



Certification of sustainable fuels

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The Renewable Energy Directive



The Renewable Energy Directive



In 2009, the EU defined a series of binding targets for Member States to be met by 2020 with Directive 2009/28/EC (RED Directive):

- 20% energy from renewable sources
- 10% of energy from renewable sources in the transport sector



RED

The Renewable Energy Directive



On 21/12/2018 the DIRECTIVE (EU) 2018/2001 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 December 2018 on the promotion of the use of energy from renewable sources called RED II was published.

It had to be implemented by the Member States by 30/06/2021.



RED II

The Renewable Energy Directive



With the RED II Directive:

- The share of renewable energy has increased from 20% to 32%
- The share of renewable energy in transport has increased from 10% to 14%



RED II

The Renewable Energy Directive



Directive 2023/2413/EU of 20/11/2023 - RED III has already entered into force (Member States have 18 months to implement it).



- The share of renewable energy increased from 32% to 42.5%
- The share of renewable energy in transport has increased from 14% to 29%

RED III

The Renewable Energy Directive



Italy has implemented RED II with Legislative Decree No. 199 of 8 November 2021 (hereinafter Legislative Decree No. 199), published in the Official Gazette No. 285 of 30.11.2021.

- Legislative Decree 199 came into force on 15 December 2021.



Dlgs 199/2021

The Renewable Energy Directive

Fuels included in the RED II Directive that count for Targets



- **BIOFUELS, BIOLIQUIDS, BIOMASS FUELS**

CARBON-NEUTRAL >>> CO2 emissions generated by its use are balanced by the absorption of the same amount of CO2 from the atmosphere of the crops from which it derives)

- **Liquid and gaseous fuels from renewable sources of non-biological origin (RFNBO)**
- **Recycled Carbon Fuels (RCF)**

The Renewable Energy Directive

Fuels included in the RED II Directive that count for Targets



	Biofuels (liquids)	Bioliqids (liquids)	Biomass Fuels (Solids and gaseous)	RFNBO	RCF
Market	Transport		Transport	Transport	Transport
		Electricity	Electricity	Electricity	
		Heating/ Cooling	Heating/ Cooling	Heating/ Cooling	

**Biofuels,
Bioliquids,
Biomass fuels**



Biofuels, Bioliquids, Biomass Fuels



Palm



Soy



Sunflower



Sugarcane



Used Cooking Oil



Marc



Straw



Organic Waste

Biofuels, Bioliquids, Biomass fuels



Biomass Fuels from waste and residue

**waste does not go to landfill
and its acquisition involves
reduced costs**

Low carbon footprint

**Promoting the circular
economy**

Promotes industrial symbiosis

Biofuels, Bioliquids, Biomass Fuels



Biomass generates concerns about:

- **Greenhouse gas (GHG) emissions;**
- **Loss of biodiversity due to changes in land use;**
- **Social issues;**
- **Rising food prices;**
- **Possible fraud for biomass from waste and residues.**



RENEWABLE



SUSTAINABLE

Biofuels, Bioliquids, Biomass Fuels

Criteria defined in the RED Directive



Land use criteria



GHG reduction



**For farmers
outside Europe**

**Good agricultural and
environmental conditions***

**as defined by Art.6(1) of Regulation (EC) No. 73/2009 of the European Council of 19 January 2009.*

Fuels produced from wastes and residues other than agricultural, aquaculture, fisheries and forestry residues must only fulfil the GHG saving criteria.

RFNBO/RCF



RFNBO/RCF



- **RFNBO:** renewable fuels of non-biological origin, liquid and gaseous fuels from renewable energy sources other than biomass, i.e. Hydrogen produced in an electrolyser using renewable electricity. Hydrogen may be used directly as fuel or serve as an intermediate for other RFNBOs. (e.g. renewable $H_2 + CO_2 = CH_4$, renewable $3H_2 + N_2 = 2NH_3$)
- **RCF:** recycled Carbon Fuels, liquid and gaseous fuels produced from liquid or solid waste streams of non-renewable origin which are not suitable for material recovery in accordance with Article 4 of Directive 2008/98/EC7, or from waste processing gas and exhaust gas of non-renewable origin which are produced as an unavoidable and unintentional consequence of the production process in industrial installations (not made from renewable resources and, thus, do not contribute to the main target of the renewable energy share of the gross final energy consumption in the Union. However, Member States may decide to allow the accounting of RCFs towards the quota of renewable energy in the transport sector. This reflects the benefit that RCFs, although not renewable, can contribute to reduce GHG emissions).

RFNBO/RCF

Criteria defined in the RED Directive



The criteria defined by RED Directive for RFNBO are:

- **GHG Saving (at least a 70% GHG emissions saving threshold (via avoided emissions) in comparison to the fossil reference)**
- **Renewable origin of Electricity (*It is necessary to ensure that RFNBO production is produced from renewable energy (RE), does not lead to an increase in fossil fuel energy production*)**
 - ✓ **Additionality**
 - ✓ **Temporal correlation**
 - ✓ **Geographical correlation**

RFNBO/RCF

Renewable origin of Electricity criteria



	DIRECT CONNECTION TO INSTALLATION GENERATING ELECTICITY (1)	VIA THE GRID			
		2) Renewable Electricity in the bidding zone >90% of previous year	(3) Emission intensity of the Electricity in the bidding zone < 18 gCO ₂ e/MJ	(4) Electricity consumed during the imbalance compensation period	(5) Electricity from the grid with additional requirements
Additionality	YES	NO	NO	NO	YES
PPA	NO	NO	YES	NO	YES
Temporal Correlation Monthly until 31/12/29, hourly from 1/1/30	NO	NO	YES	NO	YES
Geographical Correlation	NO	NO	YES	NO	YES

The Certification Procedure



The Certification Procedure

Certification

- It is a tool that allows you to distinguish sustainable products (final products, intermediates and raw materials) from those that are not.
- It ensures traceability along the entire chain of custody of biofuels, as all organizations involved must demonstrate the compliance of their products with the RED II/RED III Directive and be in possession of a recognized certification.

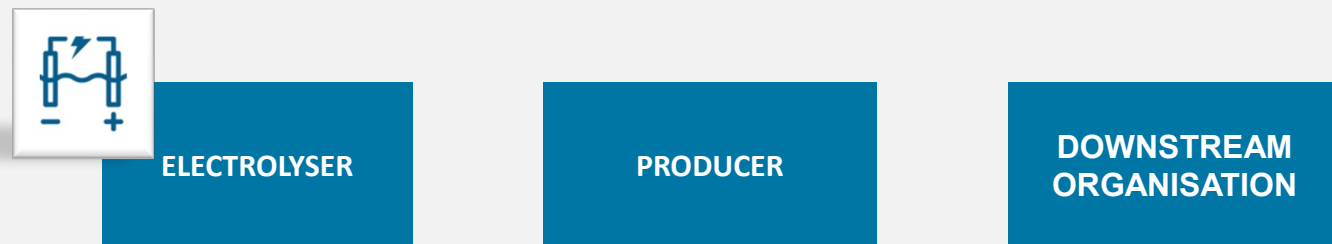


The Certification Procedure

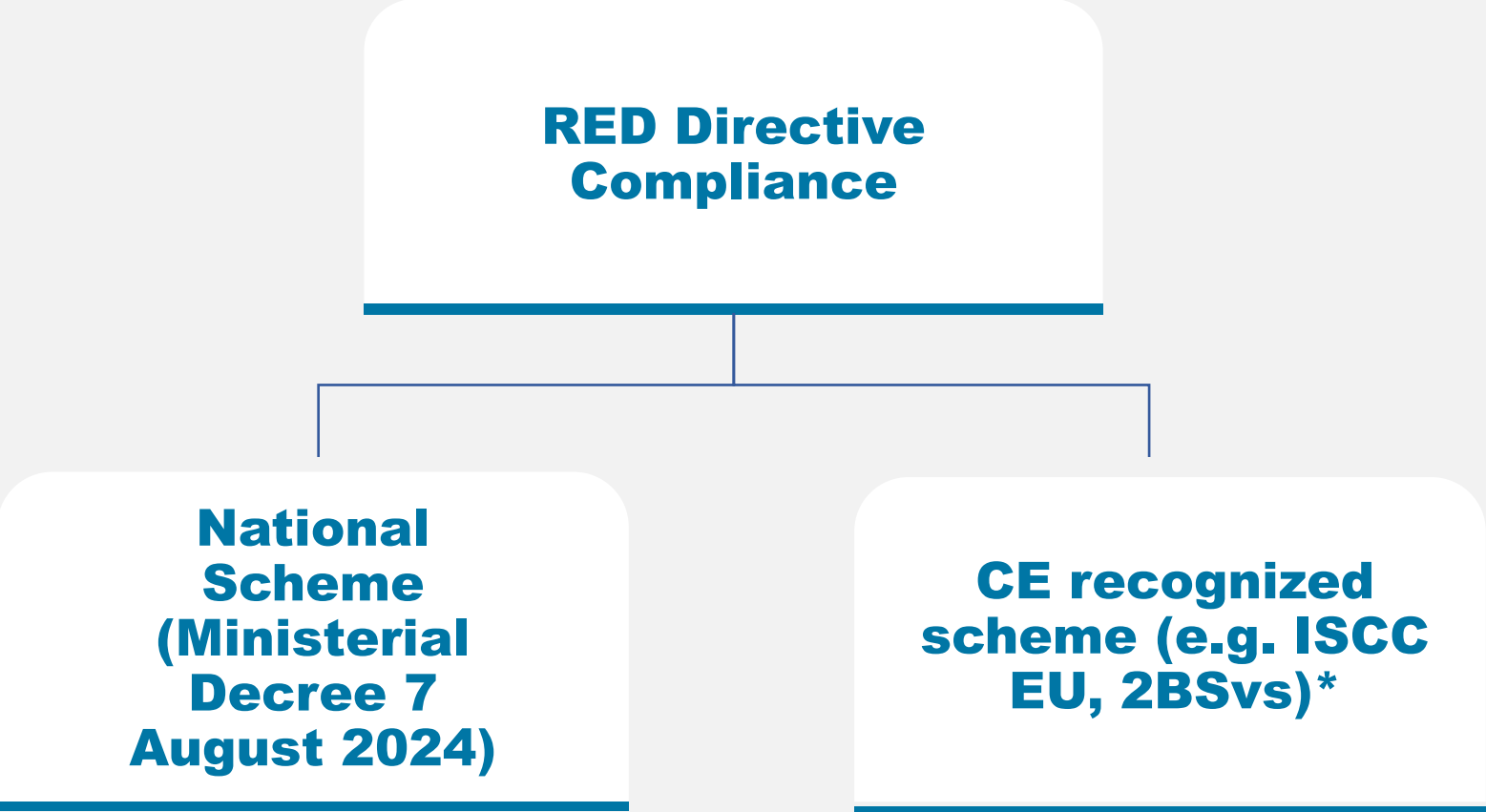
Biofuels, Bioliquids, Biomass Fuels chain of custody



RFNBO chain of custody



The Certification Procedure



The Certification Procedure



- **Biofuels: All**
- **Accreditation/recognition body: ACCREDIA**
- **Requirements: RED II, Legislative Decree 199, Ministerial Decree 7.8.2024, UNI/TS 11421, UNI/TS 11567, Implementing Regulation (EU) 2022/996, RT 31, FAQ**
- **Certificate: 5 years**
- **Main categories of organizations:**
 - Farmers
 - Forest producers (New!)
 - Residue/by-product producers
 - Producers of intermediate and finished products other than biomethane
 - Biogas and biomethane producers, Biofuel users (New!)
 - Traders

ISCC EU

- **Biofuels: All + RFNBO + RCF**
- **Accreditation/recognition body: ISCC System GmbH**
- **Requirements: RED III, public ISCC EU documents, Implementing Regulation (EU) 2022/996**
- **Certificate: 1 year**
- **Main categories of organizations:**
 - FA - Agricultural operator
 - PO - Point of origin of waste/residues
 - FGP-CP - First collection point for biomass (including waste/residues)
 - PU - Conversion Unit
 - TRS, TR - Traders with or without storage

2BSvs

- **Biofuels: All (excluding forest biomass)**
- **Accreditation/Recognition Body: 2BS Association**
- **Requirements: RED III, public ISCC EU documents, Implementing Regulation (EU) 2022/996**
- **Certificate: 5 years**
- **Main categories of organizations:**
 - FA - Agricultural operator
 - PO - Point of origin of waste/residues
 - FGP-CP - First collection point for biomass (including waste/residues)
 - PU - Conversion Unit
 - TRS, TR - Traders with or without storage

The Certification Procedure



- **Maintenance Audit: 6*-12-24-36-48-60 months**
- **Producer of the waste/residue: Must certify apart from exceptions**
- **End market: IT**
- **For incentivized biofuels and biomethane (whose end market is Italy) it is a requirement for the entire supply chain**



- **Maintenance Audit: For high-risk supply chains* 6 months and in the case of CP, TR, PO in addition of 3 months ONLY THE FIRST YEAR**
- **Producer of the waste/residue: It does not have to be certified but those who produce > 5 t per month or 60 t / year must be audited on site; The refinery that produces waste must certify**
- **End market: EU**



- **Maintenance Audit: 12-24-36-48-60 months For high-risk supply chains* 6 months and in the case of CP, TR, PO in addition of 3 months ONLY THE FIRST YEAR AND ONLY FOR BIOFUELS AND BIOLIQUIDS**
- **Producer of the waste/residue: It does not have to be certified but those who produce > 5 t per month or 60 t / year must be audited on site; the refinery that produces waste must certify itself (APPLICABLE ONLY FOR BIOFUELS AND BIOLIQUIDS)**
- **End market: EU**

RINA Services



RINA Services



RINA offers certification services according to the following schemes:

- **ISCC EU, a German initiative and managed by International Sustainability and Carbon Certification,**
- **2BSvs, a French initiative and managed by the 2BS Association**
- **National Certification System for the Sustainability of Biofuels set by Decree 7 August 2024.**

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Our experience. Your growth.