



Civil Aviation Symposium 2023

October 5th, 2023

Mitsubishi Corporation



Mitsubishi Corporation (MC) Company Profile

- MC is a global integrated business enterprise that develops and operates businesses in 90 countries thru its global network of approximately 1,700 group companies.
- MC has x12 Business Groups that operate across key industries;

- Natural Gas
- Industrial Material
- **Petroleum & Chemicals**
- Mineral Resources
- Power Solution
- **Next Generation Energy**
- Industrial Infrastructure
- Automotive & Mobility
- **Food Industry**
- Consumer Industry
- Urban Development
- Industry DX

<Company Overview>

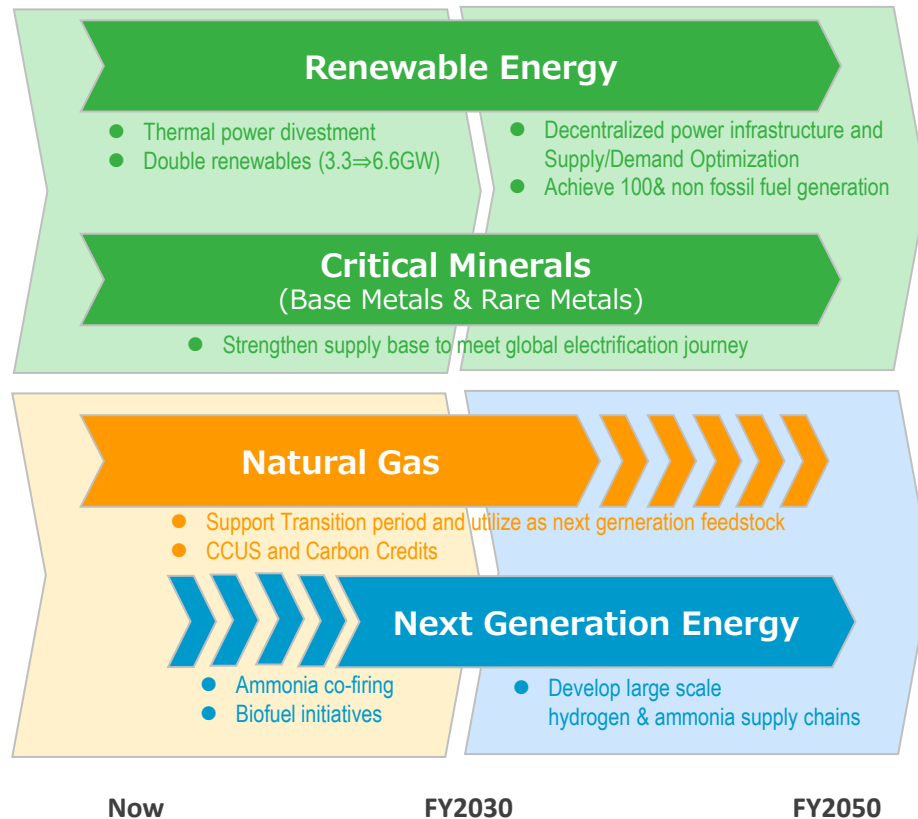
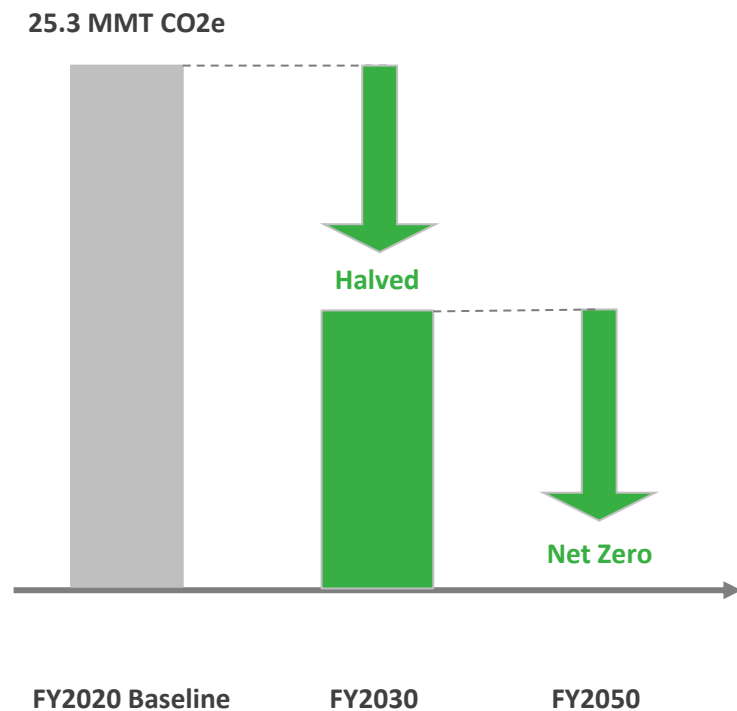
Company :	Mitsubishi Corporation
Established:	April 1, 1950
Market Capitalization:	JPY 10.6 Trillion (approx. US\$ 75 billion)
Employees :	80,728 (Consolidated)

Our Roadmap to a Carbon Neutral and Energy Transformation

- We aim to (1) halve GHG emissions by FY2030, and (2) achieve “net zero” by 2050
- Achieved, through portfolio replacement, procurement of renewable energy, fuel switching, and industry transformation

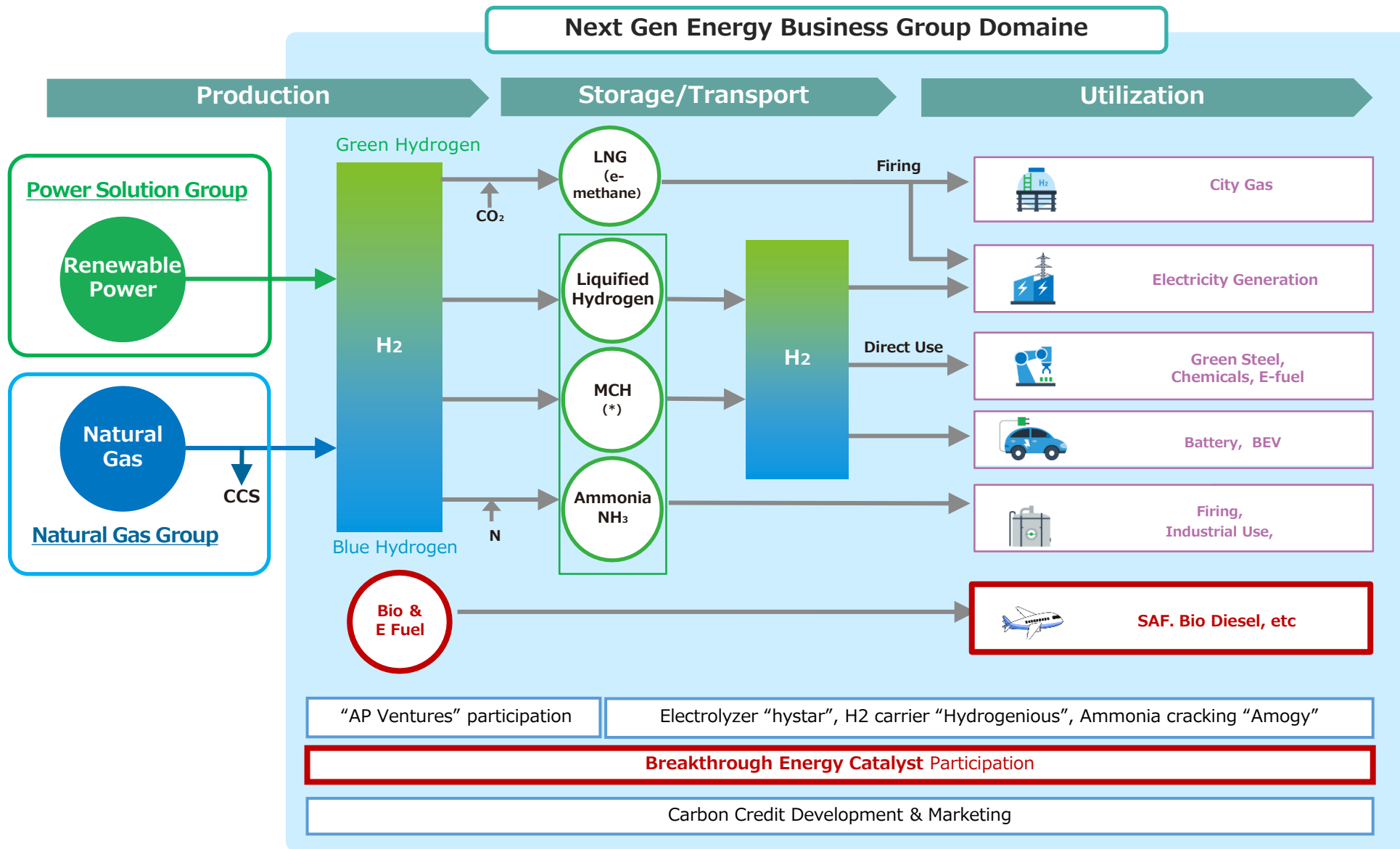
- Fulfilling our responsibility as a reliable energy supplier
- Taking global initiatives to double our renewable power capacity and develop new energy supply chains
- 2 Trillion Yen of capital earmarked for EX investments by 2030

Greenhouse Gas(GHG) Emissions Reduction Targets



Next Generation Energy Business Group Focus

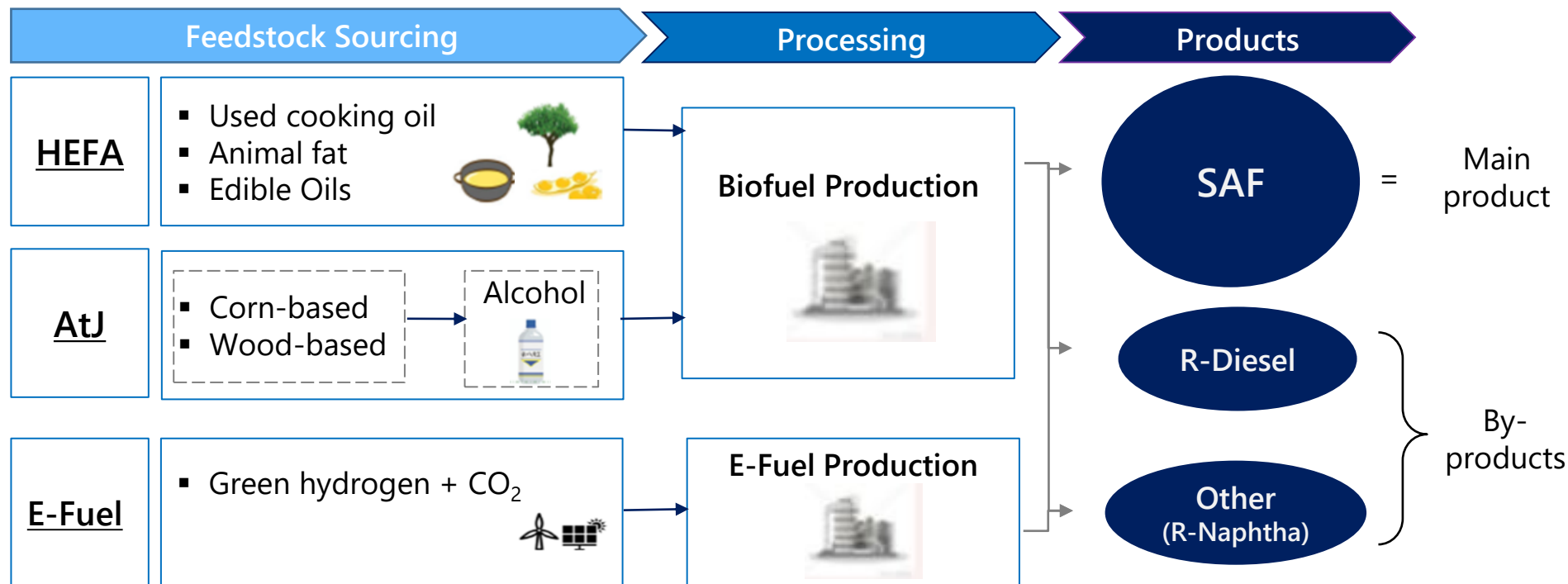
Next Gen Energy Business Group Domaine



*...MCH: Methylcyclohexane(form of Liquid Organic Hydrogen Carrier)

Striving for creation of “Next Generation Fuel” Supply Chain

- Key enablers for large scale SAF deployment
 - Cross-pollinate expertise of different industries
 - Optimize multiple technology threads all having differing maturity levels (From “HEFA” to “E-Fuel”)
 - Renewable “By-Product” distributions
 - Public policy and roadmap for SAF and By-products
- MC tapping into expertise of multiple business segments to unlock SAF pathways

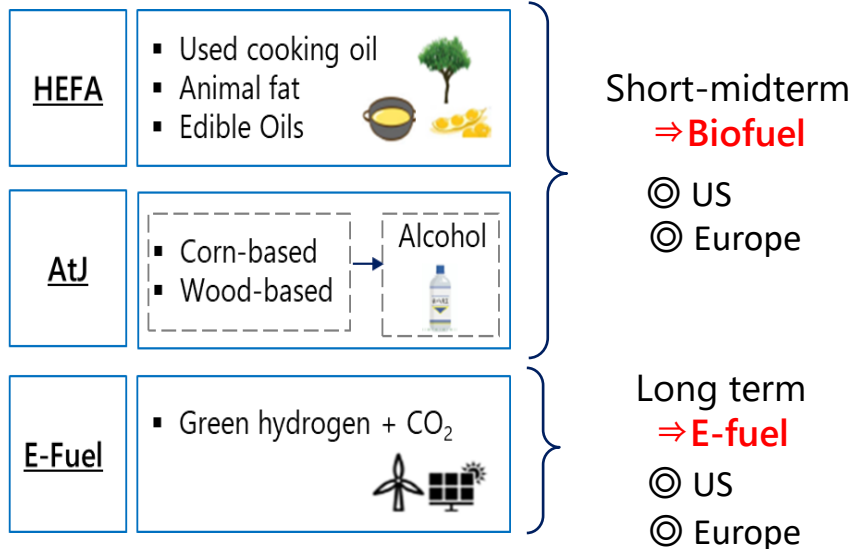


Mitsubishi's SAF activities :

In Japan :

- Joint feasibility study with Japanese oil refiner aimed at commercializing SAF in Japan.
 1. Developing sustainable feedstock derived from bio-based raw materials
 2. Producing SAF with newly emerging techniques
 3. Building a supply chain for next generation fuels, with a focus on SAF

Outside Japan :



Breakthrough Energy Catalyst :



- **Establishment** : In 2021
- **Concept** :
 - Aiming to accelerate deployment of climate tech
 - Scaleup projects.
- **Target area** :
 SAF / Clean H2 / Direct Air Capture / Long Duration Energy Storage
- Mitsubishi Corporation being the very first Asia headquartered "Anchor Partner"
- **Anchor partners** :
 Investments from leading companies in various industries such as finance, energy, steel, transportation, IT, manufacturing.



SAF Commercialization ~ Opportunities and Challenges ~

■ Opportunities and Challenges for each pathway

- “Bio-derived fuel” : HEFA and AtJ
 - Technology mature and commercialized
 - Feedstock availability is a key challenge,
 - Traceability and transparency of supply chain and “Food vs Fuel” issue for edible oil
- “Synthetic fuel” : E-fuel
 - Ideal pathway for SAF due to low-carbon footprint
 - Technology development is the key challenge, followed by access to competitive, renewable-energy source

■ Policy and Support mechanism

- Global coverage of mandated SAF requirements rather than just EU and US
 - Japanese regulations currently being designed
 - Other regions?
- Incentivize global participation SAF supply chain
 - Regional difference In SAF supply chain (upstream, midstream, downstream) is stark
 - Incentive schemes for all countries to participate in SAF supply chain