EERA Policy Update

29 May 2020

EERA
European Energy Research Alliance

EU Recovery Fund and the European Commission's new MFF proposal

EU RECOVERY FUND (NEXT GENERATION EU)

▸ The proposed Recovery Fund (Next Generation EU) would mobilise €750 billion, divided into €500 billion of grants and €250 billion of loans to the Member States

▸ To allow for the grants, the Commission would borrow on the financial markets, using national commitments to the EU budget as a guarantee.

▸ The money of Next Generation EU would be invested in programmes already present in the EU budget

▸ The European Green Deal, Horizon Europe and the Just Transition Mechanism will benefit from the additional money provided by Next Generation EU

EERA
European Energy Research Alliance

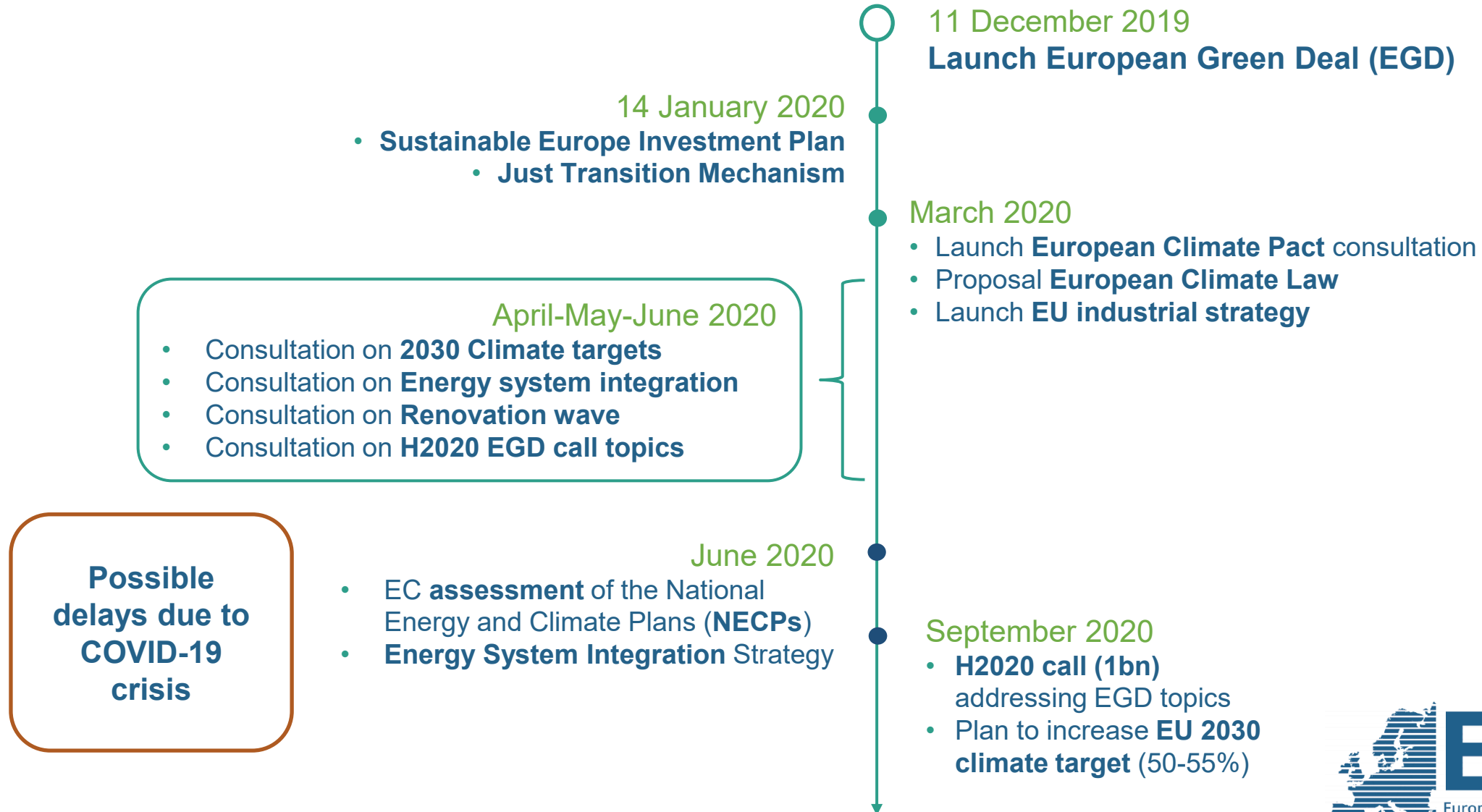# EU Recovery Fund and the Commission's new EU Budget proposal

EU BUDGET

▸ The European Commission has presented the new EU Budget in partnership with Next Generation EU. The two instruments would sum up to a total EU budget of €1.8 trillion.

▸ **Horizon Europe**, in the Commission's plan, has seen a reduction **in Budget terms**, from the initially proposed €86 billion to €80.9 billion, at the same level as latest European Council proposal of February 2020 and lower than the initial EC (€83.5bn) and EP (€120bn) proposals. **At the same time**, €13 billion (in grants) are expected to be dedicated to HEU by Next Generation EU, earmarked to fund research in health, resilience and the green and digital transitions.

   ▸ **Total allocated to Horizon Europe: €94.4 billion** (MFF + NextGenerationEU)

▸ The Commission has also hinted to a new set of revenue streams for the EU Budget, including an enlargement of the Emission Trading System's scope and a possible carbon border adjustment tax

3

The European Green Deal

Update May 2020

The European Green Deal: timeline

11 December 2019
Launch European Green Deal (EGD)

14 January 2020
- **Sustainable Europe Investment Plan**
- **Just Transition Mechanism**

March 2020
- Launch **European Climate Pact** consultation
- Proposal **European Climate Law**
- Launch **EU industrial strategy**

April-May-June 2020
- Consultation on **2030 Climate targets**
- Consultation on **Energy system integration**
- Consultation on **Renovation wave**
- Consultation on **H2020 EGD call topics**

June 2020
- EC **assessment** of the National Energy and Climate Plans (**NECPs**)
- **Energy System Integration** Strategy

Possible delays due to COVID-19 crisis

September 2020
- **H2020 call (1bn)** addressing EGD topics
- Plan to increase **EU 2030 climate target** (50-55%)

EERA
European Energy Research Alliance

European Green Deal H2020 call - timeline

▸ **Timeline:**

  ▸ **25 May 2020:** topics open for discussion with Member States during Shadow Programme Committee meeting

  ▸ **3 June 2020**: deadline for giving your online feedback for the call

  ▸ **mid-September 2020**: formal adoption of Green Deal call as amendment to Horizon 2020 work programme 2018-20

  ▸ **mid-September 2020**: publication and opening of the call

  ▸ **22-24 September 2020**: opportunity to find potential project partners at the EU R&I Days

  ▸ **end January 2021**: deadline for submitting project proposals

▸ Original budget of 1 bn EUR might be reduced due to diversion of budget towards COVID-19 related research

European Green Deal H2020 call areas

▶ **11 Call areas – detailed descriptions published**

- ▶ [Call area 1: Increasing climate ambition: cross-sectoral challenges](#)
- ▶ [Call area 2: Clean, affordable and secure energy](#)
- ▶ [Call area 3: Industry for a clean and circular economy](#)
- ▶ [Call area 4: Energy and resource-efficient buildings](#)
- ▶ [Call area 5: Sustainable and smart mobility](#)
- ▶ [Call area 6: Farm to Fork](#)
- ▶ [Call area 7: Restoring biodiversity and ecosystem services](#)
- ▶ [Call area 8: Zero-pollution, toxic-free environment](#)
- ▶ [Call area 9: Strengthening our knowledge in support of the European Green Deal](#)
- ▶ [Call area 10: Empowering citizens for transition towards a climate neutral, sustainable Europe](#)
- ▶ [Call area 11: Accelerating the clean energy transition and access in partnership with Africa](#)

European Green Deal H2020 call topics

▶ **Call Area 1: increasing climate ambition and Green Deal impact with cross-cutting solutions**

    ▶ **Topic 2: Towards climate-neutral and socially innovative cities - <u>Link to description</u>**

        ▶ **Relevance to EERA: High**

        ▶ <u>Specific challenge</u>: systemic transformation of cities to reduce GHG emissions by leveraging on technological, non-technological, social innovation and new AI-based solutions.

        ▶ <u>Scope</u>: development of a one-stop shop platform involving research stakeholders to assist cities in developing and implementing their climate action plans. Of the 4 areas of activity covered particularly n.1 seems to have potential for energy research application (development of indicators, assessment methodologies) although there is not direct mention to the energy sector and therefore the importance of the sector could be stressed in the public consultation.

        ▶ <u>Type of action</u>: RIAs

        ▶ <u>TRLs covered</u>: not specified

European Green Deal H2020 call topics

▶ **Call Area 1: increasing climate ambition and Green Deal impact with cross-cutting solutions**

    ▶ **Topic 3: Climate-resilient Innovation Packages for EU regions – <u>Link to description</u>**

        ▶ **Relevance to EERA: Medium/Low**

        ▶ <u>Specific challenge</u>: although focusing on adaptation measures, the document states that incremental adaptation will not be sufficient to mitigate the impacts of climate change on socio-ecological systems. There is a need for radical, transformative and interdisciplinary ways of reducing climate vulnerability and building resilience.

        ▶ <u>Scope</u>: calls funded will serve as early facilitators in pre-identifying and upscaling the most promising cross-sectoral solutions existing (research component not foreseen). Of the two areas proposed, area 2 could include relevant actions for EERA members, especially in relation to monitoring and assessment activities.

        ▶ <u>Type of action</u>: IAs or CSAs

        ▶ <u>TRLs covered</u>: not specified. Action 1 focuses on testing and deployment of solutions

▶ European Green Deal H2020 call topics

▶ **Call Area 2: supplying clean, affordable and secure energy**

- ▶ **Topic 1: Demonstration of innovative critical technologies to enable future large-scale deployment of offshore renewable energy technologies (with the possibility to address also hydrogen applications) – Link to description**

  - ▶ **Relevance to EERA: High**

  - ▶ Specific challenge: need for more efficient, cost-effective, affordable and secure technologies using wind, solar, wave and/or tidal resources, considering the potential of the different European sea basins and the complementarity of resources to reach the best capacity factor and optimized use of all the power equipment.

  - ▶ Scope: demonstrate at sea critical offshore renewable energy innovations, including 1) Offshore renewable energy power generating systems; 2) Grid infrastructure; 3) Power to X /innovative offshore storage systems. > The public consultation could be useful to argue for including lower TRL levels in the calls.

  - ▶ Type of action: n.a.

  - ▶ TRLs covered: demonstration phase - the project shall bring the demonstrated technologies to TRL 7.

EERA
European Energy Research Alliance

European Green Deal H2020 call topics

▶ **Call Area 2: supplying clean, affordable and secure energy**

   ▶ **Topic 2: Develop and demonstrate a 100 MW electrolyser upscaling the link between renewables and industrial applications – [Link to description](#)**

      ▶ **Relevance to EERA: High**

      ▶ <u>Specific challenge</u>: need to produce hydrogen at large scale, mainly through electrolysis powered by renewable electricity.

      ▶ <u>Scope</u>: Foreseen activities relevant to EERA include: 1) the development of a 100 MW electrolyser for managing and using efficiently power (electricity and heat), water, Hydrogen and Oxygen flows; 2) economic and environmental assessments; 3) knowledge sharing activities (organisation events, link to policymakers)

      ▶ <u>Type of action</u>: IAs

      ▶ <u>TRLs covered</u>: not specified, includes development, demonstration and operative phases.

EERA
European Energy Research Alliance

European Green Deal H2020 call topics

▶ **Call Area 3: Industry for a clean and circular economy**

  ▶ **Topic 1: Closing the industrial carbon cycle to combat climate change – <u>Link to description</u>**

  ▶ **Relevance to EERA: High**

  ▶ <u>Specific challenge</u>: sustainably convert CO2 emissions from industrial processes into synthetic fuels and chemicals utilising renewable energy driven processes with novel, highly optimised and energy efficient catalytic systems.
  → Direct link to SUNERGY project.

  ▶ <u>Scope</u>: at least two foreseen activities directly related to EERA: 1. Develop innovative, renewable energy driven, catalytic processes, to produce synthetic fuels and chemicals, at a sufficiently large scale to demonstrate its cost effectiveness; 2. Address financial, regulatory, environmental, land and raw material constraints, as well as public acceptance issues related to the proposed technological pathways.

  ▶ <u>Type of action</u>: IAs (min. 2 projects funded)

  ▶ <u>TRLs covered</u>: Proposals are expected to bring the core technology from TRL 4-5 up to TRL 7

EERA
European Energy Research Alliance

European Green Deal H2020 call topics

▶ **Call Area 3: Industry for a clean and circular economy**

   ▶ **Topic 2: Demonstration of systemic solutions for the territorial deployment of the circular economy – [Link to description](#)**

      ▶ **Relevance to EERA: Medium/low**

      ▶ Specific challenge: urgent need to decouple economic growth from resource use and to increase Europe's resilience to uncertainty in raw material supply and increase security of value chains.

      ▶ Scope: implement and demonstrate concrete systemic solutions for the territorial deployment of the circular economy (including circular bioeconomy) in at least three territorial clusters. > Although the challenge is aligned with EERA objectives, the activities foreseen seem far from research actions.

      ▶ Type of action: n.a.

      ▶ TRLs covered: n.a.

European Green Deal H2020 call topics

▶ Call Area 4: energy and resource-efficient buildings

▶ **Topic: Building and renovating in an energy and resource efficient way – Link to description**
  - ▶ **Relevance to EERA:** Medium/Low
  - ▶ Specific challenge: design and construction of new or retrofitting of existing buildings as zero-emission/zero-pollution, positive energy powerhouses within sustainable green neighborhoods (districts).
  - ▶ Scope: Proposals are expected to deliver large-scale, real-life demonstrations of promising technology and social innovations. Research component seems to be missing.
  - ▶ Type of action: IAs
  - ▶ TRLs covered: from TRL 5 to TRL 7 at the end of the project.

▶ Call Area 5: sustainable and smart mobility

▶ **Topic: Green airports and ports as hubs for sustainable and smart mobility – Link to description**
  - ▶ **Relevance to EERA:** Medium/Low
  - ▶ Specific challenge: urgent need to reduce greenhouse gas emissions (GHG) in aviation and waterborne transport. This topic addresses innovative concepts and solutions for airports and ports communities, in order to urgently reduce transport GHG emissions and improve their resilience to climate change.
  - ▶ Scope: although both topics (green airports and green ports) include energy aspects to be covered, they both address the issue at the level of integration of existing solutions and demonstration.
  - ▶ Type of action: IAs
  - ▶ TRLs covered: high TRLs

EERA
European Energy Research Alliance

European Green Deal H2020 call topics

▶ **Call Area 6 – Farm to Fork**

  ▶ **Topic: Testing and demonstrating systemic innovations for sustainable food from farm to fork - Link**

   ▶ **Relevance to EERA: Medium/Low**

   ▶ Specific challenge: While more centered on creating a sustainable diet and increase food quality, the Topic aims at reducing the GHG emissions of the agriculture sector, in particular carbon emissions

   ▶ Scope: Test, pilot and demonstrate innovative systemic solutions to achieve climate neutral farms and climate neutral food businesses. Increased carbon capture and storage capacity is one of the scopes of the Topic, paired with the goal of increasing the energy efficiency of food processing practices

   ▶ Type of action: IAs

   ▶ TRLs covered: aiming TRLs 5-8

▶ **Call Area 7 – Restoring biodiversity and ecosystem services**

  ▶ **Topic: Restoring biodiversity and ecosystem services - Link to description**

   ▶ **Relevance to EERA: Medium (JP Bio-CCS)**

   ▶ Specific challenge: increase biodiversity in the EU, enhancing the possibility to create carbon sinks and favouring the bioeconomy

   ▶ Scope: demonstrate how restoration biodiversity and ecosystem services can be scaled up in regions with severe biodiversity loss, so that opportunities for substantial biodiversity and ecosystem services gains will be realised, which in turn deliver social and economic benefits.

   ▶ Type of action: RIAs

   ▶ TRLs covered: not specified

European Green Deal H2020 call topics

▶ **Call Area 9 – Strengthening our knowledge in support of the European Green Deal**

  ▶ **Topic: European Research Infrastructures capacities and services to address European Green Deal challenges - Link to description**

    ▶ **Relevance to EERA: High**

    ▶ Specific challenge: Enhancing energy storage capacities in Europe represent one of the two main challenges for this topic

    ▶ Scope: The Topic aims at coordinating, integrating and upscaling research infrastructures and efforts in developing innovative energy storage solutions. In addition, the Topic intends to explore more in depth the socio-economic issues of the transition to climate neutrality.

    ▶ Type of action: RIAs

    ▶ TRLs covered: aiming all TRLs, from research to industry competitiveness

European Green Deal H2020 call topics

▸ **Call Area 9 – Strengthening our knowledge in support of the European Green Deal**

  ▸ **Topic: Developing end-user products and services for all stakeholders and citizens supporting climate adaptation and mitigation - Link to description**

   ▸ **Relevance to EERA: High (JP e3s)**

   ▸ Specific challenge: Including citizens in the climate and energy transition to a higher degree of participation, and studying the social effects of the transition

   ▸ Scope: The aim is to synthetize and produce knowledge about the social effects of the climate and energy transition, spreading them more widely among the citizens

   ▸ Type of action: RIAs/IAs

   ▸ TRLs covered: No TRLs involved, SSH focus

European Green Deal H2020 call topics

▶ **Call Area 10 – Empowering citizens for the transition towards a climate neutral, sustainable Europe**

    ▶ **Topic 1: European capacities for citizen deliberation and participation for the Green Deal - Link to description**

        ▶ **Relevance to EERA: Medium/High (JP e3s, Energy-SHIFTS)**

        ▶ Specific challenge: Introduce participatory processes in delivering the priorities of the European Green Deal

        ▶ Scope: establish transnational networks of experts, researchers, practitioners and relevant civil society organisations that will share good practice, tools and resources and implement participatory and deliberation processes on priority issues in order to deliver on the Green Deal.

        ▶ Type of action: RIAs

        ▶ TRLs covered: not applicable, social sciences focused

    ▶ **Topic 2: Behavioural, social and cultural change for the Green Deal - Link to description**

        ▶ **Relevance to EERA: Medium/High (JP e3s, Energy-SHIFTS)**

        ▶ Specific challenge: understand more clearly how the fight against climate change is impacting the behaviour of citizens

        ▶ Scope: Create transnational groups of experts in behavioural science, conduct more experimentation

        ▶ Type of action: RIAs

        ▶ TRL levels covered: not applicable, social sciences focused

European Green Deal H2020 call topics

▶ **Call Area 10 – Empowering citizens for the transition towards a climate neutral, sustainable Europe**

 ▶ **Topic 3: Enabling citizens to act on climate change and environmental protection through education, citizen science, observation initiatives, and civic involvement - Link to description**

  ▸ **Relevance to EERA: Medium/Low (JP e3s, Energy-SHIFTS)**

  ▸ Specific challenge: In terms of citizen participation to the EGD, three main areas need specific actions. Personal behaviours, environmental awareness of the young people, encouraging citizen science

  ▸ Scope: Implement competence frameworks to improve skills of students and workers, via projects in cooperation with business and scientists. Additionally, upscale the role of citizens in citizen science, environmental observation and civic consortia

  ▸ Type of action: RIAs/IAs

  ▸ TRLs covered: No TRLs specified. The Topic mainly deals with engaging citizens in the EGD exploitation process

European Green Deal H2020 call topics

SCREENING EERA-RELATED TOPICS

▶ **Call Area 11 – Accelerating the clean energy transition and access in partnership with Africa and the Mediterranean**

  ▶ **Topic: Accelerating the green transition and energy access Partnership with Africa - <u>Link to description</u>**

  ▶ **Relevance to EERA: medium/low**

  ▶ <u>Specific challenge</u>: Support the development of innovative solutions for renewable energy in the African continent

  ▶ <u>Scope</u>: Demonstrate projects related to sustainable energy or climate adaptation that could be applicable successfully in African countries. The proposals should also study value chain approaches.

  ▶ <u>Type of action</u>: ND

  ▶ <u>TRLs covered</u>: not specifies, demonstration phase.

Ongoing public consultations

Policy	Deadlines	How
European Green Deal H2020 Call	3 June 2020	• Online surveys ([Link](#))
Energy System Integration strategy	08 June 2020	• Feedback to roadmap ([Link](#))
2030 Climate Target Plan	23 June 2020	Online survey ([Link](#))
EU Strategy on Adaptation to Climate Change	30 June 2020	Feedback to roadmap ([Link](#))
Energy efficiency in buildings – consultation on 'renovation wave' initiative	08 June 2020	Feedback to roadmap ([Link](#))

EERA
European Energy Research Alliance

Upcoming measures relevant to EERA

Planned Q3-Q4 2020

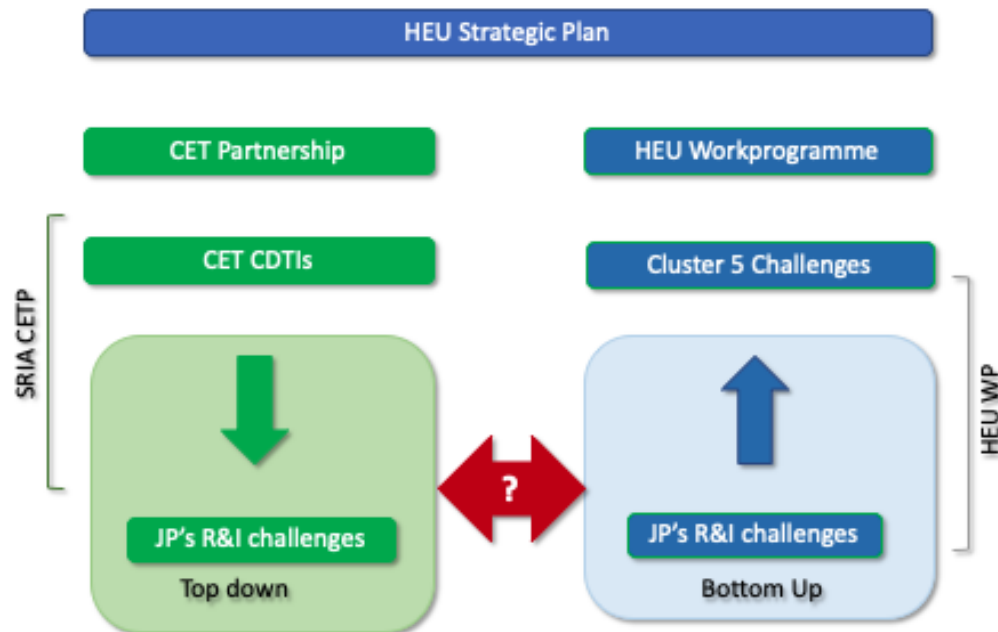| Measure	Original timing
Renewed Sustainable Finance Strategy	Q3 2020
2030 Climate Target Plan	Q3
Renovation wave	Q3
The European Climate Pact	Q3
Offshore renewable energy	Q4
Strategy for sustainable and smart mobility	Q4
New EU Strategy on Adaptation to Climate Change	Q4
Empowering the consumer for the green transition	Q4

Possible delays due to COVID-19 crisis

EERA
European Energy Research Alliance

Towards the Horizon Europe Strategic Plan

Update May 2020

EERA
European Energy Research Alliance

Horizon Europe ongoing processes – Positioning

CETP	HEU Work Programme	EUGD call
Co-F partnership	FP workprogramme	July 2020 call
Broad perspective / Flexible LT SRIA	R&I priorities	8-12 broad IA
May / Oct 2020	April / May 2020	April / June 2020
EERA-led	JP-Led / EERA support	JP-Led / EERA support

Horizon Europe Shadow Programme Committee meetings

Meetings confirmed	
23/04	[9th meeting of the Shadow Strategic Configuration of the Horizon Europe Programme Committee](#) – Link to [Presentation](#)
15/05	First meeting of Sub-group 9. Marie Sklodowska-Curie Actions (MSCA)
15/05	First meeting of the sub-group 15. Climate, Energy and Mobility – Link to [Agenda](#)
Tentative dates	
25/06	11th meeting of the SPC
17/09	12th meeting of the SPC

EERA
European Energy Research Alliance

Horizon Europe: timeline

○ **Horizon Europe (HEU) preparation**

December 2019

Publication latest version 'Orientation towards the first Strategic Plan for Horizon Europe'

Q1-Q2 2020
- Preparation HEU Missions and Partnerships
- Preparation HEU Work Programmes (2021-2022)

May/June 2020
- Publication draft HEU Strategic Plan
- Consultation on draft HEU Strategic Plan

Q3-4 2020
- Preparation SRIA for HEU Partnerships
- Publication final Strategic Plan

Possible delays due to COVID-19 crisis and MFF discussion

EERA
European Energy Research Alliance

▶ Horizon Europe latest updates: Strategic Planning

▶ Since February 2020, Commission services have been co-creating the structure and the contents of the strategic plan

  ▶ Adaptation and integration of relevant points from the Orientations, especially the <u>targeted impacts</u> elaborated at cluster level.

  ▶ Performing analysis using relevant points from the Orientations and additional intelligence to inform the directionality offered at cluster level.

▶ April 2020: agreement on outline and structure of Strategic Plan

▶ April/May 2020: presentation of first draft to European Parliament and Member States

▶ June: tentative web-based co-design exercise

▶ September?: second draft of Strategic Plan

▶ Goal to have the Strategic Plan adopted by the end of the year (depending on MFF and adoption of HEU legislative package)