

NGW European Gas Dialogues

Renewable gases: Ambition vs realism



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10 March 2021



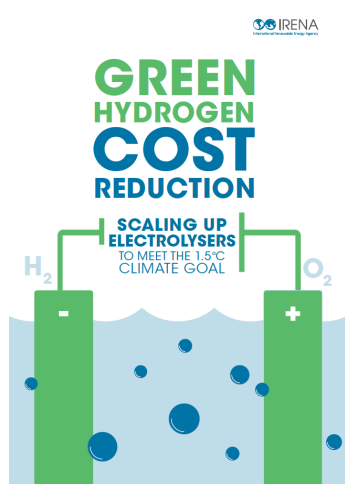


Figure ES1. A combination of cost reductions in electricity and electrolyzers, combined with increased efficiency and operating lifetime, can deliver 80% reduction in hydrogen cost.

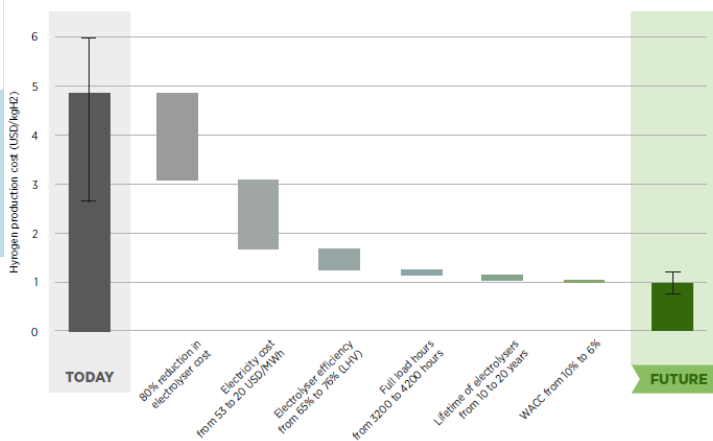
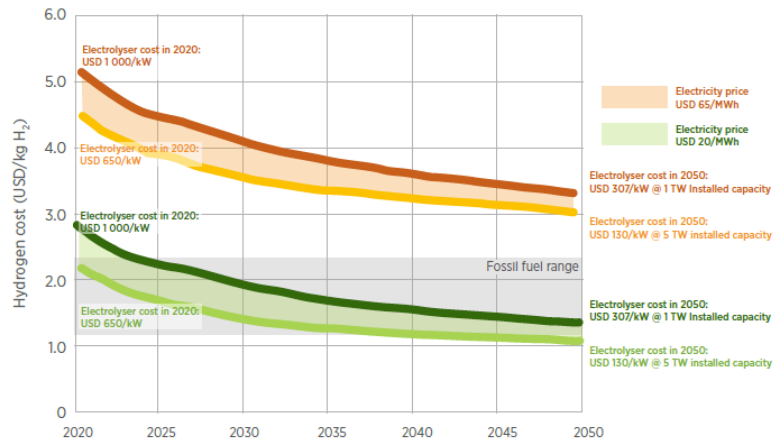
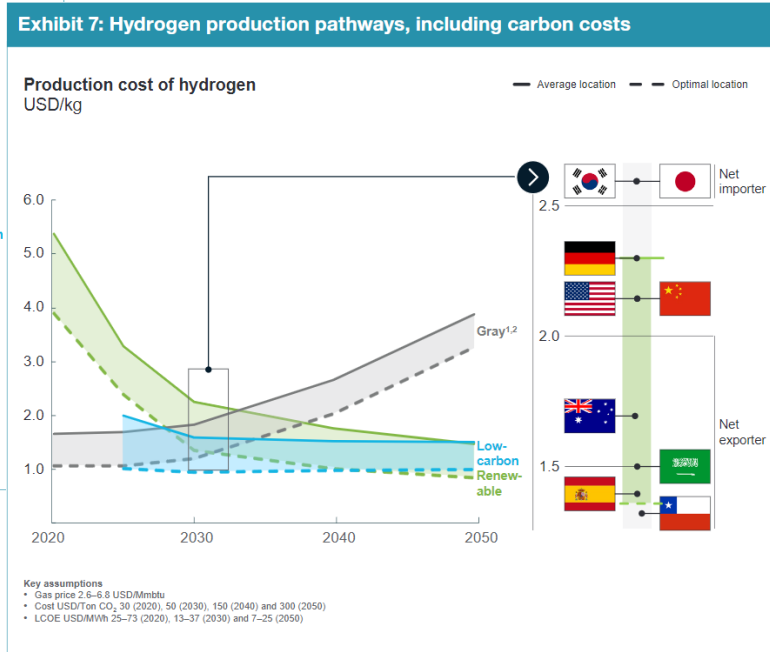
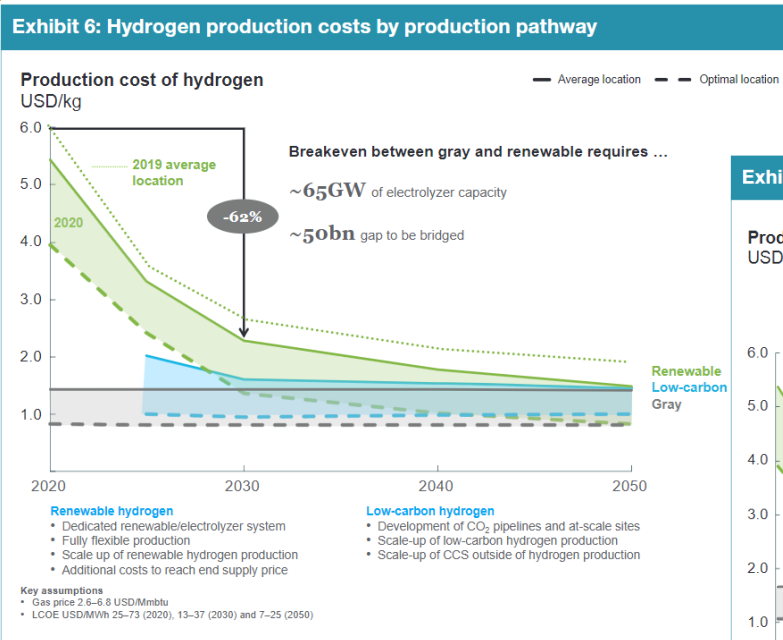


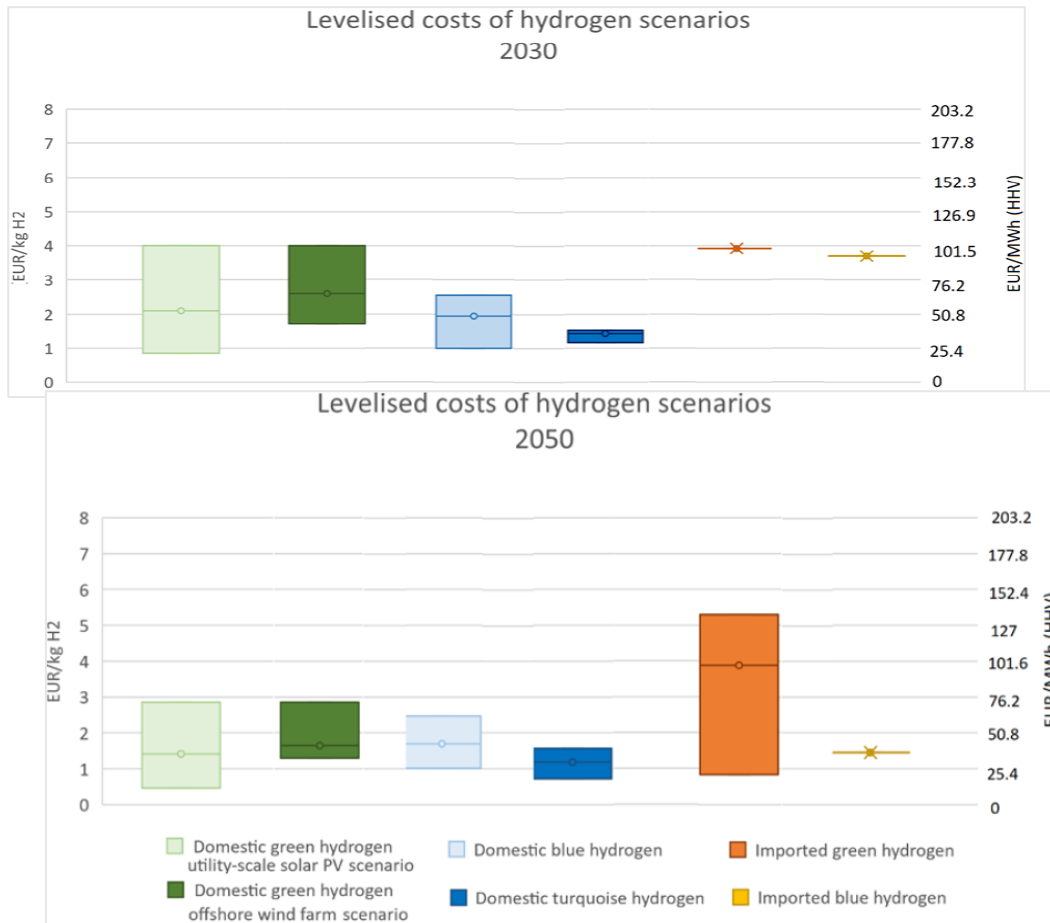
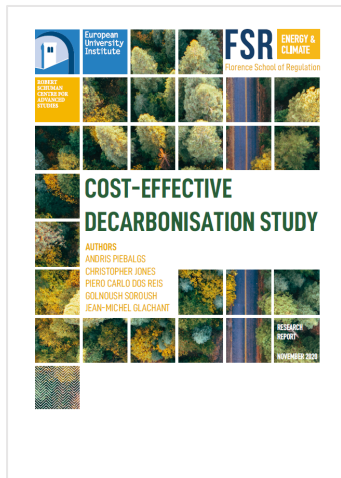
Figure ES2. Cost of green hydrogen production as a function of electrolyser deployment, using an average (USD 65/MWh) and a low (USD 20/MWh) electricity price, constant over the period 2020-2050.



Hydrogen production costs



Hydrogen production costs



Hydrogen Strategies in the EU

Government Strategy on Hydrogen



Introduction

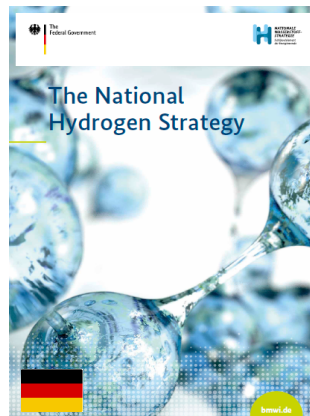
Low-carbon gases are indispensable to any energy system that is reliable, clean, affordable, safe and is suited to spatial integration, and zero-carbon hydrogen is a crucial link in that chain². The most common element in the universe seems to have a highly bonding effect in the Netherlands – particularly as a result of the unique starting position of our country. This is made clear in the agreements of the National Climate Agreement, which includes an ambitious target for hydrogen, supported by a large and broad group of stakeholders. Industrial clusters and ports regard hydrogen as an indispensable part of their future and sustainability strategy. For the transport sector, hydrogen (in combination with fuel cells) is crucial to achieving zero emissions transport. The agricultural sector has identified opportunities for the production of hydrogen and for its use. Cities, regions and provinces are keen to get started on implementing hydrogen.



Norwegian Ministry of Petroleum and Energy
Norwegian Ministry of Climate and Environment

Strategy

The Norwegian Government's
hydrogen strategy
Towards a low-emission society



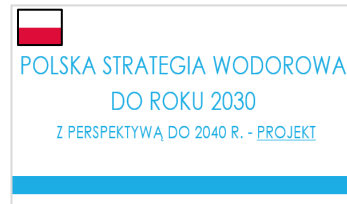
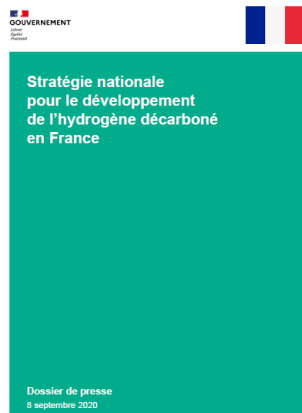
Drafts



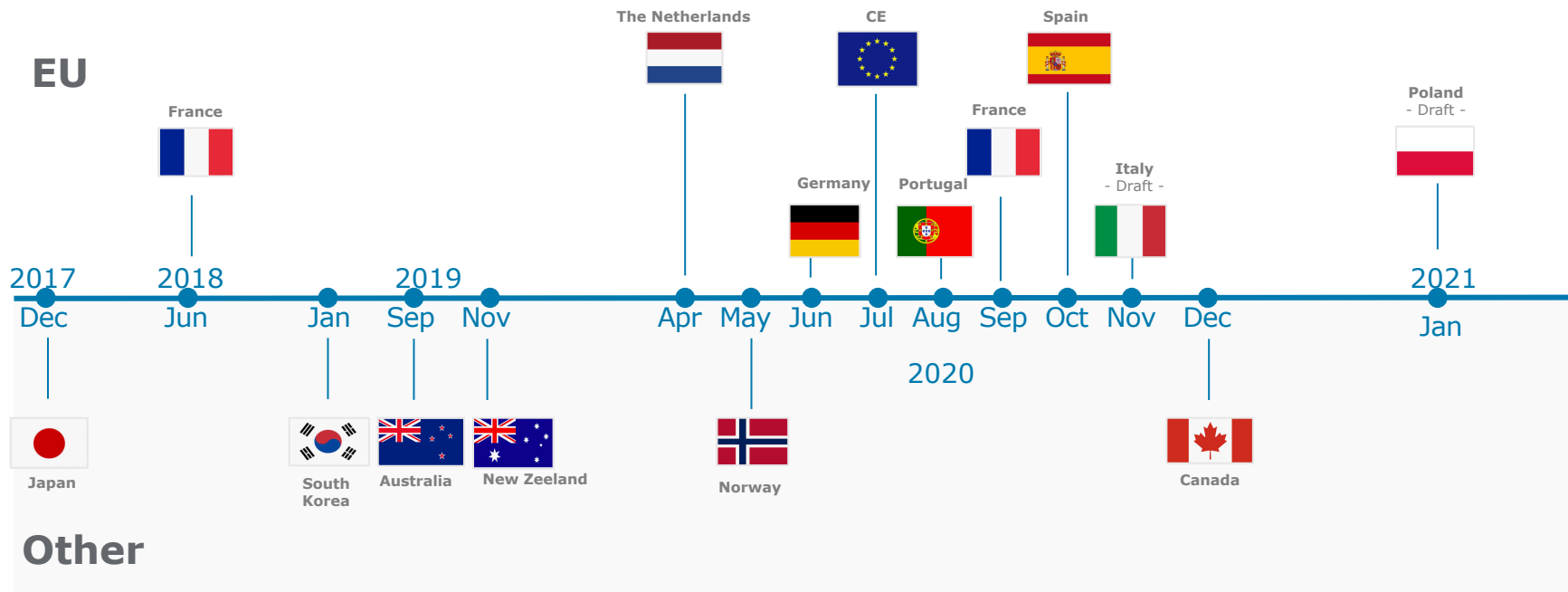
Brussels, 8.7.2020
COM(2020) 301 final

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A hydrogen strategy for a climate-neutral Europe

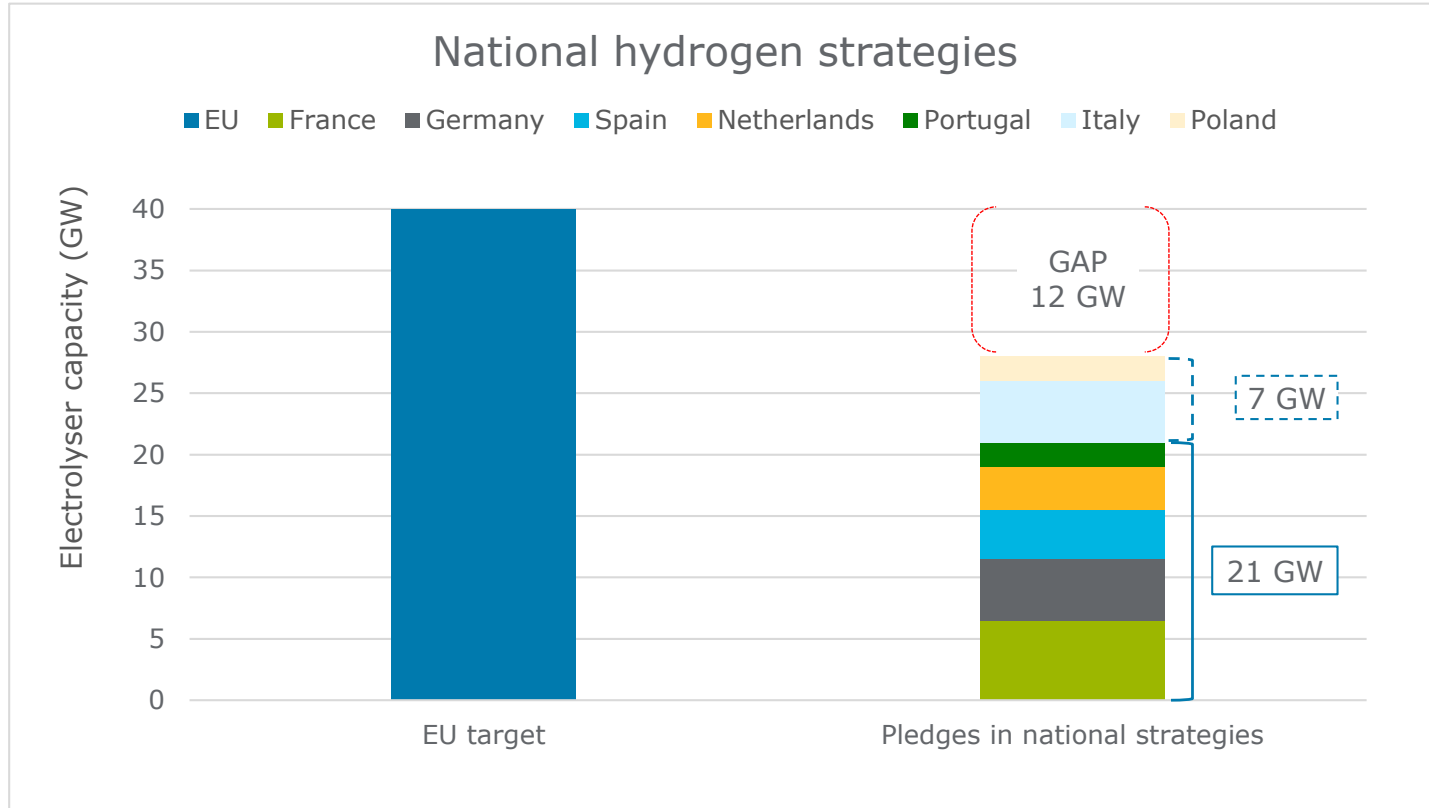


Publication of hydrogen strategies



In preparation:







30 European energy players with the aim of delivering 100% Green Hydrogen across Europe at €1.5/kg (including transmission and storage!) before 2030

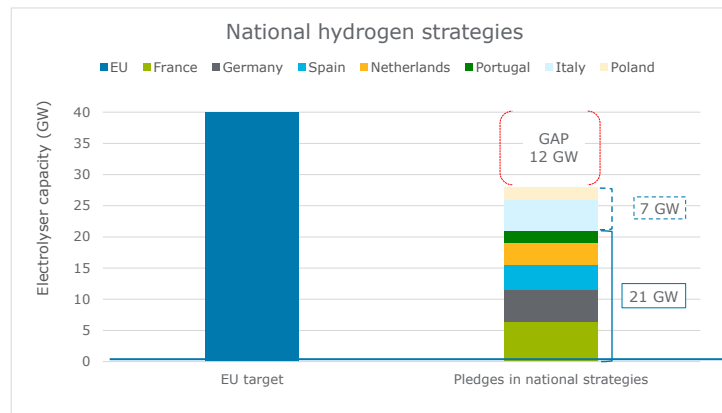
AMBITION: 95 GW of solar & 67 GW of electrolysis capacity by 2030 to deliver 3.6 million tonnes of green hydrogen per year to users in the energy, industry and mobility sectors via the gas transmission and storage network



Thierry Lepercq

.... Governments and regulators have to implement **proper regulatory frameworks** to allow investment decisions in repurposing and expanding existing pipes....

....The key to success is the joint location of large-scale solar and electrolyzers **directly connected to the gas** and soon hydrogen grid....



Scaling up hydrogen production: regulatory measures



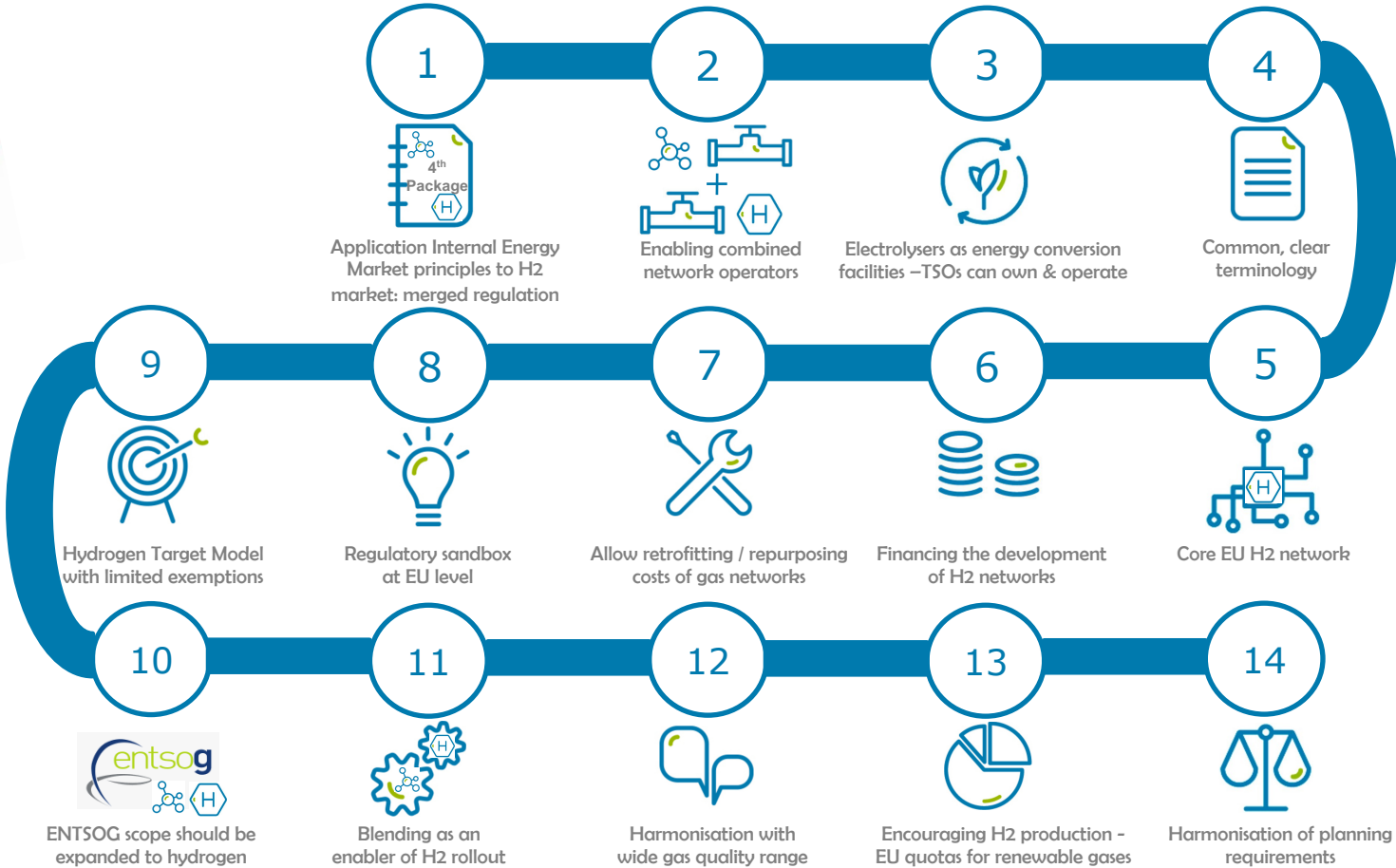
Hydrogen & Gas markets Decarbonisation Package

European Commission | Ref: Ana(2021)19348 - 10/2021

COMBINED EVALUATION ROADMAP/IMPACT ASSESSMENT

This combined evaluation roadmap/impact assessment aims to inform citizens and stakeholders about the Commission's plans so as to allow them to provide feedback on the intended initiative and to participate effectively in future consultation activities. Citizens and stakeholders are in particular invited to provide views on the Commission's understanding of the current situation, identified problems and possible solutions and to make available any relevant information they may have, including on possible impacts of the different options.

TITLE OF THE INITIATIVE	Hydrogen and Gas markets Decarbonisation Package
LEAD DG (RESPONSIBLE UNIT)	DG ENER Unit C3 (PLAN/2020/8563) and PLAN/2020/8564)
LIKELY TYPE OF INITIATIVE	Legislative proposal Revision of Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing Directive 2003/55/EC Revision of Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005
INDICATIVE PLANNING	Q4 2021
ADDITIONAL INFORMATION	-



Thank you

