



Italian National Agency for New Technologies,
Energy and Sustainable Economic Development

The Italian National Portal on Building Energy Performance PNPE² as support to evaluate and monitor the renovation of public buildings

EED Concerted Action

23 March 2021

Francesca Pagliaro

ENEA – DUEE – SIST - CENTRO



1101 0110 1100
0101 0010 1101
0001 0110 1110
1101 0010 1101
1111 1010 0000



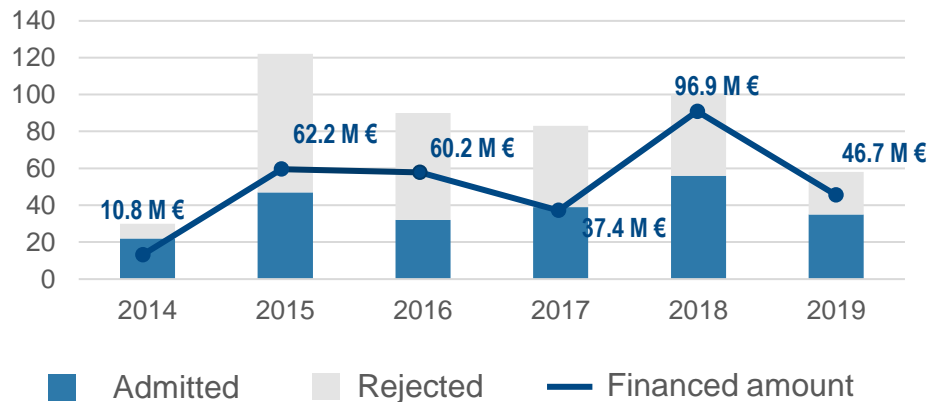
The PREPAC Program towards 2030



Starting from 2014, the **Program for the Energy Renovation of the Buildings of the Central Public Administration (PREPAC)** is prepared by November 30th of each year.

The program was confirmed and strengthened for the decade 2021-2030

PREPAC proposals (2014-2019)



- An annual **average of 50% of proposals** was found to be eligible;
- **483 proposals** evaluated, 231 financed, with a value ranging from a few thousand to a few million euros;
- In total, **314 million euros worth of projects** were funded.

Monitor the renovation rate of Italian Public Buildings

✓ Strength and Promoters

Public bodies want to pursue the public interest (pilot cases for fighting climate change) and also benefit from the energy savings.

Renovation companies and **EsCOs** have economic interests and the necessary technical skills.

✓ Weakness

PREPAC program concerns only **Central Public Administration**. Local Administrations are not part of it.

Lack of technical skills and information in the public bodies (especially in small contexts) is often present in both holding the Funds and benefitting from them.

Increase the knowledge about the buildings and estimate the evolution of their energy performance is crucial to monitor the reaching of EU's targets.

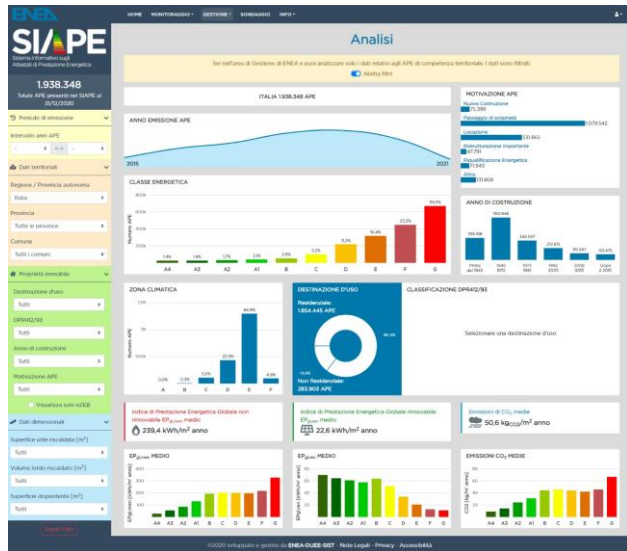
DATABASES are a powerful tool to perform these evaluations as they make it possible to combine building data and compare them with the building requirements issued by law over time

National Informative System on EPCs



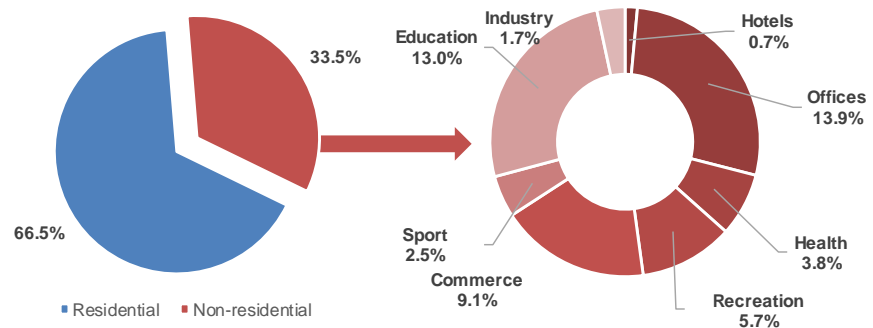
Sistema Informativo sugli
Attestati di Prestazione Energetica

The **Italian Informative System on Energy Performance Certificates (SIAPE)** is the national tool to collect the EPCs issued for buildings and building units in 2015 and was developed by ENEA in 2016.



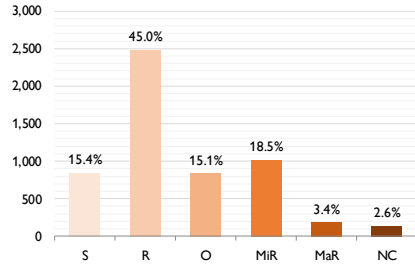
SIAPE already contains information on public buildings certified through an EPC and makes it possible to analyze several parameters on them.

Building use of EPCs issued for public buildings in 2020

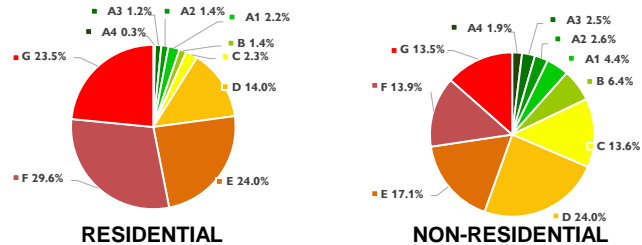


Statistics on EPCs issued for public buildings

The energy performance of public buildings on SIAPE can be compared with that of private buildings.



Purpose of EPCs issued for public buildings in 2020



Energy labels of EPCs issued for public buildings in 2020

	PURPOSE FOR EPC ISSUING	
	EPCs of public buildings	EPCs of private buildings
Sale (S)	15.4%	57.8%
Rent (R)	45.0%	26.8%
Other (O)	15.1%	5.8%
Minor Renovation (MiR)	18.5%	3.8%
Major Renovation (MaR)	3.4%	2.4%
New Buildings	2.6%	3.3%

	ENERGY LABEL DISTRIBUTION			
	EPCs of public buildings		EPCs of private buildings	
	Residential	Non-residential	Residential	Non-residential
A4-B	6.6%	17.9%	7.8%	11.3%
C-E	40.3%	54.7%	31.9%	47.6%
F-G	53.1%	27.4%	60.4%	41.1%

The previous evaluations provide already some interesting information ... however, the amount of data need to be increased to allow to monitor and evaluate the renovation rate of the public sector.

National Portal on Building Energy Performance



The Italian transposition of the EPBD III introduced the **National Portal on Building Energy Performance (PNPE²)**

ENEA is in charge of developing and managing the PNPE².



CITIZENS



COMPANIES



PUBLIC
ADMINISTRATIONS



Informative (regulations,
technologies, experts, etc.)

Educational (courses, etc.)

Decision Support Systems
(requalification, monitoring, etc.)



PUBLIC
AREA

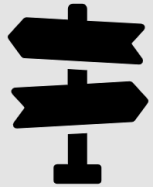


PRIVATE
AREA

Functionalities for the public sector



**BUILDING
PASSPORT**



**SUPPORT DECISION SYSTEM
for strategies on single
buildings**



BUILDING STOCK MAPPING



MACRO

to



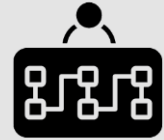
MICRO



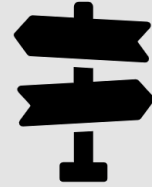
**MONITORING of the
reaching of goals
and targets**



**EVALUATION of
performance
improvement**



**STRATEGY
PLANNING**



**SUPPORT DECISION SYSTEM
for planning of strategies
and policies**

Data sources



MAIN DATABASES

(issued by law)



Informative System for the management of informative fluxes on electricity and gas consumption (AU)

Data: national consumption of private and public users



SIOPE (Banca d'Italia)
Informative System on PA Money Transactions
Data: PA incomes and outcomes



DB on incentives for energy efficiency and RES production (GSE)



SIAPE (ENEA)
Informative System on EPCs
Data: national EPCs



«PA HOLDINGS» project (MEF)
Data: PA building stock census



The Italian National Portal on Building Energy Performance PNPE² as support to evaluate and monitor the renovation of public buildings

Data sources



ADDITIONAL DATABASES

(in progress)



Building cadaster (AdE)

Data: GIPS coordinates and plan of the national building stock



Audit102 (ENEA)

Data: mandatory energy audits based on the DLgs 102/2014

Audit102



ES-PA project (ENEA)

Energy and Sustainability for Public Administration

Data: interventions of renovation on the public building stock realized through SECAP projects



CIT (ENEA)

National cadaster of TBSs
Data: information and technical data on TBSs certified through inspections

CIT



Others ...



Conclusions

What ENEA has evaluated so far about national building database potentials and limitations in supporting the achievement of art. 5 demands

✓ Potentials

Data integration

Evaluation of existing policies

Monitoring the reach of goals and targets at local, national, and EU levels

Access to information and data flow on energy efficiency in the public sector and the building sector in general

Editing of Best practices

✓ Limitations

Lack of information especially in small contexts

Lack of data quality and information control and verification

Low digitalization levels in PA

Need for integration among different data sources

**Thank you for
your attention!**

Francesca Pagliaro
francesca.pagliaro@enea.it



1101 0110 1100
0101 0010 1101
0001 0110 1110
1101 0010 1101
1111 1010 0000

