

Call for Expression of Interest for participation in IPCEI Hydrogen

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 participation. 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.

The Swedish Energy Agency is now conducting a call for expression of interest in Sweden for participation in IPCEI Hydrogen. The deadline for expressing interest is March 15th 2021 at 12:00, Stockholm time.

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 Guidelines](#) 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).

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.

Purpose of the Call for Expression of Interest

As a first step in the process, in order to qualify specific Swedish projects for participation in IPCEI Hydrogen, the Swedish Energy Agency is now conducting a call for expression of interest. The purpose of the call is to establish an overview of interested parties with relevant and sufficiently mature projects that can be included as Sweden's contribution to a joint European IPCEI project for the development of the hydrogen value chain.

Expression of Interest is non-binding on the part of the interested parties, and the Swedish Energy Agency does not grant aid to projects through this call. As part of

the further process, projects that fulfill the selection criteria might be invited to so-called "matchmaking" to connect to IPCEI projects from other countries.

All information submitted will be treated confidentially by the Swedish Energy Agency. However, projects that are invited to participate in the matchmaking process will need to share sufficient information to make it possible to link projects and initiatives with European ones. The interested parties will then have the opportunity to approve the information that must be shared.

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, and the projects must be of relevance for collaboration with other European projects under the IPCEI superstructure.

The Swedish call for expression of interest also emphasises that the projects must *make a significant contribution to reducing greenhouse gas emissions*. The call thus requests 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 call for expression of interest are climate-friendly and innovative hydrogen technologies.

Qualification criteria

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

The project may entail:

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

In order to emphasise the innovative nature of the projects, it is expected that the projects have a significant element of research and development related to the

realisation of the FID/EET investment. 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 under the call.

For projects involving First Industrial Deployment (FID):

- 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

Please see also the [IPCEI Guidelines](#). Note specifically chapter 4.1 point (28) and footnote (22) in the Guidelines about the incentive effect: “The aid application must precede the starts of the works, which is either the start of construction works on the investment or the first firm commitment to order equipment or other commitment that makes the investment irreversible, whichever is the first in time. Buying of land and preparatory works such as obtaining permits and conducting preliminary feasibility studies are not considered as start of works.”

Selection criteria

All 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 strategies
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 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

The selection criteria will be used to assess if the project is appropriate to continue for IPCEI Hydrogen funding. Projects that contain serious weaknesses in one or more of the above criteria will not be recommended for the matchmaking events and the second stage.

Selection process

Who can express interest?

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 for which interest is expressed 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 Guidelines](#), Chapter 2 (10).

How to express interest

Interested parties must submit an electronic application and send it to the Swedish Energy Agency by the deadline for expressing interest. The expression of interest should follow the headlines and instructions on the website: [forsta-steget---intressesanmalan-ipcei-vatgas.pdf \(energimyndigheten.se\)](#) (energimyndigheten.se)

Applicants are strongly advised to also examine and consider the mandatory documents for the second stage since an expression of interest in the first stage also entails a commitment to submit these documents in case the project is selected. At the second stage the full proposal requires a detailed description of the project as well as a detailed net present value calculation of the project, including an overview of eligible costs and an estimate of the need for public support (financing gap or "funding gap")

Submitted material is not an application for aid. It is nevertheless necessary that sufficient information is submitted so that the Swedish Energy Agency can make an assessment of the project, the funding gap and the potential effect on

greenhouse gas emissions and on European collaboration. In the call for expression of interest, the financing gap will be seen as an estimate of the need for state aid. Projects will be required to submit additional information and documentation if it is relevant to assess aid from the Swedish Energy Agency.

Time Schedule

Submitted projects will be assessed against the qualification criteria in the call. The projects most clearly fulfill the qualification criteria can be invited to further participate in the process, and to join the "matchmaking" with the selected projects from the other countries in IPCEI Hydrogen.

Subject to change, the preliminary schedule for the work with IPCEI Hydrogen is as follows:

- Opening of the Swedish call for Expression of Interest: no later than February 15th, 2021.
Send your Expression of Interest to the Swedish Energy Agency at: anmalanIPCEIH2@energimyndigheten.se
- Deadline for registering national interest: March 15th 2021, 12:00
- Matchmaking: February / March 2021
- Start-up notification process: Q2 2021
- Earliest start of projects: 2022

Which costs are eligible in an IPCEI project?

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

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.