

# Hydrogen Europe

Why and how communicate the benefits of hydrogen?

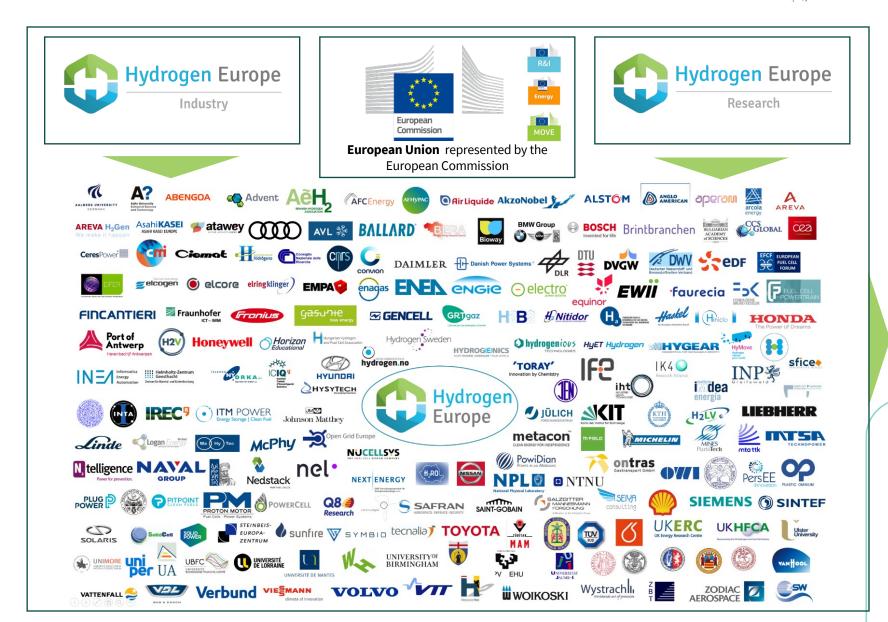
- 12<sup>th</sup> December 2023, Tallinn

# **Clean Hydrogen Joint Undertaking**









A portfolio of clean,
efficient and
competitive solutions
based on fuel cells and
hydrogen technologies
in energy and
transport

# 7 roles of hydrogen

SOURCE: Hydrogen Council



### Enable the renewable energy system ------> Decarbonize end uses

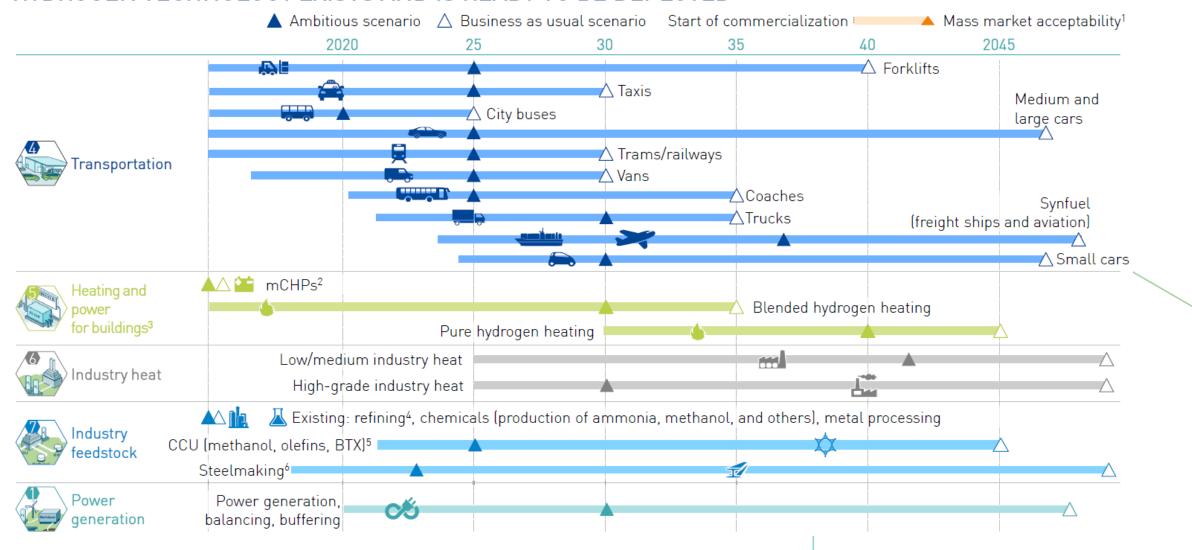
Help decarbonize Distribute Enable large-scale transportation energy across renewables sectors and integration and regions power generation Help decarbonize industrial energy use Help decarbonize building heat and power Act as a buffer to increase Serve as renewable system resilience feedstock: steel, refineries, chemicals

# **Hydrogen technologies**





#### HYDROGEN TECHNOLOGY EXISTS AND IS READY TO BE DEPLOYED

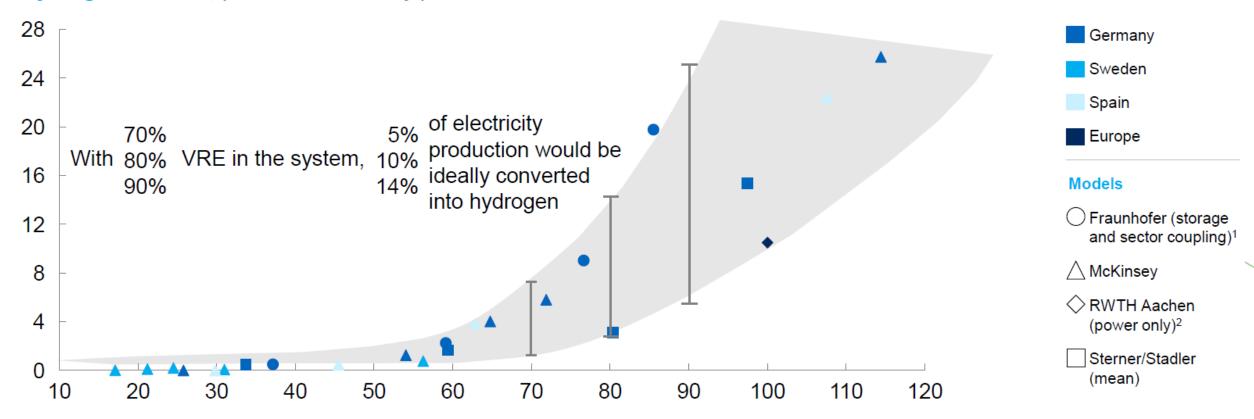


# In high electrification scenario, large scale RES curtailment is UNAVOIDABLE without hydrogen





#### **Hydrogen demand**, percent of electricity production



Variable renewable energy, percent of electricity demand

<sup>1</sup> Least-cost modeling to achieve 2-degree scenario in Germany in 2050 in hour-by-hour simulation of power generation and demand; assumptions: no regional distribution issues (would increase hydrogen pathway), no change in energy imports and exports

<sup>2</sup> Simulation of storage requirements for 100% European RES; only power sector storage considered (lower bound for hydrogen pathway)

# **BSR HyAirports**







#### **Project partnership: 16 project partner and 24 associated organisations**



<sup>1)</sup> Further project partner in Latvia: SIA Gulfstream Oil, Latvia University of Life Sciences and Technologies

Associated organisations

No.	Organisation (English)	Organisation (Original)	Country
AO 1	Everfuel A/S	Everfuel A/S	■DK
AO 2	Wielkopolska Hydrogen Platform	Wielkopolska Platforma Wodorowa	■PL
AO 3	Aviasabiedriba Liepaja Ltd. (Liepaja Airport)	SIA "Aviasabiedrība "Liepāja""	<b>=</b> LV
AO 4	Swedish Transport Administration	Trafikverket	<b>≡</b> SE
AO 5	Airport Regions Council	Airport Regions Council	<b>■</b> BE
AO 6	VITERA OY	VITERA OY	⊕FI
AO 7	Ministry of Transport and Communication	Liikenne- ja viestintäministeriö	⊕FI
AO 8	Ministry of Transport Republic of Latvia	Satiksmes ministrija	<b>≡</b> LV
AO 9	Civil Aviation Agency	Valsts aģentūra "Civilās aviācijas aģentūra"	=LV
AO 10	Estonian Aviation Academy	Eesti Lennuakadeemia	<b>≡</b> EE
AO 11	Estonian Association of Hydrogen Technologies	Eesti Vesinikutehnoloogiate Ühing	■ EE
AO 12	Non-profit association Estonian Aviation Cluster	MTÜ Eesti Lennundusklaster	■ EE
AO 13	Estonian Transport Administration	Transpordiamet	■ EE
AO 14	University of Tartu	Tartu Ülikool	■ EE
AO 15	Ministry of Economic Affairs, Transport, Employment, Technology and Tourism Schleswig-Holstein	Ministerium für Wirtschaft, Verkehr, Arbeit, Technologie und Tourismus des Landes Schleswig-Holstein	■DE
AO 16	Ministry of Environmental Protection and Regional Development	Vides Aizsardzības un Reģionālās Attīstības Ministrija	<b>=</b> LV
AO 17	Hamburg Aviation	Hamburg Aviation e.V.	<b>■</b> DE
AO 18	ZeroAvia Inc.	ZeroAvia Inc.	Other
AO 19	Estonian Air Navigation Services	Lennuliiklusteeninduse Aktsiaselts	■ EE
AO 20	Diamond Sky	Diamond Sky OÜ	■ EE
AO 21	ZAL Center of Applied Aeronautical Research	ZAL Zentrum für Angewandte Luftfahrtforschung GmbH	■ DE
AO 22	Ministry of Economy and Innovation	Behörde für Wirtschaft und Innovation Hamburg	■ DE
AO 23	Air Baltic Corporation AS	Air Baltic Corporation AS	<b>≡</b> LV
AO 24	Regional Jet OÜ	Regional Jet OÜ	■ EE

## Clean Hydrogen Joint Undertaking

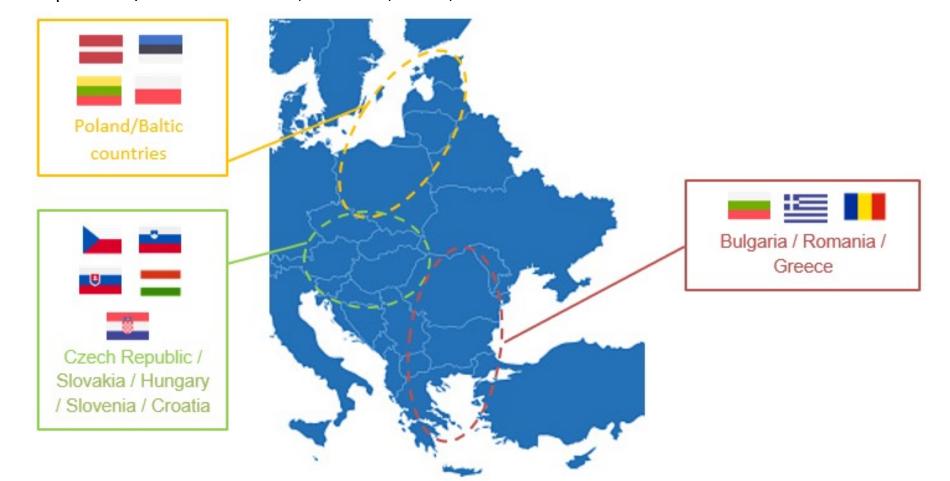






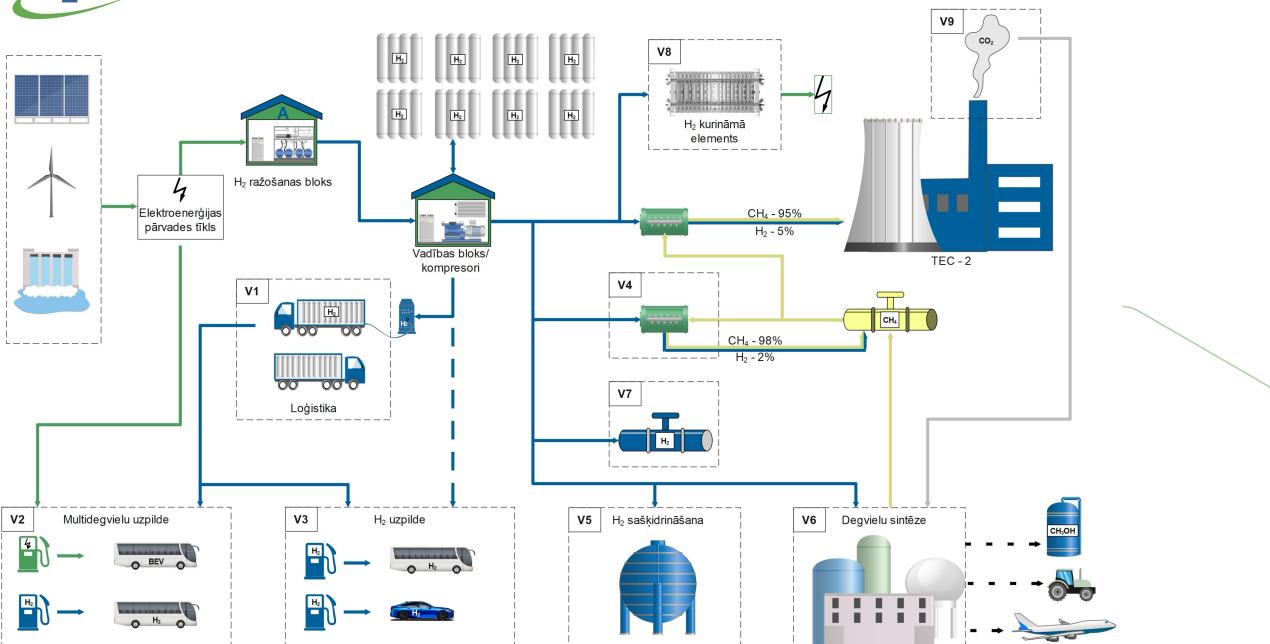
JIVE 2 CEE Bus Roadshow aims to organize FCE bus test drives on public transport routes across cities interested in the technology but cannot access the infrastructures due to their location. The objective is to have the relevant local actors test a demonstration bus to build regional capacity to deploy fuel cell bus technology to expand the sector in the short/medium term.

- 1<sup>st</sup> Roadshow mid-November till end of January Countries Slovenia, Croatia, Czech Republic, Slovakia, Hungary
- 2<sup>nd</sup> Roadshow September / October Poland, Lithuania, Latvia, Estonia











# Thank You



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