Building a Net Zero Energy Ecosystem

The SFW Veturi (locomotive) development program



Sumitomo SHI FW Stefan Nygård Vice President Strategy & Marketing



+008

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 syngas, biofuels & chemicals

Energy Storage

Long Duration - Enabling net zero grid systems

Services

Life cycle solutions enabling high plant availability and efficiency



NZEE project aims to solve the decarbonization challenge by collaboratively developing technological solutions and integrating them for the targeted sectors

Grand Challenge

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

Integration of systems

New business models

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

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



Net Zero Energy Ecosystem Roadmap

Work packages **Target industry** Focus areas Sustainable fuels **Develop** integrated Gasification applications for diverse residual feedstocks BtL* gasification-**Aviation and Maritime** biorefinery using Biorefinery concept validation, optimization and assessment residual biomass and waste **Energy storage** Energy security, Power, CHP, LNG, reliability and chemical and heavy Around-the-clock renewable energy with sector coupling resilience using long industries duration energy storage **CCUS** Technology development for carbon capture Develop carbon Power, hydrogen, capture solutions cement, steel and Biogenic CO₂-based P2X and CCUS systems with end-to-end transportation fuels integrations across Integrated carbon capture in hard-to-abate sectors the value chain Optimized plant operations and maintenance Lifecycle solutions Maximize asset Optimized plant availability and processes **Energy industries** value with integrated digital ecosystem Single digital ecosystem for lifecycle service applications



^{*} BtL = Biomass to Liquids

Thank you

www.shi-fw.com



