SPAIN

1. CONTEXT OF THE BUILT ENVIRONMENT

Urban population

Total population	Functional Urban Area population*	Share of urban population	Average urban growth
47.128 million (2020)	32.542 million (2020)	69% (2020)	4.5% (2015-2020)

Data source: European Commission (2023), FUA and eFUA methodology: OECD/European Commission (2020) [1]

Building data

	Building stock	Built before 1981	Annual construction	Annual construction rate
Residential	23,991 thousand dwellings (2023)	51%	108.9 thousand dwellings (2022)	0.5%
Non-residential	2,213 million m² (2023)		5.95 million m² (2022)	0.3%

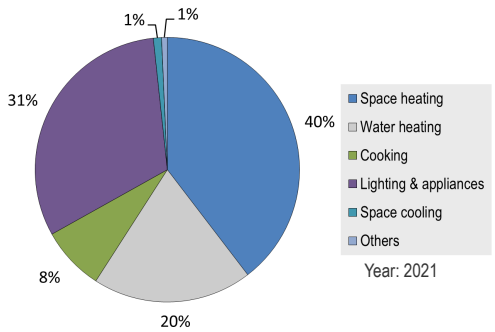
Energy & emissions data

Residential buildings**	1990	2021	+/- rate
Final energy consumption (PJ/year)	384	607	58%
	1990	**2021**	**+/- rate**
GHG emissions (MtCO2/year)	12.51	15.82	26.4%

Non-residential buildings	2021
Final energy consumption (PJ/year)	422.2
	2021
GHG emissions (MtCO2/year)	9.77

***Data source: IEA Countries & Regions [2]*

Energy consumption by end-use (Residential)



Heating degree days***

945.4
Degree (°C) Days (2020)
Reference degree day: 16 degree (°C)

Cooling degree days***

337.8
Degree (°C) Days (2020)
Reference degree day: 21 degree (°C)

****Data source: IEA Weather, Climate and Energy Tracker [3]*

[1] http://data.europa.eu/89h/2ff68a52-5b5b-4a22-8f40-c41da8332cfe, https://doi.org/10.1787/d58cb34d-en
[2] https://www.iea.org/countries
[3] https://www.iea.org/data-and-statistics/data-tools/weather-climate-and-energy-tracker

2. GOVERNANCE AND CAPACITY BUILDING

Who does what

Ministries/Agencies responsible for BEE (building energy efficiency) and related policies

A	Ministry of Transport, Mobility and Urban Agenda (MITMA)	B	City halls and Autonomous Communities	C	Ministry of Ecological Transition and Demographical Challenge	D		E	

Ministries/Agencies responsible for each policy area

Building code	Governmental buildings	Housing policy in general	Financial incentives for BEE	Behaviour change for BEE
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E

BEE standard	Act/law for BEE regulation	Whole life carbon	Energy policy in general	NDC
A B C D E	A B C D E	A B C D E	A B C D E	A B C D E

Local governments' authority to customise BEE standards[4]

—	~~Local governments can customise national standards.~~
✓	**Local governments cannot adjust national standards, but the standards differ across regions depending on the local climate.**
—	~~Local governments cannot adjust national standards. All building codes, standards or requirements are uniform across the entire country.~~

✓	**Neighbourhood level approach/planning**	Aid for rehabilitation actions at neighbourhood level is one of the five pillars on which the comprehensive residential rehabilitation plan is based.
—	~~The national government is tracking progress on de-carbonisation efforts at the local level~~	
✓	**More ambitious policy instrument by local governments**	

Capacity building

Government funding programmes to train/enhance skills for SMEs

Designing for ZEB	—	Insulation	—
Calculation for energy performance of buildings	✓	Installation of energy efficient equipment	—
Calculation for life cycle CO2 of buildings	—	Other	—

Actions undertaken by the national government to support local governments for BEE policy implementation[5]

Co-ordinating regional networks for knowledge exchange and support		✓
Providing funding for training		–
Distributing toolkits and guidelines	*Priority*	✓
Developing online platforms to share best practices		–
Hosting annual conferences focused on BEE policy implementation		–
Offering grants to hire consultants		–
Collaborating with research institutes offering specialised courses on BEE practices		–
Creating incentive programmes to reward local governments	*Priority*	✓
Supporting the Implementation of local regulations		–
Establishing mentorship programmes		–
Other		✓

3. GOALS AND POLICY FOCUS

Policy areas covered in the goals and existing commitments

	Zero emission for new buildings	Zero emission for existing buildings	Renewable energy for new buildings	Renewable energy for existing buildings	Whole-life cycle carbon reduction
NDC	–	–	–	–	–
LT-LEDS	–	–	–	–	–
Ministerial plan	✓	✓	✓	✓	–

Quantitative targets included in long-term goals

Fossil fuel-free buildings

Fossil fuel imports will be reduced by 40% by 2030 compared to 2019.

District heating/cooling

25%-50% of demand will be supplied by heating and cooling networks by 2050.

Insulation

Heat pumps

By 2030, heat pumps will supply 24.893 ktoe, marking a 177% increase from 2020.

Rooftop PVs

Solar heating of water

Other renewable energy

Other

Policy focus for decarbonising buildings (Top 3)

Current focus	Future priorities
Passive design to reduce heating demand	Passive design to reduce heating demand
Energy efficiency on heating ✓	Energy efficiency on heating
Passive design to reduce cooling demand	Passive design to reduce cooling demand
Energy efficiency on cooling ✓	Energy efficiency on cooling
Switching energy to sustainable energy ✓	Switching energy to sustainable energy
Renewable energy	Renewable energy
Embodied carbon	Embodied carbon ✓
Circularity of building materials	Circularity of building materials ✓

Energy poverty

Strategies to reduce poverty and inequality via decarbonising buildings ✓

Stronger financial support for decarbonising public housing for low-income people	✓
Financial support to buy zero-energy/emission homes	– – – –
Financial support to renovate their homes to zero-energy/emission	Low-income – – –
Allowing partial retrofits to ease financial burden on upfront cost	– – – –
Provide energy efficient appliances (e.g. LED)	– – – –
Energy bill coupon	Low-income – – –
Energy coach/consultation	Low-income – – –
Other	–

Note: Policies targeting specific households Low-income *Elderly* *Households with more than 3 children* *Other*

4. DEVELOPMENT OF POLICY INSTRUMENTS

Standards and regulations for decarbonising buildings

Building codes	National level ✓
	State level
	Local level

Type of buildings covered by the mandatory energy efficiency code

Residential buildings	
New	☑ *All* ☐ *Only large units*
Renovated	☑ *All* ☐ *Only large units*
Non-residential buildings	
New	☑ *All* ☐ *Only large units*
Renovated	☑ *All* ☐ *Only large units*

Elements of building codes (new buildings)

Insulation/heat transmission coefficient	✓
Primary energy consumption	✓
Primary fossil-fuel energy consumption	✓
Energy efficiency of equipment	✓
Operational carbon reduction	✓
Whole life cycle carbon	–
Comprehensive green building assessment	–
Other	✓

Stricter standards for public buildings than private buildings — For new construction / For renovation

	Public buildings	Public housing
Energy efficiency	🏠 🔧	– –
Zero energy/emission	🏠 🔧	– –
Renewable energy	🏠 🔧	– –
Embodied carbon/life cycle	🏠 🔧	– –
Locally sourced & recycled materials	🏠 🔧	– –

Certificates/labeling programme for built environment ✓

Types of certificates/programme

Energy Performance Certificate (EPC)	✓
Energy labelling on passive house	–
Energy labelling on annual energy consumption	–
Comprehensive built environment certification	–
Labeling for whole life carbon emissions	–

Target for Mandatory EPC

New buildings (residential)	✓
New buildings (non-residential)	✓
Existing buildings for renovation	✓
Existing buildings for sales/rent	✓

Standardised calculation methods for embodied carbon/LCA

Database of CFP/EPD	–	☐ *Governmental*	☐ *Non-governmental*
Grant for using the following materials	–	☐ *Low-carbon*	☐ *Bio-based* ☐ *Reused*
Policy tools for reusing building materials	–		
Mandatory declaration	–	☐ *Public*	☐ *Residential* ☐ *Non-residential*
Limit value on CO_2 emissions	–	☐ *Public*	☐ *Residential* ☐ *Non-residential*

Minimum energy performance standards (MEPS) regulation for existing buildings

☐ *All buildings* ☐ *Residential (rent)* ☐ *Residential (sale)*
☐ *Office (rent/sale)* ☐ *Public buildings* ☐ *Other*

Climate resilience

Extreme heat adaptation measures implemented in the building sector

Strategic orientation of main building facades	–	☐ *Regulations*	☐ *Financial incentives*
Light coloured and reflective materials	–	☐ *Regulations*	☐ *Financial incentives*
Green roof	–	☐ *Regulations*	☐ *Financial incentives*
Green facades	–	☐ *Regulations*	☐ *Financial incentives*
Other	✓		

Floods/storms adaptation measures implemented in the building sector

Lowest liveable floor above ground level	–	☐ *Regulations*	☐ *Financial incentives*
Roof drainage system	–	☐ *Regulations*	☐ *Financial incentives*
Hip-roof	–	☐ *Regulations*	☐ *Financial incentives*
Hurricane straps	–	☐ *Regulations*	☐ *Financial incentives*
Impact-resistant glass	–	☐ *Regulations*	☐ *Financial incentives*
Backup generators	–	☐ *Regulations*	☐ *Financial incentives*
Microgrids	–	☐ *Regulations*	☐ *Financial incentives*

Publicly available geographic database with climate risk information

Flood risk	✓
Heat wave	✓
Storm	–
Wild fire	✓
Other	–

Building certificate system on climate resilience

Resilience to flood risk	–
Resilience to heat	–
Other	–

This survey is designed for national governments.