

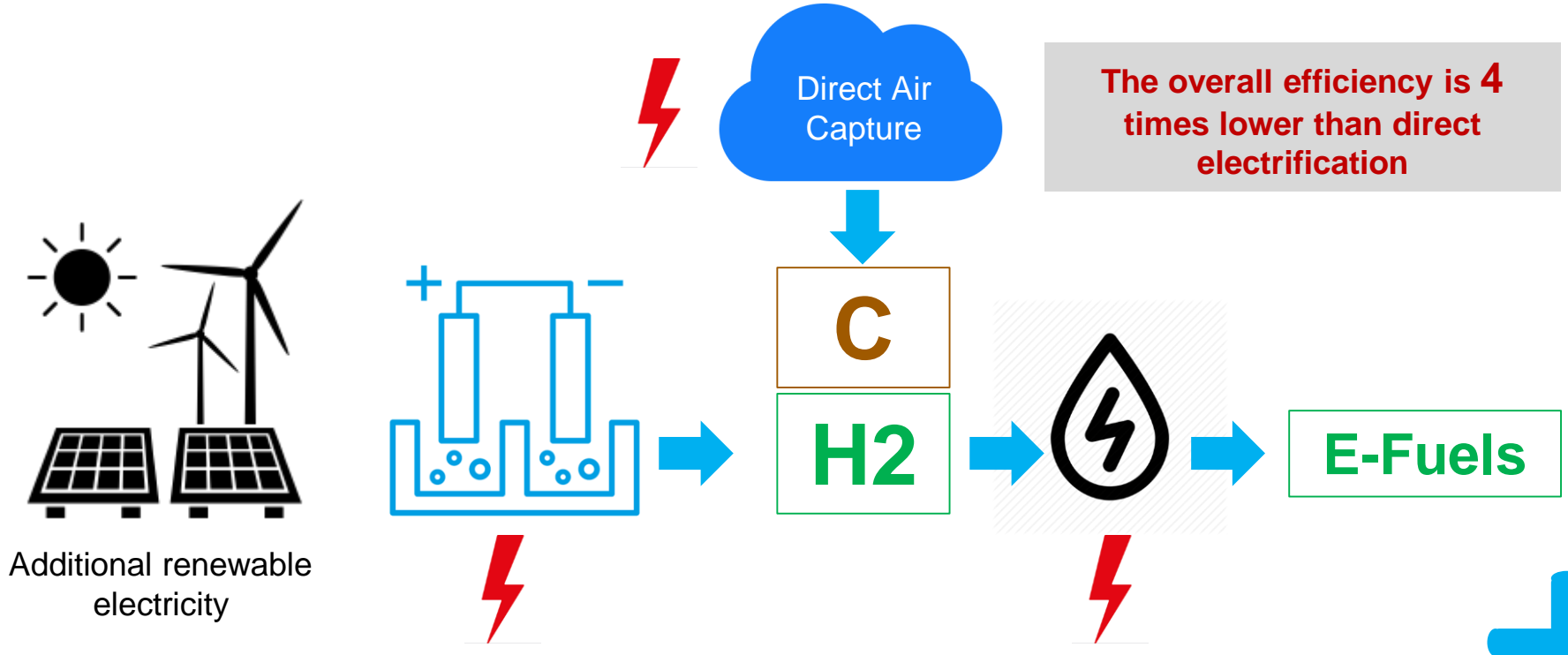
# Why e-fuels are a bad idea for cars

Availability, Sustainability, Costs

Jekaterina Boening, Senior Policy Manager



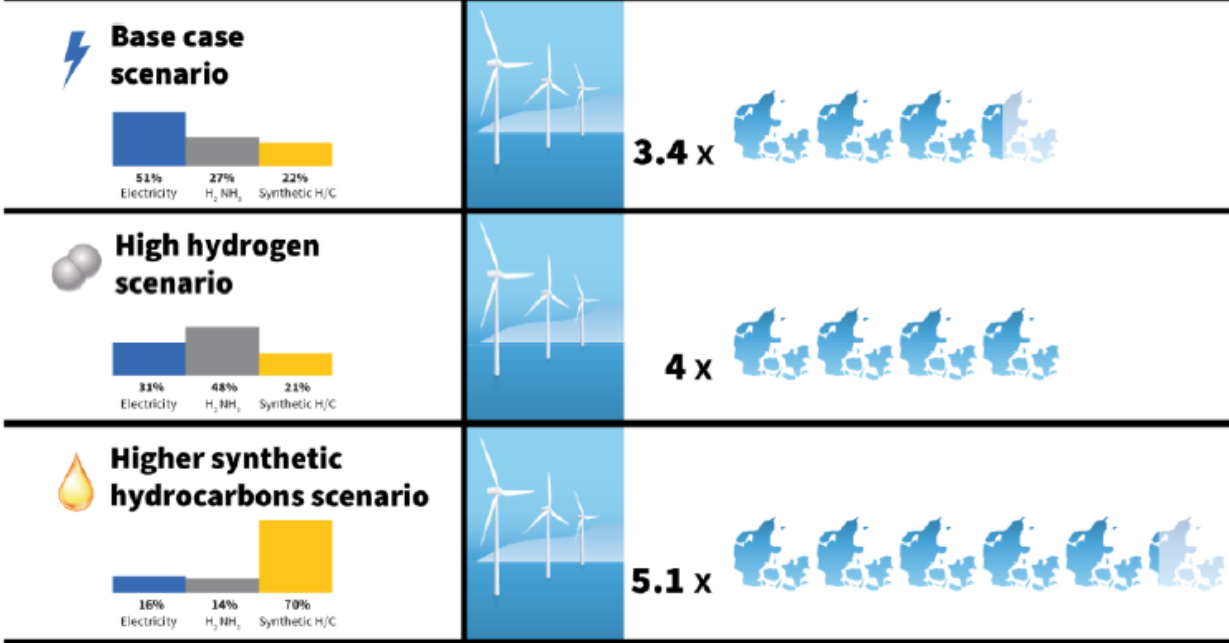
# When are e-fuels sustainable?



# Area requirement to decarbonise transport (EU 27)

Scenarios

Denmark area requirement



Inefficient use of e-fuels results in a significantly higher land requirements

If offshore wind would supply all renewable electricity to decarbonise transport by 2050, this image depicts the equivalent area used by offshore wind farms, in comparison to the size of Denmark

Source: Ricardo Energy & Environment, Renewable electricity requirements to decarbonise transport in Europe with electric vehicles, hydrogen and electrofuels, 2020



# 5% e-fuels in German road transport in 2030

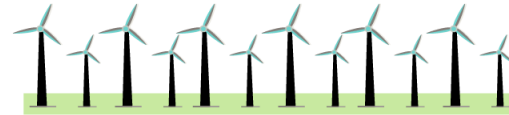
15 GW electrolysis capacity



60 TWh additional renewable electricity



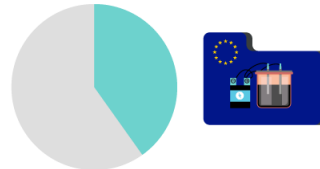
20 GW additional installations of wind onshore



3x times the German electrolyser target

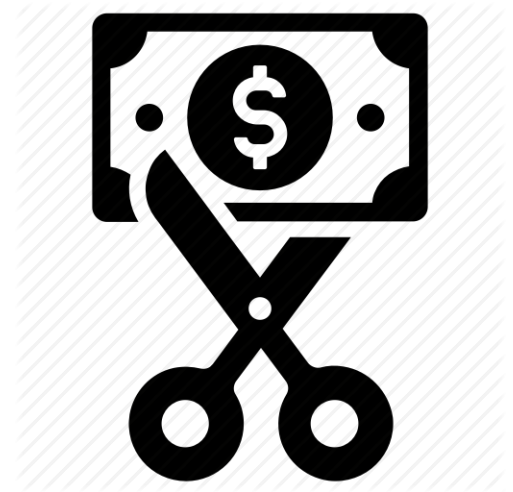
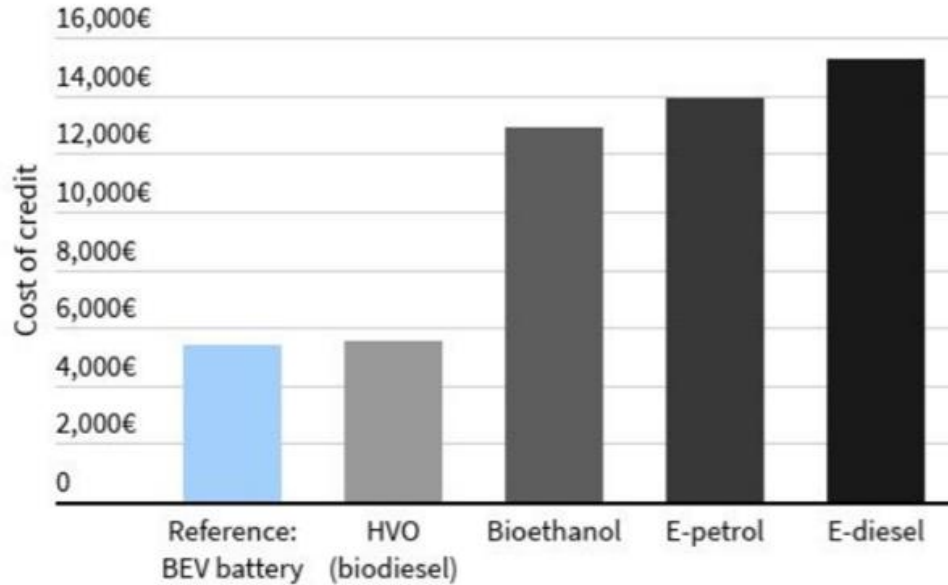


40% of the EU electrolyser target

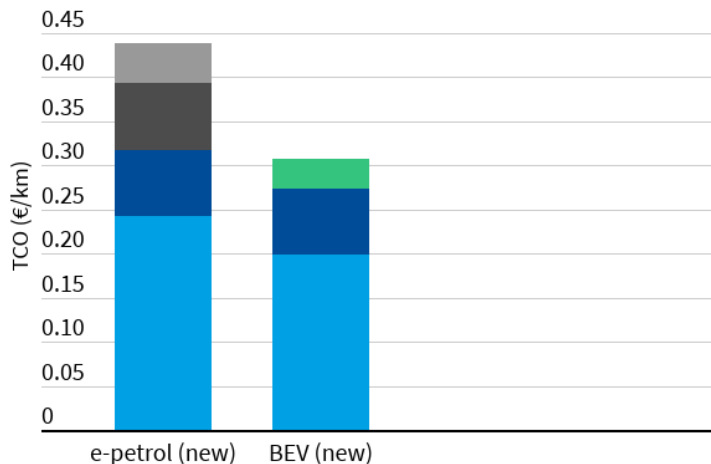


# E-Fuels are expensive

Cost of getting the fuel credit-equivalent to selling a zero emission vehicle



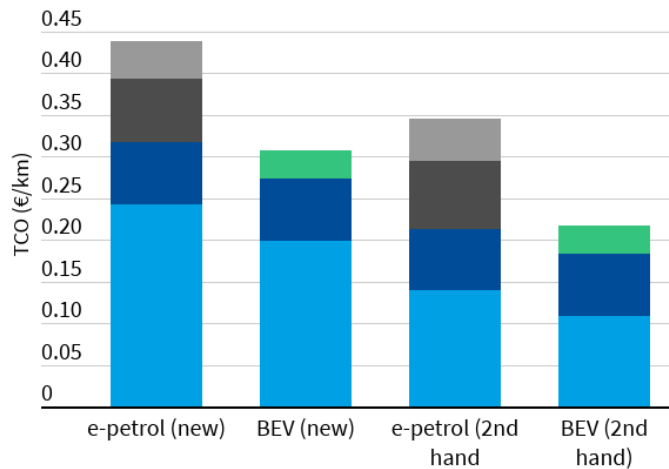
## Total costs of electric cars are less than conventional cars on e-fuels



- Vehicle cost
- Others\*
- Electricity
- Conventional petrol
- E-fuels premium

\* Others include insurance, maintenance and cost of a private charger  
 TCO comparison for a medium car, based on European averages and 5 year ownership period. E-fuel cost: T&E calculations based on Agora Verkehrswende et al. (2018) and Fasihi et al. (2016).

## Total costs of electric cars are less than conventional cars on e-fuels, also for 2nd hand



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- Others\*
- Electricity
- Conventional petrol
- E-fuels premium

\* Others include insurance, maintenance and cost of a private charger  
 TCO comparison for a medium car, based on European averages and 5 year ownership period. E-fuel cost: T&E calculations based on Agora Verkehrswende et al. (2018) and Fasihi et al. (2016).



## Allowing e-fuels credits would ...



***Postpone* an economy-wide decarbonisation due to the misallocation of green hydrogen and e-fuels**



***Increase* mobility costs for consumers**



***Delay* electrification in road transport and prolong life of polluting engines**



***Put at risk* the competitiveness of the European automotive industry**



**Thank you very much for your attention!**

