



EU Perspective on Green H2: Regulatory Framework Conditions

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How is renewable hydrogen regulated?

Directive EU 2018/2001 (REDII) and Directive 2023/2413 (REDIII)

✓ Renewable Gas:

Hydrogen generated from renewable sources.

- Renewable hydrogen
- Biogas
- Biomethane

**Guarantees of Origin
for information to
consumers
("book-and-claim")**

✓ Renewable Fuel of Non-Biological Origin (RFNBO):

A liquid or gaseous fuel, the energy content of which is derived from renewable sources other than biomass and the GHG emissions savings is at least 70%.

- Renewable hydrogen
- Synthetic fuels
(Recycled Carbon
Fuels RCF)

**Certification of Chain
of Custody to prove
compliance with
renewable targets
and quotas
("mass balance")**

How is RFNBO hydrogen certified?



Delegated Regulation 2023/1184 establishes the requirements that electricity must meet for hydrogen produced by electrolysis to be considered RFNBO under REDII.

	Additional Conditions	PPAs	Additionality (36 months)	Temporal Correlation (month / hour)	Geographical Correlation (bidding zone)
Direct Production 	N/A	N/A		N/A	N/A
Grid Connection 	RES > 90%	N/A	N/A	N/A	N/A
	Prevent Redispatching	N/A	N/A	N/A	N/A
	<18gCO ₂ eq/M 		N/A		
	By default			(Exemption until 2038)	

How is RFNBO hydrogen certified?



Delegated Regulation 2023/1185 sets the GHG reduction threshold for RCF and the methodology for assessing the GHG emission reductions of RFNBO and RCF.

- ✓ GHG emissions across the full lifecycle of the fuels, from production to end-use, including upstream emissions, emissions associated with taking electricity from the grid, from processing, and those associated with transporting the fuels to the end-consumer.
- ✓ Reduction in GHG emissions: at least 70% compared to fossil fuels, with a reference value set at 94 gCO₂eq/MJ.
- ✓ The threshold implies a maximum emission intensity of 28.2 gCO₂eq/MJ.

What are the next challenges?

Key issue: Public Database on renewable fuels and RCF to avoid irregularities and double counting (REDIII)	Unión Database by European Commission (Nov. 2024)	Operators must provide data on transactions and sustainability characteristics, including emissions.
		Data must be verified by certification bodies under voluntary or national schemes recognized by EU.
	Optional National Databases by Member States	To be used by operators for collecting and declaring data, to be transferred to the EU database. Aligned and linked to EU database via interface, for immediate transfer of data, ensuring interoperability.