



# WHITE PAPER

A DEEP DIVE INTO THE ITALIAN PV COMMERCIAL  
AND INDUSTRIAL MARKET

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# A DEEP DIVE INTO THE ITALIAN PV COMMERCIAL AND INDUSTRIAL MARKET

## Introduction

The photovoltaic (PV) commercial and industrial (C&I) market in Italy is experiencing significant growth, driven by a combination of policy support, technological advancements, and increasing demand for sustainable energy solutions. This white paper provides an in-depth analysis of the Italian C&I PV market, based on the findings from the EUPD Research EPCMonitor 2024/2025 survey. The paper also includes a general evaluation of survey responses from Engineering, Procurement and Construction (EPC) companies across six leading European countries, offering a comparative perspective on Italy and EU market trends, challenges, and opportunities.

- The first two sections give an introduction to the European C&I PV market, to then evaluate the survey responses from EPC companies across six European countries gathered from our survey of 133 EPC companies in Germany, France, Italy, Spain, Poland, and the Netherlands, part of the PV Commercial & Industrial EPCMonitor 2024/2025 report. Highlighting key trends, business models, procurement preferences, and risk protection measures, it also offers an overview of the leading wholesalers of PV components in the European C&I segment.
- The third section provides a detailed analysis of the Italian C&I PV market across key characteristics and metrics from the PV Commercial & Industrial EPCMonitor 2024/2025 report and integrated survey. Comparisons with neighbouring EU markets offer further insights into the distinctive features of the Italian case.

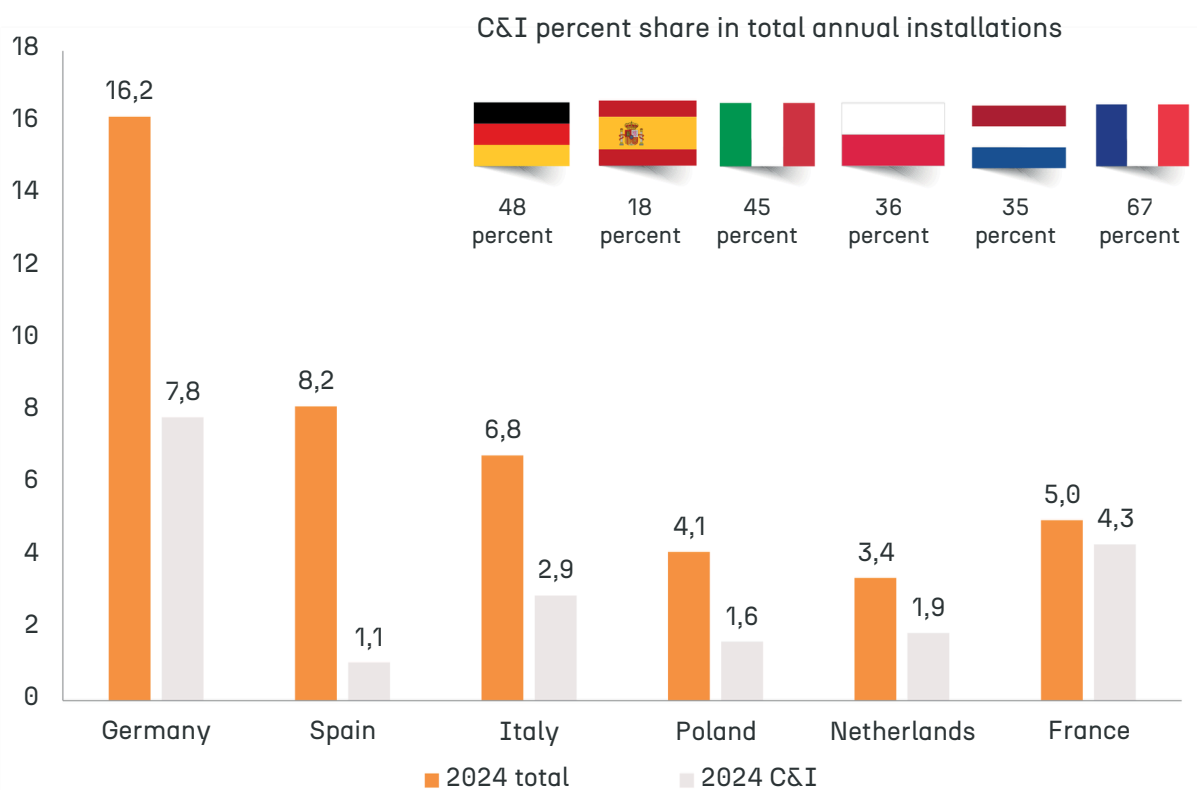
The paper concludes with recommendations for business stakeholders and governmental decisionmakers to ensure continued growth and success of the C&I PV market in Italy and across Europe, contributing to the broader goal of achieving a sustainable and decarbonized energy future.

# EU MARKET OVERVIEW

## Installed Capacity and Market Growth

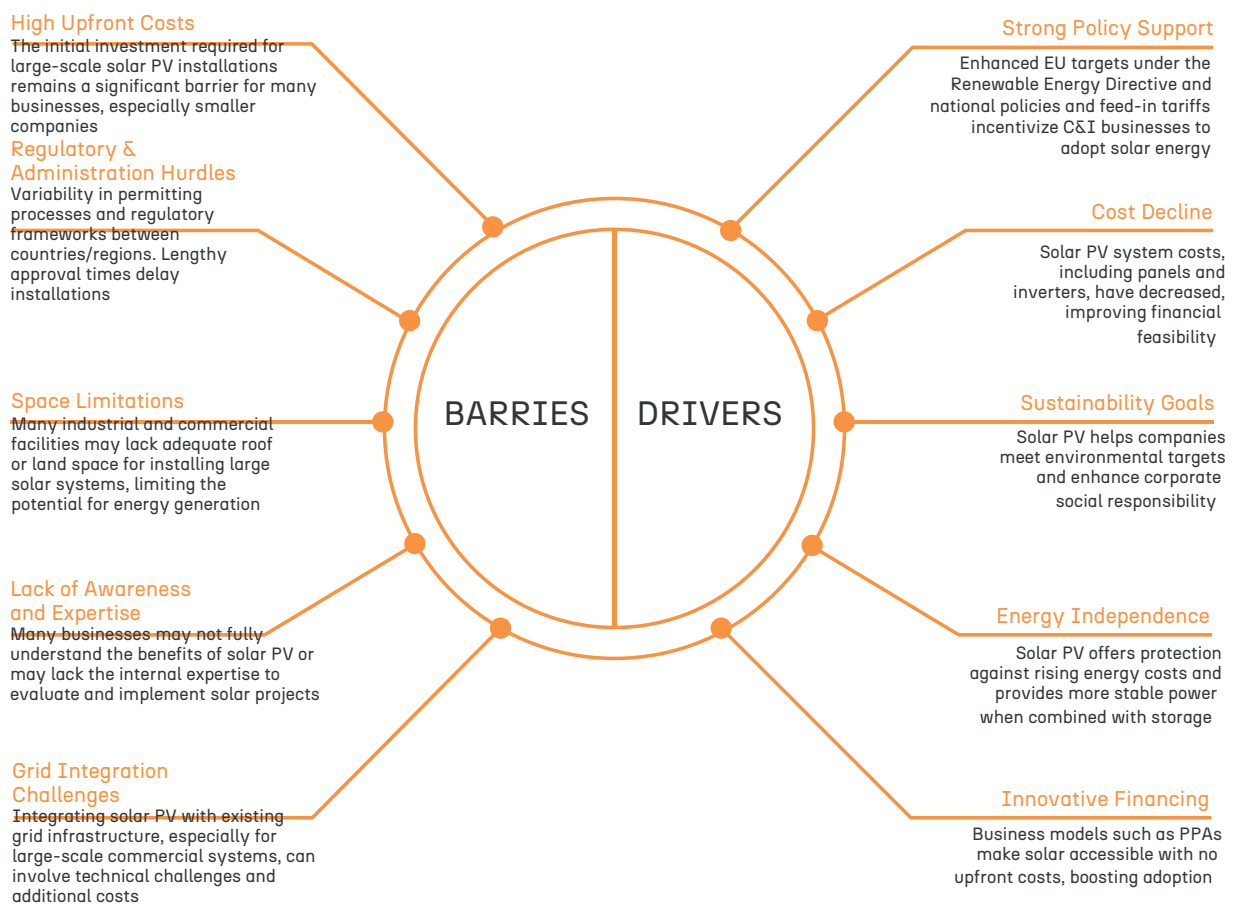
The PV Commercial and Industrial (C&I) market in Europe is experiencing significant growth, driven by decarbonization goals and supportive regulatory frameworks. Germany leads the market with 99.2 GW of cumulative PV capacity by 2024, followed by Spain (48.1 GW) and Italy (36.9 GW). The EU-27 saw a 22% YoY growth in PV installations from 2023 to 2024, reaching 340 GW in 2024, with 62 GW added in 2024 alone. Germany, Spain, and Italy accounted for 50% of new installations. In 2025, the top six EU countries (Germany, France, Italy, Spain, Poland, and the Netherlands) are expected to contribute 71% of overall new PV installations, with Germany and France leading in C&I installations (estimate Germany C&I 2025: 9,1 GW; France: 3.8 GW).

Germany, followed by France, Italy and the Netherlands have been the major C&I EPC markets in the EU with regard to the volume of installations in the segment. The top 6 C&I markets in the EU are expected to install ~21 GW of PV in 2025 in this segment.



## Market Drivers and Barriers

Cost savings and sustainability goals constitute key drivers to European PV C&I market expansion. Barriers include high upfront costs, long ROI periods, and grid connection delays.



Drivers and Barriers of Solar PV Market | C&I | Source: EUPD Research 2024

Overall, the C&I PV market in Europe is poised for continued growth, supported by stable policies and increasing demand for renewable energy.



# EVALUATION OF SURVEY RESPONSES FROM EPC COMPANIES ACROSS THE EU

## Survey & Methodology

The PV Commercial & Industrial EPCMonitor 2024/2025 provides a comprehensive analysis of the solar PV market within the C&I sector across six leading European countries: Germany, the Netherlands, Spain, France, Italy, and Poland. The report, conducted by EUPD Research, delves into the role of solar PV solutions in decarbonization plans, customer preferences, and market strategies. It also offers insights into installed capacity, regulatory frameworks, and market forecasts, alongside detailed country-specific analyses. The integrated survey constitutes an investigation of preferences for PV systems and related technologies, such as energy storage, installed for commercial and industrial consumers. The findings for 2024 are based on a survey of 133 EPCs and project developers across Germany, France, Italy, Spain, Poland, and the Netherlands.

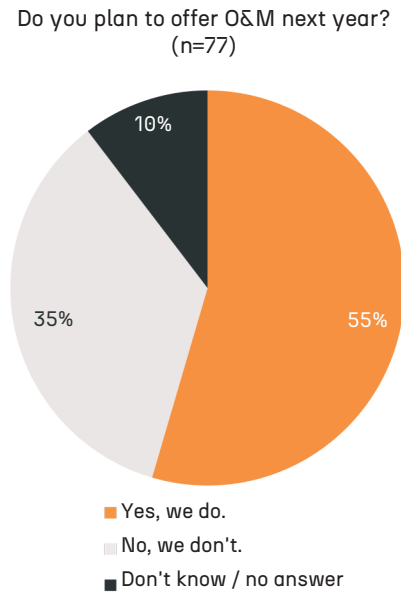
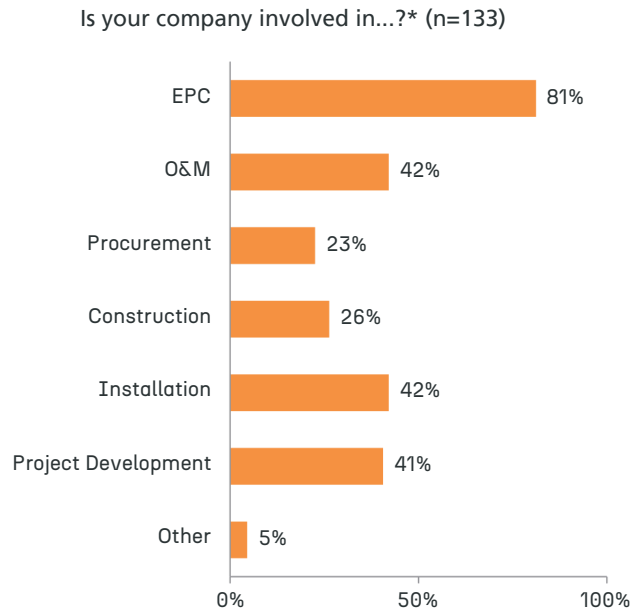
The evaluation of the survey results in this paper focuses on the following topics:

- Policy-related drivers and obstacles
- Motivations and challenges for commercial and industrial (C&I) consumers in adopting PV systems
- Risk mitigation strategies provided by EPCs, both across the sample and within specific countries
- Risk protection measures available with and without additional premiums

## Sample & Component Features

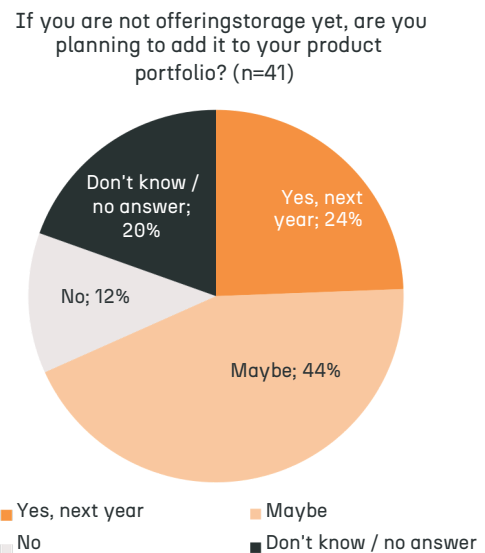
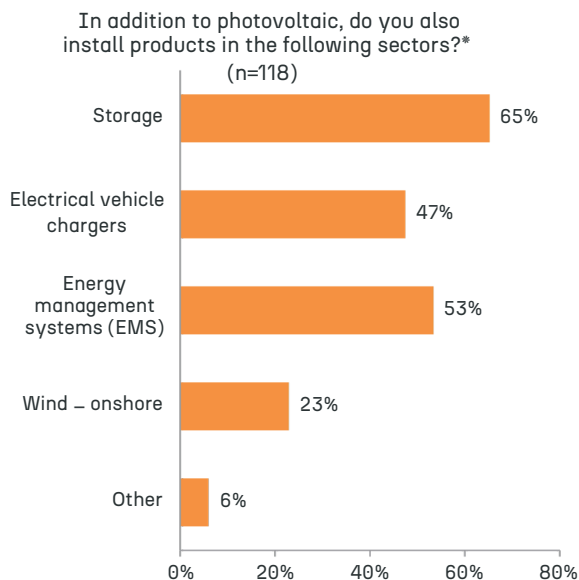
The survey revealed that in 2024, the majority of EPCs (56 percent) operated in a single country, while 44 percent were active in multiple markets. 42 percent of EPCs were involved in project development, and 42 percent offered Operations and Maintenance (O&M) services.





Service Portfolio EPCs | Source: EUPD Research 2024

Storage solutions were part of the portfolio for 65 percent of respondents, with 25 percent planning to introduce storage within the next year. 53 percent also included energy management systems (EMS) in their portfolio, while 47 percent offered electric vehicle chargers.

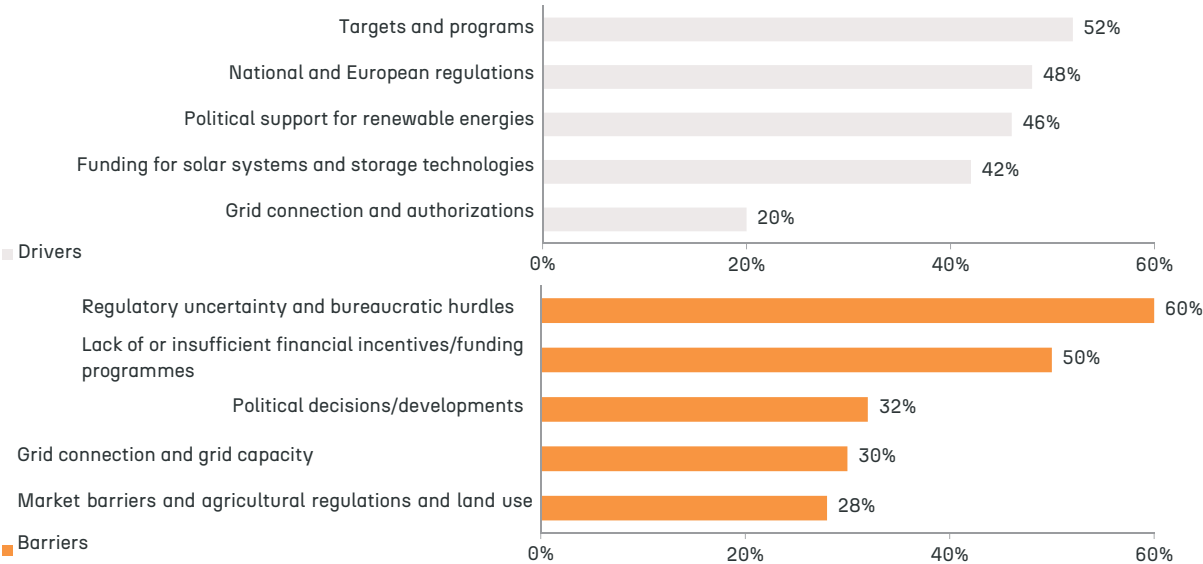


Product Portfolio of EPCs | Source: EUPD Research 2024

# General Trends

The survey highlighted the following key trends for the C&I solar PV market:

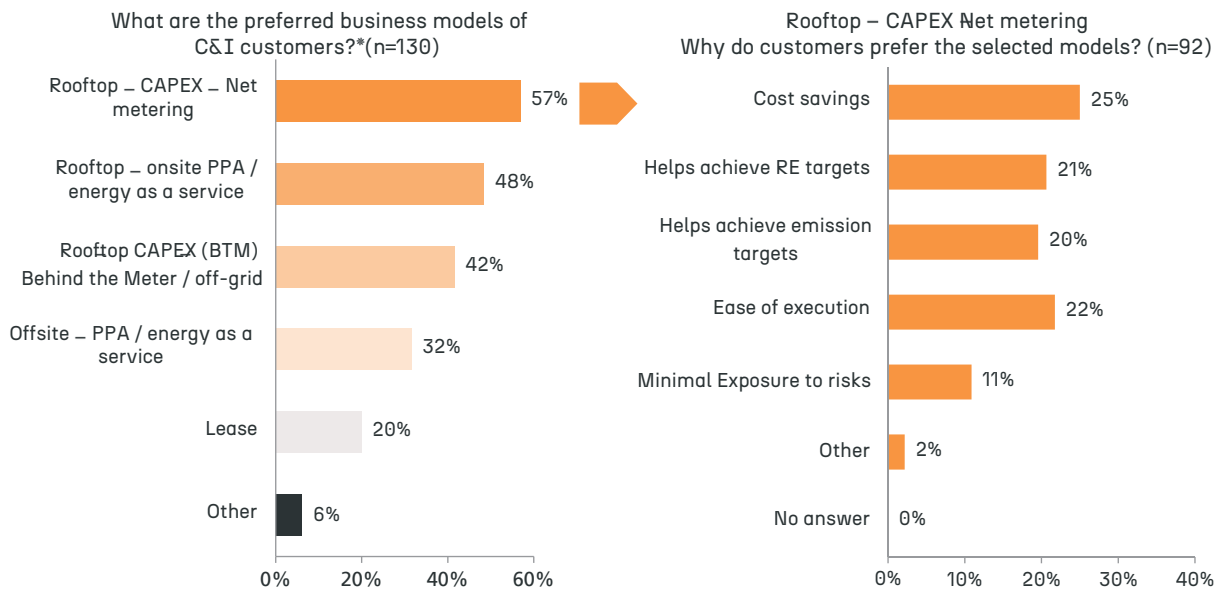
- **Policy Drivers and Barriers:** Stable policies and well-structured incentives are critical drivers for the growth of the C&I PV market. However, policy visibility and uncertainty remain significant barriers, particularly in countries with complex regulatory frameworks.
- **Cost Savings and ROI:** Cost savings and return on investment (ROI) are the primary motivators for businesses to adopt PV systems. Sustainability goals, while important, are generally considered secondary to financial considerations.
- **Risk Protection Measures:** EPC companies offer various risk protection measures to C&I customers, including premium quality equipment, extended warranties, and performance bank guarantees. However, the willingness of customers to pay a premium for these measures varies across countries, with only 54 percent of EPCs reporting willingness of consumers to pay a premium for these on average. High upfront costs, long return-on-investment periods, and availability of finance were identified as the main barriers to adoption.



Policy drivers and barriers for the C&I market | Source: EUPD Research 2024

## Business Models

The survey highlights the preference for rooftop capital expenditure (CAPEX, requiring upfront payment of the investment) models among C&I customers across all six countries, with cost savings and ease of execution being the primary reasons for this preference. Rooftop onsite and offsite power purchase agreements (PPAs, under which a project developer owns, operates, and maintains the solar production facilities for an extended limited period) are also popular, particularly among larger businesses that prefer to minimize risk exposure. In terms of project completion times, around 60 percent of rooftop projects are completed within six months. However, delays are common, with grid connectivity and related issues constituting the primary cause. Regulatory complexities and supply chain challenges also contribute to longer project timelines. The energy, electrical engineering, and commercial sectors were the top adopters of PV systems across the six countries observed.

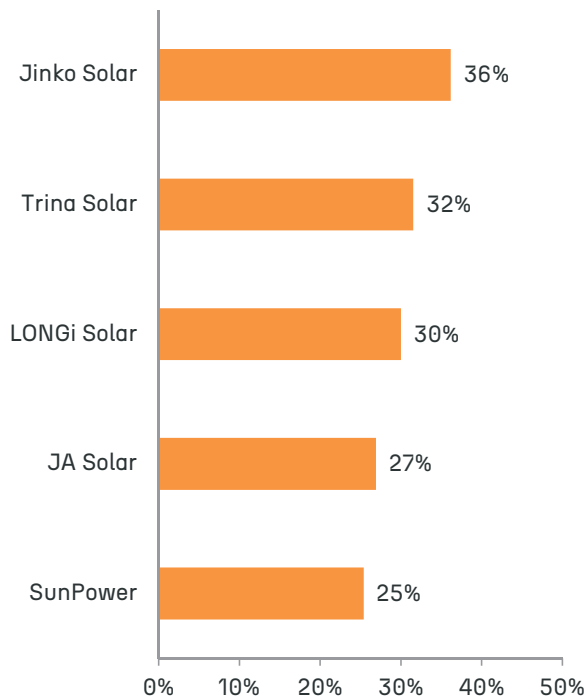


Portfolio Width: share of installers offering the brand | Source: EUPD Research 2024



## Procurement Preferences

EPC companies in the C&I segment benefit from economies of scale, with a higher proportion of procurement directly from manufacturers. Brand preference and loyalty of C&I customers are largely driven by high sensitivity to price and performance, with minimal exclusivity observed in the market. Thus, while a few leading brands show some degree of dominance, market preferences are highly dynamic and subject to significant shifts. Leading module brands across the EU include Jinko, Trina, and Longi, while Huawei, Sungrow and SMA are the preferred inverter brands. Tesla and ABB lead the market for storage solutions.



Top 5 module brands in EPC portfolios | EU-6 Average | Source: EUPD Research 2024

## Risk Protection Measures

EPC companies offer a range of risk protection measures to C&I customers, including premium quality equipment, extended warranties, and performance bank guarantees. However, the willingness of customers to pay a premium for these measures varies across countries. In Germany, for example, 70 percent of EPCs offer premium quality equipment, compared to 33 percent in Italy.

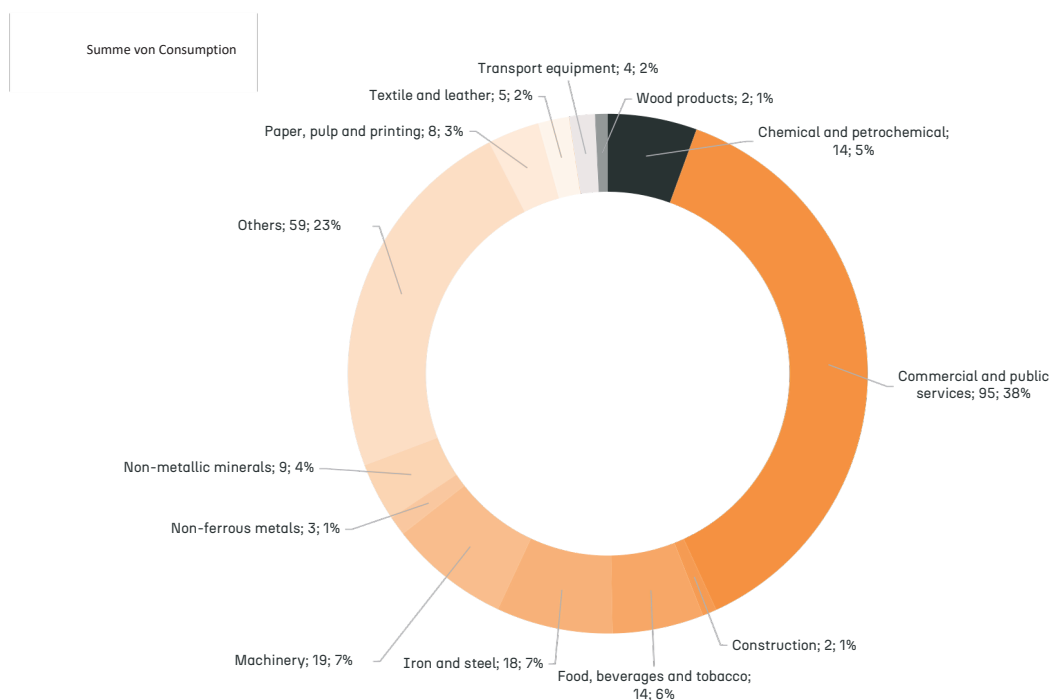
# THE ITALIAN COMMERCIAL & INDUSTRIAL PV MARKET

## Installed Capacity and Market Growth

Italy has made significant strides in expanding its renewable energy capacity, with solar PV playing a central role. As of 2023, the share of renewable energies in Italy's installed capacity mix is 55 percent, with solar PV accounting for 25 percent of the total installed capacity. This represents a substantial increase from previous years (from 25 GW in 2022 to 30 GW), driven by supportive policies and technological advancements in line with the broader EU trend, as well as the surge in adoptions of PV systems in the C&I sector. However, Italy's C&I segment shows a slightly lower penetration compared to the EU average: in 2023, the C&I sector in Italy accounted for 18 percent of total annual PV installations, slightly below the EU average of 20 percent. Also, fossil fuels continue to dominate electricity generation, accounting for 55 percent of total generation in 2023.

## Electricity Consumption

The industrial sector is the largest consumer of electricity, accounting for 40 percent of total consumption, followed by private households (23 percent of total consumption). Among economic sectors, electricity consumption in agriculture, forestry, and fishing has almost doubled, increasing from 6 TWh to 13 TWh in 2021 and 2022 (5 percent of total consumption).



## Regulatory Framework

Italy's regulatory framework has been instrumental in driving the growth of the C&I PV market. Key policies and incentives include:

- **Renewable Energy Community (CER) Decree:** Introduced in February 2023, this decree promotes the formation of renewable energy communities, allowing businesses and individuals to collectively invest in and benefit from renewable energy projects. The decree also includes provisions for net-billing schemes, which compensate users for surplus electricity fed into the grid.
- **Subsidies and Tax Credits:** The Italian government offers various subsidies and tax credits to encourage the adoption of PV systems. For instance, the New Sabatini program provides favorable interest rates for investments in renewable energy projects, while the Transition Plan 5.0 offers tax credits of up to 63 percent for companies undertaking energy efficiency and innovation projects.
- **Net-Metering and Net-Billing:** Italy has implemented net-metering and net-billing schemes to incentivize the adoption of PV systems. Under these schemes, businesses can offset their electricity costs by feeding surplus energy back into the grid, with compensation rates varying based on market prices and grid service costs.

### Renewable Energy Sources Act (EEG 2021)

Ground-mounted and other structural installations must participate in tenders for 750 kW–20 MW capacities, roof systems between 300–750 kW can join second-segment tenders to receive full production remuneration. Tendering in 2022 continues per EEG 2021 and Easter Package, with adjustments in direct marketing and feed-in tariff.

### Annual Tax Act

The Annual Tax Act increases the income tax exemption from 15 kW to 30 kW for residential or commercial systems. A maximum of 100 kWp is allowed under this exemption. Zero VAT rate applies to the purchase, import, and installation of PV systems up to 30 kW on residential or public buildings, including storage units

### Changes EEG 2023

Installations under 1 MW exempt from tenders, EEG-funded PV systems are restricted to specific, lower-value or disadvantaged areas, with regulations set by federal states. Fixed 20-year FiTs apply based on system size and type, with higher tariffs for smaller systems and systems fully feeding in.

### Solar Package 1

PV rooftop tenders for large systems increased to 2.3 GW/year from 2026, with mandatory tendering lowered to 750 kW after a one-year transition period. It includes an increase in FiTs, which are €0.015 higher per kWh for commercial solar installations.

### Renewable Energy Sources Act (EEG 2021)

Systems up to 200 kW can inject surplus to the grid without remuneration or direct marketing costs. System certificates are required only above 270 kW feed-in or 500 kW installed capacity. Direct marketing requirements are simplified for systems up to 25 kW. Optional direct marketing becomes more favourable for smaller PV systems.



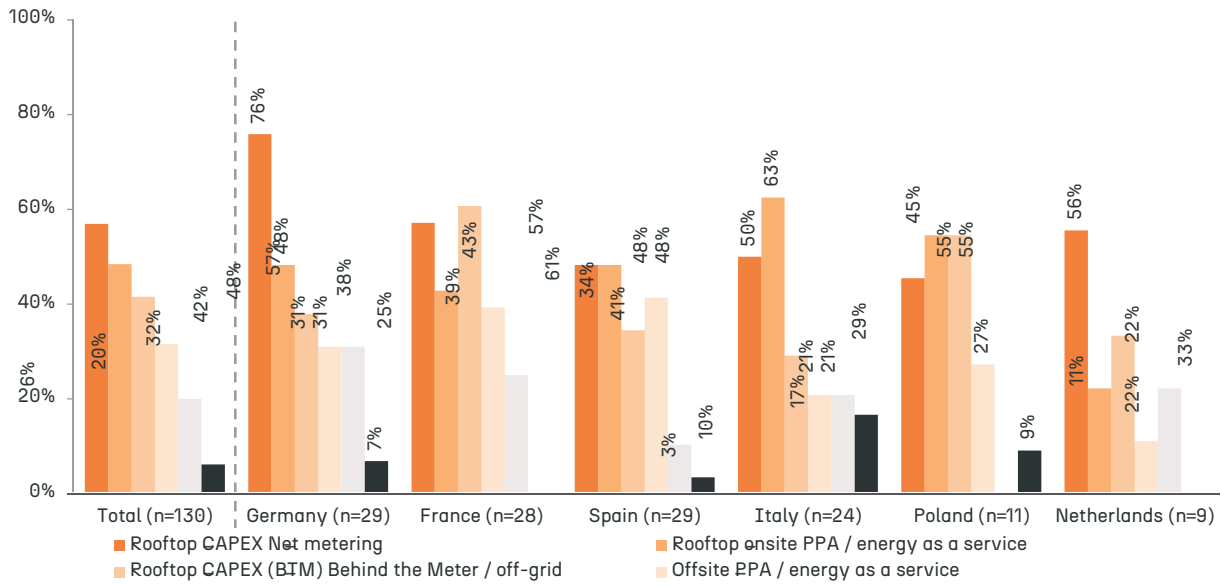
## Market Drivers and Barriers

As in neighbouring European countries, the key drivers for the Italian C&I solar PV market include cost savings and return on investment: cost-savings through increased energy autarky enabled by PV adoption are particularly relevant in energy-intensive industries such as electrical engineering, food and beverages, and machinery manufacturing, among the top adopters of PV systems in Italy. Adoption is also incentivised through feed-in-tariffs and a reverse charge for company environmental and digital restructuring and innovation interventions. Voluntary sustainability commitments and carbon footprint reduction further play a role in driving adoption. The Italian market in particular benefits from supportive policies such as tax credits, subsidies for renewable energy projects, and the Renewable Energy Community Decree, which incentivizes solar installations. However, there are also notable barriers to PV adoption in the Italian C&I market: high upfront costs and long payback periods are significant deterrents for C&I customers, particularly small and medium enterprises (SMEs). Regulatory complexities, including permitting and grid connection delays have also hindered implementation of PV projects, as has grid congestion (grid overload from distributed generation). In particular, the Decree 63/2024, which bans PV installations on agricultural land, has introduced significant regulatory hurdles to deployment of large-scale PV projects. Furthermore, the lift of the ban on nuclear energy deployment passed in February 2025 and the continued reliance on hydropower and gas facilities by major energy market players and ongoing subsidisation of gas plants through capacity payments may also hinder future PV expansion.

## Business Models and Procurement Preferences

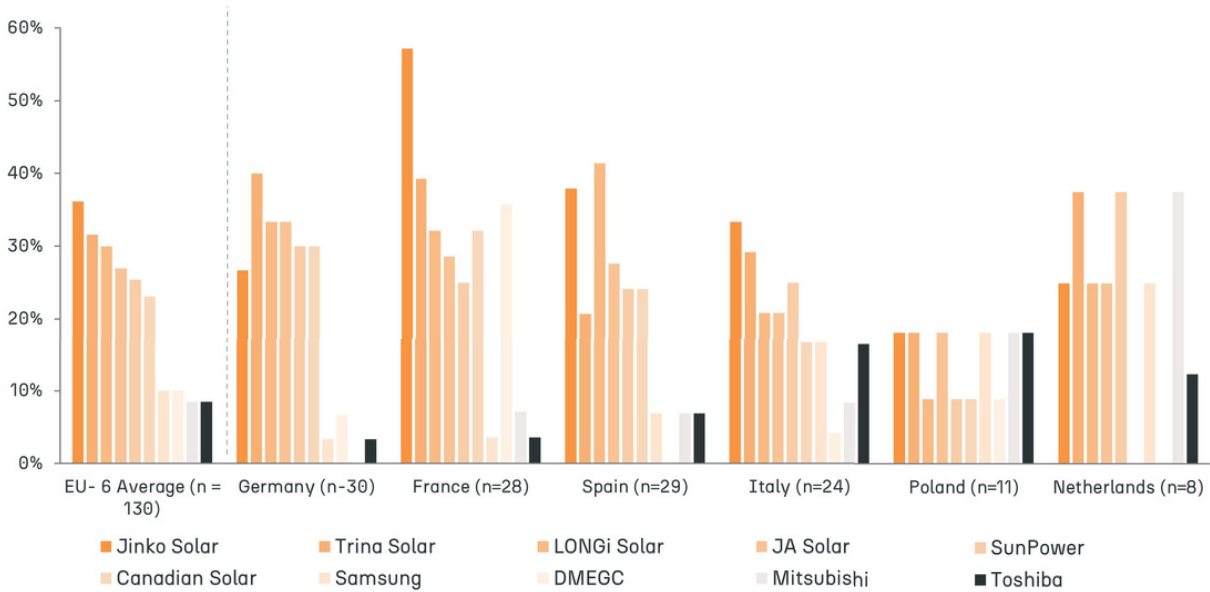
The Italian C&I PV market is characterized by a variety of business models, with rooftop CAPEX models being the most preferred, mirroring the consistent preference for these across EU countries. These models offer maximum cost savings and ease of execution, making them attractive to businesses. Other popular models include rooftop onsite PPAs and offsite PPAs, which allow businesses to benefit from solar energy without the need for upfront investment.

Italy's C&I market also shows a stronger preference for behind-the-meter (BTM) systems compared to the EU average. This is driven by the desire to maximize self-consumption and reduce dependency on the grid, which is particularly relevant in Italy due to mentioned higher electricity prices and grid connection challenges. In contrast, countries like Germany and the Netherlands have seen a higher adoption of offsite PPAs, where large-scale projects are developed to serve multiple C&I consumers.



Preferred business models of C&I customers | Source: EUPD Research 2024

In terms of procurement, EPC companies in Italy prefer sourcing components directly from manufacturers to optimize costs. Leading module brands in the Italian market include Jinko, Trina, and Longi, while Huawei and SMA are the preferred inverter brands. Tesla and ABB are the top choices for storage solutions.



Top module brands in EPC portfolios | By country | Source: EUPD Research 2024

# CONCLUSION & RECOMMENDATIONS

With strong parallels to other EU market leaders in terms of installed capacity, business models, and market drivers, the Italian PV C&I market is poised for continued growth, driven by supportive policies, technological advancements, and increasing demand for sustainable energy solutions. However, challenges distinguishing the Italian PV C&I market from its EU counterparts such as higher upfront costs, regulatory complexity and grid congestion must be addressed to fully realize the market's potential.

Such a growth-inducive approach necessitates a continued leveraging of existing policy incentives and high electricity prices as key drivers for solar PV adoption. The survey responses from EPC companies across the EU also highlight the importance of stable policies, cost savings, and risk protection measures in driving the adoption of PV systems in the C&I sector.

Concretely, the following recommendations to stakeholders can be proposed: •

Enhance Policy Support: Governments should continue to provide stable and

well-structured incentives to encourage the adoption of PV systems in the C&I sector. Simplifying regulatory processes and reducing barriers to entry will also be crucial.

- Address Grid Congestion: Investments in grid infrastructure are needed to accommodate the increasing load from distributed generation. Policymakers and grid operators should work together to develop solutions that ensure the reliable integration of PV systems.
- Promote Risk Protection Measures: EPC companies should continue to offer risk protection measures to C&I customers, while also educating them on the long-term benefits of these measures. This will help increase the willingness of customers to pay a premium for added security and performance guarantees.
- Foster Innovation: Continued investment in research and development will be essential to drive technological advancements and reduce the cost of PV systems. Innovations in energy storage and grid management will also play a key role in the future growth of the C&I PV market.



In summary, while Italy is a key player in the EU's PV market, there is significant room for growth in the C&I segment, particularly if regulatory and infrastructural challenges can be effectively addressed. As the market continues to evolve, businesses and policymakers must work together to overcome barriers and capitalize on the opportunities presented by solar PV technology. The here examined experience of the Italian market offers valuable insights for other EU markets seeking to accelerate their energy transition while navigating similar barriers.

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