

BALANCEAKT ZWISCHEN POTENZIAL UND RISIKO

Die Finanzierung erster PtL-
Anlagen

23.11.21

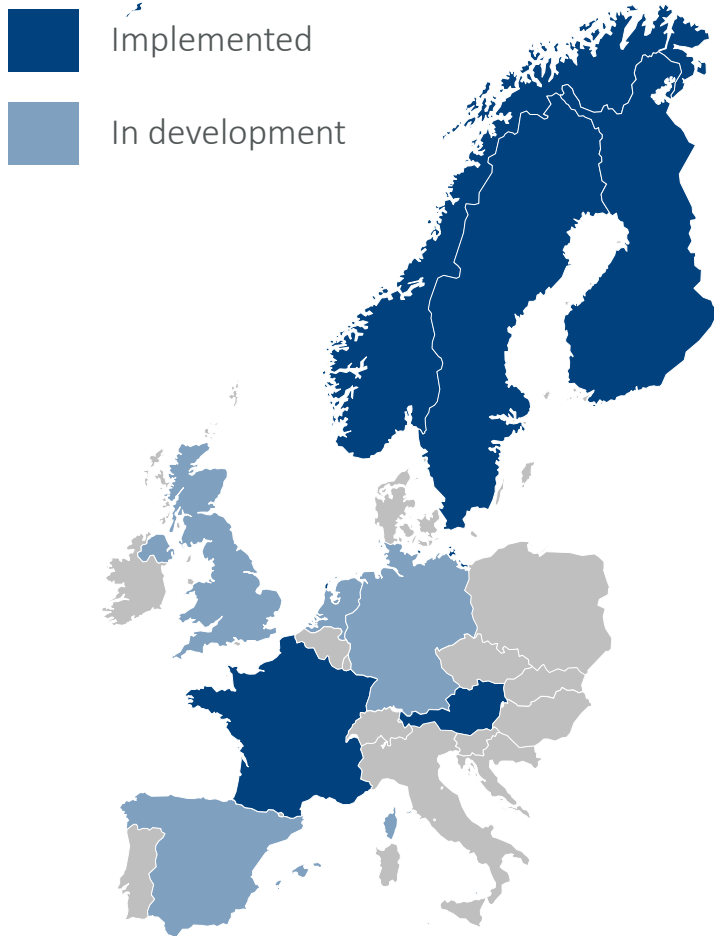
Karl Hauptmeier

POTENTIAL



REGULATORY FRAMEWORK FOR SAF

PtL sub-quotas to kick-start development



ReFuelEU Aviation

Draft available

| Current draft proposes a blending mandate for hydrogen-based aviation fuels of **0.7 % (2030)**; more recent discussions hint at **2 – 2.5 %**.

BImSchV

In effect

| Fuel suppliers must ensure a minimum share of sustainable aviation fuel produced via electrolysis: **0.5 % (2026), 1 % (2028) and 2 % (2030)**.

Other EU Member States

until Q4/2021

| Similar legislation in preparation to convert RED II requirements into national law.

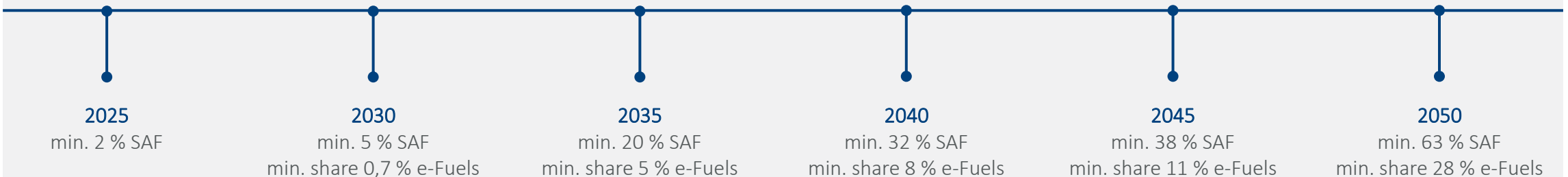
2030 Market Potential within EU



EU REGULATORY: FIT FOR 55

Long-term SAF targets and sub-quotas to secure market development

- | Proposal package including 13 laws by EU commission to achieve 55% of CO₂ emission reduction by 2030
- | Proposal laws are now subject to EU-legislative procedure and have to pass European Council and Parliament
- | This will take several months and will most likely only be realized later in 2022
- | Of special interest are proposed SAF quotas and PtL-subquotas:



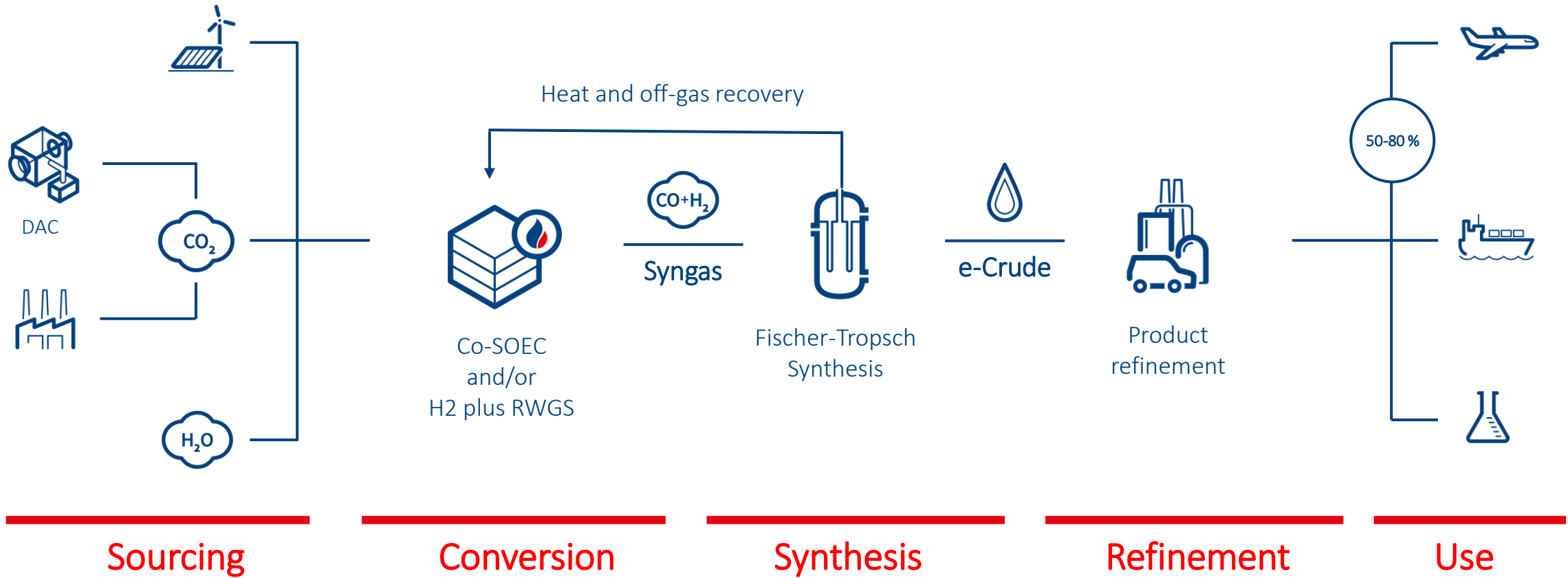
Source: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/delivering-european-green-deal_en#transforming-our-economy-and-societies

UMSETZUNG



POWER-TO-LIQUID VALUE CHAIN

Complex projects ask for strong partnerships and innovative technology



THE NORSK E-FUEL CONSORTIUM

Companies joining forces to kick-start a renewable transition



Technology Leader Power-to-Liquid with **SOEC Technology** and world-wide patent: **Sunfire** enables power to fuel conversion with top efficiency.



Technology Leader **Direct Air Capture** of CO₂: Synergetic to Sunfire PtL process **Climeworks** enables CO₂ supply in remote areas with access to cheap electricity.



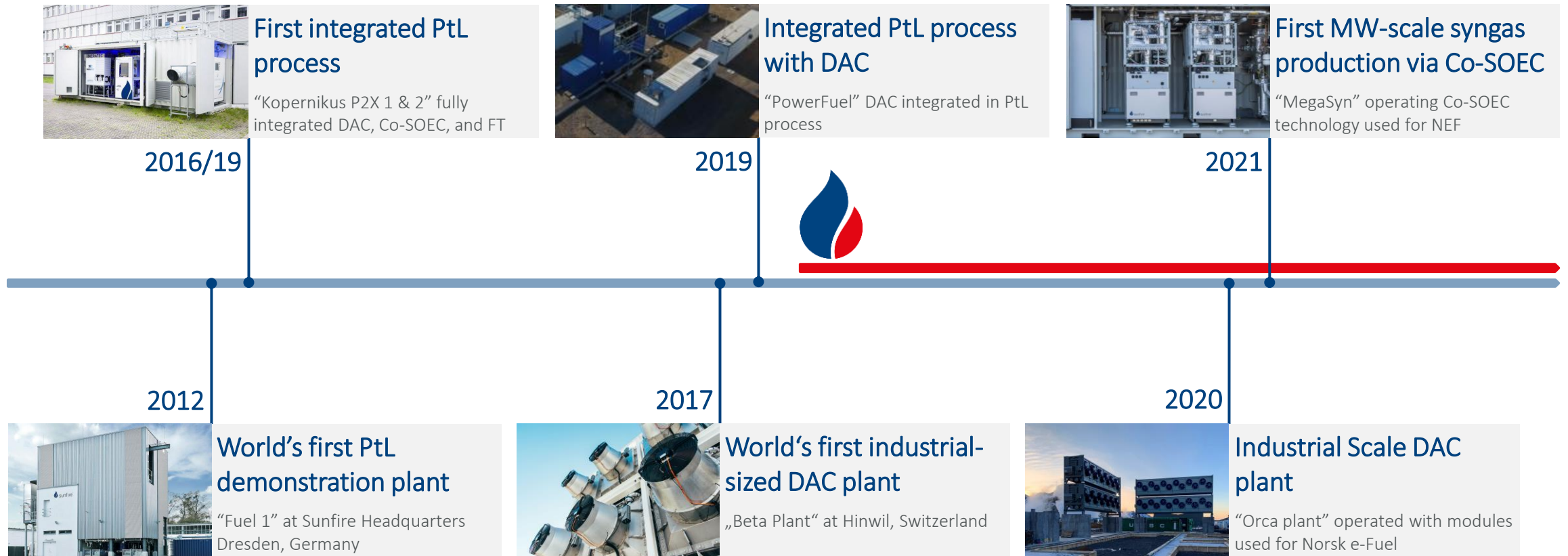
Technology **Leader System Integration and EPC**: As large corporate **Paul Wurth** has the resources to industrialize PtL and will offer performance guaranty for the PtL process.



Norwegian family-owned **investment company** specializing in sustainable solutions: **Valinor** makes early-stage investments in cutting-edge companies to enable solutions for tomorrow.

INNOVATIVE TECHNOLOGY EXPERTS

Examples of a decade long track record in PtL

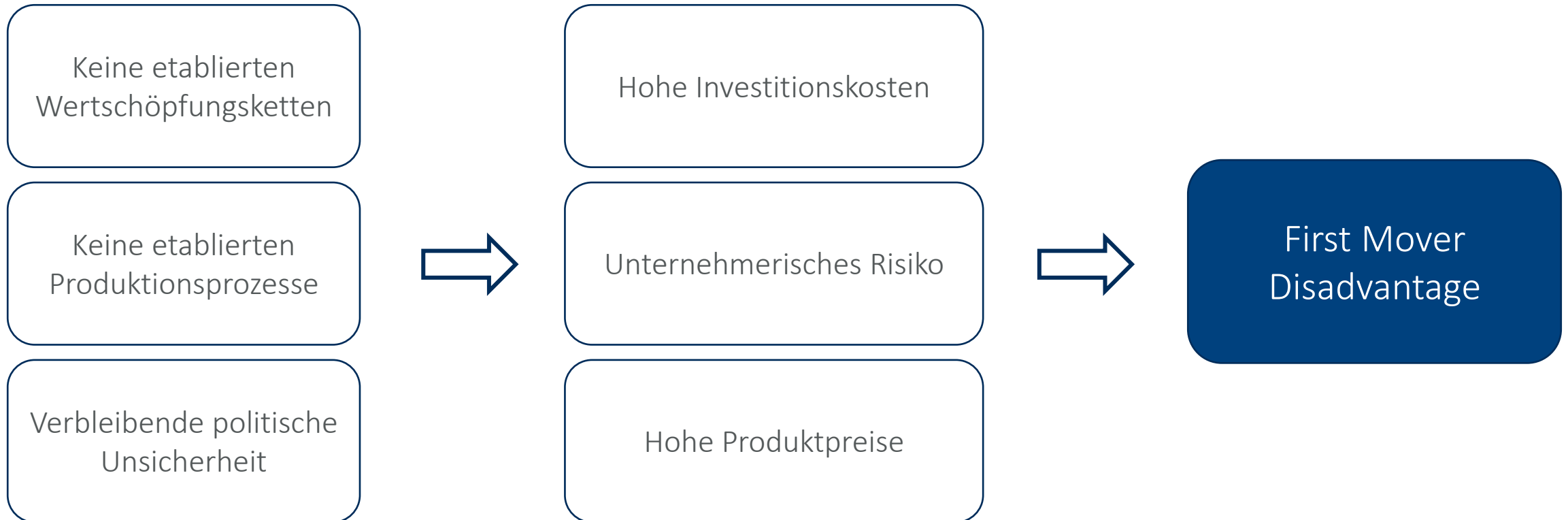


HERAUSFORDERUNG



INDUSTRIAL DEMONSTRATOR - FIRST OF ITS KIND

Enormen Potenzialen stehen Unsicherheitsfaktoren gegenüber



Für den Bau der ersten PtL-Anlagen wird private und staatliche Unterstützung benötigt



Abnehmer

- | Beteiligung an den Bau- und Betriebskosten erster Projekte



Investoren

- | Beteiligung an langfristigen Entwicklungen und erhöhte Risikobereitschaft



Politik

- | Verlässlicher regulatorischer Rahmen entlang der gesamten Wertschöpfungskette
- | Demand-Side support: Steuerung der Nachfrage nach synthetischen Kraftstoffe z.B. durch verbindliche Quoten
- | Supply-Side support: Minderung des First-Mover disadvantage z.B. durch CAPEX-Förderung, Contracts-for-Difference o.ä.

VIELEN DANK!

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