

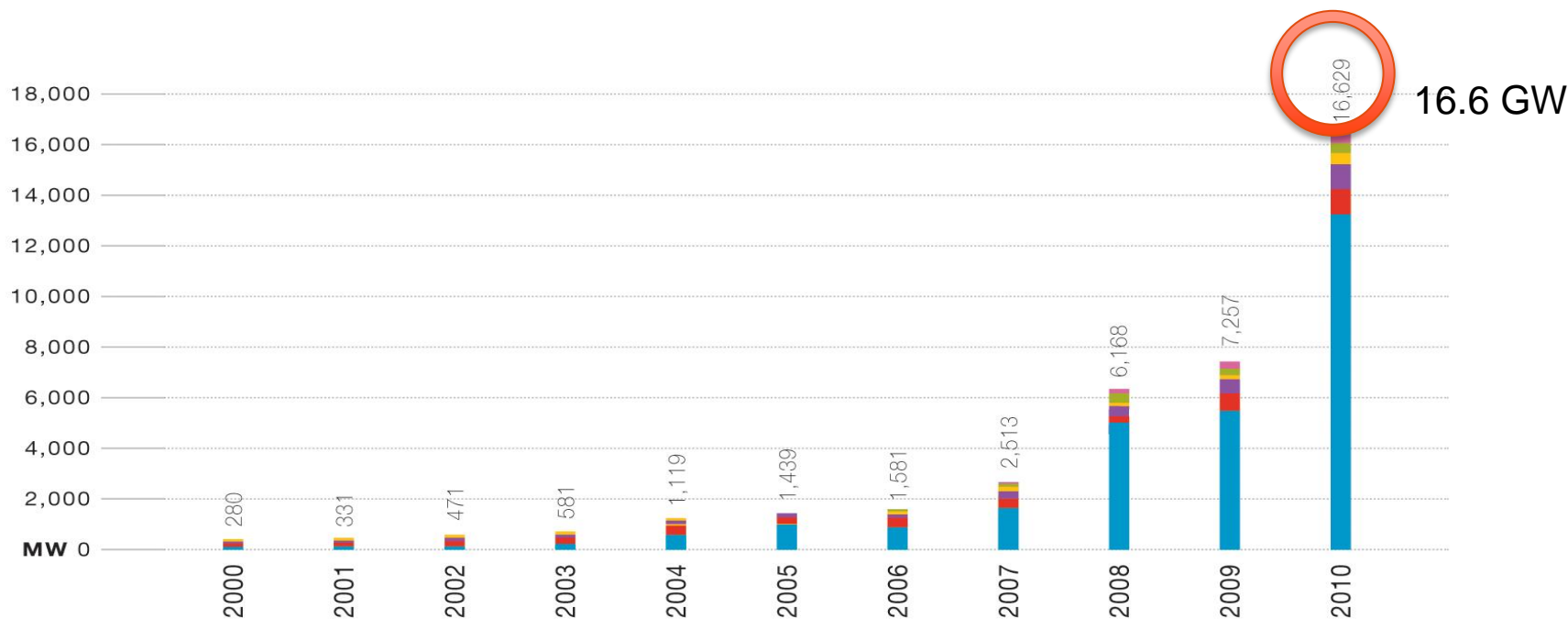
Building on the experience of European markets

**... to successfully develop PV
markets in the long term**



- **European Market Development vs Global development**
- **Overview of support schemes in main EU markets**
- **PV Observatory Policy Recommendations**

Evolution of Global Annual PV Market – 2000-2010

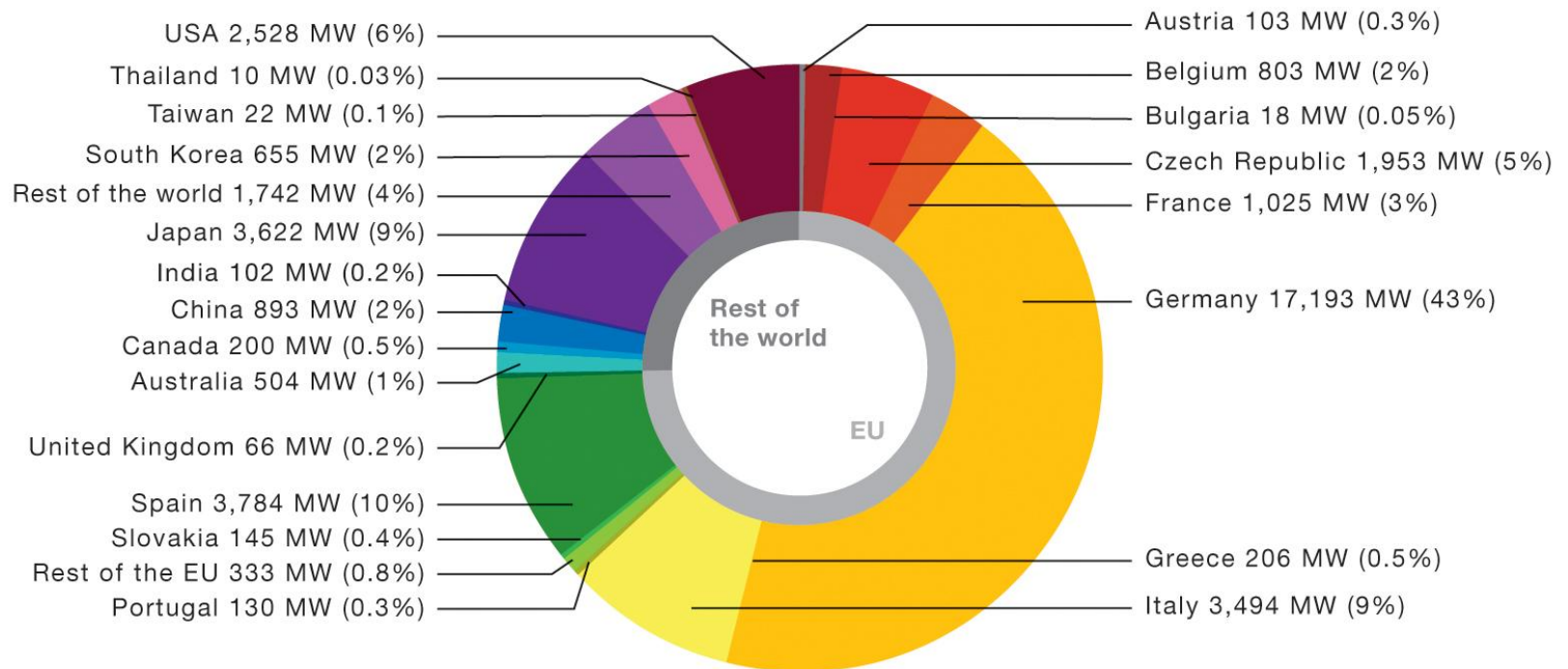


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
China	0	11	15	10	9	4	12	20	45	228	520
APEC	5	5	7	8	10	13	33	59	300	258	473
Rest of the world	88	56	80	77	29	10	118	63	115	130	417
North America	23	31	46	65	92	117	149	212	349	539	983
Japan	112	135	185	223	272	290	287	210	230	483	990
EU	52	94	139	199	707	1,005	983	1,950	5,130	5,619	13,246
Total	280	331	471	581	1,119	1,439	1,581	2,513	6,168	7,257	16,629

Evolution of global annual PV market - 2000-2010

source: EPIA

Share of Global Cumulative PV Power installed (MW, %)

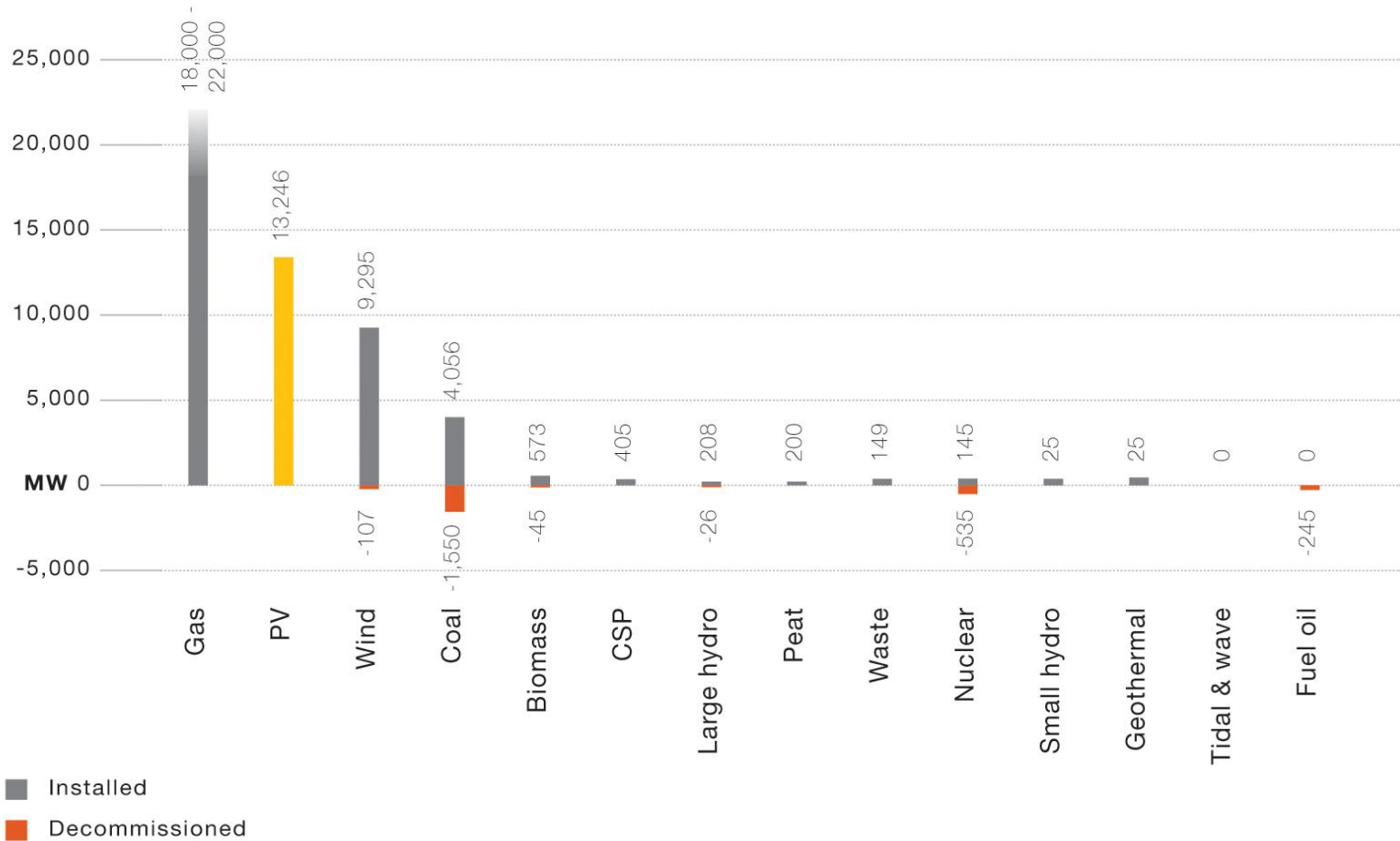


2010 global cumulative installed capacity share (MW, %)

source: EPIA

Our position in 2010... new installed capacity EU27 (MW)

- Uncertainties on gas, **PV** ahead of all RES



Power generation capacities added in 2010 in EU 27

source: EPIA

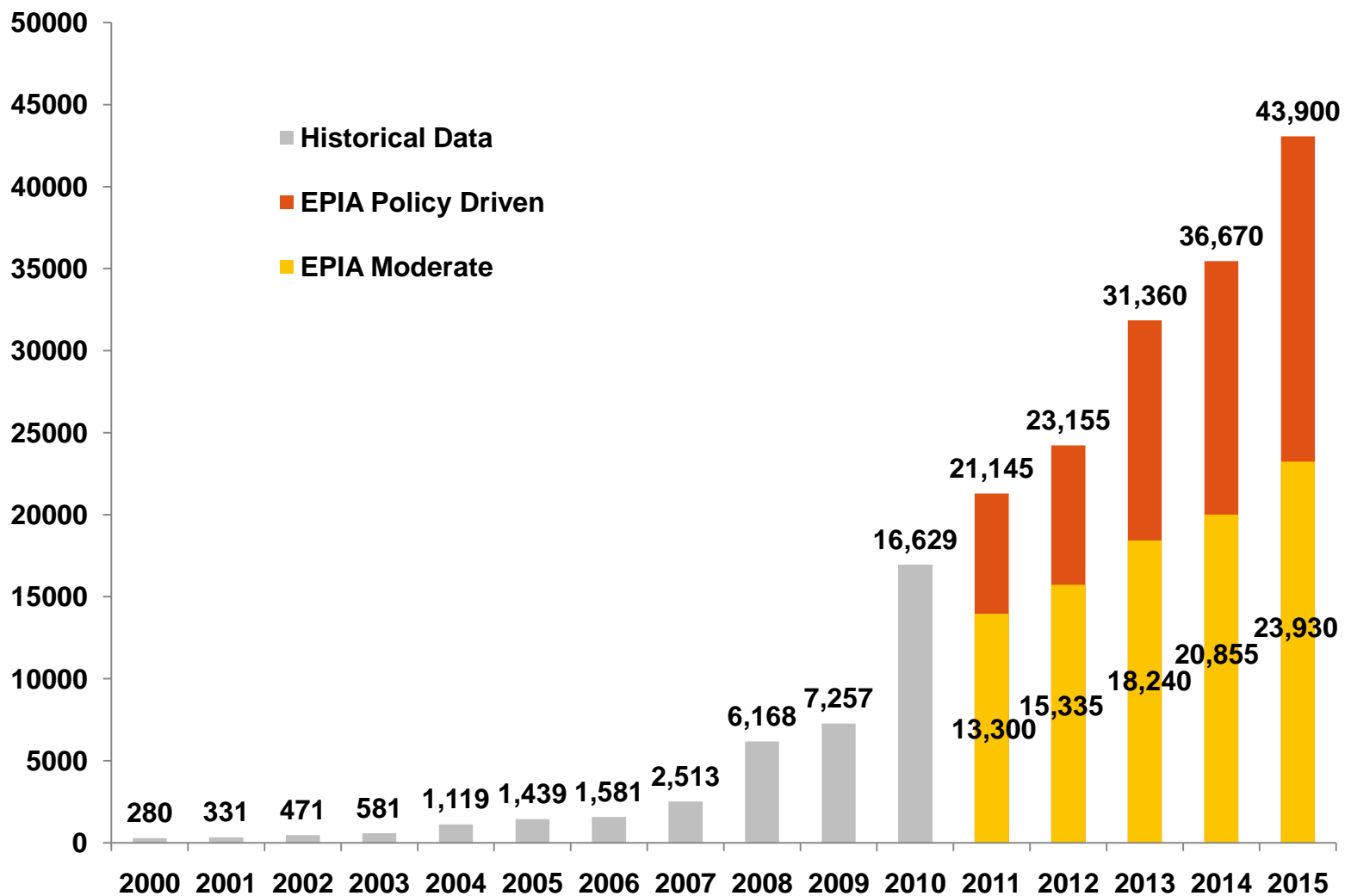
... and where are we going?

Two short term scenarios

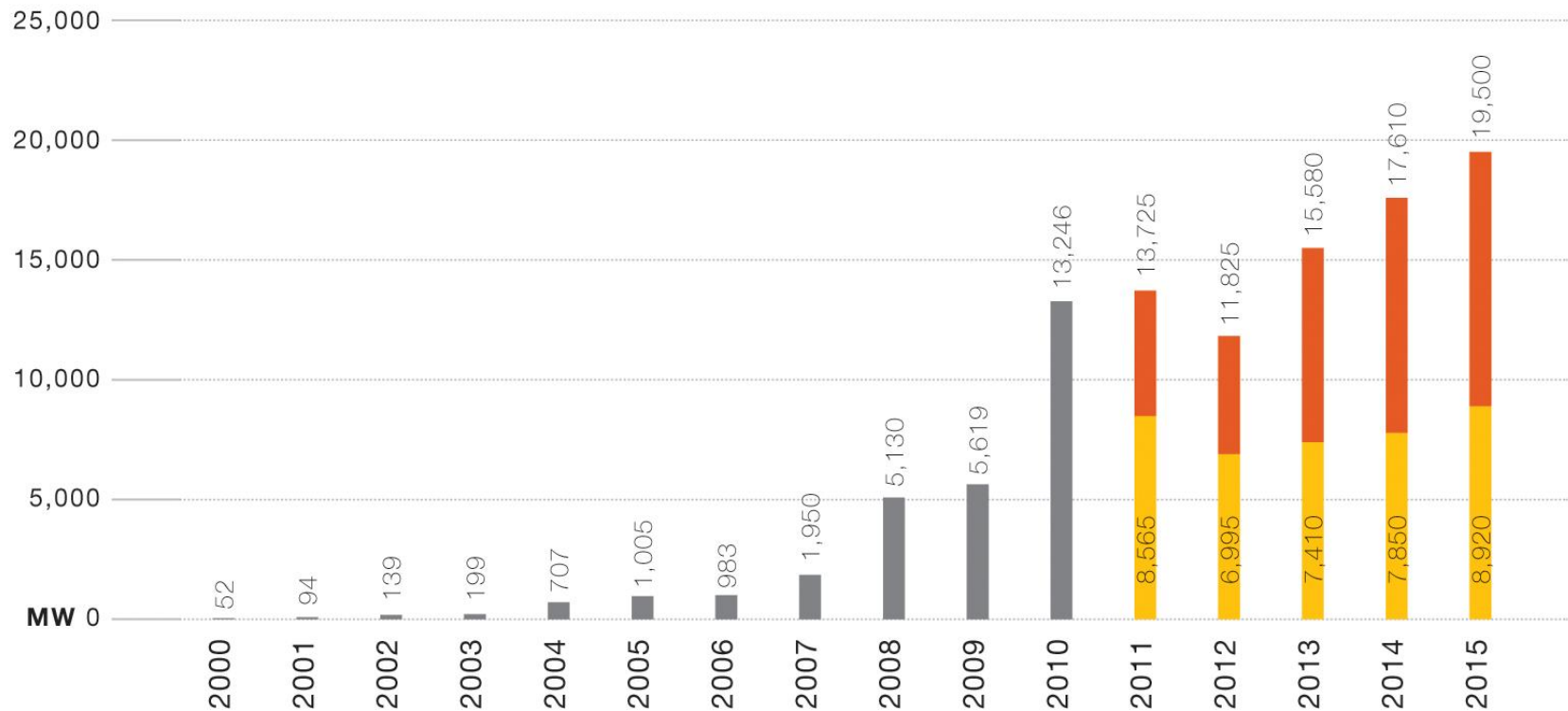
- **A Moderate scenario** (“Business-as-usual” market)
 - no major reinforcement of existing support mechanisms,
 - reasonable continuation of current FiTs aligned with PV systems prices.
- **Policy-Driven scenario:**
 - continuation or introduction of support mechanisms, namely FiTs,
 - strong political will to consider PV as a major power source in the coming years.
 - removal of non-necessary administrative barriers and the streamlining of grid connection procedures.

Global Annual Market Forecasts until 2015

Neither the worst nor the best are sure...



European Annual Market Forecasts until 2015



- EPIA Policy-Driven
- EPIA Moderate

European annual market scenarios - Moderate and Policy-Driven

source: EPIA

Unlocking new markets, stabilizing others

In Europe:

- Need to consolidate/further expand existing markets
 - Germany, Italy, France, Belgium, Spain, Greece, Portugal

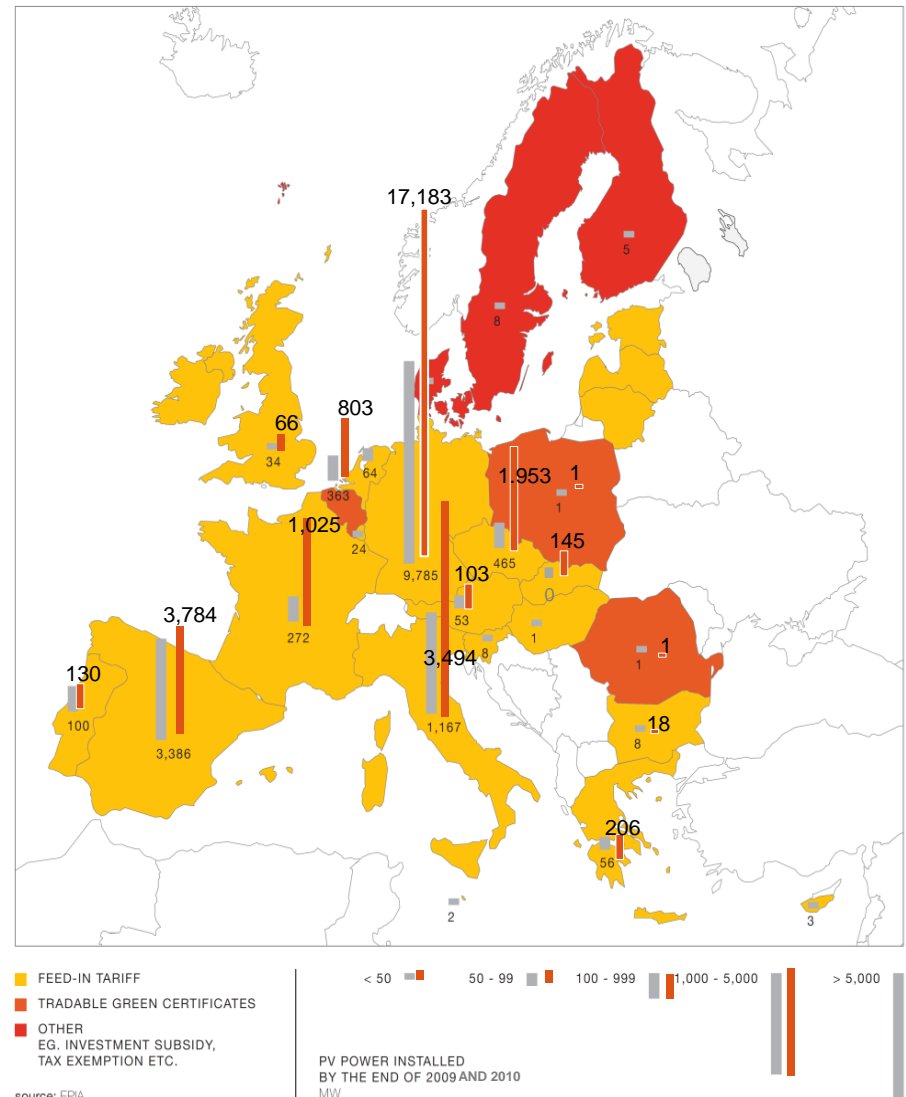
- Need to unlock/develop medium size markets
 - UK, Slovakia, Bulgaria, Hungary, Romania, Turkey...

Overview on EU support scheme and power installed by the end of 2009 and 2010

21 EU countries have implemented FiT scheme for PV, more or less successfully

Effectiveness and long-term capacity to develop the market depends on 3 components :

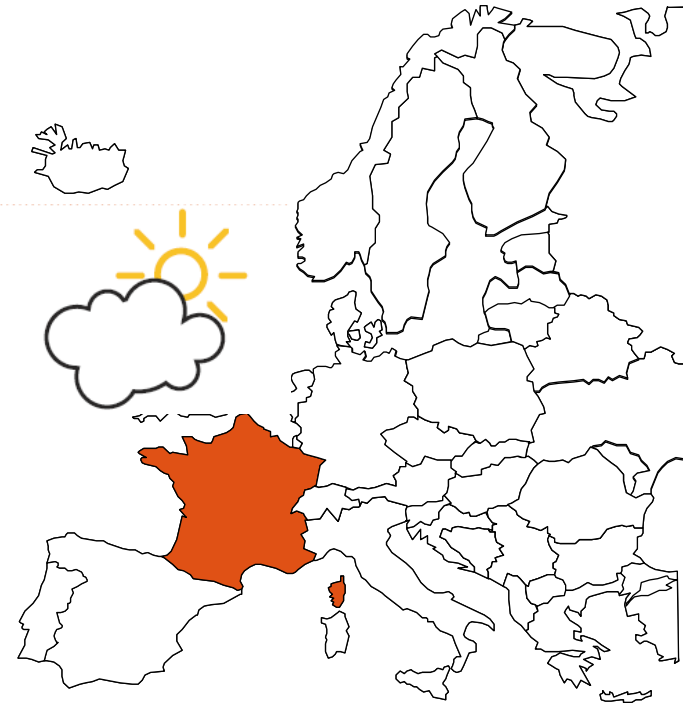
- Sustainability of the scheme
 - Streamlined administrative procedures
 - Guaranteed effective grid connection procedures
- **Green certificates** → *fix the volume*
 - **Feed-in Tariffs** → *fix the price*



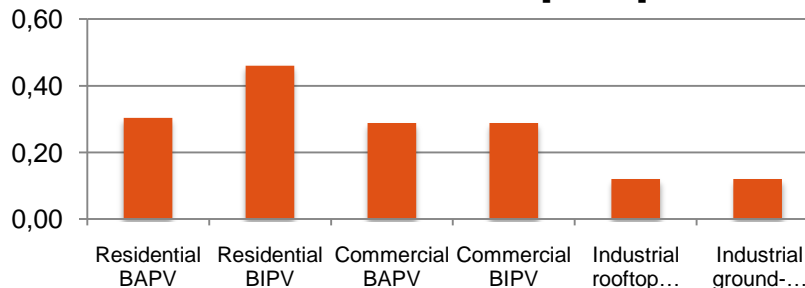
source: EPIA.

FRANCE

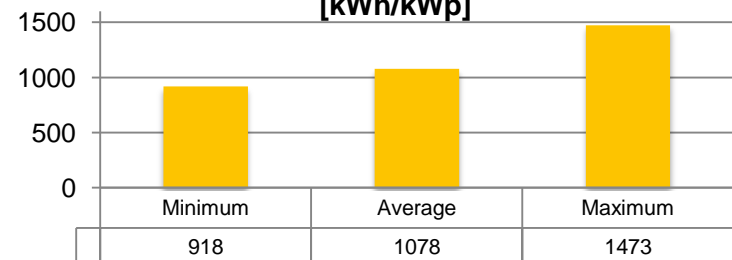
- Strong FiT reduction in 2011 for non residential systems and complex scheme
- Adverse lobbying from conventional players
- FiT limited to systems up to 100 kWp, call for tenders for larger systems
- Heavy and slow administrative process leading to artificially high prices



PV remuneration levels [€/kWh]

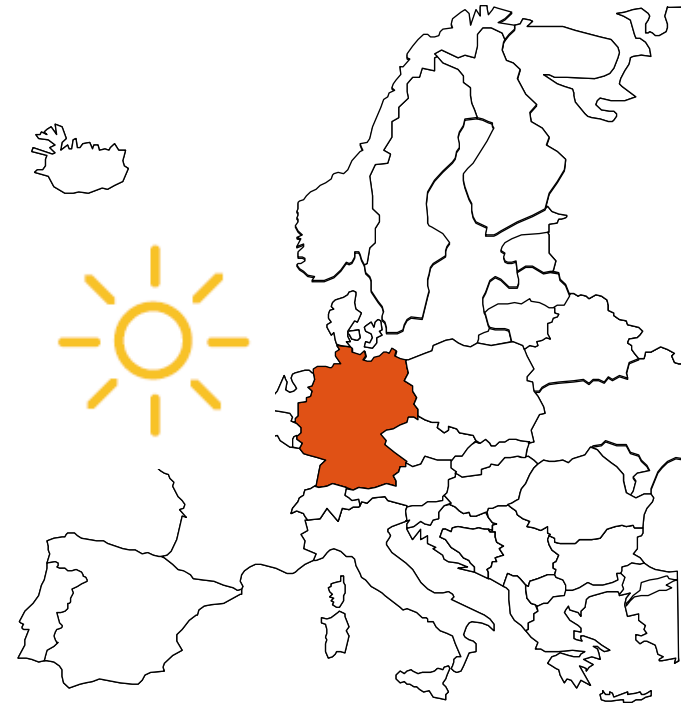


Yearly solar electricity generation [kWh/kWp]

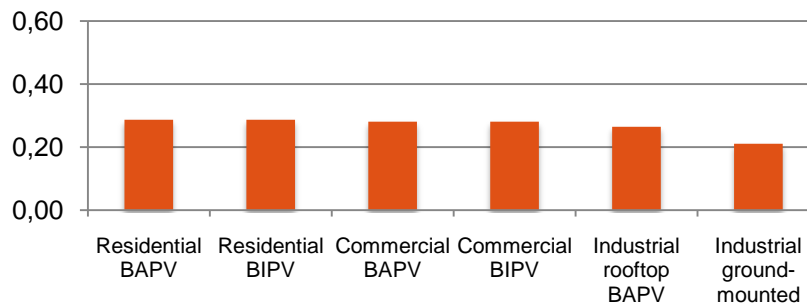


GERMANY

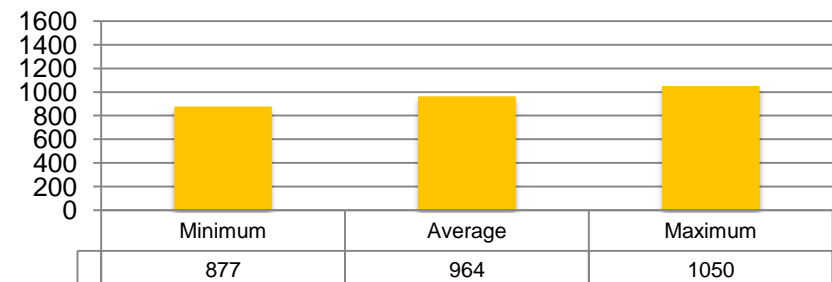
- **FiT scheme + auto consumption scheme**, with clear evolution in 2011
- Intermediate measures taken to avoid a surge of market again. Willingness to control market within defined ranges.
- Simple and lean administrative process
- Limits to grid hosting capacity arising in the South



PV remuneration levels [€/kWh]



Yearly solar electricity generation [kWh/kWp]

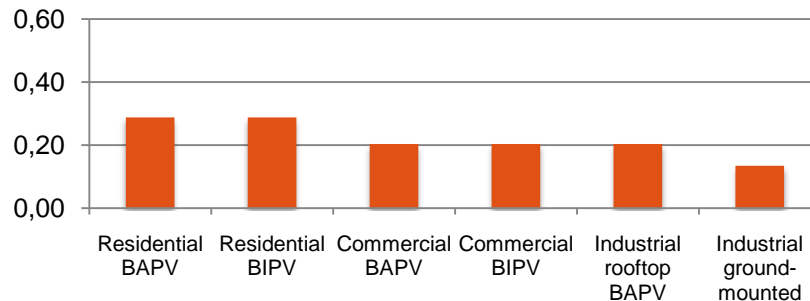


SPAIN

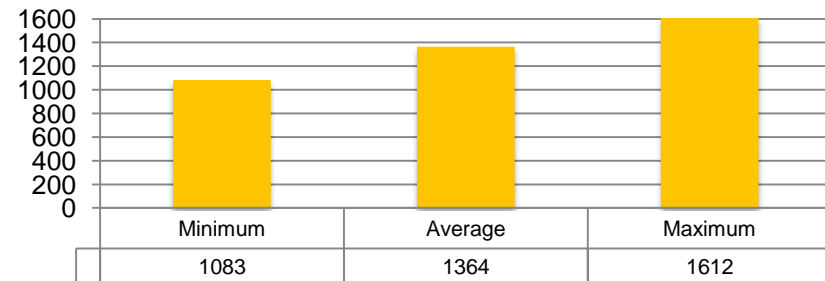
- FiT scheme, have been drastically reduced in 2011
- Problems with Market segmentation within cap need to be fixed
- Retroactive law was passed in 2010
- Heavy and slow administrative processes on all segments



PV remuneration levels [€/kWh]

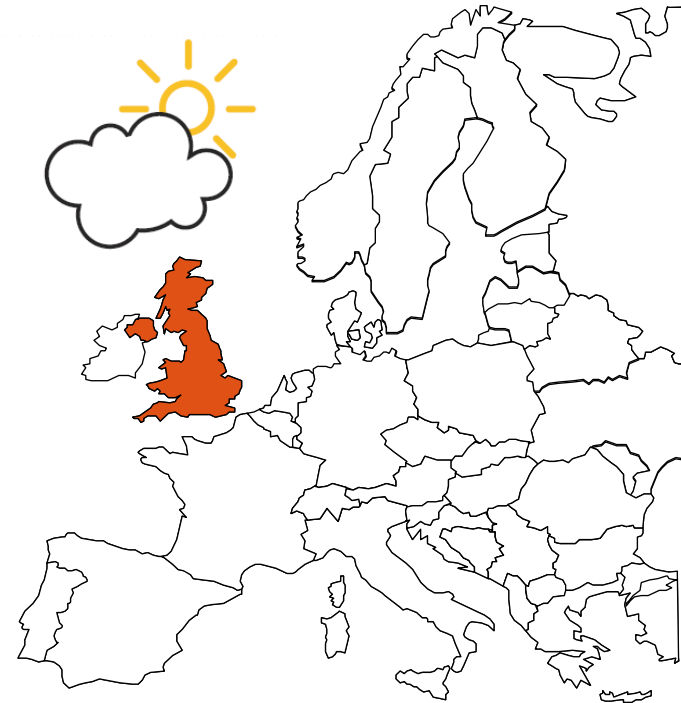


Yearly solar electricity generation [kWh/kWp]

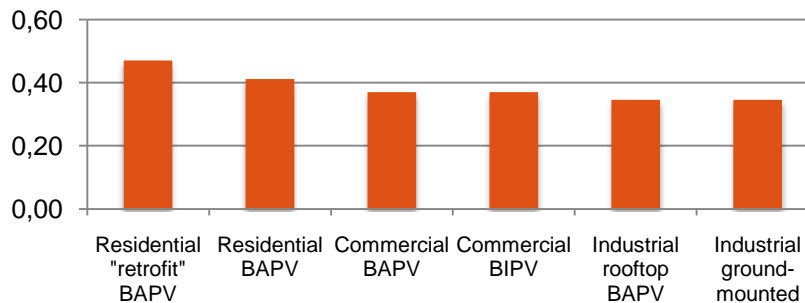


UNITED KINGDOM

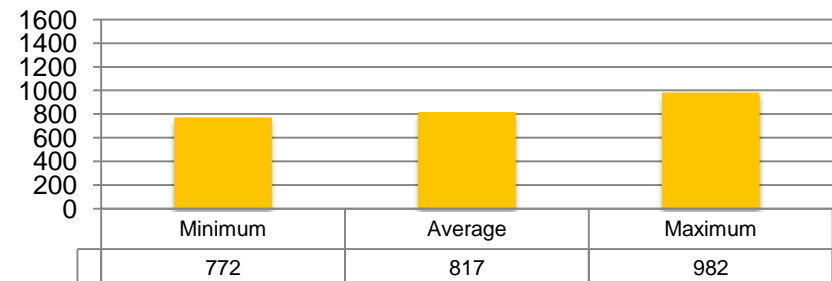
- FiT scheme since 2010
- Unclear evolution in 2011 due to early political response
- Ongoing discussions are reconsidering support to systems > 50 kWp



PV remuneration levels [€/kWh]

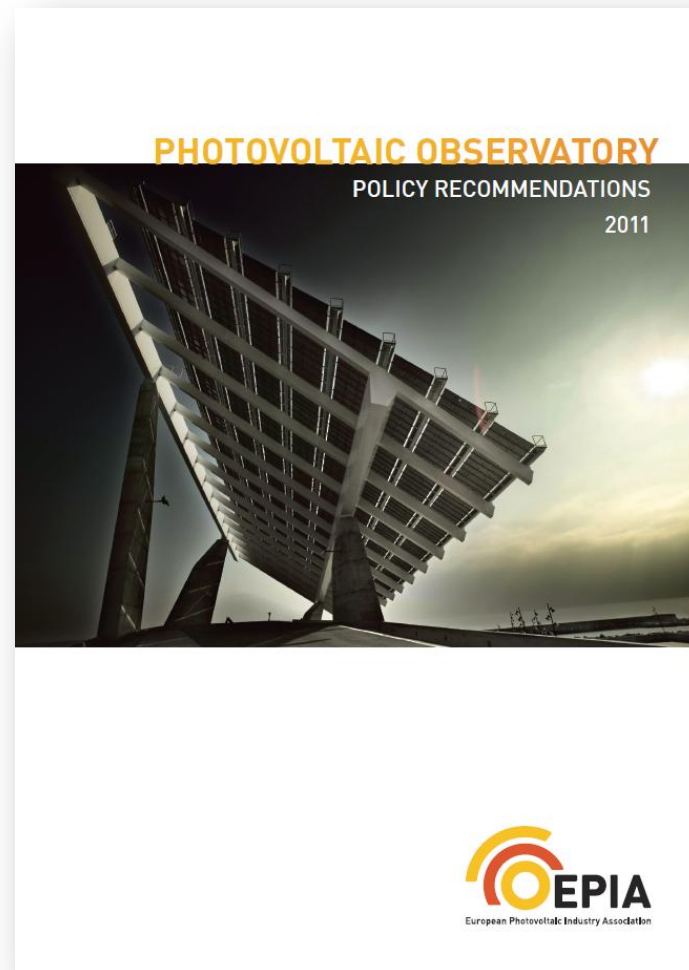


Yearly solar electricity generation [kWh/kWp]



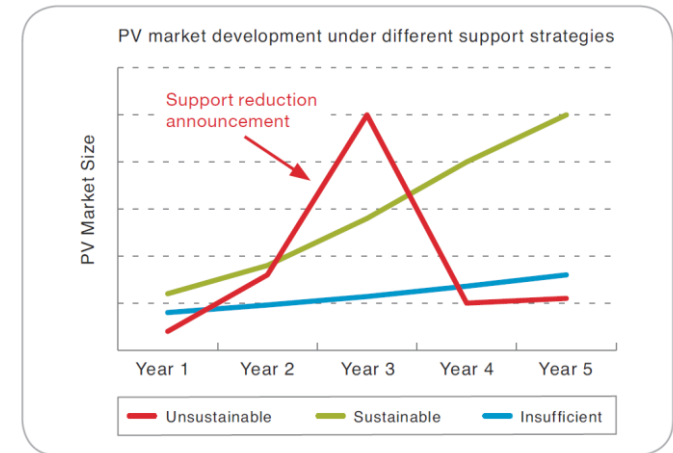
Aim:

- Identify **best practices among existing support policies** in Europe
- **Promote market transparency and PV deployment in the energy sector** across Europe
- **Advise** national decision makers on the **successful implementation of their support policies**
- Ensure the accelerated development of the market and the industry in a **sustainable** way



Pillar I: Implementing sustainable support mechanisms

1. Use Feed-in Tariffs or similar mechanisms
2. Ensure transparent electricity costs for consumers
3. Encourage the development of a sustainable market by assessing profitability on a regular basis and adapting support levels accordingly
 - Assessing the profitability through IRR calculations
4. Guarantee a gradual market development with the corridor concept
5. Develop a national roadmap to PV competitiveness



Adequate IRR levels according to investor profile

	Insufficient Support	Sustainable Support	Unstable Support
Private Investor	< 6%	6-10%	> 10%
Business Investor	< 8%	8-12%	> 12%

1. Assess the administrative process

- Transparency
- Linearity
- Simplicity
- Proportionality
- Cost effectiveness
- Reasonable duration

2. Establish a “one stop-shop” process

3. Reduce administrative lead times to reasonable periods

4. Accompany the administrative simplification by an adjustment of the support mechanisms

5. Ensure a fast and reliable monitoring system



Pillar III: Guaranteeing efficient grid connection processes



1. Assess the grid connection process

- Transparency
- Information
- Appropriateness
- Lead time
- Cost sharing

2. Reduce grid connection lead times to a few weeks

3. Ensure priority access to the grid

4. Issue grid connection permits to reliable project developers

5. Ensure the financing of network operators



Summary:

3 pillars for a successful longterm and sustainable market development



- 1. A sustainable, market driven, support scheme**
- 2. Easy and transparent administrative process**
- 3. Fast and efficient grid connection schemes**

THANK YOU!!!



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