



Towngas

智慧燃展未來
Smart Energy for a Brighter Future

Develop Green Energy to Achieve Carbon Neutrality

Ir Jack Li

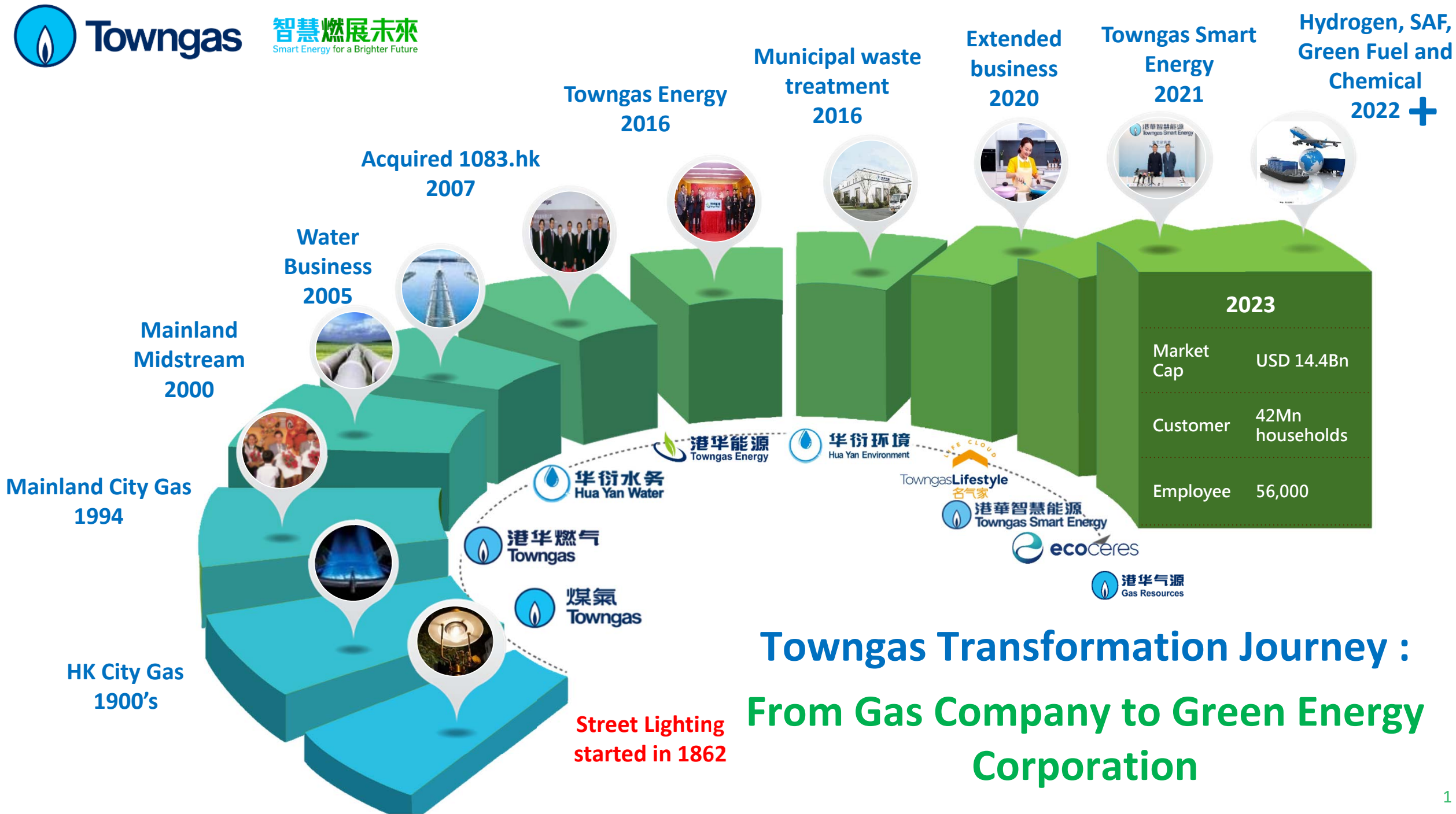
Assistant Vice President – Business Development

Sustainable Green Energy Hub

The Hong Kong & China Gas Co., Ltd.

17 Feb 2025





Towngas Transformation Journey : From Gas Company to Green Energy Corporation

Street Lighting started in 1862



Land
Hydrogen



Maritime
Green Methanol



Aviation
SAF/HVO



Towngas is one of the Leading Green Fuel Suppliers



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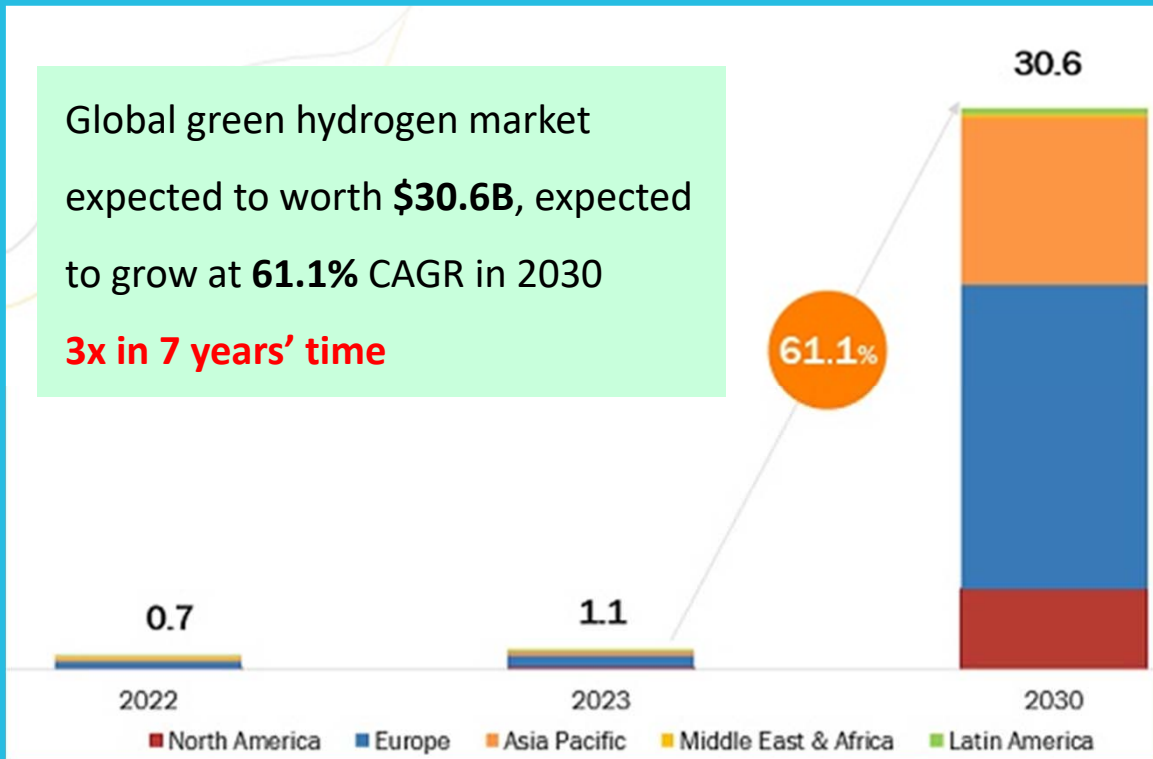
Hydrogen



Global Demand

Rising government support, infrastructure investments, and fuel cell vehicles driving recent growth

Increasing demand for green hydrogen in **transportation** sector



Future supply of green hydrogen is mainly from solar farm in **Inner Mongolia**

< 1%

Future price of green hydrogen is expected to range from **USD 0.8 to \$1.5 /kg** by 2050

Global Supply

Current green hydrogen costs **USD 3-8/kg** including delivery and fueling

Edges to Develop Hydrogen Economy in Hong Kong

High concentration of hydrogen in Town Gas

Hydrogen	49%
Methane	29%
Carbon Dioxide	18%
Others	4%

Well established >3,700km Underground Network along decades



>162 years of experience and excellent operation records

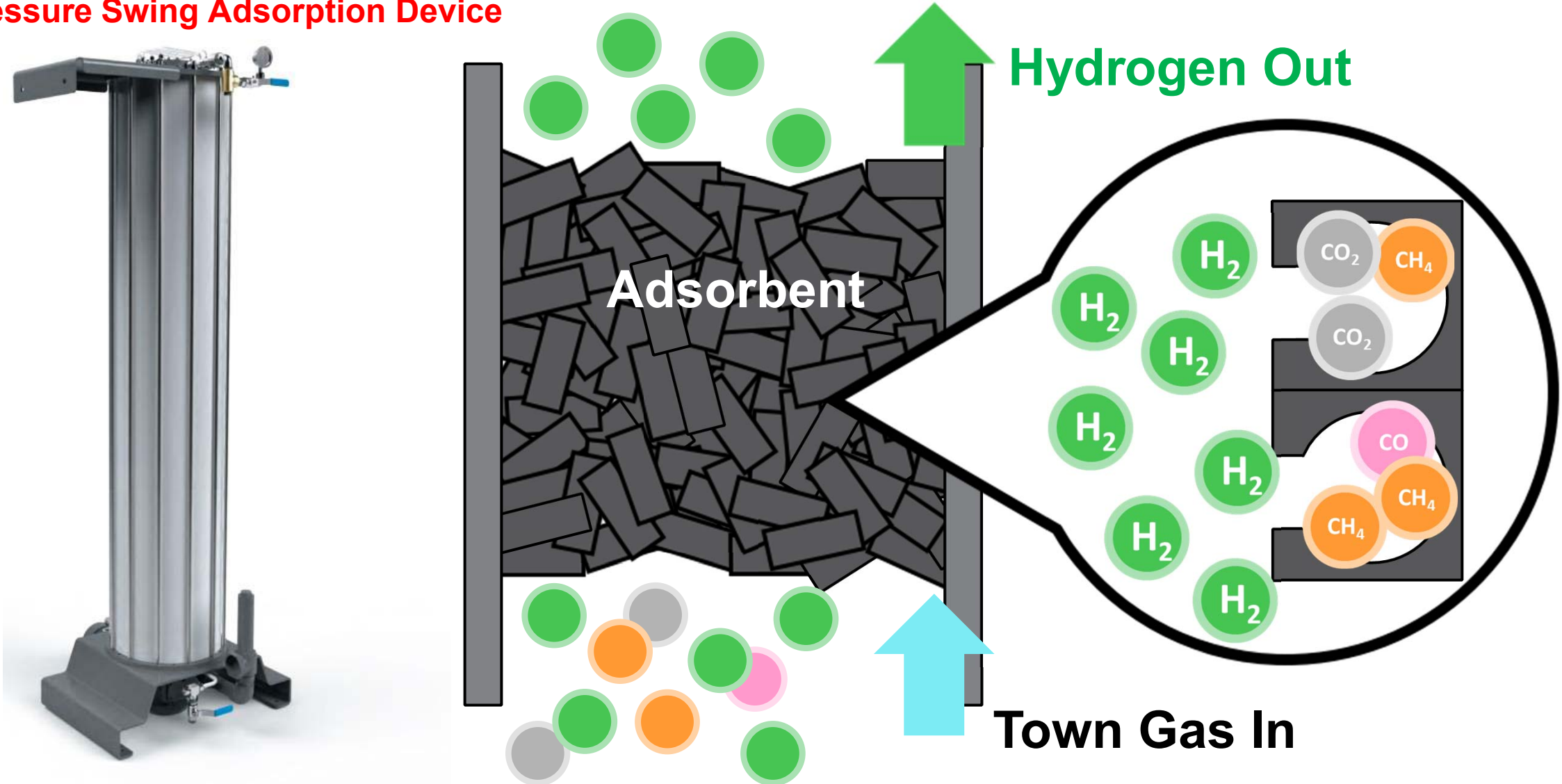


Existing production facilities, no need new investment (34 ton H₂/day)

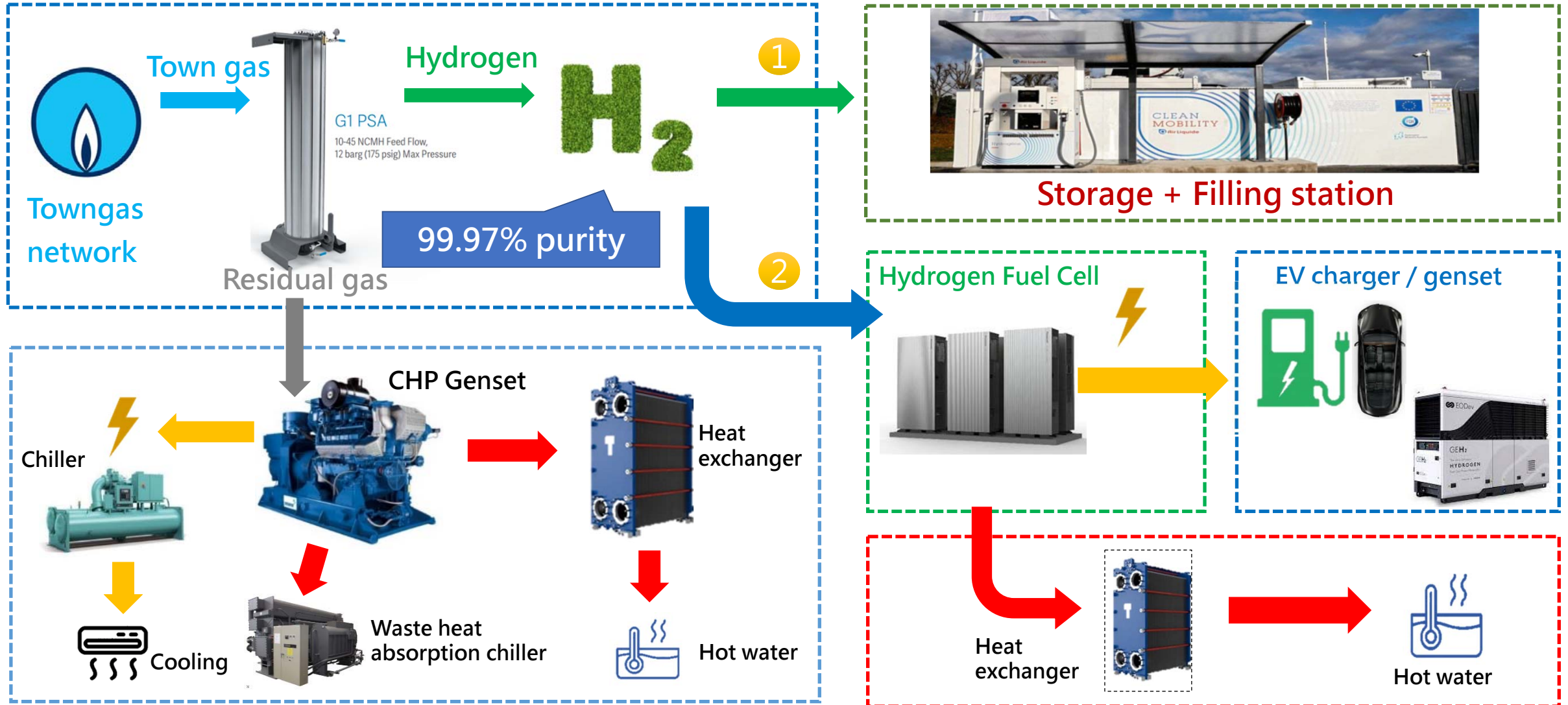


Hydrogen Applications in Hong Kong

Pressure Swing Adsorption Device



Hydrogen Applications in Hong Kong



Developing H₂ Power Generation at Construction Sites



No emission



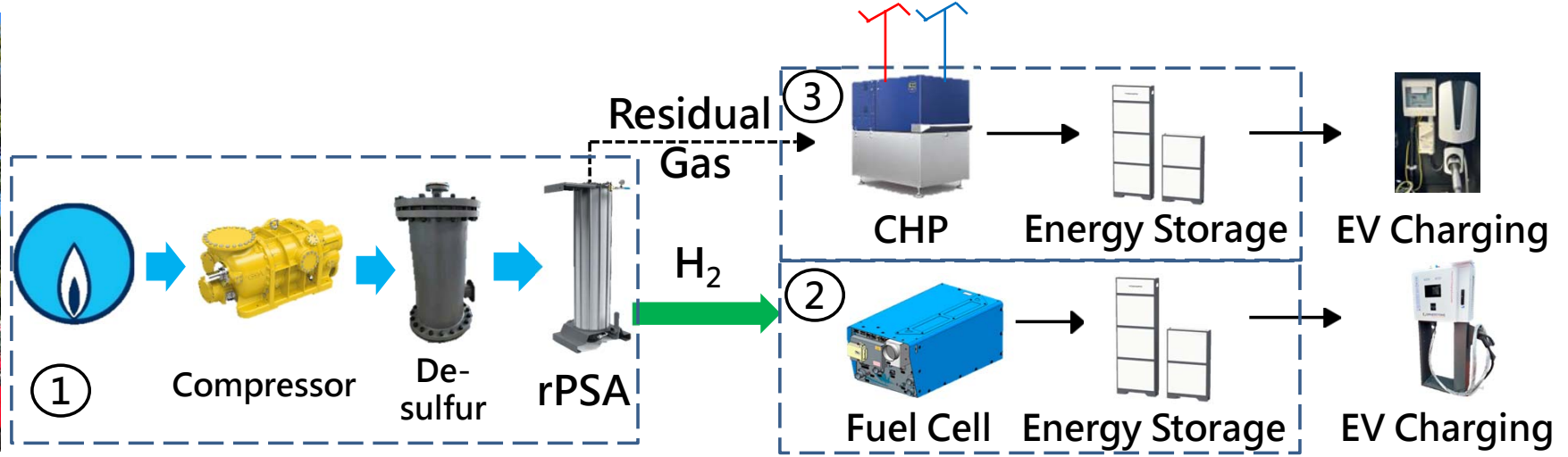
No noise



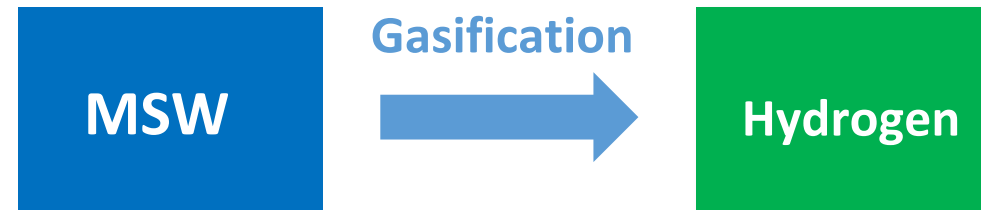
No smell



1st H₂ Power Generation Facility for EV Charging



Explore Green Hydrogen from Landfill / Waste



SENT – To be completed by end-2025, 300kg/day



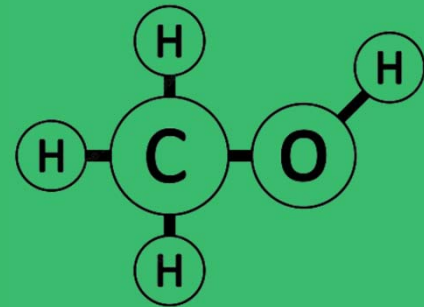
Under Planning



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Green Methanol



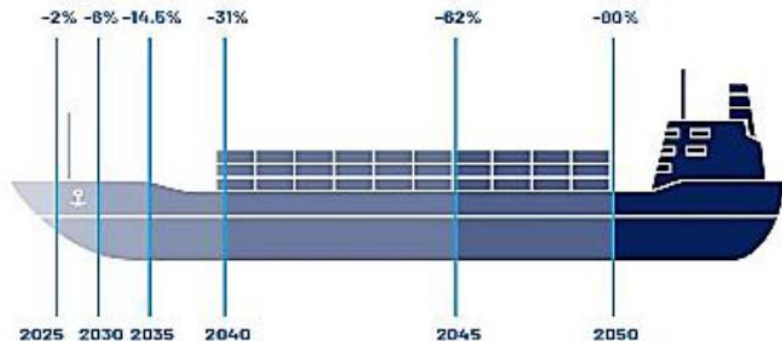
Global Demand



The FuelEU maritime regulation will oblige vessels above 5000 gross tonnes calling at European ports (with exceptions such as fishing ships):

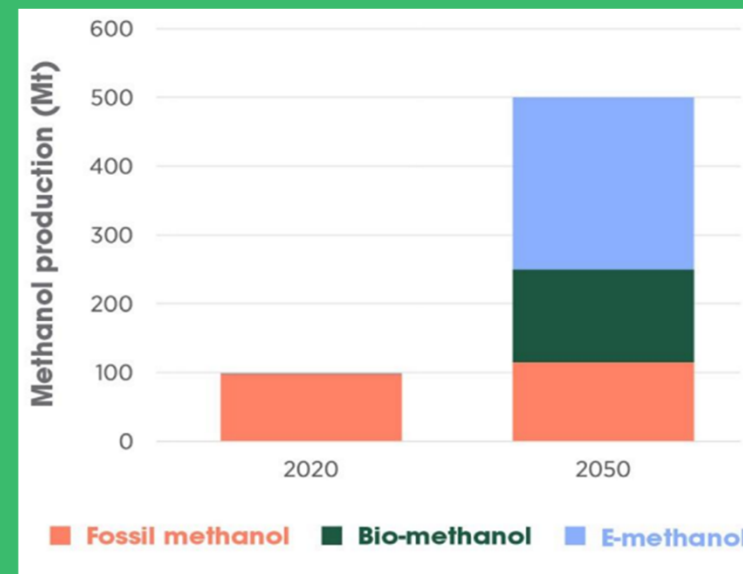


Annual average carbon intensity reduction compared to the average in 2020



Company	HQ	Sector	Net-zero target	Green methanol ships on order
MAERSK	Denmark	Container	2040	25
EVERGREEN	Taiwan	Container	2050	24
COSCO SHIPPING	Mainland China	Container, bulk carrier, tanker	2060	12
CMA CGM	France	Container, tanker	2050	12
HMM	South Korea	Container	2050	9

Bio/e-methanol production projected to reach 400 mt/year by 2050



Future supply of green methanol is mainly from China, Europe and US

Global Supply

Current green methanol costs USD 1,200-1,800/ton

An aerial photograph of a large container ship, viewed from an elevated angle, sailing on a deep blue ocean. The ship's hull is a vibrant orange-red, and its deck is densely packed with colorful shipping containers in shades of blue, green, and yellow. The ship is moving from the top-left towards the bottom-right, leaving a white wake behind it. The sky is a clear, bright blue.

HK's Latest Roadmap

2025

Complete drafting COP on green methanol bunkering

2026

- To reduce carbon emissions from HK-registered ships by at least 11%
- 55% of the diesel-fuelled vessels in the Government fleet to switch to using green maritime fuels

2030

- To reduce carbon emissions from the Kwai Tsing Container Terminals by 30%
- Close to 400 methanol-capable vessels will be in operation
- 7% of the HK-registered ships to take up green maritime fuels

Towngas is the first ISCC certified Producer in China



Inner Mongolia Green Methanol (GM) Production Plant

Production capacity > **120,000 tons** Green Methanol per year complying EU standards





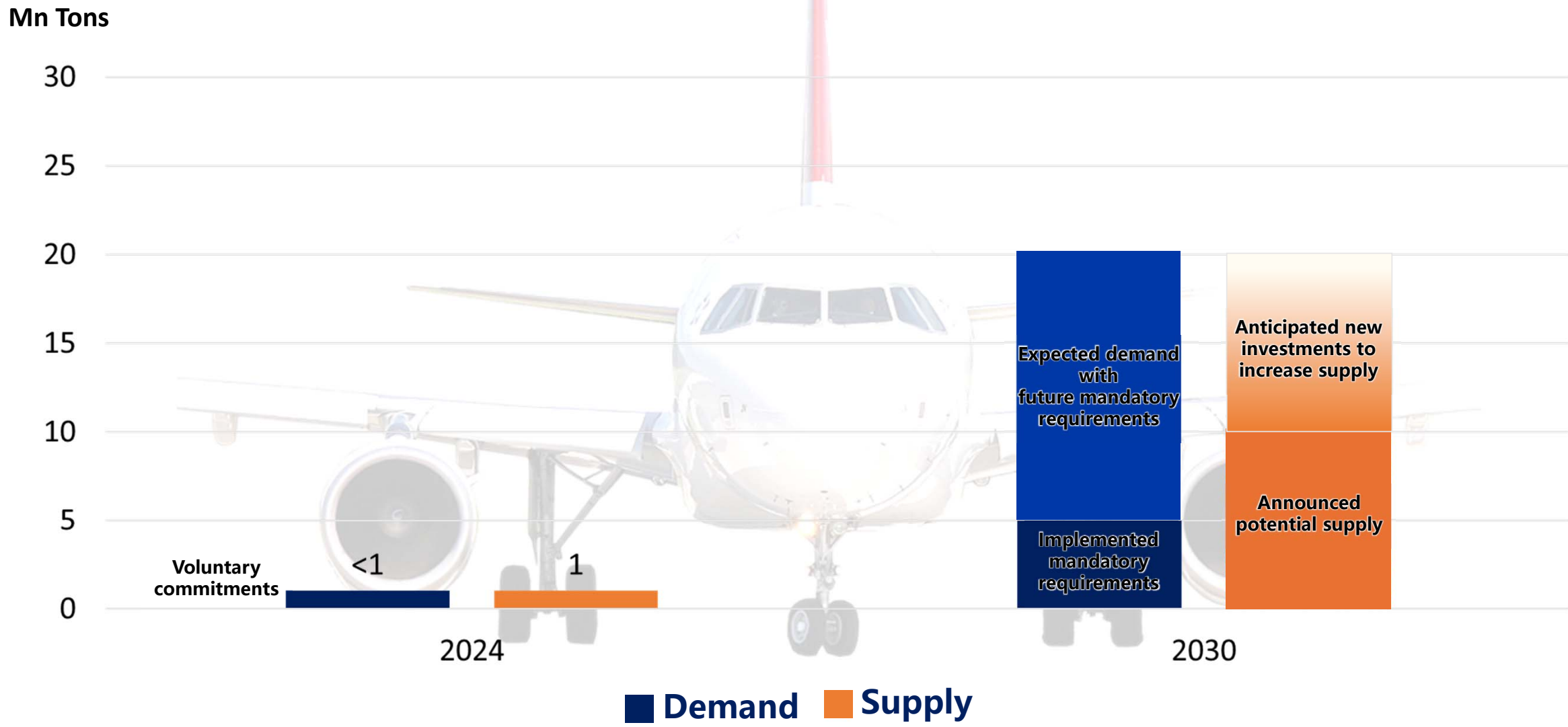
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Sustainable Aviation Fuel



Rapid Growth in Global SAF Demand and Supply

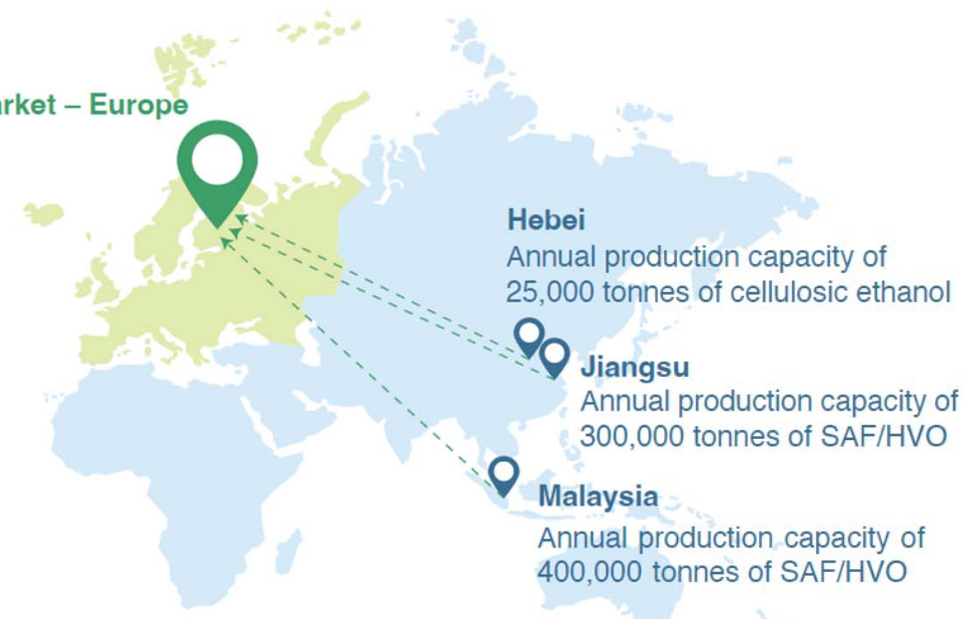


From Waste to Jet Fuel : Sustainable Aviation Fuel



EcoCeres, incubated by The Hong Kong and China Gas Company Limited, specializes in producing high-quality SAF. Product achieves up to a 90% reduction in GHG emissions and is entirely based on waste materials.

Primary market – Europe



2nd Largest SAF Manufacturer in the Globe



EcoCeres Inc. incubated by Towngas



Sustainable Biomass

Bio-grease Utilization

Waste Greases

Hydrotreated Esters and Fatty Acids (HEFA) Tech.

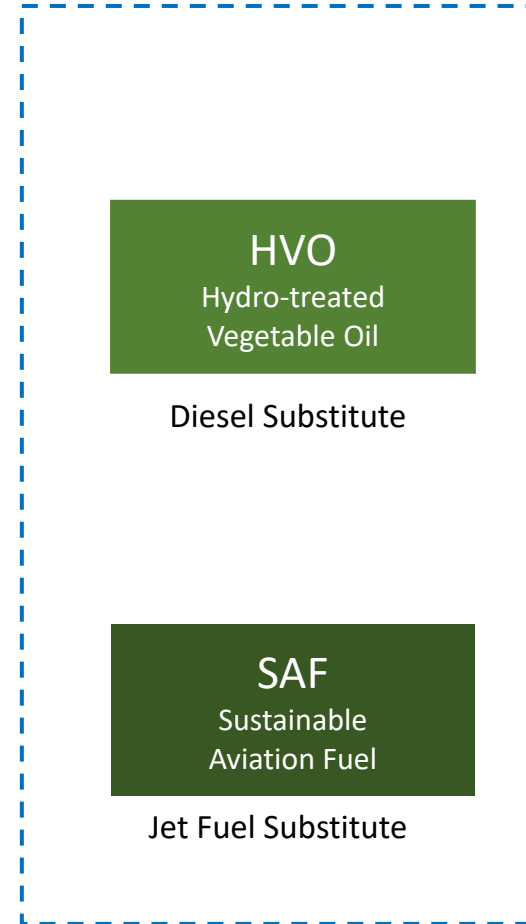
Animal Fats

Processing at high temperatures and pressures with hydrogen and catalysts

Hydrotreated Vegetable Oils

High Value Sustainable Fuels

De-oxygenation & Isomerization (HEFA)

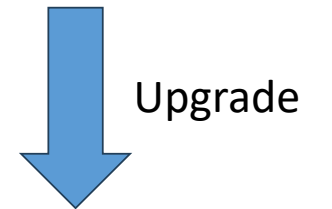


2018

- Proprietary **1st -gen HVO** (freezing point: **+15°C**)
- With blending wall

2020

- Proprietary **2nd -gen HVO** (freezing point: **-20°C**)
- **100% Drop-in fuel**



2021

- Proprietary **3rd -gen SAF** (freezing point: **-40°C**)

Our SAF with superior product quality



SAF

- ✓ 100% waste-based feedstock
- ✓ World 1st ISCC-CORISA PLUS Certified SAF producer by Dec 2021
- ✓ Full compliance to ASTM 7566 standard
- ✓ Proven record of INTERNATIONAL FLIGHT usage



Nov 2024



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Thank you!