



FINANCING ENERGY EFFICIENCY PROJECTS: THE CASE OF ITALY

Briefing Note No.9, March 2022

SUMMARY

This 9th Briefing Note provides an overview of the applicable regulatory forces, the market architecture, and policy framework related to the Energy Efficiency (EE) projects in Italy. Compared to some of the other Triple-A case study countries' governments, the Italian government is recently starting to put more attention in renewables and EE. With the launch of the Next Generation EU (NGEU) program in 2020 the EU provided an important number of financial resources to accelerate the growth. Amongst the applicable and relevant laws and regulation, EE policies and tax deductions, as well as National Inventory Report – ISPRA, are described. Details of the Italian market architecture and policy framework are provided, related to Italian subsidy schemes that foster sustainable investments and energy transition, and how these are applied to each of the Triple-A sectors: Buildings, Industry, Transportation, District Energy Networks and Outdoor Lighting.

KEYWORDS

Energy Efficiency, Policy Framework, Financial Incentives, Financial Schemes, Buildings, Industry, Transportation, District Energy Networks, Outdoor Lighting, Italy

AUTHORS

Maurizio Megliola (GFT Italia), Andrea Giugno (GFT Italia), Tommaso Zerbi (GFT Italia)



The Triple-A project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 846569.

1 Introduction

This briefing note gives an introductory overview of the applicable regulatory forces, the market architecture, and policy framework related to the projects and tools identified under the Triple-A project. The overview and recommendations presented in this report focus on the Italian situation and are based on the projects that were identified as Triple-A, which, in turn, are available through Standardised Triple-A Tools & Triple-A Database on Energy Efficiency (EE) Financing, and the project fiches that are made publicly available through the Triple-A website.

Compared to some of the other Triple-A case study countries' governments, the Italian government is recently starting to put more attention in renewables and EE. With the launch of the Next Generation EU (NGEU) program in 2020 the EU provided a huge number of financial resources to accelerate the growth. The NGEU initiative channels significant resources to countries such as Italy which, although characterised by levels of GDP in line with the EU average, have recently suffered from low economic growth and high unemployment¹. These money are being used by Italian government within the PNRR (Piano Nazionale di Ripresa e Resilienza) to provide a financial aid to the entities which are interested in a green and sustainable transition.

The Italian plan belongs to an unprecedented, coordinated EU response to the COVID-19 crisis, to address common European challenges by embracing the green and digital transitions, to strengthen economic and social resilience. The Commission's assessment finds that Italy's plan devotes 37% of total expenditure on measures that support climate objectives. The plan includes investments to finance a large-scale renovation programme to increase the EE of buildings. It also provides for measures to promote the use of renewable energy sources, including hydrogen. The plan places a special emphasis on reducing greenhouse gas emissions from transport, with

investments in sustainable urban mobility and railway infrastructure.²

These briefing notes analyses the main Italian EE goals and the laws and incentives available. In particular, this document is divided in the following sections:

- EE goals for 2030 & 2050.
- Status in key sectors.
- Policy framework, incentives & schemes.

2 Energy Efficiency goals for 2030 and 2050

The Italian document related to the energy and climate transition is the *Piano nazionale integrato per l'energia e il clima per gli anni 2021-2030* (PNIEC), whose main goals regarding energy and climate for 2030 are reported in Table 1. Regarding the EE goals for 2030, there are several objectives to be achieved, all deriving from European legislation.

The first consists in the reduction by 2030, of the European primary energy requirement by 32.5%, calculated with respect to the projections drawn up by the EC in 2007 with the PRIMES scenario. It is expected that Italy will achieve a reduction of 43%, calculated in the same way³.

The objective of reducing final energy consumption by a value equal to 0.8% of the average annual consumption of the three-year period 2016-18 is very demanding in each of the years from 2021 to 2030, through active policies. This objective is equivalent to a reduction of 0.93 Mtoe / year, and, compared with the final consumption of 115.9 Mtoe in 2016, highlights the great effort it will require, even in demanding sectors, including buildings and transport.

The penetration of electricity in transport will be very important: by 2030, the aim is to reach 1.6 million pure electric cars, 4.5 million hybrid cars, out of a fleet of 37 million vehicles in circulation

¹ <https://www.governo.it/sites/governo.it/files/PNRR.pdf>
² https://ec.europa.eu/commission/presscorner/detail/en/ip_21_3126

³ <https://temi.camera.it/leg18/post/la-proposta-italiana-di-piano-nazionale-per-l-energia-e-il-clima.html>

in the same year, slightly lower than the current one.

Electricity generation will have to discontinue the use of coal by 2025, with 72% of electricity coming from renewable sources in 2030, and up to levels close to 95-100% in 2050.

The electrification of the primary energy system, in the perspective of total decarbonisation by

2050, will have to exceed 50%. It will therefore be necessary to aim for an acceleration of the development of the electricity carrier compared to the 22% share reached in 2018 (it was 17% in 1990) thanks to a marked growth in the transport sector and buildings, with a greater diffusion of heat pumps.

Table 1: Main goals on energy and climate of EU and Italy to 2030⁴

Sectors	2030 goals	
	EU	Italy
Renewable Energy Sources (RES)		
Share of energy from RES in gross final energy consumption	32%	30%
Share of energy from RES in gross energy consumption in transports	14%	22%
Share of energy from RES in gross energy consumption for cooling and heating	1.3 %/year	1.3%/year
Energy Efficiency		
Reduction of primary energy consumption in respect to 2007 PRIMES scenario	-32.5%	43%
Share of energy from RES in gross energy consumption in transports	14%	22%
GHG emissions		
Reduction of GHG vs 2005 for all non-ETS sectors	-30%	-33%

⁴ Piano Nazionale integrato per l'energia ed il clima, Ministero dello sviluppo economico, January 2020.

3 Status in key sectors

The analysis from the energy audits sent to ENEA (Italian public research body that operates in the energy, environment, and new technologies sectors in support of competitiveness and sustainable development policies) in December 2020⁵ highlights the

ability of the related measures to exploit the energy saving potential in industrial sectors as part of the obligation set out in the Energy Efficiency Directive. The following table shows the details of the interventions carried out recently and those proposed in the diagnoses: the energy saving potential is over 37 ktoe / year deriving from 321 interventions.

Table 2: Energy audits in 2020

ATECO Sector	Number of interventions made	Annual savings on interventions carried out (toe / year)	Interventions identified (n)	Annual savings in interventions identified (toe / year)
Agriculture, forestry and fishing	2	113.3	23	42.9
Extraction of minerals from quarries and mines			6	25.6
Manufacturing activity	217	36316.7	998	14859.8
Supply of electricity, gas, steam and air conditioning	1	6.0	11	123.0
Water supply; sewerage networks, management of waste and remediation	11	16.2	76	1781.4
Construction	21	0.5	22	41.2
Wholesale and retail trade; repair of motor vehicles and motorcycles	13	160.4	109	755.8
Transport and storage	11	183.7	91	1903.3
Activities of accommodation and catering services			35	110
Information and communication services	2	0	63	534.8
Financial and insurance assets	10	68.4	33	152.5
Real estate activities			15	4322
Professional, scientific and technical activities	17	134.7	23	118.2
Rental, travel agencies, support services to businesses	9	20.9	56	536.8
Education	1	5.1	5	46
Health and social assistance	4	1.8	64	661.2
Artistic, sporting, entertainment and fun activities	1	0	3	9.9
Others	1	0	15	89.4
Total	321	37027.6	1648	26113.6

⁵ La situazione energetica nazionale nel 2020, Ministero della transizione ecologica, Dipartimento per l'energia ed il clima, Luglio 2021.

4 Policy frameworks, incentives & schemes

There are many laws and regulations, or policy interventions, in the Triple-A sectors, which are: (1) Buildings, (2) Industry, (3) Transportation, (4) District Energy Networks and (5) Outdoor Lighting.

4.1 National guidelines for the energy certification of buildings

The decree for the adaptation of the national guidelines for the energy certification of buildings⁶:

- describes the Guidelines and the means of connection between the State and the Regions for the preparation of Energy Performance Certificates (APE);
- establishes an information system for the management of a national cadastre of energy performance certificates and thermal plants, the Information System on Energy Performance Certificates (SIAPE);
- introduces the constraint for the Regions and Provinces to establish control plans and procedures, to analyze at least 2% per year of the Energy Performance Analyses (EPAs) of their own territory.

4.2 White Certificates

White certificates⁷, also known as "Energy Efficiency Certificates", are negotiable securities that certify the achievement of energy savings in the final uses of energy through interventions and projects to increase EE.

White certificates are the main incentive mechanism for EE in the industrial sector, network infrastructures, services and transport, but also concern interventions carried out in the civil sector and behavioural measures.

The GSE (*Gestore Servizi Energetici*) recognizes a certificate for each TOE of savings achieved thanks to the implementation of the EE intervention. Upon indication of the GSE, the

certificates are then issued by the Manager of Energy Markets (GME) on specific accounts.

White certificates can be exchanged and valued on the market platform managed by GME or through bilateral negotiations. To this end, all the subjects admitted to the mechanism are included in GME's Electronic Register of Energy Efficiency Certificates. The economic value of the securities is defined in the trading sessions on the market.

4.3 Conto Termico

The Conto Termico⁸ encourages interventions to increase EE and the production of thermal energy from renewable sources for small plants. The beneficiaries are mainly public administrations, but also companies and individuals, who will be able to access funds for 900 million euros per year, of which 200 for public administrations.

Thanks to the Conto Termico it is possible to redevelop buildings to improve their energy performance, thus reducing consumption costs and quickly recovering part of the costs incurred.

4.4 Italian National Recovery and Resilience Plan (PNRR)

Loans at a subsidised rate of 200 million euros were announced under the Kyoto fund for the energy upgrading of school buildings, sports facilities, and publicly owned health facilities. The implementing decree of the new Kyoto fund, published in the *Gazzetta Ufficiale* on Saturday 24th April 2021, provides for loans at an interest rate of 0.25% for a maximum duration of the loan of twenty years.

The projects presented must ensure an improvement in the building's EE parameter of at least two energy classes. EE interventions such as the replacement of systems, the installation of heat pumps, the replacement of windows, the construction of the thermal coat, as well as water saving, and efficiency

⁶https://www.mise.gov.it/images/stories/normativa/DM_Lin_ee_guida_APE.pdf

⁷<https://www.gse.it/servizi-per-te/efficienza-energetica/certificati-bianchi>

⁸<https://www.gse.it/servizi-per-te/efficienza-energetica/conto-termico>

measures are eligible for financing. Seismic adaptation interventions can also be financed, where functional to the project and to a maximum extent of 50% of the total value of the work.

Then, The Italian National Recovery and Resilience Plan (PNRR)⁹ has a dedicated fund, to which REACT-EU funds are added, along with a complementary national fund. The total budgets of the missions dedicated to energy are as follows:

- M2: Green revolution and energy transition.
- M2C1: Sustainable agriculture and circular economy (€ 6.97 billion).
- M2C2: Energy transition and sustainable mobility (€ 25.36 billion).
- M2C3: EE and buildings renovation (€ 22.24 billion).
- M2C4: Interventions for resilience, enhancement of the territory and efficiency energy of the Municipalities (€ 6 billion).
- M3: Infrastructure for sustainable mobility
- M3C1: Rail network and secure roads (€ 27.97 billion).

4.5 Energy Efficiency National Fund

Together with reforms Italy has introduced numerous financial incentives aimed at increasing the attractiveness of the country as a Foreign Direct Investments (FDIs) destination, encouraging R&D operations, supporting industrial crisis areas, and fostering the growth of new innovative enterprises. To increase the EE the Energy efficiency National Fund has been adopted¹⁰. The fund has a budget of € 310 MLN and supports EE investments on buildings, plants, and production processes (district heating and cooling networks, cogeneration and trigeneration plants).

The aid consists in:

- soft loan up to the 70% of the total eligible investment for a total amount between € 250 K and € 4 MLN;

- guarantee on individual financing operation, up to the 80% of the investment, for a total amount between € 150K and € 2.5 MLN.

4.6 Superbonus

The Superbonus¹¹ is the tax relief governed by Article 119 of Law Decree no. 34/2020 (Relaunch decree), which consists of a 110% deduction of the expenses incurred starting from 1 July 2020 for the implementation of specific interventions aimed at EE and static consolidation or the reduction of the seismic risk of buildings. The facilitated interventions also include the installation of photovoltaic systems and infrastructures for charging electric vehicles in buildings.

The subsidy goes alongside the deductions, already in force for many years, due for the energy requalification of buildings (eco-bonus) and for those for the recovery of the building heritage, including anti-seismic ones (sismabonus), currently governed, respectively, by the articles 14 and 16 of the law decree n. 63/2013.

The 2022 budget law extended the facility, providing for different deadlines depending on the subjects who support the eligible expenses.

In particular, the Superbonus is up to, until December 31, 2025, in the following sizes:

- 110% for expenses incurred up to 31 December 2023.
- 70% for expenses incurred in 2024.
- 65% for expenses incurred in 2025

for condominiums and individuals, outside the exercise of business, art and profession activities, for interventions on buildings consisting of 2 to 4 distinctly stacked real estate units, even if owned by a single owner or co-owned by several natural persons.

The following table directly links the five Triple-A sectors to the different policy frameworks, incentives and schemes described before.

⁹ <https://www.governo.it/sites/governo.it/files/PNRR.pdf>

¹⁰ <https://www.mise.gov.it/index.php/it/energia/efficienza-energetica/fondo-nazionale-efficienza-energetica>

¹¹ <https://www.agenziaentrate.gov.it/portale/web/guest/superbonus-110%25>

Table 3: Policy frameworks, incentives and schemes relation to Triple-A sectors

Policy frameworks, incentives & schemes	Triple-A sectors
National guidelines for the energy certification of buildings	Buildings
White Certificates	Industry, Outdoor Lightning
Conto Termico	Industry
Italian National Recovery and Resilience Plan (PNRR)	Buildings, Industry, Transportation, District Energy Networks, Outdoor Lightning,
Energy Efficiency National Fund	Buildings, Industry
Superbonus	Buildings

5 Conclusions

To stay in line with European objectives towards 2030 and 2050 for EE and decarbonisation, Italy has set up different measures in terms of policy frameworks, incentives and schemes in different sectors.

The Italian plan proposes projects in the European flagship areas. These are specific investment projects, which address issues that are common to all Member States in areas that create jobs and growth and are needed for the twin transition. The most comprehensive form of financing provided by Italy is the National Recovery and Resilience Plan (PNRR), consisting of 191.5 billion euros to employ during the period 2021-2026. This plan is articulated in 6 missions, which cover different areas, as: digitalisation, innovation, competitiveness, culture and tourism; green and ecological transition; infrastructures for sustainable mobility; education and research; inclusion and cohesion; health. Alongside the PNRR Italy has provided other policy framework, incentives and schemes which directly relate to the Triple-A sectors, such as the White Certificates which allows to certify the energy savings and efficiency, the Conto Termico which aims to redevelop buildings to improve their energy performance, the Energy Efficiency National Fund which has a budget of € 310 MLN and supports EE investments on buildings, plants, and production processes and finally the Superbonus, which consists of a 110% deduction of the expenses incurred

starting from 1 July 2020 for the implementation of specific interventions aimed at EE and static consolidation or the reduction of the seismic risk of buildings.

All the aforementioned measures will contribute to favour a green and just transition focus on integrated long-term goals and strategies for a more resilient and fairer economy.

TRIPLE-A IN BRIEF

Triple-A - Enhancing at an Early Stage the Investment Value Chain of Energy Efficiency Projects - is an EU-funded research project under the Horizon 2020 programme, aiming to assist financial institutions increase their deployment of capital in energy efficiency, making investments more transparent.

VISIT OUR WEBSITE



www.aaa-h2020.eu

CONTACT US



contact@aaa-h2020.eu

FOLLOW US



[@H2020_AAA](https://twitter.com/H2020_AAA)



[Triple-A Project](#)



[triple_a_horizon2020](#)



[Triple-A Horizon 2020](#)