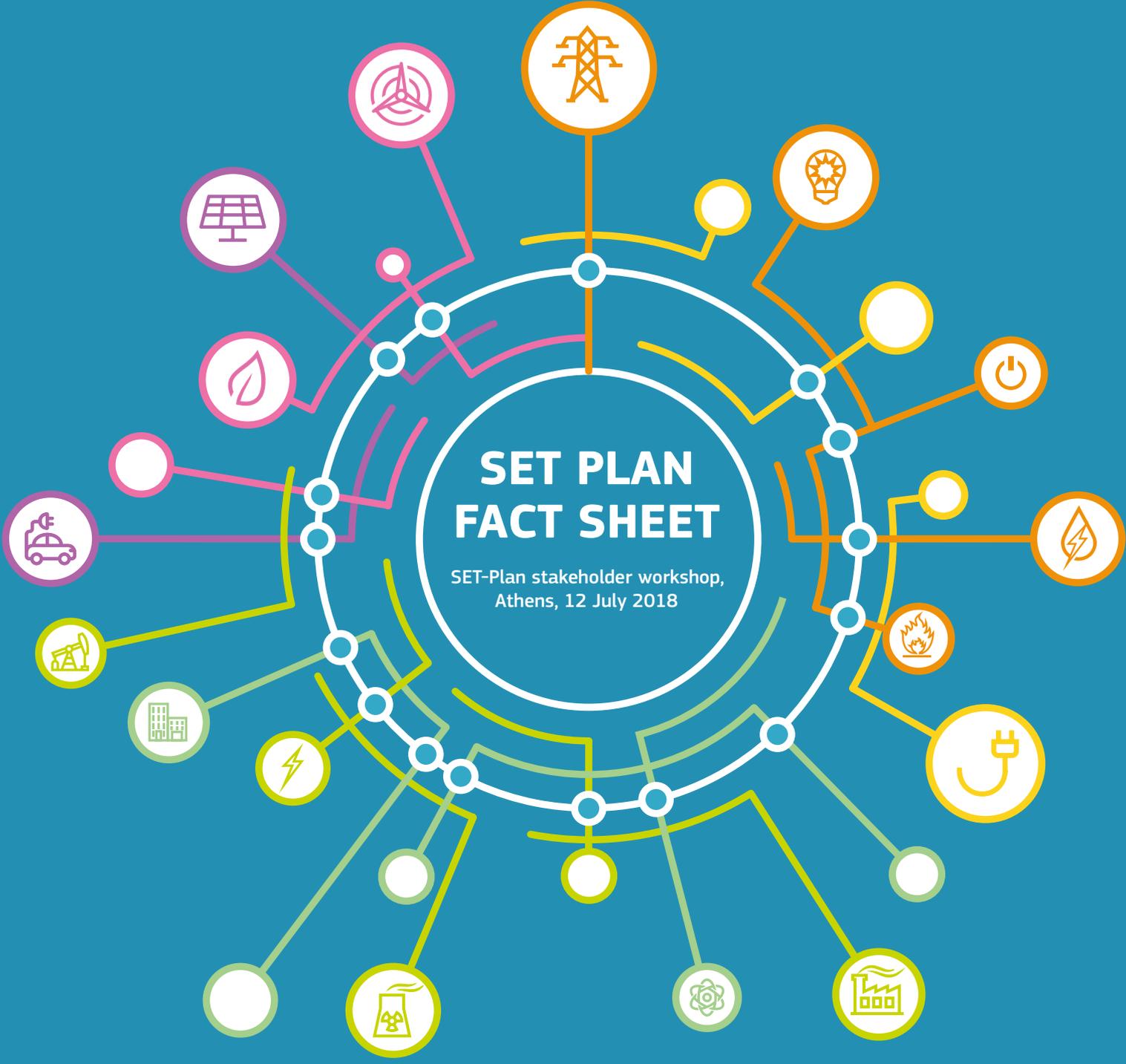




European  
Commission



## WHAT IS IT? POLICY BACKGROUND:

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- The Strategic Energy Technology (SET) Plan has constituted since 2007 the main driver for a European Research and Innovation (R&I) strategy for low carbon technologies. Since then, it has moved forward from a technology based approach, towards a more integrated way to address the new challenges of the energy system.
- In 2015 the Energy Union Strategy (the common European strategy that defined an energy vision toward 2030 – document no: COM (2015) 080 final, link at the end) included for the 1st time research innovation and competitiveness as one of its 5 core dimensions, with the help of which the EC could realise its 2030 energy and climate targets faster and cost-effectively.
- As a result of this political document, SET Plan needed to also adapt its approach: The 4+2 energy Union priorities (which are: become No1 in RES, Energy system with consumer at the centre, energy efficiency first and decarbonising transport plus CCS and Nuclear safety) have been further broken down into 10 SET Plan actions. All these are presented in the relevant SET Plan Communication of 15.09.2015 (C(2015) 6317 final), a Communication from the Commission entitled: 'Towards an Integrated Strategic Energy Technology (SET) Plan: Accelerating the European Energy System Transformation'.
- The new priorities we have set for SET Plan through this revamped Communication include the increased penetration of variable renewables, a more active role for consumers into the "energy game", the new opportunities that digitization offers and also a more decentralized generation, either very close to the consumption centres or in many other cases extremely remote.
- These proposed 10 SET Plan Actions are now targeting not only cost reduction and improvement of performance for the various low carbon technologies, but also looking at consumer participation, energy system needs (integration), energy efficiency in buildings and in industry, or the evolution of the idea of smart cities and communities.

## WHO PARTICIPATES? SOME BASIC HINTS ON THE SET PLAN AND ITS STEERING GROUP

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- The SET Plan is a platform for interaction among the **European Commission**, the EU Members States, other **countries** associated with the SET Plan efforts (such as Norway, Iceland, Switzerland or Turkey), and the various **research community or industrial stakeholders** that are of relevance to the specific technologies that SET Plan tackles and the Actions it has set. The SET Plan Steering Group (SG) formalises this interaction among all parties and constitutes its main governance structure.
- This Steering Group creates a flexible framework for countries and the EC for strategic planning and implementation and aims to maximise the cost-effective contribution of technology to the achievements of the Energy Union. The Terms of Reference for it also follow below.

- The Steering Group is composed of high level representatives from the EU Member States and from the rest of the SET Plan countries and from the European Commission. Each country's designated representatives come mostly from the Energy and Research authorities. Many of the representatives are also members in the Energy Programme Committee that negotiates with the EC the energy research framework programme (the H2020 Framework Programme and its annual Work Programme, which breaks down further the programme activities for each year). This means that, in most cases, they are responsible for their national energy innovation strategies, having sufficient seniority and knowledge to position themselves on EC and national research and innovation investments.
- The decisions taken in the Steering Group are of a non-obligatory nature, nevertheless the policy documents (i.e. Communications, such as the Integrated SET Plan that proposed the SET Plan actions) and the more technical outcomes of their discussions (such as the Declarations of Intent, or the SET Plan progress report of 2016 that you have at the end) are influencing the low carbon research and innovation policies at the national level and vice versa.
- All the MSs and the 4 associated countries (Norway, Switzerland, Iceland and Turkey) have nominated participants to the SG. All countries have been active, in a varying degree and periodicity, but we have noted especially during the last year that there are 5-10 countries not actively involved – among which yours. This is something that we need to overcome, if we want to have a full picture of the clean energy research and innovation landscape in the EU and also make sure that nobody misses out from the help and the valuable support that SET Plan can afford especially to small countries that need to use own research resources more efficiently.
- As explained before and further analysed below, research actors and industry also have a role to play, since they are the other two pillars of the SET Plan; industry is being represented by umbrella structures named European Technology and Innovation Platforms and the research community through the European Energy Research Alliance.
- In brief, SET Plan has:
  - A widely participatory governance:
    - 32 National Governments: EU28, IS, NO, CH, TK
    - Industry and research actors: 154 umbrella organisations representing 16 700 entities.
  - Steering Group: the main SET Plan decision-making body, increases alignment between national and EU R&I programmes and enhances cooperation between countries.
  - ETIPs: Streamlined industry-led stakeholders' structures.
  - EERA: Strategic partnership with the research community, promotes coordination among research and technology transfer actors.
  - Finally, a word on SETIS; SETIS is the information system of SET Plan, the digital depository of all the work undertaken within its context. It has a wealth of historical information on the evolution of each activities and work stream under SET Plan; it is also where all finalised Implementation Plans are published. This is the site to consult to keep up with the progress under SET Plan at all times.

## WHERE ARE WE RIGHT NOW:

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- The SET Plan has come a long way since 2015. With this revamped format and new impetus it has set forth to:
  - Identify the targets that can inform progress in each one of its 10 Actions – the link below to the 2016 SET Plan publication, which contains an overview of these targets, can be found at the end;
  - Embark upon finding actual ways of achieving these targets, through concrete collaborative activities between the countries having initially subscribed to them- these are the **14 Implementation Plans** – a further link to this respect is provided below, where the Implementation Plans for the various Actions are presented/ through the relevant SETIS page
  - In these Implementation Plans authors/participants identify concrete actions and projects to be implemented by the interested actors (being countries and/or research/industrial stakeholders, or both).
  - After the adoption of all these Implementation Plans (we have set an informal target to have all of them completed by June 2018), the next phase is to put forward their proposed activities among the countries and the private stakeholders/industry.
  - This will be done under the auspices of relevant **implementing structures**, currently being created and constituted primarily by the members of the groups that have originally drafted each Implementation Plan, but allowing also the possibility to new actors to adhere in the future. Countries (represented by SET Plan delegated participants from research/energy agencies) will continue to play a leading role and could decide to create a joint programme, or implement projects, etc.
  - These implementation structures that will have the mandate to execute the Plans (IPs) **will need to bring forward the identified, in the various IPs, sources and opportunities for financing**, be it from national funds, European funding instruments if applicable, other private funds from industry, loans and guaranties (EIB etc.), cohesion funds in case of Regions demonstrating a specific interest, etc. In many cases key actors will support the identification of key resources or translate research project into a market success (for example KIC Inno-Energy).

## WHAT'S IN IT FOR YOU?

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- The most important reason for **a country** to be active in a given SET Plan activity area is the gains in terms of coordinating national research efforts, according to national priorities, at European scale, create useful synergies, embark on cooperation efforts towards the same objective while using own resources more effectively and thus gaining in terms of economies of scale.
- Another reason is to be up-to-date and fully literate on what is going on currently in the clean energy research and innovation landscape; especially

during this nodal point where there are ongoing deliberations as to the financing methods for clean energy R&I that will lead to shifts in this landscape. SET Plan is a vehicle to coordinate and streamline local research efforts and try to pair them with available EU funding, among others.

- In recent months, and in order to translate the SET Plan targets into concrete actions, tangible research activities that translate into collaborative research schemes among countries targeting specific topics have been put forward; meaning that the SET Plan actors have been drafting the so-called Implementation Plans, which identify research and innovation activities or projects under each one of the SET Plan Actions, that can be implemented through budget pooled together from the participating countries in each of them and from private resources – and when needs be, is also topped up with EU funds.
- For research institutes/universities there is also great value to be part of the SET Plan extended community; it facilitates linkages with many other research institutes in Europe and with industry, exchange of information and knowledge, creation of synergies and partnerships, leveraging funding for similar research efforts around EU, identify other sources for financing, understand what are the research and innovation priorities in a specific clean energy technology area, etc.
- Research institutes can also benefit from SET Plan and its implementing structures mainly via the umbrella organisation, the European Energy Research Alliance, while Universities can participate as part of EPUA-EUA. Also, since the Implementation Plans go into details in defining research and innovation projects in specific technology areas, the research community has an interest in looking into those IPs and identify those instances that match research activities they are themselves undertaking anyway.
- Industry with a significant research and innovation strand has also good reasons to participate to the SET Plan process. Industry can be represented in the different implementing structures of the SET Plan mainly (but not exclusively) via the umbrella stakeholder platform, the European Technology and Innovation Platforms (ETIPs) - to consult their number and scope, see SETIS link below. There are already 9 of them, with more in the pipeline.
- Through participation in the various ETIPs, they can discuss and coordinate their research priorities with those of other partners in the same industry, research institutions and countries, since the budget that can be potentially mobilised and the scale of a demonstration activity is much larger than the capabilities of one single industrial stakeholder. Synergies, economies of scale and avoidance of duplications are the obvious 'draws' for them; other reasons have to do with keeping abreast of all the developments under SET Plan through their participation in the execution of the various IPs - they can more easily connect and understand European and national research priorities.

# OVERVIEW

## of the implementing structures for the various IPs

10 SET Plan Actions	Future implementing structures that will execute/monitor the Implementation Plans
1. Cost reduction (RES)	Solar (PV)
	Off-shore Wind
2. Improve performance (RES)	Geothermal
	Ocean
	CSP
3. Technologies & Services for Consumers	3.1. Energy Consumers
	3.2. Smart Cities
4. Resilience and security of the energy system	WGs (6 in total) under the SNET ETIP
5. New materials & technologies for buildings	5.1. Materials and technologies for EE for buildings
	5.2. Heating and Cooling technologies for EE in buildings
6. Energy Efficiency for industry	6. Energy Efficiency for industry
7. Competitive in global battery sector and e-mobility	7. Competitive in global battery sector and e-mobility
8. Renewable fuels and bioenergy	8. Renewable fuels and bioenergy
9. Carbon Capture and Storage/Use	9. Carbon Capture and Storage/Use
10. Nuclear Safety	10. Nuclear Safety

## FURTHER READING

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- 1/** The Integrated SET Plan Communication in 2015, revamping the established SET PLAN platform:  
[https://ec.europa.eu/energy/sites/ener/files/documents/1\\_EN\\_ACT\\_part1\\_v8\\_0.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/1_EN_ACT_part1_v8_0.pdf)
  
- 2/** The Terms of Reference for the operation of the SG of the SET Plan:  
[https://ec.europa.eu/energy/sites/ener/files/documents/2008\\_term\\_of\\_reference.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/2008_term_of_reference.pdf)
  
- 3/** A summary of the SET plan targets can be found in the 2016 Progress Report:  
[https://ec.europa.eu/energy/sites/ener/files/documents/set-plan\\_progress\\_2016.pdf](https://ec.europa.eu/energy/sites/ener/files/documents/set-plan_progress_2016.pdf)
  
- 4/** A 10-year anniversary publication presenting achievements in the areas the SET Plan works on and also introducing some Implementation Plans, as these had just been endorsed:  
<https://publications.europa.eu/en/publication-detail/-/publication/771918e8-d3ee-11e7-a5b9-01aa75ed71a1/language-en/format-PDF/source-51344538>
  
- 5/** The SETIS is the information system of SET Plan, the digital depository of all the work undertaken within its context. In this link, you have an overview of the activities under each Action, all the endorsed IPs, information on the various ETIPs, and Joint Programmes of EERA/ various pages:  
<https://setis.ec.europa.eu/>
  
- 6/** EERA –representing the research community in SET Plan:  
<http://www.eera-ecer.de/>