

Green hydrogen: towards realising the global potential

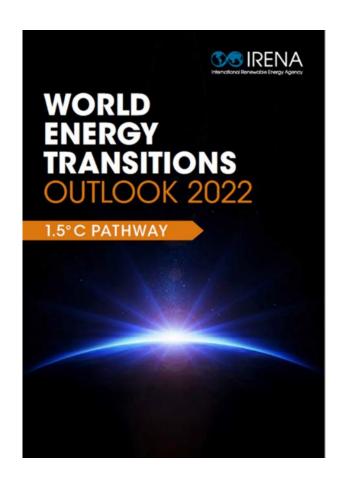
Dr. Ute Collier Madrid, 19 May 2022





Green hydrogen plays a key role in the energy transition



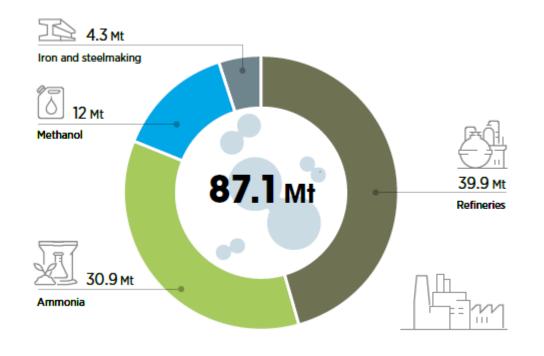


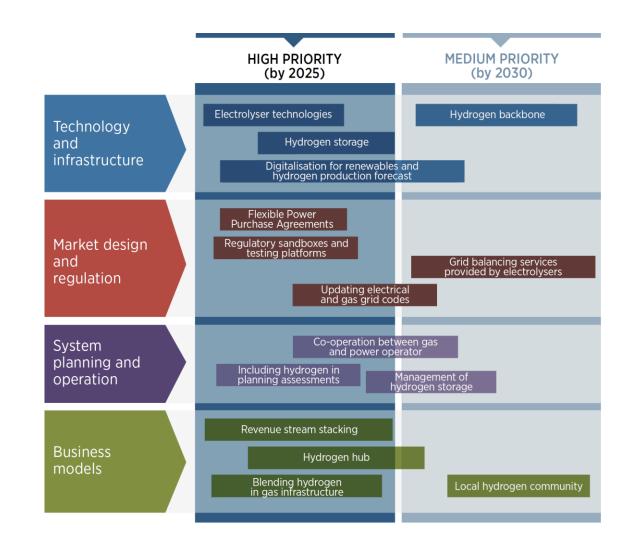
	Indicators	Recent years	2050	Off/On track	Required scaling factor (~X times)
	Clean hydrogen production	0.8 Mt 16), 21)	614 Mt		Significant increase
HYDROGEN	Investment needs for clean hydrogen infrastructure	0	116 USD billion/yr		Significant increase
Í	Clean hydrogen consumption - industry	0	38 E		Significant increase

We need to move from blue to green and scale up



Industrial hydrogen demand, 2020





Hydrogen strategies have been multiplying across the globe

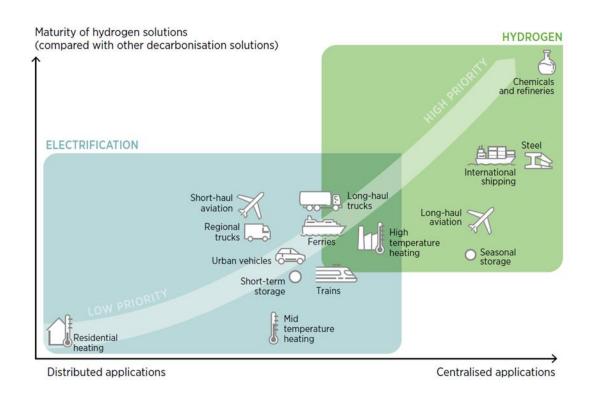




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Policy makers need to set green hydrogen priorities



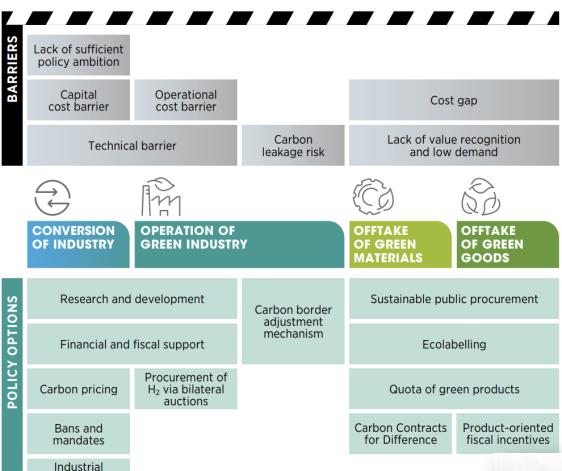




There are multiple supporting mechanism options



ERS	Sustainability issues									
BARRIERS	Technical barriers									
B					Unclear future	Unfit power system structure				
	Sustainability of grid electricity	High cost of electrolysers	Unfit power system structure	Lack of demand	Lack of standards					
	High costs of renewable electricity	Unclear future	Green hydrogen cost gap	Unclear future	High infrastructure costs					
				H_2						
	ELECTRICITY CONSUMPTION	ELECTROLYSIS	GREEN HYDROGEN OFFTAKE		INFRASTRUCTURE					
			PRICE	DEMAND	TRANSPORT	STORAGE				
POLICY OPTIONS	Sustainability assurance measures	Capacity targets	Fiscal incentives	Green gas targets	Financing					
	Exemptions from electricity taxes and levies	Manufacturing capacity support	Green gas premium	Virtual blending	Planning					
POL		Direct financial support	Auctions	International agreements	Creation of standards					
	™ IRENA	Fiscal incentives	Ancillary market participation		Support for green trucks and ships	Seasonal storage support				
Ħ	N DGEN	Guarar	ntees of origin							

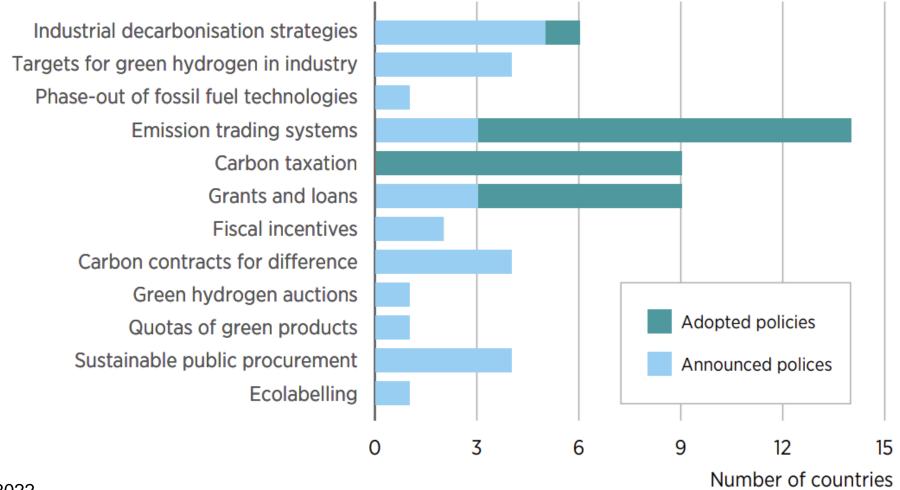


decarbonisation strategies



Few countries have adopted specific policies for H₂

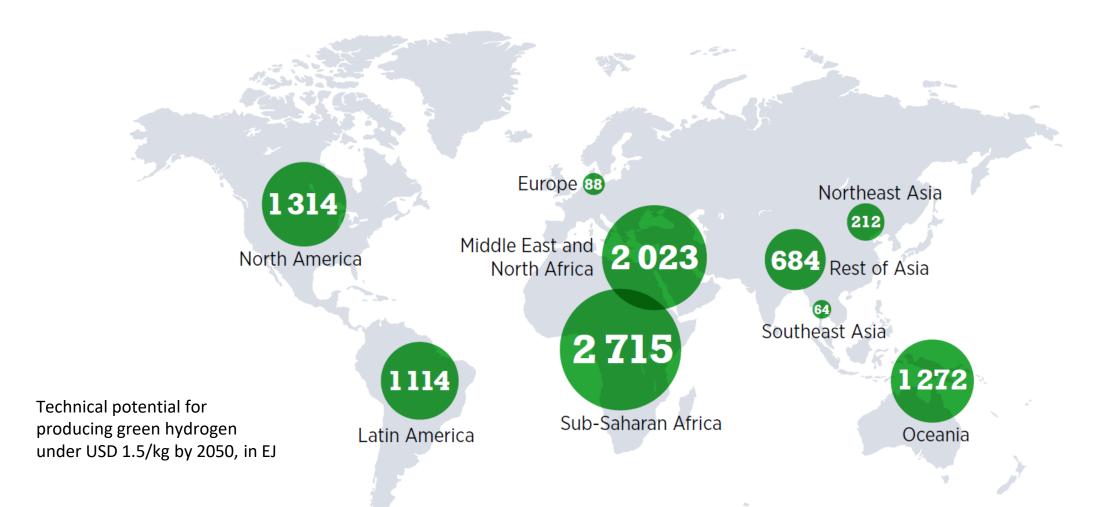






Green hydrogen is likely to influence the geography of energy trade





Hydrogen trade routes, plans and agreements are expanding fast





Exporting region

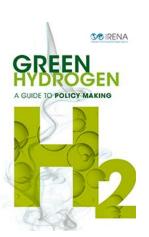


Thank you Gracias









PRACTICAL INSIGHTS ON GREEN HYDROGEN

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