

Idemitsu's Challenge Toward Carbon Neutrality

(SAF, Biofuel)

15th Jan, 2026

Carbon Neutral Transformation Dept.

Idemitsu Kosan Co.,Ltd.

Toward Carbon Neutral Society

Idemitsu Kosan aims to achieve carbon neutral (CN) and circular society by leveraging our Group's core strength in **"Social Implementation"**

We are committed to fulfilling our responsibility
to support people's lives and
to protect the global environment now and in the future

Chapter 1

Idemitsu's
Direction

Chapter 2

New Priority
Businesses
(SAF, Other Biofuel)

Chapter 3

Conclusion

Idemitsu Overview

As of March 2024

Year Established	1940 Founded in 1911
Employees	14,000 people
Net Sales	8.7 trillion¥ (~6 billion\$)



Petroleum Share in Japan
2nd



Ethylene Production Capacity in Japan
2nd



Lubricants Global share
8th

Petroleum



Basic chemicals



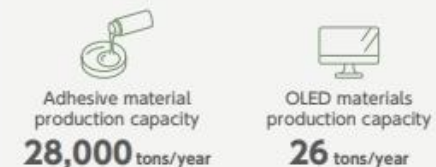
Resources



Power and renewable energy



Functional materials



Chapter 1

Idemitsu's Direction



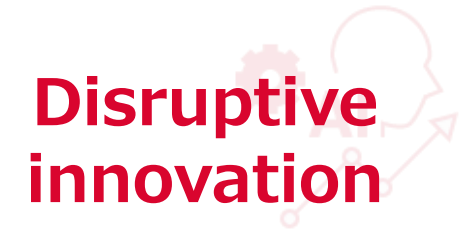
Business Environment for 2050



- Power generation: hydrogen / ammonia mono fuel combustion, fossil fuel with CCS, renewable energy
- Transport: electrification, synthetic fuel, second-gen biofuel (non-edible sources)
- Industry: electrification, hydrogen reduction in ironmaking, etc.



- Biomass-derived materials
- Recycled plastic
- Collection and recycling of rare metals (lithium batteries, solar panels, etc.)



- Negative emissions technology
- CCUS using CO2 as a resource
- Next-gen storage batteries
- Fully autonomous vehicles



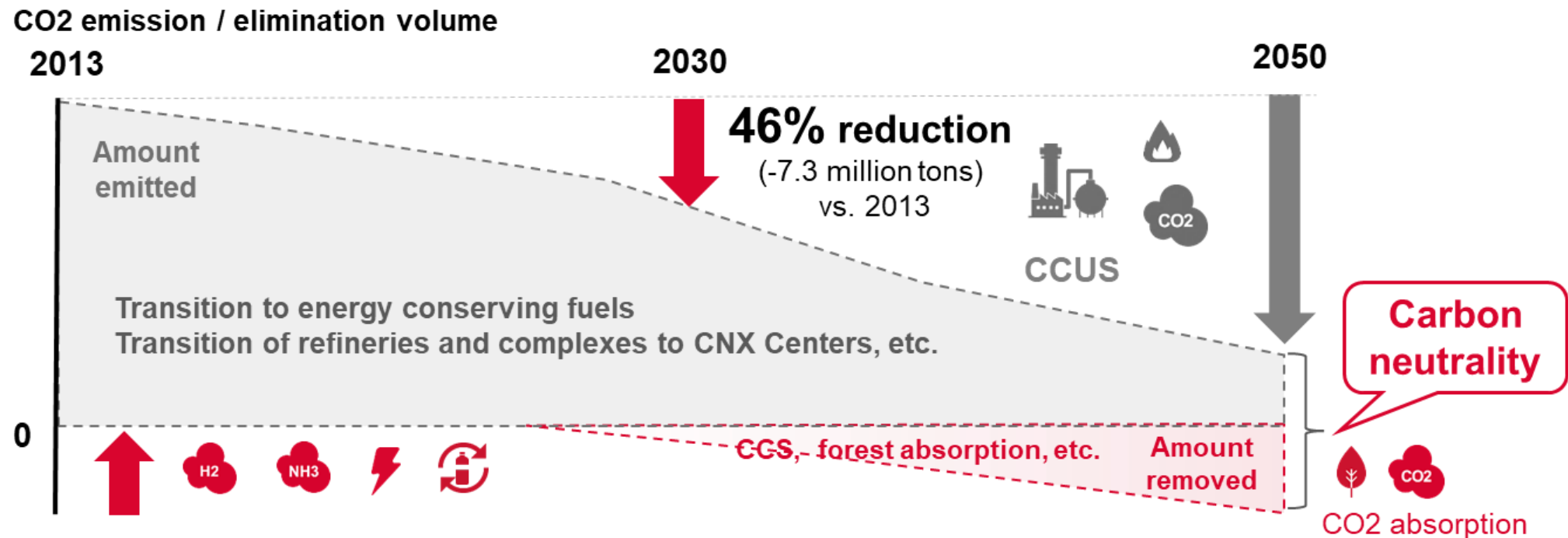
Transition toward CN Energy System and Circular Society are business opportunity for Idemitsu

Roadmap to Carbon Neutral in 2050

Towards a CN society in 2050

- **Achieve CN (=net zero CO2 emissions)** from Idemitsu's own operations (Scope1+2) and pursue CN for the entire supply chain (Scope 3) by providing solutions to businesses and consumers

Emission reduction target for Idemitsu's operations (Scope1+2) by 2030: -46% vs. 2013



Chapter 2

Priority Businesses for CN



SAF (Sustainable Aviation Fuel)

Prioritized Businesses for Energy Transition

- Three Projects to be prioritized through 2030, toward Carbon Neutrality in 2050
- To monetize in the 2030's and beyond, utilizing our existing assets.

Blue ammonia

- ▶ Fuel transition from coal

Ammonia supply

- Procured from US, etc
- Supplying from Tokuyama Complex to consumers

SAF

- ▶ Supply
CORSIA eligible fuels in Japan

*ATJ : Alcohol To Jet
*HEFA : Hydrogenated Esters and Fatty Acids

ATJ* process

- In Chiba Complex

HEFA** process

- In Tokuyama Complex

Other Supply

- From overseas

**Towards
2050**

**Green ammonia
Green hydrogen**

**Biofuel
Biochemicals**

e-methanol

- ▶ Marine fuel
- ▶ Expansion into e-gasoline

Production

- Around FY2030~
- In Hokkaido Refinery

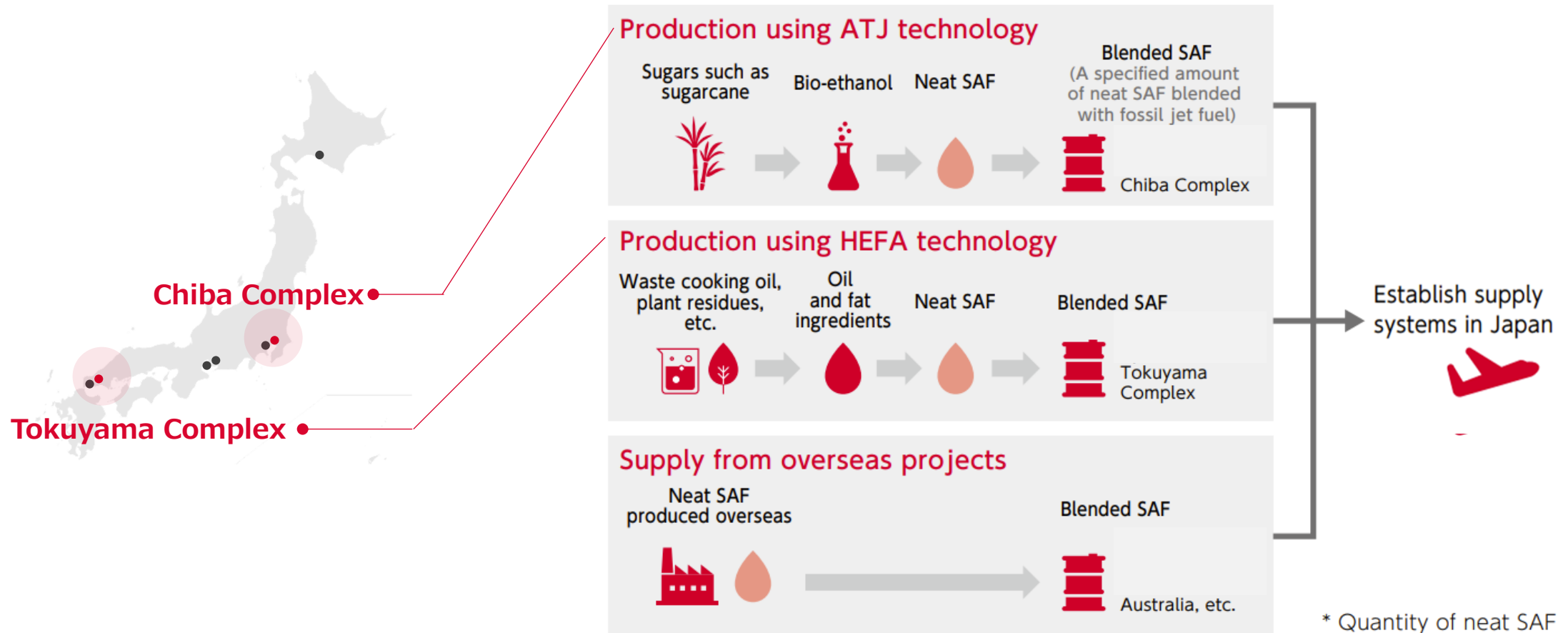
Supply

- Around FY2030~
- Procured from overseas
- Partnering with HIF

**e-fuel
e-chemicals**

SAF (Sustainable Aviation Fuel) : Business strategy

- Target of Japanese government and airlines: Replacing 10% of usage with SAF by 2030
- To contribute to above, building a supply system of **SAF around 2030**



SAF (Sustainable Aviation Fuel) : Business strategy

Key Strategic Points

- Expected demand for CORSIA-qualified SAF to achieve **ICAO CO₂ reduction targets**
- 2 processes for **supply stability**
 - HEFA - established worldwide
 - ATJ - accessible feedstock
- Idemitsu is advancing various efforts to **secure raw materials with reasonable cost** for stable supply of SAF including procuring of ethanol from Brazil and the industrial development of Pongamia, a non-edible legume tree species.



"Pongamia", tree, seeds and oil

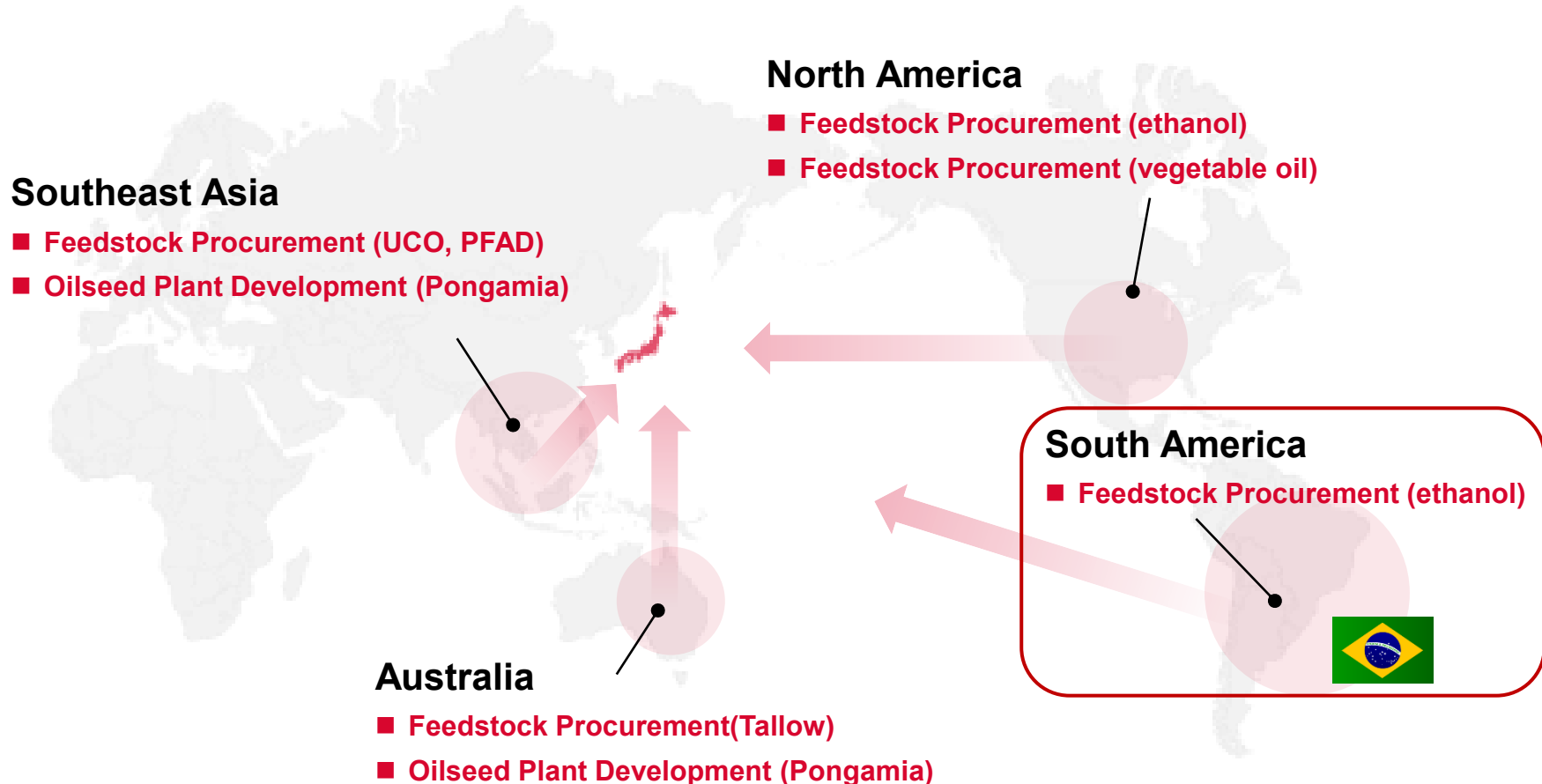
Started trial afforestation in Queensland, Australia, with partner companies (Jan,2025~)

⇒ For CO₂ absorption, SAF, Biopellet, Feed

SAF (Sustainable Aviation Fuel) : Examples of Initiatives

■ For stable supply of SAF

Most of the feedstock procurement depends on overseas,
and we are trying to establish a stable and low-cost supply chain with various countries.



SAF (Sustainable Aviation Fuel) : Ethanol Procurement

■ Feedstock for SAF

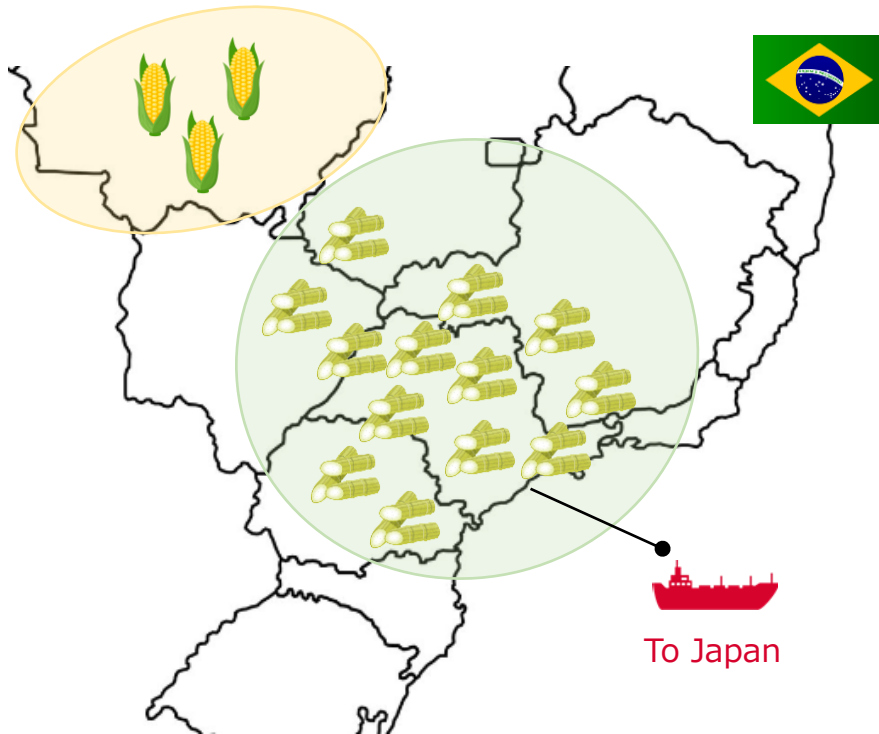
Brazilian ethanol is an excellent low-carbon feedstock of the world under the CORSIA.

We are studying Brazilian Ethanol as ATJ feedstock.

■ Brazilian ethanol producing Area

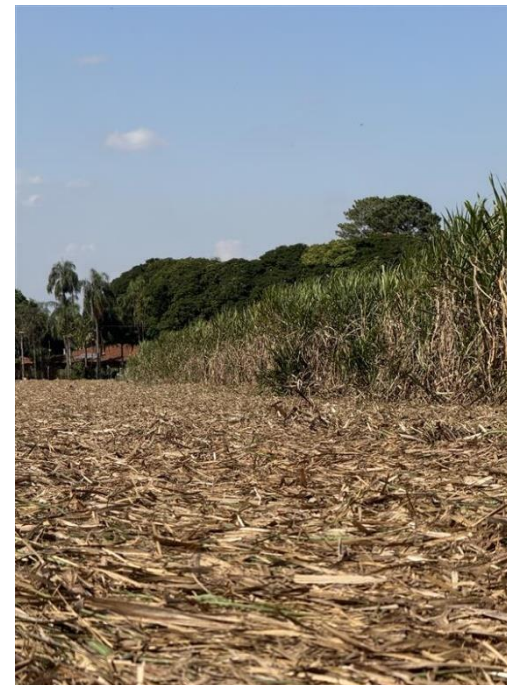
Sugarcane ethanol is produced in São Paulo area

Corn ethanol is produced in Mato Grosso area



■ On-site visiting sugarcane farm

【Sugarcane Farm】



【Before pressing】



Other Biofuel Activity

Other Biofuel Activity : Biodiesel/fuel demonstration

- After the **successful demonstration supply of FAME and HVO**, we are **working to stimulate demand in Japan** and secure buyers for the by-products of SAF production in the future.

【June. 2024 / FAME to Construction site】



【Dec. 2024 / HVO to Construction site】

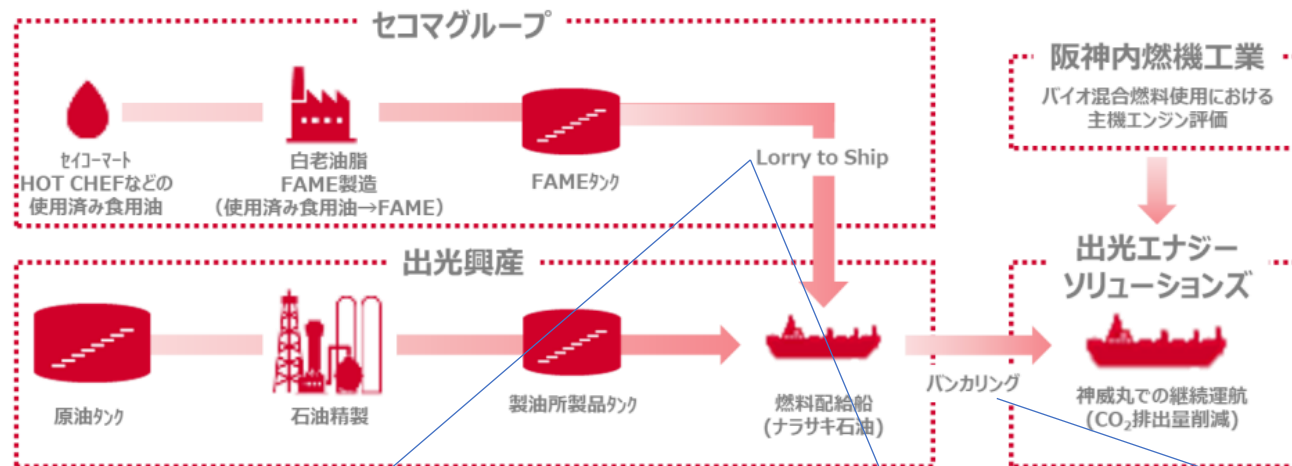


【Mar. 2025 / HVO to Passenger Bus】



Other Biofuel Activity : Biofuel demonstration

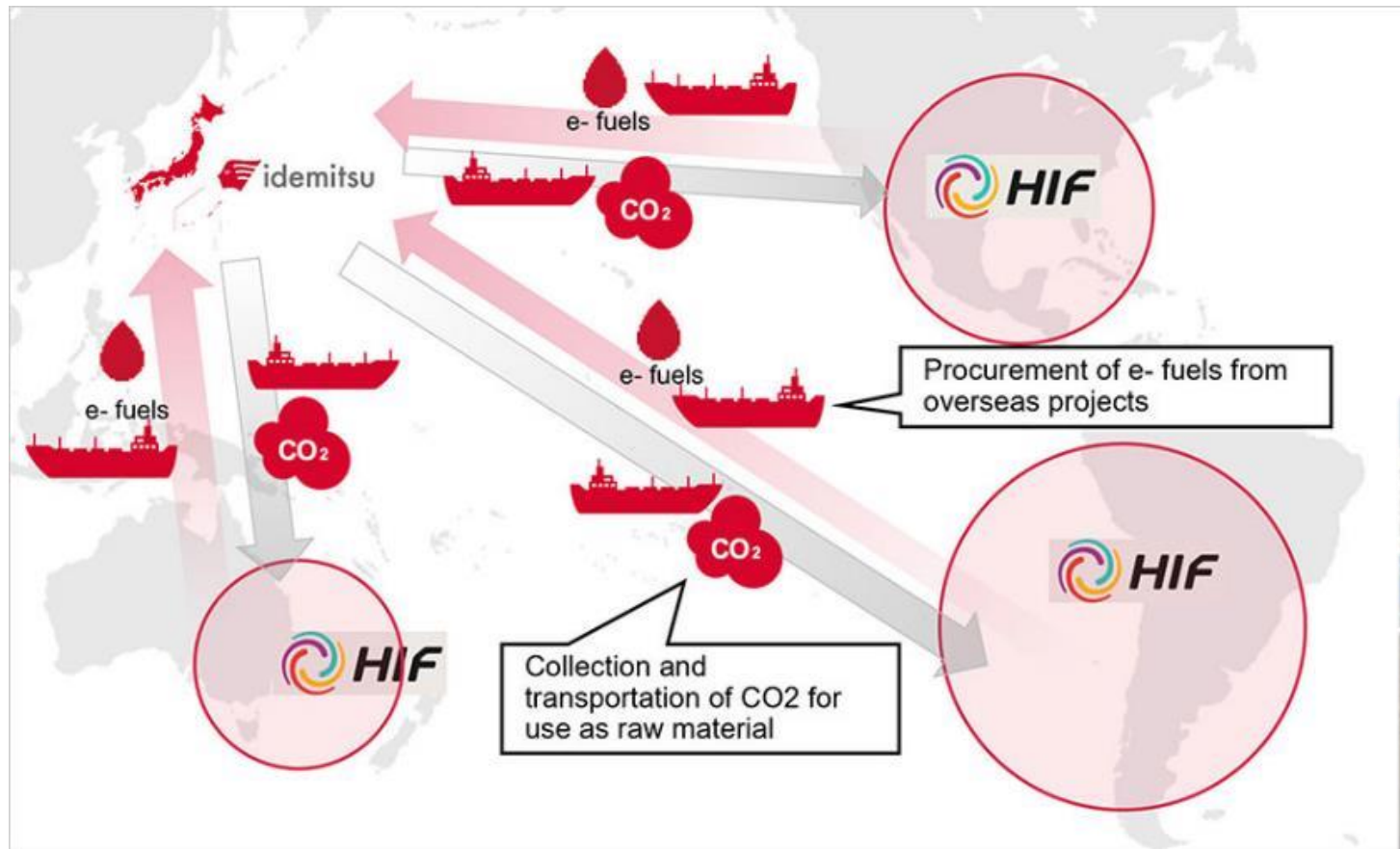
- From September 2023 to June 2024, a 10-month demonstration of B24 fuel using Lorry to Ship and Ship to Ship methods is being conducted in Hokkaido.
- The operational tests have confirmed that it can be used in the same manner as existing fuels.
- To meet the biofuel needs of both domestic and international shipping, the development of domestic supply facilities is currently under consideration.



e-methanol Initiatives

■ Investment in HIF Global

Promoting the establishment of supply chains for e-methanol in Japan and overseas



Chapter 3

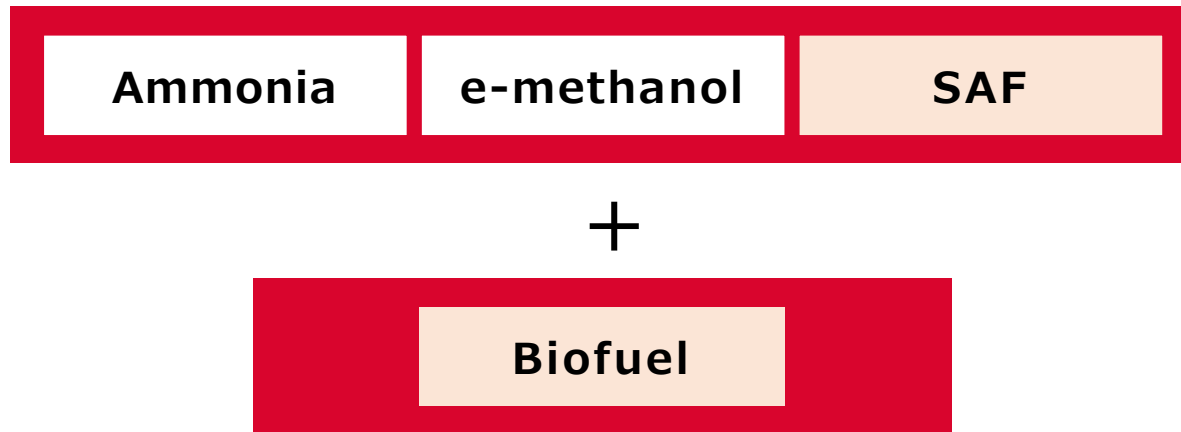
Conclusion



Conclusion

We promote decarbonization as a model not only for Japan but for Asia and so on, aiming to lead the region's energy transition efforts.

New Priority Businesses





Appendix

Management Philosophy and Vision

Management Philosophy

Truly inspired

The Origin of Management

人間尊重

Vision for 2050

Shaping Change

We will fulfill our

Responsibility to support people and their daily live

Responsibility to protect the global environment now and in the future

through the implementation of:

- Energy one step ahead
- Diverse resource conservation / circulation solutions
- Smart Yorozuya* (*one-stop shop)

Idemitsu Network

■ Manufacturing Bases in Japan

■ Overseas Group Companies

