GREEN HYSLAND

Deployment of a Hydrogen Ecosystem on the Island of Mallorca

Sustainable Integration of Green Hydrogen on Island Electrical Systems

Administrative Processing of Green Hydrogen Projects in Spain

Second Green Hysland Workshop

28 November 2022 – Gran Canaria, Spain

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking (now Clean Hydrogen Partnership) under Grant Agreement No 101007201. This Joint Undertaking receives support from the European Union's Horizon 2020 Research and Innovation programme, Hydrogen Europe and Hydrogen Europe Research.

Redexis

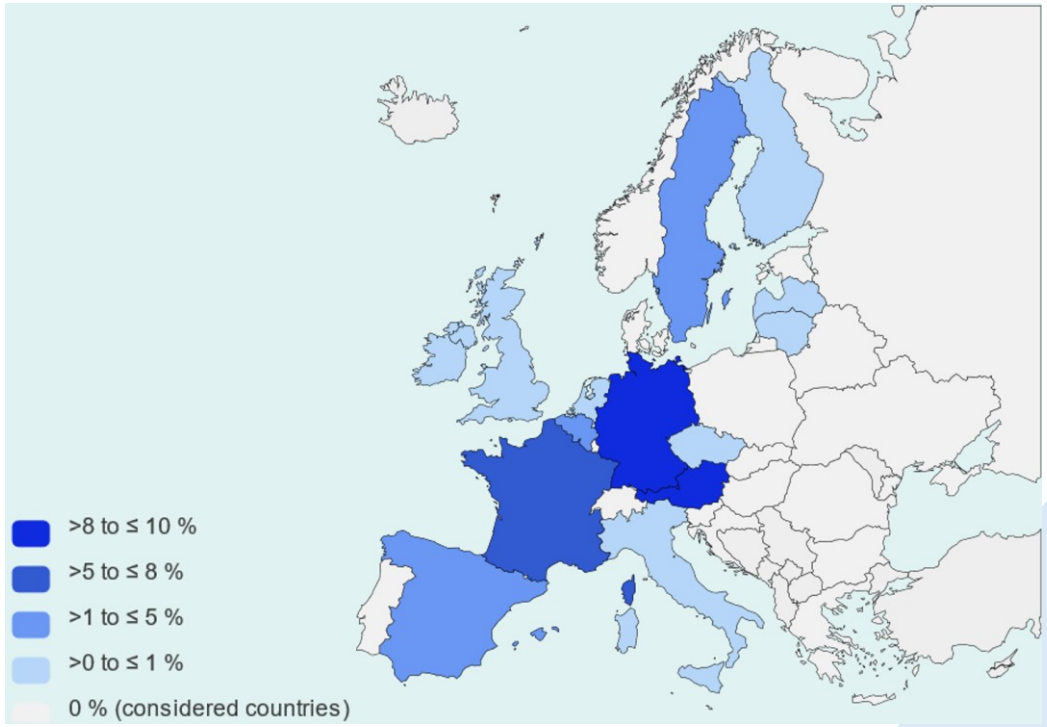
GREEN HYSLAND

Legal, Regulatory and Standardization status of hydrogen projects in Spain

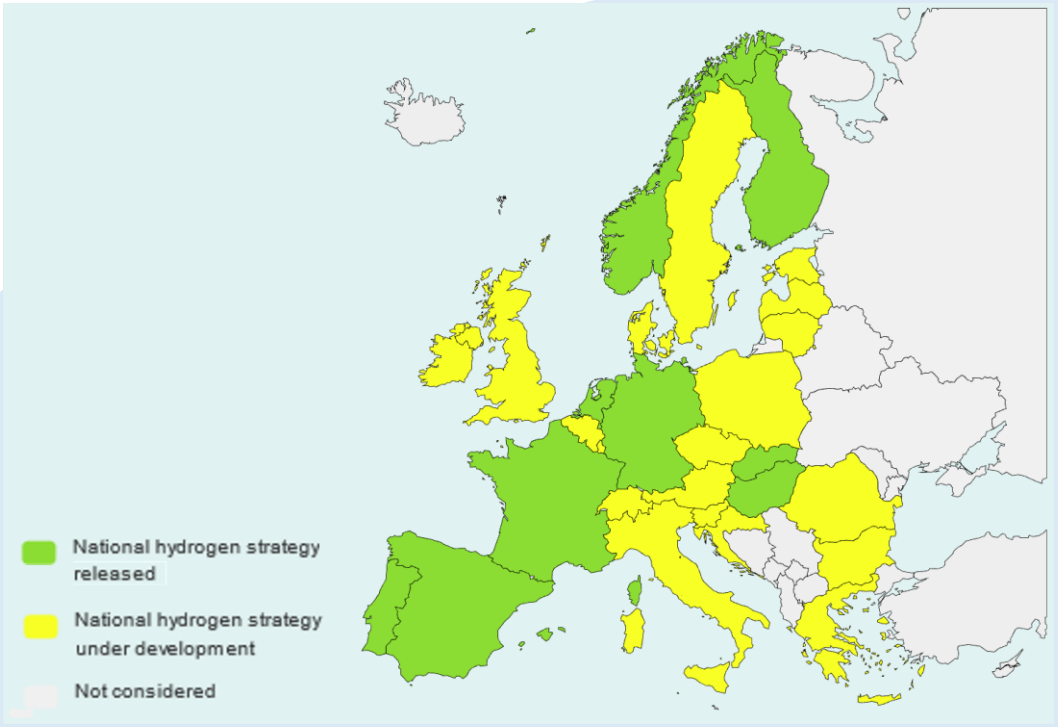
Redexis

GREEN HYSLAND

The current European framework



Allowed H2 concentration for blends with NG in the transmission gas grid of the EU countries.



Status of hydrogen strategies in the European countries

HIGGS Hydrogen in Gas Grids

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking (now Clean Hydrogen Partnership) under Grant Agreement No. 875091 'HIGGS'. This Joint Undertaking receives support from the European Union's Horizon 2020 Research and Innovation program, Hydrogen Europe and Hydrogen Europe Research.

Clean Hydrogen Partnership

Project HIGGS Website: https://higgsproject.eu/

Redexis

Legal, regulatory and technical aspects in Europe

- There is a quite diverse picture on the current status of national legal and technical framework in regards of hydrogen implementation in Europe.

- European Commission is working intensely on the preparation of the proposals of legislation regarding to hydrogen and hydrogen admixtures in NG transmission grid.

- The European gas sector is very active and shows big efforts to achieve and enable the use of hydrogen.

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking (now Clean Hydrogen Partnership) under Grant Agreement No. 875091 'HIGGS'. This Joint Undertaking receives support from the European Union's Horizon 2020 Research and Innovation program, Hydrogen Europe and Hydrogen Europe Research.

Project HIGGS Website: https://higgsproject.eu/

The Spanish legal and technical framework

- Law 34/1998 “The Regulation of the supply of combustible gases by canalization” is the basis for the gas grid system and its regulation. It mainly applies to natural gas, but also to other gas types, if it is technically possible and safe to inject and transport these gases into the gas grid.

- In June 2020, the Royal Decree 542/2020 modified the technical regulation of distribution and use of gaseous fuels (RD 919/2006) including hydrogen in the gas phase as a fuel gas and including service stations for hydrogen vehicle in the gas phase.

- The resolution from September 22, 2011, of the Directorate General of Energy Policy and Mines includes the protocol of detail PD-01 “Measurement” of the norms of technical management of the gas system. According to it the current maximum concentration for alternative gases in natural gas that can be injected into the transmission gas grid is 5 Mol-%. It is allowed to interpret that it would also be valid for Hydrogen.
  Currently, a revision of the PD-01 is ongoing.

- The Spanish government published the Spanish national green hydrogen strategy in October 2020. The strategy establishes country targets until 2030 and provides visions for the development in 2030 and 2050.

The Spanish legal and technical framework

- In 2022, Royal Decrees-Law RDL 6/2022 and RDL 18/2022 were published, which include modifications to the hydrocarbons law (Law 34/1998) and identify pipelines that connect renewable gases plants (i.e., hydrogen) to the natural gas network as direct lines and establish that:
  - No execution authorization required
  - Grants the DPU (Declaration of Public Utility)
  - Ownership passes to the producer
  - [...]

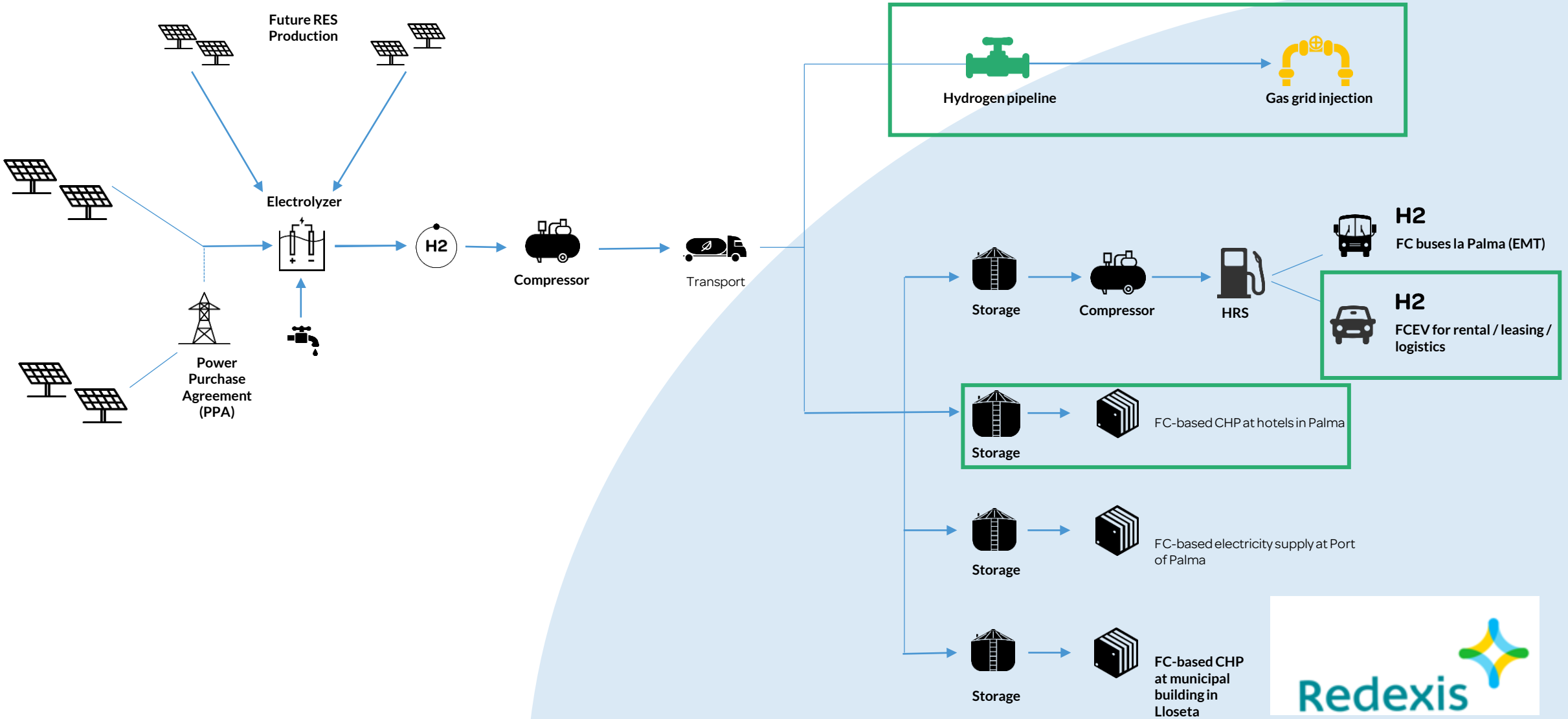
These RDLs came into force after the start of the Green Hysland Project, establishing a different scenario than the one applied during the Project.

GREEN HYSLAND

Experience of the Processing of Hydrogen Projects within GREEN HYSLAND

Redexis

Green Hysland Project Introduction



General Tasks to be performed by REDEXIS

- Execution of a H2 pipeline

Sub Task 3.3.2 Deployment of a dedicated H2 pipeline

- Renewable hydrogen injection point in the gas pipeline network of Mallorca

Task 3.4 Deployment of end-user applications

Sub Task 3.4.4 Injection of H2 into the local gas grid on Mallorca. RDX will introduce a NG/H2 mixing station at a suitable location to allow some of its existing NG customer base to run on a NG/H2 blend.

- Applications

Task 3.4 Deployment of end-user applications

Sub Task 3.4.6 Transport Application 2: Fuel cell-powered vehicles in Palma [RDX] Delivery of 10 FC vehicles to be leased/rented in and around Palma.

Sub Task 3.4.3 Energy Application 3: CHP application at a hotel in Palma [RDX, ENAG] RDX, with the support of ENAG, will install a 50kW FC for a combined heat and power application in a hotel in Palma.

- Operation for 2 years of the infrastructures associated with the Hydroduct and applications executed by Redexis

Considerations to the Processing. Hydroduct and Injection Point.

Hydrogen Pipeline

Gas Grid Injection

Submarine NG pipeline

NG Transport network

SANSON-01 Injection Post

Considerations to the Processing. Competence

HYDROGEN PIPELINE:

- In accordance with article 30.25 of the Balearic Autonomy Statute, the Community has exclusive competence in the matter of "Installations for the production, distribution and transmission of energy, when the transport does not leave the community and its use does not affect another Autonomous Community", respecting what is established in no. 25 of section 1 of article 149 of the Constitution.

- While the State does not have reserved for itself, by means of any basic regulations, the competence related to any hydrogen installation that runs solely through the Autonomous Community (in natural gas, for example, the State does have jurisdiction when pressure is higher than 60 bar), the Autonomous Community would have exclusive competence to authorize the installation.

- In the Balearic Islands there is the particularity of the Energy Sector Master Plan of the Balearic Islands (D 96/2005), which allows to identify the hydrogen pipeline as an installation of general interest and exempts us from the need for licenses.

Modification SANSON-01 - Injection post:

- As it is a primary transportation gas pipeline, it will be processed by the General State Administration (Ministry of ecological transition).

Considerations to the Processing. Processing Procedure

- In the absence of a specific procedure, the procedure for granting administrative authorization could follow the procedure established in Law 39/2015, of October 1, on the Common Administrative Procedure of Public Administrations.

- However, in the same way that for secondary transportation gas pipelines, the Autonomous Communities have been applying RD 1434/2002 (whose material scope actually corresponds to the facilities that are the exclusive competence of the State), the State itself recently included, through RD 335/2018, a forecast that allowed the application of the procedures of RD 1434/2002 to hydrogen pipelines:

  "Installations necessary for the supply of other alternative fuels, such as hydrogen, which are destined to be supplied by pipeline to final consumers, including vehicle supply stations and which are the responsibility of the General State Administration. "

  Therefore, for the processing of the administrative authorization of the hydroduct, the specific procedures established in RD1434/2002 could be followed in the same way that it has been used to authorize secondary transportation gas pipelines.

- Following the guidelines of the Autonomous Community of the Balearic Islands, the project won't need an administrative authorization AA but a project authorization and a DPU that would be granted according to the regional regulation.

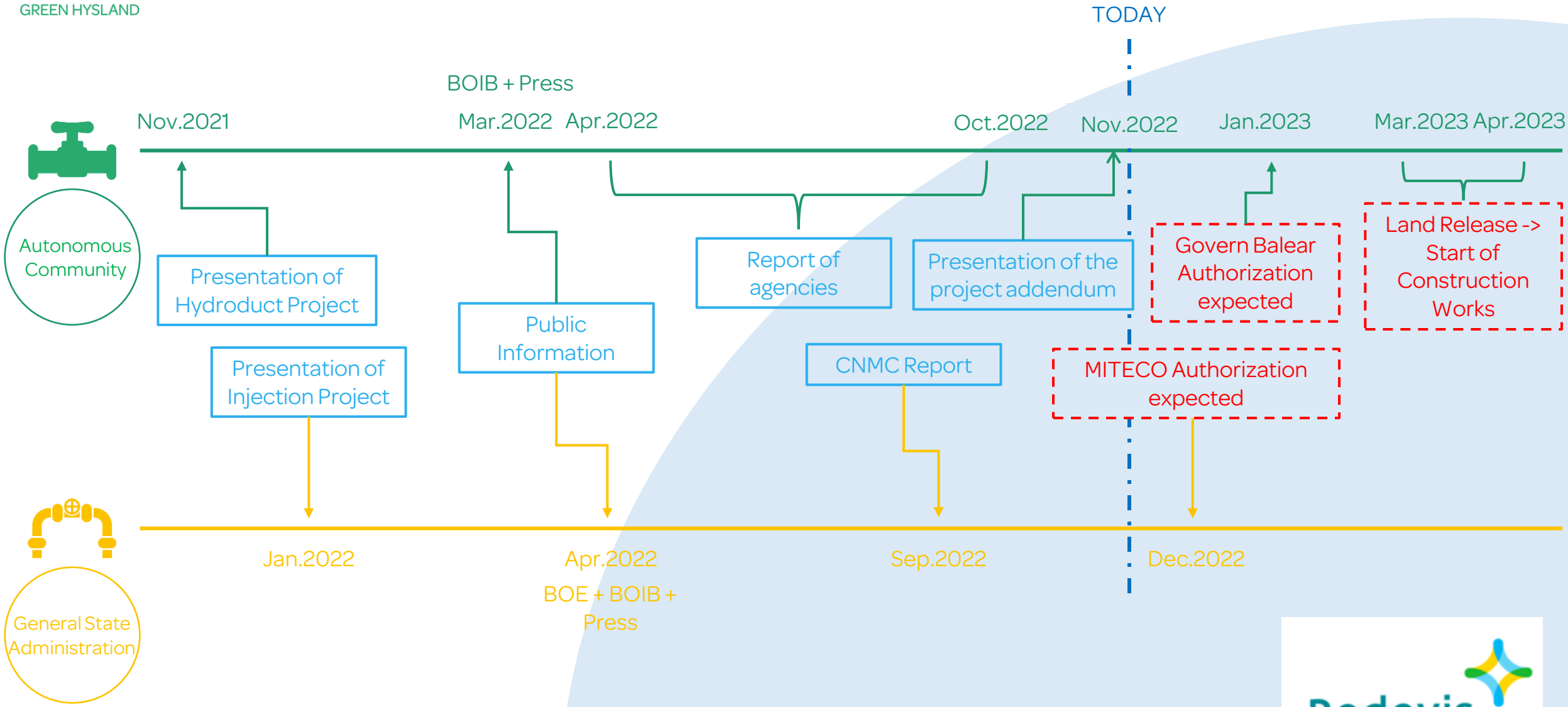
- Due to the length of the hydrogen pipeline and because it does not affect the Natura 2000 network, the environmental impact statement is not needed.

Considerations to the Processing. DPU

- The public utility, necessary for the infrastructure to benefit from the Forced Expropriation regime, can be requested and granted under articles 2 and 3 of Law 13/2012, of November 20, on urgent measures for economic activation in the matter industry and energy, new technologies, waste, water, other activities and tax measures.

- Thus, the aforementioned article 2 indicates that "the towers or the measurement equipment necessary for the evaluation of renewable energy resources can be declared of public utility, and, according to their energy interest, the thermal utilization facilities, such as solar and thermosolar, biomass, cogeneration, and geothermal and energy distribution networks ". As a continuation of this, article 3 details the DPU application process, which concludes with a Resolution of the competent general director in matters of industry and energy.

Processing Timeline



GREEN HYSLAND

Thank You for your Attention and Participation

Pablo Martínez Fondón

Pablo.martinez@redexis.es

https://greenhysland.eu/

This project has received funding from the Fuel Cells and Hydrogen 2 Joint Undertaking (now Clean Hydrogen Partnership) under Grand Agreement No 101007201. This Joint Undertaking receives support from the European Union's Horizon 2020 Research and Innovation programme, Hydrogen Europe and Hydrogen Europe Research.

Redexis