

currENT response to ‘Revamping the SET Plan’ call for Evidence

As stated in the consultation documents, the SET Plan has played a crucial role in implementing the research, innovation, and competitive dimension of the Energy Union, and guiding national research efforts in the NECPs. Going forward, the revamped SET plan will support speeding up the development and deployment of clean energy technology in alignment with the goals of the EU Green Deal, Fit for 55, REPowerEU, and the new European Research Area (ERA) agenda. Below are six key recommendations from [currENT](#), the voice of innovative grid technology companies in Europe, on what is needed to make the revamped SET Plan a success.

1. Include system/infrastructure efficiency as a cross cutting issue in the SET Plan

Increasing renewable energy is at the core of the EU's strategy for achieving its decarbonisation goals, and powerful electricity networks will be required to transport all this electricity. In order to do this as quickly, efficiently, and sustainably as possible, while keeping costs low for citizens, the EU needs to focus on innovative grid technologies that can increase the overall efficiency of the energy system. currENT recommends including ‘system efficiency’ and/or ‘infrastructure efficiency’ as cross-cutting issues that needs to be paid attention to in the revamped SET plan,

It is important to align this with the Energy Efficiency First Principle (EEFP), as defined in EU Regulation 2018/1999 on Governance of the Energy Union and Climate Action, and which will further be strengthened in the upcoming recast of the Energy Efficiency Directive: *“energy efficiency first’ means taking utmost account in energy planning, and in policy and investment decisions, of alternative cost-efficient energy efficiency measures to make energy demand and energy supply more efficient, in particular by means of cost-effective end-use energy savings, demand response initiatives and more efficient conversion, transmission and distribution of energy, whilst still achieving the objectives of those decisions”*

2. Optimisation of electricity networks is key to reaching EU targets in time

While the EU continues to plan for the massive scale-up of renewables, electricity grids are at risk of lagging behind. Building new grids can take an average of 5-7 years in

Europe, while there are many fast-acting solutions that can be implemented in 1-2 years. Grids must not become a bottleneck for delivering on the EU's decarbonisation goals. This is why currENT believes that the NOVA principle, which states that the optimisation of the existing grid should happen before reinforcement before expansion of the grid, should become a general regulatory principle across the EU and European grid-related legislation.

3. Look ahead at what electricity grid and energy infrastructure will help achieve the 2050 Net Zero goal

While implementing fast solutions now, we must at the same time maintain a long-term approach and consider what kind of electricity grid will be needed in 2050 and beyond, and what kind of innovative grid technologies could support this. The revamped SET plan must consider what is necessary for economy-wide carbon neutrality in 2050 and work back from there.

Such plans need to be based on demand scenarios for 2030, 2040 and 2050 that ensure the greenhouse gas emissions (GHG) targets are reached. Modifications to include the following issues could be made: flexibility, complementarity of solutions, redeployability, scalability, fast deployment, and modularity.

Conventional copper-based HVDC transmission technology carries maximum 1 GW and is unlikely to ever be able to transfer more than 2 GW of power. New innovative transmission technology based on superconductors, promise the ability to carry several times more power in a much smaller surface area and at lower voltages than conventional copper-based cables at no losses. To carry one kA one metre, superconducting cables requires 150 times less raw material than conventional power cables. They also require significantly less infrastructure, materials and space.

4. Better alignment between SET Plan and National Energy and Climate Plans

There needs to be better alignment between the SET Plan and the National Energy and Climate Plan that will be updated in 2023/2024. This means that the guidance for NECPs provided by EC, and the elaboration of the national drafts should include the SET plan/RD priorities crucial to achieve the agreed targets, on the national level.

5. The new SET Plan needs a clear governance structure with clearly defined roles for stakeholders and transparent processes

We agree with the ETIPs FORUM that the revised SET Plan must have a clear governance structure, transparent processes and be open to accommodate new and relevant stakeholders (even as official observers or advisory groups for certain thematic areas) and process for utilizing and implementing the SET Plan in the Member States and relevant markets. Stakeholders' roles must be clarified. All the already existing and new proposed roles in the SET Plan Governance must be clearly defined in the revised structure. A clear and well-structured definition of roles and responsibilities of all involved actors (EC, MSs, ETIPs, IWG components, NRCGs and NSCGs) must be given in a more public, transparent, and integrated way.

6. The new SET Plan needs to make space for enhanced discussion with stakeholders and experts

We agree with the ETIPs FORUM that there needs to be enhanced discussion, interaction, and collaboration between the decision /policy makers, ETIPs (including European industries, research centers, academia, and NGOs) and EERA with the precise and concrete scope to facilitate and foster the alignment of priorities between the SET Plan IWGs' IPs, the national R&I agendas and the ETIPs priorities. It is crucial to foresee a fruitful and structured discussion about the incoming legislative proposals with the activities to be developed at R&D level.