



WHEN TRUST MATTERS

Private Sector Engagement: Unlocking Hydrogen Market Potential through Certification

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Sustainable Fuels & CCUS



A global assurance and risk management company

15,000+

employees

100,000+

customers

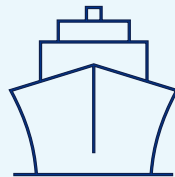
100+

countries

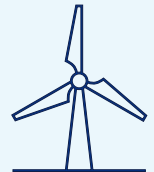
6%+

of revenue to R&D

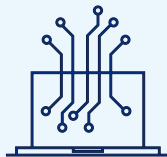
Ship and offshore
classification and advisory



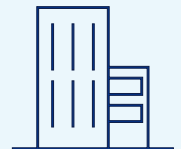
Energy advisory, certification,
verification, inspection and
monitoring



Software, cyber security, data
platforms and
digital assurance

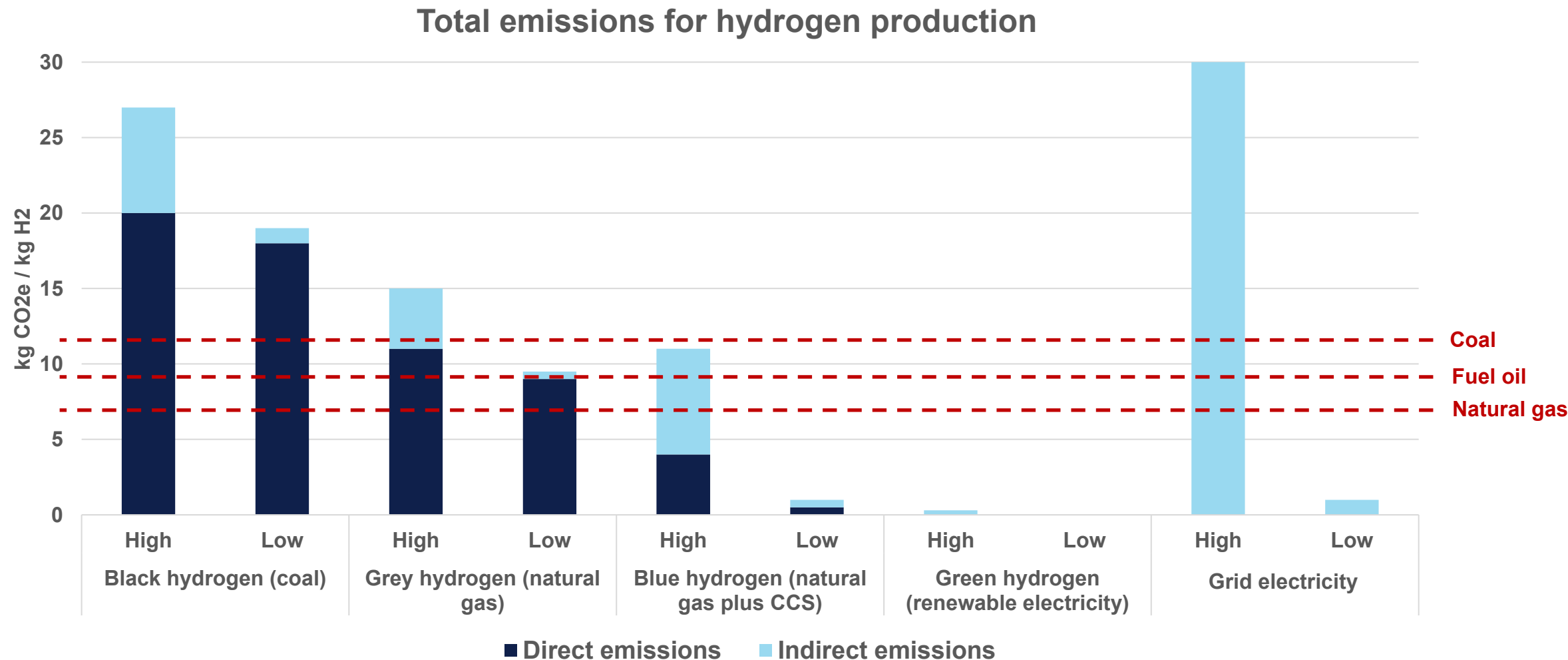


Certification and assurance across
industry sectors, including
healthcare and ocean health

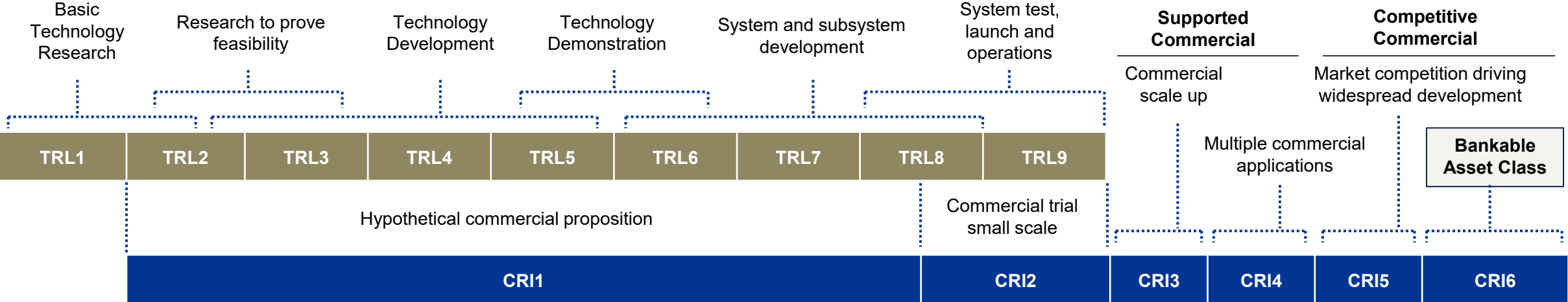


Why greenhouse gas emissions and sustainability standards are important

Why is this important? Some hydrogen molecules are not as low carbon as other molecules



Why is this important? Low carbon provenance supports commercial readiness



TRL levels can be increased by Technology Qualification & Technical Assurance

CRI levels can be increased by Financial Risk Evaluations

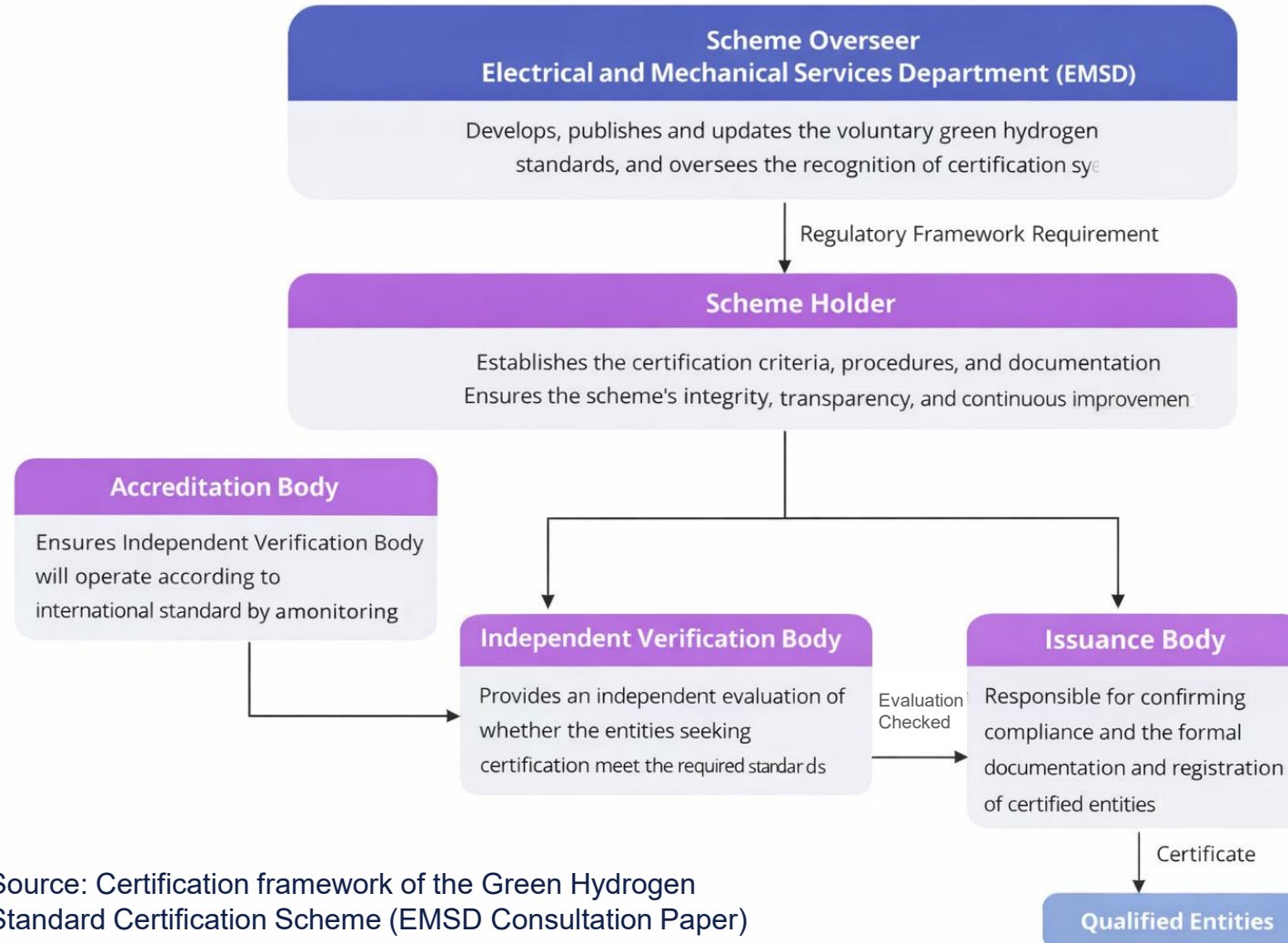
Hydrogen and hydrogen derivative emissions and sustainability standards

A global look at emissions and sustainability standards

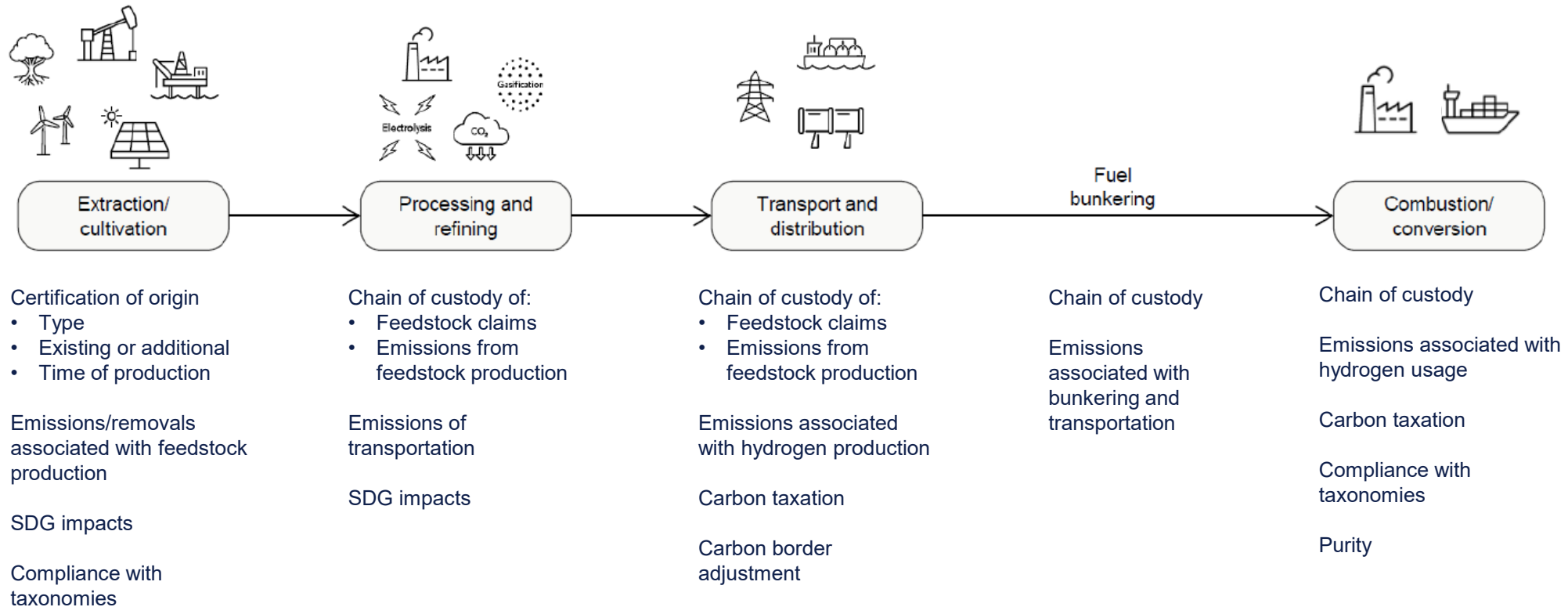
Economy	Framework	Purpose	Carbon intensity (kgCO ₂ e/kgH ₂)	Value chain coverage
Australia	Australia Hydrogen Production Tax Incentive	Support mechanism	0.6 (verification through GO scheme)	Well-to-gate
	Guarantee of Origin (GO) Scheme	Labelling scheme	Linked to support mechanism	Well-to-delivery gate
Brazil	Low carbon hydrogen scheme	Compliance scheme	7	Well-to-gate
Canada	Clean Hydrogen Investment Tax Credit	Support mechanism	Tiered: <0.75, 0.75–≤2, 2–4	Well-to-gate
	Clean Fuel Regulation (CFR)	Support mechanism	Tiered. Calculated using the Fuel LCA model	Well-to-gate
China	China Hydrogen Alliance's Standard	Reporting scheme	Clean/renewable: ≤4.9 Low-carbon: ≤41.51	Well-to-gate
European Union	EU Renewable Energy Directive (RED) / EU low-carbon hydrogen (Gas and Hydrogen Market Directive)	Compliance scheme	3.4 70% GHG savings	Well-to-wheel
	EU Taxonomy	Reporting scheme	3.4 (H ₂ based synthetic fuels)	Well-to-wheel
India	Green Hydrogen Certification scheme	Compliance scheme	2	Well-to-gate
Japan	Hydrogen Society Promotion Act	Compliance scheme	3.4 0.87 (ammonia)	Well-to-gate
The Republic of Korea	Clean Hydrogen Certification Scheme	Compliance scheme	Tiered: 0–4	Well-to-gate
United Kingdom	UK Low Carbon Hydrogen Standard	Compliance scheme	2.4	Well-to-gate
	UK Renewable Transport Fuel Obligation (RTFO)	Compliance scheme	4	Well-to-wheel
United States	Clean Hydrogen Production Standard + 45V Tax Credit	Support mechanism	Tiered: 0.45–4 (Sliding scale for tax credit)	Well-to-gate

The process of assuring sustainability claims to demonstrate meeting of standards

How does assurance of sustainability work in practice?



How does assurance of sustainability work in practice?



The policy challenge

An aerial photograph of an industrial facility, likely a refinery or chemical plant. The image shows a complex network of large, white, cylindrical pipes running across a paved area. These pipes are interconnected by numerous blue valves and smaller connecting pipes. Yellow safety railings and ladders are visible around the pipe junctions and valves. The perspective is from directly above, looking down at the facility. A semi-transparent white rectangular box is overlaid on the top left portion of the image, containing the title text.

Interoperability: its importance, current approaches and future direction

Your partner on the energy transition

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