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International Energy Agency
Photovoltaic Power Systems Programme



Task 1 Strategic PV Analysis and Outreach

PVPS

National Survey Report of PV Power Applications in Italy

2025

GSE Gestore Servizi Energetici
RSE Ricerca Sistema Energetico
ENEA
GREEN HORSE

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The International Energy Agency (IEA), founded in 1974, is an autonomous body within the framework of the Organization for Economic Cooperation and Development (OECD). The Technology Collaboration Programme (TCP) was created with a belief that the future of energy security and sustainability starts with global collaboration. The programme is made up of 6.000 experts across government, academia, and industry dedicated to advancing common research and the application of specific energy technologies.

The IEA Photovoltaic Power Systems Programme (IEA PVPS) is one of the TCP's within the IEA and was established in 1993. The mission of the programme is to "enhance the international collaborative efforts which facilitate the role of photovoltaic solar energy as a cornerstone in the transition to sustainable energy systems." In order to achieve this, the Programme's participants have undertaken a variety of joint research projects in PV power systems applications. The overall programme is headed by an Executive Committee, comprised of one delegate from each country or organisation member, which designates distinct 'Tasks,' that may be research projects or activity areas.

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What is IEA PVPS Task 1?

The objective of Task 1 of the IEA Photovoltaic Power Systems Programme is to promote and facilitate the exchange and dissemination of information on the technical, economic, environmental and social aspects of PV power systems. Task 1 activities support the broader PVPS objectives: to contribute to cost reduction of PV power applications, to increase awareness of the potential and value of PV power systems, to foster the removal of both technical and non-technical barriers and to enhance technology co-operation. An important deliverable of Task 1 is the annual "Trends in Photovoltaic Applications" report. In parallel, National Survey Reports are produced annually by each Task 1 participant. This document is the country National Survey Report for the year 2025. Information from this document will be used as input to the annual Trends in Photovoltaic Applications report.

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COVER PICTURE

Source: Politecnico di Milano, BIPV tile roof

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LIST OF ABBREVIATIONS

ARERA	Regulatory Authority for Energy, Networks and Environment
BAPV	Building Applied Photovoltaic(s)
BIPV	Building Integrated Photovoltaic(s)
EC	European Commission
EU	European Union
FiP	Feed-in Premium
FiT	Feed-in Tariff
GSE	Gestore dei Servizi Energetici
IEA	International Energy Agency
IEA PVPS	International Energy Agency, Photovoltaic Power Systems Programme
NECP	National Energy and Climate Plan
MASE	Ministry of Environment and Energy Security
MIMIT	Ministry of Enterprise and Made in Italy
NRRP	National Recovery and Resilience Plan
PPA	Power Purchase Agreement
PV	Photovoltaic(s)
RES	Renewable Energy Sources
TERNA	Electricity Transmission System Operator

1 INSTALLATION DATA

A PV system consists of modules, inverters, batteries and all installation and control components for modules, inverters and batteries. Other applications such as small mobile devices are not considered in this report.

For the purposes of this report, PV installations are included in the 2025 statistics if the PV plants were installed and connected to the grid between 1 January and 31 December 2025, although commissioning may have taken place at a later date.

1.1 Applications for photovoltaics (PV)

6 685 MW of new PV capacity was commissioned in Italy in 2025, for a total of 214 626[1] plants. The PV cumulative capacity at the end of 2025 is 43 687 MW, for a total number of 2 090 496 of plants. The number of plants commissioned during 2025 decreased by 24% compared to 2024 data, while new additional capacity decreased by 2%, slowing the strong growth of the capacity, a trend observed as early as 2024.

The average capacity of PV plants commissioned in 2025 is around 30.8 kW (the value increases by 29.5% compared to the 2024 figure), while the average cumulative capacity in 2025 is equal to around 20,9 kW. The actual national power per capita at the end of 2025 is 741 W, an increase by 114 W compared to 2024.

Almost all plants commissioned in 2025 have a capacity below 30 kW, while plants larger than 1 MW represent more than 50% of the power installed. Ground mounted capacity commissioned in 2025 is 2 499 MW, with a cumulative power of 14 296 MW (+23% compared to 2024).

Most PV plants installed in Italy (2 056 144 out of a total of 2 090 496, a percentage of 98.4% of all installations and of 39.6% of total installed capacity) are connected to the low voltage distribution grid. Plants with a capacity of 20 500 MW are connected to the medium voltage grid, representing 46.9% of total existing capacity. Only a small number of plants are connected to the high voltage grid, with a capacity of 5 907 MW, 13.5% of the total installed capacity.

The regional distribution at the end of 2025 shows that Lombardy had the largest installed PV capacity with 5.74 GW, equal to 13.1% of the national data, followed by Veneto (4.3 GW). Puglia has the largest average size, 33 kW. PV net electricity production in 2025 amounted to 44.3 TWh.

[1] ***The value results from the difference between the value at the end of 2025 and the value of 2024. It is important to point out that the actual number of installed PV plants in 2025 is equal to 211 799, and the actual installed capacity is equal to 6 520 MW, due to plant decommissioning and statistic power update.***

Table 1: PV power installed during calendar year 2025 [1] [2]

			Installed PV capacity [MW]	Installed PV capacity [MW]	AC or DC
Grid-connected	BAPV and BIPV [3]	Residential	3 963	1 327	DC
		Commercial		717	DC
		Industrial		1 919	DC
	Utility-scale	Ground-mounted	2 722	2 499	DC
		Floating		0	DC
		Agricultural		224	DC
Off grid					
Total			**6 685** [4]		**DC**

[1] *Source: GSE.*

[2] *Blank boxes stand for unavailable data.*

[3] *Building Applied Photovoltaics. Building Integrated Photovoltaics (BIPV) is included (see table 2).*

[4] ***The value indicated in the table results from the difference between the value at the end of 2025 and the value of 2024. It is important to point out that actual installed capacity in 2025 is equal to 6 520 MW, due to plant decommissioning and statistic power update.***

Concerning BIPV, detailed data on installed and subsidized BIPV systems, including system power in kW, number of plants, typology of the BIPV module, etc., is available in the GSE database for the FiT period (2005-2013).

The past Italian FiT Laws from 2005 up to 2013 specifically supported BIPV systems (under different BIPV definitions, from totally integrated plants to innovative BIPV systems). Afterwards, some regions and/or municipalities supported RES/PV on buildings, even if BIPV is not always specifically requested. All different definitions share the concept of the dual role of BIPV into a building: energy generation and replacement of conventional materials/elements, providing architectural functions (e.g. water protection, shading, etc.).

Given all the above, GSE, together with Politecnico di Milano (hereafter, PoliMI) developed, within the framework of IEA PVPS Task 15, a method to estimate the installed BIPV capacity in Italy, based on both monitored data (provided by GSE) and on estimated data. Concerning BIPV estimates, the BIPV capacity installed until the end of 2025 was estimated based on the annual installed power of non-ground-mounted installations recorded in the national database

(GSE), with a share determined on data obtained both from the literature and from interviews with stakeholders in the sector.

Based on this methodology the size of the Italian BIPV market at the end of 2025 has been estimated at between 2 800 and 3 400 MW (see Table 2). This range reflects uncertainty in the post-FiT period, when no precise monitoring data was available.

Table 2: BIPV power installed

	BIPV capacity installed (MW)	*Source*
Feed-in Tariff Law (2005-2013)	**2 549**	*GSE database*
After FiT in era (2014-2025)	**298 - 883**	*GSE/PoliMI estimate*
Cumulative at the end of 2025	**2 847 - 3 432**	*GSE/PoliMI estimate*

In order to better frame the annual installed capacity, the following tables highlight additional information regarding the Italian PV market and the collection process.

Table 3: Data collection process

If data are reported in AC, please mention a conversion coefficient to estimate DC installations	Data refer to the sum of PV nominal power
Is the collection process done by an official body or a private company/Association?	Public body for statistical data: GSE, TERNA
Link to official statistics	www.gse.it; www.terna.it;

Table 4: The cumulative installed PV power in 4 sub-markets (1) (2)

Year	Off grid [MW]	Grid-connected BAPV, BIPV [MW]	Grid-connected ground, floating, agricultural [MW]	Total [MW]
2019		13 021	7 844	20 865
2020		13 656	7 994	21 650
2021		14 546	8 048	22 594
2022		16 661	8 403	25 064
2023		20 992	9 328	30 319
2024		25 428	11 574	37 002
2025		29 391	14 296	43 687

(1) *Source: GSE, TERNA.*

(2) *Blank boxes stand for unavailable data.*

Table 5: Other PV market information (1) (2)

	2025		
Number of PV systems in operation in your country	2 090 496 (3)	Residential Commercial Industrial Utility scale	1 776 461 139 624 156 450 17 961
Decommissioned PV systems during the year [MW]	20 (3)	Residential Commercial Industrial Utility scale	5 8 6 0
Repowered PV systems during the year [MW]			

(1) *GSE elaboration based on PVPS Task 1 classification criteria.*

(2) *Blank boxes stand for unavailable data.*

(3) *GSE actual data.*

Table 6: PV power and the broader national energy market

	Data	Year
Total power generation capacities [GW] (1)	145.9	2025
Total renewable power generation capacities (including hydropower) [GW] (1)	81.7	
Total electricity demand [TWh] (1)	311.3	
Total electricity final consumption [TWh] (2)	293.1	
New power generation capacities installed [GW] (1)	8.3	
New renewable power generation capacities (including hydropower) [GW] (1)	7.2	
Total net PV electricity actual production (including self-consumed PV electricity) [TWh] (3)	44.3	
Total net PV electricity production as a % of final electricity consumption	15.1%	
Average yield of PV installations [kWh/kWp] (3)	1 117	

(1) *Source: TERNA.*

(2) *Source: EUROSTAT.*

(3) *Source: GSE.*

1.2 Key enablers of PV development

Table 7: Information on key enablers, 2025 (1)

	Annual Value	Total Value	Source
Decentralized storage systems (number)	145 942	884 191	GSE (2)
Residential heat pumps (number)			
Battery Electric Vehicles BEV (number)	82 617	362 224	ACI (3)
Plug In Hybrid Electric Vehicles PHEV (number)	98 338	411 946	ACI (3)
Electric buses and trucks (number)	8 262	32 362	ACI (3)

(1) *Blank boxes stand for unavailable data.*

(2) *Best estimate.*

(3) *Automobile Club d'Italia, www.aci.it et al.*

2 COMPETITIVENESS OF PV ELECTRICITY

2.1 Module prices

Table 8: Typical PV module prices [€/W] (1)

Year	Lowest module price	Highest module price	Average module price
2015	0.50	0.75	0.55
2016	0.40	0.65	0.48
2017	0.32	0.56	0.40
2018	0.20	0.48	0.35
2019	0.18	0.45	0.29
2020	0.16	0.44	0.30
2021	0.20	0.52	0.38
2022	0.22	0.54	0.40
2023	0.15	0.48	0.32
2024	0.12	0.43	0.28
2025	0.10	0.39	0.23

(1) *GSE specific survey.*

2.2 System prices

Table 9: Turnkey system prices of different typical PV systems in 2025 (1) (2)

Category/Size	Typical applications and brief details	[€/W]
Residential BAPV <10 kW	Grid-connected, roof-mounted, distributed PV systems installed to produce electricity to grid-connected households.	1.11 – 1.64
Small commercial BAPV 10-100 kW	Grid-connected, roof-mounted, distributed PV systems installed to produce electricity to grid-connected commercial buildings, such as public buildings, etc.	1.06 – 1.40
Large commercial BAPV 100-250 kW	Grid-connected, roof-mounted, distributed PV systems installed to produce electricity to grid-connected large commercial buildings, such as public buildings, multi-family houses, agriculture barns, grocery stores etc.	0.97 – 1.25
Industrial BAPV >250 kW	Grid-connected, roof-mounted, distributed PV systems installed to produce electricity to grid-connected industrial buildings, warehouses, etc.	0.78 – 1.06
Large PV 500-1 000 kW	Grid-connected PV systems installed to produce electricity to grid-connected industrial buildings, warehouses, etc.	0.66 – 0.92
Small centralized PV 1-10 MW	Grid-connected, ground-mounted, centralized PV systems that work as central power station. The electricity generated is not tied to a specific customer and the purpose is to produce electricity for sale.	0.64 – 0.88

(1) GSE specific survey, GSE National Energy and Climate Platform (NECPlatform, https://www.pniecmonitoraggio.it/Dimensioni/Rinnovabili/FER%20Elettriche/Pagine/Tecnologie-e-costi.aspx).

(2) Excluding VAT.

Table 10: National trends in system prices for different applications [€/W] (1) (2) (3)

Year	Residential BAPV Grid-connected, roof-mounted, distributed PV systems <10 kW	Small commercial BAPV Grid-connected, roof-mounted, distributed PV systems 10-100 kW	Large commercial BAPV Grid-connected, roof-mounted, distributed PV systems 100-250 kW	Large PV Grid-connected PV systems 500-1 000 kW	Small centralized PV Grid-connected, ground-mounted, centralized PV systems 1-10 MW
2015	1.60		1.32		
2016	1.55		1.22		
2017	1.44		1.10		
2018	1.41	1.20	1.08		
2019	1.34	1.15	1.00		
2020	1.33	1.15	1.00		
2021	1.44	1.36	1.10		
2022	1.60	1.42	1.28		
2023	1.45	1.32	1.18		
2024	1.39	1.28	1.15		
2025	1.33	1.21	1.10	0.76	0.72

(1) *GSE specific survey, GSE NECPlatform.*

(2) *Excluding VAT.*

(3) *Blank boxes stand for unavailable data.*

2.3 Cost breakdown of PV installations

Table 11: Cost breakdown for a grid-connected roof-mounted distributed residential PV system of <10 kW, 2025 [1]

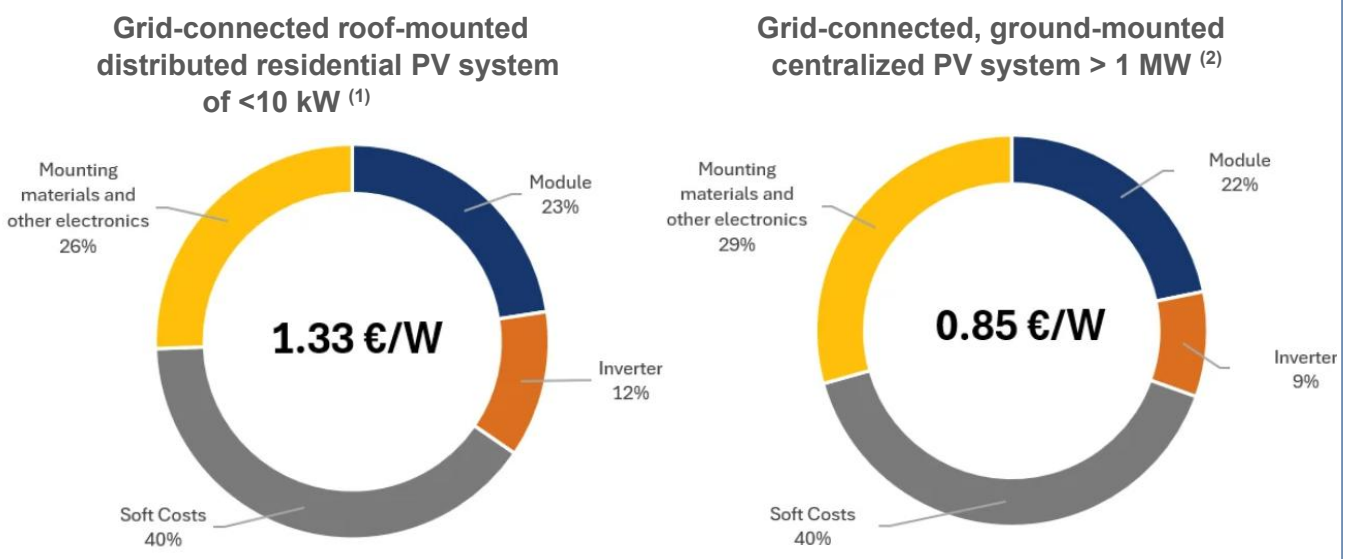
Cost category	Average (€/W)	Low (€/W)	High (€/W)
Hardware			
Module	0.30	0.27	0.39
Inverter	0.16	0.12	0.26
Mounting material	0.34	0.27	0.37
Other electronics (cables, etc.)			
Subtotal Hardware	**0.80**	**0.66**	**1.02**
Soft costs			
Planning [2]			
Installation work	0.09	0.08	0.11
Shipping and travel expenses to customer	0.03	0.02	0.03
Permits and commissioning [3]	0.10	0.09	0.11
Project margin	0.31	0.26	0.37
Subtotal Soft costs	**0.53**	**0.45**	**0.62**
Total (excluding VAT)	**1.33**	**1.11**	**1.64**
VAT	10%	10%	10%
Total (including VAT)	**1.46**	**1.22**	**1.80**

[1] *GSE specific survey.*

[2] *Planning cost are included in the other soft costs.*

[3] *Including financing.*

In the beginning of 2025, the PV roof mounted system (up to 250 kW) cost decreased by 4.5% on average, while the average module price declined by 25%. Moreover, the lowest modules prices declined by up to 17% and the highest declined by almost 33%. By the end of the year, the market stabilized.



(1) *GSE specific survey.*

(2) *GSE NECPlatform.*

Figure 1: percentage distribution of PV average investment costs, €/W (excluding VAT) in 2025

2.4 Merchant PV/PPA

The bulletin board of long-term electricity purchase and sale contracts from renewable sources (PPA BULLETIN BOARD) is organised and managed by the Gestore dei Mercati Energetici (GME)[2], pursuant to Article 28 of Legislative Decree No. 199 of 8 November 2021. Its purpose is to facilitate the matching of buyers and sellers of RES electricity through long-term contracts, register concluded contracts, and carry out the electricity allocation procedures provided for in Ministerial Decree No. 341 of 16 September 2022.

In 2025, the Italian PPA framework was further strengthened by Ministerial Decree No. 152 of 20 June 2025, which provided guidelines for the development by GME of an organised market for long-term renewable electricity contracts (MPPA) and established the conditions under which GSE may act as a guarantor of last resort for eligible PPA contracts. The new framework is intended to enhance transparency, standardisation and market liquidity, thereby facilitating the conclusion of long-term renewable electricity contracts.

2.5 Additional country information

Table 12: Country information, 2025

Retail electricity prices for a household [€c/kWh]	35.12 (1)
Retail electricity prices for non-domestic consumers [€c/kWh]	26.25 (1)
Liberalization of the electricity sector	In Italy the electricity sector is almost totally liberalized. In mid-2025 the full transition to the free market for all domestic customers was completed while for the non-domestic sector the process was implemented more than ten years ago.

(1) *ARERA.*

[2] *https://www.mercatoelettrico.org/en-us/Home/Markets/ElectricityMarket/Bulletin-Board-PPA*.

3 POLICY FRAMEWORK

Table 13: Summary of PV support measures

Category	Residential		Commercial + Industrial		Centralized	
Measures in 2025	**On-going**	**New**	**On-going**	**New**	**On-going**	**New**
Feed-in Tariff, FiT	Yes (2)	Yes (4)	Yes (1) (3)	Yes (4)	Yes (1) (3)	-
Feed-in Premium, FiP	Yes (2)	-	Yes (1) (3)	-	Yes (1) (3)	Yes (4)
Capital subsidies	Yes	Yes	Yes	Yes	-	-
Green certificates (5)	Yes	-	Yes	-	Yes	-
Renewable portfolio standards with/without PV requirements (6)	-	-	-	-	-	-
Income tax credits	Yes	-	Yes	-	-	-
Self-consumption	Yes	-	Yes	-	Yes	-
Net-metering	-	-	-	-	-	-
Net-billing (7)	Yes	-	Yes	-	-	-
Collective self-consumption and virtual net-metering (8)	Yes	-	Yes	-	-	-
Sustainable building requirements	Yes	-	Yes	-	-	-
BIPV incentives (9)	Yes	-	Yes	-	-	-

(1) FER 1 Decree (see paragraph 3.2).

(2) Small Islands Decree (see paragraph 3.2).

(3) FER 2 Decree (see paragraph 3.2).

(4) FER X Decree (see paragraph 3.2).

(5) Guarantees of Origin, see paragraph 3.5. The former Green Certificates scheme is no longer in place.

(6) No obligations for utilities to obtain a minimum percentage of their power from RES.

(7) Net-billing, a phase out is in place from 2025 (see paragraph 3.5).

(8) See paragraph 3.4.

(9) National and regional support schemes for RES and energy efficiency, under which BIPV may be eligible.

3.1 National targets for PV

On 1 July 2024, Italy submitted to the EC the definitive updated NECP taking into account with the EC recommendation. As to RES implementation, Italy set the goal to reach a capacity of 131 GW by 2030. Nearly eighty (79.2 GW) of these are expected to come from solar, 28.1 from wind, 19.4 GW from hydro, 3.2 GW from bioenergy, and 1 GW from geothermal. According to scenario assumptions developed in the NECP, nuclear power from fission, and in the long term from fusion, could provide about 11% of the total electricity demand by 2050, with a possible projection toward 22%.

On 7 August 2023, Italy submitted its amended NRRP, which includes a Repower EU chapter focused on green transition, with 39% (37.5% in the original plan) of the available funds to support climate objectives. The plan foresees funds for 194.4 billion €, of which 122.6 in loans and 71.8 in grants. In December 2023 the plan has been approved by the Council of the EU. The REPowerEU chapter includes reforms and investments to accelerate the country's energy transition, including measures to boost RES deployment and investments to enhance the electricity grid and hydrogen production. Italian NRRP supports photovoltaic energy through three measures: the Agrisolar Park, the Agrivoltaics measure, and the Renewable Energy Communities.

3.2 Direct support policies for PV installations

Italy has historically supported photovoltaic (PV) installations through dedicated incentive schemes. The **Conto Energia** schemes provided a FiT scheme for PV plants commissioned between 2005 and 2013, and a significant number of these plants are still receiving support under 20-year incentive periods.

The **FER 1 Decree** of 4 July 2019 introduced support mechanisms for electricity generation from selected RES. For PV installations, plants with a capacity above 20 kW and below 1 MW could access support through registration procedures, while plants with a capacity of 1 MW or more participated in competitive auctions. Plants with a capacity of up to 250 kW could opt for an all-inclusive feed-in tariff, while larger plants were supported through a two-way sliding feed-in premium mechanism, comparable to a Contract for Difference. An additional premium was available for PV installations of up to 100 kW installed on buildings where self-consumption exceeded 40%. A separate premium was available for eligible PV installations replacing asbestos roofing.
By the end of September 2025, 16 procedures had been carried out under FER 1, resulting in 3 928 MW of RES commissioned capacity at the end of October 2026, of which 2 252 MW of

PV[3]. The sixteenth procedure marked the end of the FER 1 framework, which was subsequently complemented by the FER 2 Decree and the transitional FER X scheme.

The **FER 2 Decree**, issued on 19 June 2024, supports less mature renewable technologies, including floating PV, offshore wind, biogas, biomass, geothermal and solar thermodynamic technologies. Support is provided through a two-way tariff for a period of 20 years. Two tenders took place in 2025 and one in 2026.

On December 2024 the Italian government enacted the so-called **FER X** transitional Decree (in force from February 2025), supporting electricity production from RES with costs close to market competitiveness. The mechanism of the draft decree is based on competitive tenders and provides for the "two-ways mechanism" tariff for a 20-year period.

The so-called **CACER** scheme, established by MASE Decree No. 414 of December 2023 and operational since January 2024, supports Renewable Energy Communities (RECs) and other collective self-consumption configurations through a 20-year incentive tariff and, in specific cases, capital contributions under the NRRP. In 2025, the eligibility threshold for the contribution was extended to municipalities with fewer than 50 (see paragraph 3.4).

A dedicated support mechanism for **advanced Agri-PV** systems was introduced by MASE Decree No. 436 of 22 December 2023. The scheme provides a 20-year incentive tariff and capital grants of up to 40% of eligible investment costs for Agri-PV plants that comply with specific technical and monitoring requirements. Access to the incentives is granted through registers and competitive procedures. A competitive procedure was held in 2024, and the scheme was subsequently updated in 2025 through MASE Decree No. 149 of 19 June 2025.

The so-called **Agrisolar Park** is a measure included in the Italian NRRP aimed at supporting the installation of photovoltaic systems on the roofs of buildings in the agricultural, livestock and agro-industrial sectors, without additional land consumption. The scheme also supports complementary interventions, including asbestos removal and disposal, roof thermal insulation and ventilation systems. Energy storage systems and electric vehicle charging infrastructure may also be included among the eligible expenditures. Following the application rounds launched between 2022 and 2024, the programme remained operational in 2025.

The **Small Islands Decree**, issued on 14 February 2017, provides 20-year support for RES electricity generated by plants on small islands not connected to the national electricity grid. The mechanism foresees a 20-year FiT for the electricity fed into the grid and a FiP is applied for the self-consumed quota. Moreover, a bonus for PV replacing asbestos is foreseen.

[3] *https://www.pniecmonitoraggio.it/Dimensioni/Rinnovabili/FER%20Elettriche/Pagine/Incentivi-e-altre-misure.aspx#FER1*.

Building on earlier local experiences, the so-called **Reddito Energetico Nazionale** (National Energy Income) was established in 2023 to support vulnerable households through grants for small residential PV installations (see paragraph 3.6)

An important contribution came from **regional policies**, such as, i.e., tenders for capital subsidies for PV plants, sometimes together with other RES, building energy efficiency interventions, heating pumps and storage systems.

3.2.1 BIPV development measures

In 2025, BIPV remained a relatively niche but increasingly relevant segment of the Italian PV market, particularly for new buildings, renovations and urban applications where PV modules can be integrated into roofs, façades, substituting building elements. Unlike the past Feed-in Law, BIPV benefited mainly from broader RES and PV support mechanisms, self-consumption and building renovation rather than from a dedicated national incentive.
At regional level, some Italian regions provided support for PV on buildings through broader programmes for renewable energy, energy efficiency and collective self-consumption. However, in 2025 these measures were generally not specifically targeted at BIPV, and no widespread regional scheme dedicated exclusively to BIPV was identified.

BIPV technology, therefore, remained a small but strategically important market in Italy, given the country's exceptionally rich architectural and cultural heritage, as well as the large number of buildings located in historically and architecturally sensitive areas.

3.3 Self-consumption measures

Table 14: Summary of self-consumption regulations, 2025

PV self-consumption	**1**	*Right to self-consume (real time)*	Yes
	2	*Revenues from self-consumed PV*	Savings on the electricity bill
	3	*Charges to finance Transmission, Distribution grids & Renewable Levies*	No
Excess PV electricity	**4**	*Revenues from excess PV electricity injected into the grid*	Net-billing (SSP) phased out in 2025. Indirect sale through a dedicated withdrawal and, in case of collective self-consumption and solar community, an incentive is granted on the shared energy (1)
	5	*Maximum timeframe for compensation of fluxes*	Collective self-consumption and energy communities, energy fluxes are calculated on an hourly basis
	6	*Geographical compensation (virtual self-consumption or metering)*	On site. RES communities, groups of self-consumers, and remote self-consumers
Other characteristics	**7**	*Regulatory scheme duration*	Real time self-consumption, unlimited
	8	*Third party ownership accepted*	Yes, with condition
	9	*Grid codes and/or additional taxes/fees impacting the revenues of the prosumer*	No taxes, grid connection requirements
	10	*Regulations on enablers of self-consumption (storage...)*	Mainly tax credit for storage coupled with PV
	11	*PV system size limitations*	Self-consumption, none
	12	*Electricity system limitations*	None
	13	*Additional features*	None

(1) Managed by GSE. Concerning sale, the producer may choose between GSE dedicated withdrawal and market sale.

3.4 Collective self-consumption, solar community and similar measures

Following the framework introduced in 2020, on 7 December 2023, MASE enacted Decree No. 414 (so-called CACER Decree, *Configurations for the Sharing of Renewable Energy for Self-Consumption*), which entered into force on 24 January 2024. The Decree, together with the provisions established by ARERA Resolution 727/2022/R/eel (Integrated Regulation Text for Distributed Energy Self-consumption), defines the mechanisms and contributions for shared and self-consumed renewable energy. The Decree supports energy communities and collective self-consumption through both an incentive tariff and, in specific cases, capital contributions.

The FiT measure supports a widespread self-consumption scheme up to a capacity cap of 5 GW. The main general requirements of the PV plants are the following:

- maximum eligible capacity of 1 MW;
- new plants (or new sections of existing plants);
- plants commissioned after 15 December 2021;
- built with new components;
- in line with DNSH (Do No Significant Harm) principles;
- not under net-billing scheme (SSP) or other incentives;
- PV capacity installed to meet mandatory requirements for new buildings cannot access the measures.

Different options based on a virtual model are foreseen, as highlighted below:

1. Renewable Energy Communities (RECs). The REC is a legal entity, and members may be private persons, small and medium-size enterprises, local public administration authorities, research and training bodies, religious organizations, etc.. The scope of the Community is to provide environmental, economic or social benefits to the Community and to its members.
2. Groups of renewable energy self-consumers. The production and consumption units must be located within the same building.
3. Remote renewable energy self-consumer, which is the owner of the connection points (production and consumption). Third party producers may also be part of this configuration.

The FiT scheme is foreseen for twenty years (flat tariff), higher for small plants. FiT is granted on the shared electricity, which is the lowest value, calculated on an hourly basis, between the electricity fed into the grid and the electricity withdrawn from the points of connection. In addition to the flat tariff, there is a variable tariff depending on market price and on geographical compensation.

There are other configurations only accessing to the contribution for the value of self-consumed energy, like active customer groups, remote active customer, and Citizen Energy Communities (CECs).

The configurations eligible for the capital contribution are RECs and groups of RES self-consumers located in small towns with a population of less than 50 000 inhabitants. The support can cover up to 40% of the eligible costs within the limits of the applicable reference costs. The overall resources allocated to the measure amount to EUR 2.2 billion.

According to NECP Platform monitoring data available at the end of October 2026, GSE had registered a number of 7 797 CERs configurations under the so-called CACER scheme for a total capacity commissioned equal to 635.9 MW[4]. PV technology covers almost all the capacity installed under the above-mentioned decree.

3.5 Other market mechanisms

Several **tax credit** measures have been in place for years to support building energy efficiency improvements, PV installations, electric vehicle charging infrastructure and energy storage systems, (such as, the so-called Ecobonus).

The so-called **Transition 5.0 Plan**, established by Article 38 of Law Decree No. 19/2024, provides tax credits to companies investing in innovation projects that support both digital transformation and energy efficiency improvements. The incentive applies to eligible investments carried out in 2024 and 2025 and provides tax credits whose value depends on the level of energy savings achieved, reaching up to 45% for certain investments. For PV systems eligible under the scheme, PV modules must comply with the relevant regulatory requirements and be included in the ENEA (Italian National Agency for New Technologies, Energy and Sustainable Economic Development) register of PV Technologies[5].

The **Energy Release 2.0** mechanism, established by MASE Ministerial Decree No. 268/2024 and subsequently updated in 2025, enables energy-intensive companies to access RES electricity through the mechanism managed by GSE at a fixed reference price of 65 €/MWh for a period of three years. In return, participating companies undertake to develop, directly or through third parties, new renewable energy generation capacity, primarily PV plants. The mechanism makes available approximately 23 TWh of electricity per year and aims to accelerate the deployment of new RES capacity while reducing energy costs for industrial consumers.

In implementation of Article 19 of Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources, Article 46 of Legislative Decree No. 199/2021 lays down specific provisions on **Guarantees of Origin** (GOs). A GO is an electronic certificate issued by GSE for each MWh of electricity generated from RES and fed into the grid by GO-qualified

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[4] *For updated data, please visit the following website https://www.pniecmonitoraggio.it/Dimensioni/Rinnovabili/FER%20Elettriche/Pagine/Incentivi-e-altre-misure.aspx#CACER.*

[5] https://webapps.enea.it/rfvp.nsf/

plants. All GO certificates are issued, transferred and cancelled electronically through a dedicated web portal.

Italy introduced the so-called **Scambio sul Posto** (SSP) scheme in 2009, replacing the previous net-metering approach with a compensation mechanism often described as a form of net billing for small renewable energy systems. Electricity fed into the grid was remunerated through an "energy quota" based on electricity market prices and a "service quota" depending on grid services costs. A gradual phase-out of the scheme was introduced by Legislative Decree 199/2021. In 2025, new SSP applications were accepted only until 26 September for plants commissioned by 29 May 2025. With the end of the above-mentioned mechanism, many owners of small/residential PV systems are moving towards the Dedicated Withdrawal Scheme (Ritiro Dedicato, RID) managed by GSE.

The **Ritiro Dedicato** (RID) mechanism enables eligible producers to sell electricity directly to the GSE under regulated conditions, providing a simplified route to market, particularly for small-scale installations.

3.6 Social policies

After the pilot project of the so-called *reddito energetico* (Energy Income) launched in 2017 by the Municipality of Porto Torres (Sardinia) in cooperation with the GSE, other municipalities and regions have introduced similar support mechanisms.

The National Energy Income (*Reddito Energetico Nazionale*), established by Ministerial Decree of 8 August 2023 and managed by the GSE, provides a capital contribution covering the investment costs of small residential PV systems (with a capacity between 2 and 6 kW) installed for vulnerable households.

3.7 Retroactive measures applied to PV

Law 116/2014 defined procedures related to incentives granted to electricity produced by PV plants under the past Feed-in Laws of 2005-2013. From 2015, tariffs for plants with a capacity over 200 kW accessing the above-mentioned tariffs were adjusted according to different options taking into account tariffs reduction or a longer period of incentive scheme.

3.8 Indirect policy issues

The Ministerial Decree of 21 June 2024 (so-called Decree on the Suitable Areas), entered into force on 3 July 2024, with the scope of establishing a common framework for the regions to identify suitable and unsuitable areas for the installation of RES plants to achieve the 2030 target. Within 180 days, the regions were required to identify the areas highlighted below:

- *suitable areas*, for which an accelerated authorisation process is streamlined;
- *unsuitable areas*, where RES installations are deemed incompatible;
- *ordinary areas*, subject to standard permitting procedures;
- *restricted areas*, where ground-mounted PV plants are prohibited under recent agricultural legislation.

To ensure compliance, the MASE, with the support of GSE, monitors and publishes the outcomes on a dedicated web portal. If regions fail to comply with the allocated capacity targets, the Italian Government retains the authority to intervene through the mechanisms provided for by the Decree. The framework also provides for monitoring of progress towards the allocated RES targets, with the regions required to report on any shortfall from 1 January 2026. However, the Decree grants considerable autonomy to the regional authorities. During 2025, several regions completed or further advanced their area identification process, while in other cases the process remained subject to delays and legal challenges.

The regulatory framework governing authorisation procedures for RES installations was revised through Legislative Decree No. 190 of 2024, titled “Consolidated Text on Administrative Regimes for Renewable Energy Production” (Testo Unico sulle Fonti Rinnovabili, so-called “TU FER Decree”), which entered into force on 30 December 2024. regional and local authorities were required to achieve full compliance within 180 days (by 28 June 2025). This decree streamlined and consolidated regulations concerning the construction and operation of RES plants, simplifying administrative procedures by reducing the number of authorisation regimes from four to three: free activity, Simplified Authorisation Procedure (PAS), and Single Authorisation (AU). The reform represented a significant step toward reducing administrative barriers in Italy and also established a framework for Renewable Energy Acceleration Areas, with the GSE responsible for mapping areas with potential for renewable energy development. This legislative reform represents a crucial step in facilitating renewable energy expansion in Italy, ensuring faster permitting while maintaining regulatory oversight. However, its success depends on regional implementation and coordination with national energy policies. Moreover, the TU FER Decree was subsequently amended by Decree-Law No. 175/2025, which further reorganised the regulatory framework for suitable areas and established, among other provisions, areas to be considered suitable under the implementing regional regulations.

The One-Stop Shop for Renewable Energy, so-called SUER (Single Digital Platform for Renewable Energy), issued by the MASE Decree 368/2024, simplifies the submission and the monitoring of authorizations for RES plants. The platform, developed by GSE[6], aims to streamline and harmonise authorisation procedures for RES projects throughout the country, and to provide an updated register of authorized plants. Authorization requests may be submitted through the SUER platform.

3.8.1 Support for electricity storage and demand response measures

In 2025, electricity storage continued to expand significantly in Italy. According to Terna, the nominal power of storage systems in operation increased by around 1.7 GW during the year,

[6] *https://suer.gse.it/suer/home*.

including about 700 MW of utility-scale systems. The development of storage was increasingly driven by utility-scale systems, supported by capacity mechanisms and by the introduction of the new MACSE mechanism. The first MACSE auction, held on 30 September 2025, awarded 10 GWh of storage capacity, corresponding to 100% of the required capacity. The contracted systems, consisting of lithium-ion batteries, are expected to enter operation in 2028. The auction attracted strong market interest, with offers exceeding four times the requested capacity.

On the demand-response side, ARERA approved the regulation for the experimental demand reduction service for 2025, aimed at providing additional flexibility to the electricity system. The implementation of the Integrated Electricity Dispatching Regulation (*Testo Integrato del Dispacciamento Elettrico,* TIDE) framework also progressed during 2025, with regulatory developments concerning virtual enabled units and the participation of flexible resources in electricity markets. Some of the provisions concerning virtual enabled units were scheduled to become effective with the consolidation phase of the TIDE from 1 February 2026.

3.8.2 Support for encouraging social acceptance of PV systems

In 2025, no specific national support scheme was dedicated to the social acceptance of PV. However, Renewable Energy Communities and collective self-consumption schemes promoted local participation in RES generation and may contribute to greater acceptance of PV deployment, in a context of increasing public awareness of climate change and the energy transition.

3.9 Financing and cost of support measures

The cost of the incentives for the FiT/FiP mechanisms is covered by a component of the electricity tariff paid by all final electricity consumers. Capex grants provided by incentive mechanisms launched in implementation of NRRP are funded by the EU.

3.10 Grid integration policies

3.10.1 Grid connection policies

Connection costs are covered by the producers on the basis of tariffs defined by the ARERA. The approval of connections depends on several factors, such as high or medium/low voltage grid connection, TSO (longer timeframe) or DSO (shorter timeframe) decisions, construction permitting. During 2025, new rules for accessing the grid regarding grid congestion and virtual grid saturation have been extensively discussed among industry, operators, TSO, DSO and institutions with a regulatory draft which became law in 2026.

3.10.2 Grid access policies

Italy's electricity grid access framework, regulated by ARERA and managed by Terna for the national transmission grid and by local DSOs for medium-voltage (MV) and low-voltage (LV) distribution networks, ensures fair and efficient connection procedures for electricity producers, including RES producers. Producers must apply for a connection solution, which is assessed for feasibility before technical and economic conditions are set. Renewable energy sources receive priority access, benefiting from fast-track procedures under certain conditions.

Concerning curtailment, from 1 April 2025, the production Curtailment mechanism, originally envisaged only for wind farms, has been extended to all RES plants. In particular, from 2025 (ARERA Resolution 128/2025), PV plants may receive compensation for electricity not produced as a result of curtailment orders issued by Terna.

4 INDUSTRY

4.1 Production of PV cells and modules (including TF and CPV)

Information on Italian manufacturers of PV cells and modules for the production year 2025 is summarised in the Table 15. The list includes the manufacturers that replied to Ricerca sul Sistema Energetico (here below, RSE) specific survey and companies for which sufficiently documented information was available. The figures in the table refer exclusively to production carried out in Italy in 2025; production at facilities located abroad is excluded.

Table 15: PV cell and module production, production capacity information for 2025 (1) (2)

Cell / Module manufacturer	Technology	Total Production [MW]		Maximum production capacity [MW/yr]	
		Cell	Module	Cell	Module
Wafer-based PV manufactures					
3SUN	Si-HJT	200	200	3 000	3 000
FuturaSun (3)	sc-Si	0	0	0	0
Gruppo STG	sc-Si, mc-Si	0	1.33	0	26
Solbian	sc-Si	0	1.47	0	1.88
Thin-film PV manufactures					
Midsummer	CIGS	0	0		50
Total		**200**	**203**	**3 000**	**3 078**

(1) *RSE specific survey.*

(2) *A blank box stands for unavailable data.*

(3) *FuturaSun, an Italy-based solar module manufacturer with production facilities in Asia, is currently in the process of establishing a gigafactory in Italy, which is still under construction.*

The 2025 survey confirms that Italy's manufacturing landscape remains highly concentrated. Based on the usable data collected, domestic production amounted to 200 MW of cells and 203 MW of modules. Installed maximum capacity was considerably higher, 3.0 GW/year for cells and approximately 3.078 GW/year for modules. As these figures refer only to manufacturers that provided usable data for 2025, they should not be interpreted as a comprehensive assessment of national production capacity.

In 2025, Italy's PV manufacturing sector displayed a dual structure. 3SUN accounted for all reported cell production and most module output, operating at multi-gigawatt scale, whereas the other quantified manufacturers remained in the megawatt range and focused on flexible, customised, architectural and other specialised applications. Domestic demand was much

larger than reported national output (about 6.5 GW of PV capacity was added in Italy in 2025), so imported modules continued to supply most of the market.

3SUN's Gigafactory in Catania was the main development in Italian PV cell and module manufacturing. The facility, Europe's largest PV manufacturing plant, has a maximum annual capacity of 3 GW for both cells and modules. According to information provided directly to RSE, all production equipment had been installed by 2025 and was ready for gradual activation in line with market demand. Annual output reached 200 MW of cells and 200 MW of modules. Based on high-efficiency bifacial HJT technology, the product range serves utility-scale plants as well as commercial, industrial and residential rooftop applications. The company also reported approximately 600 direct employees and a similar number of indirect workers in logistics, construction and related services.

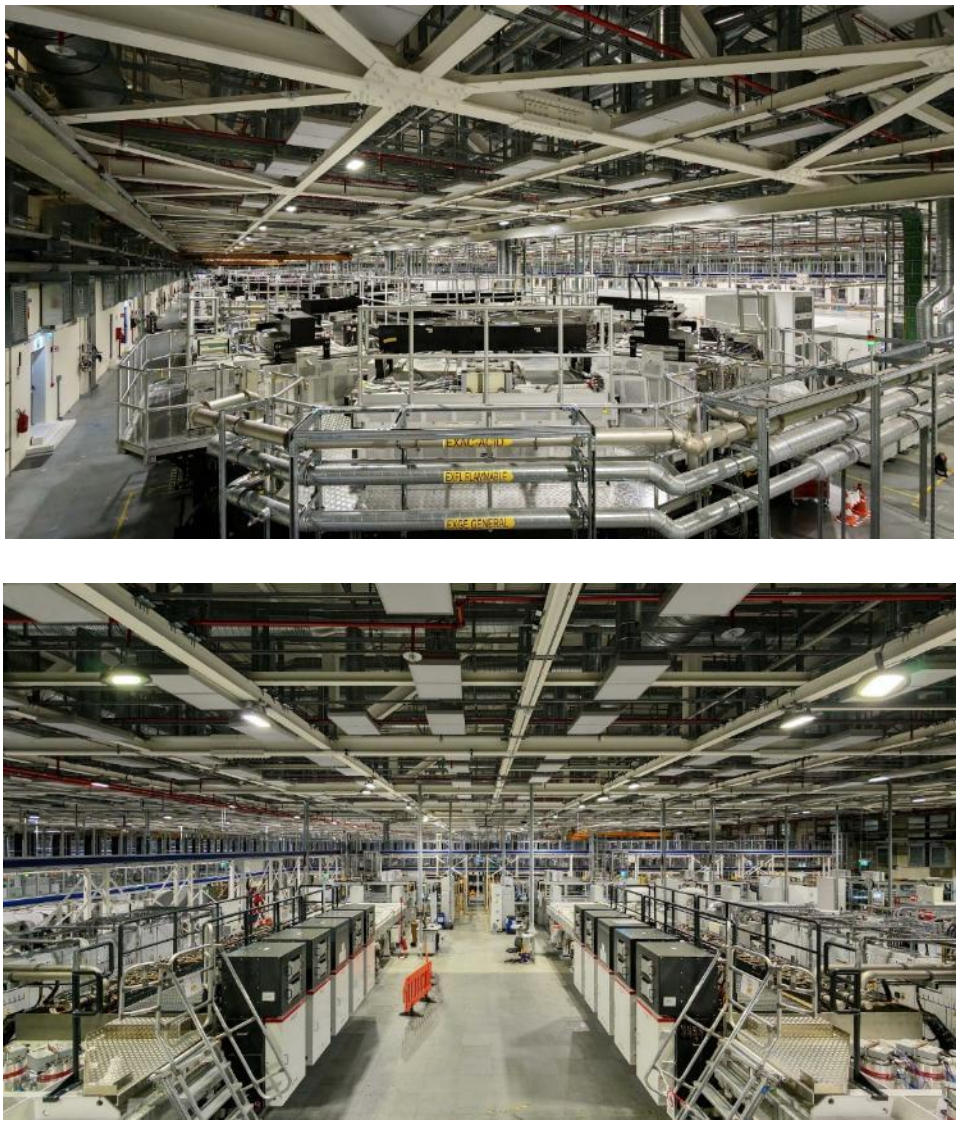


Figure 2: Interior view of the 3SUN photovoltaic module manufacturing facility in Catania. Source: photograph provided by 3SUN to RSE, 2025.

Concerning FuturaSun's reshoring initiative, the company provided further details on the schedule and market positioning of its FENICE plant in Cittadella (Veneto). Operations are expected to start by the end of 2027, with a nominal capacity of 1.4 GW/year and annual output of about 1 GW at full operation[7]. During the initial phase, production will focus on n-type and back-contact (xBC) modules. Rather than competing in the mass market, the plant will target customised products, including hail-resistant and coloured modules and solutions for revamping projects. FuturaSun estimated that initial production costs in Italy could be 80–90% higher than in China.

The performance of smaller manufacturers (see Table 15) illustrates the pressure created by low-priced imported modules and the limited economies of scale available in Italy. Rather than competing solely on standardised module price, these companies generally purchase cells on the international market and retain domestic value added in module design, assembly, integration and customer-specific engineering. Available 2025 cost data for Europe confirm this competitive disadvantage: a module manufactured in Europe using European-made cells was estimated to cost approximately EUR 0.103/W more than an equivalent Chinese module, before targeted support measures[8]. Solbian is a representative example of this specialisation strategy. In 2025, the company assembled 1.468 MW of flexible crystalline-silicon modules in Italy against a maximum capacity of 1.882 MW/yr, using cells purchased on the international market. Its modules (about 70% of production was exported) offer extensive customisation of dimensions, electrical configuration and connection layout and are intended for demanding mobile and off-grid applications. Marine applications remain particularly important: Solbian develops lightweight, flexible and salt-resistant modules for sailing boats, yachts and other vessels.

Gruppo STG reported 1.33 MW of module production in Italy in 2025, compared with maximum capacity of 26 MW/yr. For Midsummer Italia, 2025 was a year of plant completion, certification and preparation for production rather than commercial output. The vertically integrated facility in Modugno (Puglia) was designed to manufacture CIGS thin-film cells and lightweight, flexible modules, with a maximum capacity of 50 MW/yr. During the year, the plant was completed, inspected and approved, and its product range obtained TÜV certification. However, Midsummer Italia confirmed that no cells or modules were produced in Italy in 2025; production began only in the second quarter of 2026.

A further initiative announced in 2025 concerned building-integrated photovoltaics (BIPV). New Time, an Italian company specialising in architectural solutions and the integration of photovoltaic products into buildings, partnered with Huasun Energy, a Chinese manufacturer

[7] *https://www.pv-magazine.it/2025/05/29/i-pannelli-del-progetto-fenice-costeranno-l80-90-in-piu-dei-moduli-cinesi/*

[8] *SolarPower Europe (2025): Reshoring Solar Module Manufacturing to Europe: A Cost Gap Analysis and Policy Impact Simulation.*

and technology provider focused on high-efficiency heterojunction (HJT) cells and modules[9]. Their agreement envisaged a 1 GW/yr production line in Emilia-Romagna for HJT-based BIPV products, with possible future use of HJT–perovskite tandem technology. The planned portfolio included photovoltaic roof tiles, load-bearing paving elements and transparent-glass components for balconies and façades. New Time is expected to contribute product design, glass processing, building-integration expertise and local manufacturing, while Huasun would provide HJT technology, technical know-how and staff training. Under the industrial plan, photovoltaic glass would be processed in Budrio, while assembly and R&D activities would be located in San Lazzaro di Savena; both municipalities are in the Emilia-Romagna region.

4.2 Manufacturers and suppliers of other components

In 2025, the Italian supply base for photovoltaic balance-of-system components included inverter and power-electronics suppliers such as Enertronica Santerno, Elpower, FRIEM, FIMER, Riello Solartech–RPS, SIEL and Zucchetti Centro Sistemi (ZCS), alongside storage-system providers including ATON and FIAMM. The most significant development concerned ZCS: in July 2025 the company announced plans to establish industrial-inverter manufacturing at its Penna facility in Terranuova Bracciolini (Toscana Region)[10]. The project envisaged local manufacture of mechanical parts and final assembly, initially for inverters from approximately 100 kW upwards, while electronic boards would continue to be sourced from China; the expansion was also expected to double employment at the site from about 80 to 160 staff. In parallel, at Intersolar Europe 2025 ZCS Azzurro presented the *Power Magic Mini* commercial and industrial storage system (98 kW/98 kWh), designed to increase the self-consumption of electricity generated by photovoltaic systems, manage the mismatch between solar generation and demand, and support the integration of PV in commercial and industrial applications[11]. These developments marked a shift from the company's established role as importer, distributor and service provider towards partial localisation of inverter production in Italy, although the start of manufacturing is planned for 2026.

Italian suppliers of mounting structures and single-axis trackers for utility-scale PV included Convert Italia (a Valmont Industries company), Comal, AcriGroup, REM Tec, RCM Italia and Soltigua. Convert Italia, Comal and REM Tec also offered solutions for agrivoltaic applications.

[9] https://www.pv-magazine.com/2025/08/19/italy-backs-1-gw-tandem-solar-line-with-huasun-new-time-by-2026/.

[10] https://www.zcscompany.com/assets/uploads/ILSOLE24ORE-31-07-2025.pdf.

[11] https://www.zcsazzurro.com/news/zcs-azzurro-at-intersolar-2025.

Ecoprogetti was particularly active in 2025 in both photovoltaic-module manufacturing equipment and end-of-life treatment. The company continued to design and manufacture in Italy turnkey, automated and modular lines covering module assembly and quality control and compatible with current crystalline-silicon technologies. Furthermore, Ecoprogetti released a fully automated line for recycling crystalline-silicon glass-backsheet and glass-glass modules[12]. Using mechanical and electromagnetic processes without chemicals, the system separates the main module components in seven stages. It can treat over 60 modules, or up to about 1.5 tonnes, per hour, requires two operators and adapts to approximately 99% of marketed module sizes. Ecoprogetti reported recovery rates of 95–100% for silicon, plastics, glass, copper and aluminium, together with low energy and labour requirements and no process emissions. The system was publicly presented at Intersolar Europe 2025 and offered to Southern European markets, reinforcing Ecoprogetti position not only as a supplier of PV-module production lines, but also as an Italian technology provider for industrial-scale circular management of end-of-life modules.

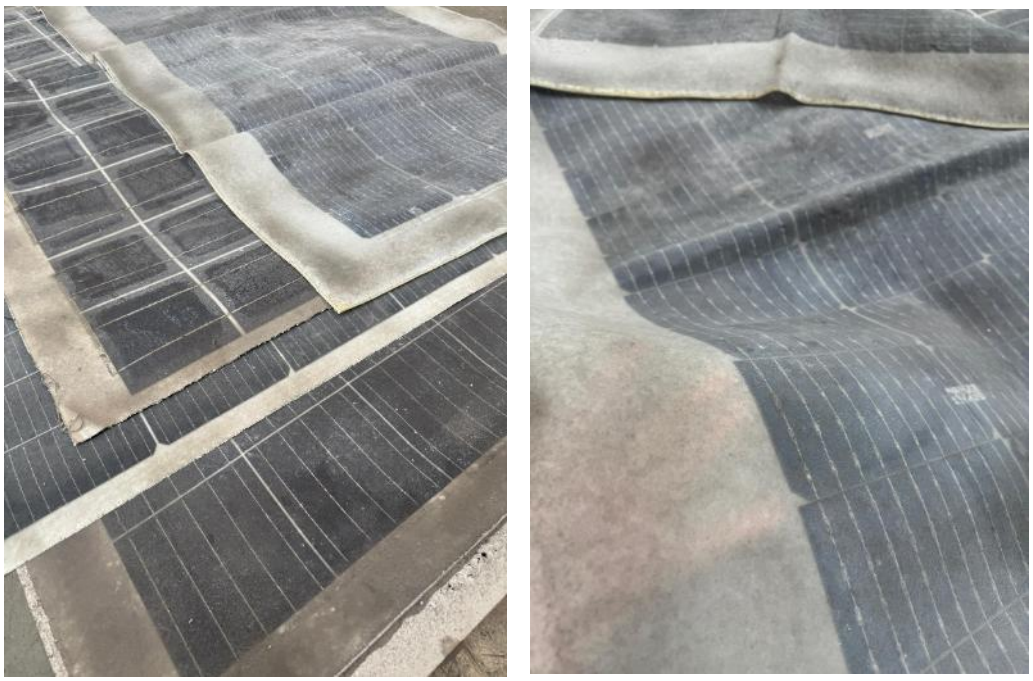


Figure 3: Result of glass removal from a photovoltaic module using Ecoprogetti patented recycling process. Source: photograph provided by Ecoprogetti to RSE, 2025.

[12] https://www.pv-magazine.com/2025/05/20/ecoprogetti-releases-fully-automated-solar-panel-recycling-line/

5 PV IN THE ECONOMY

5.1 Labour places

Table 16: Estimated PV-related full-time labour places in 2025 (1)

Market category	Number of full-time labour places
Research and development (not including companies)	
Manufacturing of products throughout the PV value chain from feedstock to systems, including company R&D	
Distributors of PV products and installations	
Other	
Total	10 810 (2)

(1) Blank boxes stand for unavailable data.

(2) GSE estimate. Preliminary data concerning permanent jobs, in terms of FTE (Full Time Equivalent), directly and indirectly related to O&M activities on existing PV plants.

5.2 Business value

Table 17: Rough estimation of the value of the PV business in 2025 (VAT is excluded) (1)

Sub-market	Capacity installed [MW]	Average price [€/W]	Value of PV business [Billion €]
Off grid			
Grid-connected	6 520 (2)	0.970	6.3

(1) Blank boxes stand for unavailable data.

(2) 6 520 MW is the actual installed capacity in 2025 (see note 4 of Table 1).

6 INTEREST FROM ELECTRICITY STAKEHOLDERS

6.1 Structure of the electricity system

The Italian electricity sector went through a deep reform over the last years that changed it from a vertically integrated monopolistic structure to a liberalized market. The process started in 1999, but the total liberalization was decided only in August 2017, and it was fully completed in mid-2024, with the tariff system eliminated in the domestic sector. It is still valid for a fraction of the market, the so-called vulnerable clients, consumers under conditions of potential energy poverty.

The former monopolist Enel still holds relevant market shares in all segments, especially in the domestic sector markets and in distribution. Enel is a private stock company where the state holds a 24% stake.

Generation, transmission and distribution are separated. Generation is liberalized, and larger energy companies (Enel, Eni, Edison, A2A, EPH, Iren and ENGIE) hold around 50% of the national gross production, while the rest is scattered among several other players.

Transmission is a regulated activity conducted by the transmission system operator (TSO) Terna, a stock company with the state holding a 30% stake. Again, also distribution is a regulated activity, where e-distribuzione (Enel group) is the first operator followed by the other three major operators (Unareti, Areti, Ireti).

Retail activity is liberalized even if with regulated tariffs for the domestic sector for a marginal share of the market, the so-called vulnerable clients. Some companies with activities in production, distribution and retail are former municipalities owned by local authorities.

The Energy Authority (Italian Regulatory Authority for Energy, Networks and Environment, ARERA) was created in 1995 and regulates the electricity sector following directives from the Italian Government, the Parliament and the European Union.

6.2 Interest from electricity utility businesses

Electricity utilities continued to show strong interest in investing in RES and PV sector in 2025, driven by the PV competitiveness and the growing development of utility-scale projects.

6.3 Interest from municipalities and local governments

Municipalities and local governments continued to show interest in PV deployment in 2025, particularly through renewable energy communities and collective self-consumption. Public authorities also benefited from NRRP and other funding programmes supporting RES and building energy efficiency.

7 HIGHLIGHTS AND PROSPECTS

The Italian PV market continued to be the main driver of RES capacity growth in 2025. During the year, 6.5 GW of new PV capacity was connected[13], bringing cumulative installed capacity to 43.7 GW at the end of 2025. Despite a modest decline in annual additions compared with 2024, PV generation reached a new record exceeding 44 TWh, confirming the increasingly important contribution of PV to Italy's electricity system.

A key characteristic of 2025 was the transition in the structure of the market. After several years in which residential installations played a major role, the market increasingly shifted towards larger commercial, industrial and utility-scale projects. This transition is supported by new and existing mechanisms such as FER X, agrivoltaic incentives, Renewable Energy Communities and Energy Release 2.0 and other support measures. At the same time, the development of storage and grid infrastructure is becoming increasingly important, as the rapid growth of non-dispatchable renewable generation creates greater requirements for flexibility and system integration.

Considering the 2030 NECP target, Italy's updated NECP sets a pathway for PV of around 79.2 GW in 2030. With 43.7 GW already installed at the end of 2025, Italy has achieved more than half of the required capacity. The growing contribution of commercial, industrial and utility-scale projects, together with ongoing improvements in permitting procedures, grid infrastructure and storage deployment, provides a solid basis for sustaining further PV growth towards the 2030 target.

[13] *See note 4, Table 1*

