Introduction to the Hydrogen TCP

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The Hydrogen TCP in a nutshell

*Established in **1977** under the auspices of the **IEA** to pursue international collaborative research in hydrogen*

33

Members

24 Member Countries
7 Sponsors
European Commission + UNIDO

40+

Tasks

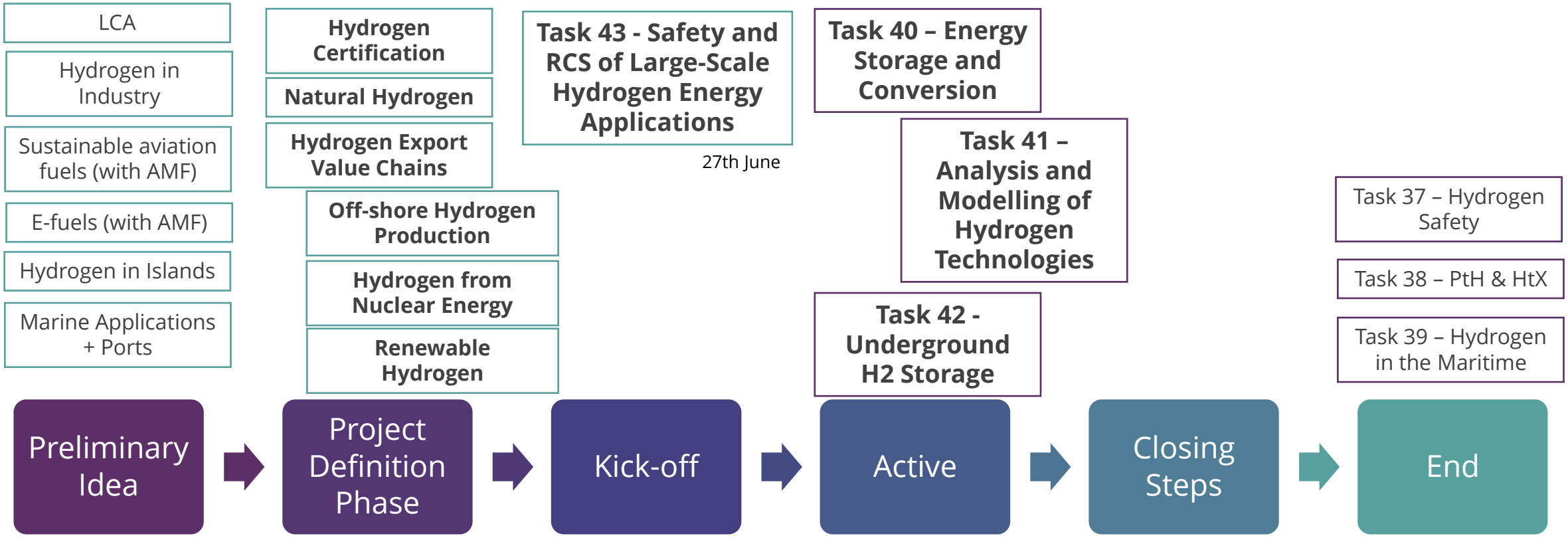
4 Ongoing
39 Finished
≅ **6** in definition

250+

Experts involved

In collaborative research on hydrogen and hydrogen technologies

Task portfolio status (July 2022)



- Document review for other organizations (IEA, other TCPs, international groups…)
- Strategic activities: TRL Assessment, Hydrogen TCP Awards

The immense challenge of scaling up H_2 production

Our goals…

- NZE 2050 scenarios (1,5°C) estimate clean hydrogen production 400 - 800 Mt/year *(IRENA, IEA, ETC, BNEF, Hydrogen Council…)*
- Need to install 4000-5000 GW electrolysis by 2050
- That means 160 GW/year!

Vs Where we are…

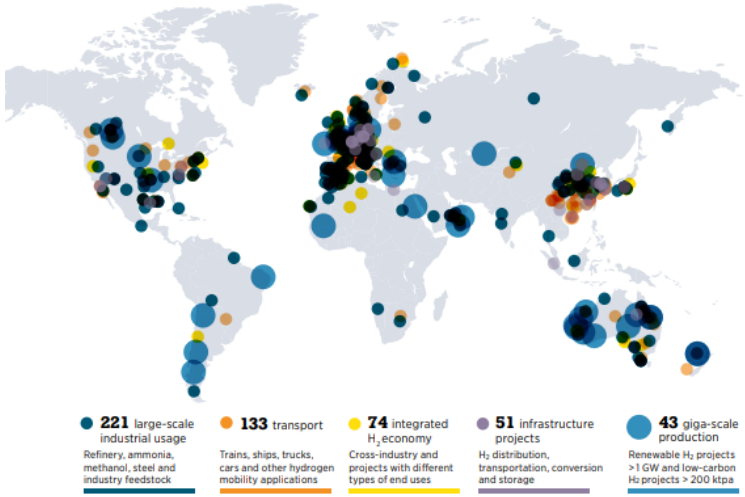
- The current portfolio of projects is around 280 GW to become in operation in the next decade (that means around 30 GW/year)
- To be on track we would need to launch every year for the next 30 years…

  2,5x “HyDeals” (67GW)

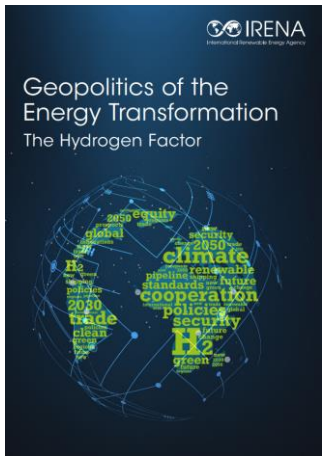
  or 11x “Asian Renewable/Oman Green Energy Hubs” (14 GW)

Despite an impressive portfolio of projects…
our pace is still too slow and subject to many hurdles

Figure 3.3 Clean hydrogen projects and investment as of November 2021



Source: Hydrogen Council (2021). Map source: Natural Earth, 2021
Note: The figure describes large-scale projects only, including commissioning after 2030. It does not include more than 1 000 small-scale projects and project proposals. GW = gigawatt; H_2 = hydrogen; ktpa = kilotonnes per annum.

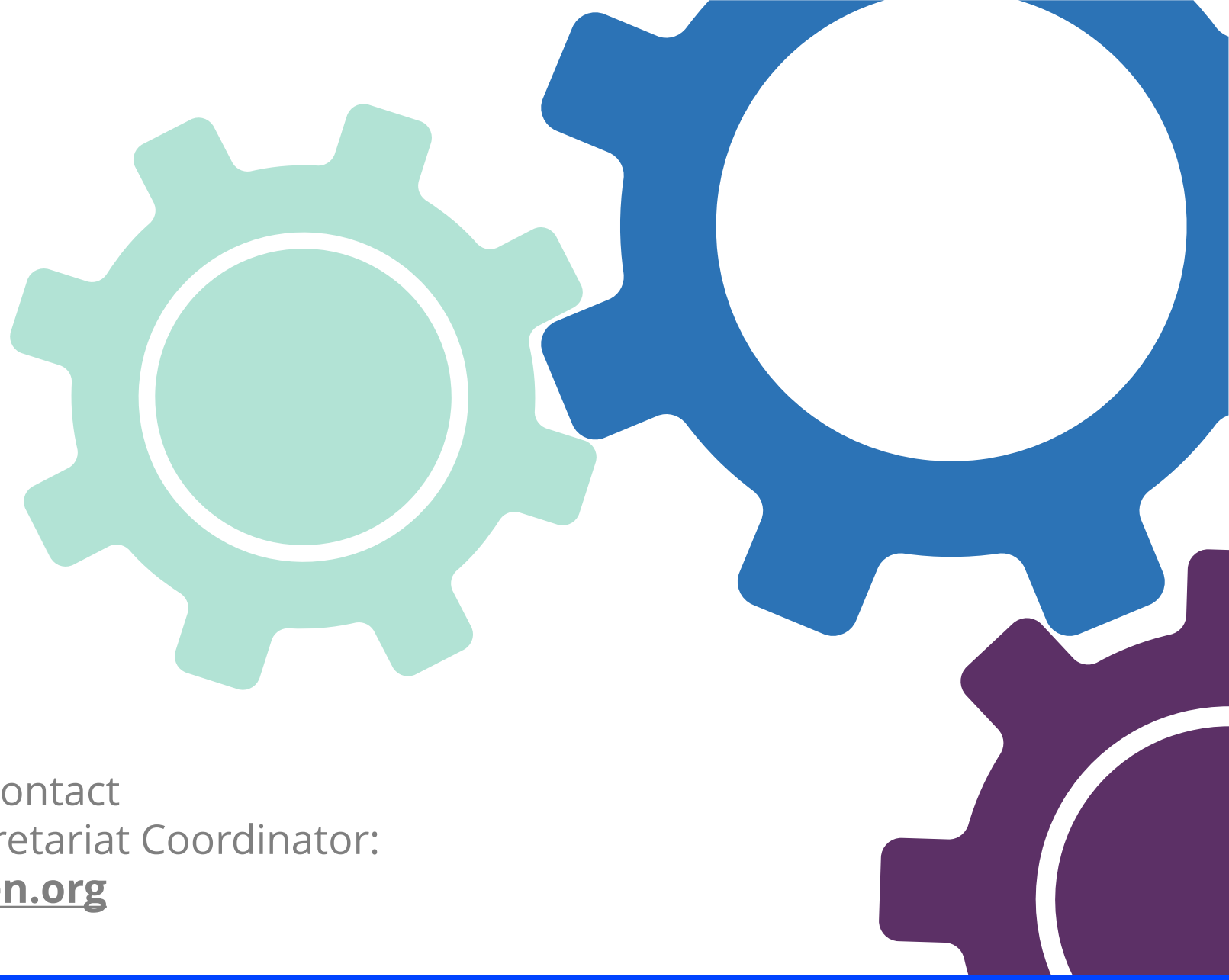


|ects

1	**HyDeal Ambition (67GW)**	Western Europe
2	**Unnamed (30GW)**	Kazakhstan
3	**Western Green Energy Hub (28GW)**	Australia
4	**AMAN (16GW)[a]**	Mauritania
5	**Asian Renewable Energy Hub (14GW)**	Australia
6	**Oman Green Energy Hub (14GW)[a]**	Oman
7	**AquaVentus (10GW)**	Germany
8	**NortH2 (10GW)**	Netherlands
9	**H2 Magallanes (8GW)**	Chile
10	**Beijing Jingneng (5GW)**	China
11	**Project Nour (5GW)[a]**	Mauritania
12	**HyEnergy Zero Carbon Hydrogen (4GW)[a]**	Australia
13	**Pacific solar Hydrogen (3.6GW)**	Australia
14	**Green Marlin (3.2GW)**	Ireland
15	**H2-Hub Gladstone (3GW)**	Australia
16	**Moolawatana Renewable Hydrogen Project (3GW)[a]** – Australia	
17	**Murchison Renewable Hydrogen Project (3GW)** – Australia	
18	**Unnamed (3GW)**	Namibia
19	**Base One (2GW)[a]**	Brazil
20	**Helios green Fuels Project (2GW)**	Saudi Arabia

Hydrogen TCP

Thank You!



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