



Recent and forthcoming EU programmes and actions in support of RD&D in PV

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Outline

Elements of EU Energy Policy

- RES support schemes
- SET-Plan



PV Support Programmes

- FP7, IEE II
- H2020 (2014-2020)

Policy Context

- **Challenges:** Competitiveness, Sustainability, Security of Supply
- **2007 – Energy for a Changing World**
“Energy and Climate Change Package”
(roadmaps, policy guidance documents, market initiatives, ...)
- **Key targets:** 3 x 20% by 2020 (EE, RE, GHG).
- **Key actors:** Power Sector, Industry and Manufacturing Sector, Building Sector, Mobility Sector.



The Strategic Energy Technology (SET) Plan

“Technology Pillar of the Energy and Climate Change Package”



Overview of the SET-Plan

- **Joint strategic planning – EU Steering Group**
- **EU-wide Strategic Energy Technologies Information System (SETIS)**
- **Main means of implementation:**
 - European Industrial Initiatives (7)
 - European Energy Research Alliance – EERA (longer-term research)
 - Trans-European Energy Networks and Systems of the Future – transition planning
- **Plus, addresses collectively issues such as:**
 - resources, both financial and human
 - international cooperation



RES Directive (2009/28/EC)

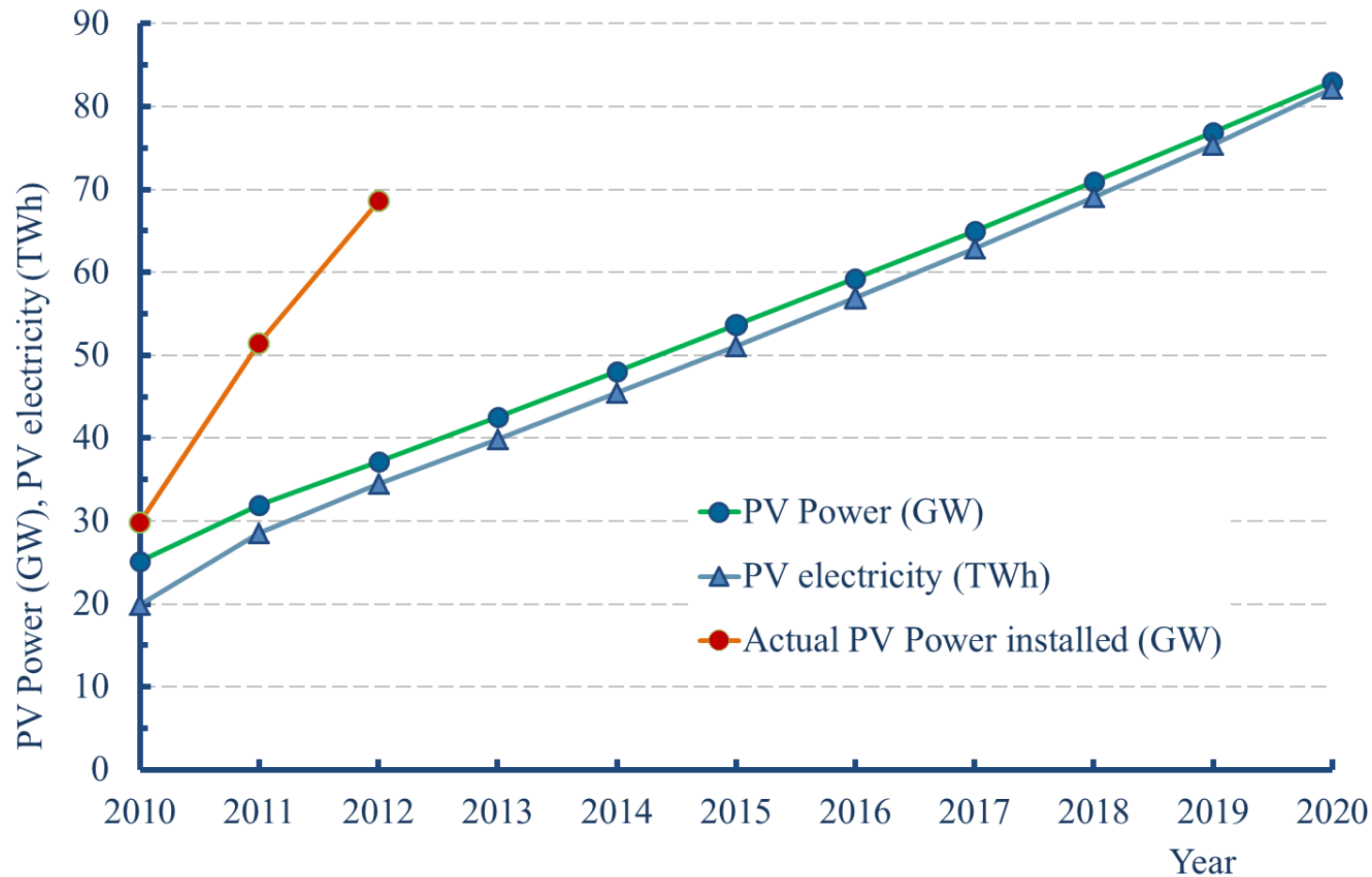
Stable framework for investments by

- **setting res targets (20% by 2020) and detailing strategies**
- **streamlining and simplifying administrative procedures**
- **better information on technologies and support schemes in MSs**

National Renewable Energy Action Plans (NREAPs)

- **detailing MSs measures and trajectory towards 2020 targets**
- **monitoring and reporting: from MSs to Commission**
- **scrutinizing and reporting: Commission**
- **PV forecast:**
EU overall installed capacity > 80 GW by 2020

NREAPs PV sectorial targets





Recent EU support to innovation in PV

Three main support programmes

- **7th Framework Programme for Research & Technological Development (FP7), 2007-2013**
Overall budget: 50.5 Bn€, of which 2.3 Bn€ for non-nuclear energy
- **Intelligent Energy Europe (IEE), 2007-2013**
Non-technological factors
Overall budget: 720 M€
- **Emissions Trading Scheme – NER 300** (CO₂ emissions market)
Demonstration projects

Two ongoing SET-Plan related initiatives

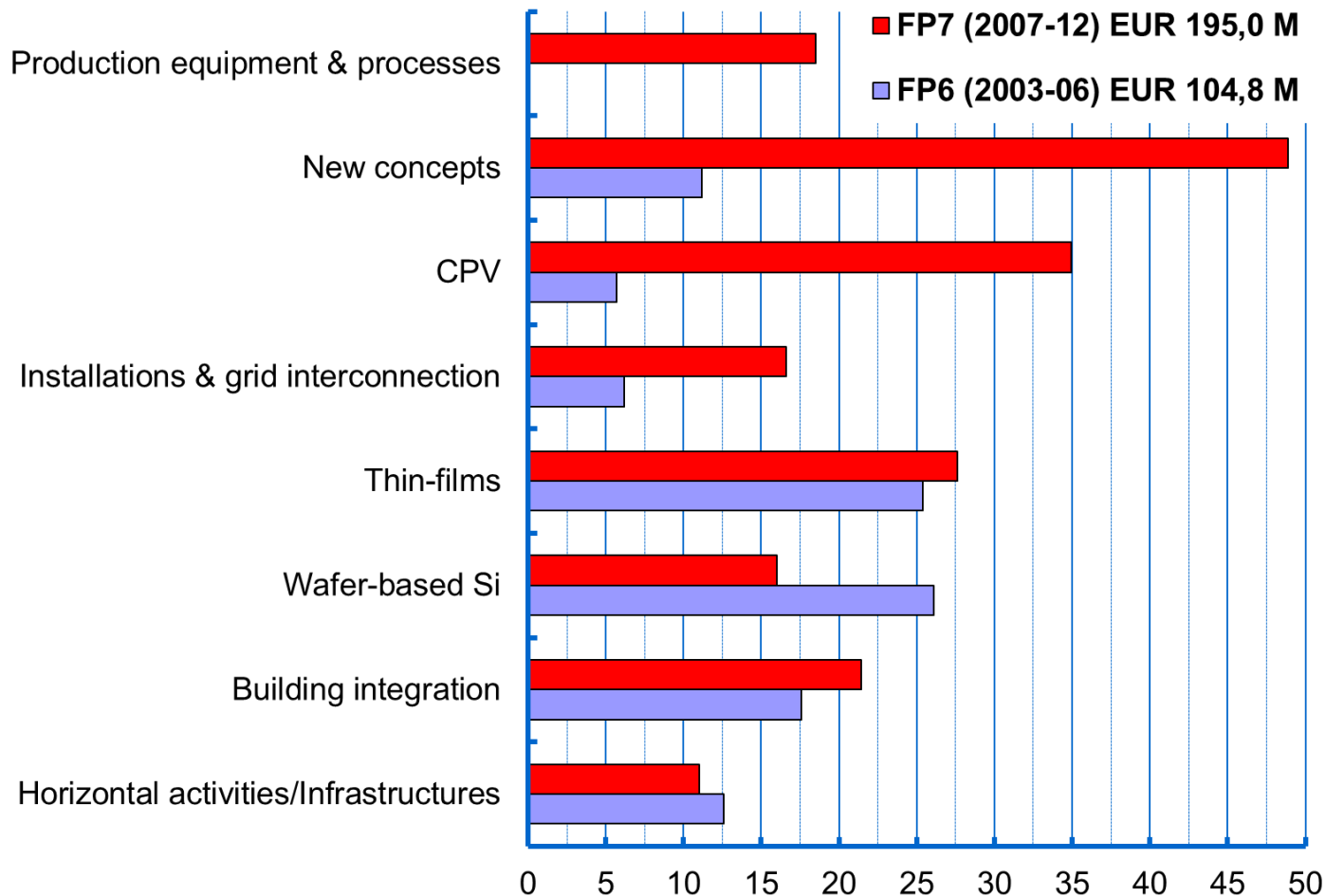
- **the Solar Energy Industry Initiative (SEII) of the SET-Plan**
- **European Energy Research Alliance (EERA)**



Solar Europe Industry Initiative (SEII)

- The Initiative covers both PV and CSP.
- Overall target: 15% of European electricity demand by 2020 (12% PV + 3% CSP).
- Launched in June 2010.
- “SEII-Team”: industry representatives, European Commission, EU Member States, EERA.
- Presently, 13 MSs actively involved.
- Focus: industry-oriented RD&D projects of European relevance, with a potential for large-scale exploitation.
- Current priority: SOLAR ERA-NET project, new Integrated Energy Roadmap, definition of possible financing instruments.

FP investment in PV activities (EUR M)





Which support in the future?

RD&D in PV will continue to be supported within the framework of

Horizon 2020

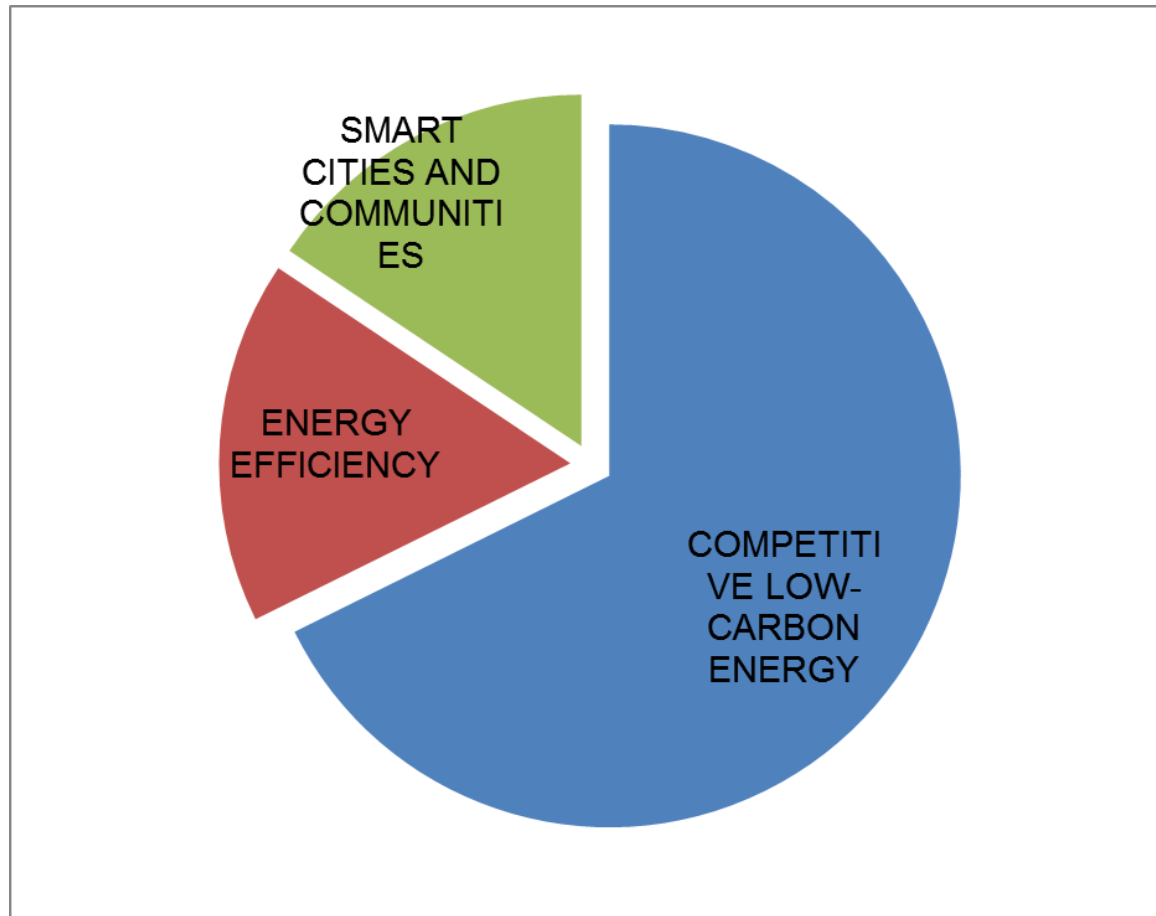
and more specifically under the

"Secure, Clean and Efficient Energy" Challenge,

accounting for about **5.7 B€** out of a total budget of **70 B€** for the period **2014-2020**.

The 2014/2015 Energy Call is now open...

H2020 "Energy Challenge" budget share (call 2014-2015)



Sector challenges to be addressed in the near future

- Since 2010 **the world has added more PV capacity than in the previous 4 decades**
- The geographical pattern of **deployment has shifted from Europe** to other parts of the world
- In the last few years **manufacturing of PV systems has been concentrated in Asia** (particularly China); **future progress** is likely to be **driven mainly by technology innovation**; the possibility of global manufacturing capabilities (if R&D efforts are strengthened) is open
- PV system prices have dropped by factor 3 (last 6 years) and module prices by 5; however **further reductions need to be pursued (while system efficiencies increase)**
- The **variability of the solar resource is a challenge**; all flexibility options –interconnections, flexible generation, demand-side response and storage- need to be developed



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