



Project supported by the FCH JU



CertifHy

the 1st EU-wide Certification
Scheme for Green and Low-
carbon hydrogen

4th Prime Movers' meeting on Guarantee of Origin
(GO)







Wouter Vanhoudt
Hinicio

- HINICIO is a strategic consultancy specialized in hydrogen and fuel cells, widely recognized as a leader in Europe in this area.
- 80+ assignments on hydrogen and fuel cells since the creation of the company in 2007, including several landmark study at the European level.
- Unmatched experience at every step of the value chain on all aspects:
 - ❑ Technology
 - ❑ Economy
 - ❑ Business Cases
 - ❑ Markets
 - ❑ Strategy
 - ❑ Public policy and regulation
 - ❑ Social acceptance, etc.

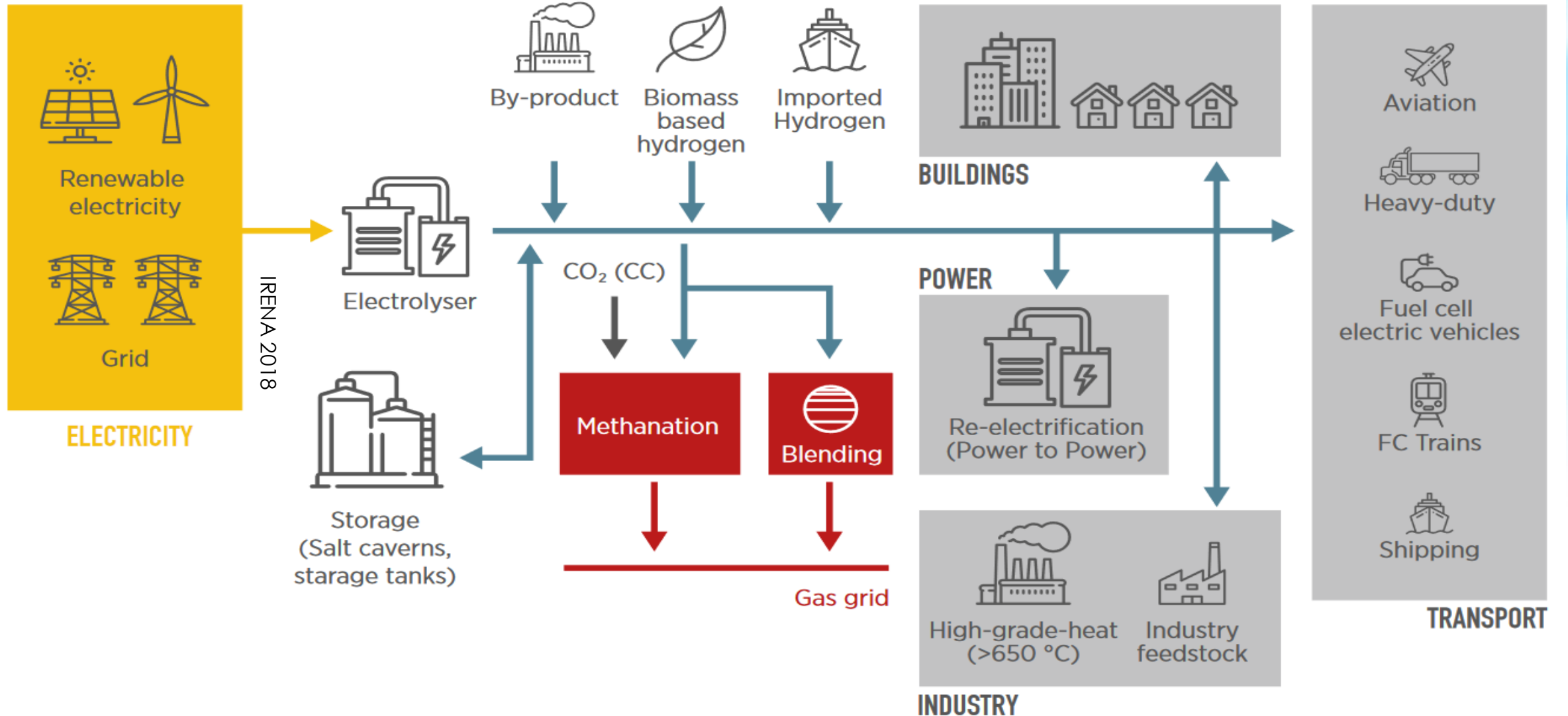
An international view and network

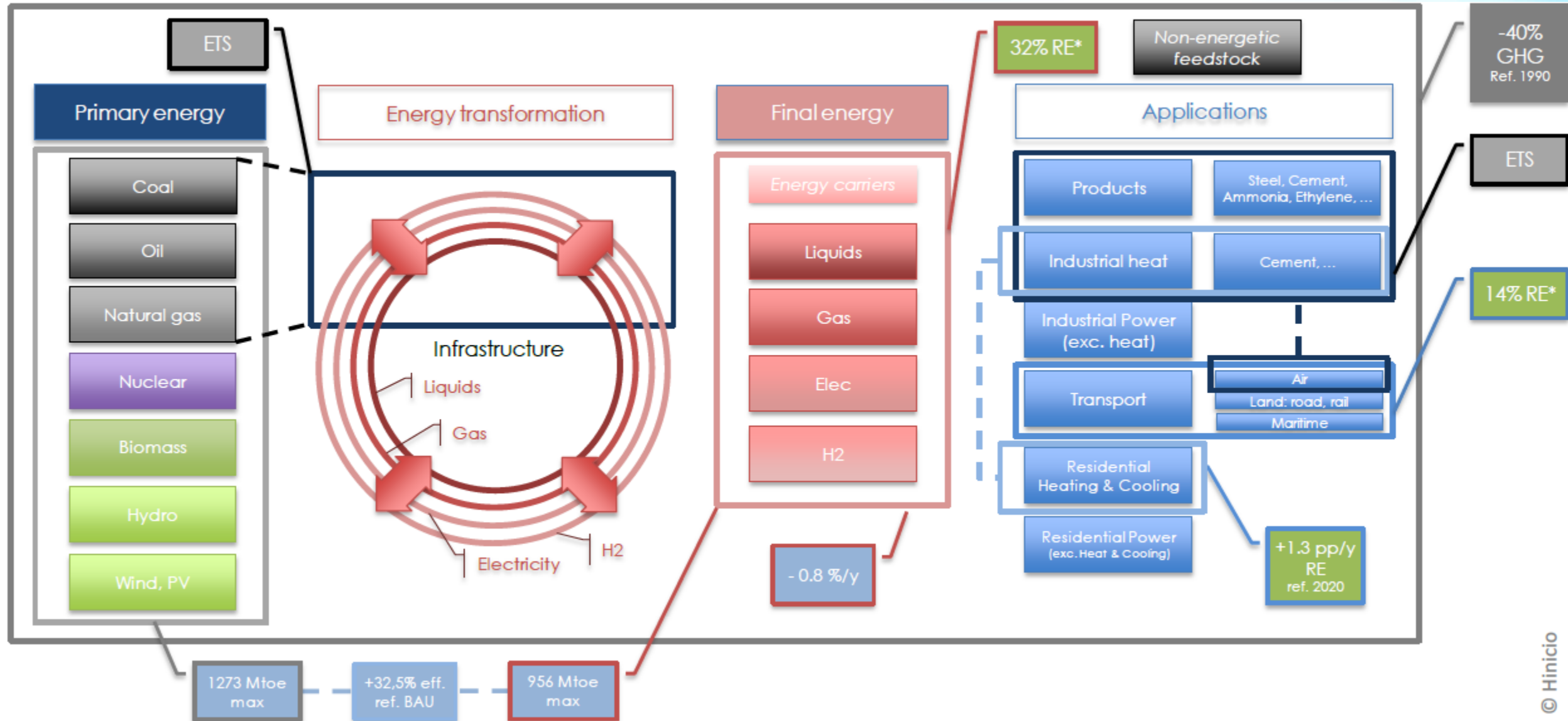


Countries covered by HINICIO's recent studies on hydrogen

Production	T&D et storage	Fuel cell applications	End-clients	Public sector	Investors and donors
					

INDUSTRY & MARKET SHARE	KEY APPLICATIONS	SUPPLY SYSTEM	H2 DEMAND per YEAR
 <p>General Industry</p> <p>1%</p>	<ul style="list-style-type: none"> • Semiconductor • Propellant Fuel • Glass Production • Hydrogenation of Fats • Cooling of electrical Generators 	<ul style="list-style-type: none"> • Small on-site • Tube trailers • Cylinders • Liquid H2 	<p>LOW</p> <p>>0.4 Mtons</p>
 <p>Metal Working</p> <p>6%</p>	<ul style="list-style-type: none"> • Iron Reduction • Blanketing gas • Forming gas 	<ul style="list-style-type: none"> • Cylinders • Tube trailers 	<p>MEDIUM</p> <p>2 Mtons</p>
 <p>Refining</p> <p>30%</p>	<ul style="list-style-type: none"> • Hydrocracking • Hydrotreating 	<ul style="list-style-type: none"> • Pipeline • Large On-site 	<p>14 Mtons</p>
 <p>Chemical</p> <p>63%</p>	<ul style="list-style-type: none"> • Ammonia • Methanol • Polymers • Resins 	<ul style="list-style-type: none"> • Pipeline • Large On-site 	<p>HIGH</p> <p>29 Mtons</p>





2014 2016 2017 2018/9 2020s..

Phase 1

- 1 Define a widely acceptable definition of green hydrogen
- 2 Determine how to design and implement a robust EU wide GO scheme

Affiliated partners:



Phase 2

- 1 Set-up a hydrogen GO Stakeholder platform
- 2 Finalise the scheme design ensuring it can be the main route to guarantee the origin of green & low carbon hydrogen across EU Member States
- 3 Run a pilot scheme to test the proposed design
- 4 Identify actions which need to be undertaken after the completion of the study to achieve an EU wide deployment of the scheme

Phase 3

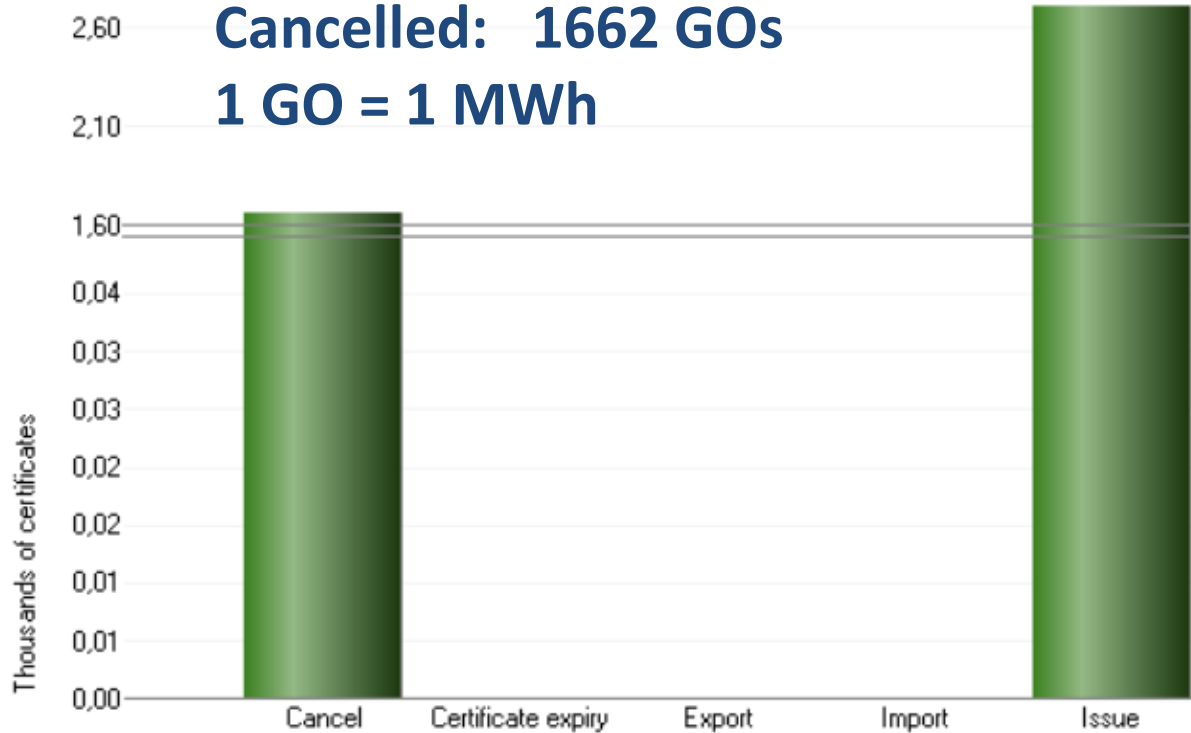
- 1 Prepare EU wide deployment:
Implement key elements
 - Competent authority
 - Issuing Body
 - Registry operator
 - Accreditation body
- 2 Finalise Regulation, Codes and Standards:
 - CEN Standard
 - EU and national regulation
 - CertifHy scheme docs



Domain Transactions

Domain: CertifHy; Transaction Date: 2019-01-01 To 2019-02-28

Issued: 2714 GOs
Cancelled: 1662 GOs
1 GO = 1 MWh



News Release

Air Products launches European project to certify renewable hydrogen

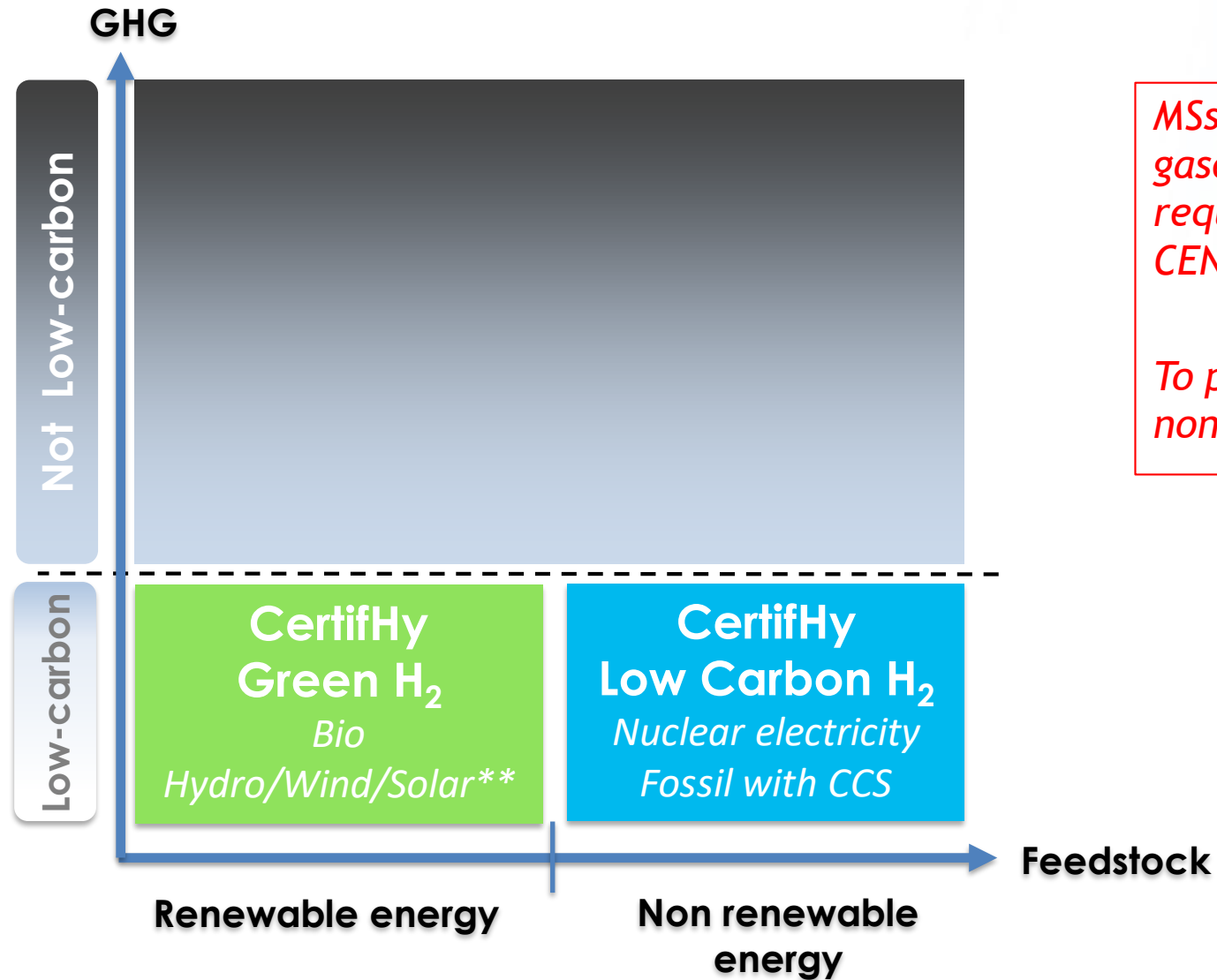
One of the first to receive Guarantees of Origin under CertifHY; renewable hydrogen will support vehicle fuelling stations

07/02/2019 Rotterdam, The Netherlands

As part of the pilot project, two of Air Products' hydrogen customers in the mobility sector will receive GOs for renewable hydrogen. The first is H2 MOBILITY Deutschland, an organisation operating a network of hydrogen fuelling stations in Germany. The second is London's integrated transport authority, Transport for London, which operates hydrogen buses across the United Kingdom's capital.

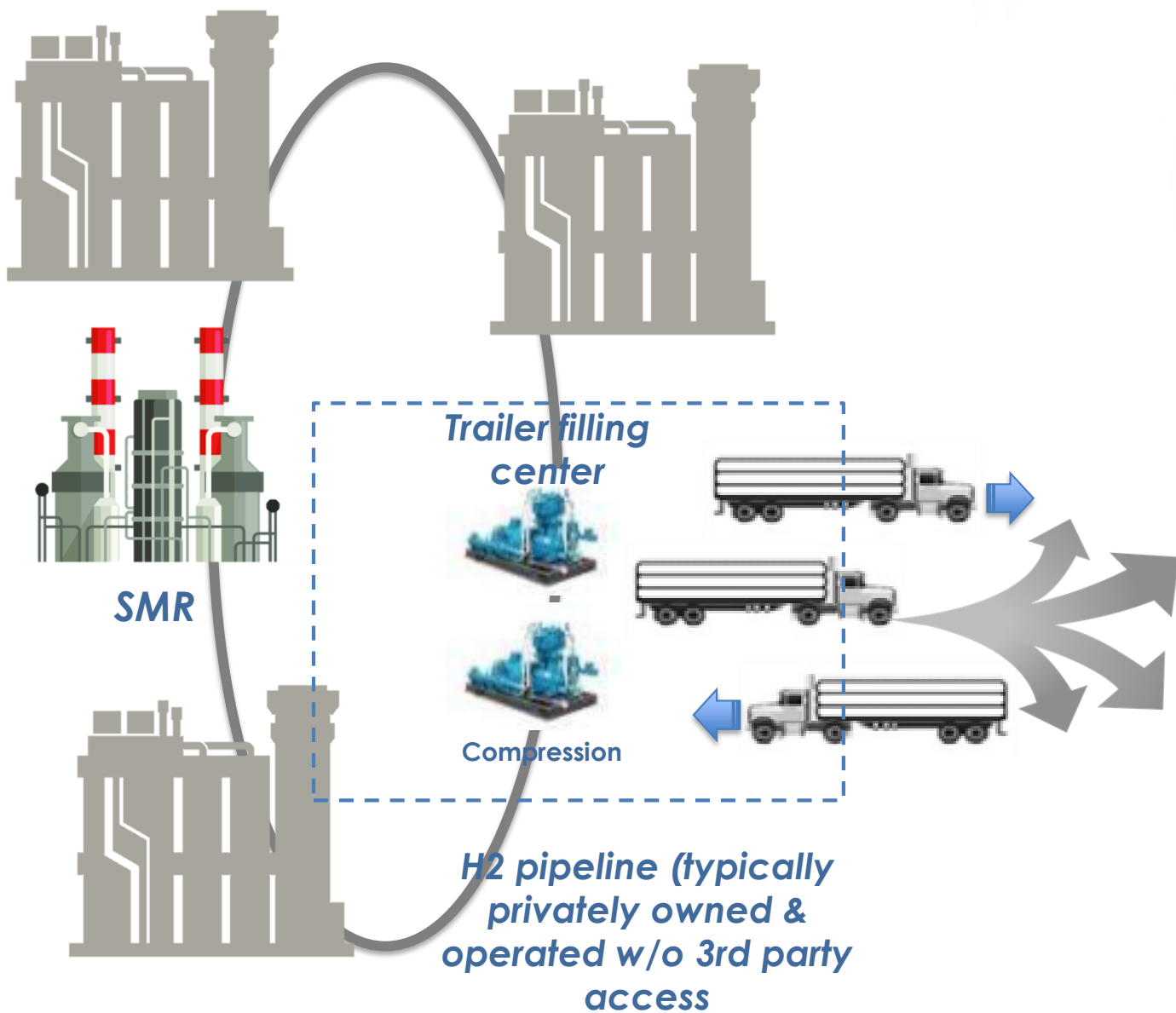
Energy Source	Issue	Transfer	Cancel	Export
F01000000 Renewable	2 714	-	1 662	

H₂ can be used in hard to decarbonise sectors requiring decarbonated high grade heat, steelmaking, ammonia, etc: low-carbon H₂ will be an important instrument for the future



MSs are encouraged to issue GOs for non-renewable gases, such as blue hydrogen, abiding to the requirements of RED II for renewable gases GOs and CEN 16325 standard.

To provide for an obligation of MSs to issue GO for non-renewable gases.



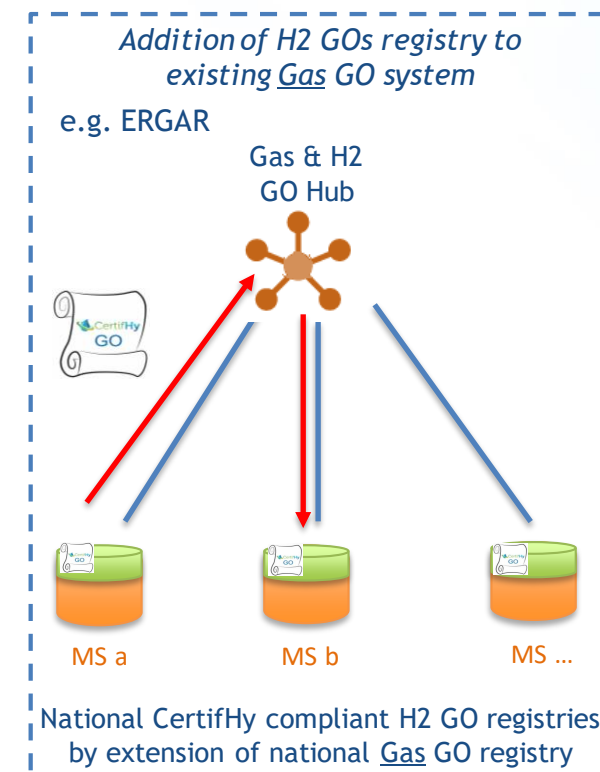
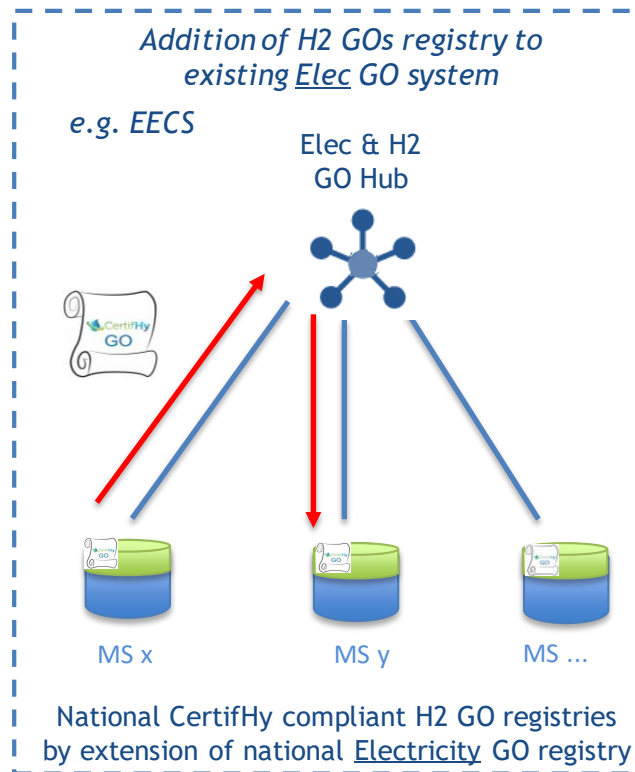
RED II Art. 30 now also includes “processing or logistical facility, transmission and distribution infrastructure or site” as perimeters across which mass balance can be applied.

In a “site”, products may remain within separate containers, so the same should apply to transmission/distribution infrastructure: it does not matter if there is a physical disconnection between two parts of that infrastructure, as long as a mass balance can be done over the system perimeter in a clear and enforceable way.

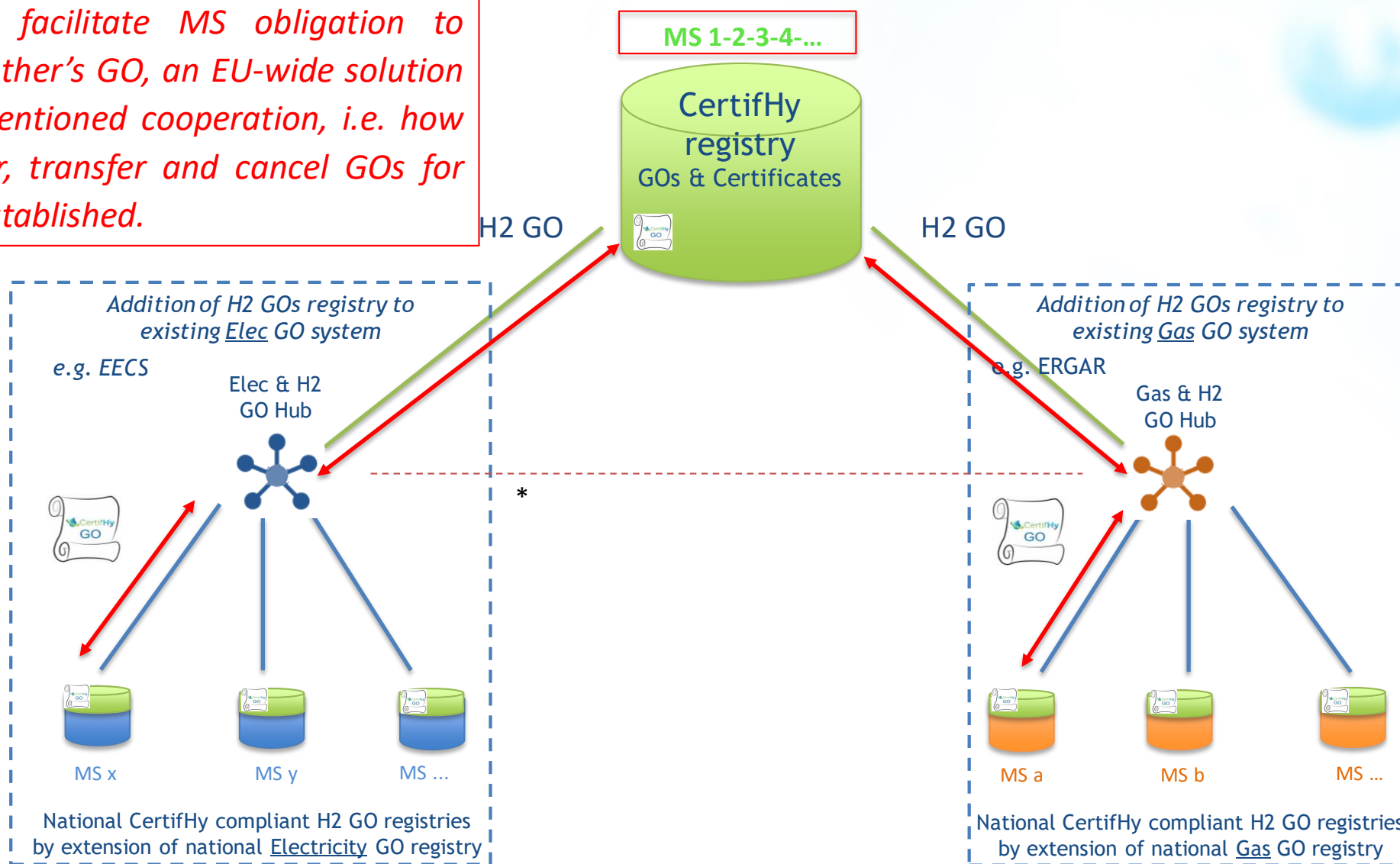
CertifHy requests to have the entire H2 supply chain (grid + tube trailers +) in Europe being considered as one logistics facility

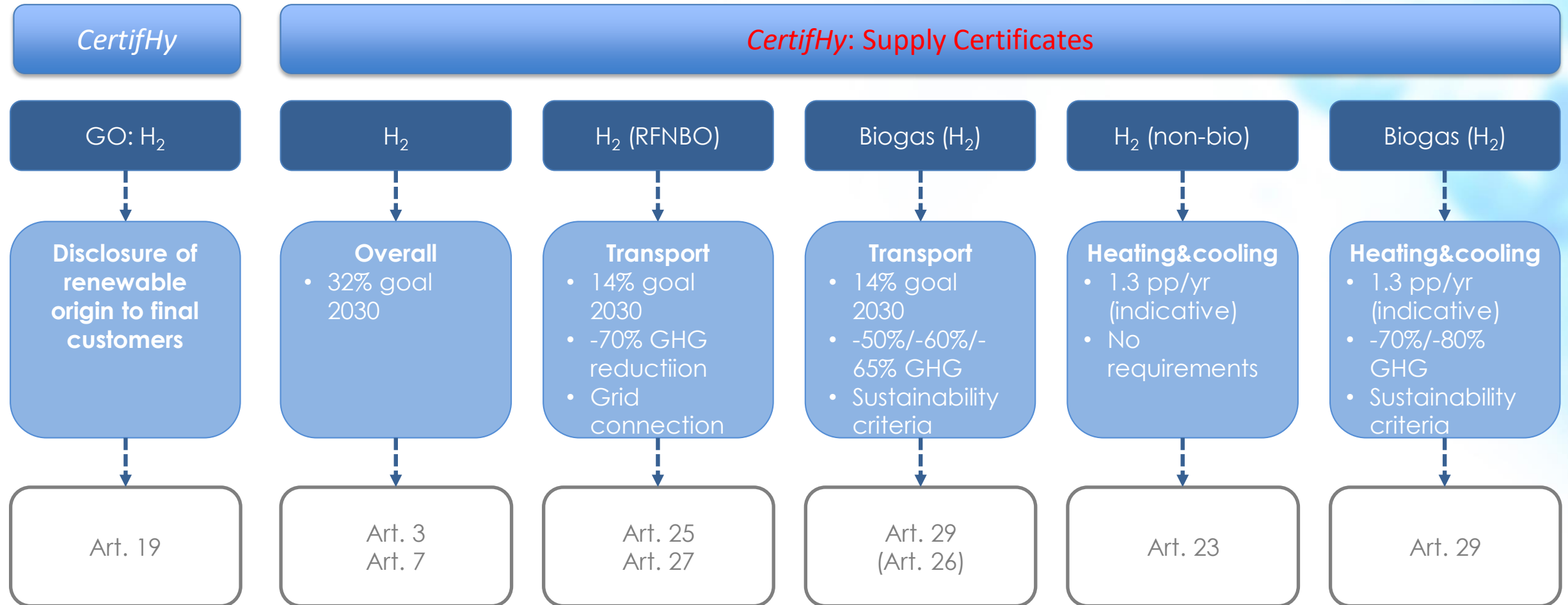
For H2 GOs: CertifHy is developing an EU wide single Issuing Body and Registry solution as it is the most cost effective and will allow the least market fragmentation.





Additionally, to facilitate MS obligation to recognise each other's GO, an EU-wide solution for the above-mentioned cooperation, i.e. how to issue, register, transfer and cancel GOs for gas, should be established.

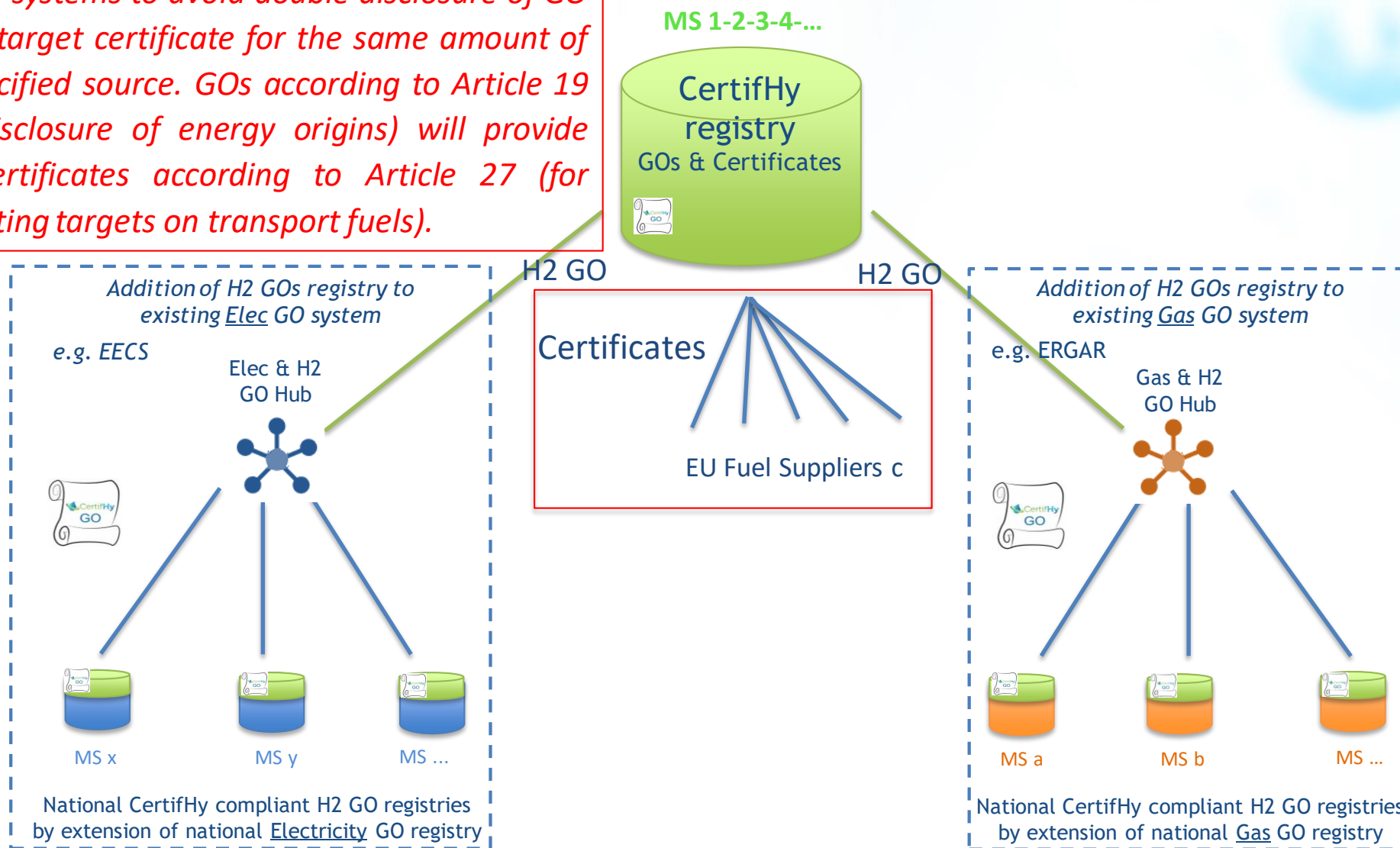




Different products: GO vs. “certificate”; this requires harmonisation of the underlying requirements and audit criteria in order to use the synergies possible through CertifHy.

As both GOs and Supply Chain co-exists, we need to ensure there is no incompatible claim possible: e.g. 1 batch of green H2 production leading to a claim by e.g. Glass manufacturing via GOs and Fuel suppliers via Certificates

MSs must establish systems to avoid double disclosure of GO and sustainability/target certificate for the same amount of energy from a specified source. GOs according to Article 19 (for traceability/disclosure of energy origins) will provide information to certificates according to Article 27 (for sustainability/meeting targets on transport fuels).





Project supported by the FCH JU



Q&A