

ITALY

1. CONTEXT OF THE BUILT ENVIRONMENT

Urban population

Total population	Functional Urban Area population*	Share of urban population	Average urban growth
59.427 million (2020)	33.189 million (2020)	56% (2020)	0.8% (2015-2020)

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

Building data

	Building stock	Built before 1980	Annual construction	Annual construction rate
Residential	35,246 thousand dwellings (2020)	72%	59.8 thousand dwellings (2021)	0.2%
Non-residential	million m ²		9.89 million m ² (2021)	

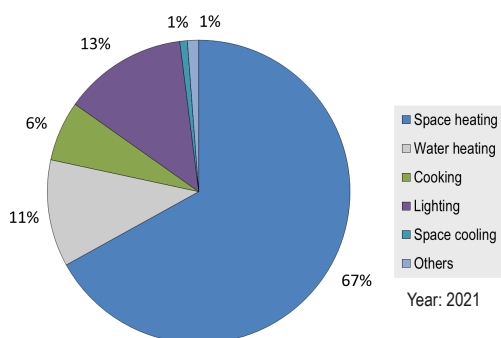
Energy & emissions data

Residential buildings**	1990	2021	+/- rate
Final energy consumption (PJ/year)	1091.1	1280	17%
	1990	2021	+/- rate
GHG emissions (MtCO ₂ /year)	55.56	41.65	-25%

**Data source: IEA Countries & Regions²

Non-residential buildings	2021
Final energy consumption (PJ/year)	731.1
GHG emissions (MtCO ₂ /year)	24.6

Energy consumption by end-use (Residential)



Heating degree days***

1,309.8

Degree (°C) Days (2020)

Reference degree day: 16 degree (°C)

Cooling degree days***

285

Degree (°C) Days (2020)

Reference degree day: 21 degree (°C)

***Data source: IEA Weather, Climate and Energy Tracker³

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 Infrastructure and Transport	B Ministry of the Environment and Energy Security	C Ministry of Economy and Finance	D Italian National Agency for New Technologies (ENEA)	E Municipalities
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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

<input checked="" type="checkbox"/>	Local governments can customise national standards.
<input type="checkbox"/>	Local governments cannot adjust national standards, but the standards differ across regions depending on the local climate.
<input type="checkbox"/>	Local governments cannot adjust national standards. All building codes, standards or requirements are uniform across the entire country.
<input checked="" type="checkbox"/>	Neighbourhood level approach/planning Yes, but only sub-national governments are working on district/neighbourhood approach
<input checked="" type="checkbox"/>	The national government is tracking progress on decarbonisation efforts at the local level Periodic public reports
<input type="checkbox"/>	More ambitious policy instrument by local governments

Capacity building

Government funding programmes to train/enhance skills for SMEs

Designing for ZEB	<input type="checkbox"/>	Insulation	<input type="checkbox"/>
Calculation for energy performance of buildings	<input type="checkbox"/>	Installation of energy efficient equipment	<input type="checkbox"/>
Calculation for life cycle CO2 of buildings	<input type="checkbox"/>	Other	<input type="checkbox"/>

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

Co-ordinating regional networks for knowledge exchange and support	✓
Providing funding for training	Priority ✓
Distributing toolkits and guidelines	✓
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	Priority ✓
Creating incentive programmes to reward local governments	-
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	District heating/cooling
Insulation	Heat pumps
Rooftop PVs	Solar heating of water
Other renewable energy Increase renewable energy by 54% in 2030 (from 2021 levels).	Other Reduce oil-based fuel consumption by 53% by 2030 in the residential sector.

Policy focus for decarbonising buildings (Top 3)

Current focus

Passive design to reduce heating demand	<input checked="" type="checkbox"/>
Energy efficiency on heating	<input checked="" type="checkbox"/>
Passive design to reduce cooling demand	<input type="checkbox"/>
Energy efficiency on cooling	<input type="checkbox"/>
Switching energy to sustainable energy	<input type="checkbox"/>
Renewable energy	<input checked="" type="checkbox"/>
Embodied carbon	<input type="checkbox"/>
Circularity of building materials	<input type="checkbox"/>



Future priorities

Passive design to reduce heating demand	<input type="checkbox"/>
Energy efficiency on heating	<input type="checkbox"/>
Passive design to reduce cooling demand	<input checked="" type="checkbox"/>
Energy efficiency on cooling	<input checked="" type="checkbox"/>
Switching energy to sustainable energy	<input type="checkbox"/>
Renewable energy	<input checked="" type="checkbox"/>
Embodied carbon	<input type="checkbox"/>
Circularity of building materials	<input type="checkbox"/>

Energy poverty

Strategies to reduce poverty and inequality via decarbonising buildings



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

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	<input checked="" type="checkbox"/>
	State level	<input type="checkbox"/>
	Local level	<input checked="" type="checkbox"/>

Type of buildings covered by the mandatory energy efficiency code

Residential buildings		
New	<input checked="" type="checkbox"/> All	<input type="checkbox"/> Only large units
Renovated	<input checked="" type="checkbox"/> All	<input type="checkbox"/> Only large units
Non-residential buildings		
New	<input checked="" type="checkbox"/> All	<input type="checkbox"/> Only large units
Renovated	<input checked="" type="checkbox"/> All	<input type="checkbox"/> Only large units

Elements of building codes (new buildings)

Insulation/heat transmission coefficient	<input checked="" type="checkbox"/>
Primary energy consumption	<input checked="" type="checkbox"/>
Primary fossil-fuel energy consumption	<input type="checkbox"/>
Energy efficiency of equipment	<input checked="" type="checkbox"/>
Operational carbon reduction	<input type="checkbox"/>
Whole life cycle carbon	<input type="checkbox"/>
Comprehensive green building assessment	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

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)	<input checked="" type="checkbox"/>
Energy labelling on passive house	<input type="checkbox"/>
Energy labelling on annual energy consumption	<input type="checkbox"/>
Comprehensive built environment certification	<input type="checkbox"/>
Labeling for whole life carbon emissions	<input type="checkbox"/>

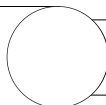
Target for Mandatory EPC

New buildings (residential)	<input checked="" type="checkbox"/>
New buildings (non-residential)	<input checked="" type="checkbox"/>
Existing buildings for renovation	<input checked="" type="checkbox"/>
Existing buildings for sales/rent	<input checked="" type="checkbox"/>

Standardised calculation methods for embodied carbon/LCA


Database of CFP/EPD	<input type="checkbox"/>	<input type="checkbox"/> Governmental	<input type="checkbox"/> Non-governmental
Grant for using the following materials	<input checked="" type="checkbox"/>	<input type="checkbox"/> Low-carbon	<input type="checkbox"/> Bio-based <input checked="" type="checkbox"/> Reused
Policy tools for reusing building materials	<input type="checkbox"/>		
Mandatory declaration	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Public	<input type="checkbox"/> Residential <input type="checkbox"/> Non-residential
Limit value on CO2 emissions	<input type="checkbox"/>	<input type="checkbox"/> Public	<input type="checkbox"/> Residential <input type="checkbox"/> Non-residential

Minimum energy performance standards (MEPS) regulation for existing buildings



<input type="checkbox"/> All buildings	<input type="checkbox"/> Residential (rent)	<input type="checkbox"/> Residential (sale)
<input type="checkbox"/> Office (rent/sale)	<input type="checkbox"/> Public buildings	<input type="checkbox"/> Other

Climate resilience

🔥 Extreme heat adaptation measures implemented in the building sector

Strategic orientation of main building facades	<input type="checkbox"/>	<input type="checkbox"/> Regulations	<input type="checkbox"/> Financial incentives
Light coloured and reflective materials	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> Regulations	<input type="checkbox"/> Financial incentives
Green roof	<input checked="" type="checkbox"/>	<input type="checkbox"/> Regulations	<input checked="" type="checkbox"/> Financial incentives
Green facades	<input type="checkbox"/>	<input type="checkbox"/> Regulations	<input type="checkbox"/> Financial incentives
Other	<input type="checkbox"/>		

🌊 Floods/storms adaptation measures implemented in the building sector

Lowest liveable floor above ground level	<input type="checkbox"/>	<input type="checkbox"/> Regulations	<input type="checkbox"/> Financial incentives
Roof drainage system	<input type="checkbox"/>	<input type="checkbox"/> Regulations	<input type="checkbox"/> Financial incentives
Hip-roof	<input type="checkbox"/>	<input type="checkbox"/> Regulations	<input type="checkbox"/> Financial incentives
Hurricane straps	<input type="checkbox"/>	<input type="checkbox"/> Regulations	<input type="checkbox"/> Financial incentives
Impact-resistant glass	<input type="checkbox"/>	<input type="checkbox"/> Regulations	<input type="checkbox"/> Financial incentives
Backup generators	<input type="checkbox"/>	<input type="checkbox"/> Regulations	<input type="checkbox"/> Financial incentives
Microgrids	<input type="checkbox"/>	<input type="checkbox"/> Regulations	<input type="checkbox"/> Financial incentives

Publicly available geographic database with climate risk information

Flood risk	<input checked="" type="checkbox"/>
Heat wave	<input type="checkbox"/>
Storm	<input type="checkbox"/>
Wild fire	<input checked="" type="checkbox"/>
Other	<input type="checkbox"/>

Building certificate system on climate resilience

Resilience to flood risk	<input type="checkbox"/>
Resilience to heat	<input type="checkbox"/>
Other	<input type="checkbox"/>

This survey is designed for national governments.