



# Business initiatives to address climate change as an opportunity ②

Performance Materials Business Unit

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Basic Materials Business Unit

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# Business groups in the Chemicals segment to address climate change as an opportunity

## Basic Materials Business Unit

### Raw materials

- Petrochemicals
- Inorganic materials
- Methanol, Ammonia
- Tank terminals



## Performance Materials Business Unit

### Intermediate materials

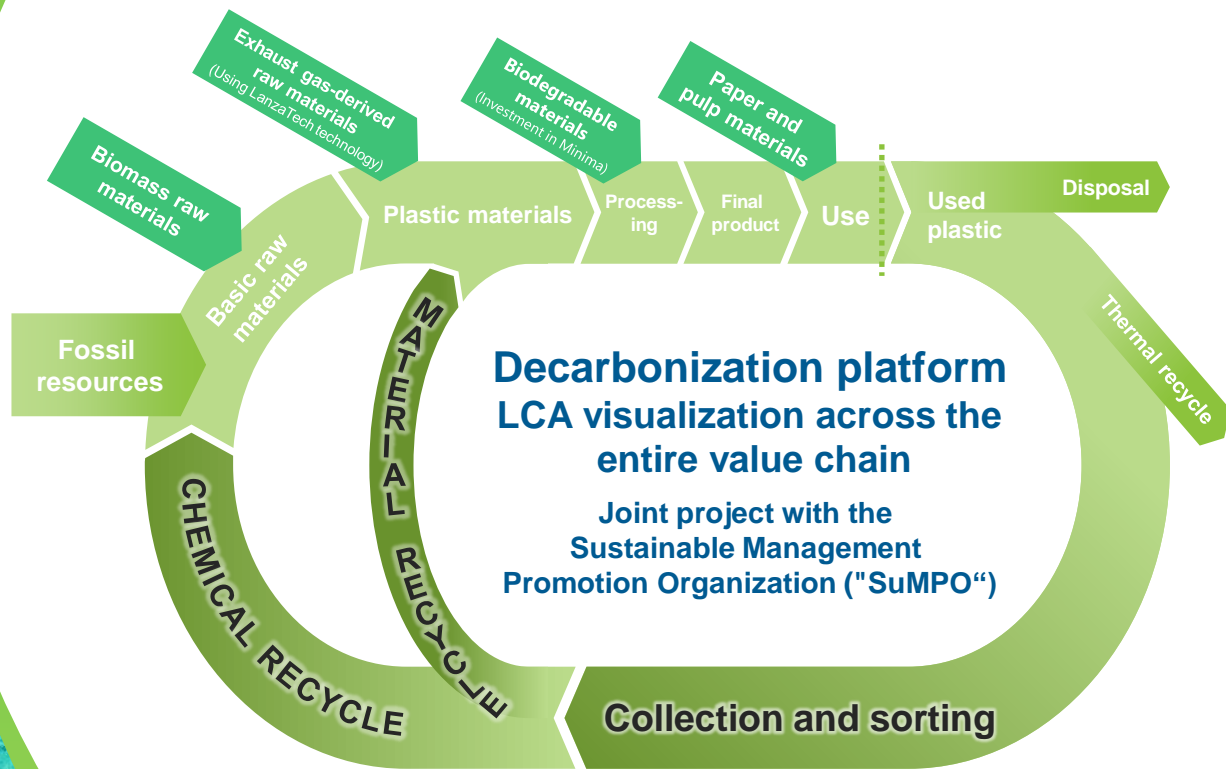
- Polymer
- Carbon fiber
- Electronic materials
- Specialty chemicals
- Bio-based materials



## Product market



# Circular economy initiatives



## Establishment of a platform for collecting waste plastics



## Recycled PET business



• Veolia • Seven & i Holdings

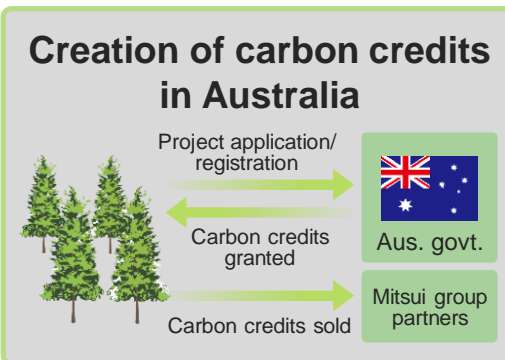
## Development of high-purity Polypropylene recycling business



• PureCycle Technologies

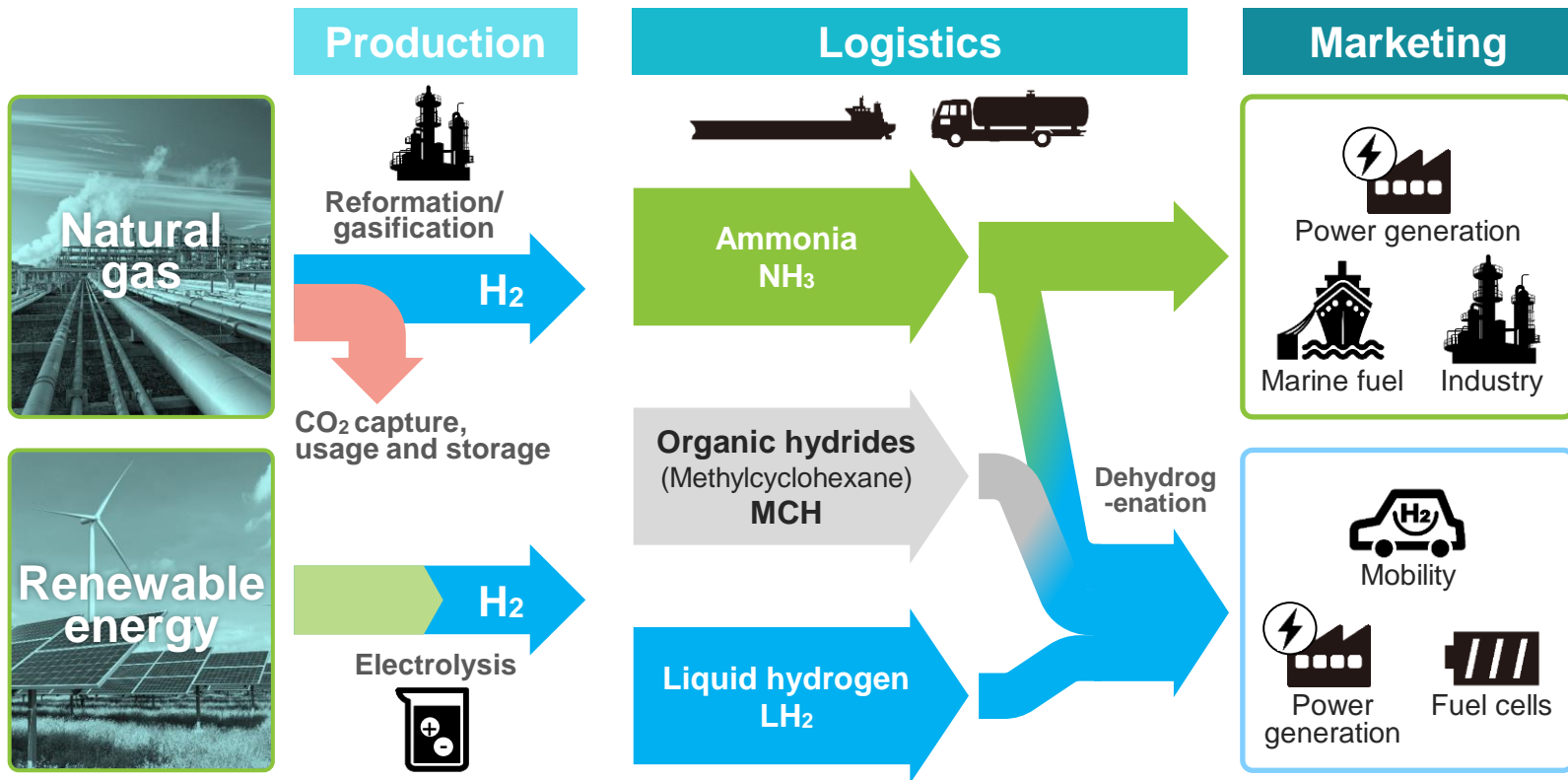
# Forest resources business

Initiatives for business transition and creation of carbon credits



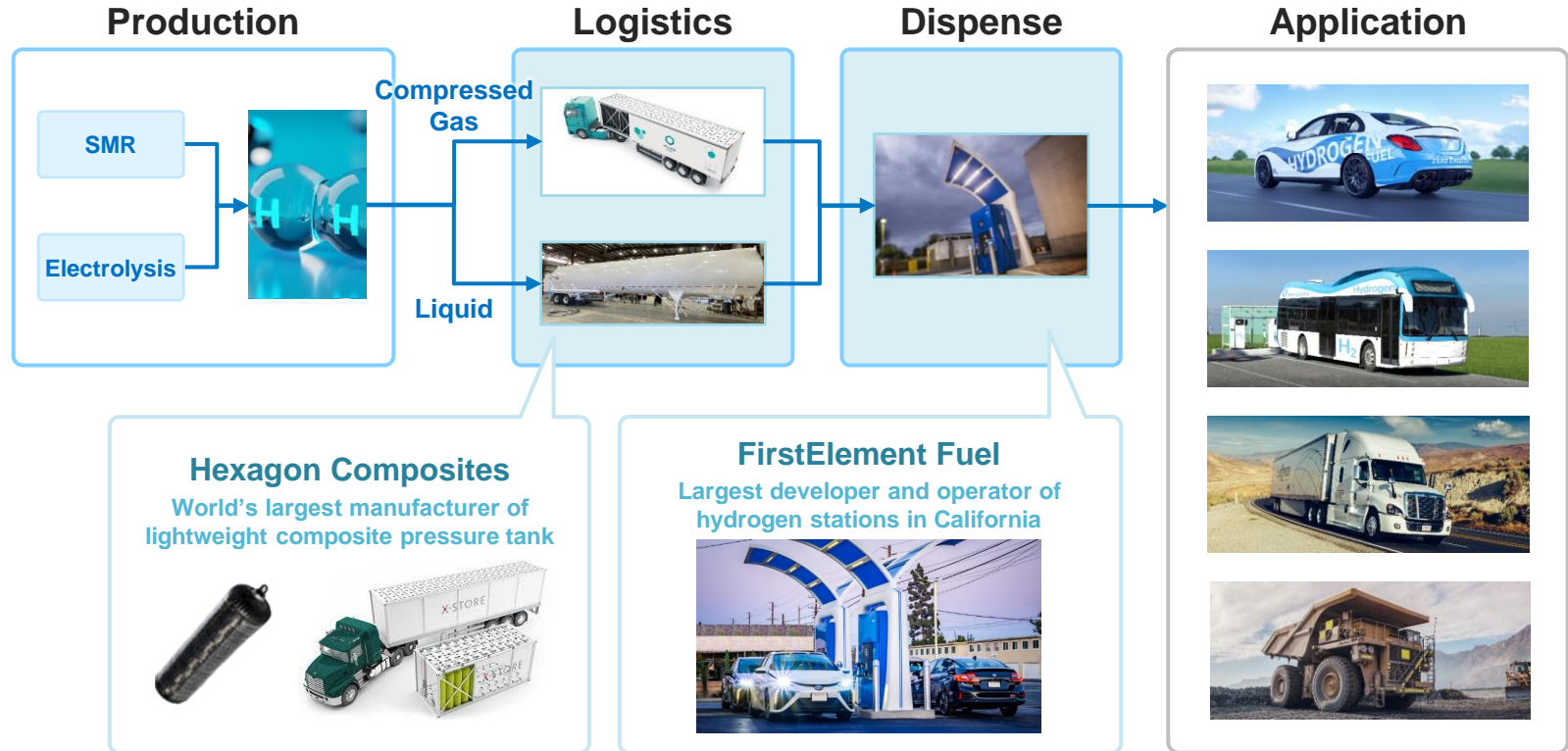
# Clean energy

## Hydrogen/ammonia value chain

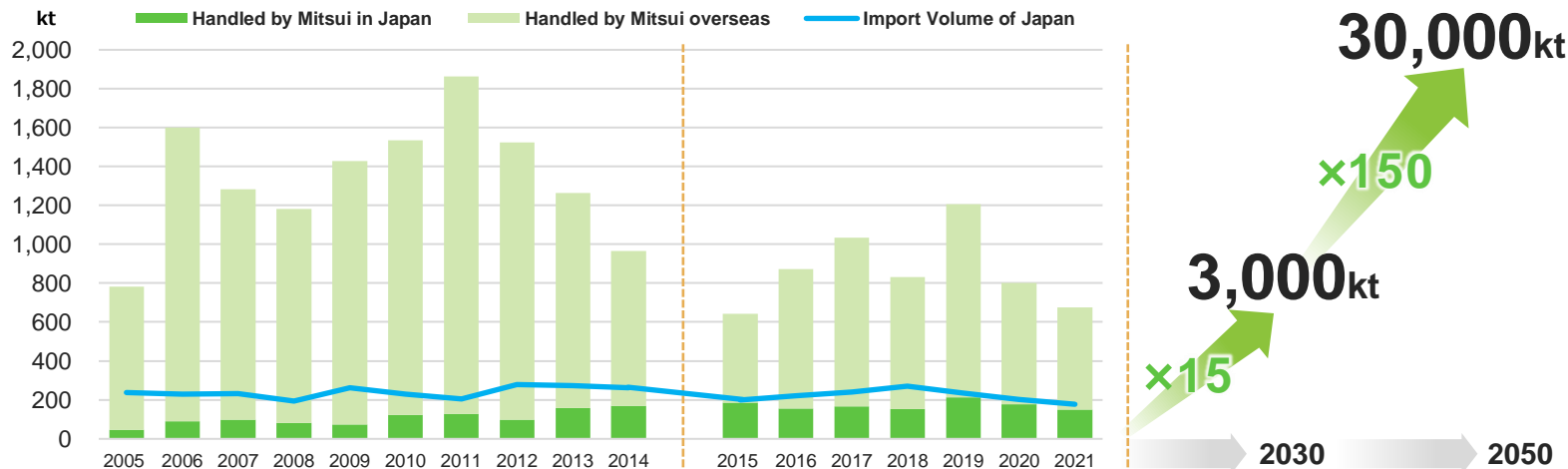


# Hydrogen value chain

## Specific initiatives in California



# Ammonia: Mitsui's track record and import statistics of Japan



Operating KPA in Indonesia (2000-2014) **BOT** Continue to marketing KPA's product

KPA: Ammonia production company established in 1996, began operations in 2000

MOU for new ammonia production facility signed with the Saudi Arabian General Investment Authority in November 2019

# Secure supply source for blue/green ammonia

Production



Logistics

Marketing



Russia  
(Arctic ocean)

**Expansion of new demand**

Fuel for power generation in Asia

Marine fuel

US  
(USGC)

UAE

Saudi Arabia

Indonesia

Chile

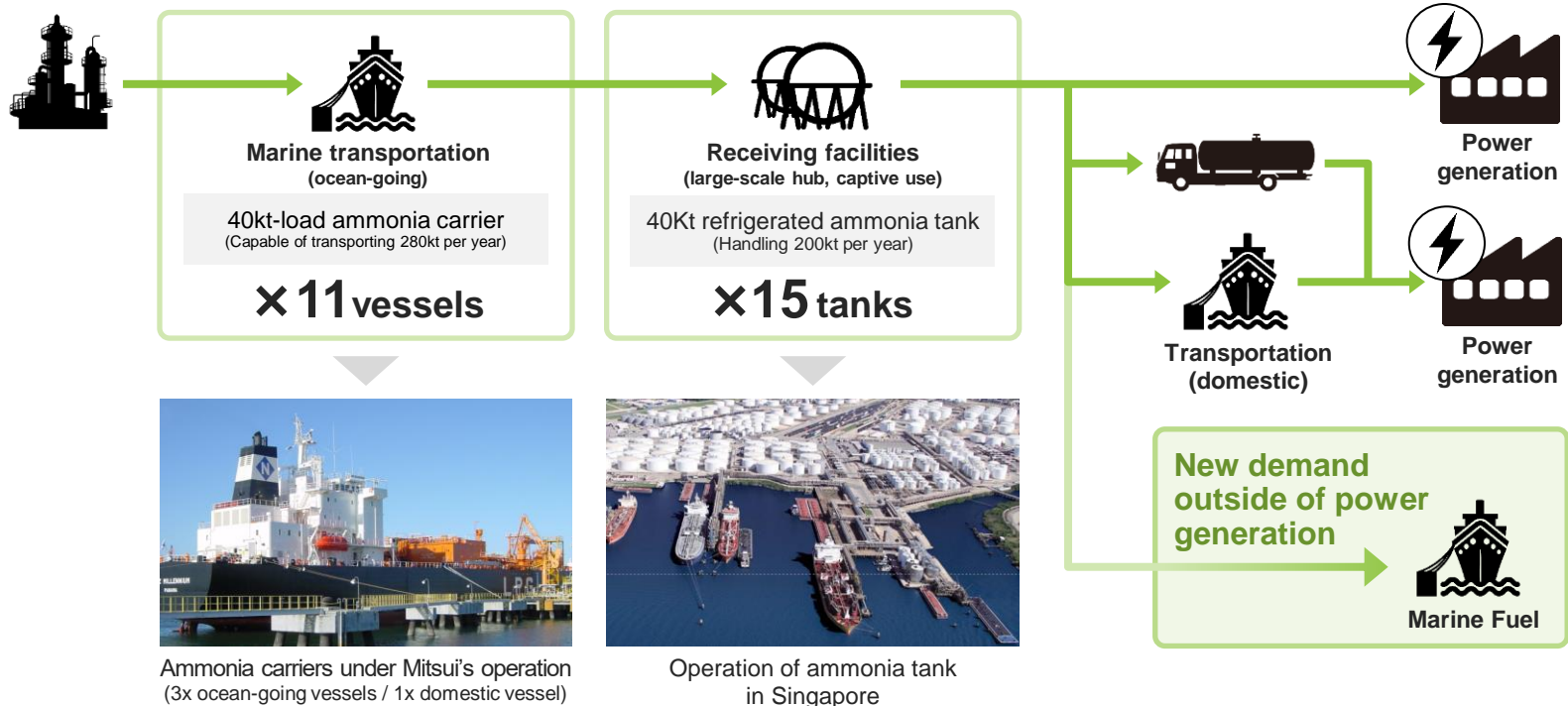
Australia

New Zealand





# Logistics required for the import of 3 million tons of ammonia to Japan (Expected 2030)



# Blue/green ammonia needs

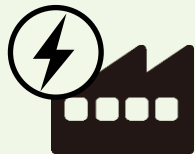
Production

Logistics



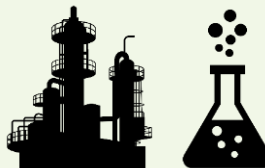
## Power generation

(Electricity and independent power generation for industrial use)



## Chemical industry

(Fuel, derivatives)



## Marine Fuel



## Low-carbon methanol

- Marine fuel during transition to zero-emission period
- New raw materials to replace conventional raw materials
  - ▶ Biomethanol
  - ▶ eMethanol (Renewable energy-derived hydrogen + bio-derived CO<sub>2</sub>)
- Initiatives at Fairway (US) and IMC(Saudi)
  - ▶ Effective use of carbon dioxide through CCU used by both Fairway and IMC
  - ▶ Manufacture of biomethanol through use of biogas at Fairway



Fairway (US) methanol plant  
(Annual capacity of 1.3m tons;  
Mitsui has 50% stake)



IMC(Saudi) methanol plant  
(Annual capacity of 1m tons;  
Mitsui has 20% stake)