

Second quarter financial results briefing topics

# Overseas business strategy

- (1) Industrial gas business in India**
- (2) Overseas engineering business in North America**
- (3) High-power UPS (uninterruptible power supply) business**

November 8, 2019



## Business strategy 1: Industrial gas business in India

### To establish a strong position in India's industrial gas market: About 12% share

(Air separation gas production capability)

#### Acquisition of business from Praxair India

- Date of business acquisition: July 2019 (included in the scope of consolidation from the 2<sup>nd</sup> quarter of fiscal 2019)
- Scale of business: Sales of about ¥7.9 billion/year (in the year ended December 31, 2018)
- Company-owned facilities: 3 on-site ASUs for steel plants (in Jamshedpur)  
2 cylinder-filling stations (in Parbangla and Asansol)
- Main supply destination: Tata Steel Ltd.

#### Acquisition of business from Linde India

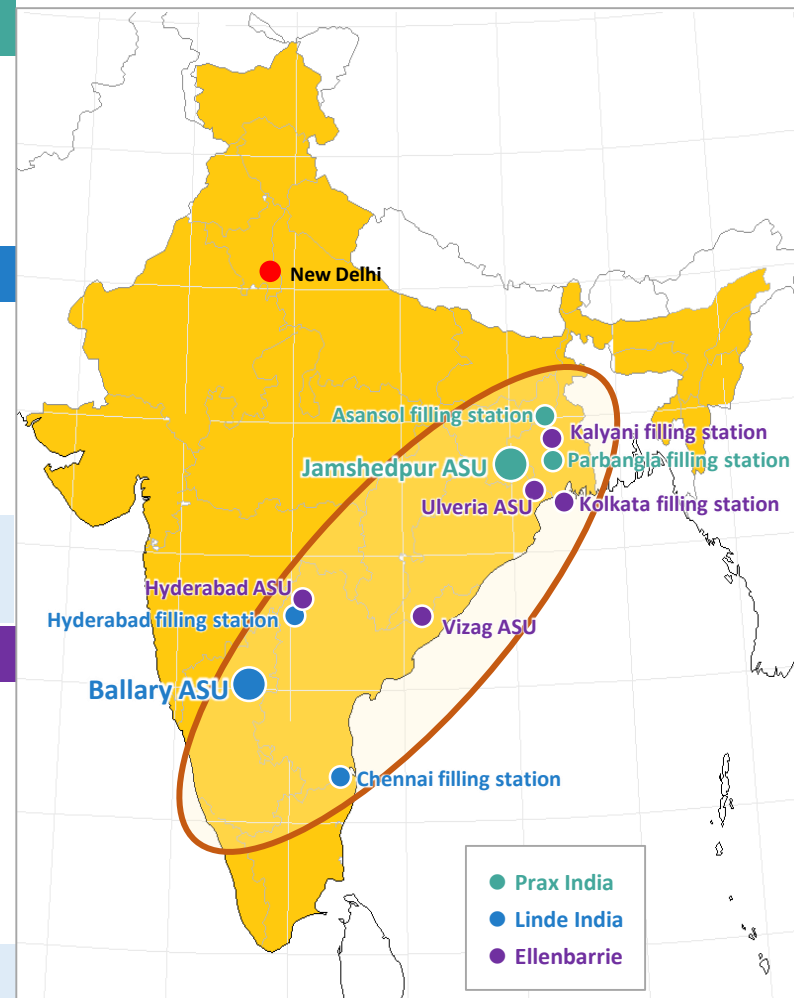
- Date of business acquisition: December 2019 (schedule)
- Scale of business: Sales of about ¥ 5.7 billion/year (in the year ended December 31, 2018)
- Company-owned facilities: 1 on-site ASU for steel plants (in Bellary)  
2 cylinder-filling stations (in Hyderabad and Chennai)
- Main supply destination: JSW Steel Ltd.

#### Establishment of an “upstream business” through the acquisition of on-site supply bases and liquefied gas production bases

#### Ellenbarrie Industrial Gases Ltd.

- Established in: 1973 ※ Made into AWI's subsidiary in 2013 (equity stake of 51%)
- Scale of business: Sales of about ¥2.6 billion/year (in the year ended March 31, 2019)
- Company-owned facilities: 3 ASUs (in Ulveria, Vizag and Hyderabad)  
5 cylinder-filling stations (above-listed 3 hubs with ASUs + Kolkata and Kalyani)
- Business outline: Gas lorry/cylinder supply business in eastern and southeastern India

#### Expansion of a “downstream business” through lorry and cylinder supply



## Business strategy 1: Industrial gas business in India

### Growth strategy in India's industrial gas market where high economic growth continues

#### 1 Response to growing industrial gas demand associated with expanded steel production

- Take advantage of AWI's extensive operation know-how for steel plants accumulated in Japan
  - ▶ ▶ **Promote maximized efficiency to reduce production energy consumption rate**
- Build a trust relationship with customers who are leading blast furnace manufacturers
  - ▶ ▶ **Capture further business opportunities such as construction of additional and new plants**

#### 2 Acquisition of new projects for on-site supply service from small- and medium-sized plants

- Allows AWI to implement the business through the acquisition of back-up and maintenance functions

※ The above-mentioned growth strategies 1 and 2 will be implemented based on the plant engineering technology (large- to small-sized cryogenic air separation plants) which was acquired after AWI made SAC (Shinko Air Water Cryoplant, Ltd.) into a wholly-owned subsidiary.

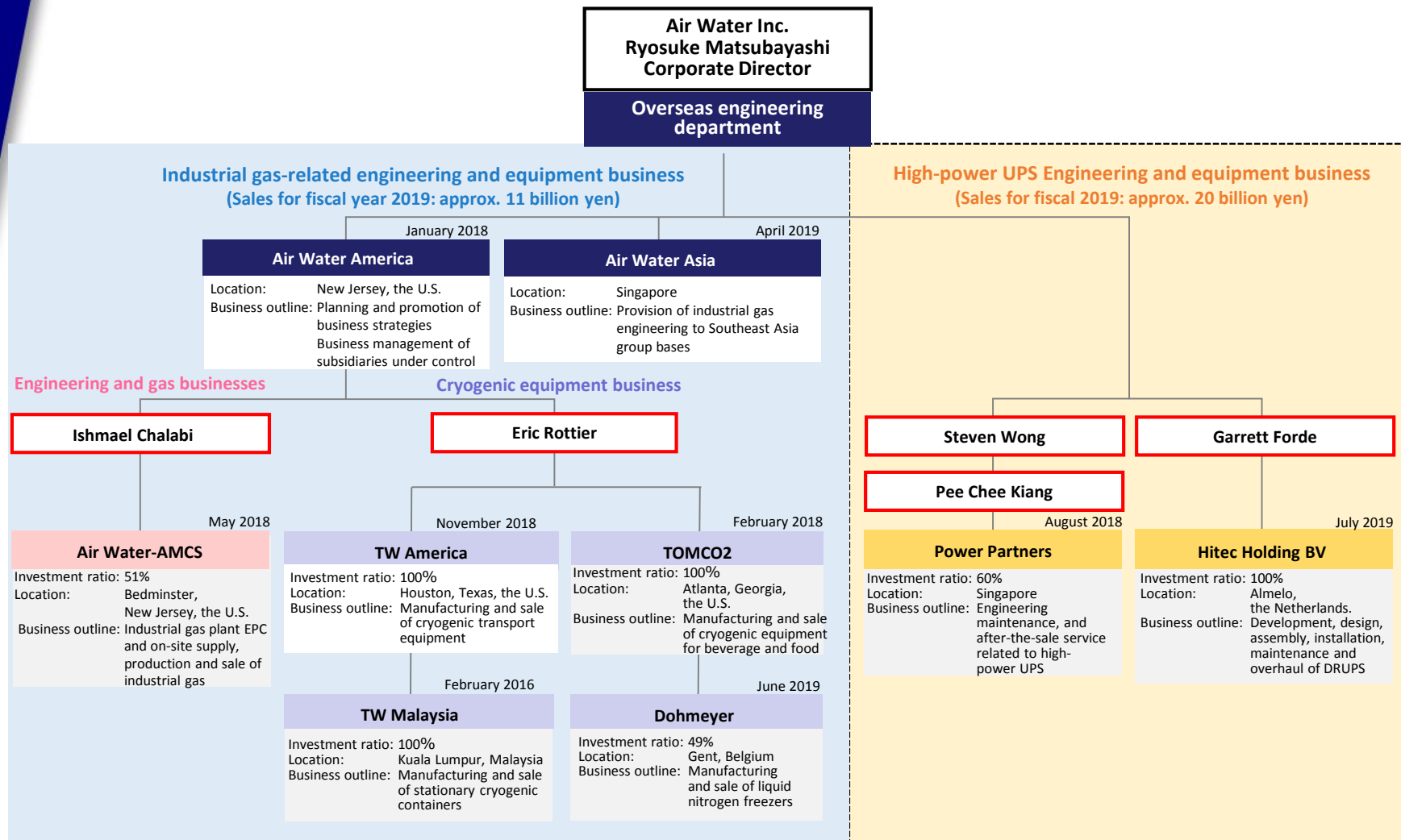
#### 3 Expansion of the lorry and cylinder supply business through synergies created with Ellenbarrie Industrial Gases Ltd.

- Expansion of business in eastern India (where steel industries are concentrated)
- Advances to southern India (where auto and electronics industries are concentrated)
- Acquisition of the argon supplier allows AWI to implement sales expansion



## Business strategy 2: Overseas engineering (North America)

### [Structure of overseas engineering business]



## Business strategy 2: Overseas engineering (North America)

**Establish an industrial gas-related engineering and equipment business base, with an eye toward deploying industrial gas supply business in North America**

### Industrial gas market in the U.S.

- Market size: Approx. 2.3 trillion yen
- Demand is also buoyant in sectors of food including beverages and bio-science
- About 85% of the US industrial gas market is monopolized by major companies
- About 750 dealers exist in the region

**Increase the recognition of Air Water Group**  
**Establish a partnership with dealers**

### Engineering and cryogenic equipment areas

#### Engineering and gas businesses

- Air Water-AMCS



Cryogenic air separator

#### Cryogenic equipment business

- TW America



Cryogenic transport container

- TOMCO2



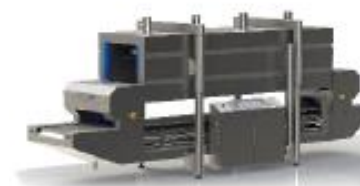
Carbonic acid trailer

- TW Malaysia



Stationary cryogenic containers

- Dohmeyer



Liquid nitrogen freezer

## Business strategy 3: High-power UPS (Uninterruptible power supply) business

### Entry into the high-power UPS system business

**To promote the commercialization of “utility solutions” that are crucial to customers’ BCPs (business continuity plans) and aim to become the world’s top in the field of high-power UPS systems and peripherals.**

### What are dynamic rotary uninterruptible power supply systems? (DRUPS) ※

※Dynamic Rotary Uninterruptible Power Supply

- An uninterruptible power supply (UPS) suitable for high-power band over an output of 1,500 kVA.
- Introduced at data centers, large semiconductor and pharmaceutical factories and critical infrastructure such as airports.
- An important device to prevent facilities and products from damage caused by voltage drop and blackout and maintain stable operations.

### Hitec Holding B.V. (Hitec)

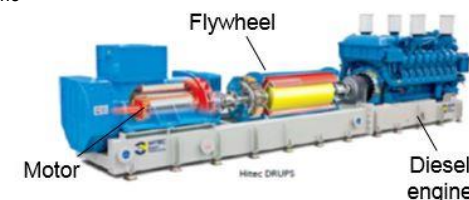
- Date of stock acquisition: July 2019 (to be included in the scope of consolidation from 3Q FY2019)
- Sales: 12.6 billion yen (in the year ended December 31, 2018)
- Head office: The Netherlands
- Overhaul service hubs: The Netherlands, the U.S., Taiwan
- Business bases: 9 locations worldwide
- Sales regions: 40% in EMEA, 6% in North America, 17% in China and Taiwan, 37% in APAC



EMEA: Europe, Middle East and Africa  
APAC: Asia Pacific

### Power Partners Private Limited (Power Partners)

- Date of stock acquisition: August 2018 (included in the scope of consolidation from April 2018)
- Sales: 3.9 billion yen (in the year ended December 31, 2018)
- Head office: Singapore



**DRUPS:Hitec**

**Hitec Head Office**  
**The Netherlands**

**PP Ltd.**

- Overhaul service facilities
- Hitec business bases
- Countries having partner hubs
- PP Ltd. hubs

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Meeting society's needs with nature's blessings.



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