OSS Project (Pilot in Andalusia, expanding nationally)	EU LIFE Programme
HORIS digital platform (Nationwide and extends to other EU Member States)	EU Horizon Programme
CondoReno (Multiple regions)	EU LIFE Programme
FACILITA Project (Extremadura, Madrid, Valencia)	Spanish Government + EU RRP
Renovation Offices (All autonomous communities)	Spanish Government (Royal Decree 853/2021)

European Commission's guide to Citizen-led Renovation

The European Commission's has published a **How to Citizen-Led Renovation** guide which provides practical steps for communities and individuals to organize and lead building renovation projects. It emphasizes the role of energy communities and collective action in achieving energy efficiency and decarbonization goals. The guide outlines governance models, financing options, and technical support mechanisms to empower citizens in managing renovations.

Renewable Resource Mapping Tools

Spain also offers renewable resource mapping tools to help citizens assess local energy potential. These include the **Spain's Solar Atlas**, which provides detailed solar irradiation and photovoltaic potential maps, and the **Spain's Wind Atlas**, which identifies high-wind areas for wind power generation. Additionally, the **IRENA Global Atlas** integrates multiple renewable sources, allowing users to explore solar, wind, and other resources with geographic overlays. These tools support informed decisions for installing renewable energy systems across Spain.

[69] Entry into force of the Royal Decree on Renovation Offices ('one-stop shops') – Link

Guidebooks and Roadmaps

Spain is charting a clear path toward a zero-carbon building future through a series of strategic initiatives. At the heart of this effort is the **Whole Life Carbon Roadmap for Spain**, developed by Green Building Council España under the BuildingLife program, which lays out milestones and practical strategies to achieve net-zero buildings by 2050. Complementing this, the **PAS-E project** introduces Building Renovation Passports (BRPs), digital tools that act as a long-term guide for property owners by detailing staged renovation steps and tracking energy performance improvements.