

# Bringing eSAF to market – Challenges and prospects

Marlene Hermfisse, eFuel Alliance e.V.  
ISCC Technical Stakeholder Meeting on Sustainable Aviation Fuels  
19 September 2023





# Who are we?

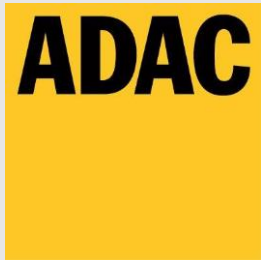
# Our Members



MORE THAN 170 COMPANIES, ASSOCIATIONS  
AND CONSUMER ORGANIZATIONS FROM 17  
COUNTRIES, INCLUDING:



PORSCHE



# eFuel Alliance – a platform with a clear vision



We are a **lean and fast-lobbying “trailblazer”** created to foster a strong renewable fuel market within the next 2-3 years, representing the whole value chain of eFuels.

We stand for **fair competition** and a **level-playing field** for all relevant emission reduction solutions. We are clearly committed to more climate protection and are not fighting against any single technology.

Now or never – **the Green Deal is the unique opportunity** to change the regulation and achieve more holistic political decisions

We aim to **initiate attractive business models** to develop innovative fuel technologies in Europe.





# Prospects

ReFuelEU Aviation – REDIII – Energy Taxation Directive

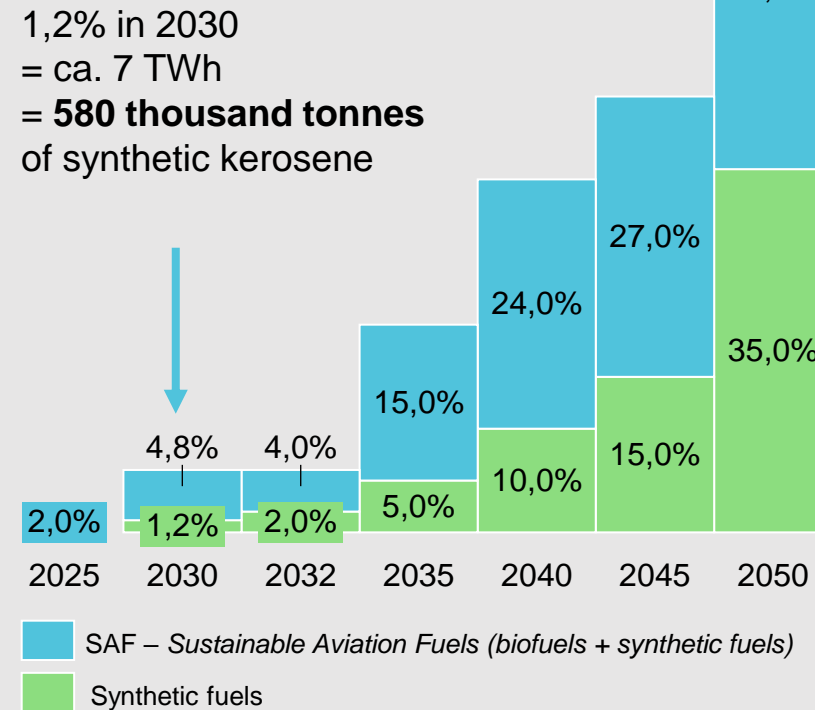


# ReFuelEU Aviation: clear market size and long-term perspective



## Overview

- **On 25 April** compromise in triologue was reached
- Quota for synthetic aviation fuels includes **RFNBO** (hydrogen is named separately) and low-carbon fuels
- **Penalties** set clear maximum price for eFuels (at least 2x difference between the yearly average price of synthetic aviation fuel and conventional aviation fuel)
- Review in **2027**





# Renewable Energy Directive

## Overview

- One of the most important legislative initiatives to increase the share of renewable energy in the EU
- Should lead to a significant reduction in greenhouse gas emissions
- On March 29, the final trilogue reached an agreement
- RED must be implemented into national law within 18 months of publication (autumn 2023)
- Allows for member states to set more ambitious quotas

## Content

- The overall **renewable energy target** will be raised to **42.5% by 2030**, with an additional 2.5% increase to which each Member State is expected to contribute

### Transport sector:

- By 2030, 14.5% GHG reduction or a 29% share of renewable energy
- Combined quota for advanced biofuels and RFNBO\* – 1% in 2025 and 5.5% in 2030, including an RFNBO quota of 1% in 2030
- **BUT:** Due to multipliers, the de facto targets are 2.75% for the combined quota and 0.5% for RFNBOs

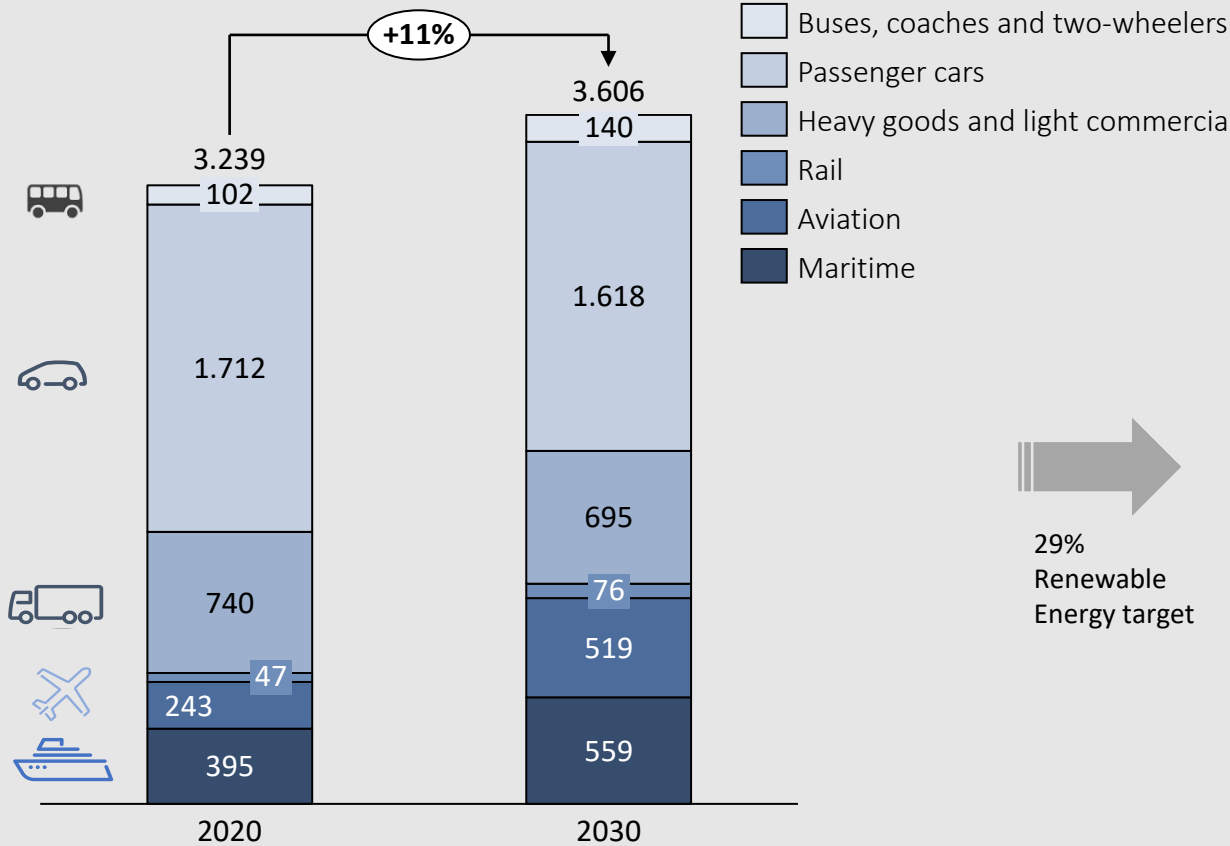
### Industrial sector:

By 2030, 42% of hydrogen consumption must come from RFNBOs and 60% by 2035

- This corresponds to a projected demand of approx. 60-100 TWh in 2030
- This can be reduced by 20% if:
  - Member States consume no more than 23% hydrogen from fossil fuels in 2030, and
  - the national contribution of Member States to the EU's binding overall target is equal to the expected contribution

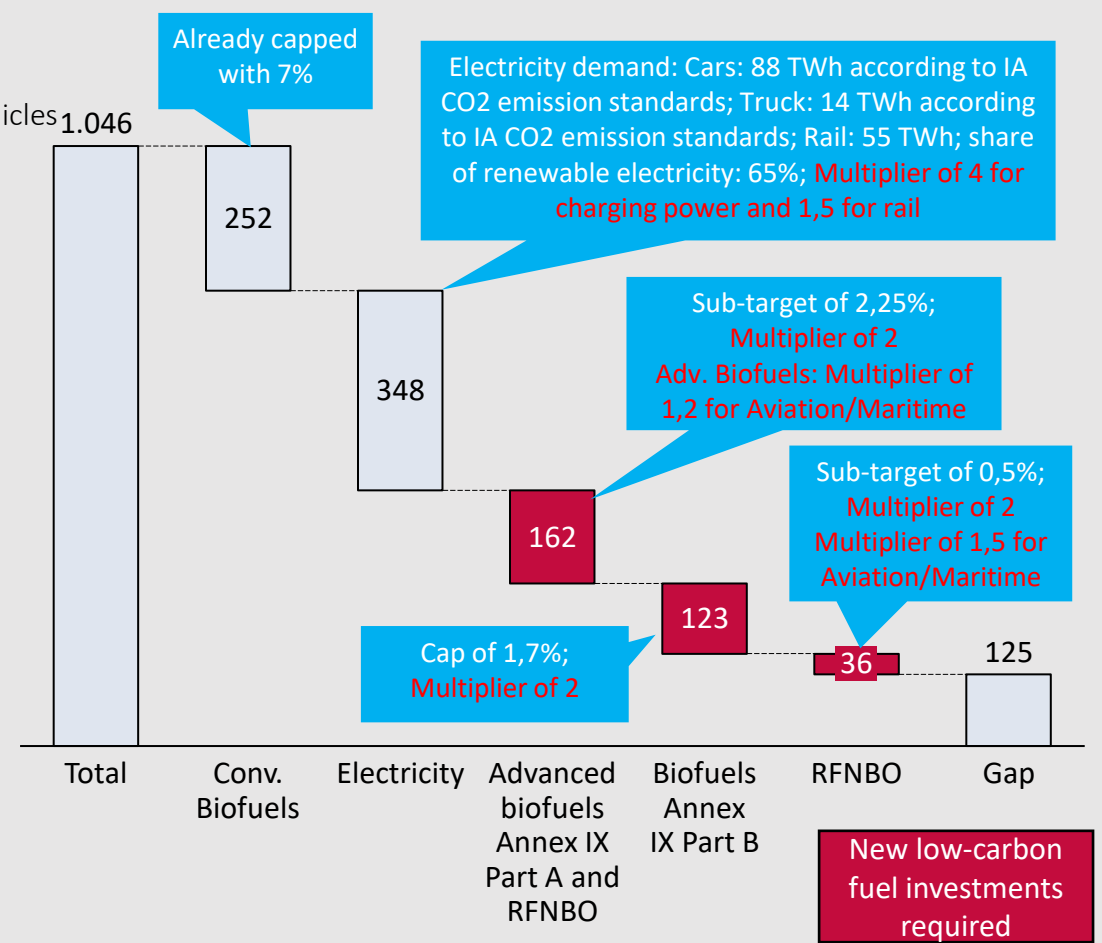
# RED III: Incentives for Aviation and national implementation

EU Fuel Demand Transport Sector in TWh:



29% Renewable Energy target

Compliance options in TWh:

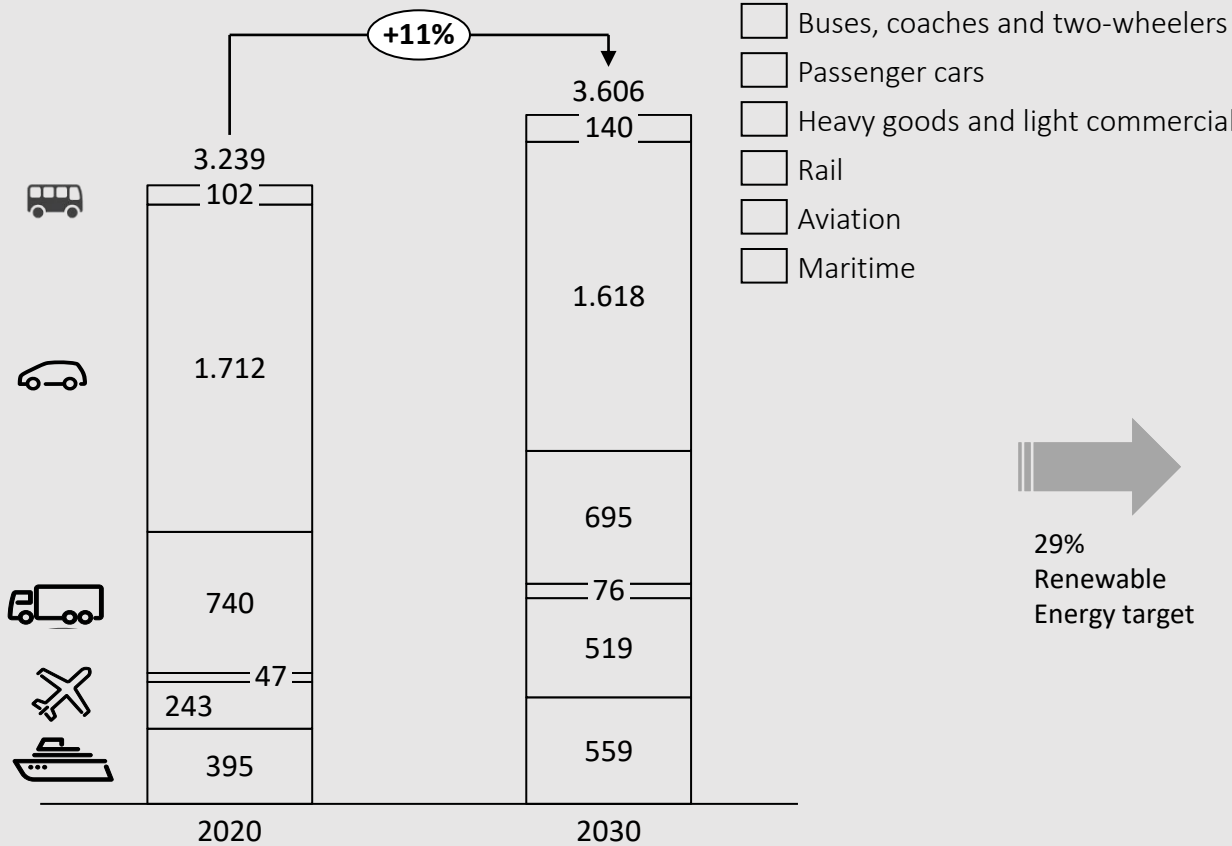


Source: Fuel demand and electricity mix: Policy scenarios for delivering the European Green Deal, MIX-Scenario Fit-for-55: [https://energy.ec.europa.eu/data-and-analysis/energy-modelling/policy-scenarios-delivering-european-green-deal\\_en](https://energy.ec.europa.eu/data-and-analysis/energy-modelling/policy-scenarios-delivering-european-green-deal_en)

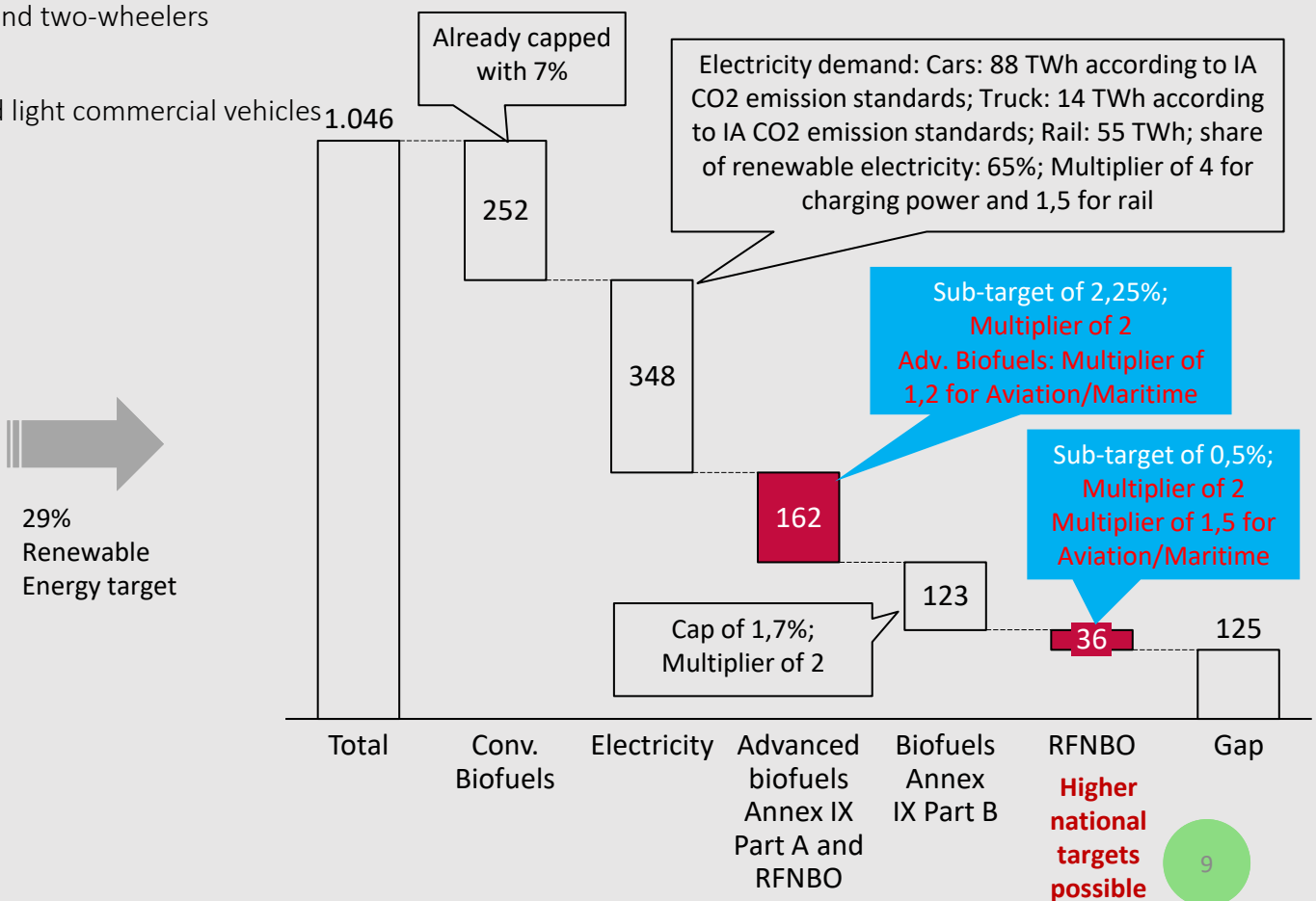


# RED III: Incentives for Aviation and national implementation

EU Fuel Demand Transport Sector in TWh:



Compliance options in TWh:



Source:  
 Fuel demand and electricity mix: Policy scenarios for delivering the European Green Deal, MIX-Scenario Fit-for-55: [https://energy.ec.europa.eu/data-and-analysis/energy-modelling/policy-scenarios-delivering-european-green-deal\\_en](https://energy.ec.europa.eu/data-and-analysis/energy-modelling/policy-scenarios-delivering-european-green-deal_en)



# Energy Taxation Directive

- Unanimity required in Council
- Dossier on hold in EP
- Distinction in taxation between renewable and fossil fuels is essential
- Initial 10-year tax exemption for eFuels in aviation sector, afterwards immense price advantage of almost 40 ct/l from 2033

## Overview about different tax rates (motor fuels)

Motor Fuel	Energy tax in 2023 in ct/l	Energy tax in 2033 in ct/l
Gasoline	37.52	37.52
Diesel	40.21	40.21
Kerosene	4	39.56
Natural gas in €/GJ	7.17	10.75
Crop-based biofuel (Diesel-equiv.)	20.12	40.21
Sustainable biofuel (Diesel-equiv.)	20.12	20.12
Advanced biofuel (Diesel-equiv.)	0.56	0.56
eFuels (Diesel-equiv.)	0.56	0.56



# Challenges

REDII Delegated Acts – Financing



# REDII DAs: Many open questions left

## Delegated Acts on electricity supply (Art. 27) and GHG methodology (Art. 28)

- Entry into force on July 10 after significant delay
- Certification schemes not yet in place
- New living DG ENER Q&A document has been published recently, but no certainty on time schedule
- National implementation pending

- **Industrial CO<sub>2</sub> point sources** have to be “taken into account upstream in an effective carbon pricing system”
- Switch from monthly to **hourly temporal correlation** can be implemented earlier on MS level (2027 instead of 2030) and is subject to review in July 2028 (see REDIII)
  - Additional insecurity; increases cost by more than 25% without significant reduction in power sector emissions\*
- **Sleeve PPA** via electricity supplier will not be accepted according to Q&A doc

[\\*Oliver Ruhnau, Johanna Schiele \(2023\) Flexible green hydrogen: The effect of relaxing simultaneity requirements on project design, economics, and power sector emissions](#)



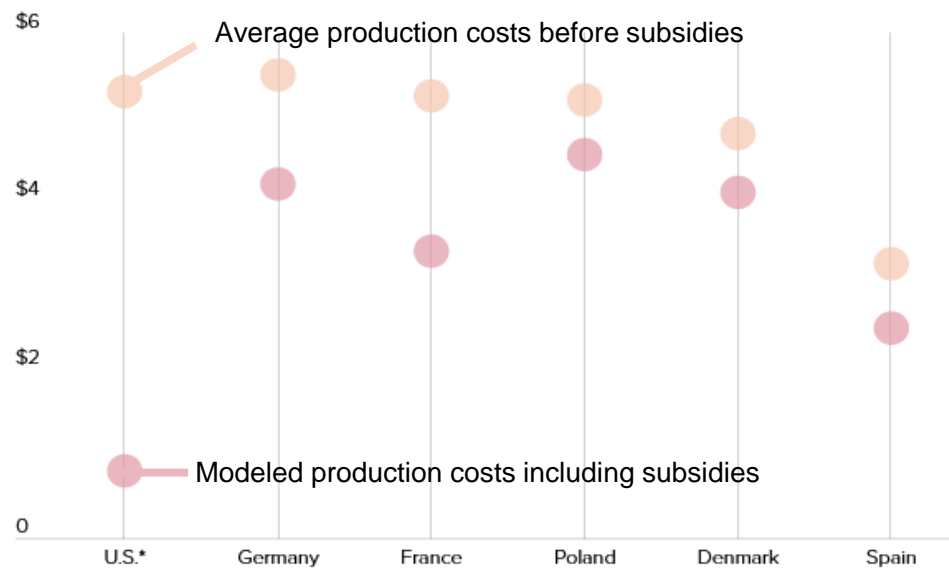
# Financing: Subsidies and mismatch



Producer

Offtaker

More attractive conditions outside EU  
Production cost including subsidies set US at significant advantage due to Inflation Reduction Act



Mismatch in planning horizons

- **10-year offtake agreement** needed for bankability in project financing
- Airlines and fuel suppliers and with **significantly smaller time horizons**

Pre-2030 national quotas

ETS Allowances for Airlines

- **20 million allowances** in 2024-2031
- covering **95% of price difference between RFNBO and conventional aviation fuels** and 70% of price difference between SAF and conventional aviation fuel
- Functioning unclear, Commission shall adopt delegated acts on the calculation of the price difference and the allocation of allowances

Graph by Politico based on Confederation of Swedish Enterprise (2023) The effects of the US Inflation Reduction Act (IRA) on EU competitiveness



# Conclusion

- **Remaining uncertainties from REDII DAs** have to be resolved as quickly as possible
- **Financing and support** necessary to facilitate market ramp up in globally highly competitive sector and combat first mover disadvantages
- For a successful ramp-up, regulatory framework should be **pragmatic instead of perfect**

**Berlin Office:**  
Unter den Linden 10  
10117 Berlin

**Brussels Office:**  
De Crayer Straat 7, Rue de Crayer 7  
1000 Brussels

T +49 (0)30 700 140 313  
F +49 (0)30 700 140 150  
E [info@efuel-alliance.eu](mailto:info@efuel-alliance.eu)  
[www.efuel-alliance.eu](http://www.efuel-alliance.eu)



[linkedin.com/company/efuel-alliance](https://www.linkedin.com/company/efuel-alliance)



[@eFuel\\_Alliance](https://twitter.com/eFuel_Alliance)



**Marlene Hermfisse**  
Policy Officer / eFuel Alliance  
[hermfisse@efuel-alliance.eu](mailto:hermfisse@efuel-alliance.eu)