

LNG bunkering business and our pathway to carbon neutrality

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Yokohama, Japan

About us | Creating value for a Sustainable Future



Upstream & LNG Investments

Investment in 4 countries



Power Generation

Global 7.1GW of power generation, mainly gas-fired power and renewables



LNG Procurement & Transportation

Procure 10mtpa+ of LNG
10 LNG Carriers



Gas Transmission & Distribution

63,800km of pipelines in Japan



LNG Receiving Terminals

Terminals in Senboku and Himeji



Gas Marketing

Commercial, Industrial & Residential



LNG Bunkering



Bunkering | LNG for the Maritime Industry

Osaka Gas offers all types of LNG bunkering in Japan

Ship-to-Ship LNG bunkering to be launched



Commencement of Senboku and Himeji LNG Terminal

- A total of over 8000 LNG carriers received so far (Senboku + Himeji)

Launch of Truck-to-Ship LNG bunkering service

- Supplying to the LNG-fueled tag boat 'Ishin'
- Over 100 Truck-to-Ship bunkering operations conducted to date

Launch of Port-to-Ship LNG bunkering service

- First Gas Utility company to conduct Port-to-Ship bunkering in Japan
- LNG supplied to bulker 'Verde Heraldo' operated by MOL



Bunkering | Ship-to-Ship LNG bunkering operation

Our LNG bunker vessel is scheduled to start operation from 2026, mainly in the Seto Inland and Osaka Bay area



Shipbuilding in progress
(photo as of October 2025)



- ✓ 4250T Gross Tonnage
- ✓ Type-C LNG tank
- ✓ 3500m³ LNG capacity tank
- ✓ 1000m³/h flow rate
- ✓ Built by Shitanoe shipyard in Oita
- ✓ Operated by NS United Coastal Tanker
- ✓ Financially supported by MLIT (Japanese government)

Bunkering | Our strength

Osaka Gas offers flexible and stable LNG supply to LNG-fueled vessels



Osaka Gas Senboku Terminal



Osaka Gas Himeji Terminal

- ✓ Osaka Gas' LNG handling experience spanning over 50 years+
- ✓ Bunkering vessel operated by NS United Coastal Tanker, with its 20 years+ LNG carrier operation expertise
- ✓ Multiple LNG supply bases : Senboku and Himeji
- ✓ Independent berths for our LNG bunkering service
- ✓ One of the world's largest LNG terminals enabling smooth LNG quantity /quality management for bunkering

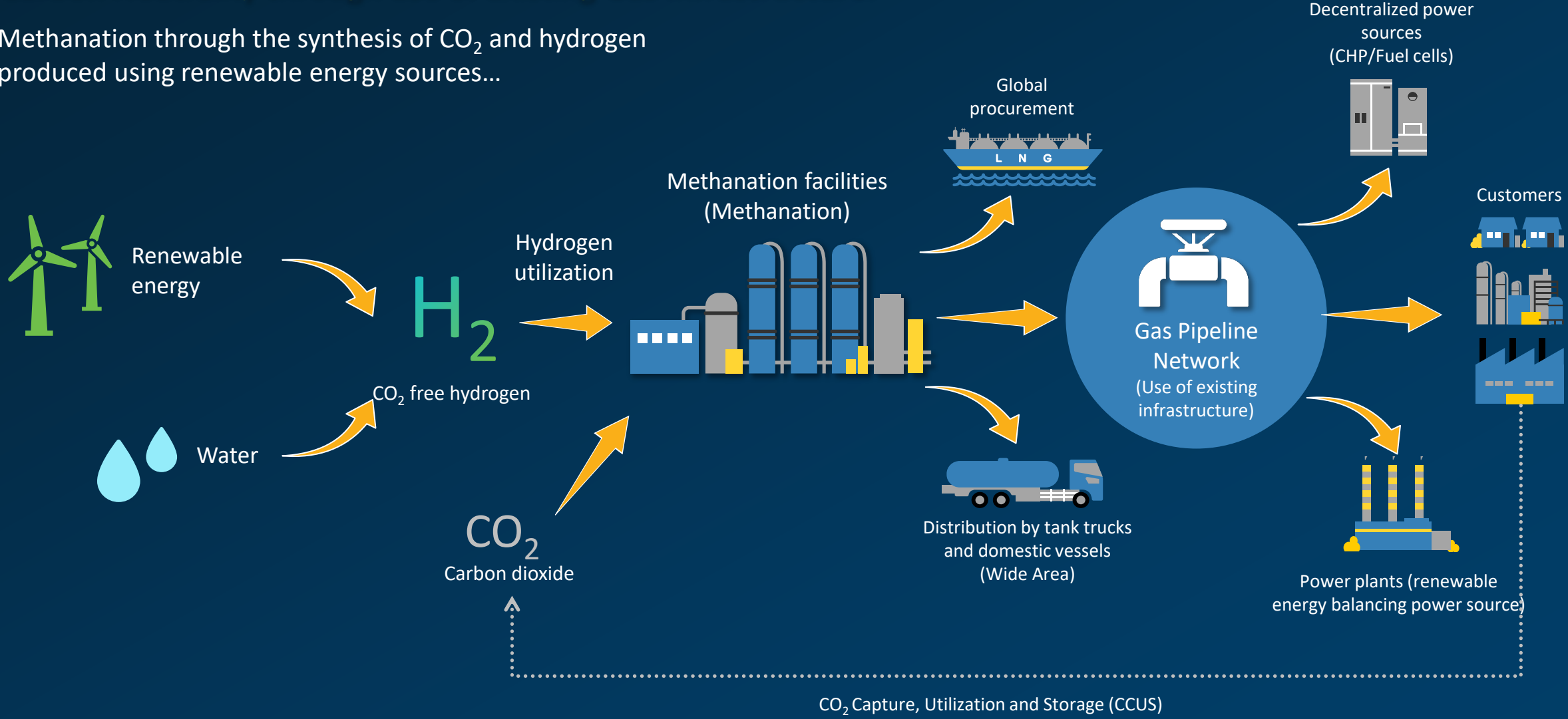
Innovation for carbon neutrality



Innovation | 'e-methane' Value Chain

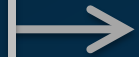
Carbon Neutrality through use of Existing Gas Infrastructure.

Methanation through the synthesis of CO₂ and hydrogen produced using renewable energy sources...



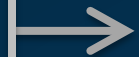
Innovation | e-methane for the Maritime Industry

e-methane has huge potential to curb emissions in the Maritime Industry



Point 1

Existing supply chain (infrastructure and facilities) can be used as-is including LNG fueled vessels



Point 2

Can be supplied simultaneously with natural gas-based LNG



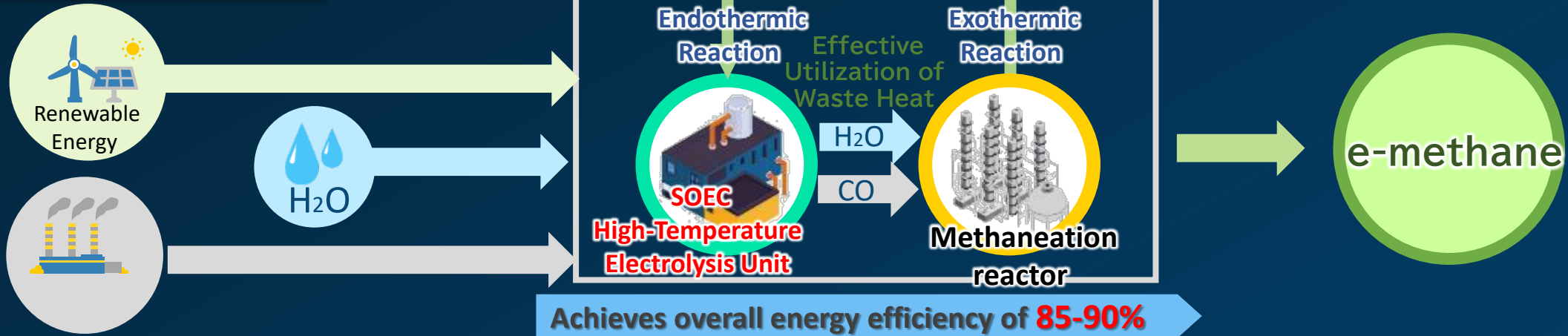
Point 3

Enables a seamless transition from natural gas to the decarbonization of the Maritime Industry

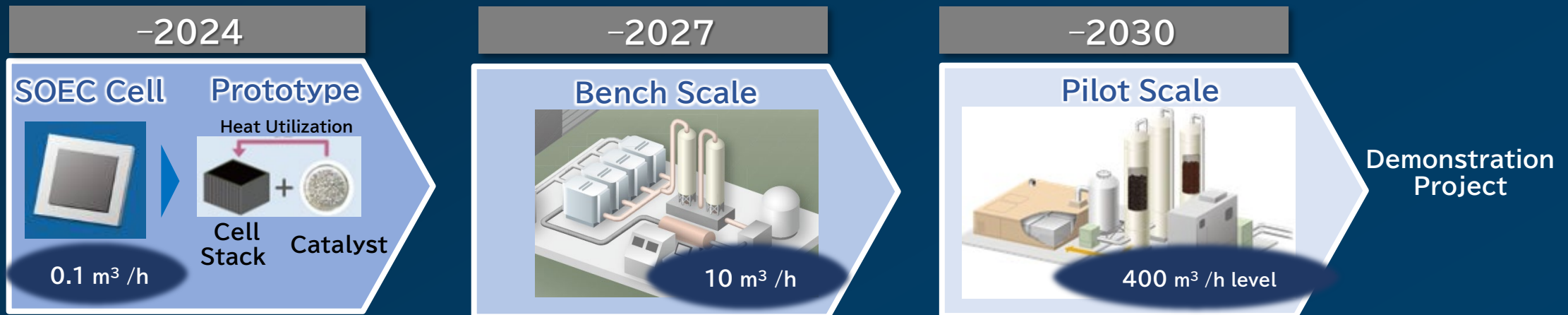
Innovation | SOEC Methanation Technology

Osaka Gas is exploring a more advanced technology to enable e-methane production with higher efficiency

SOEC Methanation process



Timeline



Thank you for your attention

