Cristina Maggi – Director H2IT
Associazione Italiana idrogeno
Italian Hydrogen Association

Hydrogen Supply chain in Italy

H2IT
Who we are

MISSION & OBJECTIVES

We are the voice of the Italian industry and entities involved in the hydrogen supply chain. We aim to promote the development of the Italian market related to the production, storage and use of hydrogen.

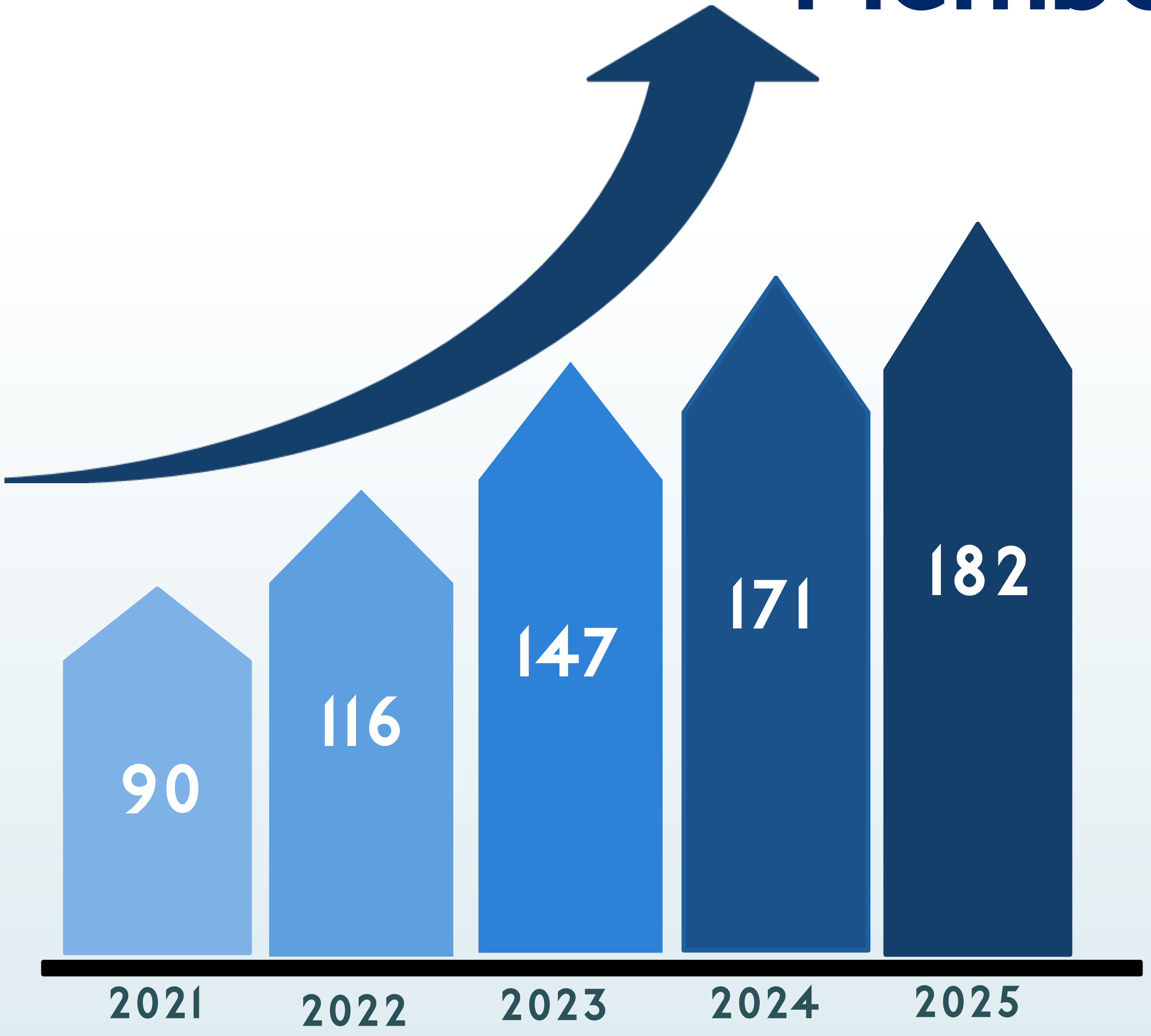
The Association has always set itself the goal of achieving the following objectives:

- to stimulate the creation of the infrastructure for the use of hydrogen,
- to support the players in the sector and ensure a leadership role for Italy in the world market.

H2IT aims to create the political and regulatory conditions for the development of a hydrogen applications market in Italy, as well as to promote its use through public and private participation.

- On the one hand, we want to act as bridge between companies and the institutions, offering the necessary support to define a clear regulatory framework and raising awareness among the Government and citizens on the importance of hydrogen in a zero-emission energy system
- and, on the other hand, to support member companies in the path of growth and development towards a hydrogen economy in Italy and Europe.

Members H2IT



72 Big companies

79 SME

11 Research centers

20 Technological Clusters

Hydrogen Europe

WHO WE ARE - Companies

a2a, ABB, Air Liquide, Alfa Laval, Altea Green Power, Alstom, ansaldo green tech, APT Gorizia, Arco FC, Argo, ISO Filtri, Atlas Copco

Aumatech, Aviogei, axpo, Baker Hughes, Beyfin, Blu Energie, Bosch, Burckhardt Compression, Bifuel LNG, Blunova, blue Engineering & Design, Bureau Veritas, cavagna group, CFFT Civitavecchia Fruit & Forest Terminal

CIME, coax valvole italia srl, Enapter, coes, CPL Concordia, CTS H2, COMAU, Comer, COMSOL, Chemprod Chemical Process Design, DG Engineering Management Contracting, DBA Group, De Nora, Dassault Systemes, EAE

Endress+Hauser, ErreDue, Edison, EN.IT, eni, Eldor Corporation, Enereco, Fasteel, FNM, Fincantieri, Fores Engineering

Faber Cylinders, Gastech Consulting S.r.l., Hyundai, Gruppo Hera, hyCharge, Hydroalp, Hoerbiger, ILT Energia, Hybitat, H2E, Hazel New Energy, Harting

Dr. Gaetano Santonocito Idrogeno Biogas e Cogenerazione, ICIM Group, IIT Hydrogen, Interfluid, Italfluid, Italgas, Iveco Group, ICI Powering Evolution, ILOS, Iberdrola, kiwa

L'Agricola, Linde, Landirenzo, lazzero tecnologie, MCD Microchannel Devices, Meridionale Impianti, MIA Energia, Masmec, MetHydor, McPhy, Metlen Energy & Metals, Maximator Maximum Pressure Italy

Mussari, Neeltran Inc., Naval EGT, NatPower, ORP Stampi, OMAL Automation, OMB Saleri, Pietro Fiorentini, Parker, Portwest, PST Process Sensing Technologies, Precision Fluid Controls

Pollution, regas, rampini, rototech group, RINA, snam, Starlight, Saipex, Società Gasdotti Italia, SIAD, STAM Mastering Excellence

Sapio, S.A.L.P. S.p.A., SITAV Società Italiana Treni Alta Velocità, STE energy, Siram Veolia, Switch Engineering, Saipem, Secom, Spesso, SOL

solar IT Energie Rinnovabili, SolydEra, Simpli Phy, techfem, T.EN Technip Energies, Tenaris, building the future, Wave, Toyota, Verbund, Tormene Group, Toyota Material Handling, Vito Rimoldi, UFI Hydrogen, Transfer Oil, TÜV SÜD, Tubacex

WHO WE ARE – Institutional members

Scientific Committee – Research Centers & Universities

CITRAMS CENTRO INTERDIPARTIMENTALE TRASPORTI E MOBILITÀ SOSTENIBILE

ENEA

FBK FONDAZIONE BRUNO KESSLER

ITAE

POLITECNICO MILANO 1863 DIPARTIMENTO DI ENERGIA

Politecnico di Torino 1859

SAPIENZA UNIVERSITÀ DI ROMA

UNIMORE UNIVERSITÀ DEGLI STUDI DI MODENA E REGGIO EMILIA

UNIVERSITÀ DEGLI STUDI DI GENOVA

HIPPOCRATICA CIVITAS STUDIUM SALERNI

UNIVERSITÀ DEGLI STUDI FIRENZE

UNIVERSITÀ DI TORINO

UNIVERSITÀ DEGLI STUDI DI BERGAMO

Technological Clusters & Local Authorities

AIPF

asstra

Autorità di Sistema Portuale del Mar Tirreno Settentrionale
Porti di Livorno - Piombino - Portoferraio - Rio Marina - Cavo - Capraia

ATENA FUTURE TECHNOLOGY

CMA CONSORZIO MONVISO AGROENERGIA

Consorzio Comuni B.I.M. di Valle Camonica

CLM Cluster Lombardo della Mobilità Lombardy Mobility Cluster

CLUST-ER GREENTECH ENERGIA E SOSTENIBILITÀ

CNPI Consiglio Nazionale dei Periti Industriali e dei Periti Industriali Laureati

ENVIRONMENT PARK Parco Scientifico Tecnologico per l'Ambiente

FAST Federazione delle associazioni scientifiche e tecniche fondata nel 1897

FEDERCHIMICA CONFINDUSTRIA

NGV ITALY POWERING A CLEANER FUTURE

mobility

AREA SCIENCE PARK

RENAEL RETE NAZIONALE DELLE AGENZIE ENERGETICHE LOCALI

stream energy and environment

stress

UNINDUSTRIA UNIONE DEGLI INDUSTRIALI E DELLE IMPRESE ROMA • FROSINONE • LATINA • RIETI • VITERBO

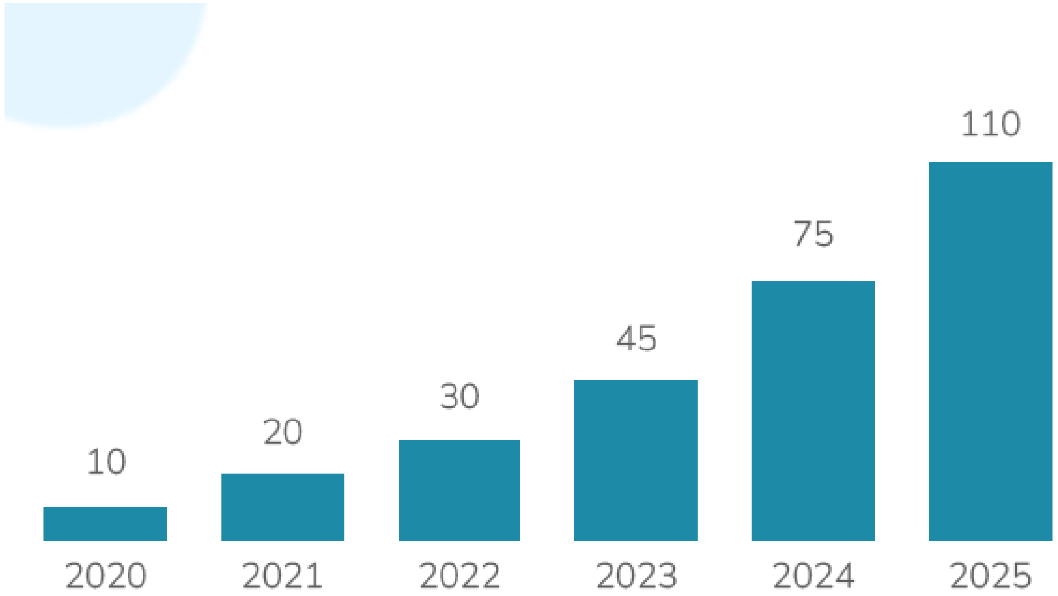
Città di Segrate

Global investments and European focus

Global investments

Global Hydrogen Compass 2025 – Hydrogen Council

Global cumulative committed (FID+) investment in clean hydrogen projects by 2030, $ billion



China
33 billion $

North America
23 billion $

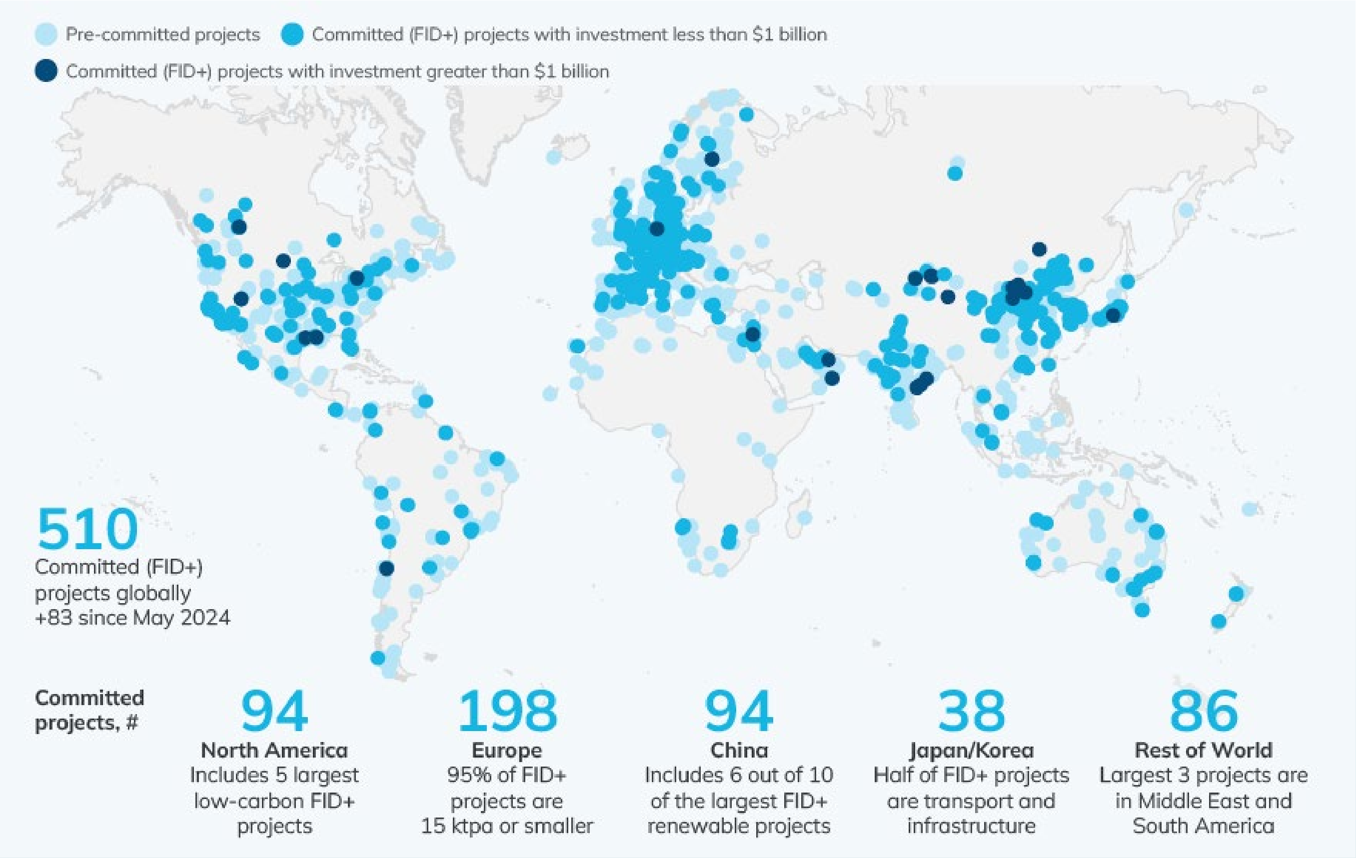
Europe
19 billion $

India
14 billion $

Global investments

Global Hydrogen Compass 2025 – Hydrogen Council

Global clean hydrogen projects by project status

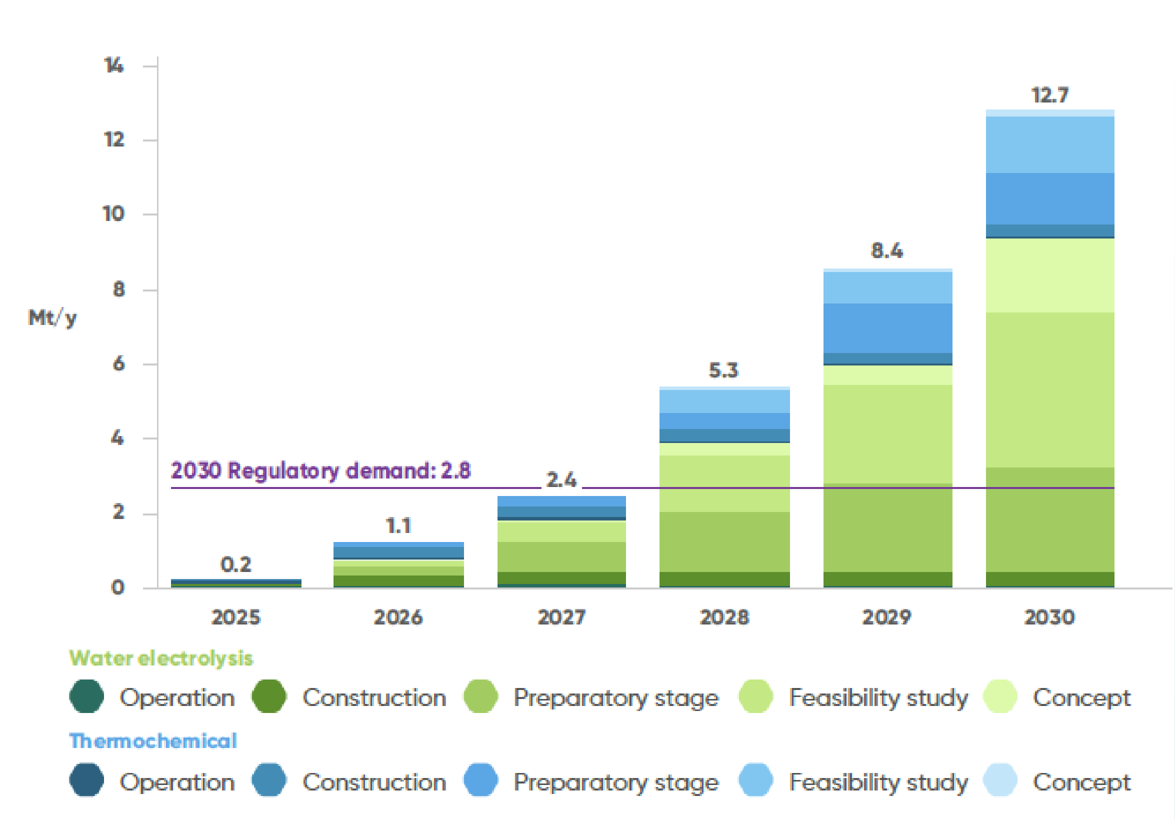


- *510 projects*
- *Europe has the highest number of projects with a date of entry into market by 2030*
- *70% of projects are renewable hydrogen, of which just under half are in Europe.*
- *Europe leads in quantity but Chinese renewable projects are ten times larger than European ones*

H2 Produzione in EU

CLEAN HYDROGEN MONITOR 2025 – Hydrogen Europe

Cumulative announced clean hydrogen production capacity up to 2030



- ***862 progetti annunciati di produzione di idrogeno pulito con piani di entrare in funzione dal 2030 per un volume di 12,7 Mt.***
- ***Il 4,7% dei progetti è in costruzione***
- ***Il 37% della pipeline di progetti è in una fase avanzata***

Italian Policy Framework

2021-2026

National Recovery and Resilience Plan PNRR

3,64 billion euros along the value chain

2024

Integrated Energy and Climate Plan

251.000 tons of hydrogen RFNBO by 2030

November 26, 2024

Hydrogen strategy

Decarbonisation of end-uses, Energy security and low-carbon hydrogen production

January, 2026

RED III

42% rfnbo industry

1% rfnbo tranport

2026?

Tariff Decree

Renewable hydrogen auction (bio and non-bio)

Updating of safety and authorization regulations

National Funded Projects

Hydrogen valleys

Hydrogen Refuelling Stations

Important Projects of Common European Interest

The national hydrogen strategy

The stages of the strategy

SHORT TERM

The start of the Early projects

- Launch of PNRR projects
- Achievement of RED III target
- Regulatory simplification
- Development of Hydrogen Valleys

LONG TERM

Centralization large quantities, Infrastructure

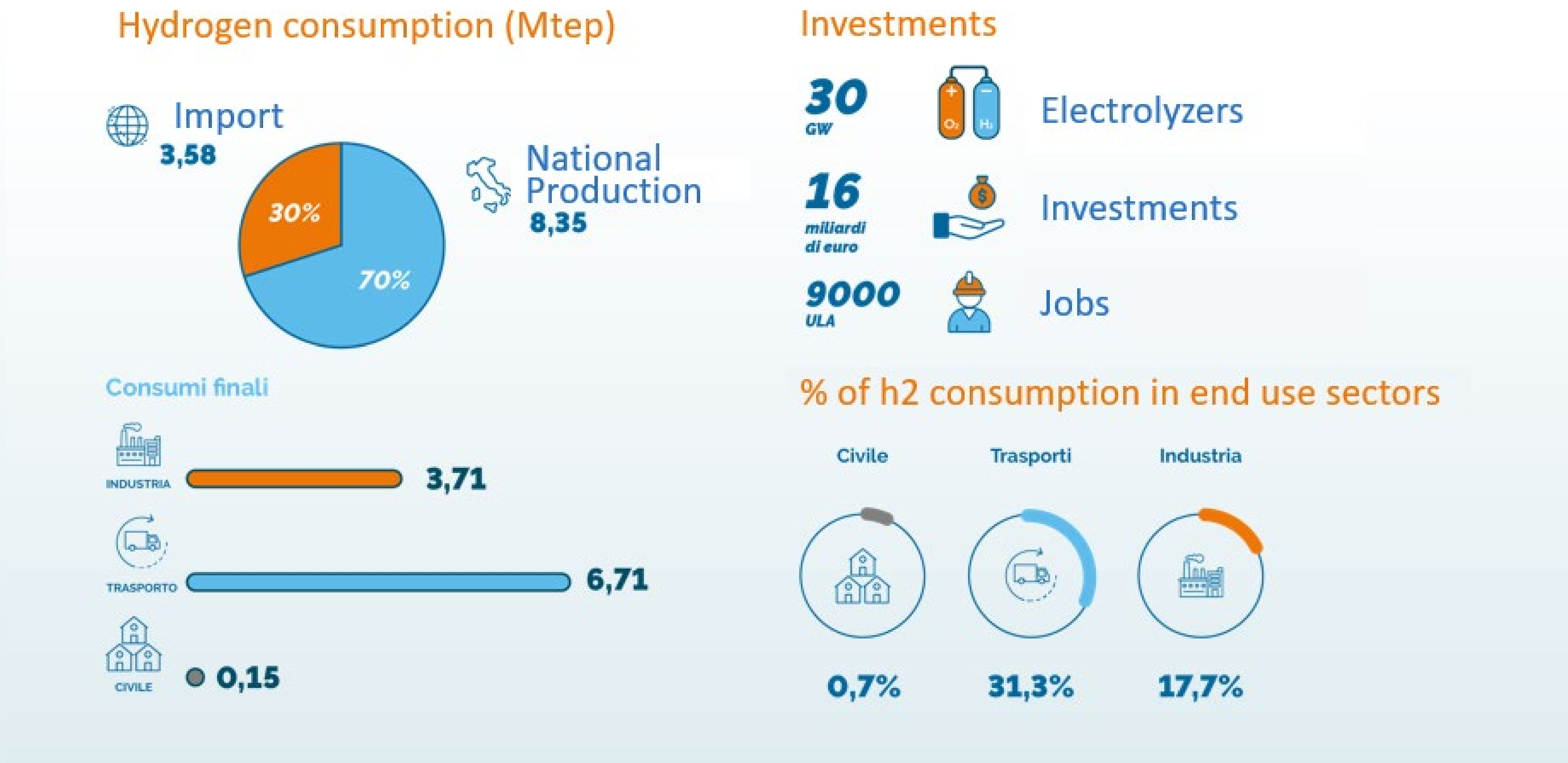
- 18% of H2 in final consumption
- Infrastructure development
- Long-term storage and import

MEDIUM TERM

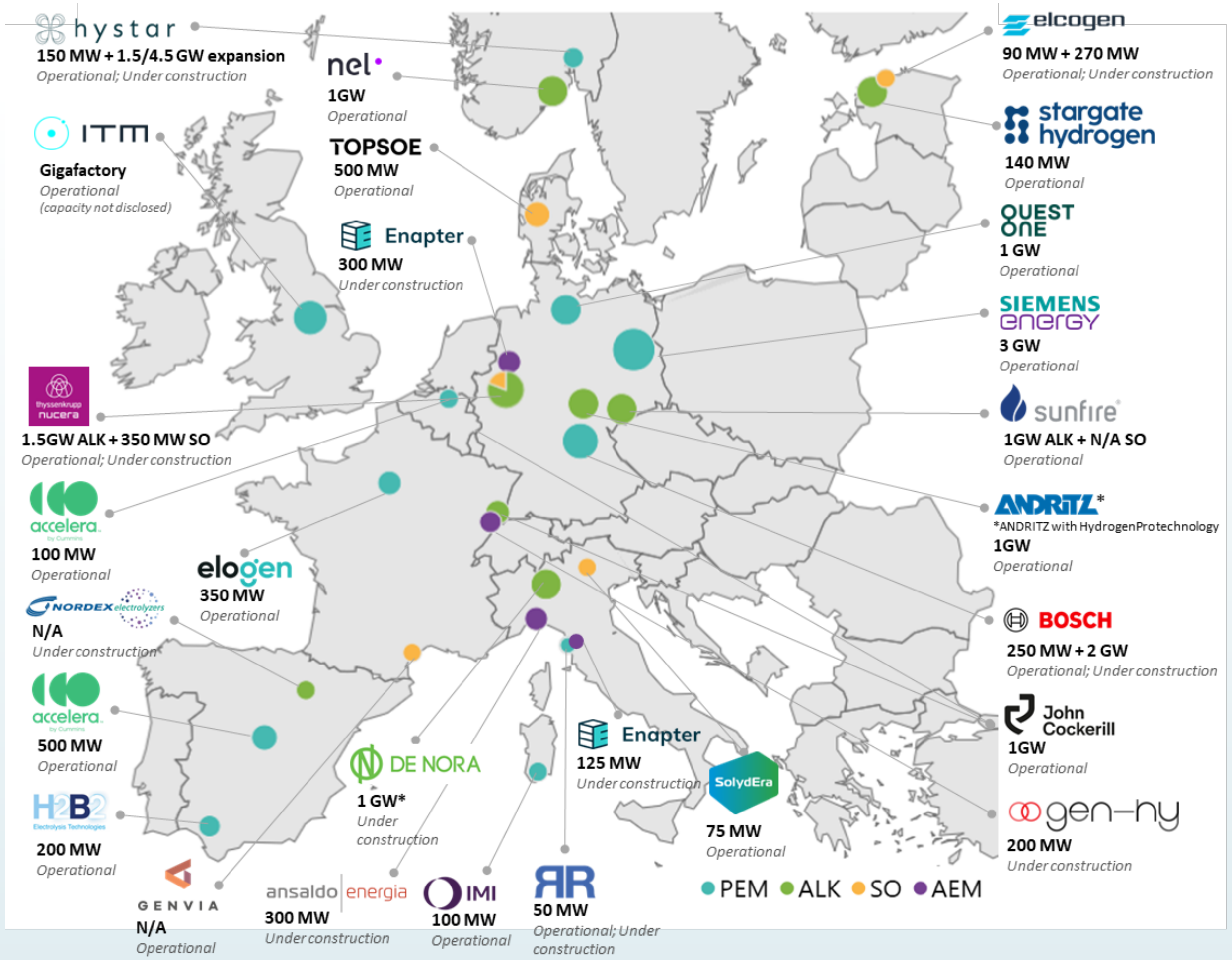
Scaling up and development of the market

- Market launch through incentive instruments
- Large-scale projects
- Increased demand in industry and mobility

High diffusion scenario (30% imports) by 2050:



European/Italian manufacturing capacity



In Italy

The current operational production is about ~275 MW/year.

In Italy

We cover all technologies: ALK, PEM, SOEC, and AEM

In Italy

More than 2.5GW/year of electrolyser production capacity is under construction

Source- Hydrogen Europe - Sites below 50MW not shown, latest update August 2025

Necessary Regulations and Policies

PRIORITIES FOR ACTION

1. OPEX INCENTIVE: It is necessary to provide support for operating costs to bridge the cost gap with fossil alternatives.

2. STIMULATING DEMAND IN INDUSTRY AND MOBILITY – It is necessary to support companies that represent the demand for hydrogen and derivatives with appropriate tools. (Support for the replacement of fleets, the replacement of industrial equipment, calls to support the creation of ecosystems and the transition of industrial processes..)

3. REDUCING THE COST OF ELECTRICITY: Tools to reduce the Impact of the cost of electricity on the cost of final hydrogen.

4. CERTIFICATION: Define the rules for the certification of renewable and low-carbon hydrogen.

5. MADE IN EU MANUFACTURING. Enhancement of the national and European supply chain of technologies and products, support for the creation/expansion of production centers in line with the NZIA.

6. R&D: Research and development fundamental for national competitiveness

Grazie per l’attenzione

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