

Bankability of Green Hydrogen

The 2nd Annual Powerfuels Conference

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Rabobank ranks 1st of all ESG rated diversified banks in the world



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Bankability of hydrogen: do we have a business case?

Capital stack

Mezzanine Debt

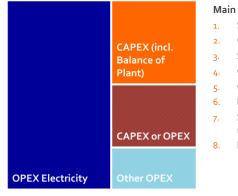
Senior Debt

Risk/Return



Typical breakdown of LCOH (1MW-scale PEM-tech)

Bankability, risk allocation & mitigation



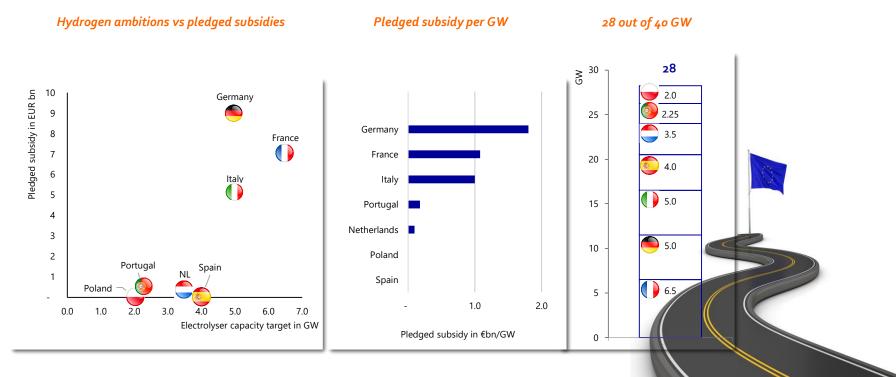
Main cost determinants: Subsidies OPEX: electricity price System CAPEX CO₂ price in EU-ETS Operational hours Project lifetime Stack degradation & replacement Discount rate and ROCE



Source: TNO-DNV GL; RaboResearch

Do EU Members put their money where their mouth is?





Source: National governments, RaboResearch

RaboResearch

Financial, regulatory and political support is necessary

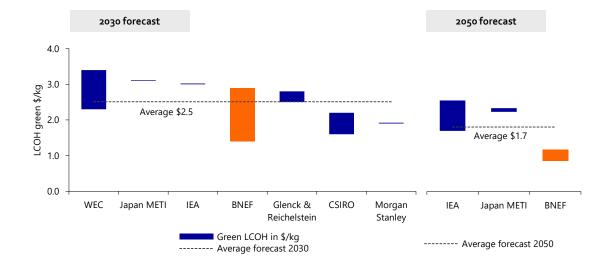


Synchronised EU-wide legislation is needed LCOH is not competitive 8 Harmonised definitions Short legislative 6 procedures LCOH in \$/kg GoOs & certification system **Regulatory sandboxes** FU-wide harmonised Use FU FTS and CBAM 2 regulation EU Taxonomy 0 Pricing framework Renewables Grev Blue

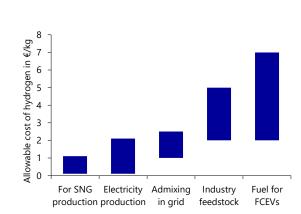
Source: IEA, Hydrogen production costs by production source, 2018, IEA, Paris https://www.iea.org/data-and-statistics/charts/hydrogen-production-costs-by-production-source-2018; IEA, Hydrogen production costs using natural gas in selected regions, 2018, IEA, Paris https://www.iea.org/data-and-statistics/charts/hydrogen-production-costs-by-production-source-2018; IEA, Hydrogen production costs using natural gas in selected regions, 2018, IEA, Paris https://www.iea.org/data-and-statistics/charts/hydrogen-production-costs-by-production-source-2018; IEA, Hydrogen production costs using natural gas in selected regions, 2018, IEA, Paris https://www.iea.org/data-and-statistics/charts/hydrogen-production-costs-by-production-source-2018; IEA, Hydrogen production costs using natural gas in selected regions, 2018, IEA, Paris https://www.iea.org/data-and-statistics/charts/hydrogen-production-costs-using-natural-gas-in-selected-regions-2018-2; EC, RaboResearch

Source: BNEF; HyUnder; RaboResearch

Forecast of the LCOH/kg of green hydrogen in 2030 and 2050



Different uses allow for different costs









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