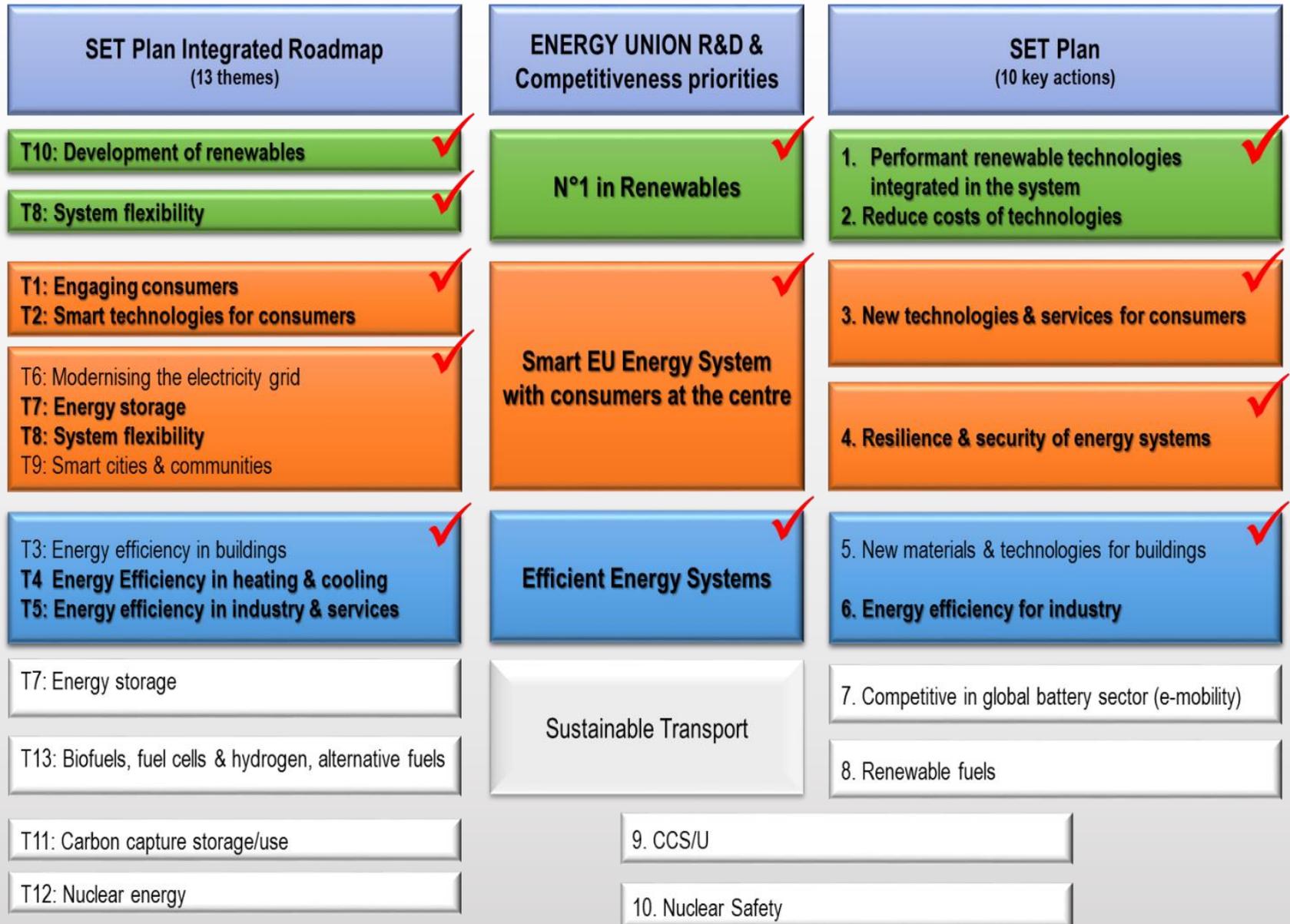


Providing the Agora - The institutional building for a stronger European geothermal sector





Deep Geothermal - Implementing Working Group

Initiating and follow up of general measures to promote the IP targets

Annual assessment and recommendation to SETPLAN

General discussion fora

SETPLAN Countries +EU

Initiating and follow up of member state and EU targeted funding

GEOTHERMICA

National Research

Initiating and follow up of research programmes

EERA

National Industry

Initiating and follow up of industrial funding

EGEC

ETIP

Declaration of Intent Deep Geothermal Energy: Targets

Action 1

Performant renewable technologies integrated in system

Increase reservoir performance* resulting in power demand of reservoir pumps to below 10% of gross energy generation and in sustainable yield predicted for at least 30 years by 2030;

Improve the overall conversion efficiency, including bottoming cycle, of geothermal installations at different thermodynamic conditions by 10% in 2030 and 20% in 2050;

Reduce production costs of geothermal energy (including from unconventional resources, EGS, and/or from hybrid solutions which couple geothermal with other renewable energy sources) below 10 €/ct/kWhe for electricity and 5 €/ct/kWth for heat by 2025**;

Action 2

Reduce costs of technologies

Reduce the exploration costs by 25% in 2025, and by 50% in 2050 compared to 2015;

Reduce the unit cost of drilling (€/MWh) by 15% in 2020, 30% in 2030 and by 50% in 2050 compared to 2015;

Demonstrate the technical and economic feasibility of responding to commands from a grid operator, at any time, to increase or decrease output ramp up and down from 60% - 110% of nominal power.

* Reservoir performance includes underground heat storage.

** Costs have to be confirmed establishing at least 5 plants in different geological situations, of which at least one with large capacity (20 MWe or, if for direct use only, 40 MWth).

IP R&I Activities

R&I Activities:

- Geothermal heat in urban areas
- Materials, methods and equipment to improve operational availability (high temperatures, corrosion, scaling)
- Enhancement of conventional reservoirs and deployment of unusual reservoirs
- Improvement of performance (conversion to electricity and direct use of heat)
- Exploration techniques (including resource prediction and exploratory drilling)
- Advanced drilling/well completion techniques
- Integration of geothermal power in the energy system and grid flexibility
- Zero emissions power plants

NTB/Enablers:

- Increasing awareness of local communities and involvement of stakeholders in sustainable geothermal solutions
- Risk mitigation (financial/project)