

General Information	
Preliminary title of the European Partnerships	Clean Energy Transition European Partnership towards a renewable-based and carbon-neutral energy system
Short description of the partnership	The European Partnership will foster joint actions between Horizon Europe and national funding programmes on common R&I priorities, building on – and bringing forward – the work carried out in the SET-Plan.
Services directly involved	DG ENER DG RTD
Context and problem definition	<ul style="list-style-type: none"> ▪ Climate neutrality in 2050 will require additional investment: 175 to 290 billion euros a year. On the other side, it will drastically reduce our bill for fossil fuel imports, which today is 266 billion euros a year. This transition will dramatically change technology needs in the EU and world-wide ▪ In the current energy landscape in Europe, around ¾ of all R&I investments in (non-nuclear) clean energy come from the private sector, only ¼ from public sources. Even the EU R&I Framework Programmes, as the most significant single programme, accounts for less than 5% of the overall public and private spending on clean energy R&I in Europe. ▪ Increase investments in R&I and the coordination of currently fragmented public and private innovation agendas will accelerate the transitional process. ▪ The Strategic Energy Technology Plan (SET Plan) has been the platform to define common targets, align research agendas and coordinate with national programmes, resulting in a number of concrete partnerships, based on Horizon 2020 ERA-NET Cofund actions, in the areas of renewables, CCUS, energy grids and smart cities. ▪ The current SET Plan toolbox lacks an instrument to leverage significant national public funding and efforts for the jointly developed implementation plans and thus overcoming the funding gap for energy innovation projects. The proposed partnership is intended to fill this gap in the toolbox and foster cooperation of national programmes through joint calls, with and without co-funding from the EU, and additional activities.
Objectives and expected impacts	<ul style="list-style-type: none"> ▪ The European Partnership would contribute to fostering the clean energy transition by leveraging national funding programmes on targets and priorities jointly agreed between the EU, Member States/Associated Countries, industry and the research community (i.e. the Implementation Plans of the SET-Plan Key Actions). ▪ This coordinated approach will help creating critical masses and increase the level of funding for common R&I priorities across Europe thereby increasing the impact of the otherwise rather dispersed efforts. The 7-year duration of the partnership is a strong incentive for national programmes to join because it offers budgetary stability and facilitates long-term planning. ▪ The stakeholder community (business, research organisation, and universities) will benefit through increased budgets for objectives agreed at EU-level and through targeted accompanying measures, developed and implemented in the framework of the partnership, which will foster the uptake of project results. ▪ Strategic participation of third countries in activities of the partnership is possible and foster international cooperation, exchange of experiences and opportunities for deployment of technologies. ▪ The European Partnership is expected to increase the budget mobilised

	<p>for concrete joint actions between Framework Programme national programmes, with or without EU-top up, by at least 33%, compared to the period 2015-2020.</p> <ul style="list-style-type: none"> ▪ The European Partnership should have a limited lifetime and aim at establishing structures for cooperation between national programmes that will work without co-funding from the EU Framework Programme.
Necessity test: rationale for a European Partnership	<ul style="list-style-type: none"> ▪ The European Partnership will target national programme owners/managers who are mandated to direct national programmes. This stakeholder group and type of action would not be possible to target through normal collaborative calls. ▪ The leverage factor for addressing common R&I priorities envisaged with the European Partnership is much higher than it could be for normal calls, due to the integration of national contributions in transnational calls. ▪ The European Partnership provides a stable framework, which can motivate national programme owners/managers to align their budget cycles and funding rules/procedures. Ad-hoc topics would not sufficiently incentivise these changes. ▪ A European Partnership with a broad scope would allow thematic flexibility and enable partners to take up emerging issues at an early stage. A hypothetical example would be the emerging need accelerate research on the storm resistance of offshore wind turbine resulting from several extreme weather events in the North Sea.
Relevant for the following parts of Horizon Europe	<p>Pillar II 'Global Challenges and European Industrial Competitiveness'</p> <p><input type="checkbox"/> Cluster Health</p> <p><input type="checkbox"/> Cluster Culture, creativity and inclusive society</p> <p><input type="checkbox"/> Cluster Civil Security for Society</p> <p><input type="checkbox"/> Cluster Digital, Industry and Space</p> <p><input checked="" type="checkbox"/> Cluster Climate, Energy and Mobility</p> <p><input type="checkbox"/> Cluster Food, Bioeconomy Natural Resources, Agriculture and Environment</p> <p><input type="checkbox"/> Cross-cluster</p> <p><input type="checkbox"/> Pillar III 'Innovative Europe'</p>
Currently identified links with other partnership candidates / Union programmes	<p>During Horizon 2020, SET-Plan members (MS, AC) have already formed, in a variable geometry, several networks in thematic areas (in some cases, these networks originated in JPIs, e.g. in the Smart Cities and Communities area). The Commission 'glued' these networks with several ERA-NET Cofund actions. The European Partnership would build on the existing groupings of MS/AC (and their ERA-NET projects) and enable them to deepen their cooperation in Horizon Europe. Furthermore, the thematic priorities and key actions of this European Partnership are already agreed and in place – it's the Key Actions and Implementation Plans of the Strategic Energy Technology Plan (SET Plan). All Implementation Plan have been endorsed by the end of 2018 and their execution phase has started.</p> <p>Thematic links to the following other proposed European Partnership are possible (complementarities/synergies to be discussed):</p> <ul style="list-style-type: none"> • Renewable energy: <ul style="list-style-type: none"> ○ 'Circular bio-based Europe' on bioenergy, ○ 'Clean Hydrogen Europe' on using renewable energy for clean hydrogen production, • Energy grids: <ul style="list-style-type: none"> ○ 'Batteries' for increasing grid flexibility, ○ 'Clean Hydrogen Europe' on using hydrogen as an energy

	<ul style="list-style-type: none"> vector to increase system flexibility, <ul style="list-style-type: none"> ○ ‘Smart Networks and Services’ on smart grids • CCUS <ul style="list-style-type: none"> ○ ‘Carbon Neutral and Circular Industry’ (SPIRE) on CO2 utilisation • Cities and Communities <ul style="list-style-type: none"> ○ ‘Built environment and construction’ on energy efficiency buildings/districts <p>It is expected that the partnership will also have links to possible mission(s) in the area of ‘Climate-neutral and smart cities’ and ‘Adapting to climate change, including societal transformation’.</p>
Does the proposed partnership build on currently active ones?	<p>The European Partnership would build on the following existing ERA-NET-Cofund-based partnerships :</p> <ul style="list-style-type: none"> • Solar-ERA.NET 1 (11/2016 – 10/2021) • Solar-ERA.NET 2 (6/2016 – 5/2023) • DemoWind 1 (11/2015 – 12/2019) • DemoWind 2 (1/2016 – 12/2020) • GEOTHERMICA (1/2017 – 12/2021) • OCEANERA-NET (1/2017 – 12/2021) • Smart Cities: ENSCC (12/2014 – 11/2019) • SmartGridPlus (SG9) (1/2015 – 1/2020) • SGplusRegSys (1/2018 – 12/2022) • BESTF 3 (1/2016 – 12/2020) • ACT (2/2016 – 1/2021) <p>Three additional ERA-NET Cofund actions are expected to be supported under the Energy WP 2018-2020 (one on CSP in 2018 – already positively evaluated; one on energy systems in 2019 and one on Smart Districts in 2020). The proposed new partnership would potentially integrate all previous networks/topics. The participating programmes are in many cases run by the same organisation, resulting in one network integrating all major national research funders for energy related research.</p>
Expected type and composition of partners	<p>The European Partnership would target mainly national programme owner/manager from Member States and Associated Countries. Third countries will be invited to join. Openness and transparency will have to be ensured in its governance, e.g. by inviting the research community and business sector in the agenda setting of the Partnership. Through the link between the consortium of partners and the established SET-Plan governance, the involvement of representatives from all Member States, Associated Countries and, where appropriate Third Countries, will be ensured. This link will allow countries to join co-funding actions even if not formal partners and enhance the leverage of the EU funding.</p>
Contributions and commitments expected from partners	<p>The main contributions from partners will be financial contributions from national/regional programmes to calls for proposals organised and implemented by the consortium. There will be a distinction between call topics that are financed by national contributions only, and call topics with co-funding from the Union. In-kind contributions for other activities and possible institutional programmes can be envisaged.</p>
Currently envisaged implementation mode(s).	<p> <input type="checkbox"/> Co-programmed European Partnership <input checked="" type="checkbox"/> Co-funded European Partnership <input type="checkbox"/> Institutionalised European Partnership </p> <ul style="list-style-type: none"> <input type="checkbox"/> Article 185 <input type="checkbox"/> Article 187 <input type="checkbox"/> EIT-KIC

Justification of the implementation mode	<ul style="list-style-type: none"> ▪ A co-funded European Partnership would target national programme owners/managers in order to leverage funding from national sources for commonly agreed R&I priorities (as mainly identified in the SET-Plan Implementation Plans). ▪ The thematic scope of the proposed European Partnership would be rather broad ('Clean Energy Transition') allowing it to take into account emerging priorities and interests. ▪ A broad thematic scope could pose challenges for the governance of the European Partnership because in many countries funding responsibilities for the different areas addressed in this European Partnership are given to different organisations. An effective and efficient governance model will be key for the success of this European Partnership and will be discussed with Members States/Associated Countries as a priority. ▪ Depending on the progress of the discussions with MS/AC on the governance and financial commitments, statements in this fiche might be revisited, either towards a co-programmed partnership, or towards implementation by classical calls under the Framework Programme, if the proposed approach is not sufficiently underpinned by substantial commitment from participating countries.
Proposed starting year	2021 (depending on progress of discussions)