

An Energy Union for Research, Innovation and Competitiveness



Repowering Europe
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Towards an Energy Union

- **The Energy Union is a top priority for this Commission**
- **More cooperation/coordination among MS is expected in order to better face current challenges, in particular as regards energy security and climate**
- **More cooperation/coordination among MS is the foundation of the European Research Area**

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 new Strategic Energy
Technology Plan
(SET Plan)**



Strategic Energy Technology (SET) Plan

- **The technology pillar of EU energy and climate change policy**
- **In force since 2010/11**
- **Objective: to accelerate the development of a portfolio of low carbon technologies leading to their market take-off**

A bit of history...

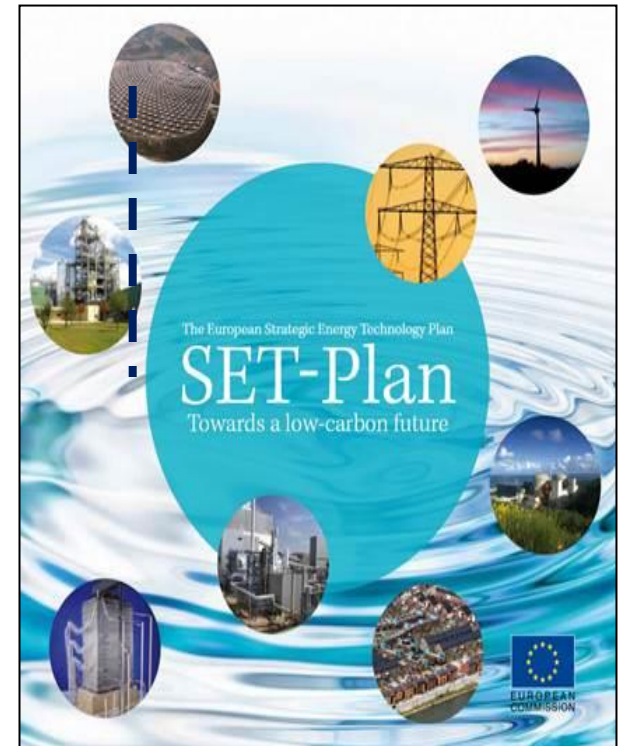
- **First links to policy agenda:
2020 targets for energy & climate**

**-20 %
Greenhouse
Gas Emissions**

**20%
Renewable
Energy**

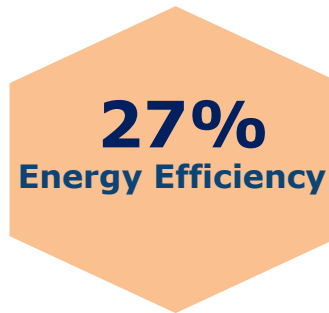
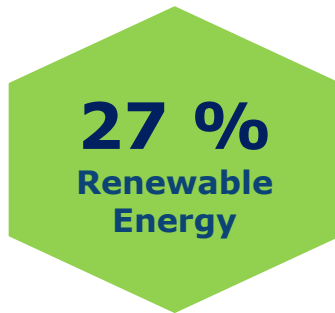
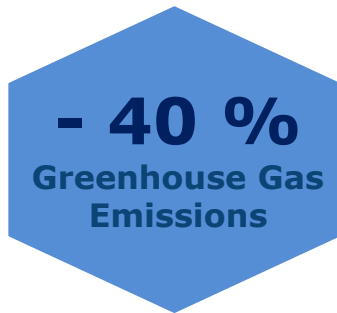
**20 %
Energy
Efficiency**

- **Focus on individual technologies with
market and target impact up to 2020**

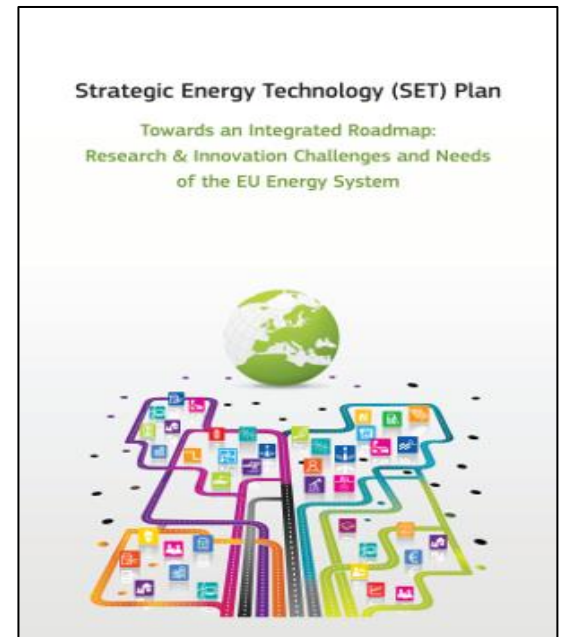


"Towards an Integrated Roadmap"

- **Still links to policy agenda:
2030 updated targets for energy & climate**



- **From individual technologies to energy system as a whole**
- **New policy challenges:**
 - Consumer at the centre
 - Energy efficiency (demand)
 - System optimisation
 - Technologies (supply)



Energy Union priorities

No1 in Renewables

Smart EU energy system,
with consumer at the
centre

Efficient energy systems

Sustainable transport

Ten actions to accelerate the energy system transformation (SET Plan)

1. Performant renewable technologies
integrated in the system

2. Reduce costs of technologies

3. New technologies & services for consumers

4. Resilience & security of energy system

5. New materials & technologies for buildings

6. Energy efficiency for industry

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

8. Renewable fuels

(9) Driving ambition in
carbon capture storage and use deployment

(10) Increase safety in
the use of nuclear energy

Making the SET Plan fit for new challenges

- A more targeted focus



- Stronger link with energy policy
- A more integrated approach
- Holistic view of the energy system
- Full research and innovation chain



- A new SET Plan governance



A new SET Plan governance model

1. Strengthened cooperation

- With Members States [EU 28 + Iceland, Norway, Switzerland and Turkey]
- With Stakeholders
 - Opening and widening to new actors
 - Bringing together **all relevant stakeholders** including, e.g. **ETIPs, EERA**, PPPs, JTIs, KET stakeholders, stakeholders from funding instruments under the Emissions Trading System...

2. More coordination between Members States:

- More joint actions

A new SET Plan governance model

3. Transparency, indicators and periodic reporting

- Annual KPIs:
 - Level of investments – public and private sector
 - Trends in patents
 - Number of researchers active in the sector
- Every 2 years, progress should be measured on:
 - Technology developments
 - Cost reduction
 - Systemic integration of new technologies
- ***State of the Energy Union Report***

4. Monitoring and knowledge sharing

The SET Plan Actors

- **European Commission**
- **Member States**
- **Stakeholder platforms**





The SET Plan Actors

1. Member States [EU28 + CH, IS, NO, TR]

- **Steering Group (SG):** Highest level discussion platform, chaired by the EC.
- **The SG Bureau:** smaller but balanced representation of the SG to assist the EC in the preparation of meetings, chaired by the MS.
- **Joint Actions Working Group (JAWG):** a working group of the SG open to all interested MS to discuss joint actions, chaired by the MS.

2. Stakeholder Platforms

- **European Technology and Innovation Platforms (ETIPs):** Structures gathering all relevant stakeholders.
- The **European Energy Research Alliance (EERA)**
- **Other EU Stakeholder platforms active in/relevant to the energy sector.**

European Technology and Innovation Platforms (ETIPs)

Participants

- Continuation of existing **ETPs and EIIs** in unified Platforms per technology.
- Recognised interlocutors about sector specific R&I needs
- **Composition – covering the whole innovation chain: industrial stakeholders** (incl. SMEs), **research organisations** and academic stakeholders, business associations, regulators, civil society and NGOs, representatives of MS



Freedom to organise yourselves as you see fit.

European Technology and Innovation Platforms (ETIPs)

Main Role: strategic advice to the EC and the Steering Group based on consensus

- Prioritisation within the 10 key actions both on objectives and implementation;
- Implementation: what best at EU/national/regional/industrial level;
- Prepare and update Strategic Research and Innovation Agendas;
- Identify innovation barriers, notably related to regulation and financing;
- Report on the implementation of R&I activities at European, national/regional and industrial levels;
- Develop knowledge-sharing mechanisms that help bringing R&I results to deployment.

SET Plan implementation in a nutshell

- 1. Setting targets**
- 2. Select and monitor specific R&I actions**
- 3. Identify and agree on Joint Actions**
- 4. Identify Flagship Actions
(at European and national levels)**

1. Setting targets

- ***'Issues Papers'*** drafted by the Commission (RTD, ENER, JRC), setting the scene and proposing targets
- **Publication on SETIS**
- **Broad stakeholder consultation**
- **Stakeholders submit position through *'Input Papers'***
- **Commission drafts 'Declaration of Intent'**
- **Discussion in meeting of the SET Plan Steering Group with invited stakeholders**
- **Agreement on targets and agree to develop an implementation plan**

2. Select & monitor specific R&I actions

Goals

- Detail what needs to be done over the next years to achieve the targets at European and national level
- Limited set of actions (technological + non-technological)
- Resources + timeline for each R&I action
- Putting a monitoring system in place

Work to be done in temporary Working Groups

within ETIP when there is one

Timeline: ~2-3 months

3. Identify/agree on Joint Actions

Goal

- Identify and decide on Joint Actions

Strategy to be developed for the SET 10 Key Actions

- Joint Actions with EU (ERA-Nets) & non-EU funds
- Joint Programming beyond ERA Net
- Joining EU risk financing facility
- Joint policy actions

Work to be done by the JAWG

Countries engaged in ERA-Nets

Results reported to SG and feed Implementation Plan

4. Identify Flagship Actions

Goal

- Identify Flagship Actions (at European or national levels) and specify to which actions they contribute and who implements them
- When no Joint Actions are possible, Flagship Actions can fill the gap

What is a Flagship Action?

A Flagship action is considered the best example of what R&I can produce in a given sector or with a specific technology in order to reach the SET Plan targets. The innovation potential and the "leading by example" features are key. A flagship action is meant to make a real change in the low-carbon energy technologies landscape.

Work to be done by the Working Groups

Working Groups

Mission

- To develop the Implementation Plans
- Aligned with Declaration of Intent

Composition (~ 30)

- Experts from ETIPs
- Input from SET Plan countries (= government representatives) & EC
- Chaired by a *champion* country + *champion* industrial stakeholder

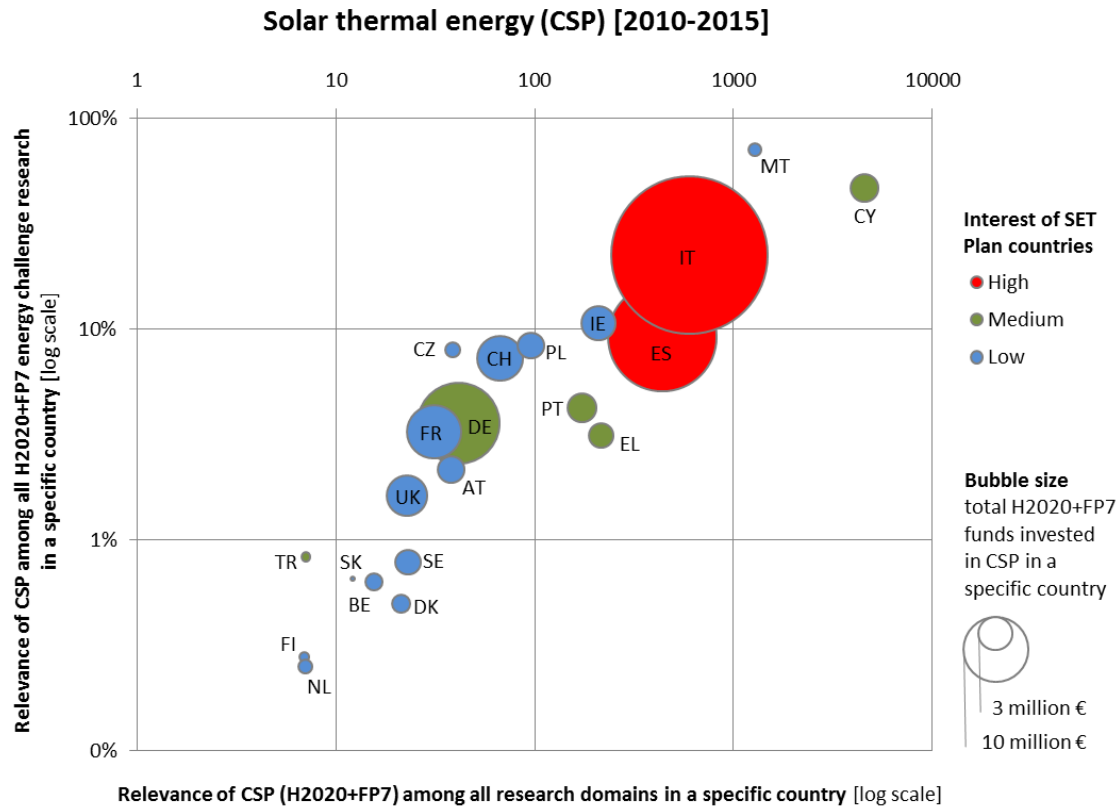
Which countries?

- High policy interest in the sector and committed to engage in Joint Actions

Working Groups

- **WGs will join the 3 pieces together and finalize the Implementation Plans**
- **Plans are then reviewed by the SG and adopted when there is consensus**
- **"On the ground" implementation should follow**

Example of aggregated information



Specimen

Example of aggregated information

Top 5 participants from the private and public sectors sorted by total FP7 funds spent on CSP [2010-2014]

Country	Total funds (% of FP7 CSP)	Participant
<i>Private sector</i>		
IT	19,9%	ENEL GREEN POWER (EGP)
IT	8,2%	TECNIMONT KT - KINETICS TECHNOLOGYS PA (TECNIMONT KT)
ES	5,0%	COBRA INSTALACIONES Y SERVICIOS S.A (ACS-COBRA)
ES	3,7%	ABENGOA BIOENERGIA NUEVAS TECNOLOGIAS SA (ABNT)
IT	2,2%	KT - KINETICS TECHNOLOGY SPA (TKT)
CY	0,3%	ARCHI ILEKTRISMOU KYPROU (EAC)
<i>Public sector</i>		
IT	4,9%	AGENZIA NAZIONALE PER LE NUOVE TECNOLOGIE, L'ENERGIA E LO SVILUPPO ECONOMICO
DE	3,5%	DEUTSCHES ZENTRUM FUER LUFT - UND RAUMFAHRT EV (DLR)
FR	2,6%	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES (CEA)
DE	2,2%	Fraunhofer-Gesellschaft zur Foerderung der angewandten Forschung e. V. (Fraunhofer)
ES	2,1%	CENTRO DE INVESTIGACIONES ENERGETICAS, MEDIOAMBIENTALES Y TECNOLOGICAS-CIEMAT

Specimen

Indicative list of countries showing the greatest interest in the CSP priority of the SET Plan

Cyprus, France, Germany, Greece, Italy and Spain

More information:



Follow the process on SETIS

A screenshot of the SETIS website navigation menu. The top part shows the European Commission logo and the text "SETIS Strategic Energy Technologies Information System". Below this is a breadcrumb trail: "European Commission > SETIS > Towards an Integrated Strategic Energy...". The main navigation bar contains several menu items: "About SETIS", "SET-Plan Process" (highlighted with a green border), "SETIS Output", "Strategic Energy Technologies", "Newsroom", "Publications", and "SET-Plan Conferences". On the right side of the navigation bar are icons for a home page and a search function. Below the navigation bar is a secondary menu with items: "EERA", "European Industrial Initiatives (EIIs)", "Towards an Integrated Roadmap", "Steering Group Meetings", and "Towards an Integrated Strategic Energy Technology (SET) Plan" (highlighted with a green background).

Towards an Integrated Strategic Energy Technology (SET) Plan: Accelerating the European Energy System Transformation

<https://setis.ec.europa.eu/towards-an-integrated-SET-Plan>

Thank you for your attention

