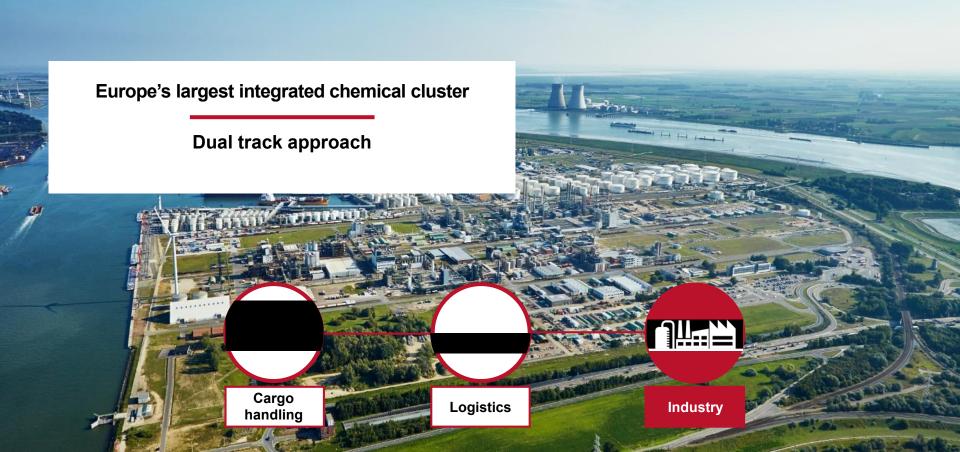




Multifunctional Port In Harmony For the Future



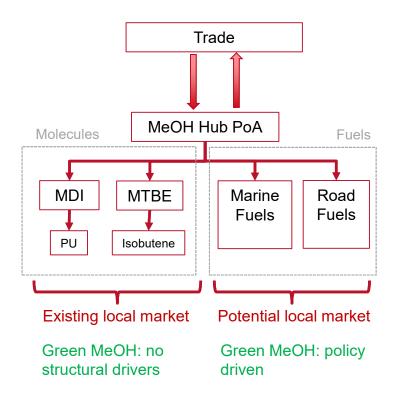




The PoA and Methanol





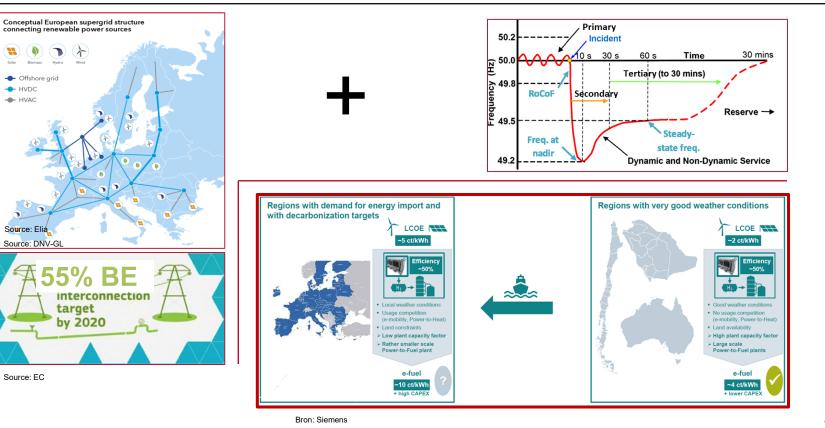


Power-to-Methanol: concept and findings



The concept is 1. about integrating RE in fuels and feedstock through flexible operation, NOT base load electrolytic hydrogen production

European Hydrogen economy The two paths





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- HVDC

- HVAC

5

Power-to-Methanol: concept and findings



The **concept** is 1. about integrating RE in fuels and feedstock through flexible operation,

NOT base load electrolytic hydrogen production

- 2. about recycling CO2 from unavoidable point sources (and leaving fossil down under per direct)
- 3. about producing a multi purpose liquid hydrogen carrier

The goal is to seek multiple business cases in order to reach economic viability

- → partial import to amortise the flexible electrolysis operations (synthesis stability), to create hydrogen input redundancy (production continuity) and avoidance of H2 buffering: fatal hydrogen now, renewable import in the future
- \rightarrow ruling in between flex value and MeOH value, with commodity MeOH as a floor
- \rightarrow hydrogen as a possible intermediate output (synthesis inavailability)

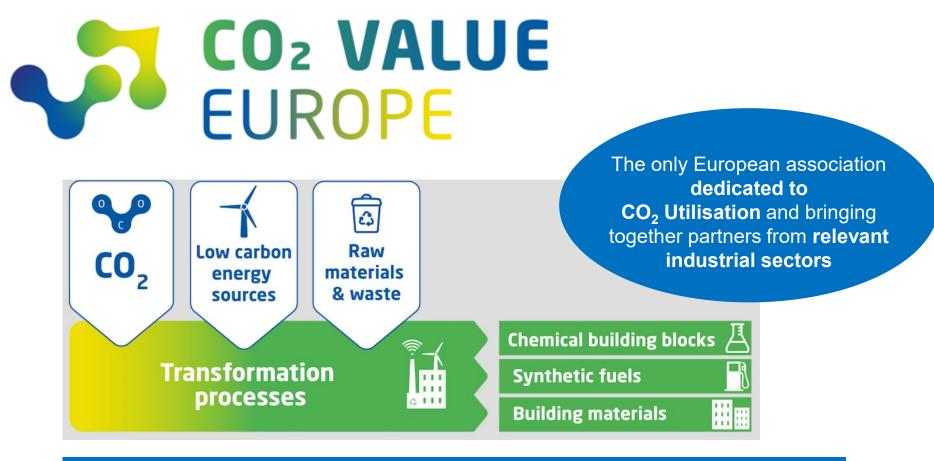
The **status** is the drafting of a partnership agreement amongst 8 cooperating industrial, government and knowledge institute parties, bringing in capital, know how, network

Power-to-Methanol: concept and findings



Market for low impact methanol – willingness to pay (a premium)

- > Main market is fuel, being shaped by the RED:
 - Current RED (ILUC amendements) creates an opening for Advanced Fuels, but very limited timespan (RED II is being finalised);
 - RED II draft confirms the shift to advanced fuels including refunobio's and carbon recycling fuels, but lots of uncertainties:
 - > Only advanced biofuels get a sub target and are ensured of a market;
 - For grid connected concepts such as ours: delegated act of the EC by the end of 2021 to define the rules of renewable consumption from the grid;
 - > For the carbon recycling fuels (CCU, waste-to): delegated act EC 2021
- > Sensitivity from chemical consumers slowly growing, but ETS providing little push towards CCU



Multinational Companies, SMEs, Regional Clusters, Research Institutions, Universities

