

Information regarding submission of documents for participation in IPCEI Hydrogen, step 2

Introduction

Hydrogen is a potentially significant energy carrier and industrial input factor in the low-emission society. Development of markets and value chains for hydrogen use and production are necessary steps towards realizing zero emissions in the transport and industrial sectors in particular and may be one of several solutions for the future energy system. For hydrogen to move from being a potential solution to being mature in the market, both technology and cost development must take place.

Development of hydrogen technology and markets is a priority in several countries in Europe. As a result, a so-called IPCEI (Important Project of Common European Interest) is being established to accelerate this development. Sweden has joined the IPCEI initiative for hydrogen, and the Swedish Energy Agency manages the Swedish participation¹. Swedish participation in IPCEI for hydrogen means that owners of hydrogen projects in Sweden can link their project to other projects and value chains in Sweden and in the EU and benefit from possible knowledge transfer, market size and other economies of scale.

IPCEI is a European collaborative effort to strengthen strategically important and future-oriented industry sectors. In short, IPCEI is a mechanism for promoting investments in cross-border R&D and industrial projects of particular importance for European development and which can receive state aid as long as the conditions under the IPCEI Communication² are met. IPCEIs are large innovation projects that often involve a great deal of risk, and which require a coordinated effort and cross-border investments from public authorities and industries in several member states in order to be realised. They are particularly aimed at new industrial areas that are not realised due to various barriers (market failures).

¹ Regeringsuppdrag N2020/03065 Uppdrag att stödja svenskt deltagande i ett viktigt projekt av gemensamt europeiskt intresse med inriktning vätgas (Regeringsbeslut 2020-12-17)

² [Communication from the Commission — Criteria for the analysis of the compatibility with the internal market of State aid to promote the execution of important projects of common European interest \(europa.eu\)](https://ec.europa.eu/eip/eip_en)

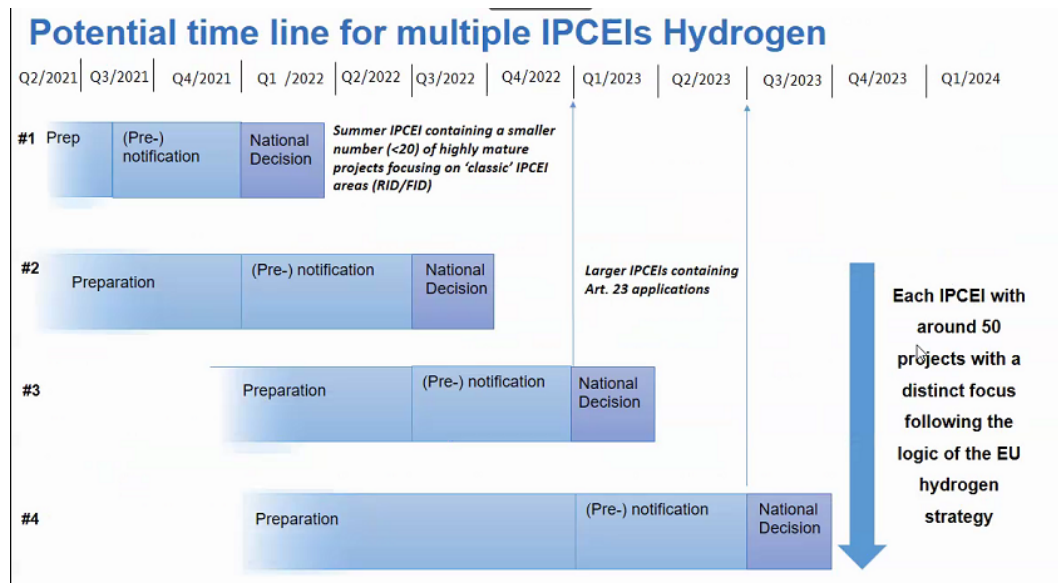
The European Commission seeks to encourage several so-called industry alliances where investors, industry and the public sector work together to finance large-scale projects with positive spill-over effects for the whole of Europe. The IPCEI mechanism is an important tool towards establishing such alliances. The EU's expert group for Important Projects of Common European Interest has identified six future-oriented industrial sectors that should be prioritised in the EU's upcoming industrial strategy. Hydrogen technology and -systems is one of these six.

The goal of a European IPCEI on hydrogen is to boost European technological leadership in hydrogen, to allow European companies to take the lead in the emerging markets for hydrogen, and to build a European framework for the emergence of hydrogen value chains. At the same time, the goal is a significant contribution to reducing greenhouse gas emissions and facilitating the integration of an increasing share of renewable energy in the individual countries and Europe as a whole, in line with the EU's and the individual countries' hydrogen strategies.

Although IPCEI projects are European projects, the process starts nationally, and national funds are used in each country. Each country intending to participate conducts a call for expression of national interest to participate in the IPCEI qualification process. This is done through an open process (often called Call of Interest (CoI) or Expression of Interest (EoI)), with selection criteria for which projects are allowed and which types of projects will be prioritised nationally. Then a so-called matchmaking is done to link nationally prioritised projects with European projects, where it is decided which projects qualify as IPCEI. Following this, a joint notification process is carried out to the EU Commission / ESA to obtain approval for necessary state aid.

In Sweden companies have during the spring 2021 been able to submit Expressions of Interest to participate, as well as been invited to participate in match making organized by the German coordinator.

Due to the high number of interested parties in hydrogen IPCEI, the funding Application process will be divided in separate “waves” of integrated large projects. See Figure below (the timeline is tentative and might be updated):



Deadline for submitting required documents for the first wave “Summer IPCEI” is 31 July 2021 (midnight, Stockholm time).

The process for the autumn IPCEI has started in parallel at present with the aim of starting pre-notification at the Commission in January 2022.

Relevant projects

Common to all IPCEI projects is that they must entail significant innovation beyond the "state of the art" in the relevant sector and the general development. The projects must also be of relevance for collaboration with other European projects under the IPCEI superstructure.

To be included in IPCEI, projects must *make a significant contribution to reducing greenhouse gas emissions*. This entails projects that:

- Will make a significant contribution to the technology front in the hydrogen field.
- Will develop and demonstrate technology that both cuts greenhouse gas emissions now and can provide significant further cuts in greenhouse gas emissions when the technology is implemented nationally and internationally.

Focus areas for the Swedish participation are climate-friendly, as well as innovative hydrogen technologies. Relevant projects should have a requested funding that requires notification to the Commission in an IPCEI and cannot be met by other national funding instruments.

In addition, Swedish participation in IPCEI Hydrogen should be in line with Swedish positions in the implementation of European strategies on hydrogen and Integration of energy systems.³ Important principles include e.g.:

- A large part of investments needed should be covered by the private sector.
- Hydrogen gas should be produced through electrolysis using fossil-free electricity. It should not be a requirement that hydrogen production is directly connected to the electricity generation, instead it should be possible to use any fossil-free electricity from the grid.
- Use of hydrogen should focus on sectors which can take advantage of the unique properties of hydrogen gas and where cheaper alternative to hydrogen, as for example electrification and renewable fuels, are not an option.

Qualification criteria

To qualify for a recommendation to be notified to the European Commission, the project must be quantitatively or qualitatively important.

Projects should have a substantial funding gap or a significant role in a collaboration or cluster with other European projects under the IPCEI superstructure.

The project must make a significant contribution towards a common European interest. Guidelines can be found in Chapter 3 «Eligibility criteria» in the IPCEI Communication.

The project may entail to one or several of the specific criteria (art 21,22 and 23 of the Communication):

- Research and development of a very innovative nature, which clearly goes beyond the «state of the art» in the relevant sector
- First Industrial Deployment (FID) of highly innovative technology
- Innovative investments that reduce greenhouse gas emissions (Environment, energy and transport projects, EET)

It is a requirement that the research has a significant degree of innovation, including significant technological and financial risk. Projects comprising research and development only, i.e. without significant elements of FID or EET investments, are not eligible.

For projects involving First Industrial Deployment (FID):

³ [Strategi för energisystemintegration och strategi för vätgas Fakta-PM om EU-förslag 2019/20:FPM61 COM\(2020\) 299, COM\(2020\) 301 - Riksdagen](#)

- Projects comprising of industrial deployment must allow for the development of a new product or service with high research and innovation content and/or the deployment of a fundamentally innovative production process. Regular upgrades without an innovative dimension of existing facilities and the development of newer versions of existing products do not qualify as IPCEI

For projects involving investments in climate and energy technology or transport projects (EET):

- Environmental, energy or transport projects must either be of great importance for the environmental, energy, including security of energy supply, or transport strategy of the Union or contribute significantly to the internal market, including, but not limited to those specific sectors

Note also the Compatibility criteria in chapter 4 in the IPCEI Communication regarding the compatibility with the internal market of aid to promote the execution of the project. These describe the necessity and proportionality of the aid requested and that no other less distortive types of aid make it possible to achieve the same result.

Projects submitting documents for the summer IPCEI must have a starting date during 2022.

Evaluation criteria

Submitted projects will be evaluated according to the following criteria:

1. Relevance to Europe, EU / EEA countries' national energy and climate plans / strategies and EU and European hydrogen strategies⁴
2. Degree of innovation, i.e. how significant the innovation is compared to the state of the art in the relevant sector. Co-financing from European schemes such as the ETS Innovation Fund will count positively in the assessment
3. Cost-effectiveness, i.e. high and realistic ambitions for reduced greenhouse gas emissions, relative to the necessary amount of state aid
4. Expected ripple and spill-over effects from the project, including realistic market potential for further implementation of the technology in Sweden, Europe and globally
5. The interested parties' financial and technical ability to carry out the project, including competence within the various technological areas in the project, organization and project management, realistic timeline, etc
6. Contribution to the integrated value chain in the relevant IPCEI project, e.g. extent of collaboration, involvement of with other direct or indirect IPCEI project partners.

⁴ Examples are EU hydrogen strategy, Hydrogen manifesto, Green deal, Swedish climate and environment targets, Swedish transport policy

The selection criteria will be used to assess if the project is appropriate to continue for IPCEI Hydrogen funding.

Selection process

Who can submit documents?

Documentation to support participation in Stage 2, which form the basis for a notification to the European Union, can only be submitted by applicants who have previously submitted an Expression of Interest and been invited to take part in match-making process.

Companies that are registered in the Swedish Companies Registration Office (or which will be before any assessment of financing is carried out) and that want to participate in innovative projects on a European scale through various partnerships throughout the European economic value chain can express interest in this call. It is a prerequisite that the project must be carried out in Sweden or on Swedish territory.

The interested party can be a single company or a consortium. When a consortium stands behind the project, a single party must be the contracting party towards the Swedish Energy Agency.

Note that all requirements for receiving state aid must be met. This also applies to all participants in a possible consortium. See the [IPCEI Communication](#), Chapter 2 (10).

How to submit documentation

Documentation is to be submitted by email to the Swedish Energy Agency (anmalanIPCEIH2@energimyndigheten.se) by the deadline specified for the particular application wave.

The deadline for the first application wave is 31 July 2021.

The following documents must be included

- IPCEI project Portfolio template 21210701
- IPCEI Fundig Gap Template 20210630
- PRODCOM Template

Submission of documentation does not guarantee that the project will be included in the notification made to the European Commission but forms the basis for a decision made by the Swedish government.

Time Schedule

Subject to change, the preliminary schedule for the second stage of the first wave is as follows:

- deadline for submission of documents, 21-07-31
- Chapeau finalised, 21-08-31
- Pre-notification process, from sept 2021

Which costs are eligible in an IPCEI project?

Eligible costs can be found in the Annex section of the [IPCEI Communications](#).

Note that the aid must not subsidise the costs of a project that anyhow would incur and must not compensate for the normal business risk of an economic activity.