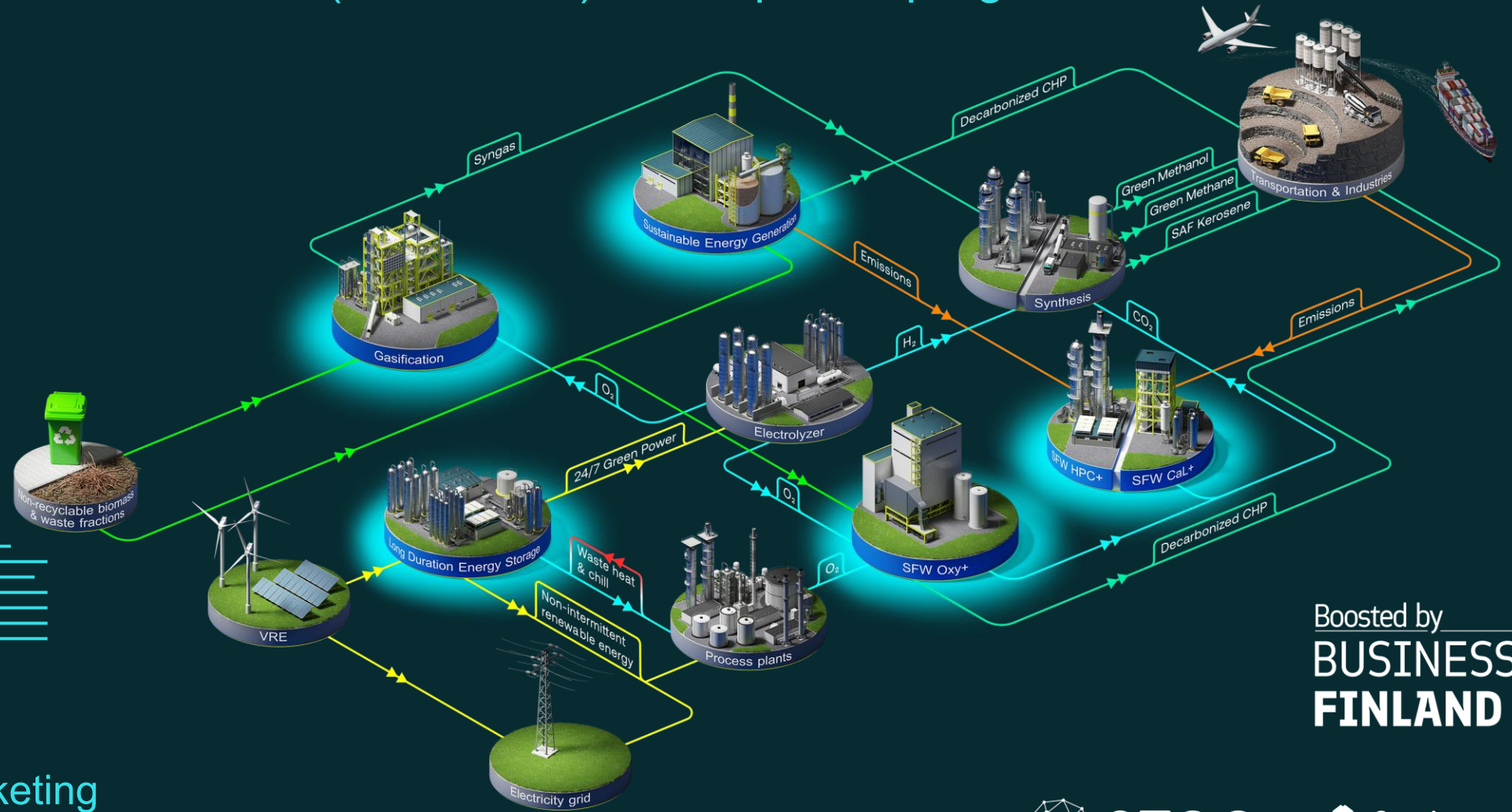


Building a Net Zero Energy Ecosystem

The Sumitomo SHI-FW Veturi (locomotive) development program



Stefan Nygård
 VP Strategy & Marketing
 NZEE Program Lead

Booster by
**BUSINESS
 FINLAND**



800+

Successful references worldwide

1800

Employees across the globe

20+

Locations around the world

130+

Years of experience

Sumitomo Heavy Industries

7B€

2024 revenue

Sumitomo SHI FW (SFW) - a Finnish company owned by Sumitomo Heavy Industries

SFW's response to decarbonization and climate change mitigation

Helping our customers reach decarbonization goals



Energy Generation

Energy from biomass or waste for carbon neutral or carbon negative heat & power applications



Carbon Capture

Decarbonization of heavy industries



Sustainable Fuels

Solid biomass/waste into liquid biofuels & chemicals



Energy Storage

Long Duration - Enabling net zero grid systems



Services

Life cycle solutions enabling high plant availability and efficiency



NZEE program aims to solve decarbonization challenges by collaboratively developing technological solutions and integrating them with target sectors

Grand Challenge

Reaching 100% reliable and carbon neutral energy supply for 2050

Mission

Develop integrated decarbonization solutions to fill in the missing links of the Net Zero Energy Ecosystem to make it thrive

Key features

Develop novel technologies

New business models

Integration of systems

Transformation into solutions provider

NZEE objectives

Activate 50+ ecosystem partner companies and institutions

Increase RDI investments by 50 MEUR (+ Ecosystem)

Develop integrated solutions to solve decarbonization challenges

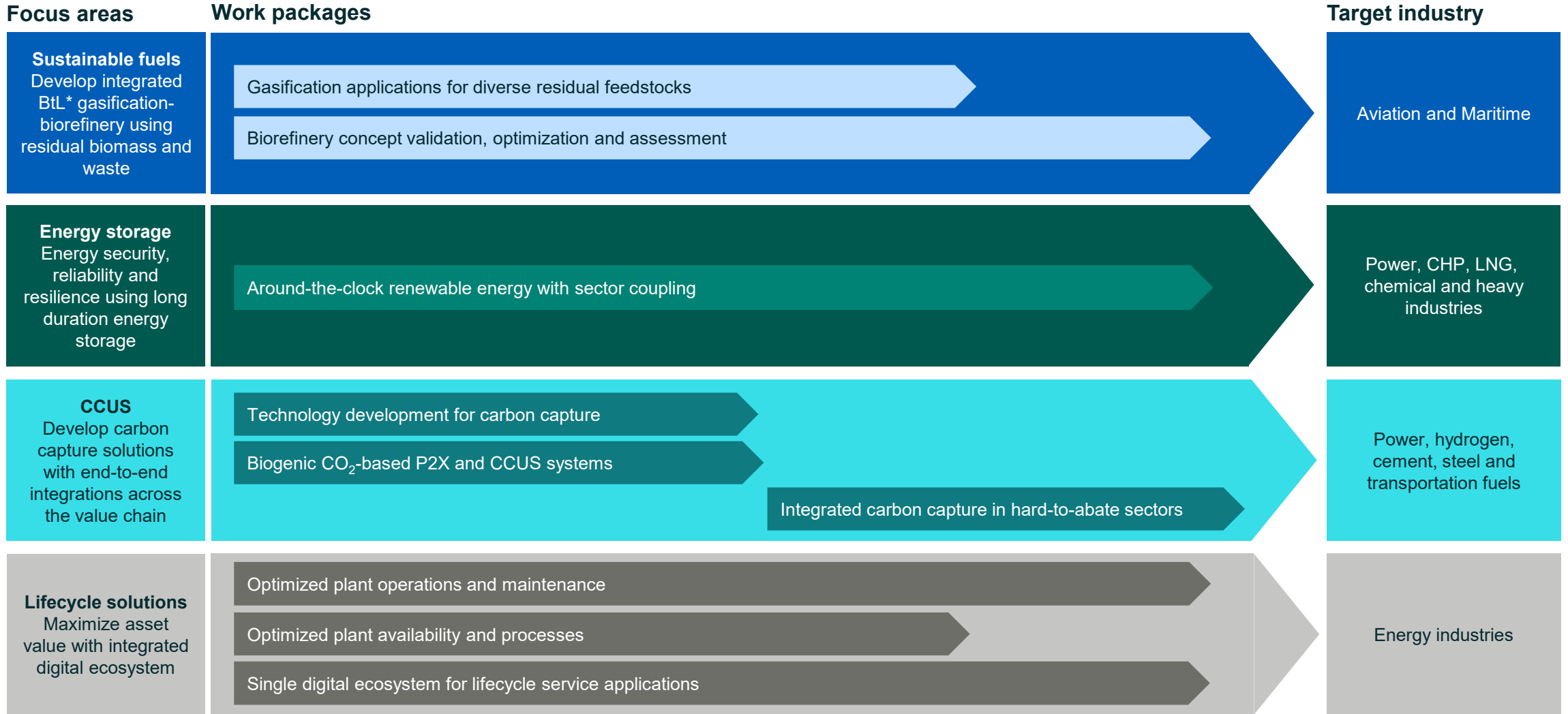
Drive employment and growth of Finnish exports

Funding

Business Finland Veturi program
30 MEUR financial support (SFW + ecosystem)



Net Zero Energy Ecosystem Roadmap



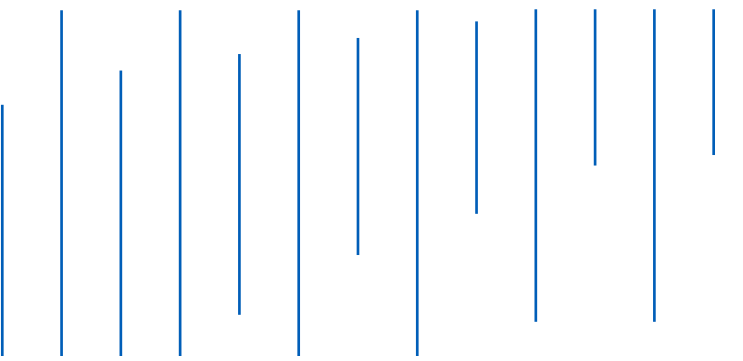
* BtL = Biomass to Liquids



NZEE program progress

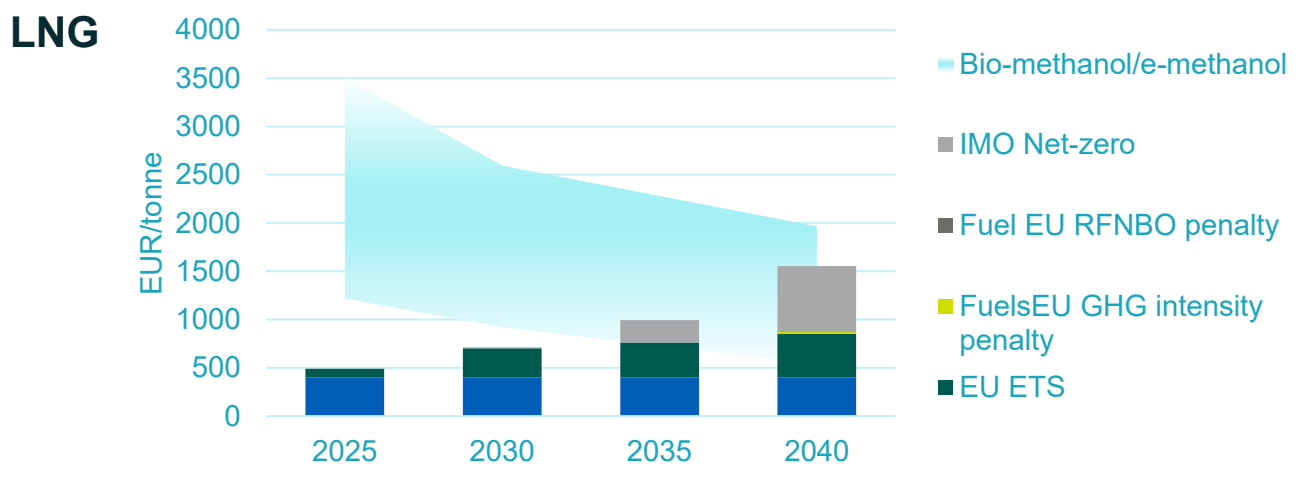
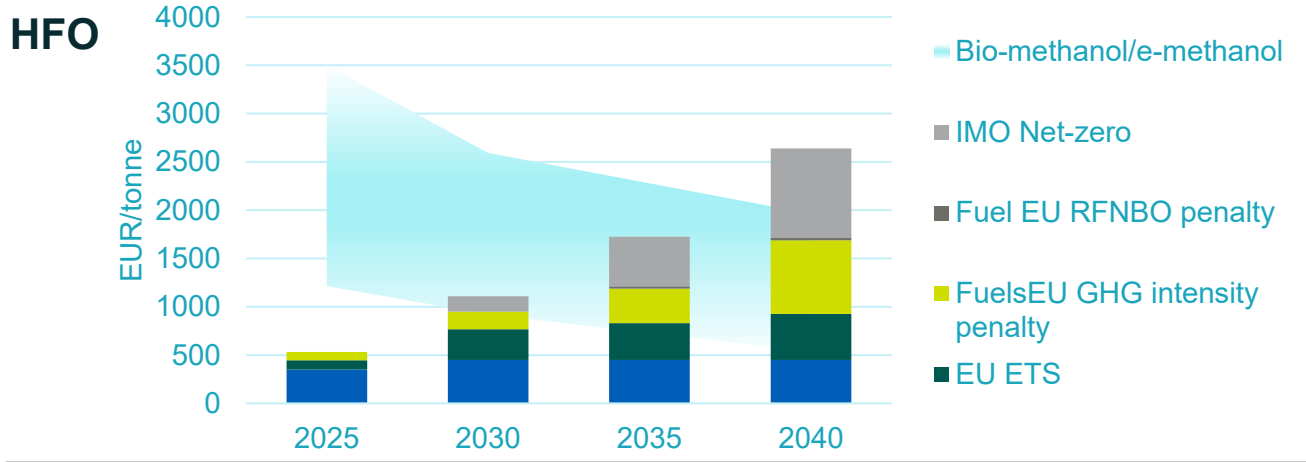
Status after first 3 quarters

- Discussions ongoing with >80 companies and research institutes
- >20 ecosystem members engaged
- Over a dozen projects under development
- 5 project applications submitted
- Several project applications to be submitted in 2026, including biofuel project and oxy-based e-fuels project



Cost parity of sustainable maritime fuels

Bio-methanol and e-methanol estimated to be reached during 2030-2040



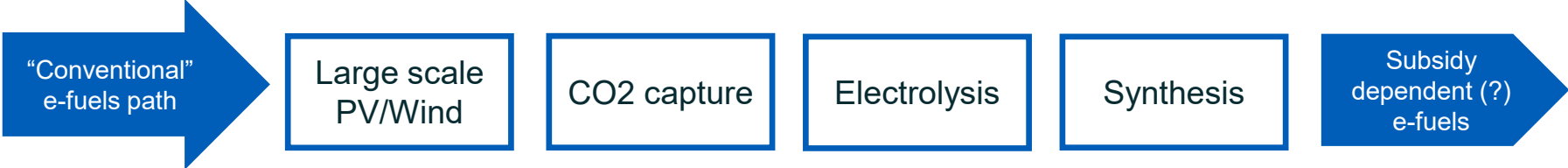
Some take-aways

- Emission penalties are key drivers, but some are still uncertain beyond 2030
- Additional subsidies still needed for most projects
- NZEE program aims to achieve cost parity by 2030 for both biofuels and e-fuels without need for additional subsidies

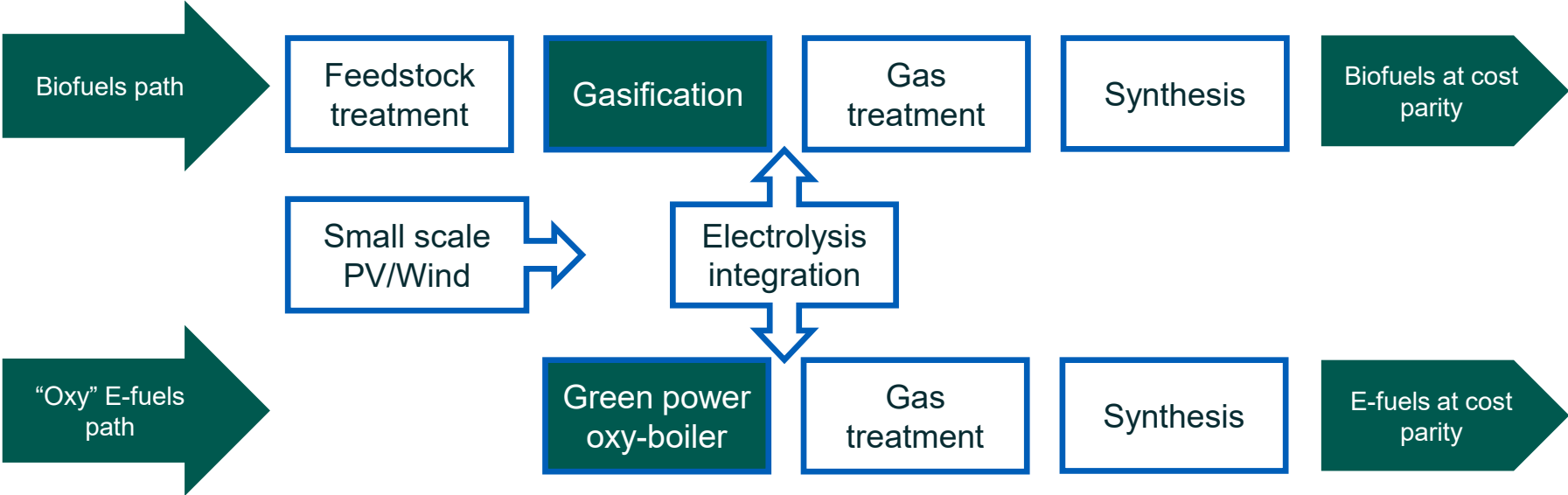
Sources: S&P Global, BNEF, Argus



Sustainable fuels pathways



NZEE program
Sustainable fuels focus



Thank you!

To join the NZEE program or more information,
please visit us at **Stand: E152**



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