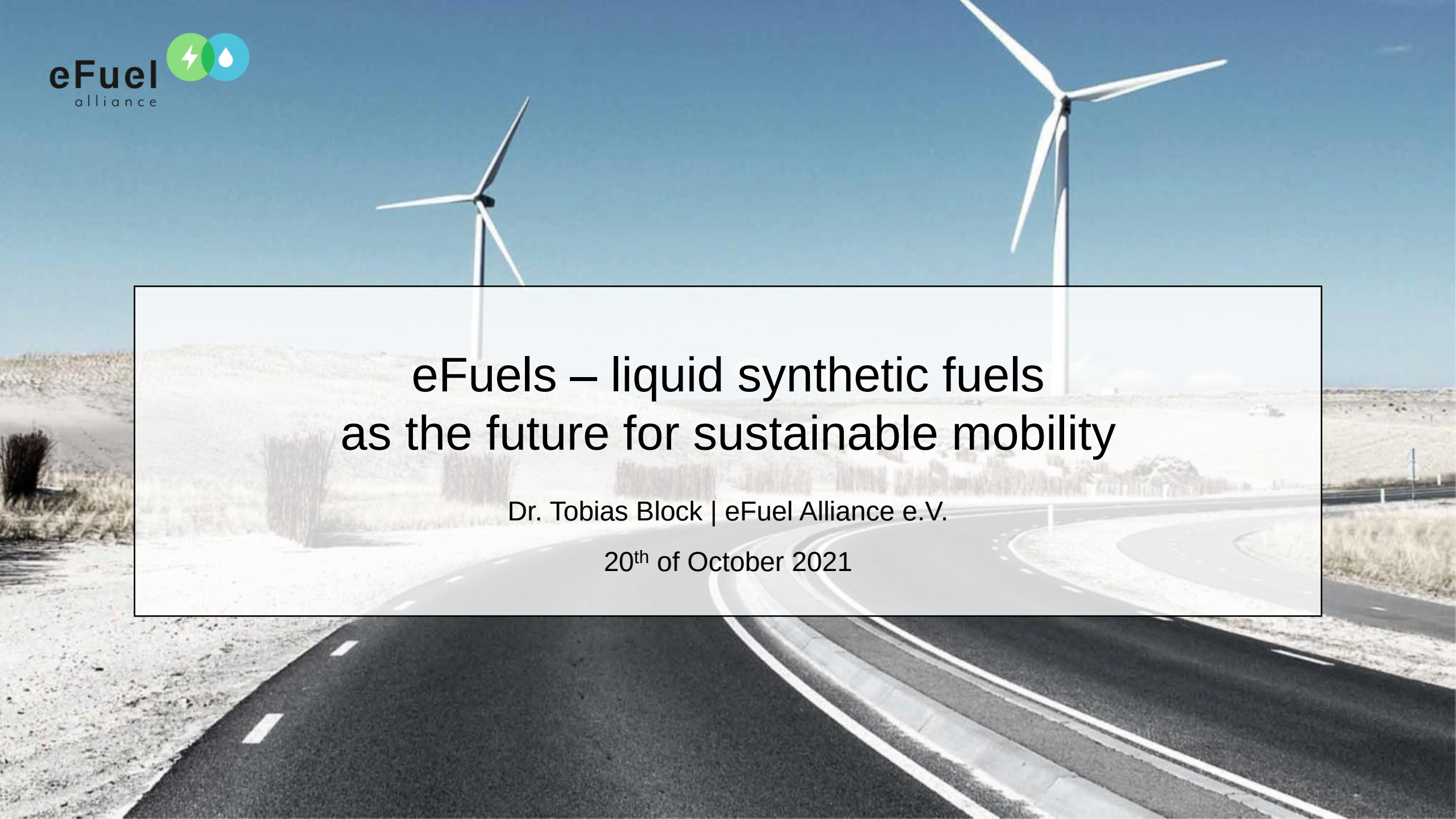


eFuels – liquid synthetic fuels as the future for sustainable mobility

Dr. Tobias Block | eFuel Alliance e.V.

20th of October 2021

eFuel Alliance – Who we are and what we stand for

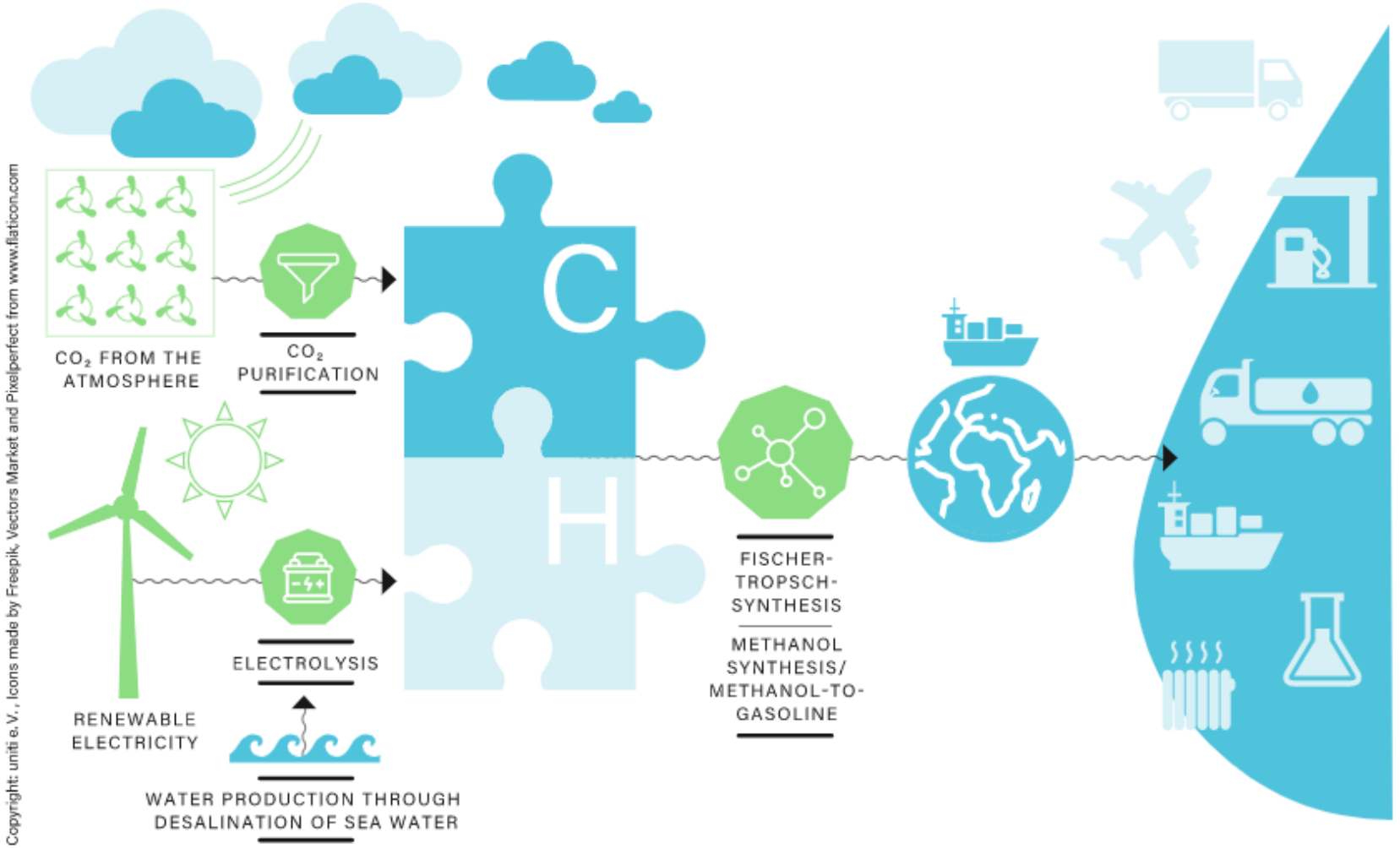
- We are a **stakeholder initiative established** to foster a strong renewable fuel market within the next 2-3 years. We currently represent companies and associations **along the whole value chain of eFuels**. We are clearly committed to greater climate protection and a strong advocate of a **multi-solution approach**.
- Now or never – the **Green Deal is the unique opportunity** to change the regulation and achieve more holistic political decisions.

OUR MEMBERS – MORE THAN 120 COMPANIES, INCLUDING:

OUR POLITICAL MISSION:

1. Account for renewable fuels in the **revision of the CO2 standards of new cars, vans and trucks**
2. Reflect the climate benefit of renewable fuels in the **revision of the European energy taxation**
3. Press for a more ambitious **revision of the renewable energy directive / Fuel Quality Directive**

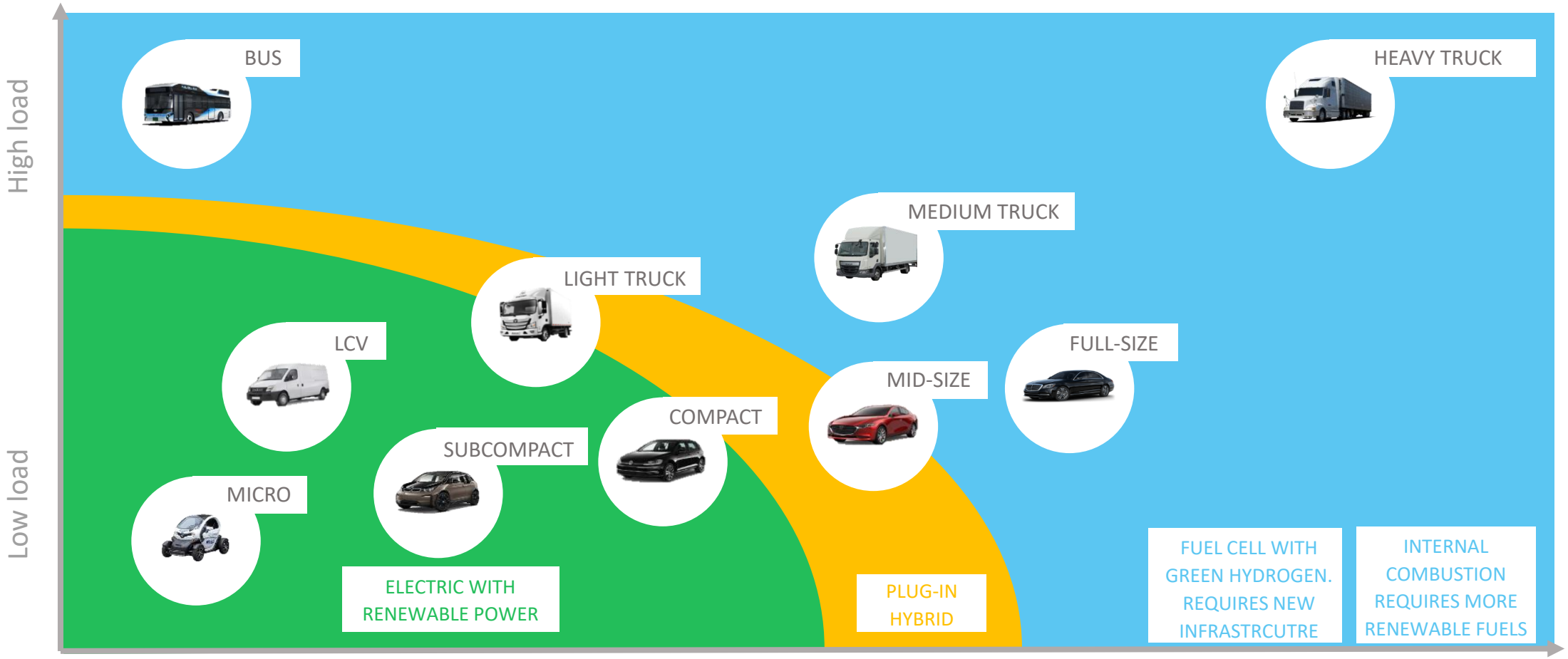
How are eFuels produced?



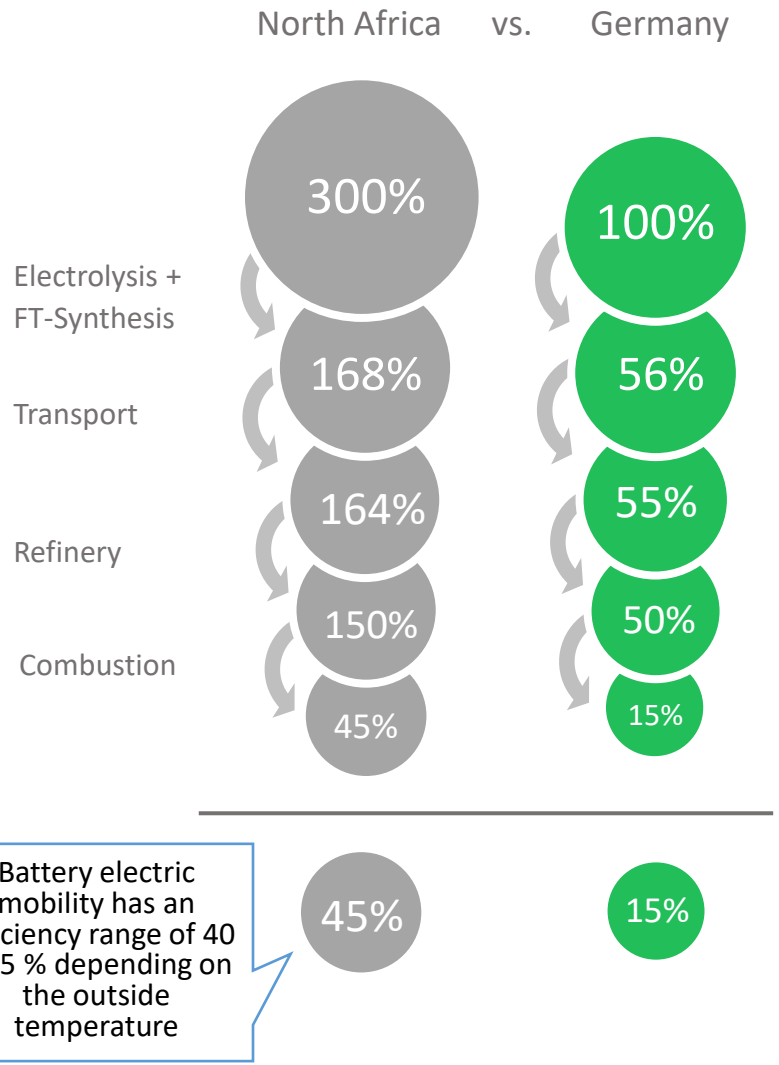
- Extraction of hydrogen from water by electrolysis using renewable electricity
- Hydrogen and CO2, directly captured from the atmosphere, are converted into a liquid energy carrier, by using e.g. Fischer-Tropsch synthesis.
- Power-to-X (PtX): Renewable electricity is converted into a synthetic, multi-purpose fuel with drop-in ability
- Climate-neutral process, no additional greenhouse gases are produced

In principle different use cases require a powertrain mix

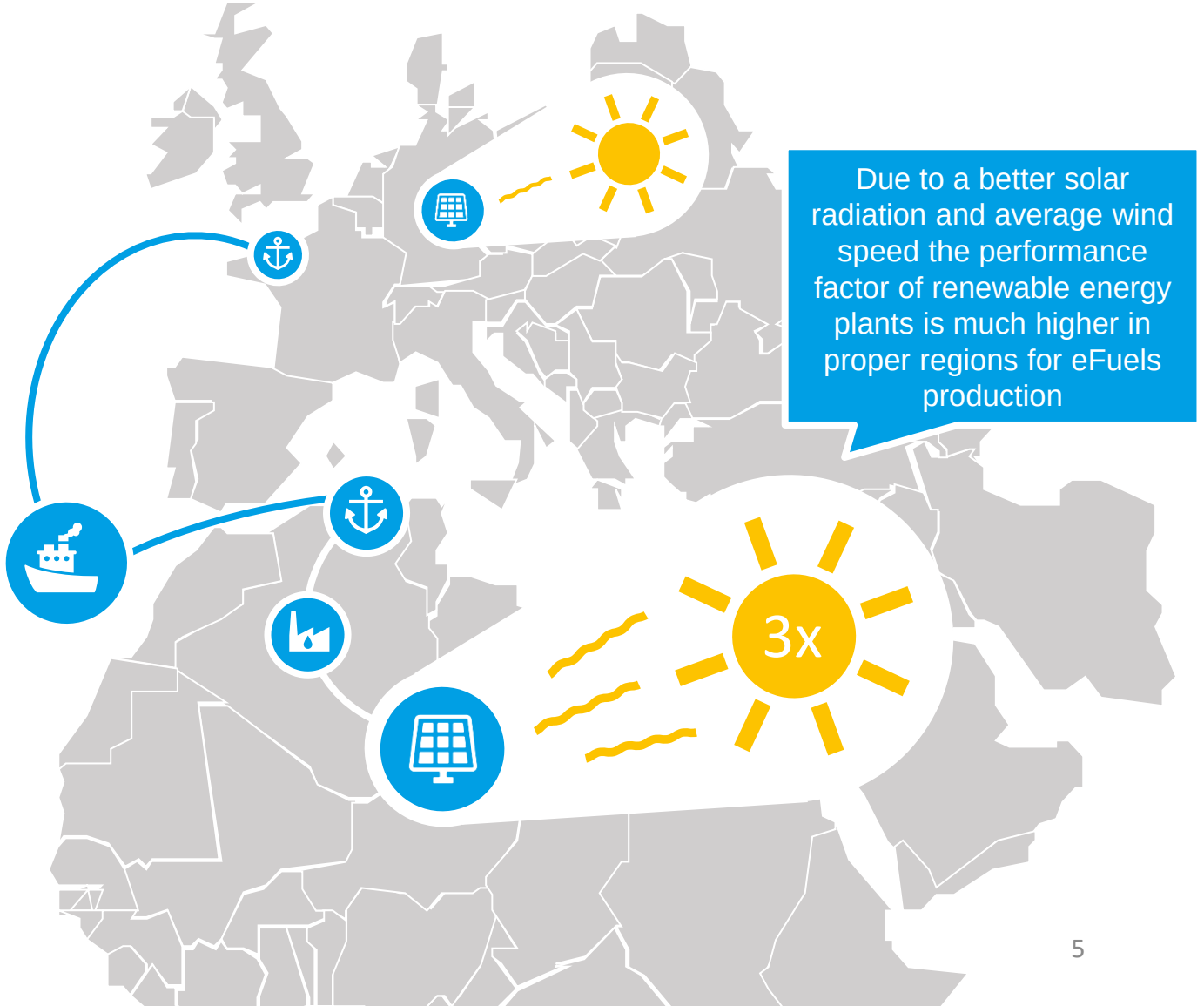
THE GREATER THE REQUIRED PAYLOAD AND RANGE – THE LARGER THE BATTERY SIZE – THE GREATER THE BATTERY COSTS – THE GREATER THE INFRASTRUCTURE EXPANSION – THE GREATER THE ECOLOGICAL FOOTPRINT.



Efficiency depends on the place of production

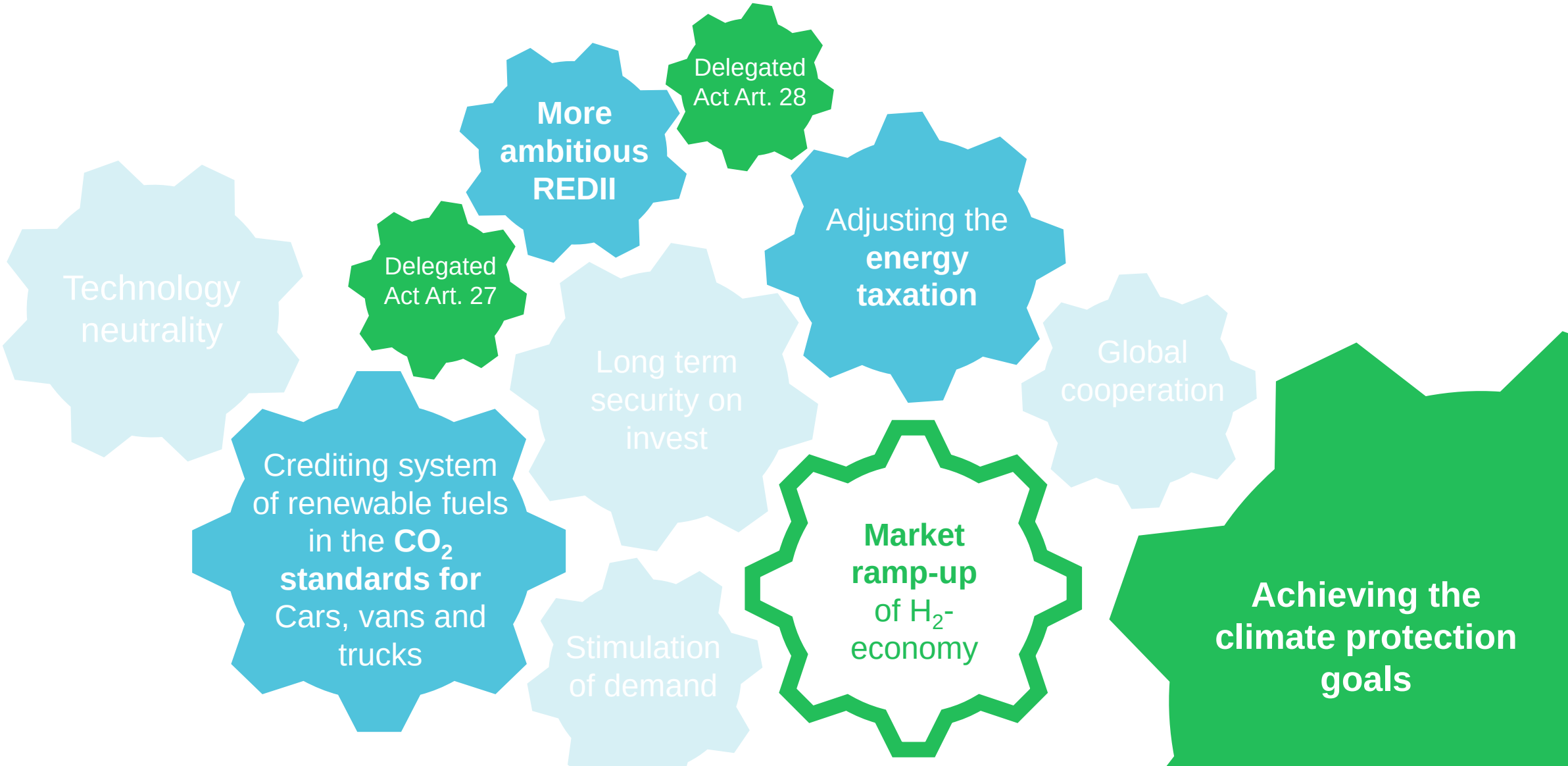


Battery electric mobility has an efficiency range of 40 – 65 % depending on the outside temperature



Due to a better solar radiation and average wind speed the performance factor of renewable energy plants is much higher in proper regions for eFuels production

The moving parts policymakers need to turn



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