

EUROPEAN PHOTOVOLTAIC INDUSTRY ASSOCIATION

Market development for PV

Gaëtan Masson

EPIA *Head of Business Intelligence*

IEA-PVPS *Task 1 Operating Agent*



What is IEA PVPS?

- Implementing Agreement from the Energy Technology Network of the International Energy Agency.
- Dedicated to Photovoltaics (PVPS = PV Power Systems)
- Established in 1993
- 28 members: 23 countries, EC, 4 associations
- Strategy 2013-2017: *“To enhance the international collaborative efforts which facilitate the role of photovoltaic solar energy as a cornerstone in the transition to sustainable energy systems”*
- Joint research programs
- Providing unbiased PV information to its members
- Markets, industry & policies, VLS-PV, sustainability, quality & reliability, grid/system integration, rural electrification & Hybrid systems.
- → www.iea-pvps.org

Renewables ahead of Nuclear in 2012

24 %

Nuclear share in electricity demand in Europe - 2012



25 %

RES share in electricity demand in Europe – 2012



2.6 % for PV

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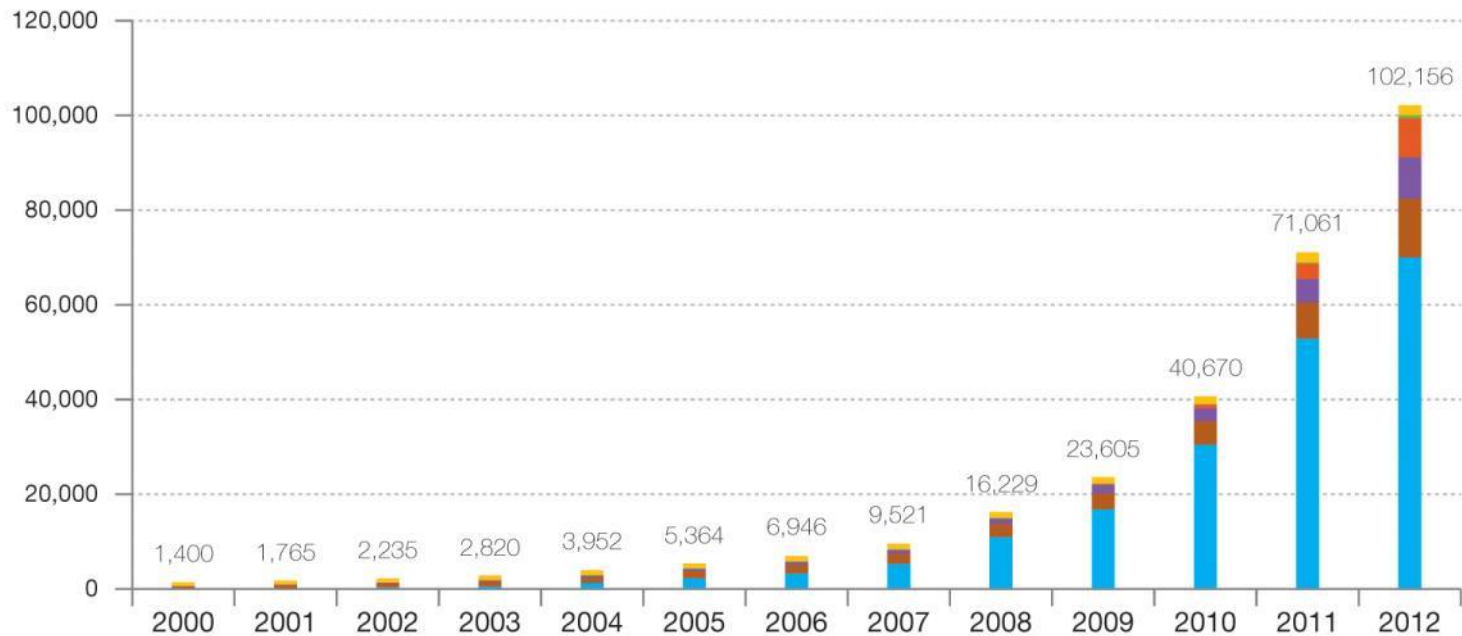
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Historical development of the PV market

Here, you can write a short description of the chapter.

Global PV capacity could have reached 100 GW in 2012

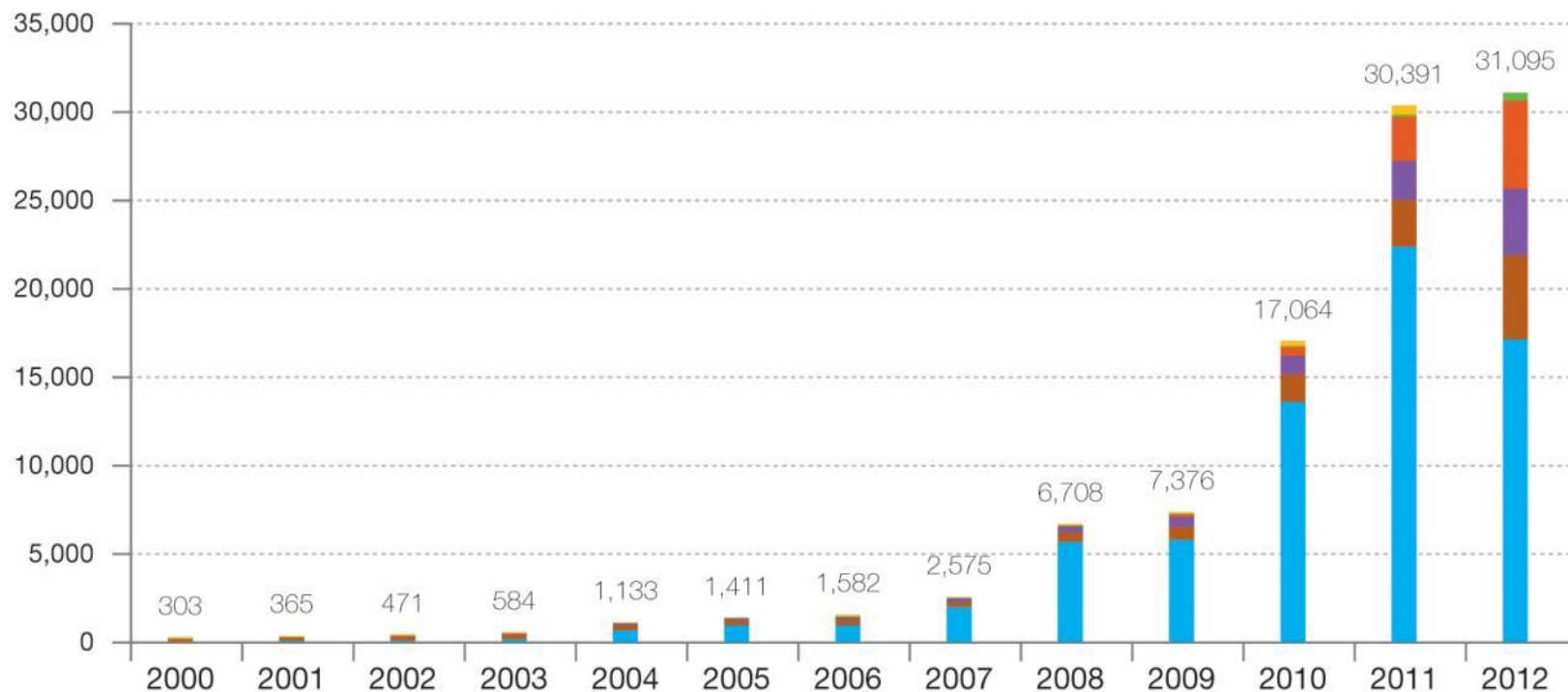
Evolution of global PV cumulative installed capacity 2000-2012 (MW)



Global PV market was stable in 2012

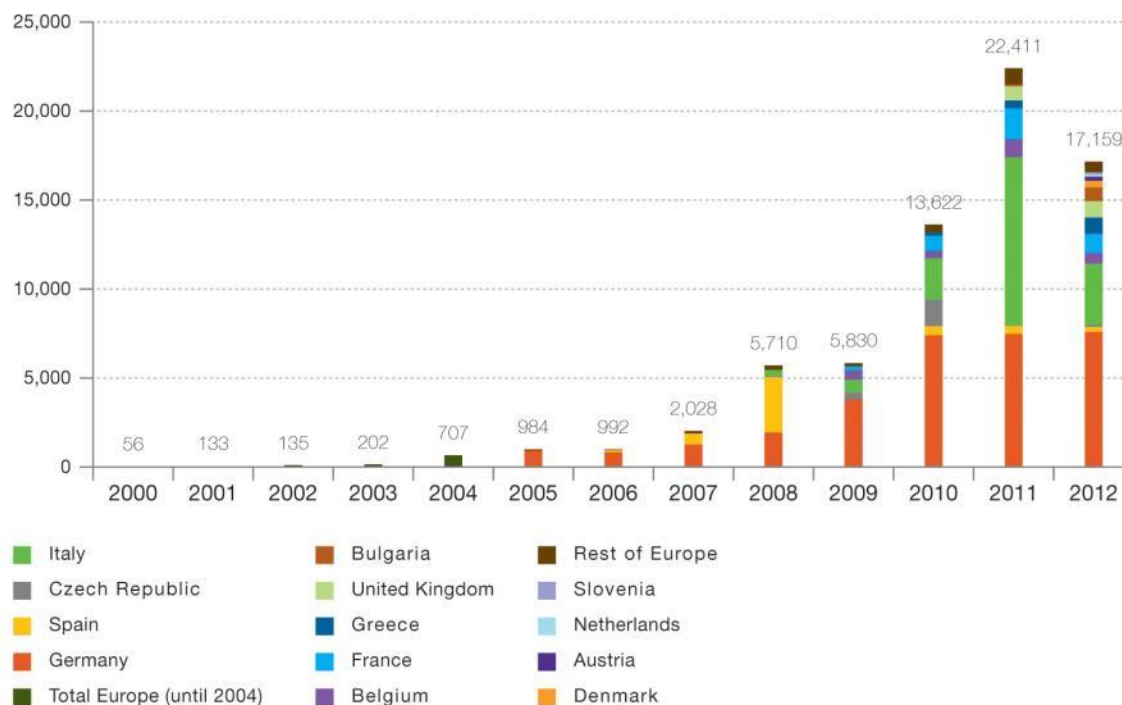
Evolution of global PV annual installations 2000-2012 (MW)

-1.8 GW



European market went down in 2012, mainly because of Italy's unsustainable surge in 2011.

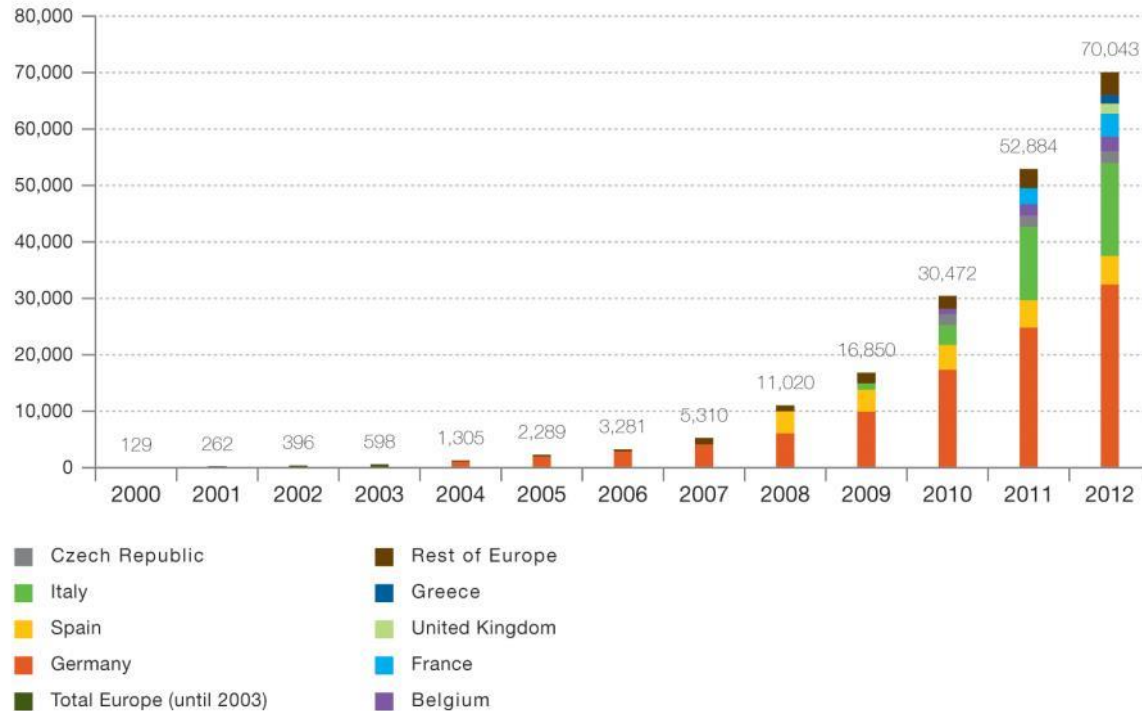
Evolution of European new grid-connected PV capacities 2000-2012 (MW)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

70 GW of PV systems are producing electricity in Europe

Evolution of European PV cumulative installed capacity 2000-2012 (MW)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

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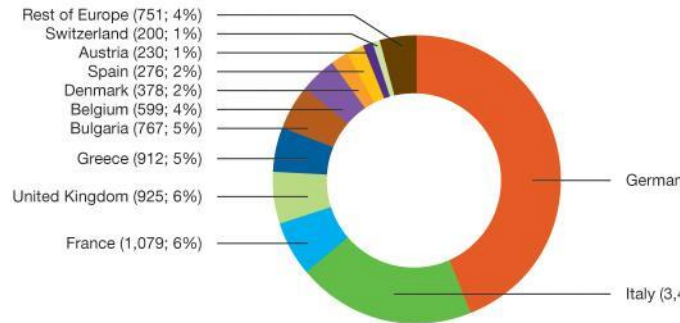
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Market segmentation in Europe

Here, you can write a short description of the chapter.

The Solar Ring

European PV market split in 2012 (MW; %)

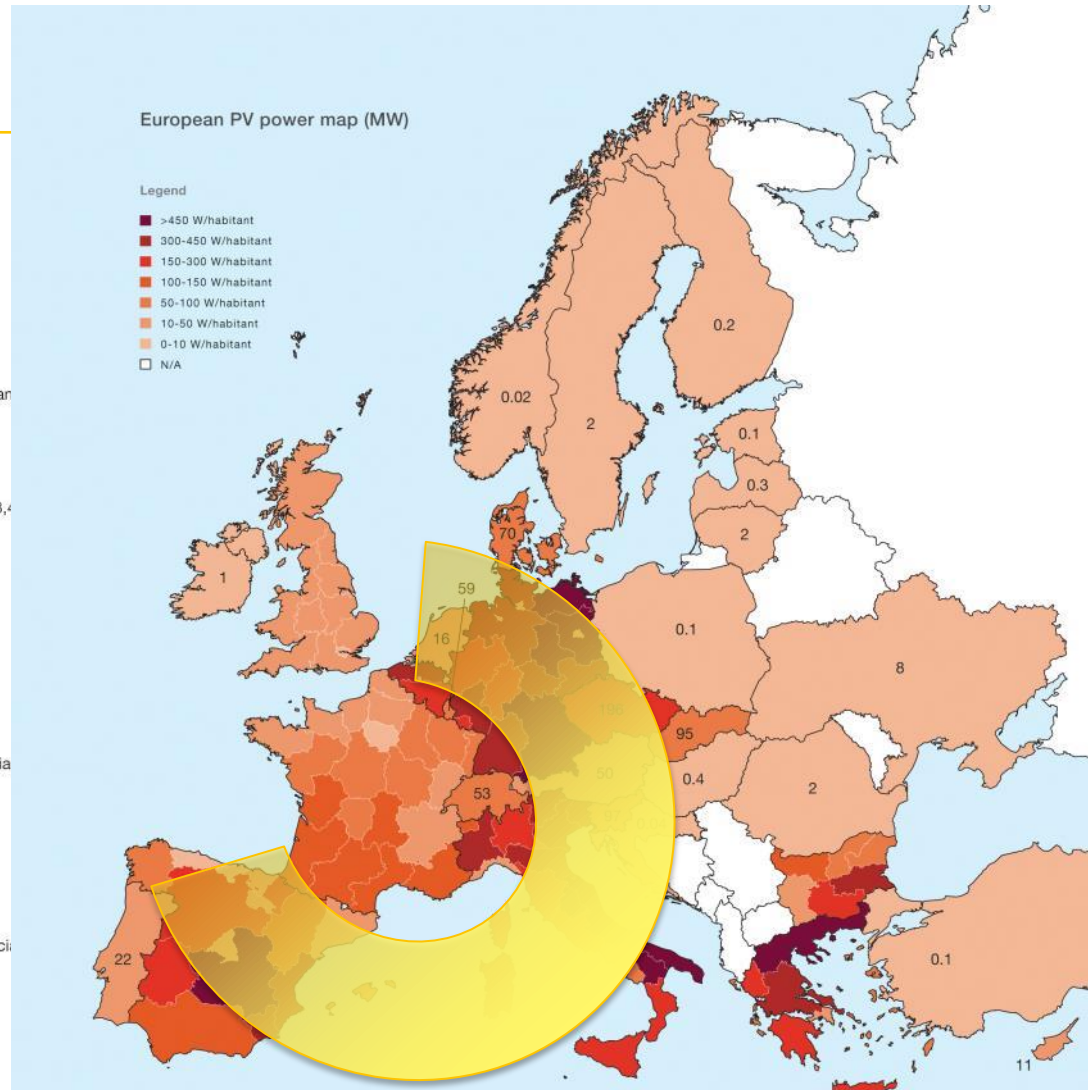


Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

European PV market segmentation in 2012 (%)

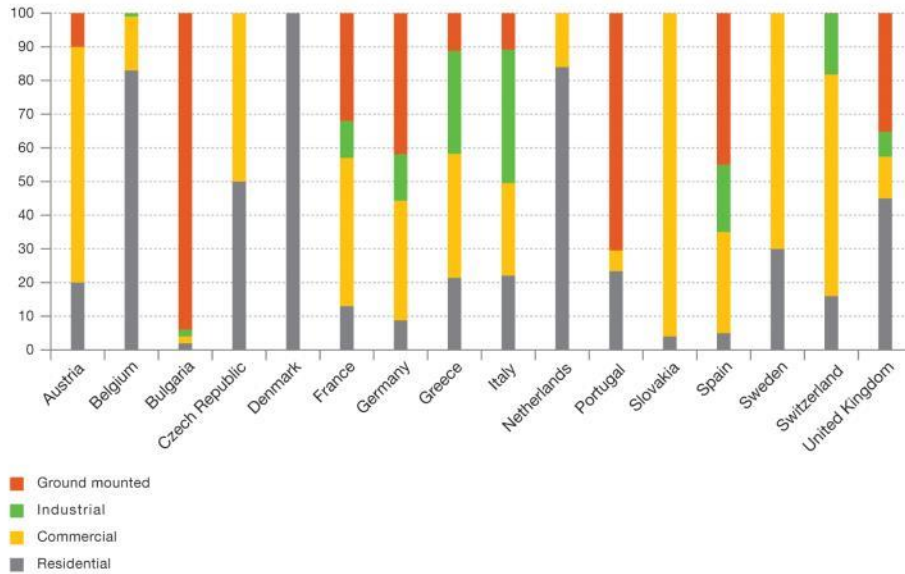


Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013



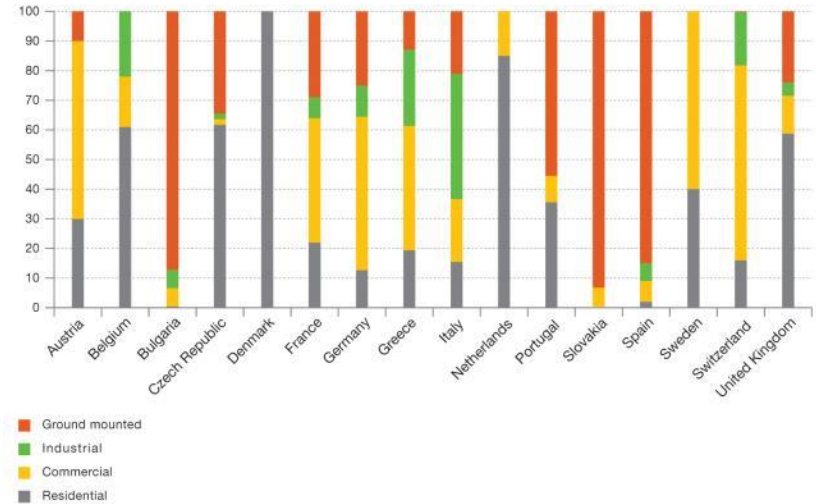
Market segmentation in key European markets

European PV market segmentation by country in 2012 (%)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

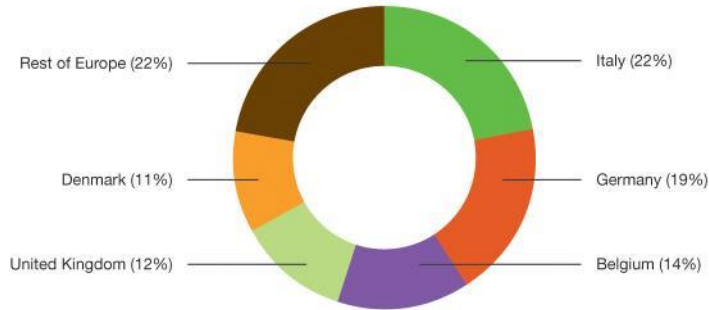
European PV cumulative capacity segmentation by country in 2012 (%)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

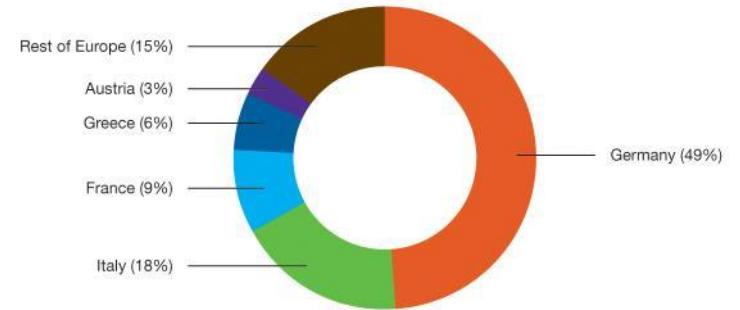
Top 5 European countries per market segment in 2012

Top 5 European residential PV markets in 2012 (%)



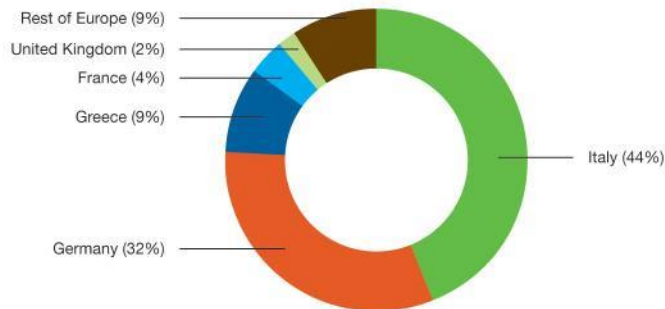
Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

Top 5 European commercial PV markets in 2012 (%)



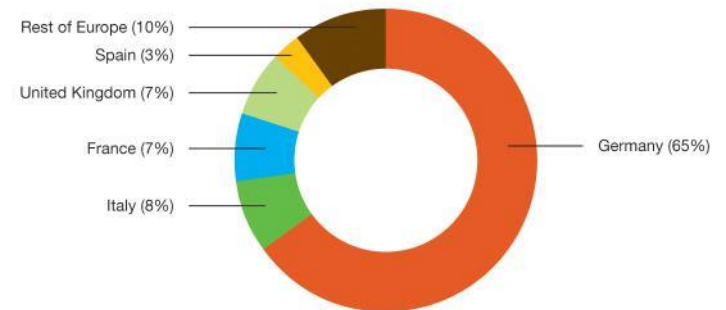
Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

Top 5 European industrial PV markets in 2012 (%)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

Top 5 European ground mounted PV markets in 2012 (%)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

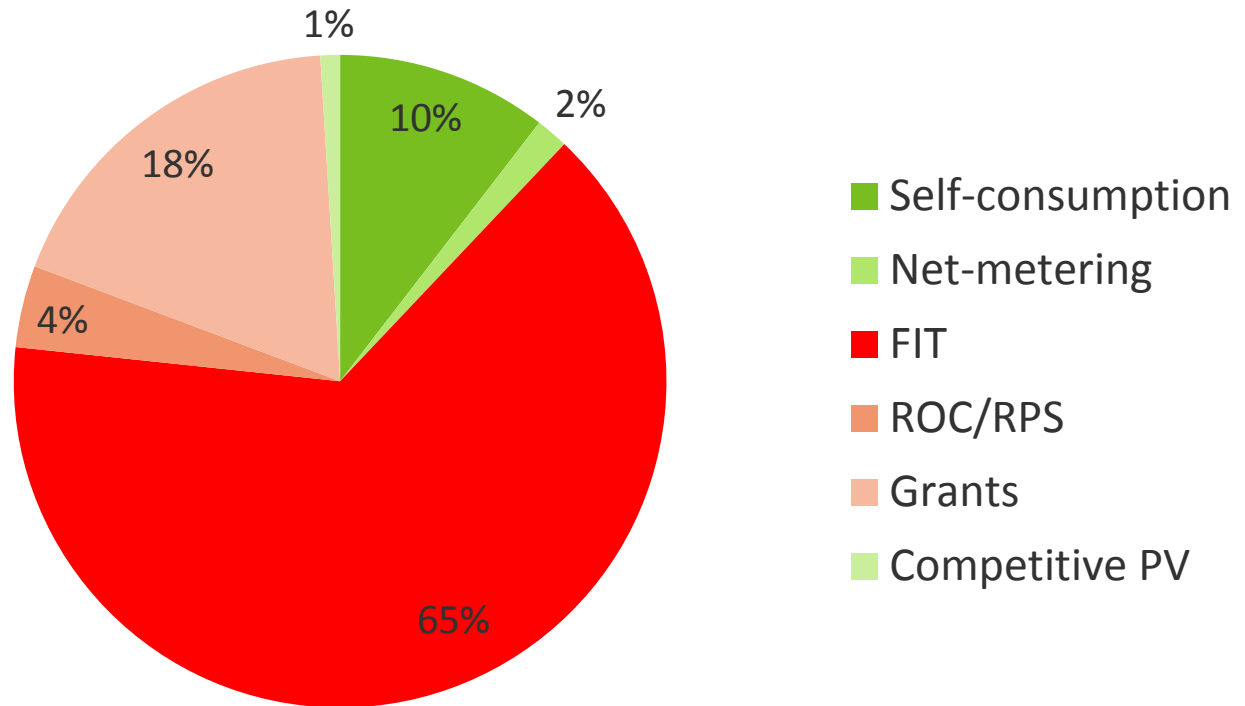
Market Segmentation

Global Picture of Business Models behind the development of the plant.

87% of the market was still incentives driven in 2012.

FIT, RPS (GC), Grants, Tax Rebates...

PV development drivers



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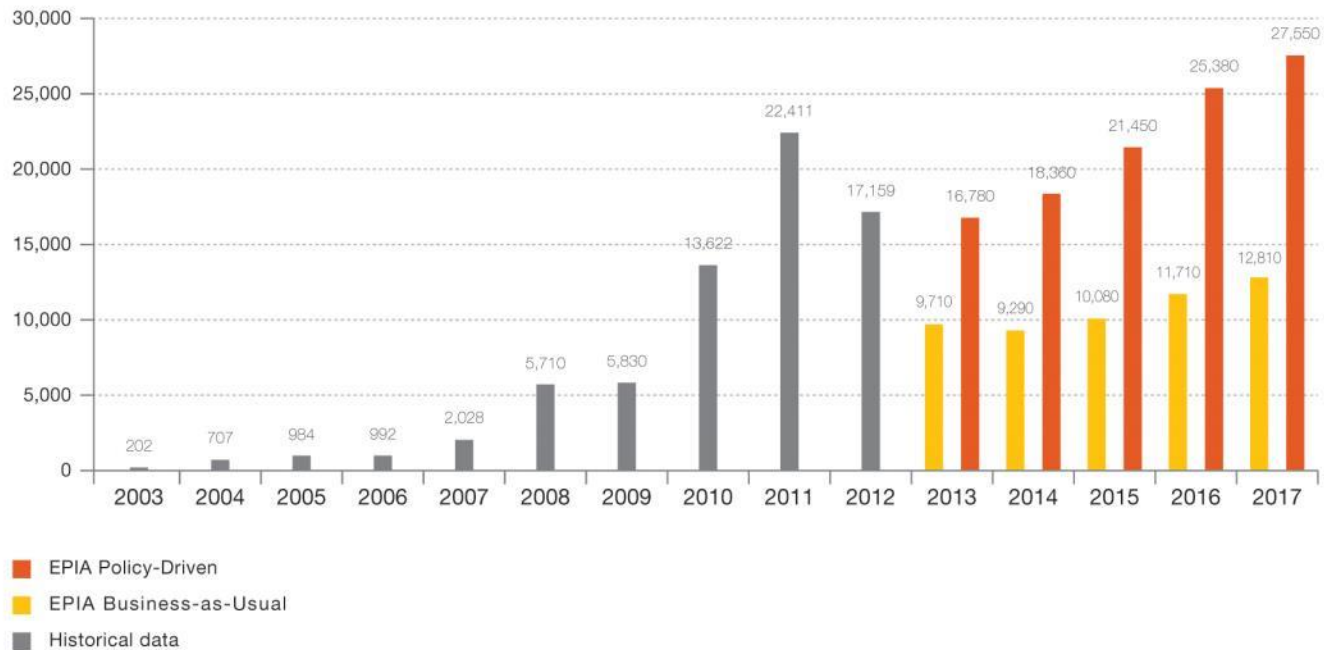
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Market forecasts for Europe

Here, you can write a short description of the chapter.

Business as usual vs Policy-driven scenarios for Europe

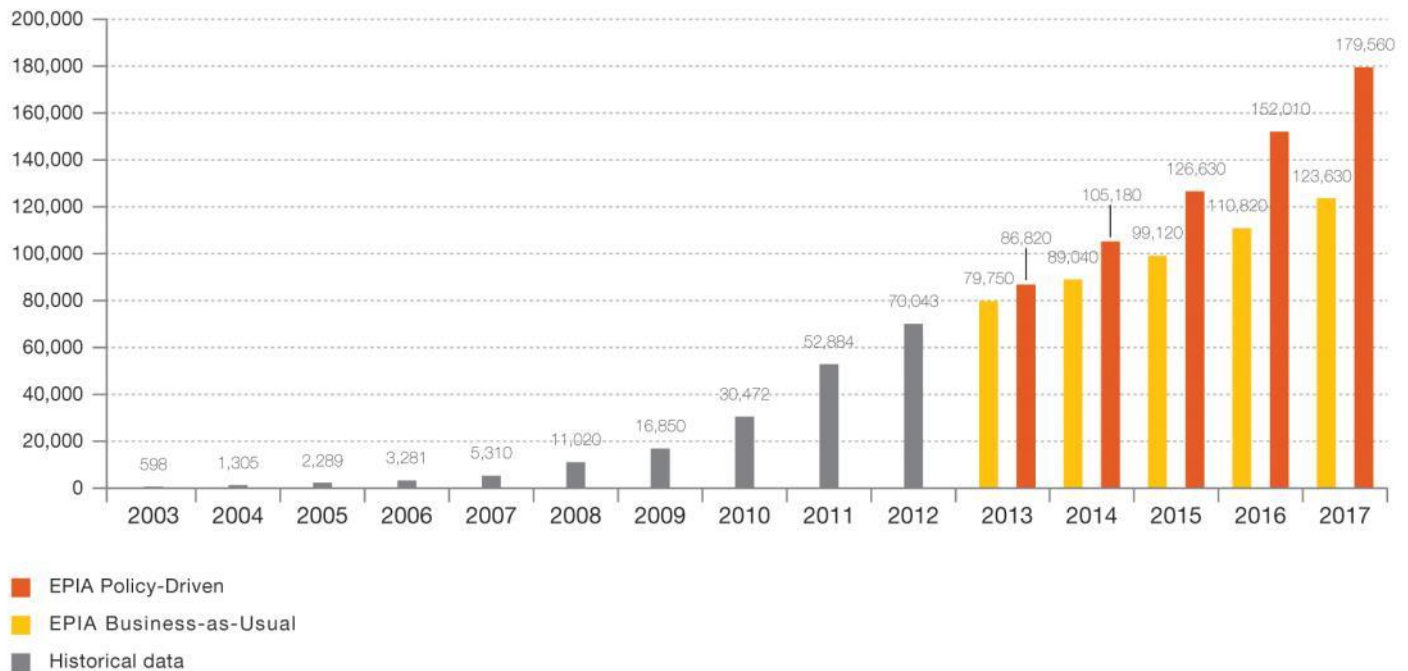
European annual PV market scenarios until 2017 - Business-as-Usual and Policy-Driven (MW)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

Forecasted European PV Capacity until 2017

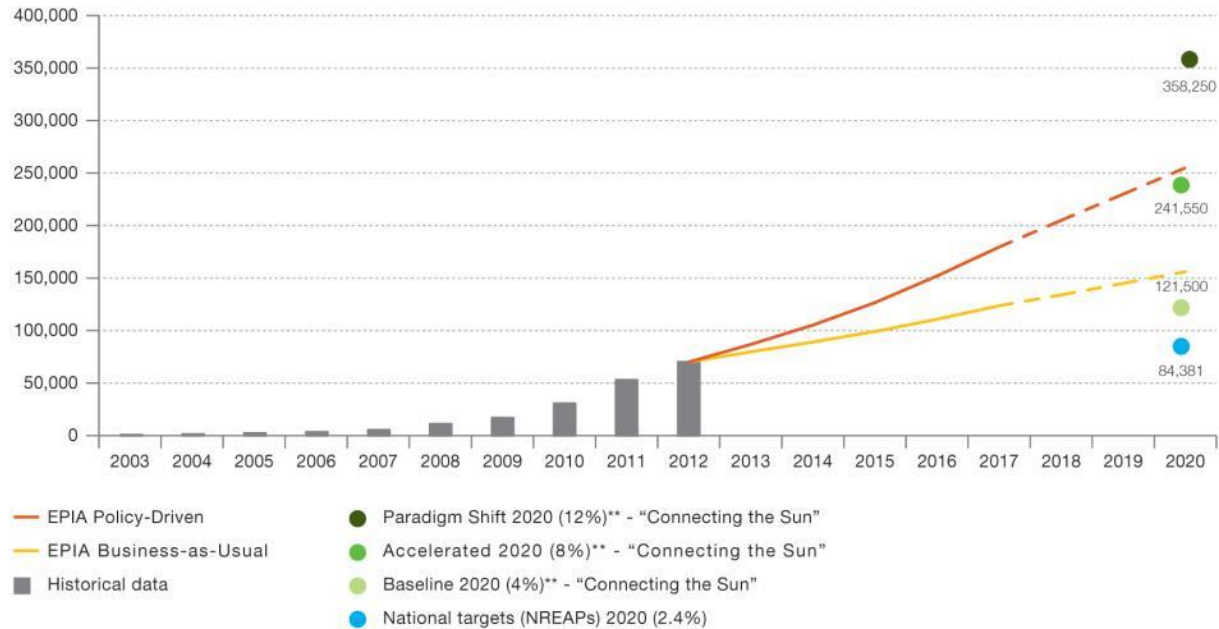
European PV cumulative scenarios until 2017 - Business-as-Usual and Policy-Driven (MW)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

2020 targets for PV have been already achieved in Europe

European PV cumulative capacity forecasts compared with EPIA's new 2020 scenarios* and NREAPs targets (MW)



* EPIA, "Connecting the Sun: Solar photovoltaics on the road to large-scale grid integration", 2012.
 ** The percentage indicates the share of electricity demand.

Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

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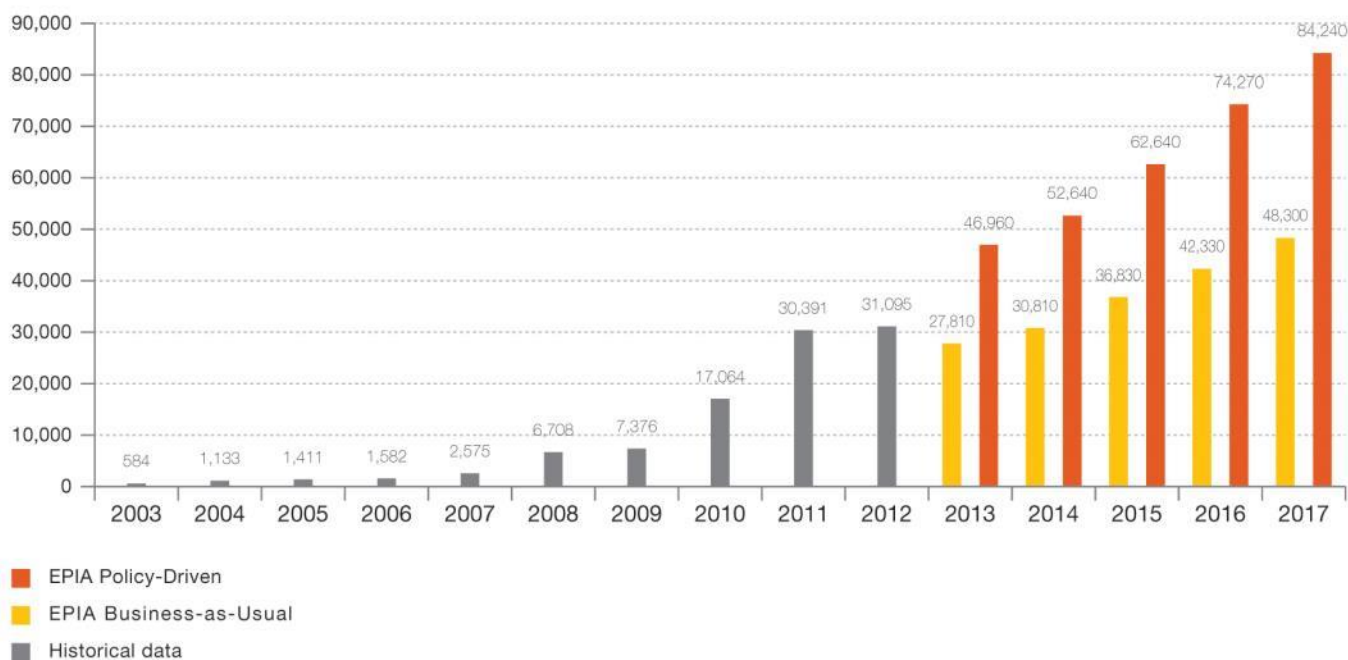
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Global market development

Here, you can write a short description of the chapter.

Global PV development scenarios until 2017

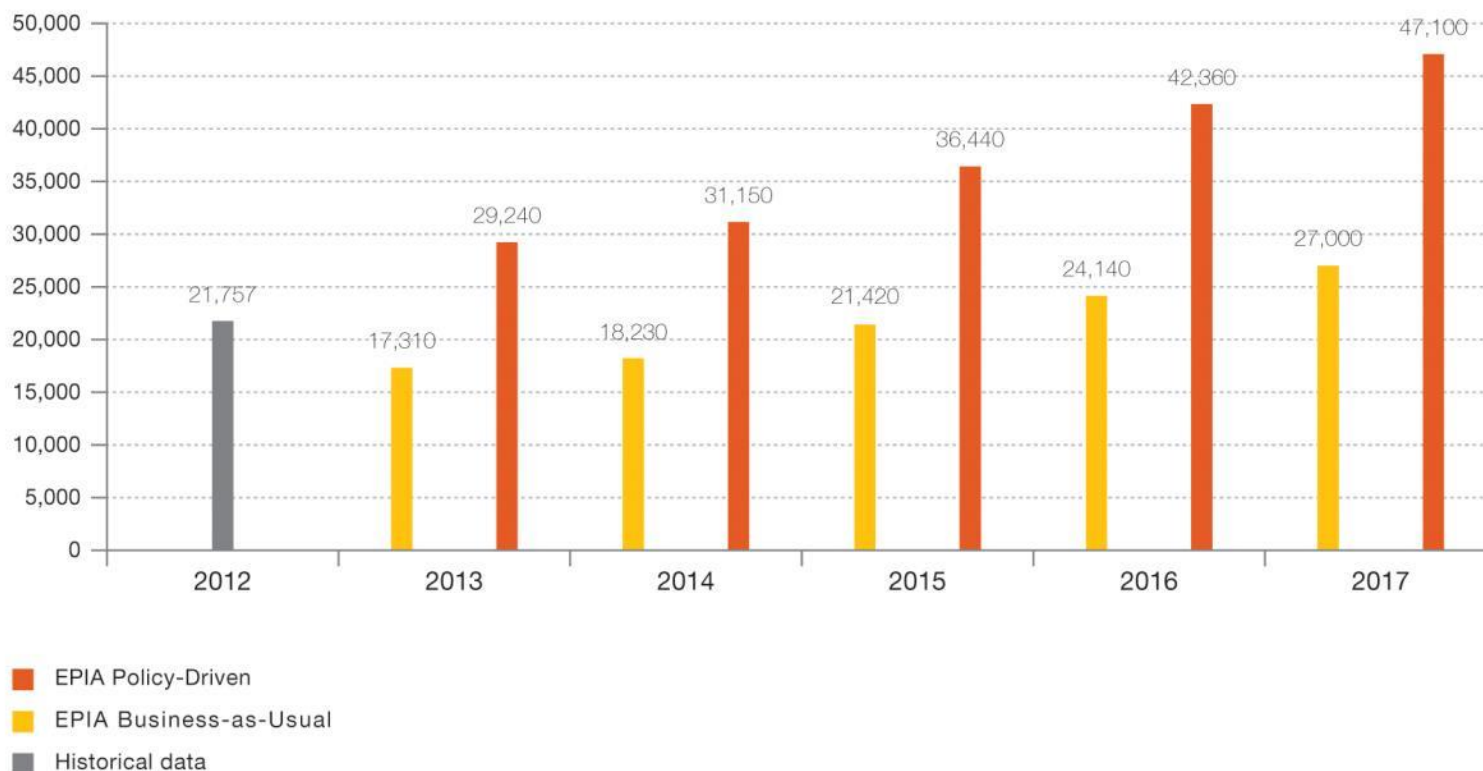
Global annual PV market scenarios until 2017 - Business-as-Usual and Policy-Driven (MW)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

Forecasts for rooftop PV

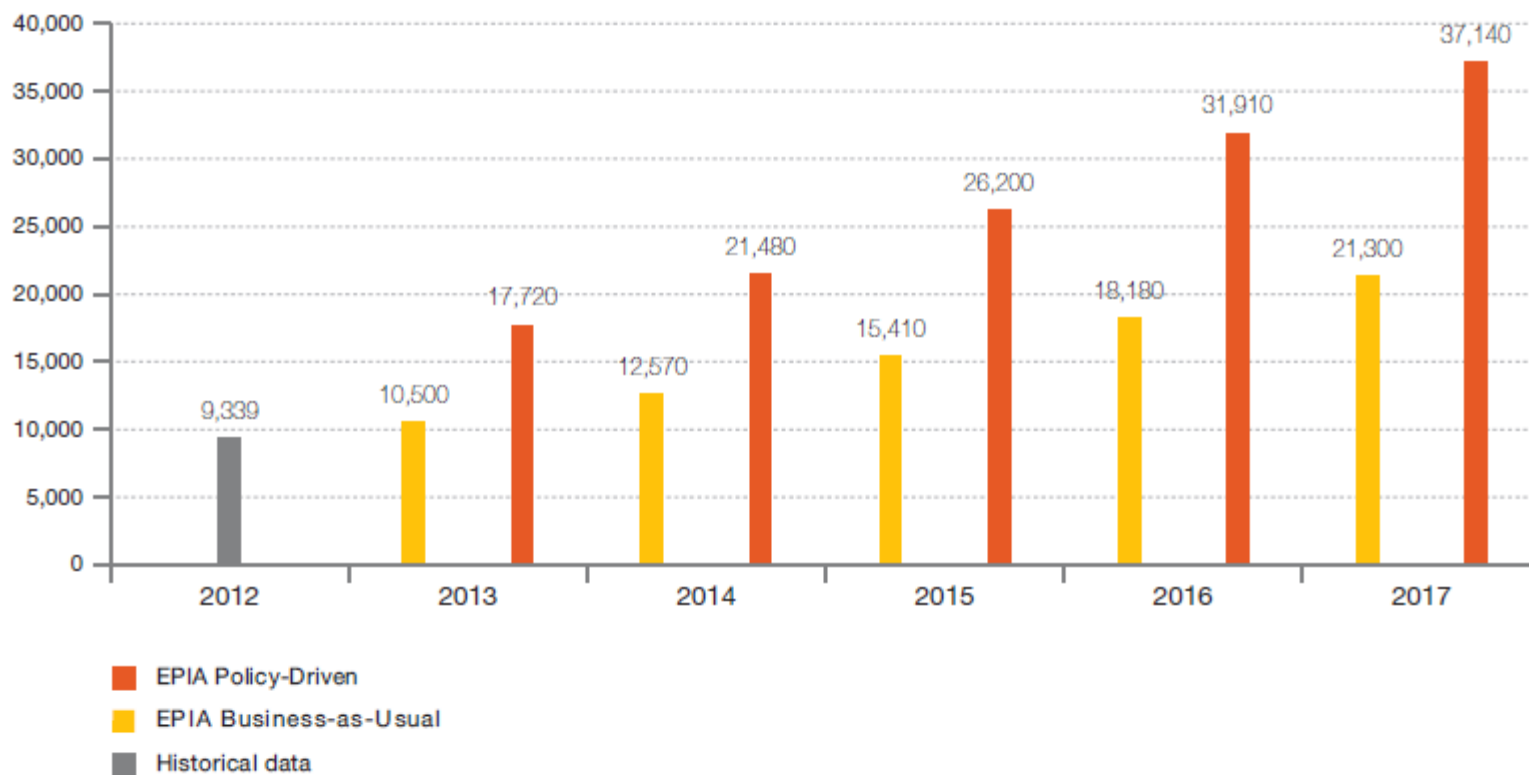
Global rooftop PV development scenarios until 2017 (MW)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

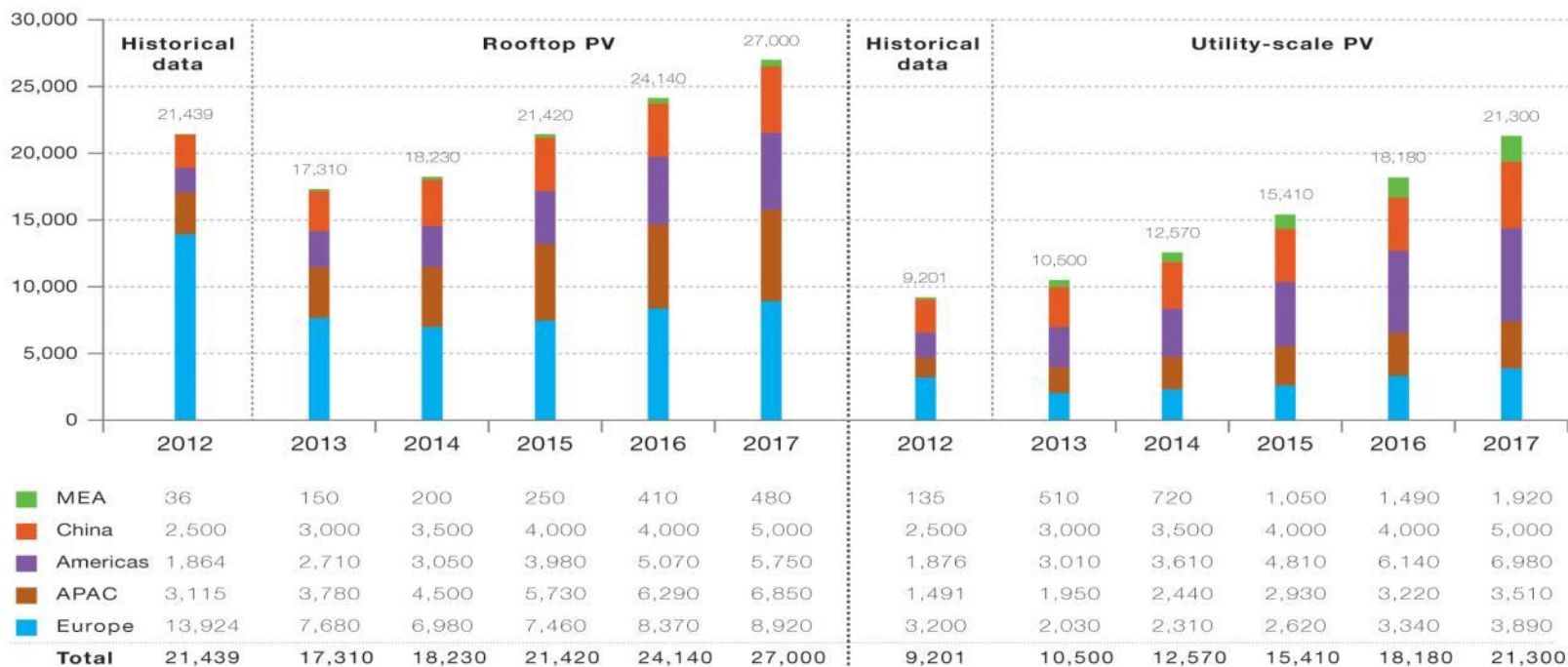
Forecasts for utility-scale PV

Global utility-scale PV development scenarios until 2017 (MW)



Regional forecasts per segment (Business as Usual)

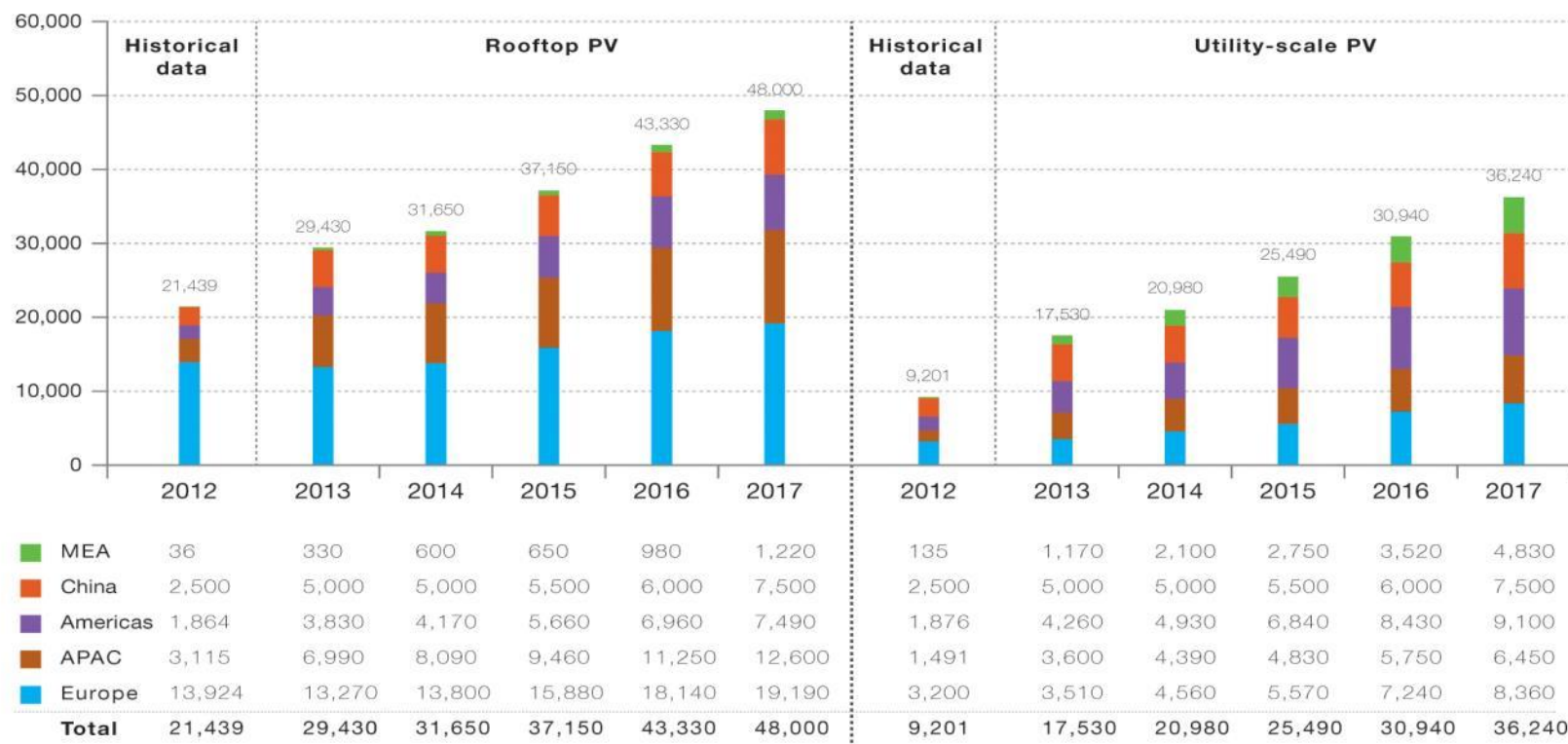
Global rooftop and utility-scale PV market by region until 2017 - EPIA Business-as-Usual scenario (MW)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

Regional forecasts per segment (Policy-driven)

Global rooftop and utility-scale PV market by region until 2017 - EPIA Policy-Driven scenario (MW)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

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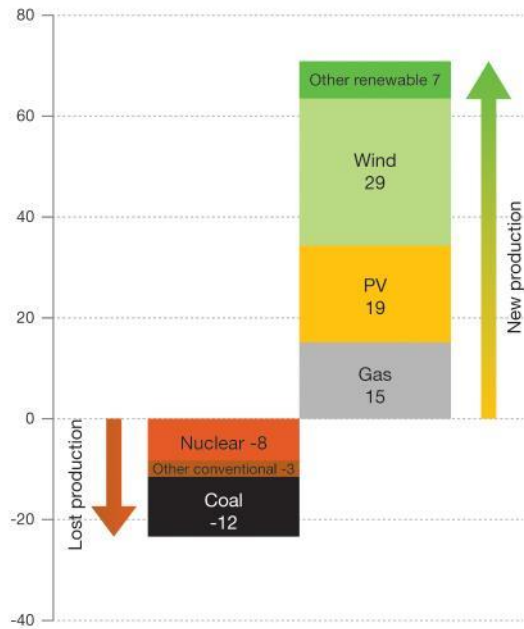
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PV in the European electricity sector

Here, you can write a short description of the chapter.

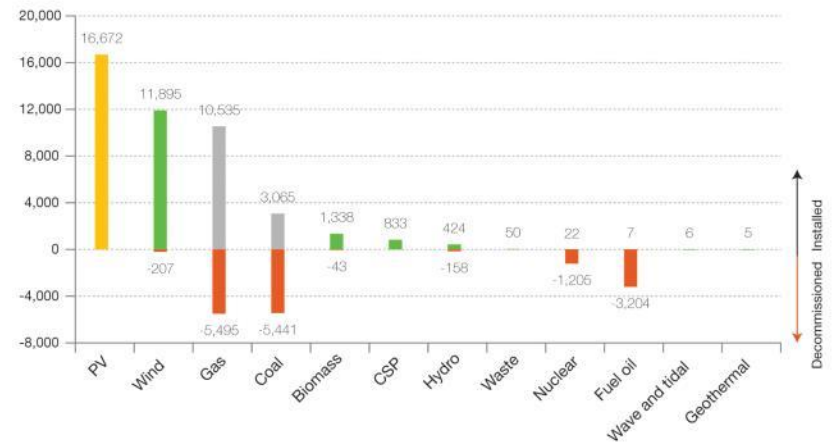
PV is number one again

Theoretical balance of new electricity production in the EU 27 in 2012 (TWh)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

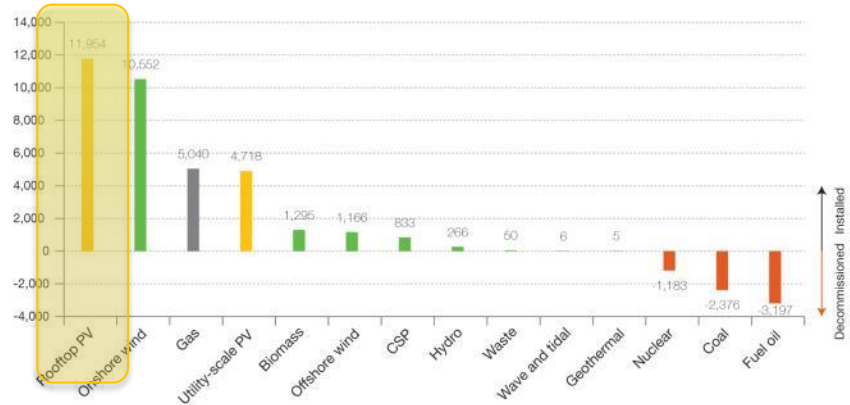
Power generation capacities added in the EU 27 in 2012 (MW)



Based on EPIA and EWEA analyses

Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

Net power generation capacities added in the EU 27 in 2012 (MW)

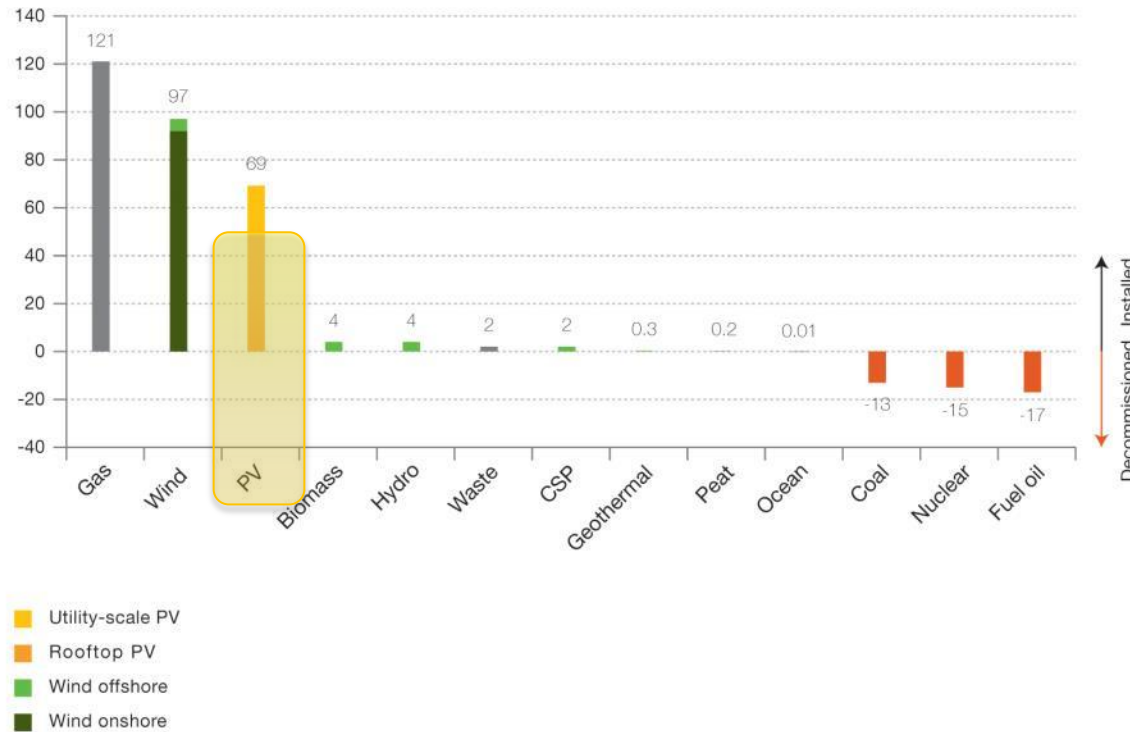


Based on EPIA and EWEA analyses

Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

The power trio in Europe: PV, Wind and Gas

Net generation capacity added in the EU 27 2000-2012 (GW)

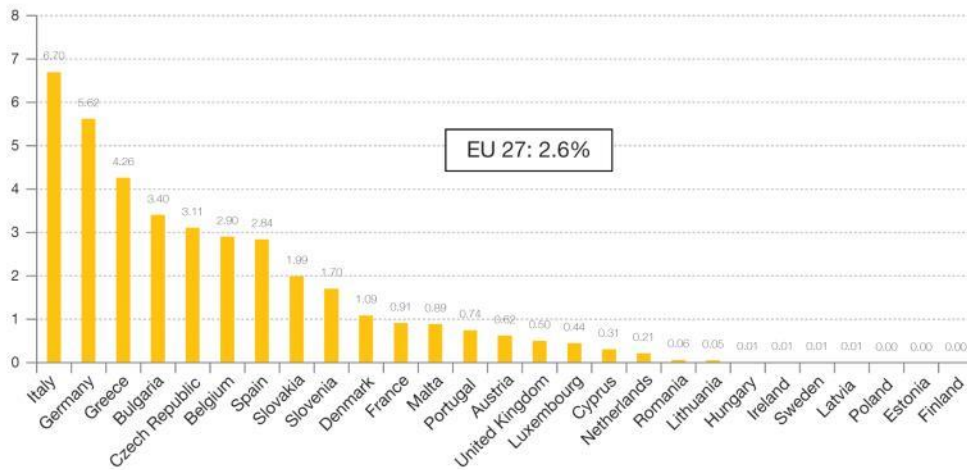


Based on EPIA and EWEA analyses

Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

PV penetration is increasing

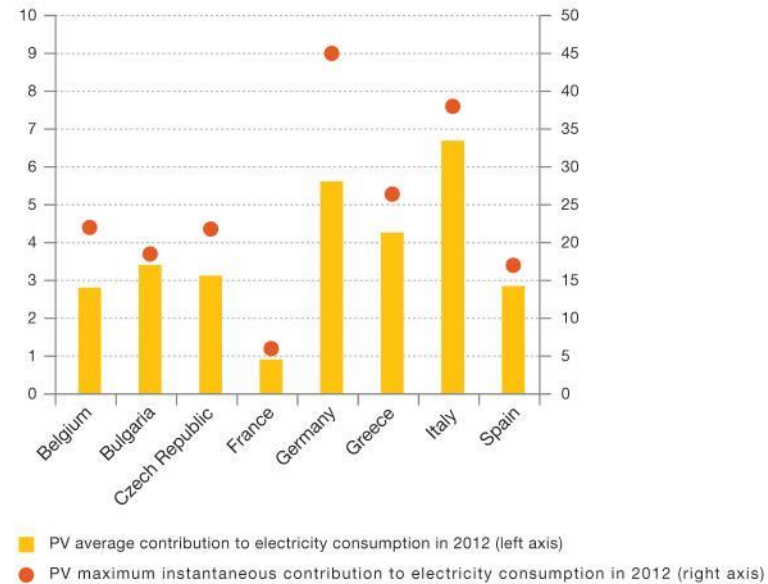
PV contribution to the electricity demand in the EU 27 in 2012* (%)



* Based on 2012 cumulative installed capacity.

Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

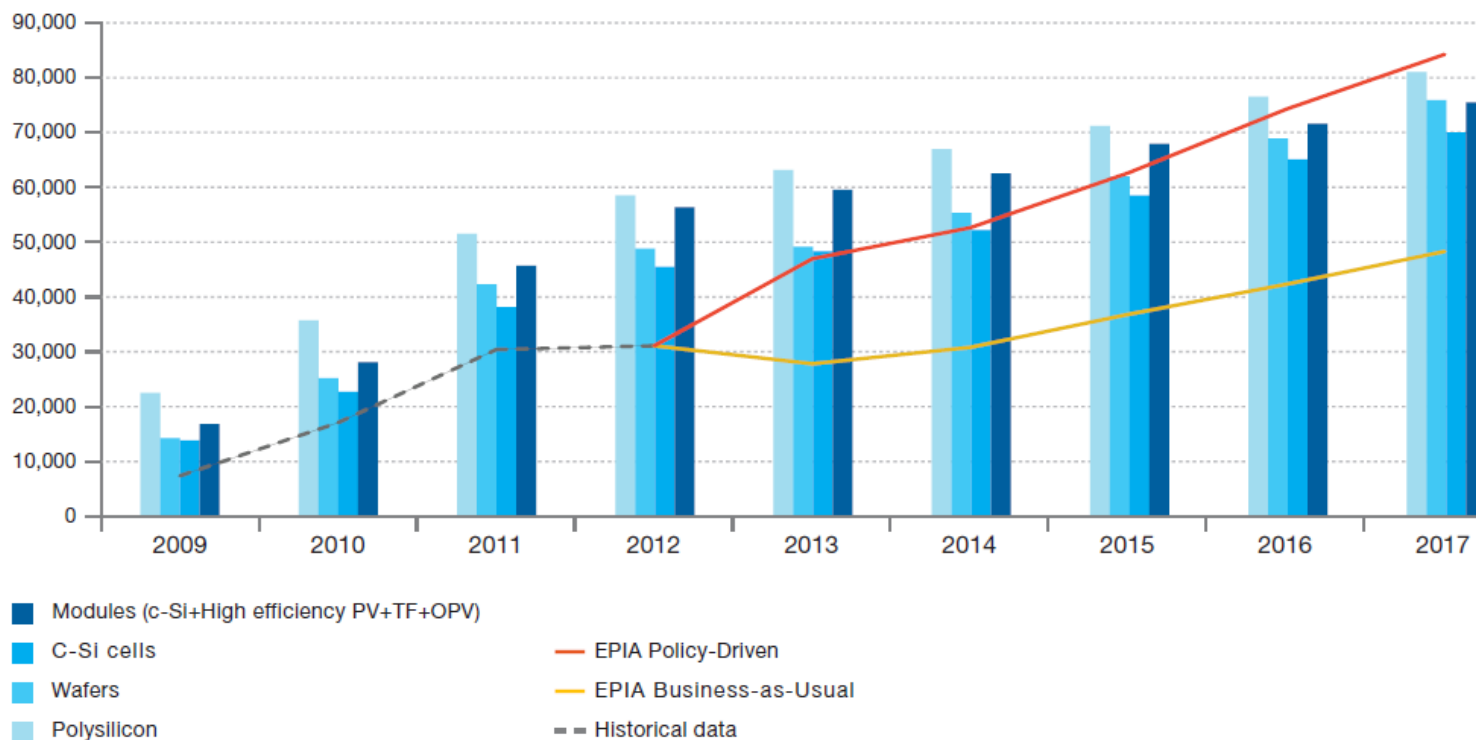
Annual average and maximum instantaneous PV contribution to electricity consumption in 2012 (%)



Source: EPIA, "Global Market Outlook for Photovoltaics 2013-2017", 2013

A More Sustainable Demand and Supply Balance

→ Will prices stabilize at a level that allow the industry to develop and invest and competitive enough to support market development?



Source: EPIA, IHS Solar and SNE Research

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Conclusion

Competitiveness of PV: the policy challenge



- Self-consumption must be allowed
- Taxes and grid costs compensation allowed as well
- Alternative grid financing
- No additional grid connection requirements that could reduce the revenues
- Excess PV electricity can be sold on the electricity market or get a FiT.
- With electricity market prices that remain significant (how?)
- Transition from an investors market to an energy-savings market quite uncertain
- Road to « plain vanilla » competitiveness is complex and dangerous

THANK YOUR FOR YOUR ATTENTION

This document was presented by Gaëtan Masson

g.masson@epia.org

g.masson@iea-pvps.org

European Photovoltaic Industry Association
Renewable Energy House
Rue d'Arlon 63-67, 1040 Brussels - Belgium
T +32 (0)2 465 38 84 - F +32 (0)2 400 10 10
info@epia.org - www.epia.org