



Six Months Ended September 30, 2022(FY2022) Result Briefing

November 10, 2022

GS Yuasa Corporation

FY2022 2nd Quarter Financial Results

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FY2022 2nd Quarter Financial Results

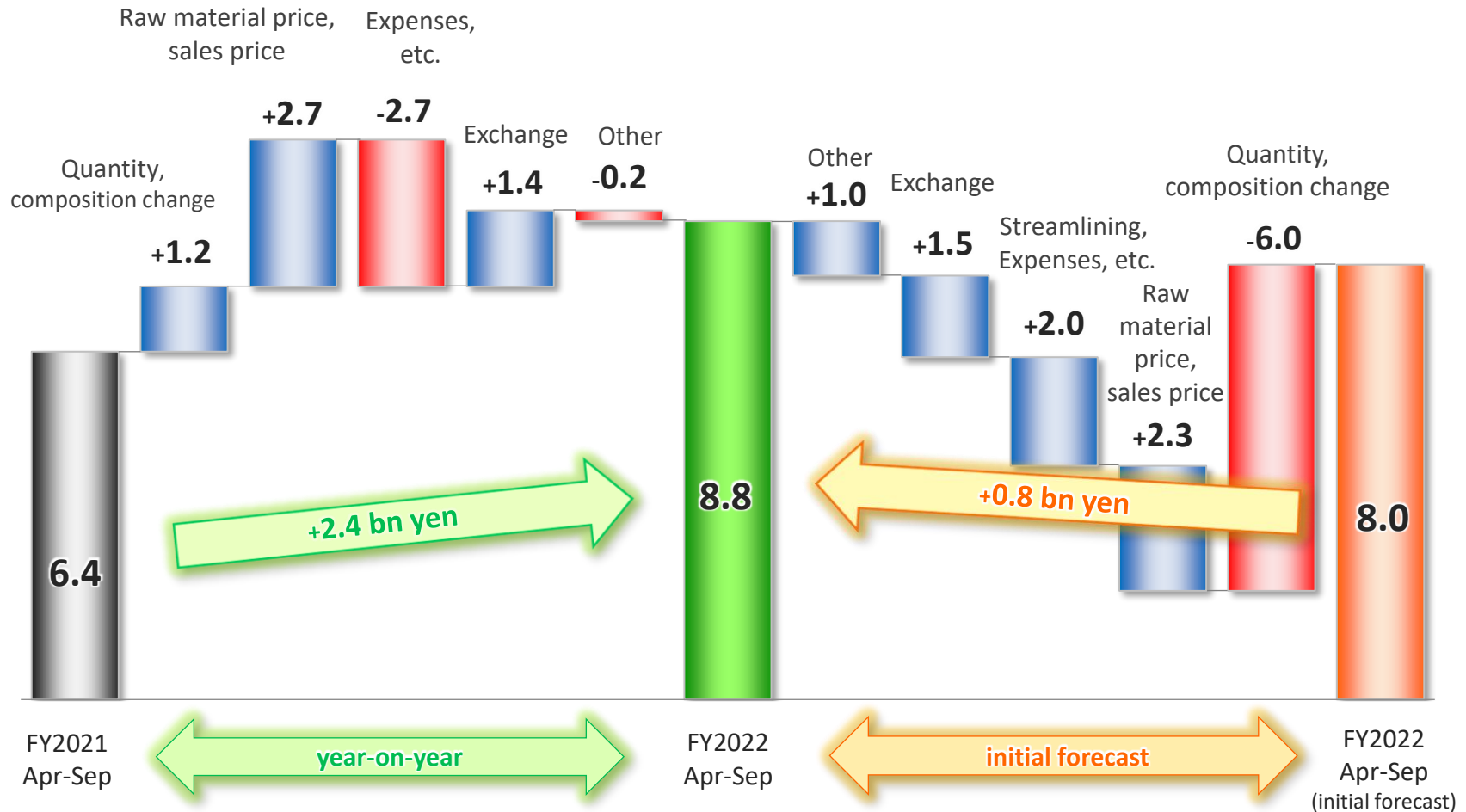
1. Net Sales, Profits



	FY2021 Apr-Sep (Six Months)	FY2022 Apr-Sep (Six Months)	Change	(Billion yen) (YoY%)
Net Sales	195.1	Record 235.2	+40.1	(+20.6%)
Operating income (Operating income ratio)	5.2 2.7%	Record 8.2 3.5%	+3.0 +0.8P	(+57.3%)
Operating income before amortization of goodwill (Operating income ratio before amortization of goodwill)	6.4 3.3%	Record 8.8 3.7%	+2.4 +0.4P	
Ordinary income	6.6	6.0	-0.6	(-8.4%)
Extraordinary income	1.5	1.5	-0.0	
Extraordinary loss	1.7	0.3	-1.4	
Profit before income taxes	6.4	7.2	+0.8	
Income taxes	2.1	3.2	+1.1	
Profit attributable to non-controlling interests	2.2	2.3	+0.1	
Profit attributable to owners of parent (Net profit ratio)	2.2 1.1%	1.7 0.7%	-0.5 -0.4P	(-22.4%)
Profit attributable to owners of parent before amortization of goodwill (Net profit ratio before amortization of goodwill)	3.2 1.6%	2.2 0.9%	-1.0 -0.7P	
Domestic lead price quote	¥305,200/t	¥341,700/t	+¥36,500/t	
LME	2,234US\$/t	2,090US\$/t	-144US\$/t	
Exchange rate	¥110.10/US\$	¥135.30/US\$	+¥25.20/US\$	

1. Net Sales, Profits

Factors for Operating Income Change (**year-on-year** / **initial forecast** comparison)
 (Billion yen)



Note : Operating income is operating income before amortization of goodwill.

2. Segment Results

(Billion yen)

		FY2021 Apr-Sep (Six Months)		FY2022 Apr-Sep (Six Months)		Change	
		Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: pp)
Automotive Batteries	Japan	35.2	1.8 (5.0)	37.7	1.8 (4.7)	+2.5	-0.0 (-0.3)
	Overseas	87.6	4.3 (4.9)	121.8	6.1 (5.0)	+34.2	+1.8 (+0.1)
Industrial Batteries and Power Supplies		46.0	-0.2 (-0.3)	40.4	0.8 (1.9)	-5.6	+1.0 (+2.2)
Automotive Lithium-ion Batteries		18.4	0.2 (0.9)	27.3	0.2 (0.7)	+8.9	+0.0 (-0.2)
Specialized Batteries and Others		7.9	0.2 (2.9)	8.0	-0.0 (-0.5)	+0.1	-0.2 (-3.4)
Total		195.1	6.4 (3.3)	235.2	8.8 (3.7)	+40.1	+2.4 (+0.4)

Note : Operating income is operating income before amortization of goodwill and operating income ratio is operating income ratio before amortization of goodwill.

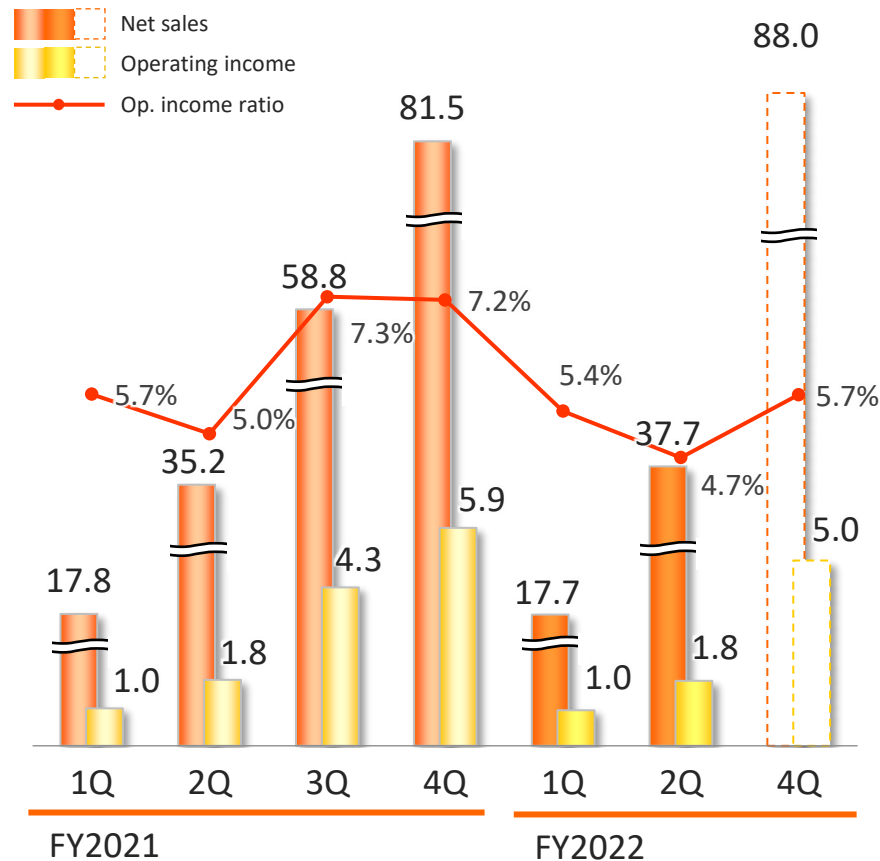
2. Segment Results (Automotive Batteries (Japan))

**Sales increased,
Profit declined**

(Billion yen)

Automotive Batteries (Japan)

Net Sales, Operating income, Op. income ratio



FY2022 2Q Sales Overview

- Sales volume of batteries for new automobiles decreased because production decrease of automakers due to semiconductor shortage, etc. has continued
- Sales volume of replacement batteries performed well due to the impact of increase in continuous use of owned cars

Main Profit Change Factors

Quantity, composition change	-0.5
Raw material prices, sales prices	+0.3
Streamlining, expenses, etc.	+0.2

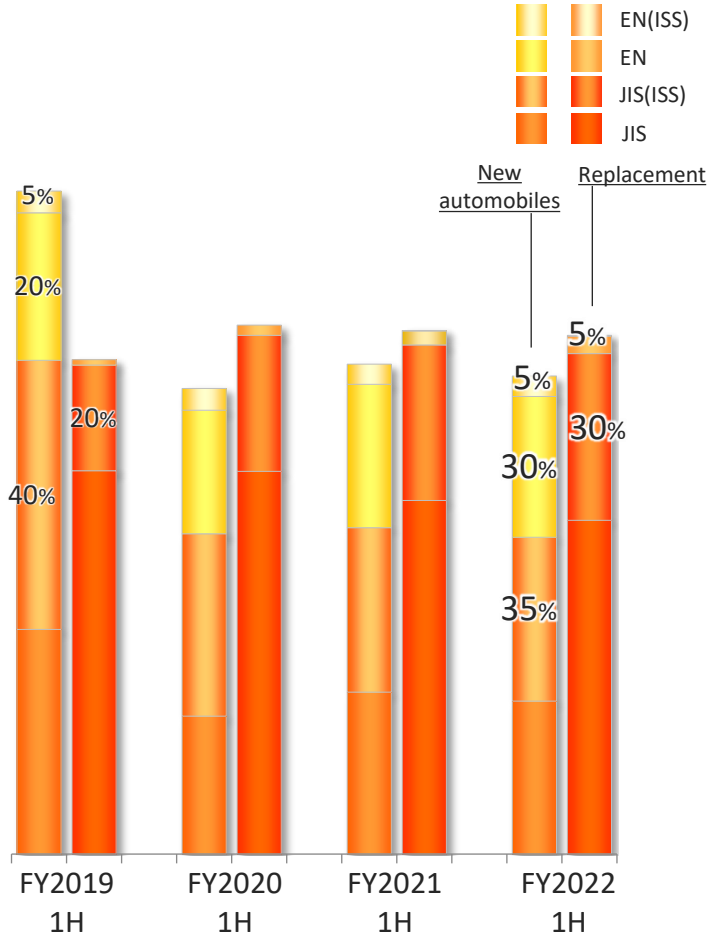
Note: Operating income is operating income before amortization of goodwill and Op. income ratio is Op. income ratio before amortization of goodwill.

2. Segment Results (Automotive Batteries (Japan))

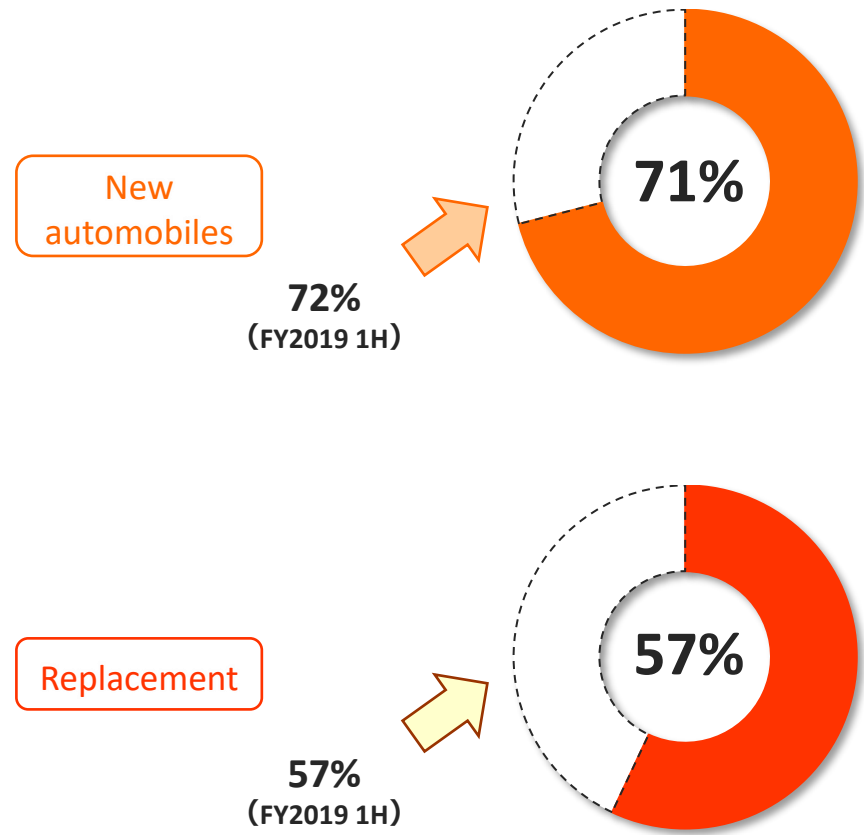
Ratio of Shipped Batteries for New Automobiles and Replacement / Market share



Ratio of Shipped Batteries



Market Share (FY2022 1H/Group total)



*In-house research (excluding imported batteries)

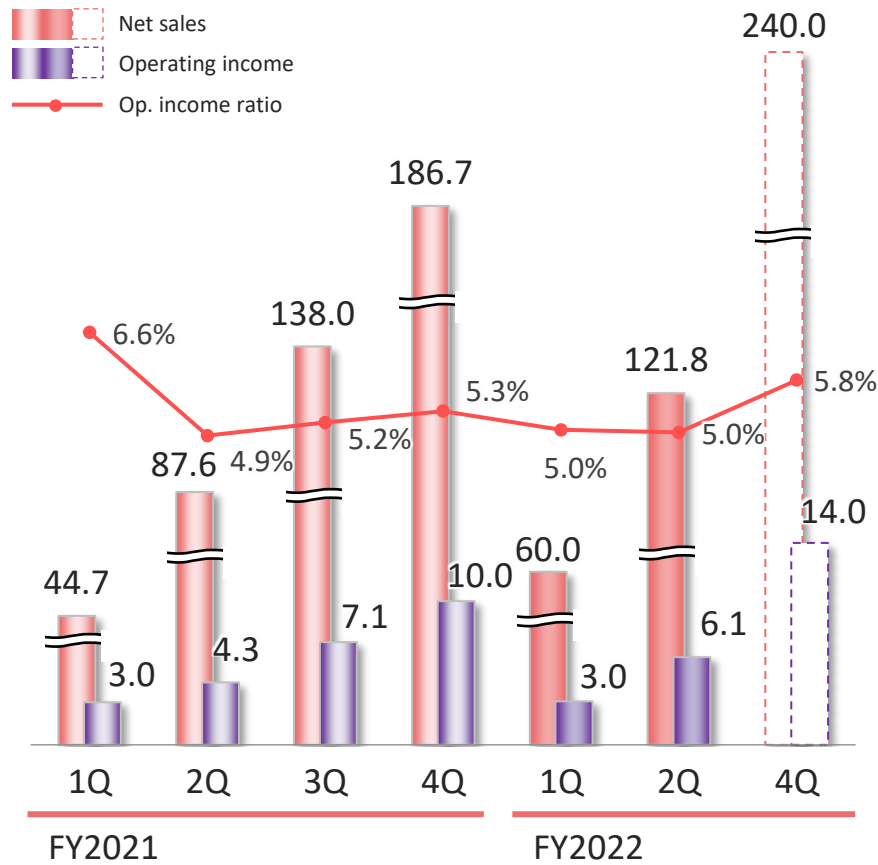
2. Segment Results (Automotive Batteries (Overseas))

Automotive Batteries (Overseas)

Sales and profit increased

(Billion yen)

Net Sales, Operating income, Op. income ratio



FY2022 2Q Sales Overview

- In Southeast Asia, sales volume of batteries for automobiles and motorcycles remained strong
- Sales volume of batteries for automobiles increased due to consolidation of our site in Turkey
- Sales increased thanks to the impact of weaker yen

Main Profit Change Factors

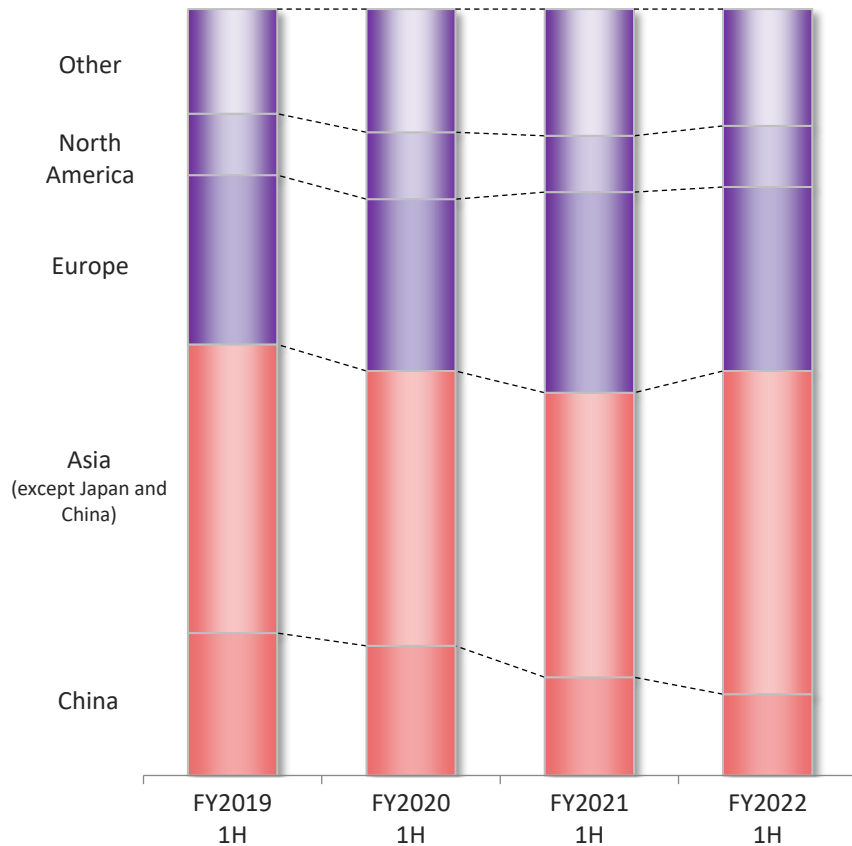
Quantity, composition change	+0.2
Raw material prices, sales prices	+2.1
Expenses, etc.	-1.9
Exchange	+1.4

Note: Operating income is operating income before amortization of goodwill and Op. income ratio is Op. income ratio before amortization of goodwill.

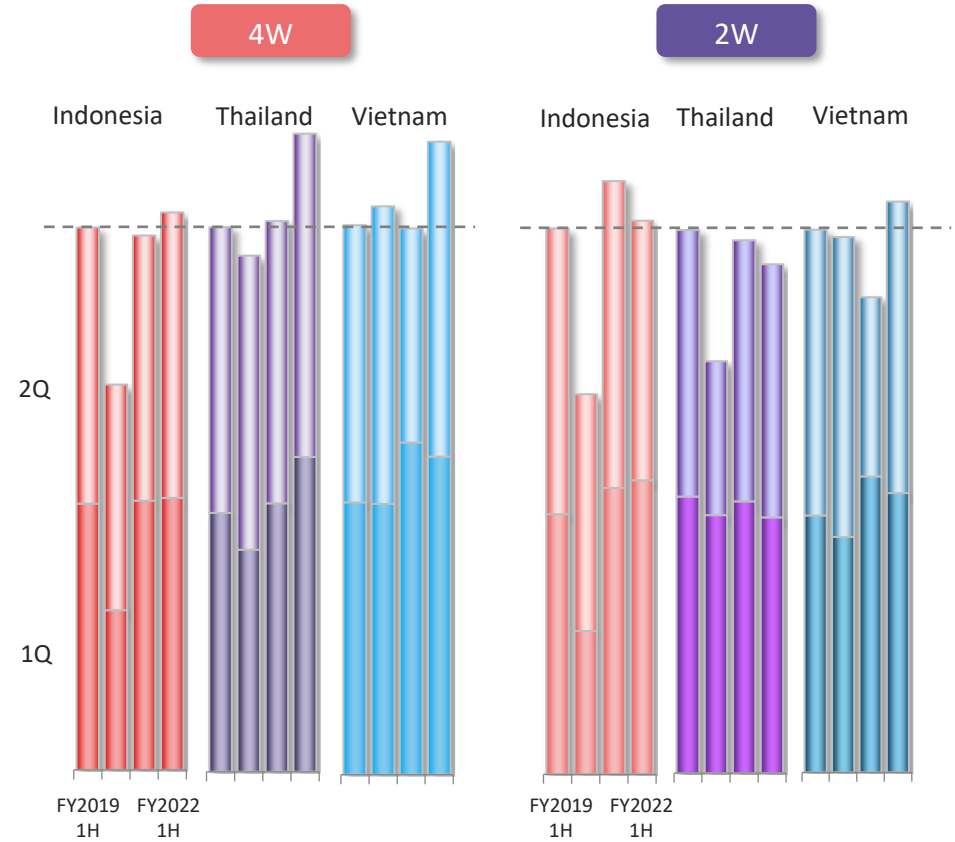
2. Segment Results (Automotive Batteries (Overseas))

Sales by Region / Ratio of Shipped Batteries in Indonesia, Thailand, Vietnam

Sales by Region (include industrial)



Ratio of Shipped Batteries in Indonesia, Thailand, Vietnam



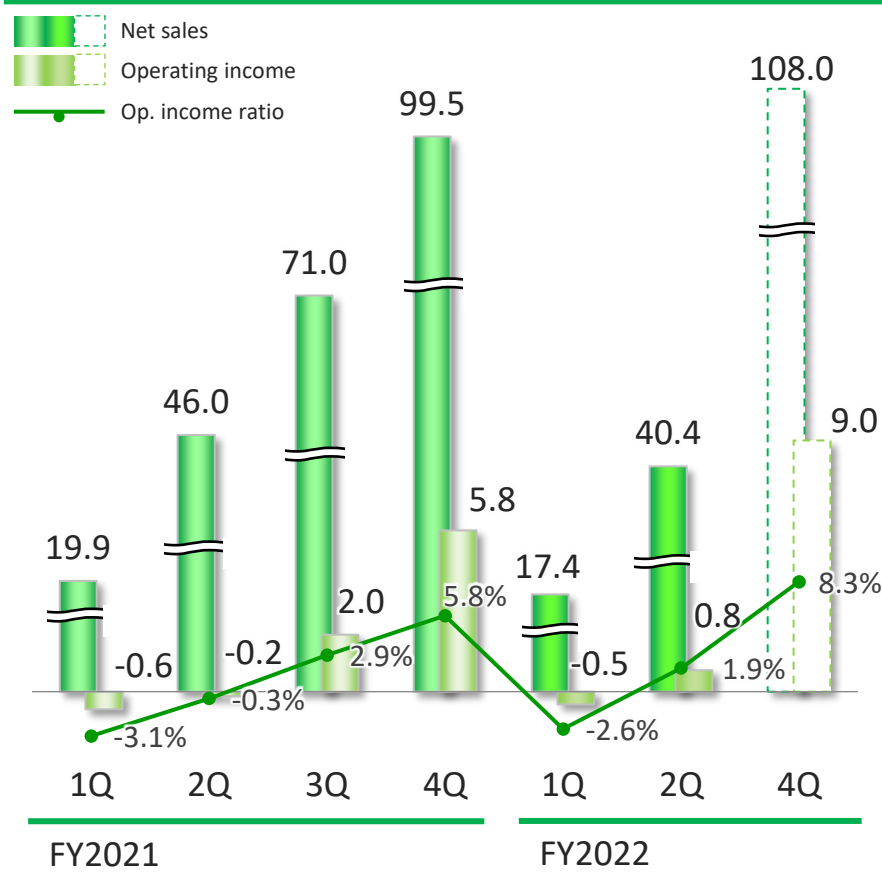
*Including equity method affiliates

Industrial Batteries and Power Supplies

Sales declined,
Profit increased

(Billion yen)

Net Sales, Operating income, Op. income ratio



FY2022 2Q Sales Overview

- Sales decreased because supply of lithium-ion batteries for interconnected system of large wind power generation in Hokkaido finished in the previous fiscal year
- Sales of backup batteries and power supplies decreased due to long delivery times for mini-UPS components
- Sales volume of replacement batteries for forklifts progressed steadily

Main Profit Change Factors

Quantity, composition change	+0.8
Raw material prices, sales prices	-0.1
Streamlining, expenses, etc.	+0.3

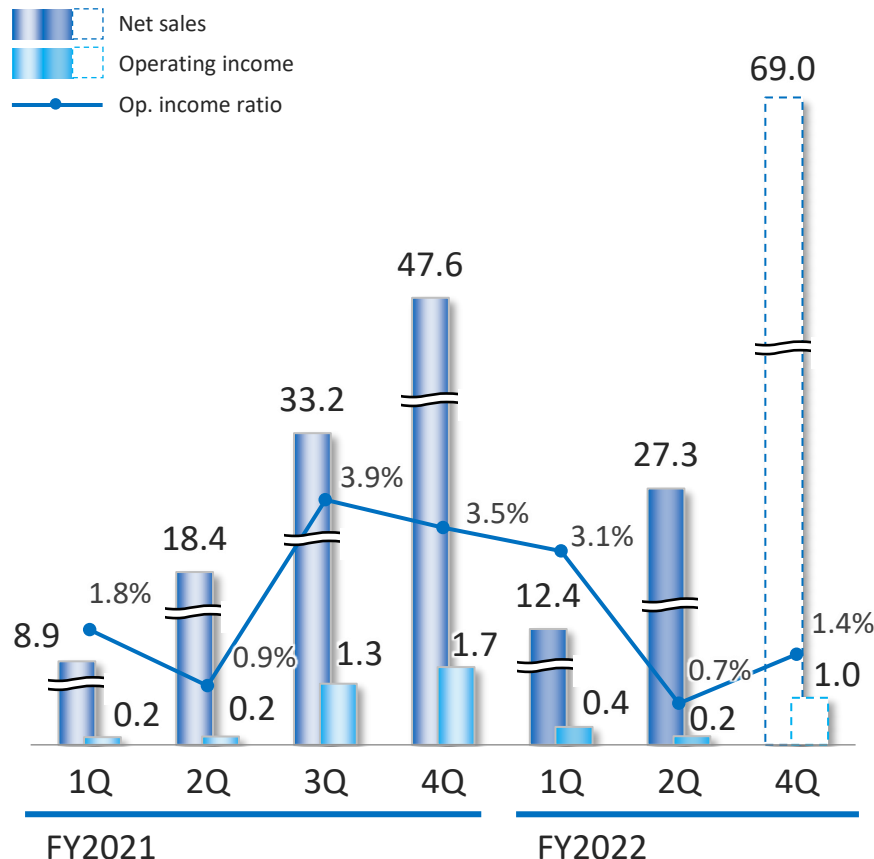
2. Segment Results (Automotive Lithium-ion Batteries)

Automotive Lithium-ion Batteries

Sales and profit increased

(Billion yen)

Net Sales, Operating income, Op. income ratio



FY2022 2Q Sales Overview

- [Blue Energy]
Sales volume of lithium-ion batteries for hybrid vehicles (HEVs) increased because No.2 Plant started operation
- [Lithium Energy Japan]
Sales volume of plug-in hybrid vehicles (PHEVs) models equipped with our lithium-ion batteries increased

Main Profit Change Factors

Quantity, composition change	+0.7
Raw material prices, sales prices	+0.4
Expenses, etc.	-1.1

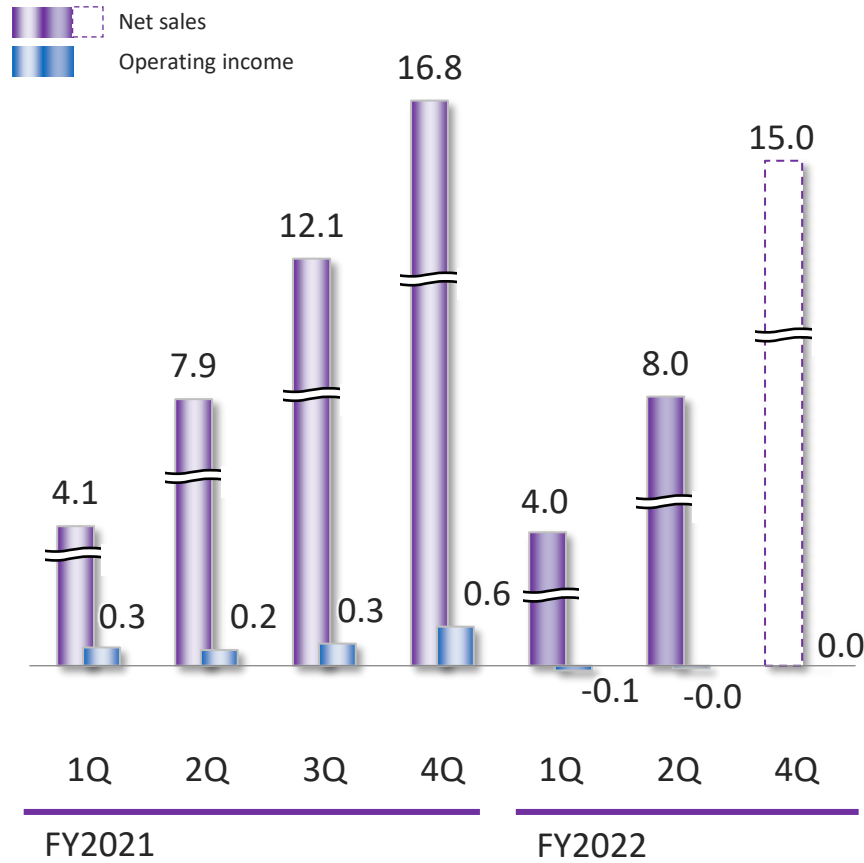
2. Segment Results (Specialized Batteries and Others)

Specialized Batteries and Others

Sales increased,
Profit declined

(Billion yen)

Net Sales, Operating income



FY2022 2Q Sales Overview

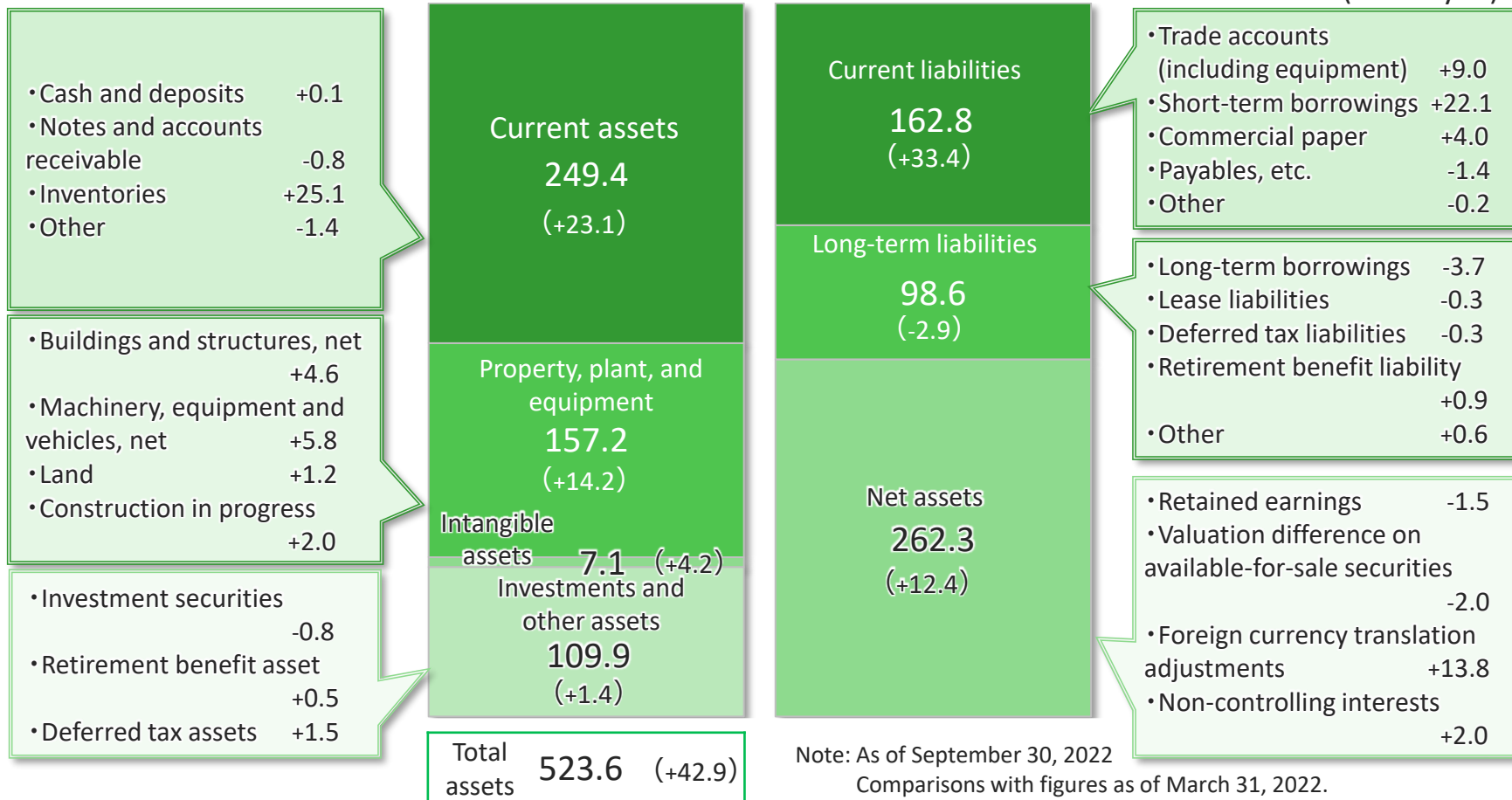
- Sales of lithium-ion batteries for submarines decreased due to the relation of standard for progress of construction works
- Sales volume of lithium-ion batteries for aircraft mainly to airlines (for replacement) increased

Main Profit Change Factors

Profit decreased due to increase in expenses

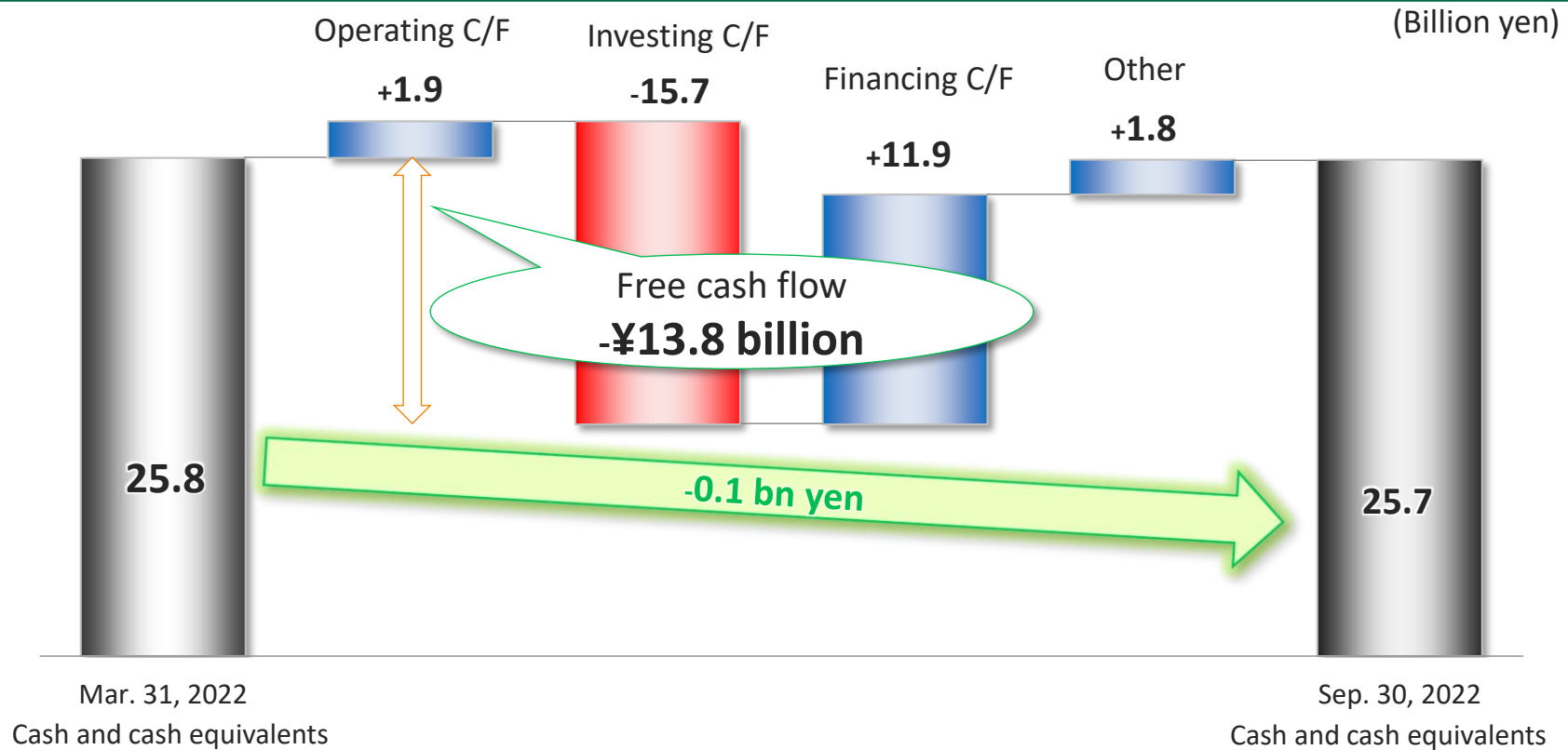
3. Balance Sheet

(Billion yen)



	3/31/2022	9/30/2022
Equity ratio	44.8%	43.1%
Total borrowings	¥82.5bn	¥104.8bn

4. Cash Flow Statements



Highlights

- Operating cash flow totaled ¥1.9 billion mainly due to increase in inventories although ensured ¥7.2 billion profit before income taxes
- Investing cash flow came to -¥15.7 billion due to capital investment for BEC No.2 plant etc.
- Free cash flow came to -¥13.8 billion and allocated to shareholder returns etc. through conducting debt

5. Capital Investment, Depreciation, R&D Costs



(Billion yen)

		FY2021 1H	FY2022 1H	FY2021 Full year	FY2022 Full year (Forecast)
Capital Investment		13.3	13.9	28.6	32.0
Automotive Batteries	Japan	1.7	0.9	3.8	4.0
	Overseas	2.3	2.7	5.3	7.0
Industrial Batteries and Power Supplies		0.6	1.9	1.3	4.0
Automotive Lithium-ion Batteries		2.8	4.7	11.0	8.0
Specialized batteries and Others		6.0	3.7	7.2	9.0
Depreciation		8.3	9.3	16.8	18.0
Automotive Lithium-ion Batteries		1.5	1.8	3.1	4.0
R&D Expenses		6.1	6.4	12.4	13.5
(Ratio of R&D expenses to net sales)		3.1%	2.7%	2.9%	2.6%

6. Revision to Segment Results Forecast

(Billion yen)

		FY2021 Actual		FY2022 Initial Forecast (A)		FY2022 Revised Forecast (B)		Change ((B) – (A))	
		Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: %)	Net sales	Operating income (Op. income ratio: pp)
Automotive Batteries	Japan	81.5	5.9 (7.2)	92.0	5.0 (5.4)	88.0	5.0 (5.7)	-4.0	- (+0.3)
	Overseas	186.7	10.0 (5.3)	236.0	14.0 (5.9)	240.0	14.0 (5.8)	+4.0	- (-0.1)
Industrial Batteries and Power Supplies		99.5	5.8 (5.8)	108.0	9.0 (8.3)	108.0	9.0 (8.3)	-	- (-)
Automotive Lithium-ion Batteries		47.6	1.7 (3.5)	70.0	1.0 (1.4)	69.0	1.0 (1.4)	-1.0	- (-)
Specialized Batteries and Others		16.8	0.6 (3.4)	14.0	0.0 (-)	15.0	0.0 (-)	+1.0	- (-)
Total		432.1	23.9 (5.5)	520.0	29.0 (5.6)	520.0	29.0 (5.6)	-	- (-)

Reason for revision

- Revised net sales forecast by segment considering the impact of production decrease of automakers and change in prerequisites

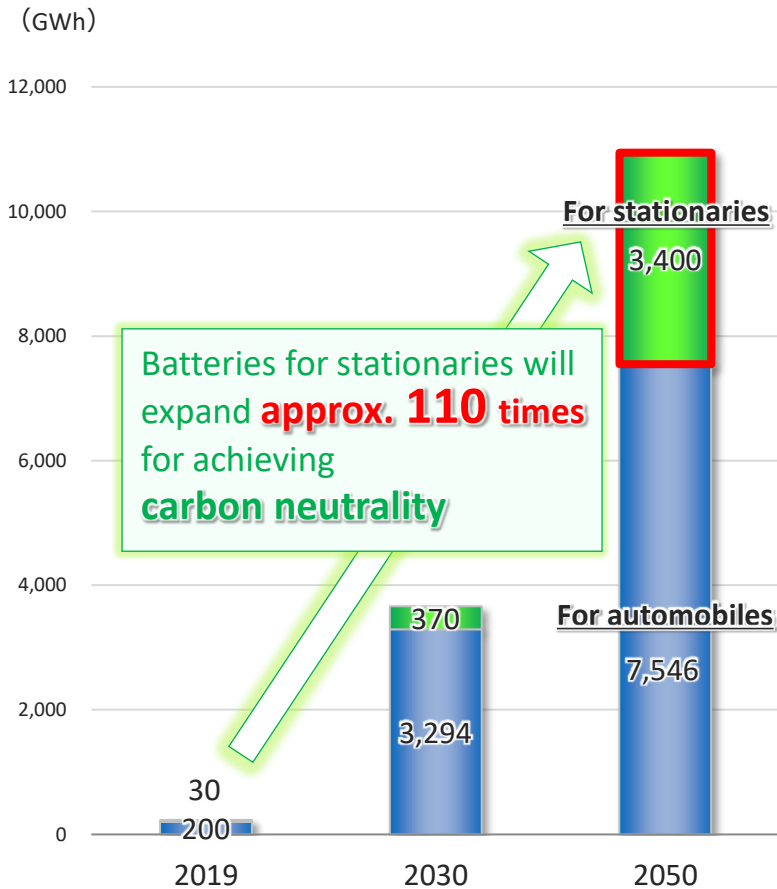
	Initial forecast	2H forecast
Domestic lead price quote	¥341,000/t	¥340,000/t
LME	2,300US\$/t	1,950US\$/t
Exchange rate	¥120.0/US\$	¥142.5/US\$

Note: Operating income is operating income before amortization of goodwill and operating income ratio is operating income ratio before amortization of goodwill.

Environment and Strategies Surrounding Storage Batteries

1. Storage Battery Market Expansion and Storage Battery Industry Strategy of Japan

Forecast of storage batteries installation (Global)



Source : Prepared based on data from IRENA Global Renewables outlook 2020 "Energy Transformation 2050"

"Storage Battery Industry Strategy" aiming to expand the presence of Japanese storage battery manufacturers

1st Target : Establishment of manufacturing infrastructure for liquid type lithium-ion batteries

«Target of manufacturing capacity (Japan)»

By 2030 at the latest : **150GWh / year**

2nd Target : Ensuring global presence

«Target of manufacturing capacity (Global)»

In 2030 : **600GWh / year**

Global market share : **20%**

3rd Target : Capturing next-generation batteries market

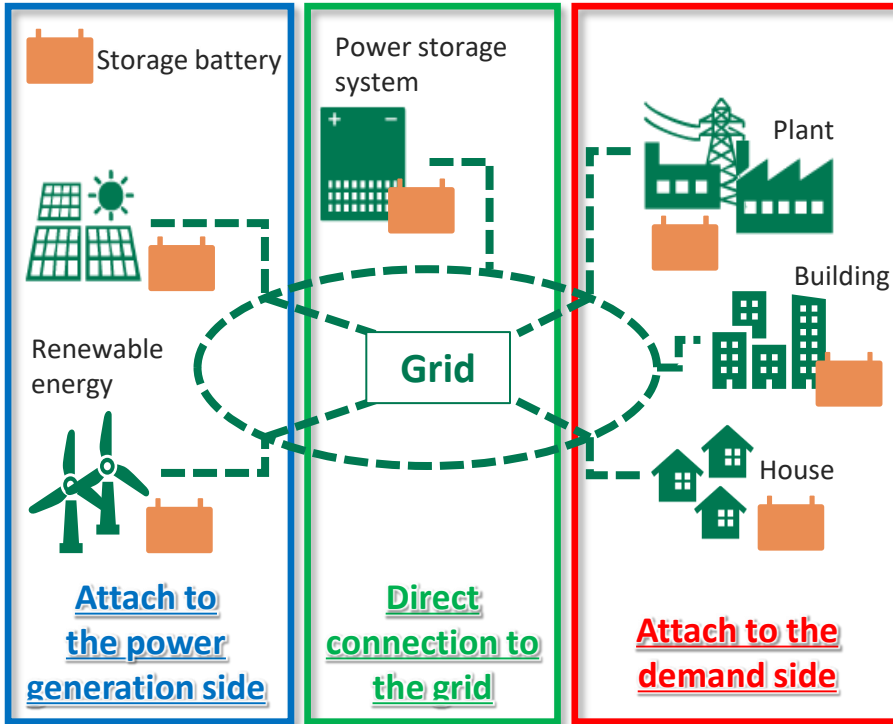
«Target of research and development capacity»

Circa 2030 : **Commercialize all-solid-state batteries and continue to lead technology development**

Source : Prepared based on data from "Storage Battery Industry Strategy" by the Ministry of Economy, Trade and Industry (METI)

2. Practical use of Storage Batteries in Renewable Energy Market

Storage batteries connection to the grid (power grid)



As the introduction of renewable energy expands, **storage batteries**, which are connected to the grid and are indispensable for strengthening the regulating power of the power grid, will become even more important.

Examples of Supplying GS Yuasa's Lithium-ion Batteries

Kushiro Town Toritoushi Wildland Solar Power Plant (Kushiro-gun, Hokkaido)



- Operator : Obayashi Clean Energy Corp.
- Output : 10MW
- Capacity : 6,750kWh

Contribute to reduce the output fluctuation of solar power generation

Overall view of the power plant

Hagigaoka Water Treatment Plant (Wakkanai City, Hokkaido)



- Operator : Wakkanai City, Hokkaido
- Capacity : 2MWh

Stabilize supply and demand of grid electricity in "self-consignment system"*

Wind power storage system
The power storage system container in situ

* The self-consignment system makes it possible for companies, local governments, and other organizations with their own electricity generation facilities to send the power they generate to their own distantly located bases via the power grids of regional electricity network operators.

3. GS Yuasa's Efforts in Renewable Energy Market



Expand importance of storage batteries

The power system is the backbone of the nation's infrastructure and high quality and safety are required

Emphasizing "domestic production" and "safety"
Enhancing value provided to customers
with all-in-one solutions

1. Complete packages of power conditioners and storage batteries
 2. Offer from products to installation and maintenance as integrated systems
- Enhancing presence in renewable energy market**

Introducing New Products in Renewable Energy Market

Enter renewable energy market

- Supply to world's largest storage battery facilities (Toyotomi-cho, Hokkaido)

Installation completed in FY2021



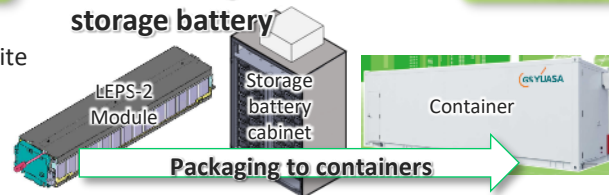
Panoramic view of the site

- Operator : North Hokkaido Wind Energy Transmission Corporation
 - Cells : The first generation of storage battery (LEPS-1)
 - Output : 240MW
 - Capacity : 720MWh
- Contributing to output fluctuation mitigation in wind power generation**

Enhance profitability with all-in-one solutions

- Power storage systems with the second generation of storage battery

Plan to start sales in second half of FY2022



Further enhance competitiveness

- Develop the third generation of storage battery

New lithium-ion batteries with higher energy density and improved cost competitiveness

Develop lithium-ion batteries for renewable energy

The first generation (LEPS-1)

Nominal capacity : 65Ah
Output : 450W

The second generation (LEPS-2)

75Ah
526W

« Compared to the first generation »

Longer life
 Improve capacity maintenance rate
Increasing capacity
 Approx. 15% increased

The third generation

Undecided

Aiming for even higher capacity from second generation batteries

Source : North Hokkaido Wind Energy Transmission Corporation
 (https://www.hokubusouden.com/progress/869/#contents)

4. GS Yuasa's Strengths in Renewable Energy Market

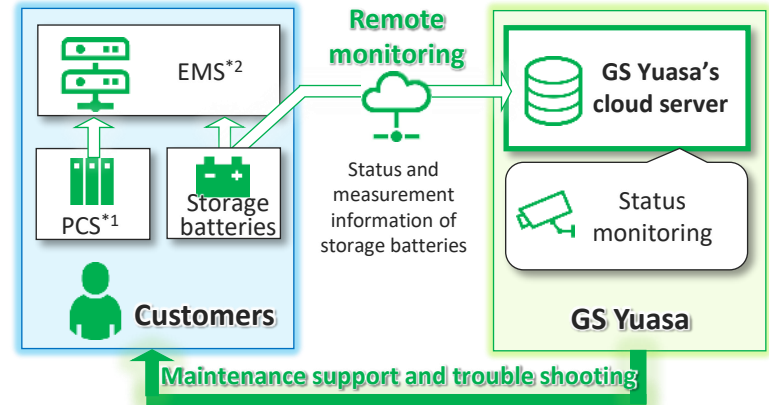
Network -Maintenance and operational services using DX-

Network
Maintenance and operational services using DX



- Provide preventive maintenance services using AI and DX to maintain stable operation and optimal control, which are essential for power generation facilities used for long periods of time

Outline of STARELINK Service



*1 Power conditioners
*2 Energy management systems

Overview of STARELINK Service

Install monitoring equipment in storage battery systems, connect to the cloud environment, and remotely monitor

- Confirm soundness
- Confirm measurement (detailed) information
- Accumulate long-term data

Remote monitoring
-Utilizing cloud-

Analyze data stored in the cloud and submit reports of operational status and deterioration of storage battery systems

- Analyze operational condition
- Diagnosis storage battery deterioration
- Predict storage battery abnormality

Analysis & diagnosis
-Utilizing AI-

- Estimate storage battery deterioration
- Maintain guaranteed capacity
- Propose operational improvements

Capacity guarantee
-Predictive technology-

Predict storage battery deterioration based on expected operations and guarantee required capacity for 15 years (maximum 20 years)

Maintenance & preservation
-Utilizing IT-

- Confirm soundness through periodic inspections
- Prevent failure through periodic parts replacement
- Repair and restore when abnormalities occur

Repair and restore equipment when abnormalities occur in addition to preventive maintenance by periodic inspections and parts replacement

4. GS Yuasa's Strengths in Renewable Energy Market

Footwork -Support services are available 24 hours a day, 365 days a year-



Footwork

Support services are available 24 hours a day, 365 days a year



➤ Utilize our network of more than 100 service locations throughout Japan. With one of the best support systems in the industry, we can provide safe and secure services 24 hours a day, 365 days a year, leading to BCP support

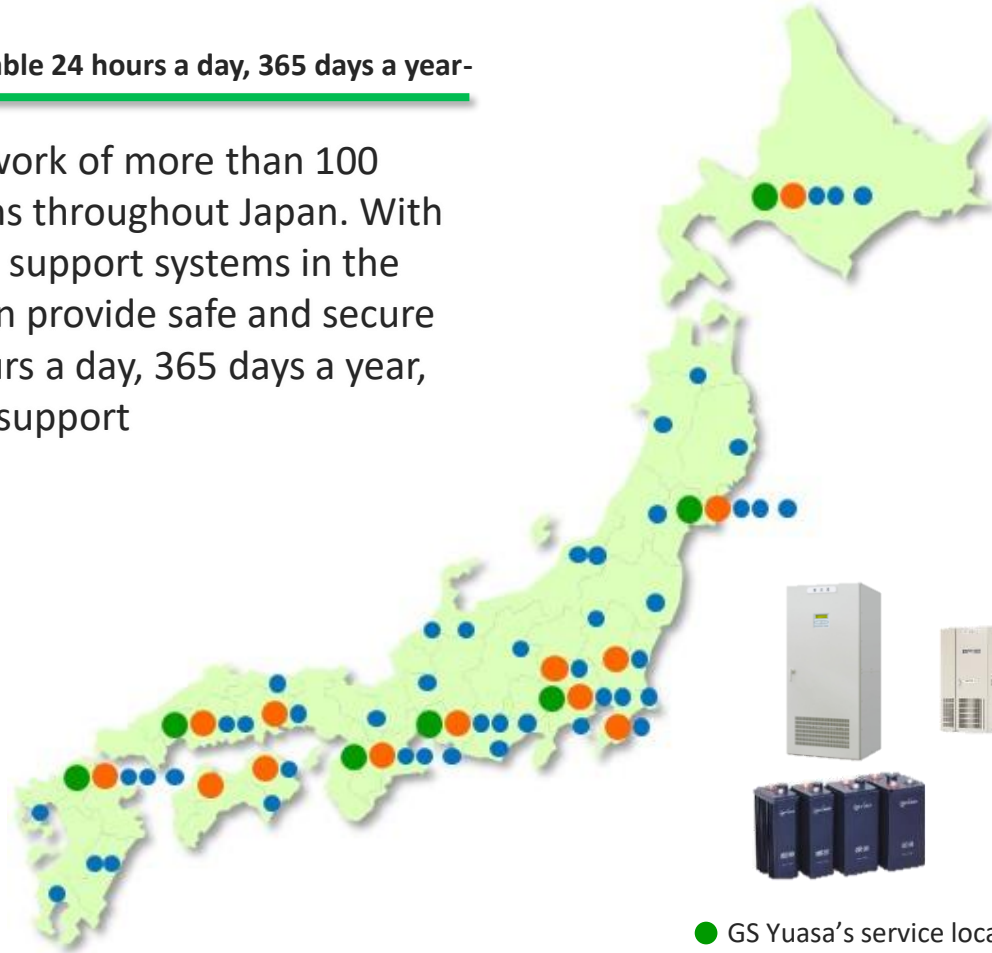
Service provision flow



GS Yuasa

On-site installation work and maintenance and servicing

Customers



- GS Yuasa's service locations
- GS Yuasa holly owned subsidiary service locations
- GS Yuasa's sole agent service locations



Abundant service personnel : **approx. 1,000**

*Persons with expertise in storage batteries certified by GS Yuasa



Creating Synergistic Effect with GS Yuasa Energy Co., Ltd.

1. Performance and Market Share after the Transfer

Net sales and operating income of Automotive Batteries (Japan) segment

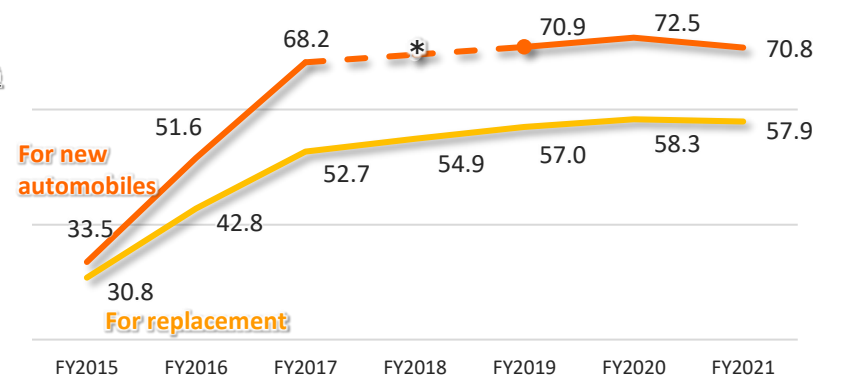
Consolidated from the second half of FY2016

(Billion yen)



Change in market share of batteries for new automobiles and replacement

Market share (%)



* No share information in FY2018

Note: In-house research (excluding imported batteries)

Contribute to profits excluding goodwill etc.

- Accumulated amortization of goodwill, etc. : approx. **11.4 billion yen**
(Cumulative total for FY2016-2021)
- Accumulated operating income of GS Yuasa Energy : approx. **20.1 billion yen**
(Cumulative total for FY2016-2021)

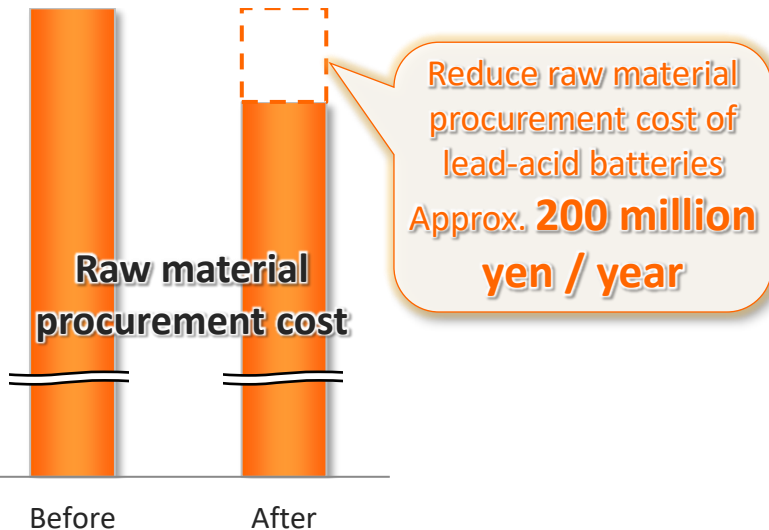
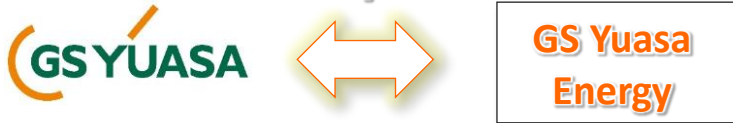
Contribute to GS Yuasa's business expansion with profits exceeding amortization of goodwill, etc. and market share gains

Note: Operating income is operating income before amortization of goodwill. Scale of operating income graph is adjusted.

2. Creating Synergistic Effect

Joint Purchasing

Centralize procurement



Reduce raw material procurement cost of lead-acid batteries
Approx. **200 million yen / year**

- Synergistic effect**
- Reduce cost through increase in amount of material resources
 - Reduce cost through sharing raw material price

Mutual Supply of Storage Batteries

Large storage batteries (For business vehicles), EN batteries
【approx. 100,000 units / year】



Small storage batteries, VRLA batteries
【approx. 400,000 units / year】

Start supplying EN batteries from global sites to GS Yuasa Energy

- Synergistic effect**
- Lineup expansion
 - Maximize sales opportunities through supply capacity flexibility
 - Investment restraint

Other Synergies

- Support introducing manufacturing facilities
- Share technological knowhow mutually

- Synergistic effect**
- Improve manufacturing process through collaboration between two companies
 - Increase speed of development and evaluation

Although this document has been prepared with information believed to be correct, GS Yuasa Corporation does not guarantee the accuracy or the completeness of such information. Also, the information herein contains forward-looking statements regarding the Company's plans, outlooks, strategies and results for the future. All the forward-looking statements are based on judgments derived from information available to the Company at the time of release. Certain risks and uncertainties could cause the Company's actual results to differ materially from any projections presented herein.



Reference

External ratings of Sustainability activities

Sustainability evaluations

(As of October 31, 2022)

	ESG rating by MSCI (U.S.) ^{*1}	ESG rating by FTSE (English) ^{*2}	CSR assessment by Toyo Keizai Inc. ^{*3}				CDP (English) assessments ^{*4}
			HR utilization	Environment	Corporate governance	Sociality	
2022	BBB	3.6	AA	AAA	AA	AA	A-
2021	A	3.6	AAA	AAA	AA	AA	B
2020	A	3.4	AA	AAA	AA	AA	B
2019	A	3.2	AA	AA	AA	AA	B
2018	AA	2.5	AA	AA	AA	AA	B-

*1: ESG rating of MSCI (U.S.) is done by Japan ESG Select Leaders Index and is seven-grade evaluation of AAA, AA, A, BBB, BB, B and CCC.

*2: ESG rating of FTSE (English) is five-grade evaluation of 1, 2, 3, 4, 5.

*3: Toyo Keizai Inc.'s CSR assessment is five-grade evaluation of AAA, AA, A, B and C.

*4: CDP (English) is eight-grade evaluation of A, A-, B, B-, C, C-, D, D-.

Evaluation, certification and accreditation for GS Yuasa's Sustainability-related efforts



- Selected as a certified company of the Company with Excellent Health Management 2022 by the Ministry of Economy, Trade and Industry



- Received the highest rank "particularly excellent in terms of initiatives for employees' health" from DBJ Employees' Health Management Rating

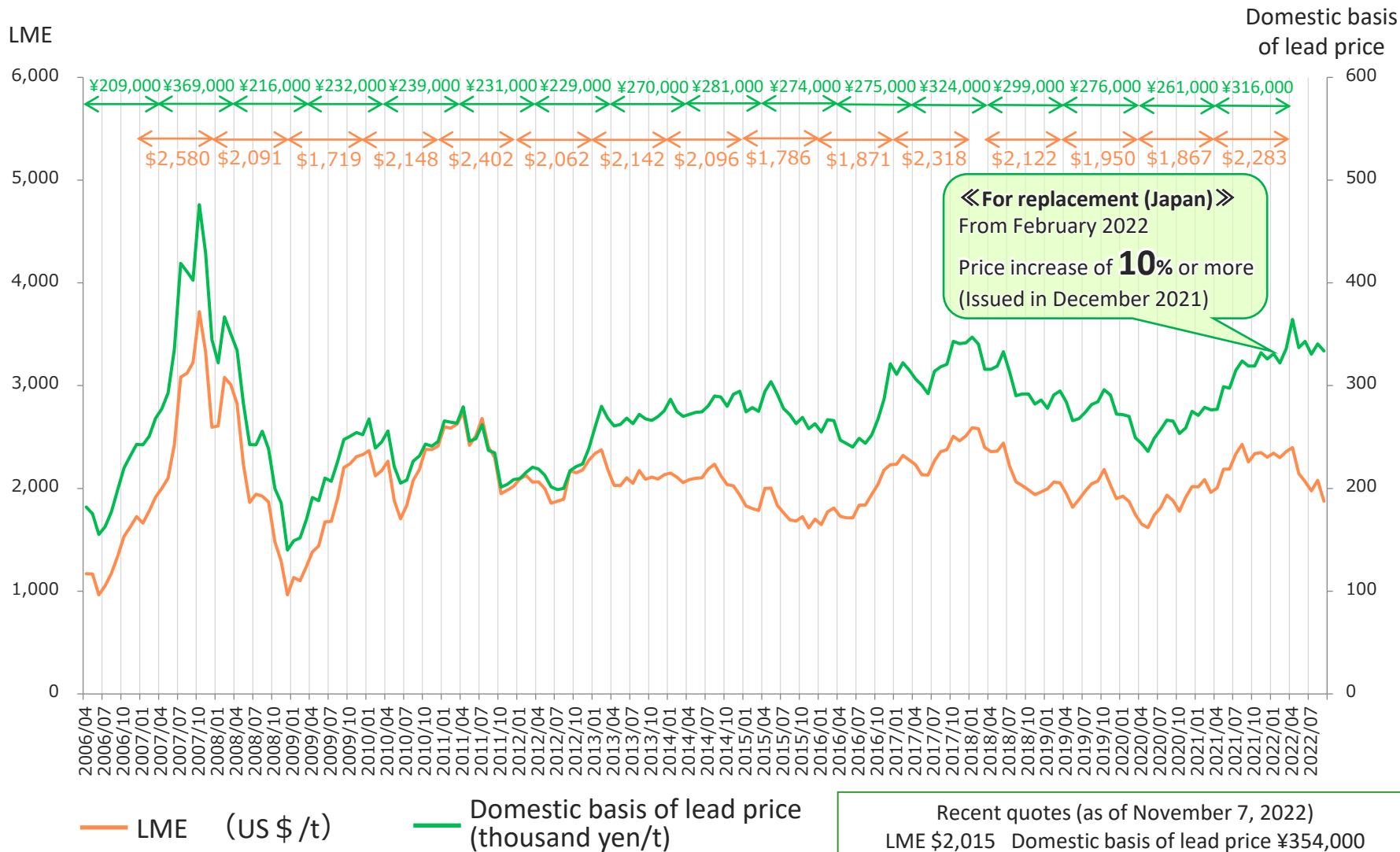


- Received Platinum Kurumin certification as a company that supports child care by the Ministry of Health, Labour and Welfare



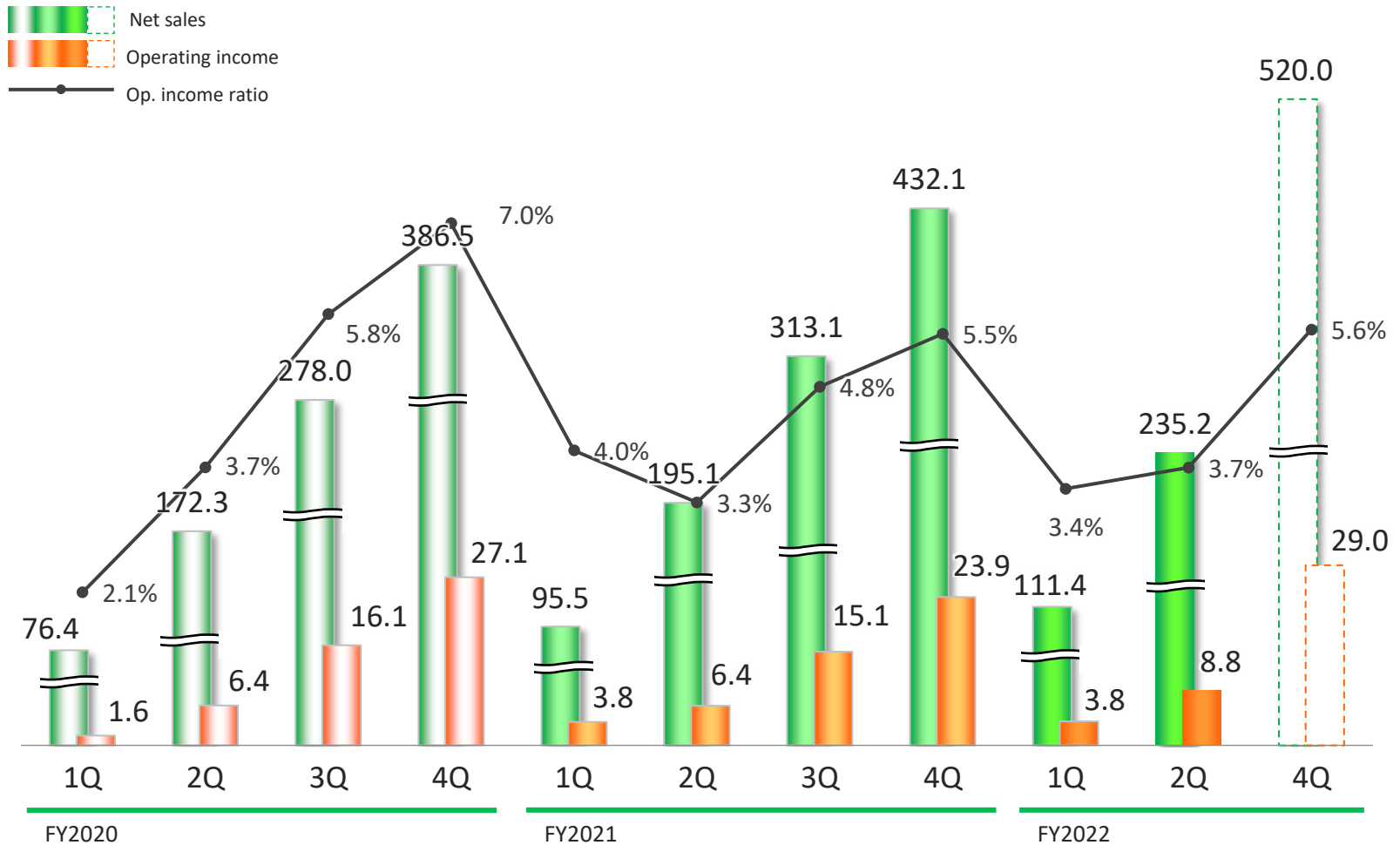
- Selected as a "Nadeshiko Brand" jointly selected by the Ministry of Economy, Trade and Industry and the Tokyo Stock Exchange

Raw Materials Prices



Net Sales, Operating Income, Op. Income Ratio

(Billion yen)



Note: Operating income is operating income before amortization of goodwill and op. income ratio is op. income ratio before amortization of goodwill.