Solar Energy: A Growing Market

A Future-Proof Solution

Summary note

OBSERVATOIRE Cetelem

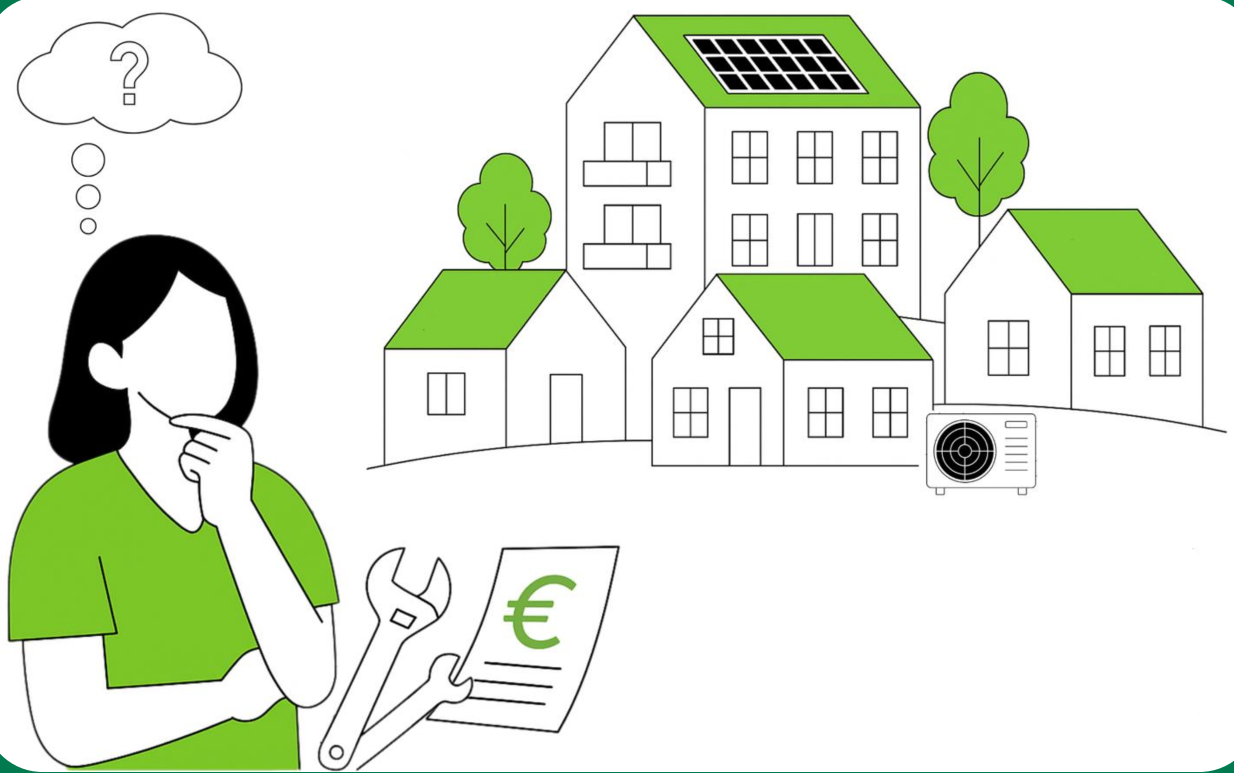
BNP PARIBAS PERSONAL FINANCE

The promise of solar energy

The **2nd edition of the *Cetelem Housing Observatory 2025*** confirms Europeans' strong attachment to their homes. Housing represents both a "**refuge**" and a "**safe haven**". Even though the majority of households are satisfied with their homes, they remain concerned about the **financial burden that energy represents in their budget.**

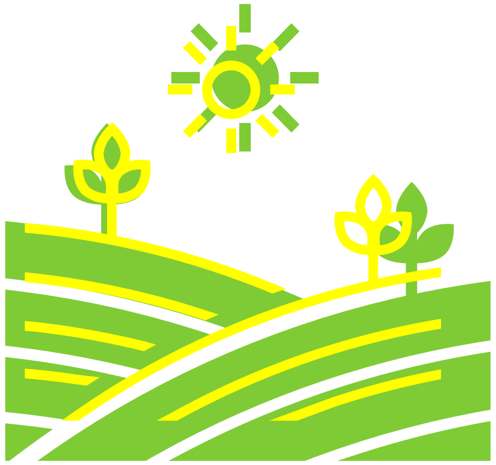
Our *Cetelem Housing Observatory 2025* highlights several findings:

- **89%** of Europeans feel attached to their home
- **92%** are satisfied with their home overall
- **75%** are expressing dissatisfaction with its energy performance (from two perspectives: cost and thermal comfort)
- **64%** of Europeans believe that renovations are necessary



Solar energy clearly emerges as a preferred solution that could make **households more self-sufficient.**

This is why nearly one in four (24%) **plan to install or replace solar panels.** However, they are discouraged by the cost of the work.



Methodology

This note is based on:

- exclusive insights from the ***Cetelem Housing Observatory 2025*,***
- on the field **expertise of BNP Paribas Personal Finance and its partners,**
- complementary market research **reports.**

Its objective is to identify key frictions, understand consumer expectations, and outline practical solutions by leveraging three main levers:

Cost-effectiveness | **Simplicity** | **Affordability**

* Cetelem Housing Observatory 2025, conducted by Toluna Harris Interactive. Survey conducted simultaneously across 8 European countries (Germany, Belgium, Spain, France, Italy, Poland, Portugal, and the United Kingdom) between 19 and 28 May 2025. A total of 12,574 respondents aged 18 and over were interviewed, with nationally representative samples in each country. Representativeness was ensured through quota sampling and data adjustment based on gender, age, region, household size, and income level.

A market paradox

Households fear a decline in their purchasing power.

65% of Europeans are worried about a decrease of their purchasing power. They also express concerns with **rising electricity prices:** 72% fear further increases, while 56% are concerned they will **no longer be able to pay their energy bills.**

In response**, two behaviours emerge**:

- some households **reduce their energy consumption**
- while others **invest in new equipment** such as solar panels, which have become a **promising solution**.

Partner Voice

"In Italy, the Superbonus decreased from 110% to 70%. It remains attractive, yet no longer drives mass adoption."

C. Iollo
Unica

Partner Voice

"In Belgium, subsidies disappeared overnight, despite national climate objectives."

R. Lascar
Solution Energie

Evidence is clear: the solar energy market has grown rapidly in recent years. Panel prices have dropped significantly over the past decade, technologies have become more reliable, and the European Union has set ambitious goals **to accelerate the transition.** Battery costs are now following the same downward trend.

Yet adoption continues to lag behind expectations.

This gap between intention and action is largely explained by **financial barriers.** Public subsidies remain a crucial driver of the energy renovation market. However, their instability—constantly reshaped by shifting political and economic decisions regarding eligibility. It creates two opposite effects:

- Some households rush **to renovate in order to secure financial support** before changes take effect.
- Others adopt a **wait-and-see attitude**, postponing investments until conditions are more stable.

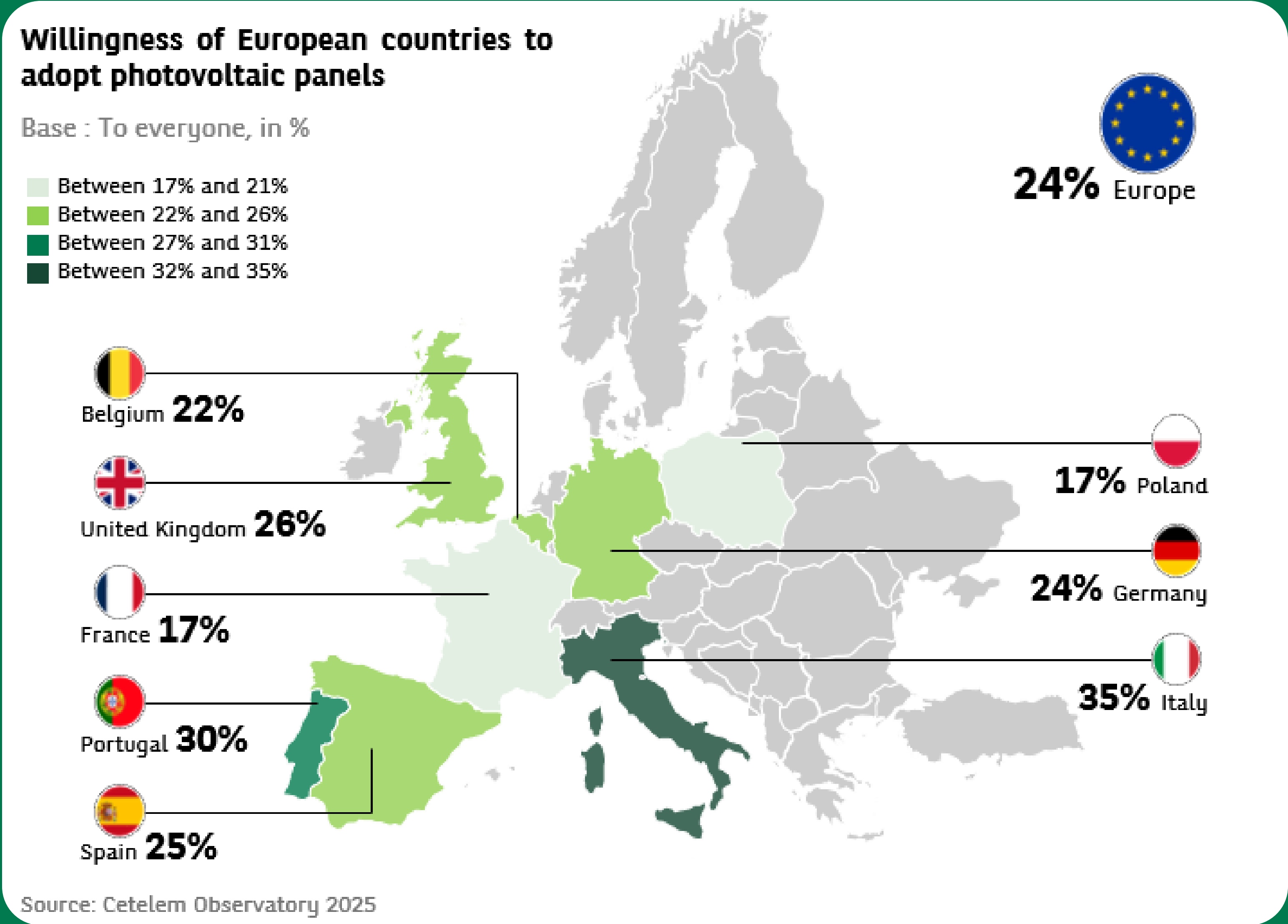
Solar energy market in Europe

Solar energy has become one of the cornerstones of Europe's energy transition. For households, it represents a threefold opportunity: lowering energy bills, achieving greater autonomy through self-consumption, and actively contributing to CO_2 emission reduction.

Looking back, in 2020 solar accounted for just 5.2% of the EU's total electricity generation (1). By 2024, its share had more than doubled to 11.1%, surpassing coal for the first time, as coal dropped to 9.8% of the European electricity mix (2).

The momentum is supported by record-breaking numbers. Over the same period, Europe's installed solar PV capacity tripled, marking an unprecedented acceleration that confirms solar power as a central pillar of Europe's energy future. In 2024, the European Union installed 65.3 GW of **new** solar PV capacity, going from 20 GW in 2020 to 65.3 GW in 2024. By the end of 2024, Europe's **total** installed solar capacity had reached 338 GW, compared with 139,3 GW in 2020 (3). In 2024, residential rooftop represented 20% of new installations (4).

This rapid expansion shows that solar is no longer a niche alternative but a mainstream solution, firmly embedded in Europe's energy strategy while creating new opportunities for self-consumption and household-driven growth. However, challenges persist: renovation and solar projects are still often perceived as complex, risky, or unaffordable for many households.



Our Expert Voice

" Solar's promise is just beginning . Anyone, anywhere, can install it at home and take a step toward independence in uncertain times. "

C. Gauffriau
BNP Paribas Personal Finance

(1) **European Commission.** *Focus on solar energy: harnessing the power of the sun*. September 2022
(2) **Le Figaro.** *Electricity: solar energy surpasses coal for the first time in the EU in 2024*. January 2025
(3) **SolarPower Europe.** *Global Market Outlook for Solar Power 2025–2029*. 2025
(4) **Solar Power Europe.** EU Market Outlook for Solar Power 2024-2028. December 2024

Lever 1: Cost-effectiveness

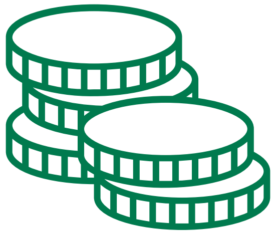
What consumers want

More than anything, Europeans value comfort and saving money. Although Europeans are satisfied with their housing. On average, nearly one in five Europeans believe that their housing is not suitable to cope with extreme temperatures. But beyond comfort, they now demand efficiency and resilience. For them cost-effectiveness is key: 57% expect a return on investment within five years – a goal that is in reality difficult to achieve due to price volatility of installations and energy prices.

Partner Voice

"Our goal is to reduce the time of return on investment to less than 5 years."

S. Xiong
Anker



Reality check

Despite demand, 61% of Europeans have abandoned an energy renovation project:

- **39%** dropped small projects
- **47%** gave up on full renovations

In most cases, **the reason is financial: 58%** cite cost as the main barrier (69% among over-50s).

Partner Voice

"With BNP Paribas' low interest loans, we can collectively reduce people's economic burden to zero."

S. Xiong
Anker

Emerging solutions

- **Plug-and-play kits** (e.g., balcony systems, Kodak by Solution Energie), affordable at €600–1200, easy to install, efficient from day one, with ROI under 5 years.
- **Home batteries** : 29% of Europeans would invest if outages became frequent in order to achieve self-consumption.

Lever 2: Simplicity

Consumers are facing a fragmented ecosystem

- The first anxiety is the **fear of choosing wrong.** In a fragmented market, many households doubt whether the contractors they hire are genuinely reliable.
- The second is the **fear of making mistakes.** From filling in forms incorrectly to taking the wrong steps in the process — energy audits, credit applications, installer selection, material choices — the risk of error feels constant.
- Adding to this is **complexity.** A growing maze of audits, labels, certifications and regional regulations makes the path to renovation even harder to navigate.

Our Expert Voice

"Households face a maze of regulations where a single mistake means losing subsidies."

D. Ciobanu

BNP Paribas Personal Finance

Partner Voice

"People often don't know where to start. By guiding them through incentives and financing, we can evolve into comprehensive multi-service platforms."

E. Vejzovic

TopCompare

Solutions on the ground

- **One-stop platforms:** TopCompare integrates product choice, subsidy eligibility, and loan applications.
- **Digitalization & AI:** Anker is building AI models to optimize solar use.
- **Integrated financing:** 60% of Europeans would prefer to see financing embedded directly in renovation quotes.

The future is clear: bundling products, financing, and services into seamless journeys.

Lever 3: Affordability

Today's reality

Solar is often perceived as elitist. The reality is harsher: many of those who need it the most are excluded.

- In Belgium, 21% of households are classified as ineligible for credit. (1)
- These households disproportionately live in energy-inefficient homes.

Partner Voice

" We aim to make green energy solutions accessible to every family, not only the wealthiest."

S. Xiong
Anker

Partner Voice

"Without including this segment, the 2050 targets will be missed."

E. Vejzovic
TopCompare

Several solutions

- Inclusive offers: White Certificate, alternative financing offers (Green bonds & European Investment Bank…)
- Usage vs. Ownership : new business models based on subscriptions and rentals, are making energy solutions more accessible and flexible for households.
- B2B2C partnerships with distributors, retailers and installers are embedding financing into the customer journey.

Our Expert Voice

"Democratizing access to energy transition is key to tackling today's climate challenges."

D. Ciobanu
BNP Paribas Personal Finance

(1) Febelfin. Sustainable housing :what financieal challenges are we facing ? 2024

Looking ahead: Solar households in 2030

The transition has only just begun. By 2030, we expect to see:

- **Self-consumption as the norm**, powered by cheaper batteries: Lithium-ion costs have plunged from nearly €1,000 per kWh in 2010 to under €110 in 2024, making solar storage increasingly affordable. Depending on capacity, technology and level of integration, prices now range from around €500 for entry-level models to €17,000 for high-end systems. (1)
- **Energy-sharing models:** 27% of Europeans would join local sharing schemes.
- **Smart homes** will optimize energy production and usage through automation.

Expert Voice

"The energy transition is about financing, trust, and collective action."

C. Courreges

Domofinance

If storage costs fall, 39 % of Europeans would invest in solar to generate their own energy.

From promise to reality

Solar energy checks all the boxes: comfort, autonomy, sustainability.

But unlocking its full potential requires three levers:

- Cost-effectiveness: high-performing solutions with a proven ROI.
- Simplicity: a streamlined journey for consumers, with clear and accessible information.
- Affordability: financing solutions that leave no one behind.

BNP Paribas Personal Finance, through its Observatory and partnerships, acts as the facilitator of this transition — helping customers to turn ambition into concrete action.

(1) Solar Power Europe, European Market Outlook for Battery Storage 2025-2029. May 2025.

Contributions

We would like to warmly thank the following contributors, whose expertise and commitment were invaluable to the completion this report :

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BNP PARIBAS PERSONAL FINANCE

BNP Paribas Personal Finance

European Leader in Energy Transition Financing

BNP PARIBAS
PERSONAL FINANCE

200,000 projects financed every year

€5 billion in outstanding loans

6,000 installers supported in our network

Active in 8 countries: France, Italy, Spain, Belgium, the United Kingdom, Poland, Portugal, Germany

Our Solutions

- ✓ Project & installation financing through our partners
- ✓ Personal loans to directly support customers with their projects and installations

Our Areas of Action

- ✓ Low-carbon & renewable energy: solar, photovoltaic, storage, heat pumps
- ✓ Energy efficiency: insulation, windows, ventilation, high-performance heating/cooling systems
- ✓ Energy savings: EV charging stations, smart home solutions, efficient appliances

Ours Commitments

- ✓ Reducing households' environmental footprint
- ✓ Developing sustainable solutions with qualified partners
- ✓ Facilitating access to green energy