



THE EU FRAMEWORK PROGRAMME
FOR RESEARCH AND INNOVATION

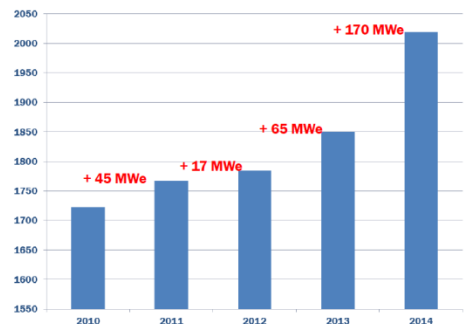
ETIPs and the SET-Plan



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Positive developments & growth in the geothermal sector

Summary of Key Conclusions Electricity



Cumulative Installed capacity in Europe – 2010-2014 (MWe)



➤ *EC support to Geothermal Energy R&I*

➤ **FP6 + FP7: ~49 M€;**

➤ **H2020:**

2014-15 Work Programme: ~70 M€

Geothermal Projects funded (M€)

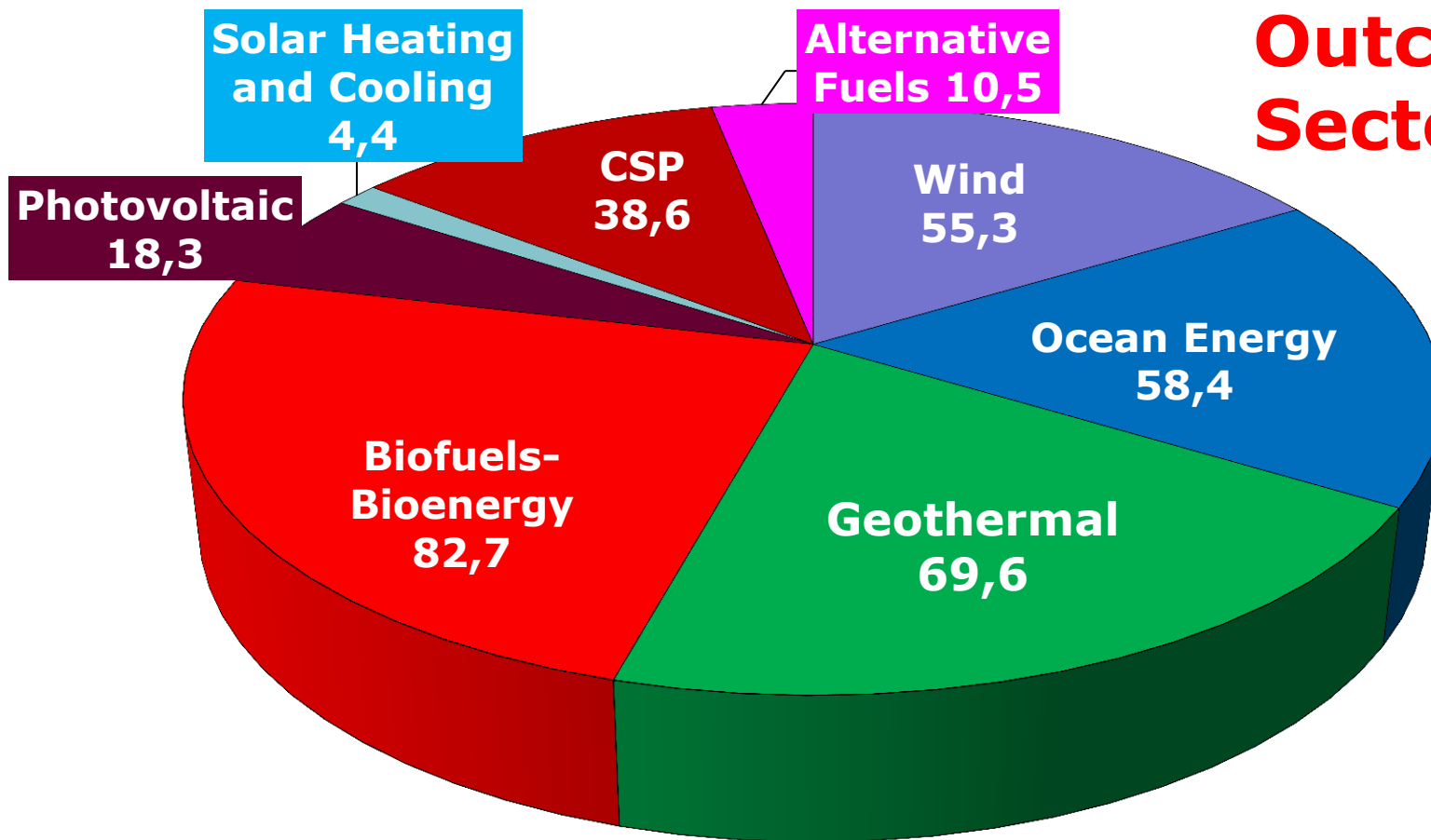
2014 24,1

2015 45,6

Total 69,6

R&I in Renewables: Work Programme 2014-2015

**Outcome by
Sector (M€)**



Feb 2015: Energy Union

Energy Union: 5 Pillars



- 1. Energy security, solidarity and trust***
 - 2. A fully integrated European energy market***
 - 3. Energy efficiency contributing to moderation of demand***
 - 4. Decarbonising the economy***
 - 5. Research, Innovation and Competitiveness***
- ⇒ **the Strategic Energy Technology Plan (SET Plan) as a key implementing pillar**

Sept 2015: a new impetus given to the SET Plan

- A key innovation pillar of Energy Union
 - To accelerate the European energy system transformation
-

↪ A more targeted focus



↪ A more integrated approach...



↪ Towards prioritisation

↪ A new SET Plan management:

- results-oriented
- wider range of stakeholders involved
- increased transparency, accountability, monitoring of prog knowledge sharing

(via SETIS Strategic Energy Technology Information System).





More focused & integrated priorities

Energy Union Priorities

SET Plan Ten Key Actions

4 Core priorities

No1 in Renewables

1. Performant renewable technologies integrated in the system
2. Reduce costs of technologies

Smart EU energy system, with consumer at the centre

3. New technologies & services for consumers
4. Resilience & security of energy system

Efficient energy systems

5. New materials & technologies for buildings
6. Energy efficiency for industry

Sustainable transport

7. Competitive in global battery sector (e-mobility)
8. Renewable fuels



More focused & integrated priorities

Energy Union Priorities

SET Plan Ten Key Actions

2 Priorities for interested Member States

9 Driving ambition in carbon capture storage and use deployment

10 Increase safety in the use of nuclear energy



The SET Plan Actors

European Commission & Countries

[EU28 + CH, IS, NO, TR]

- **Steering Group / Bureau**
- **Joint Actions Working Group**



Stakeholder platforms

- **European Technology and Innovation Platforms (ETIPs)**
- **The European Energy Research Alliance (EERA)**
- **Others e.g. European Public-Private partnerships Fuel Cells & Hydrogen, Bio-based Industry, Energy Efficient Buildings, Sustainable process Industry)**



SET Plan Prioritisation

For each of the 10 Key Actions

- 1. A few R&I targets proposed by the EC from the Integrated Roadmap**
- 2. Large consultation (Stakeholders/Member States)**
- 3. *Agreement on a limited set of targets ('Declarations of Intent')***

→ Next step – Implementation

**via EU & national programmes, industry,
European Investment Bank – private
investors**





Example of R&I targets

Solar Thermal Electricity (CSP/STE) 'Declaration of Intent'

- 1. Short-term:** *> 40% cost reduction by 2020 (from 2013) translating into*
 - ➔ *Supply price* < 10 c€/kWh for a radiation of 2050 kWh/m²/year (conditions in Southern Europe)*
- 2. Longer-term:** *develop the next generation of CSP/STE technology*
 - ➔ *New cycles (including supercritical ones) with a first demonstrator by 2020, with the aim to achieve additional cost reductions and opening new business opportunities.*

* The supply price is meant to be the targeted price within Power Purchase Agreements (PPA) with a duration of 25 years





C. The SET Plan Actors

European Technology & Innovation Platforms

Industrial Pillar

NEW

- Continuation of existing ETPs and EIIs in unified Platforms per technology.

- Recognised interlocutors about sector specific R&I needs

NEW

- **Composition – covering the whole innovation chain: industrial stakeholders** (incl. SMEs), **research organisations** and academic stakeholders, representatives of businesses, regulators, civil society and NGOs, representatives of MS

NEW

- Provide strategic recommendations to and input for the SET Plan Steering Group on the 10 priorities
- Role in the implementation