



PRESS RELEASE

ETIP SNET R&I ROADMAP 2020 – 2030: 4000 MILLION EUROS INVESTMENT TO HELP MANAGE EUROPE'S ENERGY TRANSITION

Overall, the roadmap estimates that 4 billion euros of investments are needed over the next 10 years to enable the transition towards a reliable and sustainable European electricity system with very high shares of renewables.

Brussels, 3 March 2020 – This week the European Technology and Innovation Platform Smart Networks for Energy Transition (ETIP SNET) shares its mid-term key Research and Innovation priorities. The 10 year ETIP SNET Research & Innovation (R&I) Roadmap 2020-2030* provides the system view to the entire energy transition by addressing a scope with smart electricity grids as its backbone, but going beyond: It also encompasses interactions with the gas and heat networks and focuses on integration of all flexibility solutions into the power system, including energy storage technologies.

“The purpose of ETIP SNET R&I Roadmap is to illustrate the view of all energy system stakeholder involved in ETIP SNET by identifying the range of actions (functionalities) to be addressed during the next decade, with the ultimate goal of reaching the full decarbonisation of the European energy system by 2050. ...” says Guido Guida, Chairman of the ETIP SNET.

The evolution of the energy system in a context of a decarbonisation of the economy is based on the EU pillars of sustainability, security and market. The path towards 2050 implies progressive energy system functionalities to be implemented incrementally to ensure the timely evolution and achievement of decarbonisation targets. Hence, key R&I priorities need to be adequately defined and implemented.

For this reason, ETIP SNET has developed the “ETIP SNET R&I Roadmap 2020-2030” looking at a 10-year time frame until 2030. In 2018 the platform released the “ETIP SNET Vision 2050” with the purpose of inspiring the discovery of R&I challenges associated with a Year-2050 low-carbon, fully-integrated, and circular pan-European energy system. The ETIP SNET R&I Roadmap 2020-2030 gives more detailed recommendations on Energy system research, demonstration and deployment needs with the fundamental requirement that the European citizen is at the centre of this transition and key functionalities are satisfied by 2030.

The R&I activities for the decade to come, as described in the R&I Roadmap, synthesize consolidated and balanced stakeholder views and rely on systematic monitoring and reviews of national, European and international R&I projects.

The full implementation of all R&I activities is estimated to be 4 billion euros needed to finance research and innovation over the next decade for the energy system integration.

PLAN. INNOVATE. ENGAGE.



The R&I priorities defined in the Roadmap are organised in 6 research areas and 12 functionalities (see figures below).

The ETIP SNET R&I Roadmap 2020-2030 is available for [download here](#), it is an update and significant extension of the previous ETIP SNET R&I Roadmap 2017-2026.

RA No.	Research Area (RA)	RA-Explanation
1	CONSUMER, PROSUMER and CITIZEN ENERGY COMMUNITY	Citizen and prosumer empowerment and engagement
2	SYSTEM ECONOMICS	Business models, market design and market-governance
3	DIGITALISATION	Digitalisation, communication and data handling (including Data, Cyber and System security)
4	PLANNING – HOLISTIC ARCHITECTURES and ASSETS	Energy system architectures, design and planning; new materials, technology solutions, asset management, maintenance; System Stability and resilience, multifunctional-system interfaces and system compatibility
5	FLEXIBILITY ENABLERS and SYSTEM FLEXIBILITY	Adapting all energy components to provide flexibility to the system (Flexibility in Demand, Generation, Storage & Energy Conversion, Network, Transport)
6	SYSTEM OPERATION	Reliability, forecasting, monitoring, control and automation (State estimation and supervision, short-term, medium and long-term control)

Full name of FUNCTIONALITY	Short FUNCTIONALITY	
◦ F1 Cooperation between system operators	F1 Cooperation	
◦ F2 Cross-sector integration	F2 Cross-Sector	
◦ F3 Integrating the subsidiarity principle - The customer at the center, at the heart of the Integrated Energy System	F3 Subsidiarity	
◦ F4 Pan-European wholesale markets	F4 Wholesale	
◦ F5 Integrating local markets (enabling citizen involvement)	F5 Retail	
◦ F6 Integrating digitalisation services (including data privacy, cybersecurity)	F6 Digitalisation	
◦ F7 Upgraded electricity networks, integrated components and systems	F7 Electricity Systems and Networks	
◦ F8 Energy System Business (incl. models, regulatory)	F8 Business	
◦ F9 Simulation tools for electricity and energy systems (Software)	F9 Simulation	
◦ F10 Integrating flexibility in generation, demand, conversion and storage technologies	F10 Flexibility	
◦ F11 Efficient heating and cooling for buildings and industries in view of system integration of flexibilities	F11 Heating & Cooling	
◦ F12 Efficient carbon-neutral liquid fuels & electricity for transport in view of system integration of flexibilities	F12 Transport	

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**The R&I Roadmap 2020-2030 may be updated in the parts dedicated to budget allocation after the finalization of the ETIP SNET Implementation Plan 2021-2024 in March/April 2020.*

More about the ETIP SNET

Since 2016, the key energy system players in Europe, represented through their EU associations, platforms and national stakeholders¹, started a strong and unique cooperation under the umbrella of ETIP SNET - The European Technology and Innovation Platform Smart Networks for Energy Transition. Its role is to guide research, development and innovation to support Europe's energy transition with innovation for the transmission and distribution systems. These systems form the technical and market platforms where clean electricity generation, empowered customers, storage technologies, smarter grids and interfaces to gas, heat and transport networks make the energy transition happen in secure and affordable ways.

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¹ **Transmission System Operators** (ENTSO-E), **Distribution System Operators** (EDSO, EURELECTRIC, CEDEC, GEODE), **Flexible generation players** (Energy Technologies Europe, EU TURBINES, ETIPWind, ETIP PV, EGEC, ETIP Deep Geothermal, CogenEurope, ETN), **Research and Academia** (EUREC, EERA, EUA...), **Storage stakeholders** (EASE, EUROBAT, HEA), **gas and heat networks players** (RHC+ ETIP, Euro Heat and Power, EUROGAS, EHA), transport sector (EGVI), **Consumers** (SmartEn, ANEC), **ICT and digital network providers** (ESMIG), **Equipment suppliers** (T&D Europe, Europacable, Orgalime) as well as **EU Member States** active in the SET Plan.