



THE STRATEGIC ENERGY TECHNOLOGY PLAN (SET-PLAN) OF THE EUROPEAN COMMISSION AND ITS KEY ACTION 8: RENEWABLE FUELS & BIOENERGY

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Outline

1. Energy Policy

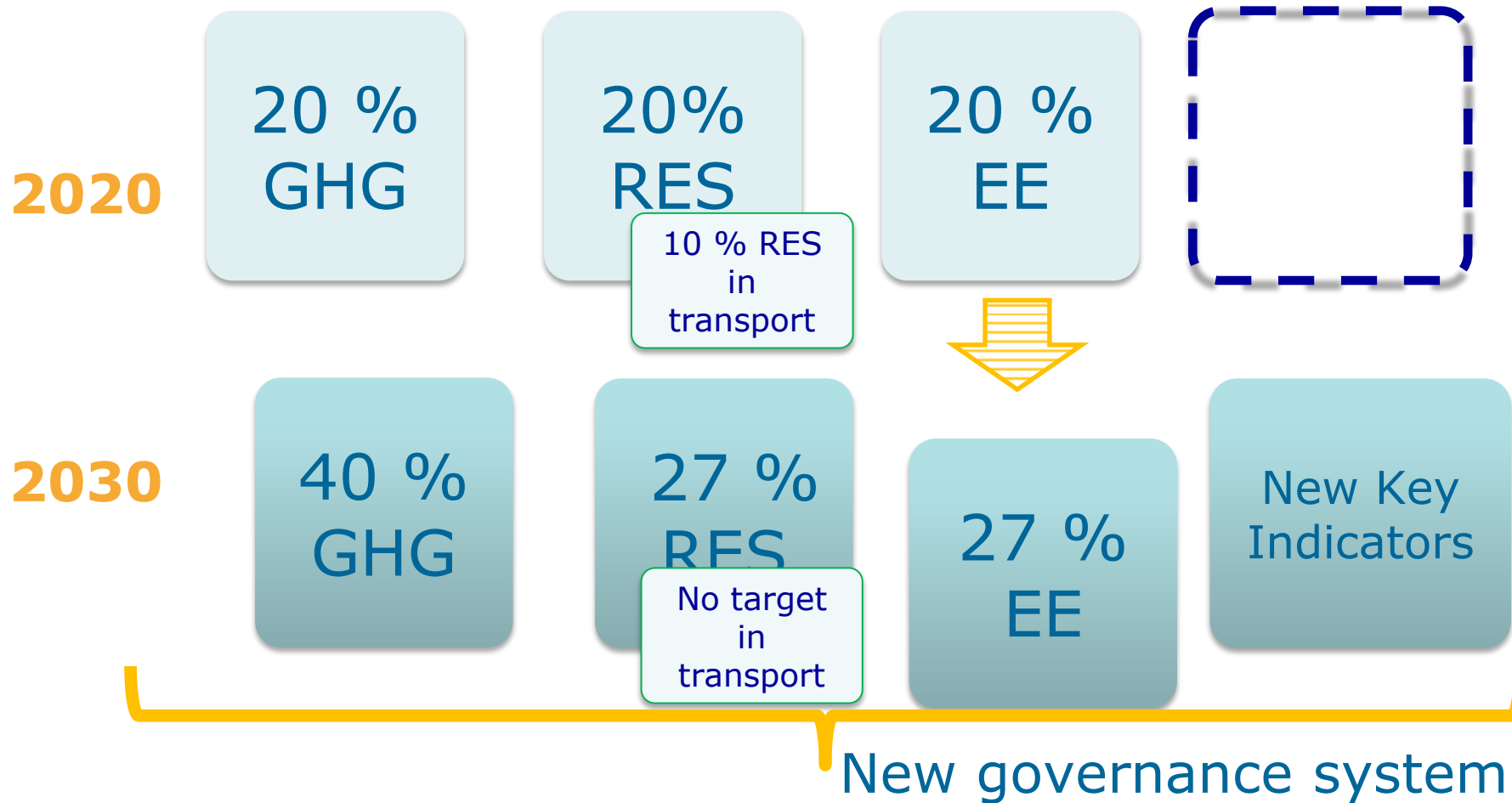
2. SET-PLAN

3. Action 8

Energy Policy

- 2030 Climate and Energy Framework
- EU commitment to a clean energy transition
- 'Resilient Energy Union with a forward-looking climate change policy' one of the 10 top priorities of the Juncker Commission COM(2016) 110
- 'Sustainable, low-carbon and climate-friendly economy' one of the five elements of the Energy Union Vision COM(2015) 80 final
- Research, Innovation and Competitiveness one of the five pillars of the Energy Union vision COM(2015) 80

Climate and Energy Framework



Not legally binding

Towards a European Energy Union

COM(2015) 80 final

- **Five Pillars**

- Energy security, solidarity and trust
- A fully integrated European energy market
- Energy efficiency supporting moderation of demand
- Decarbonising the economy
- **Research, Innovation and Competitiveness**
 - ✓ Strategic Energy Technology Plan

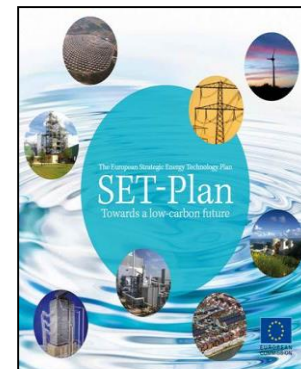


ENERGY UNION WINTER PACKAGE 'CLEAN ENERGY FOR ALL EUROPEANS' Nov. 2016

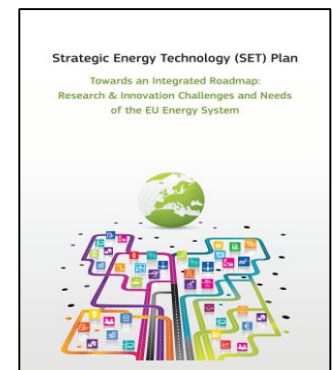
- **Energy R&I & Competitiveness is high on the agenda**
 - National objectives & funding targets for public & private R&I relating to the Energy Union
 - National objectives including long term targets (2050) for deployment of low-carbon technologies
 - Policies and measures including those to achieve these objectives and cooperation with other Member States

The SET-PLAN - coordinating research and innovation across Europe

- The Strategic Energy Technology (SET) Plan is the technology pillar of the EU's energy and climate change policy
- The integrated SET Plan part of a new European energy R&I approach to bring promising new zero-emissions energy technologies to market
- **The SET Plan Actors**
 - European Commission
 - Member States & Associated Countries
 - Stakeholder Platforms



C(2007)723 FINAL



C(2015)6317 FINAL

The Integrated SET Plan - transform the energy system across Europe by R&I

- Builds on the Energy Union strategy
- Highlights areas for EU cooperation with SET Plan countries and stakeholders for market uptake of efficient, new, cost-competitive low-carbon technologies
- **The Integrated SET-Plan approach**
 - ✓ Identifies 10 actions for R&I
 - ✓ Addresses the whole innovation chain
 - ✓ Adapts the governance under the SET-Plan umbrella
 - ✓ Proposes to measure progress via overall KPIs

The Integrated SET Plan - main actions

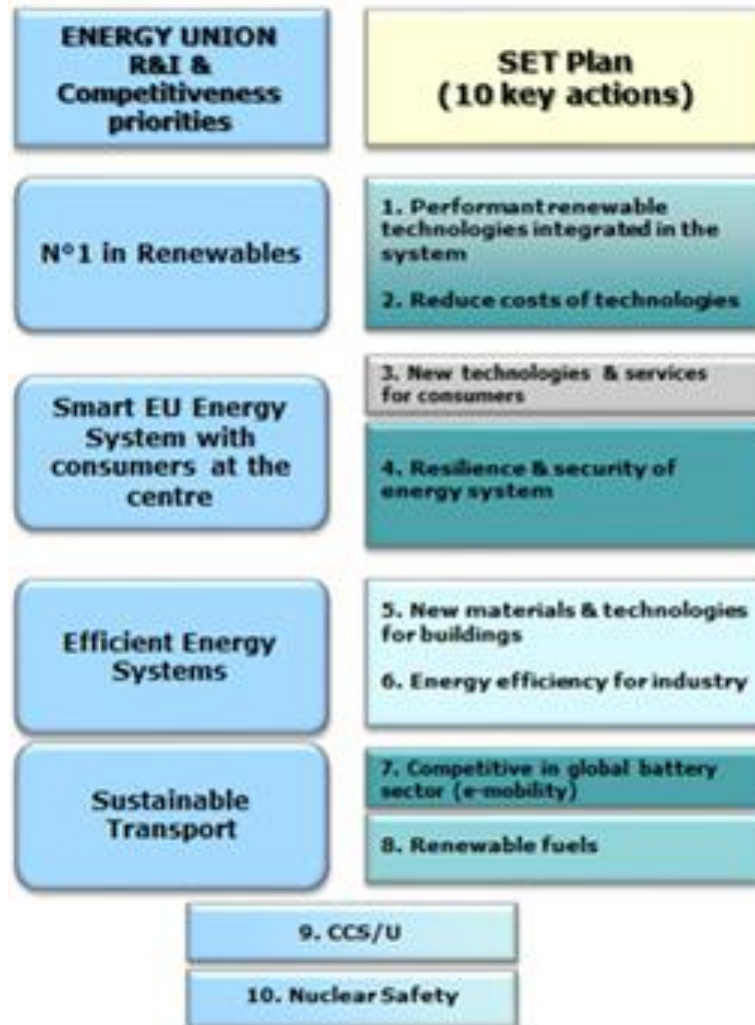
Aligned with the Energy Union Research, Innovation and Competitiveness priorities

- **Number one in RES**
 - technology leadership by developing high performant, integrated and cost efficient renewable technologies
- **Consumer at the centre of the future energy system**
 - smart homes and cities, resilient, secure and smart energy system
- **Efficient energy systems**
 - new materials and technologies, less energy intensive EU industry
- **Sustainable transport**
 - leadership in batteries, **renewable fuels for sustainable transport**
- **A forward looking approach to CCS and CCU**
- **Nuclear energy safety**



European Commission

Second State of the Energy Union Feb. 2017



Integrated SET Plan priorities

Not legally binding

Implementation Plans of SET Plan 10 actions

Describe technological and non-technological R&I activities to reach agreed targets

- Based on sector specific Declarations of Intent
- Represent the EU energy R&I strategy and actions shared by active SET Plan Countries in the sectors & key stakeholders from research & industry
- Coordinate European National R&I activities and funding in energy
- Stimulate Joint Actions among funding actors
- Accelerate the energy transition
- Will be prepared by ad-hoc Working Groups and endorsed by the SET Plan Steering Group

Set-up of temporary Working Groups

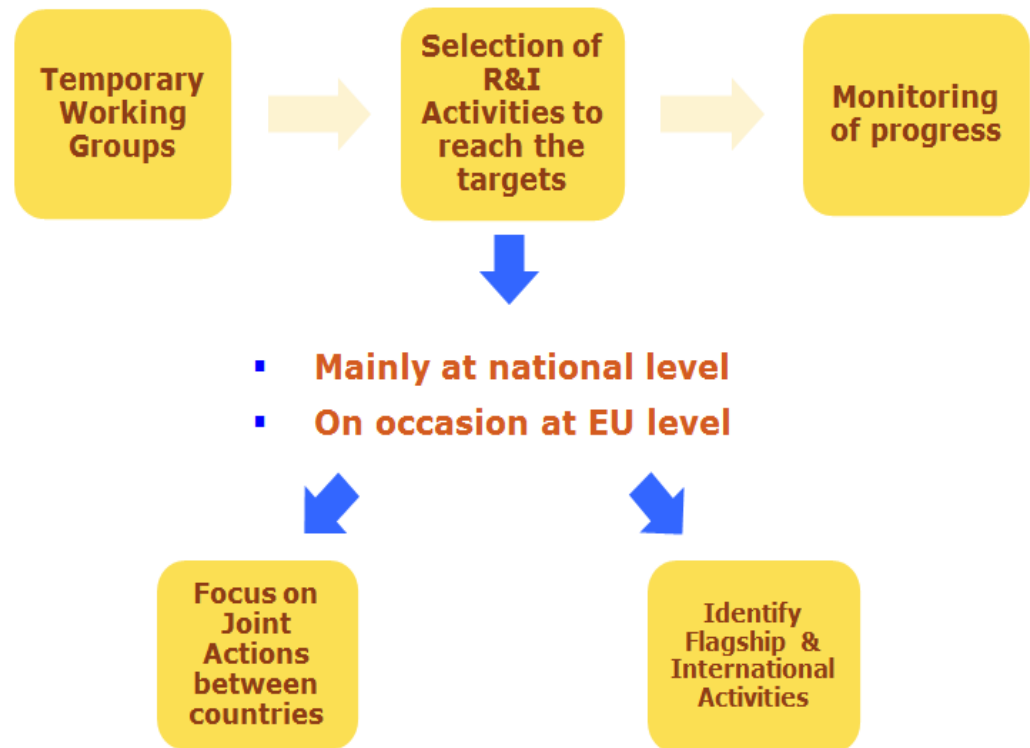
- **Composition (max. around 30 persons)**
 - SET Plan countries
 - Experts from ETIPs, EERA, public-private partnerships, etc.,
 - EC (Coordinating officer (CO)/ Associated Officer (AO)/ SETIS observer)
- **Chair and co-chair (volunteer basis)**
 - Chair is a single/more SET Plan country(ies)
 - Co-Chair is a stakeholder, preferably from industry
 - Steer, coordinate and facilitate agreements of the WG for preparing the Implementation Plan
 - Nomination decided preferably before the 1st WG meeting
 - On a basis of an EC proposal, Chair and Co-Chair agree on the WG working modalities and organize TWG meetings
- **EC supports coordination and knowledge sharing**

Implementation Plan

An Implementation Plan describes the technological and non-technological R&I Activities that need to be implemented in order to reach targets adopted in a Declaration of Intent

Selection of R&I activities

- Need to be identified when clearly contributing to DoI targets (national / EU / industry)
- Funding is mainly national (governments) and private (industry). Only in selected cases may be from EU (compliance with the TFEU and strong EU added value)
- Flagship activities are the most prominent R&I activities, like project / programme with high innovation potential and impact



Not legally binding

Time line

- **Implementation Plans drafted within 3-5 months after the establishment of the WGs**
- **A kick-off meeting for each WG**
 - Role and tasks of the WG, specific targets to achieve, endorsement of the WG roadmap (objectives & timing), and revision of WG activities submitted by WG members
- **Subsequent meetings for each WG**
 - To define R&I activities and non-technological aspects, international cooperation, to define monitoring and reporting mechanisms

SET-Plan Action 8: Renewable fuels and Bioenergy

Declaration of Intent adopted 1 December 2016

Implementation Plan to be drafted by end 2017

All renewable fuels included (defined in Directive 2015/1513) to strengthen market take-up

- Advanced biofuels using non-food feedstock (Annex IX, 2015/1513)
- Renewable fuels from non-biological origin (Annex IX, 2015/1513)

Transport sectors lacking readily available sustainable alternatives, e.g. **aviation, marine and heavy duty road transport**

SET-Plan Action 8: Targets

Agreed Strategic Targets in Renewable Fuels for Sustainable Transport

1. Improve production performance of Advanced Biofuels and Other renewable liquid and gaseous fuels
2. Improve GHG savings
3. Reduce Costs (excluding taxes and feedstock cost) for end biofuel products, other renewable liquid and gaseous fuels and renewable H2

Agreed Strategic Targets in Bioenergy

1. Reduce conversion system costs for high efficiency large biomass CHP
2. Improve performance and reduce GHG emissions by increasing efficiency

Agreed Strategic Targets Intermediate Bioenergy Carriers

1. Improve performance and reduce cost (excluding taxes and feedstock cost) for intermediate bioenergy carriers

Action 8: Renewable fuels and Bioenergy TWG

- **Kick-off meeting**
 - September 2017
- **Chair (shared)**
 - FI, IT, FR
- **National Representatives (Countries)**
 - AT, BE, CY, DE, EE, ES, IE, NL, PT, SE, TR, UK
- **Stakeholders and EC participants: in progress**
 - Coordinating officer : DG JRC
 - Associated Officer : DG RTD, DG ENER, DG JRC



Thank you for your attention!

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