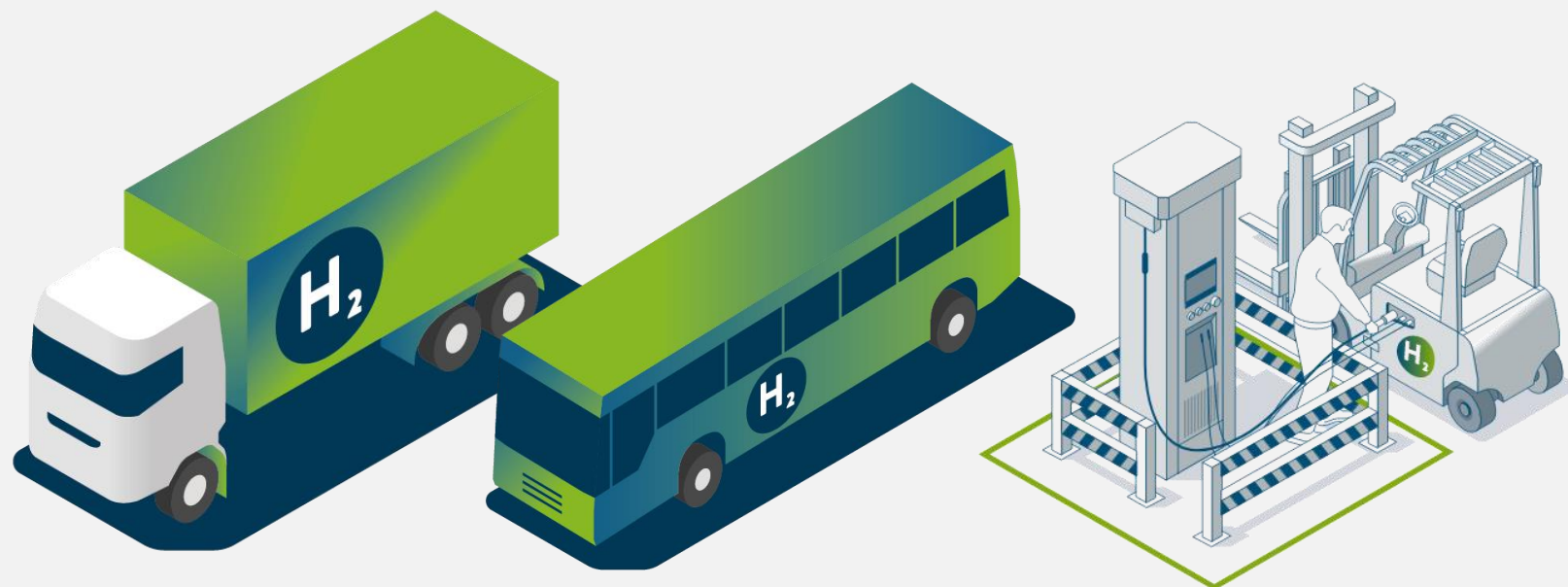




Hydrogen Initiatives and Challenges in Chile



www.h2chile.cl
contacto@h2chile.com

Disclaimer: the following presentation was made based on the studies, collected data and analysis of the administrative team of the Chilean Hydrogen Association. Any improper use or dissemination of the information provided during the meeting may be grounds for disciplinary and / or legal actions in accordance with the provisions of H2Chile.

H2 Chile-Asociación Chilena de Hidrógeno®, 2021.



Agenda

1

About H2 Chile

2

Hydrogen Initiatives

3

Main Challenges and technical / financial support needs in Chile

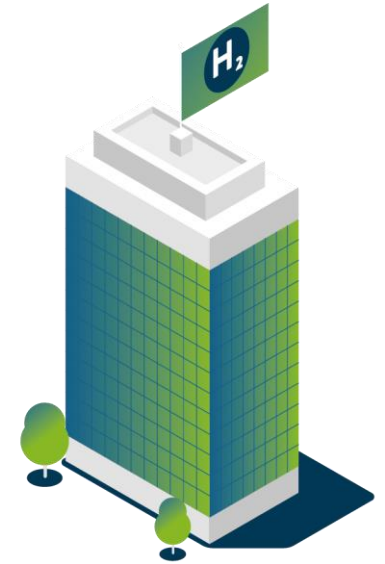


About H2 Chile



Chilean Hydrogen Association

Founded in 2018 as a non-profit association. Its objective is **to accelerate the energy transition by promoting hydrogen** and its use as an energy vector in industrial, commercial, residential, and mobility applications. It aims to position Chile as one of the leading countries in the production and export of green hydrogen. Our members come from the private, public, and academic sectors, with 45 professional partners and 66 leading companies. With the current partners, H2 Chile can cover the entire green hydrogen value chain.



Vision

Establish a hydrogen-based economy in Chile and position the country as a world leader in the production and export of Green Hydrogen.



Mission

Accelerate the energy transition by promoting the development of hydrogen technologies.

Professional and Corporate Members (111)



H2 Chile's Workstreams to impulse Green Hydrogen

Demand stimulation

1

To drive the development of applications that enable the scaling of industry and the decarbonization of sectors that are unfeasible to electrify.

Articulation of Financing

2

Facilitate the availability of financial resources for green hydrogen projects.

Public policy and regulation

3

Facilitate the creation of instruments that generate the necessary conditions for the industry in the short and medium term.

EnergieAgentur.NRW 



GLOBAL
MARITIME
FORUM

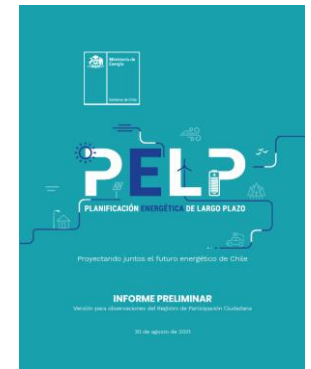
H2.B ZENTRUM
WASSERSTOFF.
BAYERN

KFW
IPEX-Bank

IFC
International
Finance
Corporation
WORLD BANK GROUP

BID | Invest

SMBC



H2 Chile is internationally linked to more than 17 countries and leading the LAC Green Hydrogen Action



Citizen awareness and human capital development

4

To raise public awareness and promote technical and professional training along the entire hydrogen value chain.



National/International alliances

5

Position Chile as a leading country in the Hydrogen market and generate connections that allow attracting knowledge, technology and resources.

H₂ Chile – consolidation step by step

In September, we joined the “**Global Hydrogen Industrial Association Alliance**”, the largest conglomerate of hydrogen associations.

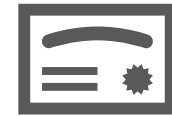


H₂ Chile – consolidation step by step

COP 26: signature of the LAC Green Hydrogen Alliance



It promotes collaboration along the region:



Green Hydrogen Certification



Social acceptance of projects



Mobilisation of early financing



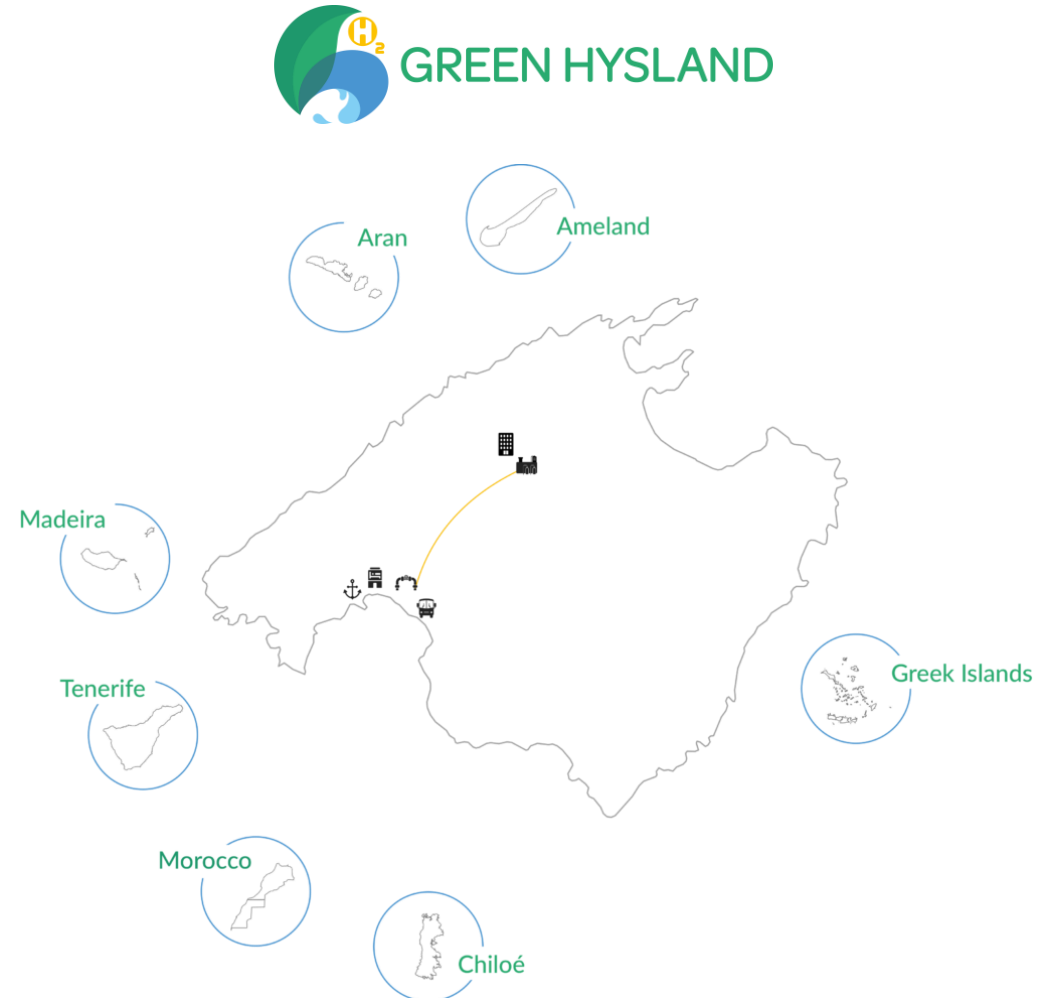
Enhance the role of GH₂ on national policies

H2 Chile part of the Consortium building Mallorca H2 Ecosystem (Spain)

The initiative received EUR 10 million from the FCH JU (UE)



The initiative could be replicated in other inlands in Chile and/or the rest of the world.

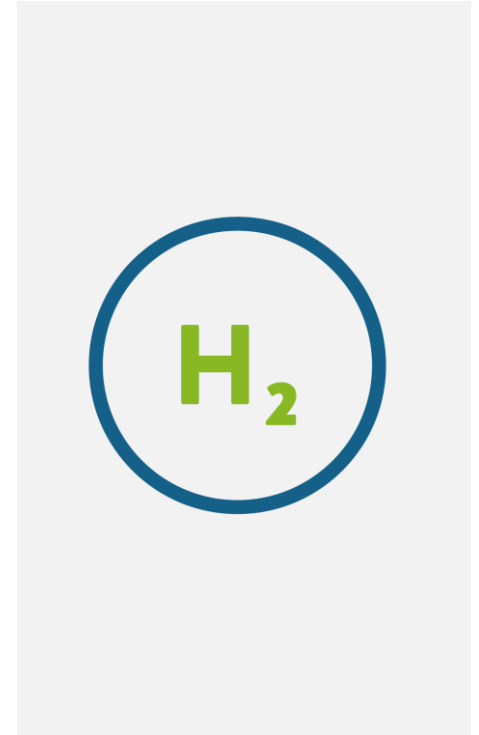
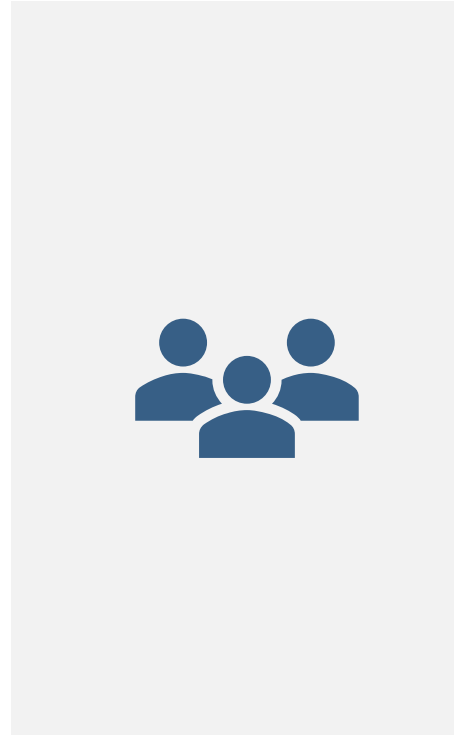
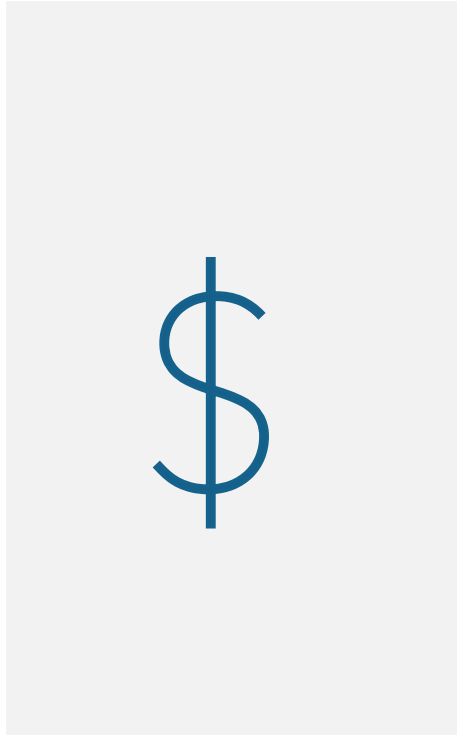
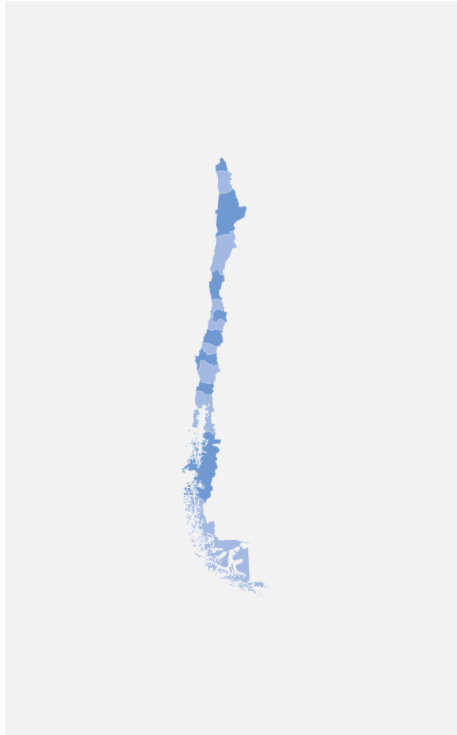




Main Challenges and technical / financial support needs in Chile

2

Main Barriers and Challenges in Chile



Main Challenges and technical / financial support needs in Chile

Activate local demand

Mechanisms to enable scalability of projects



Main Challenges and technical / financial support needs in Chile

Activate local demand

Mechanisms to enable scalability of projects

Early financing

Financing mechanisms in the first instance focusing on CAPEX

Concessional loans



Main Challenges and technical / financial support needs in Chile

Activate local demand

Mechanisms to enable scalability of projects

Early financing

Financing mechanisms in the first instance focusing on CAPEX
Concessional loans

Improve regulations

H2 strategy includes regional realities
Generate regulations to enable project development



Main Challenges and technical / financial support needs in Chile

Activate local demand

Mechanisms to enable scalability of projects

Early financing

Financing mechanisms in the first instance focusing on CAPEX

Concessional loans

Improve regulations

H₂ strategy includes regional realities

Generate regulations to enable project development

Social licence to operate

Educate and inform communities

Make them part of the process



Main Challenges and technical / financial support needs in Chile

Activate local demand

Mechanisms to enable scalability of projects

Early financing

Financing mechanisms in the first instance focusing on CAPEX
Concessional loans

Improve regulations

H2 strategy includes regional realities
Generate regulations to enable project development

Social licence to operate

Educate and inform communities
Make them part of the process

Certification

Accelerating the adoption of a green hydrogen certification mechanism

Main Challenges and technical / financial support needs in Chile

Strategic infrastructure

Ensuring open access and encouraging partnerships (ports, gas hubs)



Main Challenges and technical / financial support needs in Chile

Strategic infrastructure

Ensuring open access and encouraging partnerships (ports, gas hubs)

Human Capital

Human capital development for the industry



Hydrogen Initiatives

3

Under Development



Sociedad de Inversiones Albatros

Selknam
Green ammonia for export



AES Andes
Green ammonia for export



Antofagasta Mining Energy Renewable (AMER)
E-methanol



San Pedro de Atacama
Hydrogen energy storage



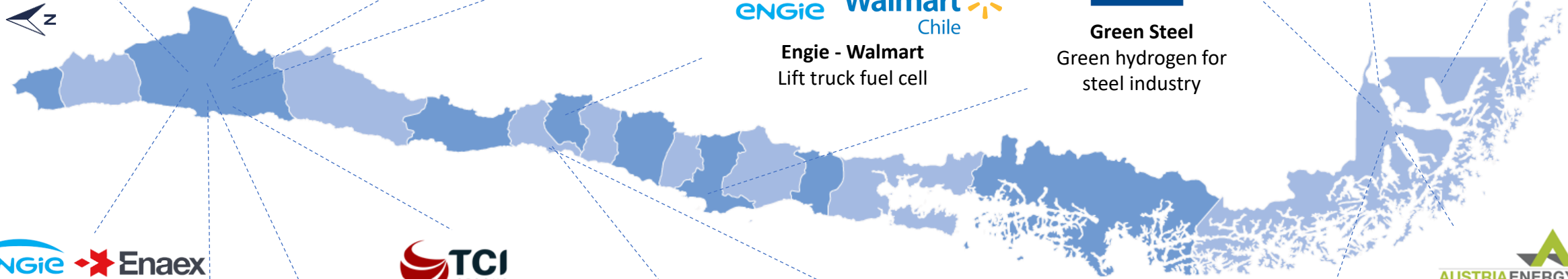
Atacama Hydrogen Hub
Hydrogen for freight transport and export



HIF
E-fuels for export



TOTAL eren
Green hydrogen and ammonia for export



Engie - Walmart
Lift truck fuel cell



Green Steel
Green hydrogen for steel industry



HyEx
Green ammonia for explosives and export



HOASIS
Green hydrogen for multiple applications



HyPro Aconcagua
Partial replacement of grey hydrogen in ENAP



Quintero Bay H₂ Hub
Green hydrogen for domestic market



H1 Magallanes
Green hydrogen and ammonia for export



HNH Energy
Green ammonia for export



ACH - MRP
Green ammonia for export

Hydra
Develop fuel cell + battery powertrains for CAEX

Ecosystem Boosts



This project is funded by
the European Union

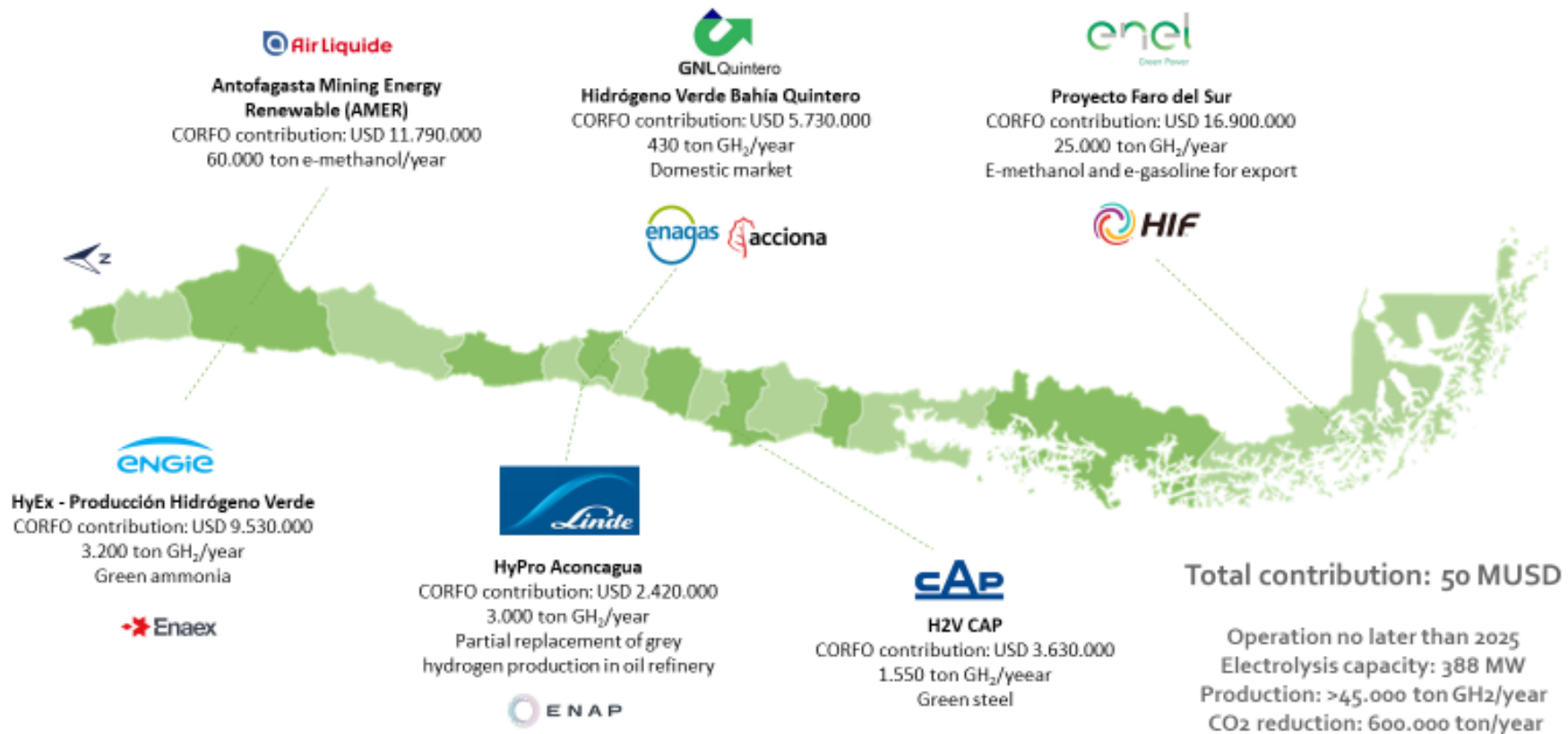


Bundesministerium
für Wirtschaft
und Energie

Ecosystem Boosts



» 50 MUSD for electrolysers > 10 MW



Ecosystem Boosts



» 50 MUSD for electrolysers > 10 MW



» 340,000 USD for pre-investment studies



» 360,000 USD for pilot projects



» Business platform for green technologies



» Developing supply chains between Germany and other countries

Green Hydrogen Strategic Alliance for the Biobío Region

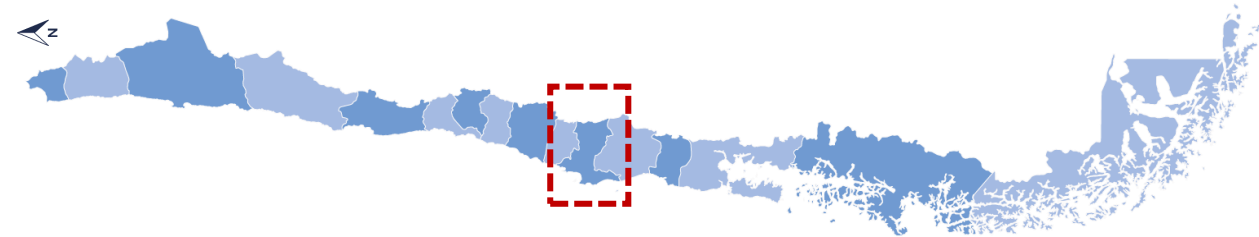
It is an alliance led by the **University of Concepción** with the participation of companies, higher education institutions, civil society and government.

It seeks to facilitate and accelerate the energy transition and the **development of green H₂ in the Biobío region** and the south-central macro-zone of Chile.

It aims to establish a **productive and technological pole** for the use of green H₂.



Universidad de Concepción



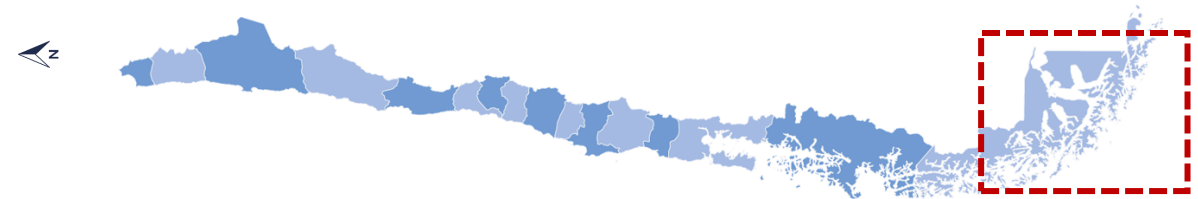
Roadmap

Green hydrogen Austral Patagonia

Magallanes Region and Chilean Antarctica

The Production Development Corporation (CORFO) within the Austral Patagonia Regional Transformation Program is developing a **roadmap for the Magallanes Region**.

It aims to consolidate the information regarding relevant issues for the development of the green hydrogen industry. It also includes implementation or development deadlines, the vision of the program and the elements and gaps related to H₂.





www.h2chile.cl
contacto@h2chile.com

Disclaimer: the following presentation was made based on the studies, collected data and analysis of the administrative team of the Chilean Hydrogen Association. Any improper use or dissemination of the information provided during the meeting may be grounds for disciplinary and / or legal actions in accordance with the provisions of H2Chile.

H2 Chile-Asociación Chilena de Hidrógeno®, 2021.