



TAIYO NIPPON SANSO
The Gas Professionals

Consolidated Business Performance for the First Half of the Fiscal Year Ending March 2017 (FYE2017)

November 15, 2016
TAIYO NIPPON SANSO Corporation

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1-1. Overview of Business Performance for the First Half

(Billions of yen)	FYE2016 Q2 Results (IFRS) Margin	FYE2017 Q2 Results (IFRS) Margin	YoY Change	FYE2017 Q2 Announced targets (IFRS) Margin
Revenue	284.3	268.7	-15.6 -5.5%	293.0
Core operating income	22.5 7.9%	25.7 9.6%	+3 +14.2%	24.2 8.3%
Non-recurring profit and loss	1.8	0.1	-1.7	0.0
Operating income	24.3 8.6%	25.9 9.7%	1.6 +6.5%	24.2 8.3%
Net income attributable to owners of the parent	15.0 5.3%	16.4 6.1%	1.4 +9.6%	14.7 5.0%

● Impact of foreign currency translations (US\$→¥): FYE2016 Q2 rate: \$1=¥121.73 FYE2017 Q2 rate: \$1=¥105.39

→Impact of currency translations led to decreases of ¥15.8 billion in revenue and ¥1.2 billion in core operating income



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1-2. Business Performance by Segment

(Billions of yen)		FYE2016 Q2 Results (IFRS)	FYE2017 Q2 Results (IFRS)	% Change	Factor
Gas Business in Japan	Revenue	155.6	152.4	-2.0%	<ul style="list-style-type: none"> ➢ Sales of LP gas decreased due to the impact of the falling oil price ➢ Higher revenue from equipment and installation work in electronics
	Segment income	12.4	14.1	+13.5%	<ul style="list-style-type: none"> ➢ Reduced costs due to the falling oil price ➢ Segment income increased in line with higher revenue from equipment and installation work in electronics
Gas Business in the U.S.	Revenue	77.1	65.1	-15.6%	<ul style="list-style-type: none"> ➢ Sales of bulk gases were firm (particularly carbon dioxide gas), but hard goods fell ➢ Recognized sales of business acquired from Air Liquide from September
	Segment income	4.6	4.7	+1.9%	<ul style="list-style-type: none"> ➢ Higher segment income from brisk sales of carbon dioxide gas to food and beverage manufacturers ➢ Contribution from recognition of business acquired from Air Liquide
Gas Business in Asia & Oceania	Revenue	37.7	37.7	-0.1%	<ul style="list-style-type: none"> ➢ Revenue grew in the Philippines, but Singapore was soft ➢ Contribution from M&A +4.9 billion (Thailand and Australia) ➢ Sales of electronics gases in China, South Korea and Taiwan were mostly unchanged year on year
	Segment income	2.2	2.5	+16.8%	<ul style="list-style-type: none"> ➢ Segment income increased in the Philippines in conjunction with revenue growth, but segment income decreased in Singapore ➢ M&A (Thailand and Australia) contributed +0.9 billion
Thermos and Other	Revenue	13.7	13.4	-2.3%	<ul style="list-style-type: none"> ➢ Growth in inbound demand settled down
	Segment income	4.0	5.0	+24.0%	<ul style="list-style-type: none"> ➢ Cost reduction effect on imports due to appreciation of the yen ➢ Equity in earnings of affiliates increased due to strong performances by overseas affiliates

* Segment income represents core operating income, which is calculated as operating income excluding certain gains and expenses attributable to non-recurring factors

2-1. Full-Year Forecasts for FYE2017

(Billions of yen)	FYE2016 Results (IFRS) Margin	FYE2017 Forecast (IFRS) (Announced Nov. 2) Margin	YoY Change	FYE2017 Forecast (IFRS) (Announced May 11) Margin
Revenue	594.4	570.0	-24.4 -4.1%	610.0
Core operating income	47.4 8.0%	52.0 9.1%	+4.6 +9.6%	52.0 8.5%
Non-recurring profit and loss	1.4	0	-1.4	0
Operating income	48.9 8.2%	52.0 9.1%	+3.1 +6.3%	52.0 8.5%
Net income attributable to owners of the parent	29.0 4.9%	30.0 5.3%	+1.0 +3.3%	30.0 4.9%

- Revision of business forecasts (Revenue of -¥40.0 billion and operating income of ±¥0 billion)
- Assumed full-year exchange rate (US\$→¥) : ¥105

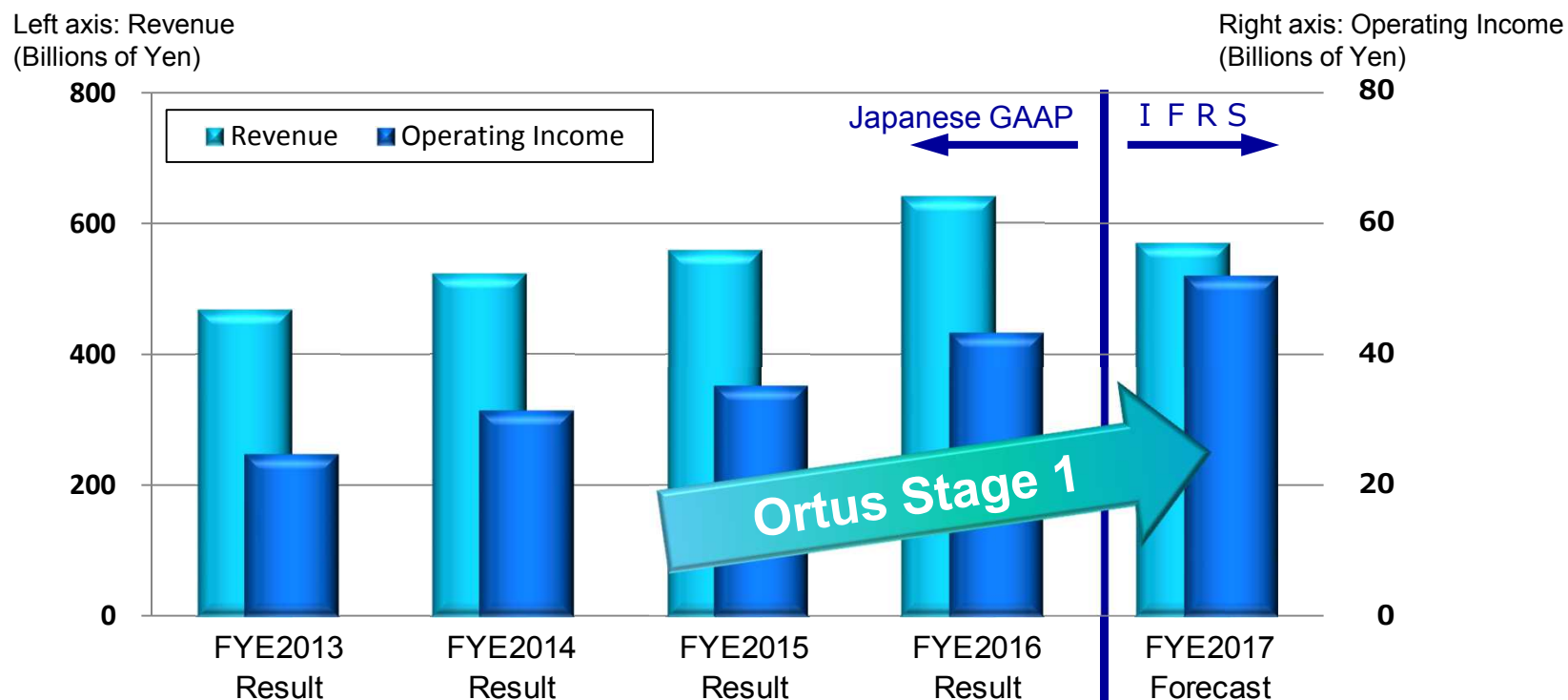


2-2. Forecasts by Segment

(Billions of yen)		FYE2016 Results (IFRS)	FYE2017 Forecast (IFRS) (Announced Nov. 2)	% Change	Future initiatives	FYE2017 Forecast (IFRS) (Announced May 11)
Gas Business in Japan	Revenue	327.9	320.0	-2.4%	<ul style="list-style-type: none"> ➢ Promote the strengthening of supply chains ➢ Start operations at Water-180 No. 3 Plant ➢ Acquire new on-site projects from Nippon Steel & Sumitomo Metal Corporation and JFE Steel Corporation (under construction) 	334.0
	Segment income	27.8	28.2	+1.3%		27.6
Gas Business in the U.S.	Revenue	149.5	145.0	-3.0%	<ul style="list-style-type: none"> ➢ Acquire some business and assets from Air Liquide ➢ Acquire new on-site projects ➢ Decide to build a new carbon dioxide gas plant at Continental Carbonic Products, Inc. (CCPI) 	160.0
	Segment income	9.2	10.8	+16.9%		11.3
Gas Business in Asia & Oceania	Revenue	89.3	77.0	-13.8%	<ul style="list-style-type: none"> ➢ Start supplying by new pipeline in the Philippines ➢ Start operations at second plant in northern Vietnam ➢ Revise power purchase contract at LNOX in Singapore ➢ Start operations at carbon dioxide plant at LNOX 	88.0
	Segment income	3.0	5.8	+92.7%		7.7
Thermos and Other	Revenue	27.5	28.0	+1.7%	<ul style="list-style-type: none"> ➢ Launch new products in August ➢ Start operations at new plant in the Philippines 	28.0
	Segment income	9.0	9.0	-0.0%		7.0

* Segment income represents core operating income, which is calculated as operating income excluding certain gains and expenses attributable to non-recurring factors

3-1. Ortus Stage 1: State of Progress



Revenue

468.3

522.7

559.3

641.5

570.0

(Difference versus initial plan)

(+93)

(+715)

Operating Income

24.8

31.4

35.2

43.3

52.0

(Difference versus initial plan)

(+02)

(+53)

Operating Margin

5.3%

6.0%

6.3%

6.8%

9.1%

(Difference versus initial plan)

(▲0.1%)

(+0.1%)

Overseas Sales Ratio

27.6%

31.4%

35.0%

44.4%

39.6%

ROCE

5.5%

6.2%

6.2%

7.4%

8.5%

* The fiscal year ended March 31, 2016 includes the impact of changes in the accounting period of some subsidiaries (revenue +¥51.3 billion, operating income +¥2.9 billion)



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3-2. Ortus Stage 1 Strategic Policy



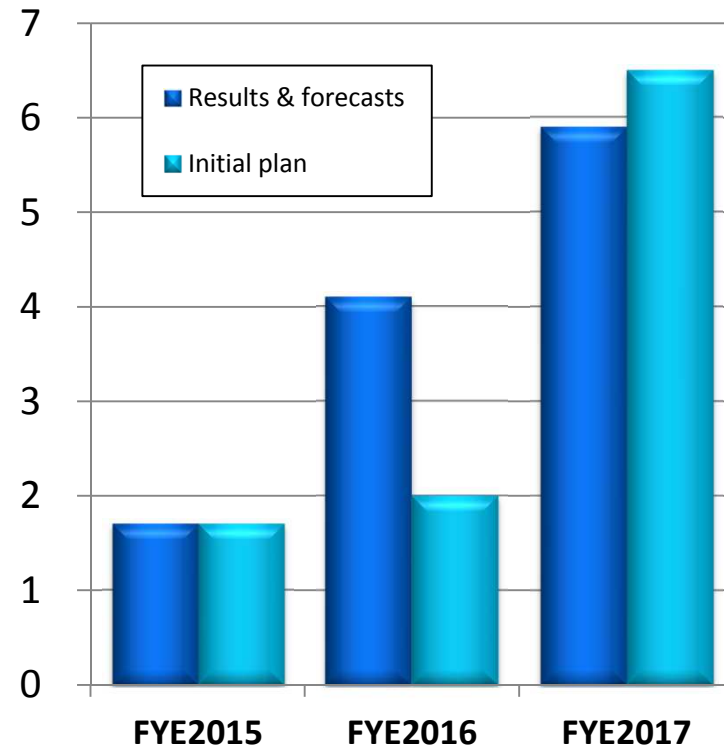
3-3. Progress with Transformation

Transformation



Improvement in earnings due to transformation and cost reductions (Cumulative Vs. FYE2014)

(Billions of yen)



The initial target for the current fiscal year is ¥6 to ¥7 billion. As a result of transformation and cost reductions centered on domestic businesses, TNSC now expects to achieve about ¥6 billion, which would be largely in line with the initial target.

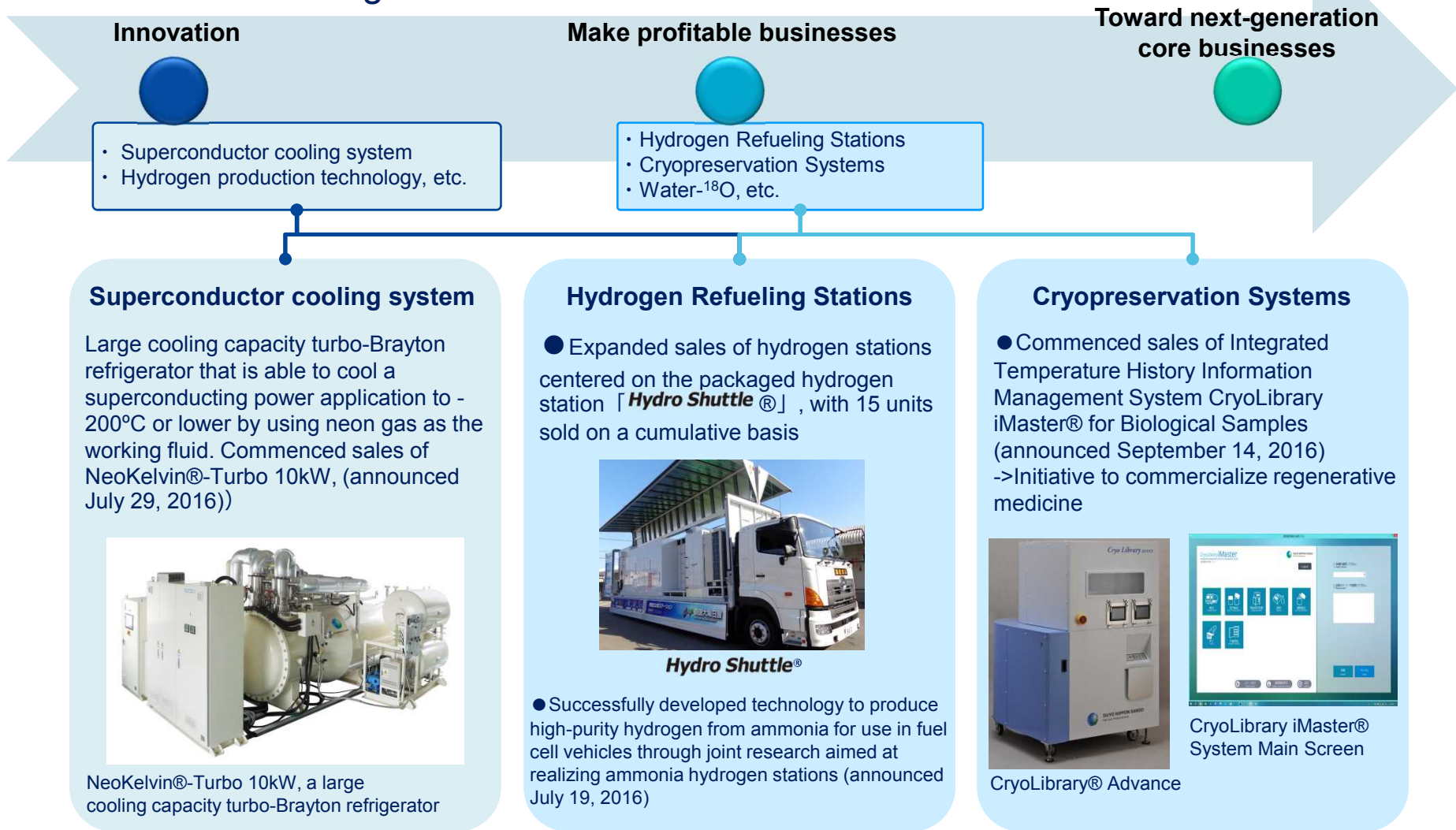


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3 - 4 . Commercialization of new strategic products

Innovation

- Develop new products in energy, healthcare and other fields that will be the core of the next generation



NeoKelvin®-Turbo 10kW, a large cooling capacity turbo-Brayton refrigerator



Hydro Shuttle®



CryoLibrary® Advance



CryoLibrary iMaster® System Main Screen



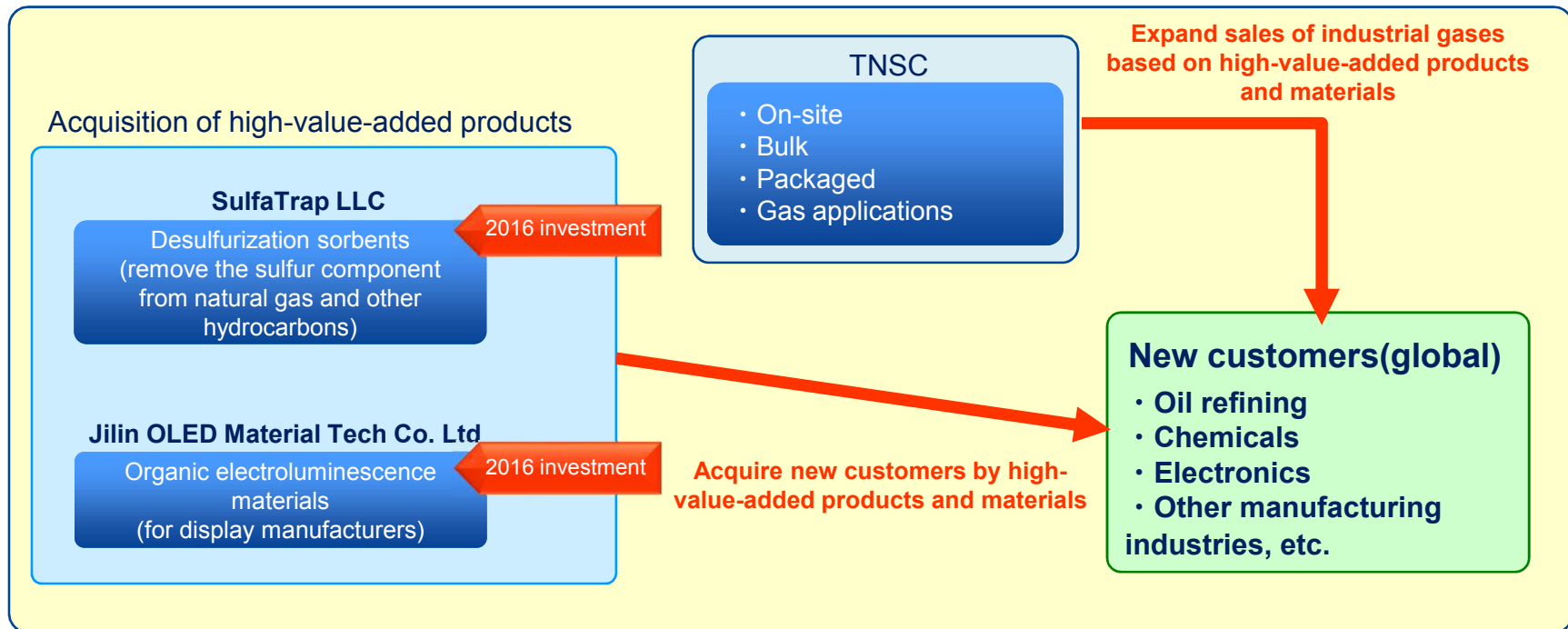
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3-4. Open Innovation

- Aim to incorporate products high in added value through venture capital investment

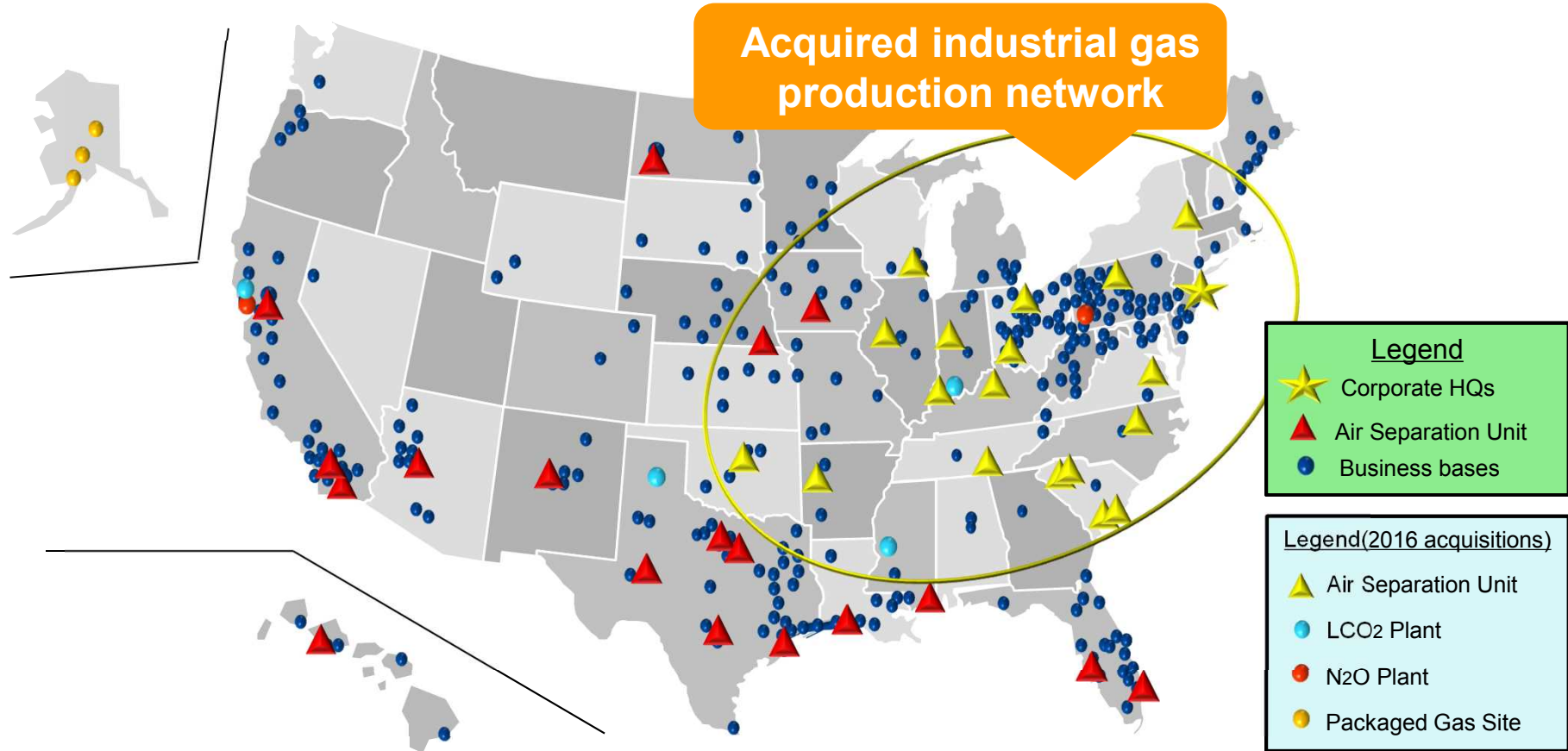


Open Innovation strategy



3 - 5 . U.S. ①: Acquisition of Air Liquide divested assets

- September 2016, acquired certain U.S. assets (eighteen air separation units, two nitrous oxide plants, four carbon dioxide plants and three packaged gas retail stores in Alaska) divested by Air Liquide.



This acquisition contributes to extending production network of separate gases in the East and Midwest and building our status as a national supplier

3 - 5 . U.S. ②: Expand on-site business

Globalization

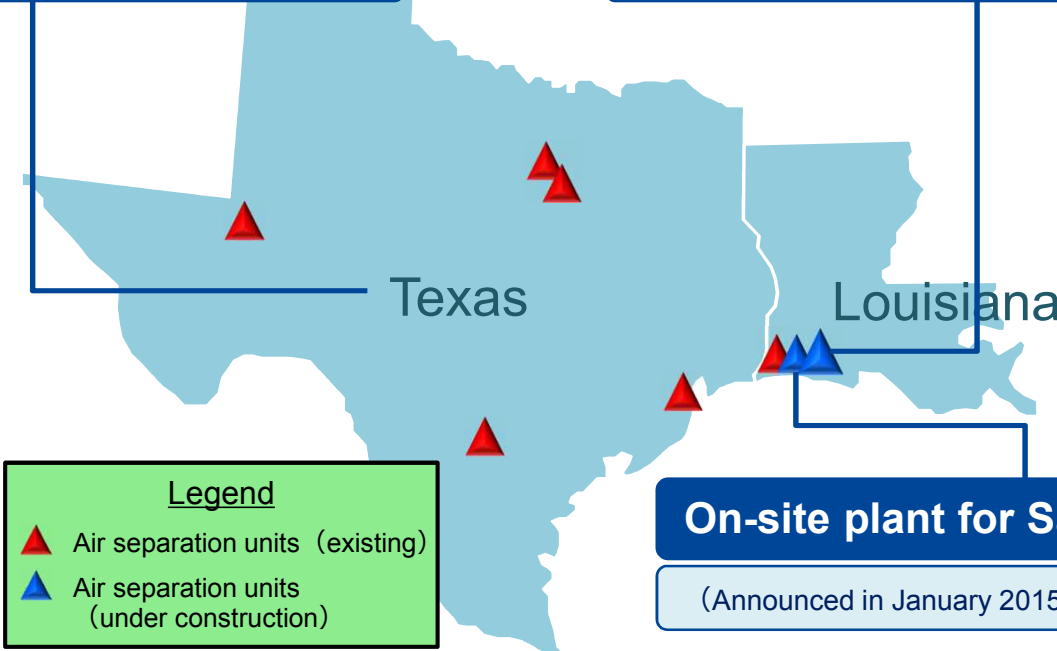
- Awarded large-scale on-site supply contracts in Texas and Louisiana

New on-site business in Texas

Location: Central Texas
Pipeline Customer: Major oxygen user
Start Up: 2017

New on-site business in Louisiana

Location: Westlake, Louisiana
Pipeline Customer: Lotte Chemical Louisiana LLC
Start Up: 2018



Establish long-term revenue base with on-site supply contracts and support fabrication customer growth with new argon sales

3-5. U.S.③: Expand CO₂ business

Globalization

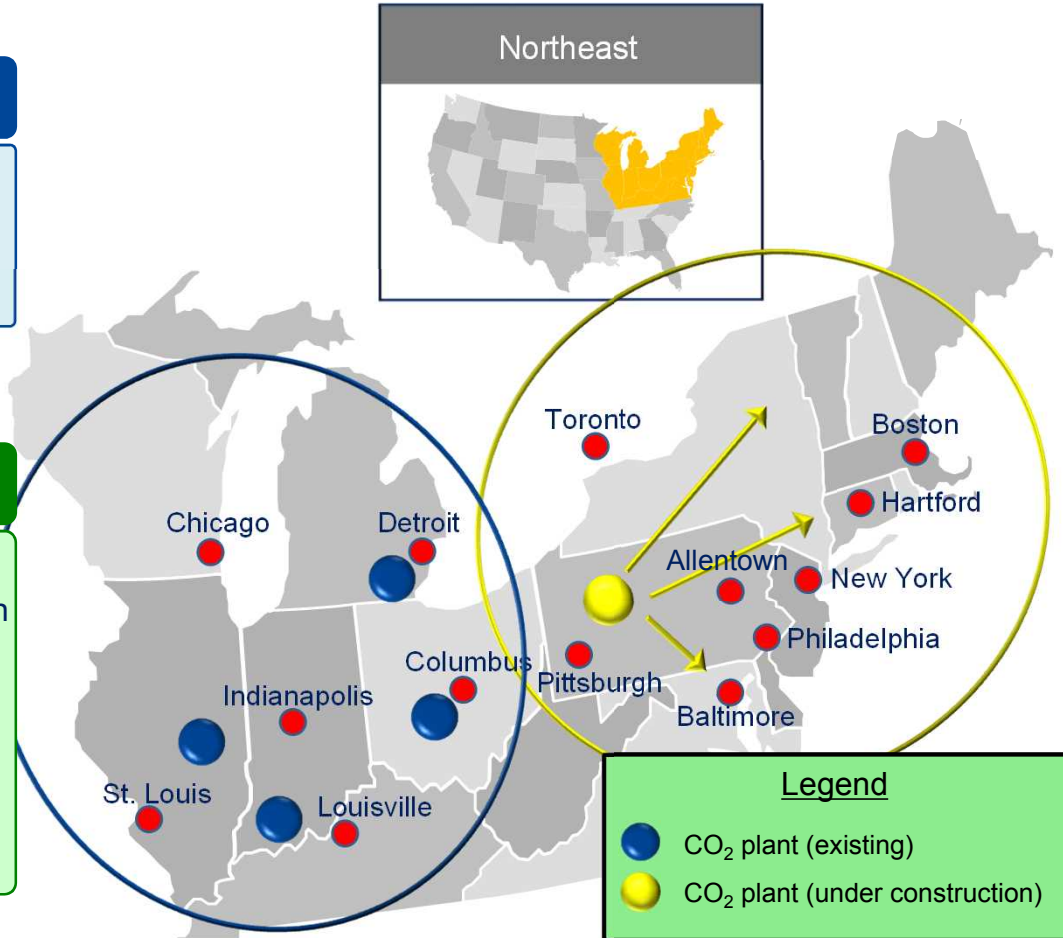
- Construct a LCO₂ and dry ice manufacturing facility in Pennsylvania

New plant overview

Location: Clearfield, Pennsylvania
Start Up: 2017

Investment objectives

- ◆ Establish stable LCO₂ and dry ice supply chain to customers in Northeast and Mid Atlantic
- ◆ Reduce distribution expense into the target market
- ◆ Redirect existing production capacity to new customers in Midwest



Leverage acquired assets and the Clearfield project to expand the CO₂ and dry ice businesses

3-5. Growth Strategies for Asia & Oceania

Globalization

M&A

Strengthen Group capabilities by using regional headquarters



- Establish regional headquarters in Singapore and China, and strengthen collaboration within each area and between Group companies
- ◆ Complete the transition of capital to regional headquarters in China in March 2017 (planned)

Strengthen businesses in regions that TNSC has already entered



- Strengthen TNSC's business infrastructure in the regions that it has already entered by installing air separation units and conducting M&A
- ◆ Acquire Taiyo Gases Co., Ltd. in October 2016 (Thailand)



Expand business territory



- Enter regions that TNSC has not yet entered by setting up operating companies and conducting M&As
- ◆ Establish operating company in November 2016 (planned) (Myanmar)



Strengthen capabilities regarding global customers



- Focus on expanding sales of electronics products in Taiwan, China and South Korea
- Respond flexibly to the globalization of electronics customers



3-5. Asia & Oceania: Entry into Myanmar

Globalization

- Established an operating company in the Thilawa Special Economic Zone in Myanmar

Company Overview

Company name: Taiyo Nippon Sanso Myanmar Corporation

Location: Thilawa Special Economic Zone

Shareholder: Taiyo Nippon Sanso Holdings Singapore Pte. Ltd. 100%

Capital: The equivalent of US\$11,296 thousand in Myanmar Kyat (MMK)

Business:

- Production and sales of industrial gases
- Engineering and piping works, etc.

Main facilities: Headquarters office, air separation unit, filling station, and delivery facility, etc.

Business Strategy

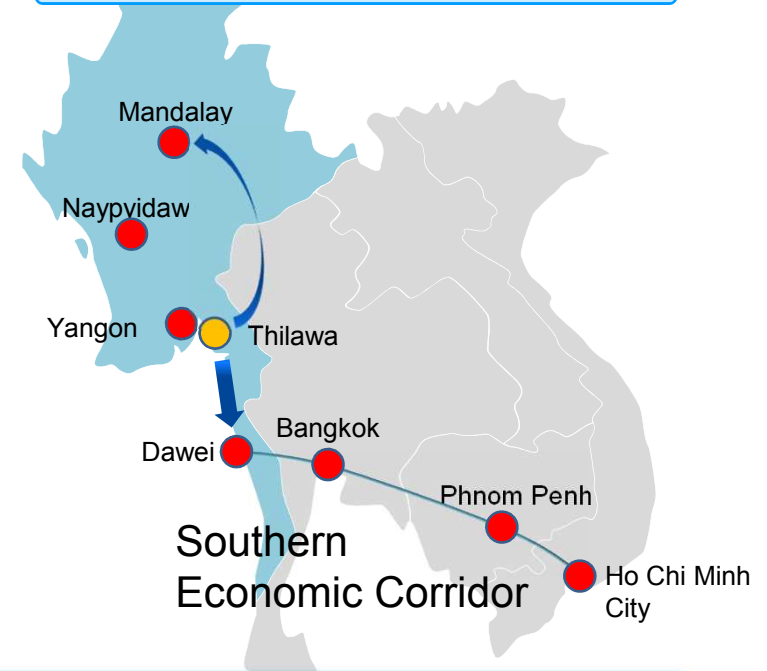
- ◆ Provide a global standard of service (quality and safety)
- ◆ Sell industrial gases to Japanese companies (construction, metal processing, transportation equipment-related and other fields)
- ◆ Secure sales channels through sales agreements with leading local dealers
- ◆ Establish a bulk gas business in Myanmar ahead of other companies

Basic Information about Myanmar

GDP: ¥5 trillion

GDP growth rate: 7.03% (2015 result)

Industrial gas market size: ¥2.0 billion (Yangon area)



Enter to Myanmar to derive first-mover profit in anticipation of rapid growth in the future



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