EU 2020 objectives
Strategic Energy Technology (SET) Plan
Solar European Industrial Initiative

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5th GA of the European PV TP
18 June 2010 – Toledo, Spain

Note: Document not legally binding
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- SET Plan
  - European Industrial Initiatives (EIIs)
  - European Research Alliance (EERA)
- Investments in PV R&D
- ETS NER 300
A complex Policy Jigsaw

- Taxation
- Global Cap & Trade
- State Aid
- Development Policy
- Competition

ETS

Targets

Internal Market

Technology

SET-Plan

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Strategic Objectives

Sustainability: world leadership in halting climate change

Climate change

Security of supply: oil & gas supply concerns, price volatility

Renewable Energy Sources and Energy Efficiency

Competitiveness: world-leading innovative industrial sector

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Binding and mandatory targets for 2020*

- Renewable energy: 20% of consumption
- 10% of all transport fuel to be renewable
- GHG emissions reduced by 20%
- Energy efficiency increase of 20%

National RE Action Plans

- Setting out the pathway towards the 2020 national target for each Member State.

- Critical for:
  - the necessary stability / predictability for investors
  - the Commission's ability to effectively enforce the Directive and keep Member States on track
  - The Member States to have an adequate implementation strategy
  - transparency of RES developments in the EU
National RE Action Plans

- National plans to be submitted by Member States by 30 June 2010 setting out:
  - national sectoral targets and trajectories adequate measures to achieve the overall target
  - planned statistical transfers or joint projects
  - support schemes for each type of renewable energy
  - measures to remove administrative barriers
The SET Plan

- Joint strategic planning / New governance / Information System (SETIS)
- Three main pillars for implementation:
  - European Industrial Initiatives (EII)
  - European Energy Research Alliance (EERA)
  - Trans-European Energy Networks and Systems (transition planning)
- Increase resources, both financial and human
- Reinforce international cooperation
Technology Roadmaps 2010-2020:

- Technological objectives → Concrete action plans → Estimated investments needed for the period 2010-2020 to achieve:

  - Up to 20% of the EU electricity produced by wind energy technologies by 2020
  - **Up to 15% of the EU electricity will be generated by solar energy in 2020**
  - By 2020, 50% of networks in Europe operate along “smart principle” effectively matching supply and demand.
  - 25 to 30 European cities will be at the forefront of the transition to a low carbon economy by 2020.
Recent developments:

- **Official Launch of the SEII in Madrid in June**
- **Presentation of the Implementation Plan 2010-2012**
- **First meeting of the SEII TEAM in Brussels, May 2010**
  - Common interests at Member State level have been defined
  - Follow-up action, definition of the KPI’s
The conclusions of the SEII Team meeting, May 2010

Short Term:

- Advance manufacturing technologies (wafer, cells, modules)
  - Reducing the Cost of manufacturing (↓ €/W)
- Building Integrated PV: Product design & application development
  - Increasing added value of PV in buildings
- Concentrator PV: large field demonstration
  - Reducing PV electricity generation cost: (↓ €/kWh), increasing reliability
The conclusions of the SEII Team meeting, May 2010

Medium/long Term:

- Materials development (incl. Organic cells)
  - Increasing lifetime, improving environmental footprint and decreasing manufacturing cost

- Smart PV modules
  - Easing their installation, interface to the network,
  - Reducing PV electricity generation cost: (↓ €/kWh)
Next steps:

- Dedicated meetings of the SEII Team
  - Identify concrete projects
  - Identify financing mechanisms/programmes
  - Define implementation time lines
  - Define specific KPI’s for those projects
Solar EII Team

Composition of the SEII Team and complementary Structures

Members States:
High Level Steering Group

SEII Team
- EU PV TP / EERA: 5 R&D
- EPIA: 5 Industry
- EC
- National representatives
- Financial institutions

Industry Advisory Committee

Research (+) Advisory Committee
EU PV Technology Platform / EERA

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FP7 (EC) Energy
EEPR (CCS & Wind)
NER300

Today's value

B€

0 1 2 3 4 5 6 7 8 9

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NER300 Decision
- 2 Feb 2010 - Approved by Climate Change Committee
- May 2010 - Parliament scrutiny
- Early summer 2010 - Formal Adoption by Commission

1st Call (200 M EUA)
- 3rd quarter 2010 - Publication
- 4th quarter 2010 - Deadline for submission to MS
- 1st quarter 2011 - Deadline for submission to EIB
- 31 Dec 2011 - Deadline for Award Decision

2nd Call (100 M EUA)
- 31 Dec 2013 - Deadline for Award Decision

31 December 2015 – entry into operation of projects of 1st Call
THANK YOU FOR YOUR ATTENTION

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European Energy Research Alliance (EERA) aims to:

- Strengthen, expand and optimise research capabilities
- Harmonise national and EC programmes (decrease fragmentation)
- Draw on results from fundamental research
- Mature technologies to hand-over to industry-driven research
Important Upcoming Activities:

- June 2010 Meeting JP Management Board
- Fall 2010 Kick-off JP sub-programmes
- Fall 2010 Start SOPHIA Research Infrastructure project
EU investment trends ...

Aggregated public R&D budgets (Mio Euros 2007)

- R&D to non-nuclear SET-P priority technologies
- Other non-nuclear energy R&D
- Nuclear energy R&D

Source data: IEA

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Results PV

- Public EU (FP6, annual average)
- Public R&D spending of EU MS (2007)
- Corporate R&D investment (2007)

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EU FP Investment in PV

FP Investments in PV, 2003-2009 (Euro million)

- Thin-films
- Concentration PV
- New concepts
- Building integration
- Innovative installations & grid interconnections
- Production equipment & processes

FP7 (2007-09) EUR 87.8 M
FP6 (2003-06) EUR 105.6 M

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Investment has to increase

- Need for a step change in investment

- From 3b€ to 8b€ per year (public and private) = an additional investment of 50b€ over the next 10 years

- IEA World Energy Outlook 2009: additional 10.5 trillion $ over baseline up to 2030

- Translates into huge global market opportunity