

The future for European R&D funding

13th July 2011

Kerry Young
EU Energy Focus





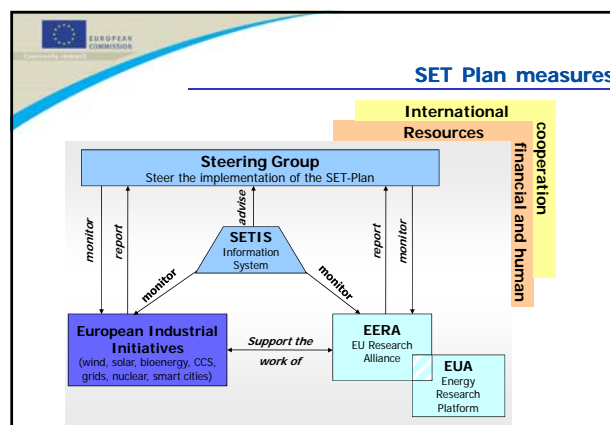

Overview

- SET-Plan
- European Industrial Initiatives
- EERA
- Future Framework Programme
- Questions




Strategic Energy Technology Plan



- EU's response to the challenge of **accelerating** the development of low carbon technologies
- Vision of a Europe with **world leadership** in a diverse portfolio of clean, efficient and low-carbon energy technologies
- Aims to make low-carbon technologies affordable and competitive
- Commission estimates that an additional investment of **€50 billion** is needed in energy technology research
- SET-Plan will guide the content of FP7 Energy Calls in the future








European Industrial Initiatives

- EIs bring together industry, the research community, the Member States and the Commission in risk-sharing, public-private partnerships
- Target sectors in which working at EU level adds most value and technologies for which barriers, scale of investment and risk is better tackled collectively
- Aim to strengthen industrial participation in energy research and demonstration, boost innovation and accelerate deployment of low-carbon energy technologies

EIs – state of play

- EIs in wind energy, solar energy (CSP & PV), electricity grids, bio-energy, carbon capture and storage and nuclear launched in 2010
- EII teams operational and implementation plans 2010-2012 developed
- Smart cities and communities EII launched 21 June 2011
- The 2011 and 2012 FP7 Energy Work Programmes are largely directed towards EII implementation



European CO₂ Capture, Transport & Storage Initiative

Aim - to further demonstrate and develop the most promising CCS technologies in power generation and in other energy-intensive industries that use fossil fuels.

- Long-term aim – to achieve commercial viability of CCS under EU Emission Trading Scheme by 2020

Activities:

- Large demonstration programme aimed at construction & operation of up to 10 industrial-scale CCS projects by 2015
- Research programme building on and complementing CCS demonstration activities
- Estimated cost of initiative - €13 billion over 10 years



The European Electricity Grid Initiative

Aim – to develop, demonstrate & validate, at scale, the technologies, system integration & processes to:

- Enable transmission & distribution of up to 35% of electricity from renewable sources by 2020 & de-carbonise electricity production by 2050
- Further integrate national networks into pan-European, market-based network

Activities:

- Integrated R&D & Demonstration programme , a network of up to 20 large-scale demonstration projects & a technical support structure to monitor progress and enable success to be replicated across Europe
- Estimated cost of initiative - €2 billion over 10 years

The Solar Europe Initiative

Aim - to make photovoltaics (PV) and concentrating solar power (CSP) technologies more competitive & to facilitate their large-scale penetration in urban & green-field locations & integration into electricity grid

Activities:

- R&D programme to enhance performance & life of PV systems & components
- PV pilot production plants for manufacturing processes
- R&D and demonstration programme for CSP technologies
- Portfolio of demonstration projects of power production
- Estimated cost of initiative - €16 billion over 10 years






The European Wind Initiative

Aim - to make wind energy more competitive, harness potential of off-shore resources & deep waters & to facilitate grid integration of wind power

Activities



- To develop more accurate mapping of wind resources & capacity potential in Europe
- 5-10 new testing facilities for new turbine systems
- Up to 10 demonstration projects of next-generation turbines including a 10-20 MW prototype
- At least 4 prototypes of new off-shore structures
- Demonstration of new manufacturing processes & industrial-scale grid integration
- Estimated cost of initiative - €6 billion over 10 years

The European Industrial Bio-energy Initiative

Aims to address barriers to further development and accelerated commercial deployment of selected SOA bio-energy technologies



- Activities include up to about 30 industrial size demonstration and/or first of their kind industrial plants
- Estimated cost of initiative €9bn over 10 years

The Sustainable Nuclear Initiative

Aims to demonstrate the long-term sustainability of nuclear energy

- Activities include the design & construction of demonstration reactors, pilot fuel fabrication workshop, coordinated R&D programme and development of supporting research infrastructures
- Estimated cost of initiative 7-10bn € over 10yrs

Smart Cities Initiative

Aims to improve energy efficiency and to step up deployment of renewable energy in large cities



- Activities are still being prepared

The FCH joint Technology Initiative

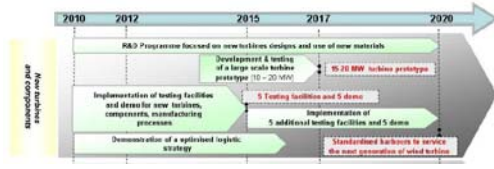
Aims to speed up the development of H-supply & fuel-cell technologies to enable industry to take large-scale commercialisation decisions

- Activities include research, technological development, large-scale demonstration projects and support actions



SET-Plan roadmaps

Technology Roadmaps 2010-2020 for the implementation of the SET-Plan – prioritisation of development needs, example below



Roadmaps for wind, solar, electricity grid, bio-energy, carbon capture and storage, nuclear fission, smart cities

http://ec.europa.eu/energy/technology/set_plan/doc/2009_comm_investing_development_low_carbon_technologies_roadmap.pdf

SET-Plan Information System

- SETIS supports the strategic planning & implementation of the SET-Plan
- Assesses low-carbon technological pathways
- Estimates current public & private R&D and demonstration expenditures
- Contributes to roadmaps via EIs
- Evaluates overall progress of technology development programmes
- Analyses issues related to spatial planning & infrastructure
- Simulates evolution of EU's energy technology mix & impact of SET-Plan implementation



European Energy Research Alliance

- ➔ **7 Joint Programmes (JPs) launched in 2010** on PV, Smart Grids, Wind, Geothermal, CO2 Capture and Storage, Material for Nuclear, Bioenergy
- ➔ **2 New JPs in the pipeline for 2011:** CSP and Marine energy
- ➔ **The first EERA Annual Congress in Brussels on 11-12 April 2011**

Future FP

- The future EU funding programme for research and innovation will be called "**Horizon 2020**" - the **Framework Programme for Research and Innovation**
- Currently with European Parliament and Council as part of the EU 2014-2020 budget negotiation
- Aim of simplification, to bring together competitiveness and innovation with R,D&D
- EIs will have strong influence on activities funded in future



Getting further help and advice

- Latest updates in monthly email bulletin
 - DECC EII contacts
 - UK National Contact Point – EU Energy Focus
- 0161 874 3636
energie@enviros.com
www.energiehelpline.co.uk

