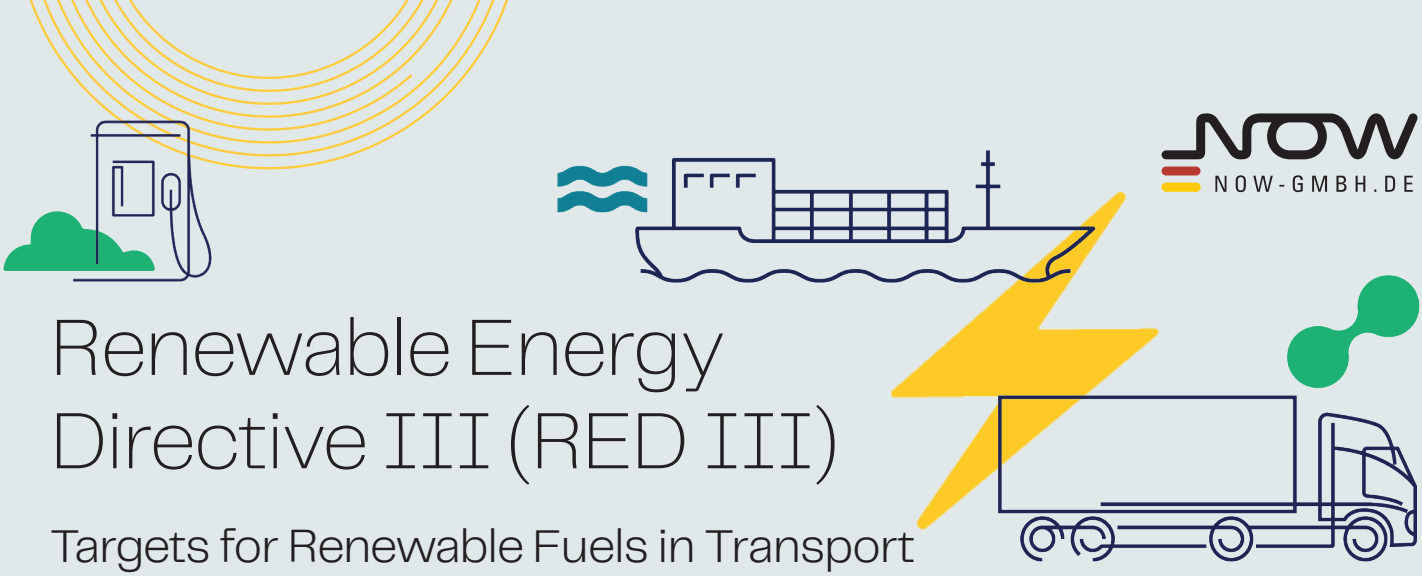

Renewable Energy Directive III (RED III)

Targets for Renewable Fuels in Transport

In 2023, the European Union (EU) adopted an amendment of the Renewable Energy Directive, which is referred to as "RED III". It thereby raised the collective target for renewable energy consumption across all sectors in Europe significantly to at least 42.5 % in 2030.

The RED III target for transport was ambitiously increased and additional energy sub-targets were set for individual fuel fulfilment options (see table below). As in RED II, RED III allows multipliers for certain fuels and use cases, when they comply with the energy targets. This incentivizes these options and puts them on a level playing field with others.

The directive must be transposed into Member State's national law within 18 months after its publication in the Official Journal of the EU. Member States need to oblige fuel suppliers to meet the set goals for the transport sector. However, they have some flexibility in national implementation and can, for example, set higher targets for fuel suppliers.

Main changes concerning the transport targets

Targets 2030	Targets in RED II (2018)	Targets in RED III (2023)
Renewable energy in transport	· At least 14 % share of renewable energy in final consumption of road and rail transport	· At least 29 % share of renewable energy in final consumption of all energy used in transport · Or a minimum of 14.5 % reduction in greenhouse gas (GHG) compared to emissions that would have been created by fossil fuel use instead
Fossil fuel comparator (Reference value to calculate baseline for GHG reduction target)	· 94 gCO_2eq/MJ for all energy used in transport	· 183 gCO_2eq/MJ for electricity used in transport · 94 gCO_2eq/MJ for all other energy used in transport
Electricity used in transport	· No sub-target · Multiplier of x4 for renewable electricity used in road vehicles and of x1.5 for renewable electricity in rail	· No sub-target · Multiplier of x4 for renewable electricity used in road vehicles and of x1.5 for renewable electricity in rail

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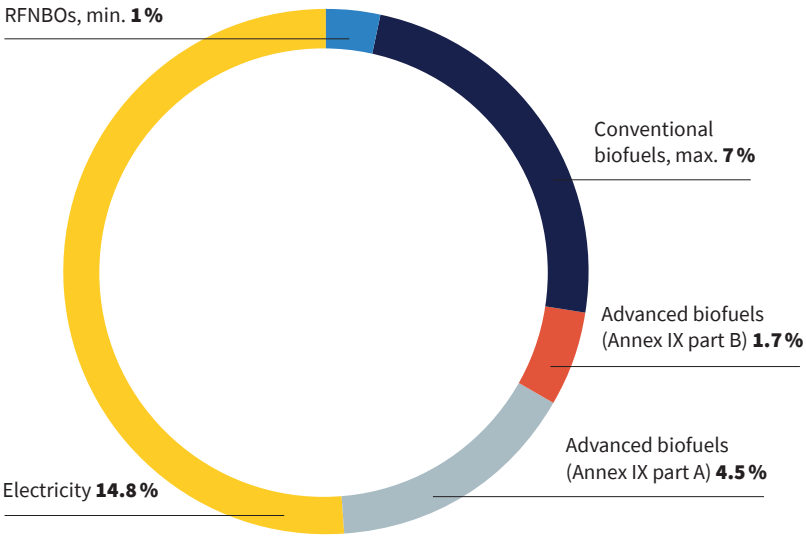
Targets 2030	Targets in RED II (2018)	Targets in RED III (2023)
Advanced biofuels (feedstocks listed in Annex IX, part A)	· 3.5 % share of advanced biofuels in final consumption of road and rail transport · X2 multiplier	· 5.5 % share of advanced biofuels and renewable fuels of non-biological origin (RFNBOs), in final consumption of all energy supplied to transport, with a 1 % RFNBO minimum share · Indicative goal of at least 1.2 % of energy used in maritime transport to come from RFNBOs in 2030
RFNBOs	· No sub-target · Additional multipliers in aviation and maritime transport: x1.2	· X2 multiplier for advanced biofuels and RFNBOs · Additional multipliers in aviation and maritime transport: x1.2 for advanced biofuels and x1.5 for RFNBOs
Biofuels and Biogas from used cooking oil (UCO) or animal fats (feedstocks listed in Annex IX, part B)	· Use of biofuels and biogas from UCO and animal fats is limited to 1.7 % in final consumption of energy in road and rail transport · X2 multiplier	· Use of biofuels and biogas from UCO and animal fats is limited to 1.7 % in final consumption for all energy used in transport · X2 multiplier
Conventional biofuels (food- and feed-based)	· Share of conventional biofuels consumed in 2020 in road and rail transport in Member States +1 %, but a maximum of 7 %	· Share of conventional biofuels consumed in 2020 in the transport sector in Member States +1 %, but a maximum of 7 %

Sample scenario: How to achieve the RED III transport target of 29 % in 2030?



+ Electricity in road transport will play a key role in achieving the overall EU transport target in 2030.
+ The production of RFNBOs and advanced biofuels (Annex IX Part A) must be significantly increased by 2030.
+ The multipliers for the various fulfilment options incentivize certain options but distort target setting. To comply with the target of 29 % renewable energy share in transport, a significantly smaller amount of renewable energy is required.
+ The change of the denominator from road and rail transport to all transport modes could lead to an increased use of conventional biofuels and biofuels from UCO or animal fats compared to today or compared to the RED II targets.

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RED III – Impact on RFNBOs

What is defined as a RFNBO according to the RED?

RFNBOs are defined as liquid and gaseous fuels whose energy content is derived from renewable sources, excluding biomass. They need to achieve a minimum GHG reduction of 70 % compared to a fossil comparator of 94 gCO_2eq/MJ.

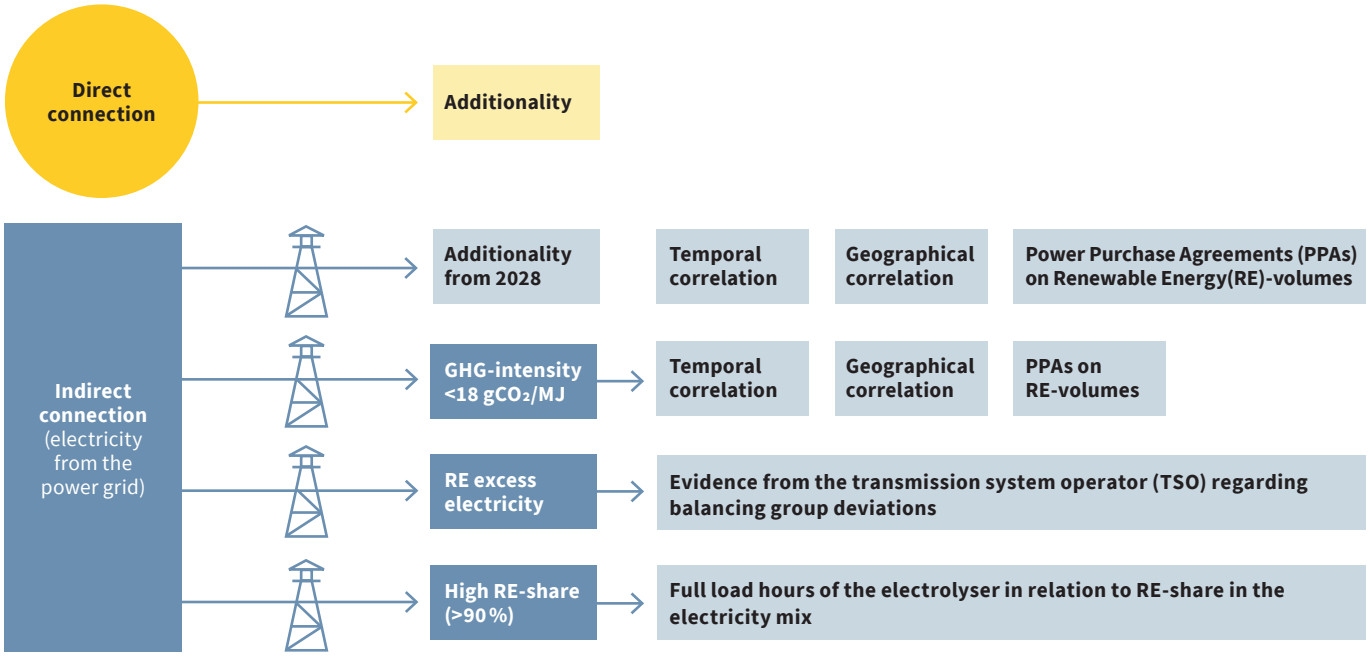
GHG-Calculation method

(Delegated Act on GHG calculation according to Art. 28 RED II)

+ Calculation method for RFNBOs and recycled carbon fuels determines GHG-footprint along life cycle
+ Fully renewable electricity is calculated with 0 gCO_2eq/MJ
+ For electricity from the grid, the GHG intensity of the bidding zone is used
+ Permitted carbon sources for the production of synthetic fuels
  + Direct air capture
  + Biogenic CO_2
  + Industrial point source (until 2041)
+ Rules for co-processing

Rules for electricity to count as fully renewable

(Delegated Act on electricity procurement criteria according to Art. 27 RED II)



→ Further information on the RED delegated acts and hydrogen certification can be found on the EU website for voluntary schemes and in a Q&A provided by the European Commission.

→ The RFNBO criteria must be met for production within Europe, as well as for production outside of Europe – in third countries – to ensure compliance with RED.

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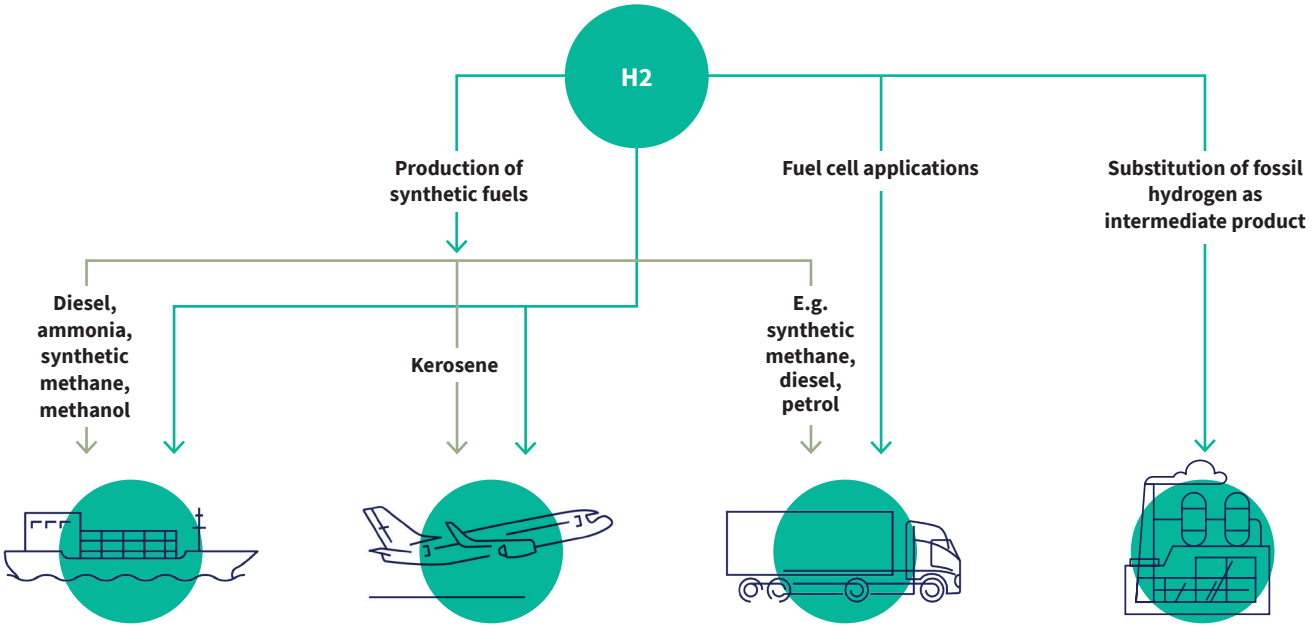
RFNBO transport crediting options in RED III

RFNBO (hydrogen or derivative) produced within EU or imported



Which fulfilment options in transport attract RFNBO production?

Maritime transport

+ The FuelEU Maritime Regulation, coupled with increasing prices in the EU Emissions Trading System (ETS) and the indicative goal of RED III are directing the maritime industry towards reliance on RFNBOs to achieve the decarbonization of shipping.

Aviation transport

+ The market uptake of RFNBOs in the aviation sector (either as hydrogen or as synthetic aviation fuel) is incentivized by the ReFuelEU Aviation Regulation. By 2030, an estimated 20 PJ of synthetic aviation fuel is required to meet the set quotas.*

Road and rail transport

+ The widespread use of renewable hydrogen or synthetic fuels in road and rail transport relies on the availability and on the cost of hydrogen vehicles, hydrogen infrastructure, market prices, RFNBO availability and the user's willingness to pay.

Refineries

+ Refineries in Europe are the largest consumers of fossil hydrogen. The substitution with renewable hydrogen can be counted towards target fulfilment under RED. This will be a highly economical choice for fuel suppliers due to the existing infrastructure.

→ Through the steering effect of the ReFuelEU Aviation and FuelEU Maritime regulations, a significant proportion of the 1 % RFNBO sub-target will potentially be met by demand from aviation and maritime transport. It is likely that a high share of the RFNBO sub-target will incentivize renewable hydrogen use in refineries. Remaining quantities incentivized by the sub-quota will be used in road and rail transport.

* NOW Factsheet on ReFuelEU Aviation

Source: All information and illustrations shown in this factsheet are based on the official document of RED III.

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