

FY2023 Results

(From April 1, 2023 to March 31, 2024)

This is a translation of materials used for the analyst meeting held online, Japan on April 26, 2024

President

Shigeru Kobayashi



NGK INSULATORS, LTD.

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This document contains forward-looking statements that are based on management's expectations, estimates, projection and assumptions that were available and reasonable at the time of release. Actual future results and trends may differ materially from those in the forecasts due to a variety of factors.

Summary of Financial Results for FY2023
(Ended March 31, 2024)

Forecasts for FY2024
(Ending March 31, 2025)

Forecasts for Each Business Segment

Improving Enterprise Value

Technology Development and Business Transformation
(Progress Toward the NGK Group Vision)

R&D/ Capital Expenditures & Depreciation Costs

ESG Management/ Capital Policy

Total Assets & Dividend/ Summary of Cash Flow

Summary of Financial Results for FY2023

	(Bln. Yen)	FY2022	Forecasts In October	FY2023	YOY Change FX Impact
Net sales		559.2	575.0	578.9	+21.2 +4%
Operating Income		66.8	62.0	66.4	+5.4 (1%)
Ordinary Income		65.9	58.0	63.0	(4%)
Net income Attributable to Owners of the Parent		55.0	39.0	40.6	(26%)
Exchange Rate	USD EUR	135 yen 141 yen	141 yen 152 yen	144 yen 157 yen	+9 yen +16 yen

Sales Reached a Record High due to the Effect of the Weaker Yen,
while Income Decreased Year on Year.

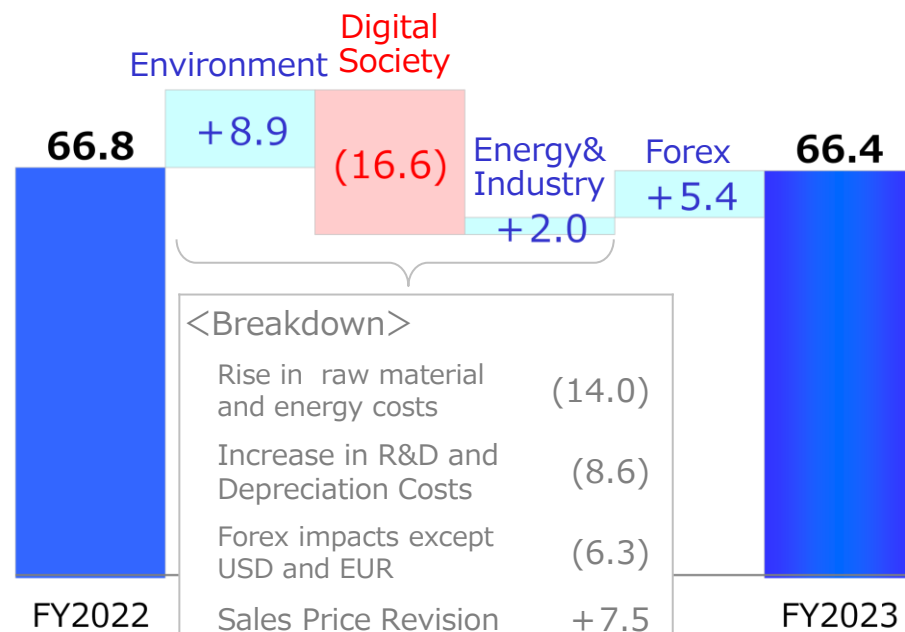
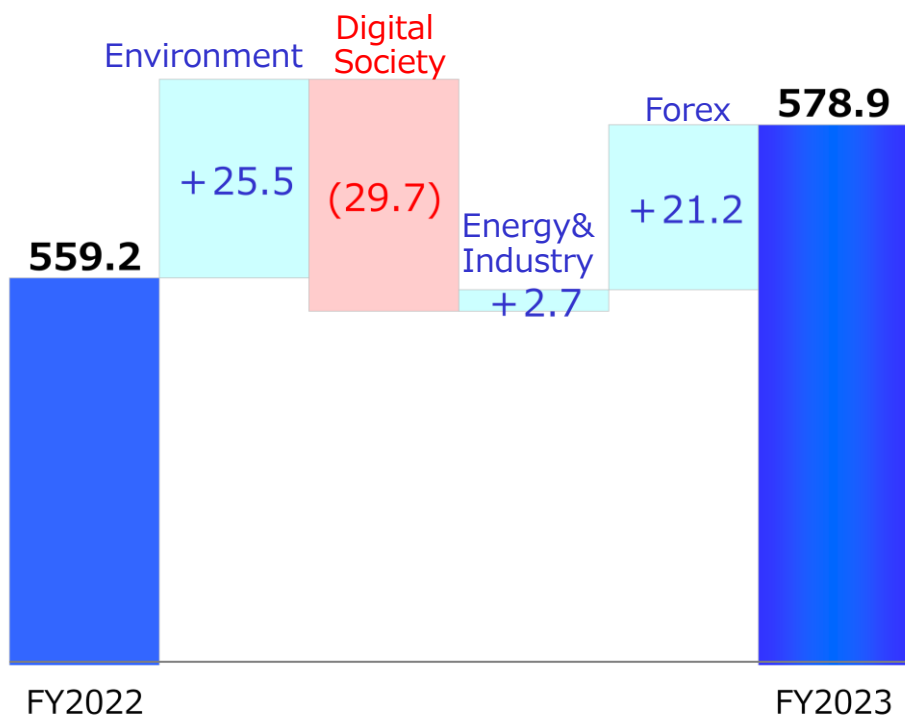
- Environment** Both sales and income increased due to a rise in demand for products resulting from higher sales quantities of trucks in China and more strict emission standard, in addition to a recovery in automotive production against the background of an easing of component shortages including semiconductors.
- Digital Society** The sharp decline in sales and income was due to investment curbs by semiconductor manufacturers in response to the deterioration of the semiconductor market.
- Energy & Industry** Demand for power transmission and distribution networks in the U.S. remained strong.
- Extraordinary Loss** Impairment losses were recorded in the Package Business and other businesses whose performance deteriorated due to the continuing slump in smartphone sales in China.

Change Analysis for FY2023

(Bln. Yen)

Sales

Op. Income



<Breakdown>

Rise in raw material and energy costs	(14.0)
Increase in R&D and Depreciation Costs	(8.6)
Forex impacts except USD and EUR	(6.3)
Sales Price Revision	+7.5
Cost Reduction	+6.8
Shipment Volume	+4.7
Others	+4.2

FX Rate
 USD 135 yen
 EUR 141 yen

144 yen
 157 yen

135 yen
 141 yen

144 yen
 157 yen

Forecasts for FY2024

	(Bln. Yen)	FY2023	FY2024	YOY Change
Net sales		578.9	620.0	FX Impact +0.2 + 7%
Operating Income		66.4	75.0	+2.4 + 13%
Ordinary Income		63.0	71.0	+ 13%
Net income Attributable to Owners of the Parent		40.6	53.0	+ 31%
Exchange Rate	USD	144 yen	145 yen	+1 yen
	EUR	157 yen	155 yen	(2 yen)

Sales and income will increase due to the recovery of demand in the DS Business in the second half of the year

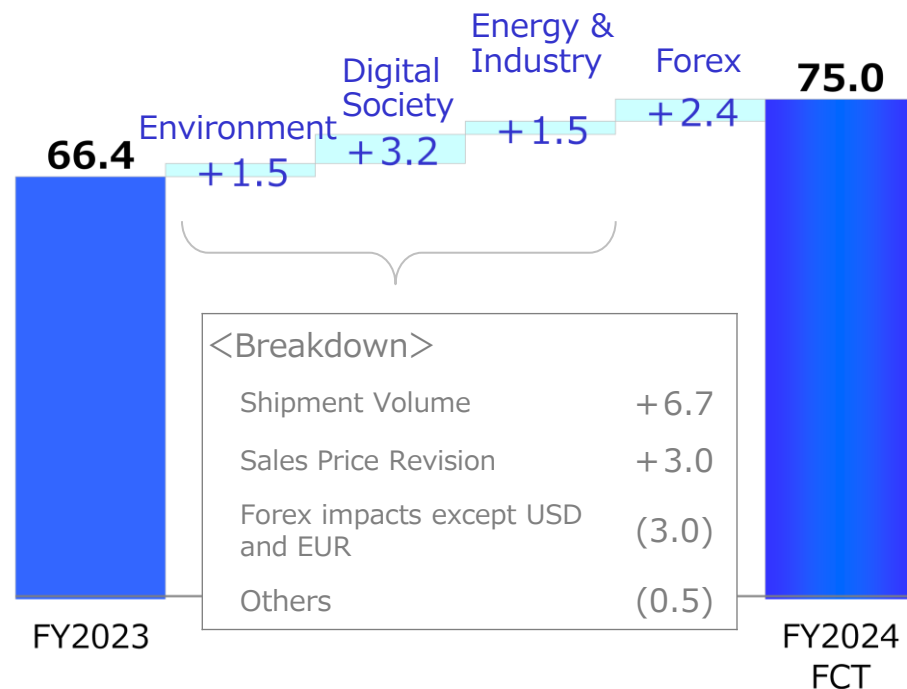
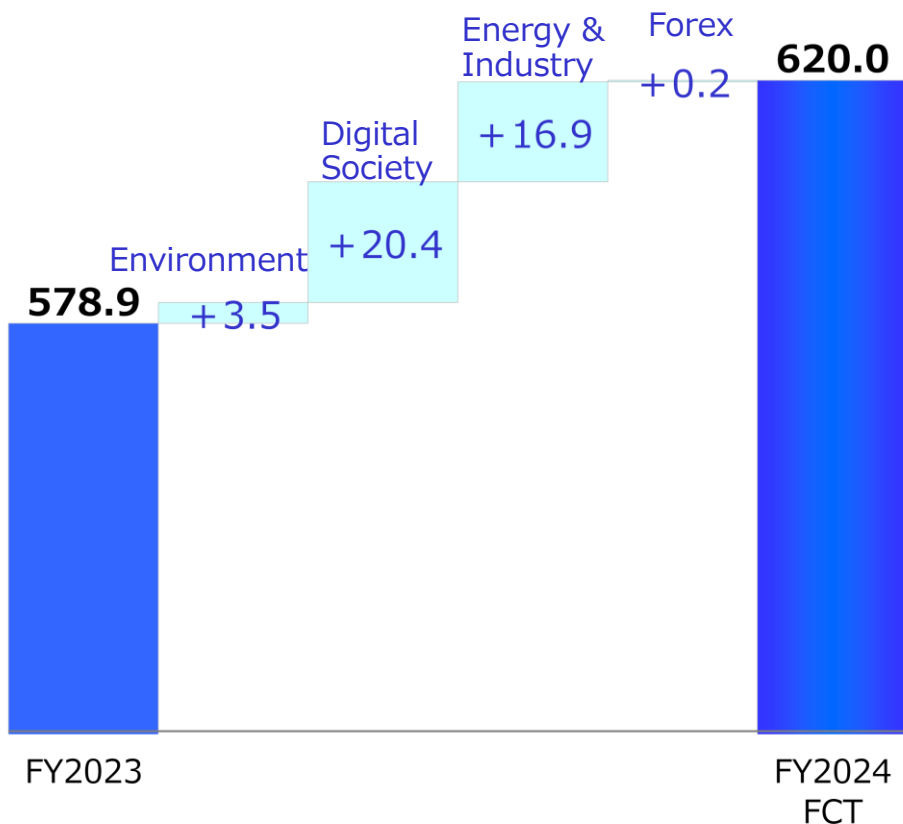
- Environment** Sales will increase slightly in total business despite a decrease in demand in some areas due to progress in EV development. Income is expected to increase due to cost reductions.
- Digital Society** In semiconductor production equipment components, capital investment by device makers is expected to recover moderately from the second half of the year. Electronic devices are also expected to recover moderately, with an increase in sales and income expected for the full year.
- Energy & Industry** NAS® batteries will continue to see losses due to soaring raw material prices, although overseas shipments are expected.
 In addition to the continuation of solid U.S. demand, sales and income for insulators are expected to increase in domestic and overseas projects.

Change Analysis for FY2024

(Bln. Yen)

Sales

Op. Income



FX Rate

USD 144 yen
EUR 157 yen

145 yen
155 yen

144 yen
157 yen

145 yen
155 yen

*The business segments have been changed from the beginning of FY2024.

As a result of this change, the operating results for FY2023 have been rearranged and presented using the same segment classification.

The Industrial Process Business was transferred from the Energy & Industry Division to the Environment Division

Forecasts for the Environment (EN) Business

■ Automotive related

Although demand for products for passenger cars is expected to decrease due to the rising ratio of non-internal combustion engine vehicles, demand for diesel products is expected to rise as truck and off-road sales increase mainly in China. As a result, sales are generally at the same as last year.

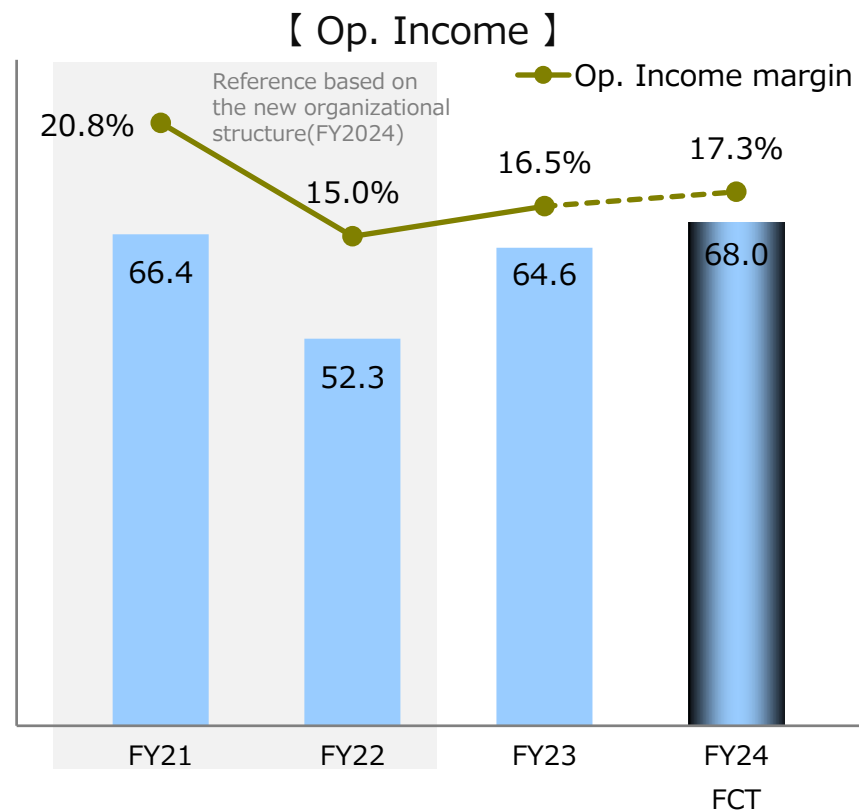
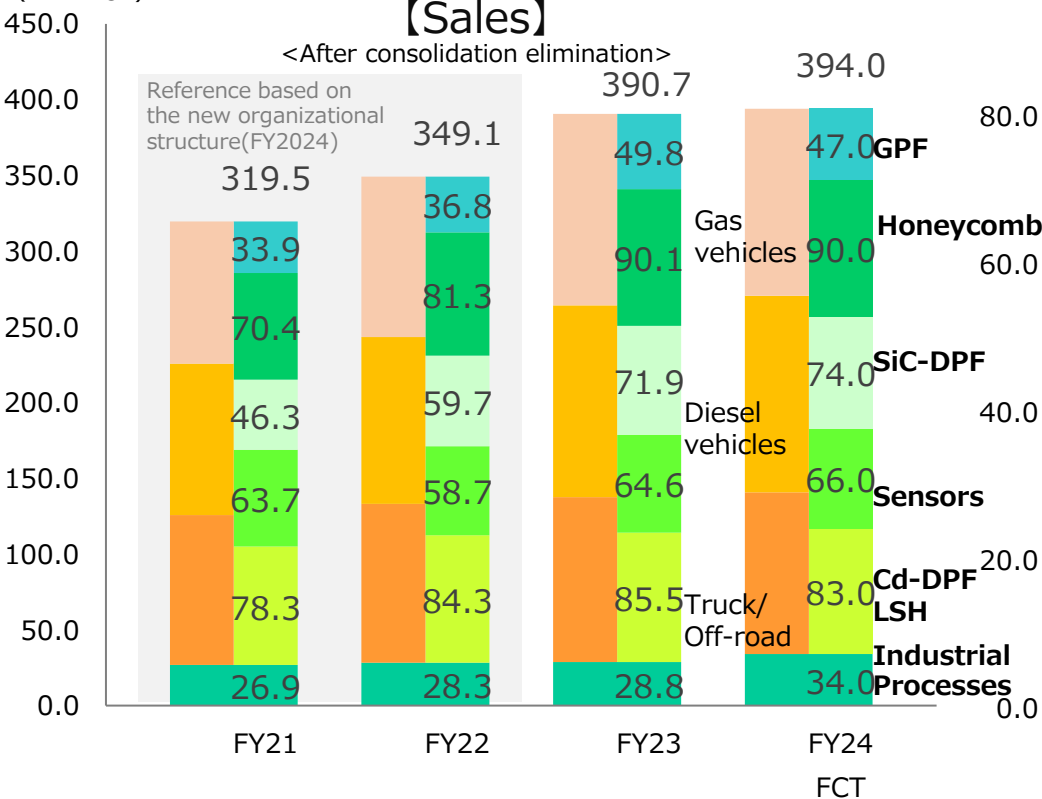
■ Industrial Processes

Sales are expected to increase due to increased demand for industrial heating systems for lithium-ion battery cathode materials and low-level radioactive waste treatment equipment.

The overall income of business will increase year on year due to cost reductions and sales price revisions.

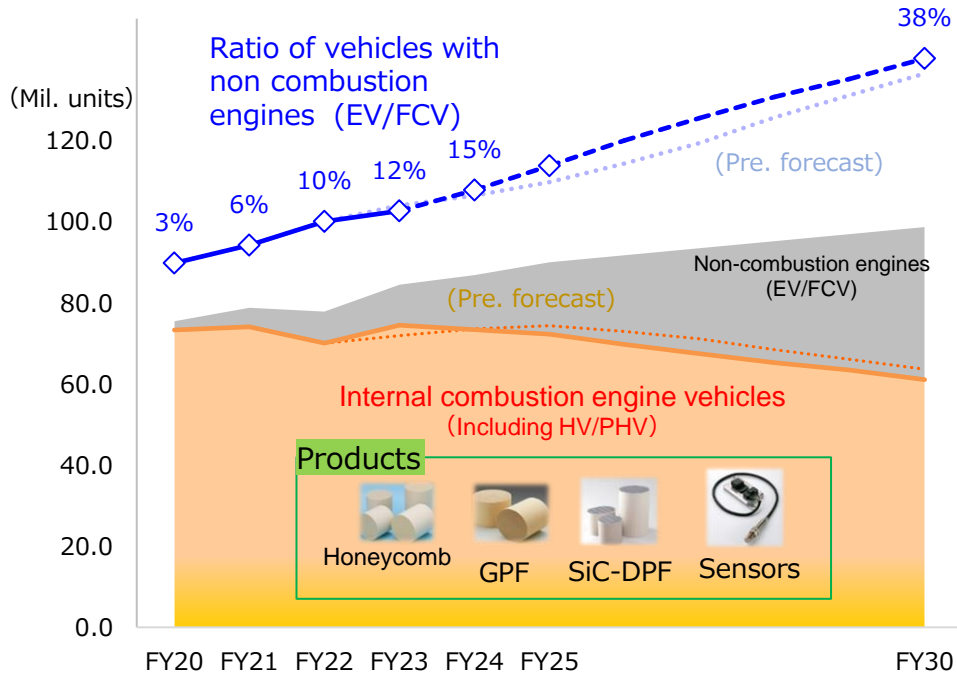
Industrial Process was transferred from Energy & Industry Business to the Environment Business at the beginning of FY2024.

(Bln. Yen)



The future perspective for the EN Business

[Forecast for Automobile Sales] (NGK's Est.)



[Forecast for emission regulations] (NGK's Est.)

Markets	FY22	FY23	FY24	FY25	FY26	...	FY30
Japan			PPNLT(WLTC)				GE/GDI·MPI RDE
Europe		EU6d-Full					EU7
U.S.		Tier3 LEV III			PM1mg		
China	China6a (All)		China6b (All)				China7
India	BS6 Stage I		BS6 Stage II				BS7
Thailand	EU4			EU5			EU6b

There is no change in the assumption that the EV ratio will evolve. Demand for the company's products is expected to remain at a certain level due to the introduction of new products with more advanced functions in response to the strengthening of emissions regulations in various countries.

The impact of the new emission regulation in Europe, Euro7

The introduction of Euro 7 is expected to be delayed in mid-2027. Proposed limits are slightly less stringent than at the beginning, but there has been no change in policy to tighten controls on particulate matter (PM) emissions and our business plan will not be largely affected. We will aggressively launch new products with high added value.

NOx sensors for gasoline **GPF with Surface Adsorption Layer**



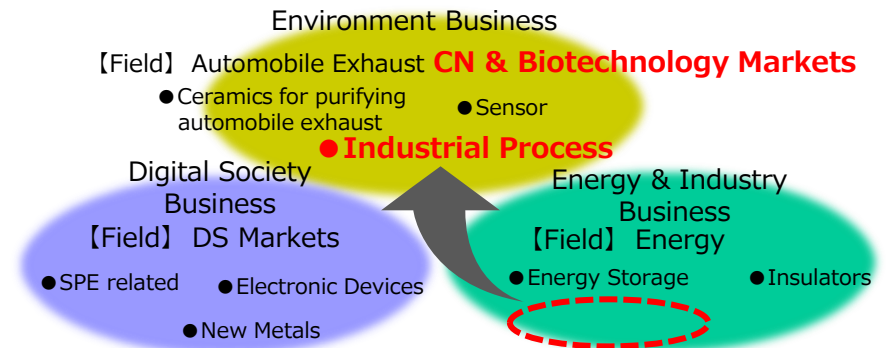
Market launch of a sensor for gasoline passenger cars that require constant NOx measurement according to Euro 7



A high collection surface collection layer is applied, and high-functional products are introduced to meet PM regulations

Business Structure Conversion of Environment Business

Aiming to expand synergies in the CN & Biotechnology markets, the Industrial Process Division was transferred to the Environment Business Group.



Forecasts for the Digital Society (DS) Business

■ SPE Related (Components for semiconductor production equipment)

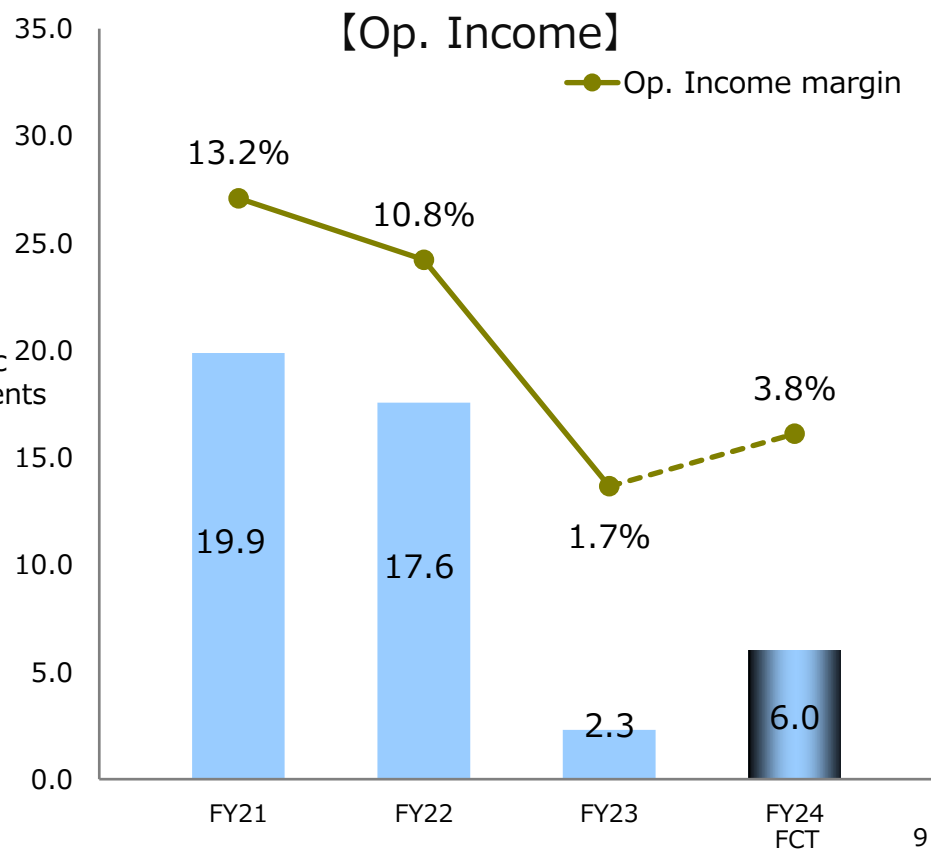
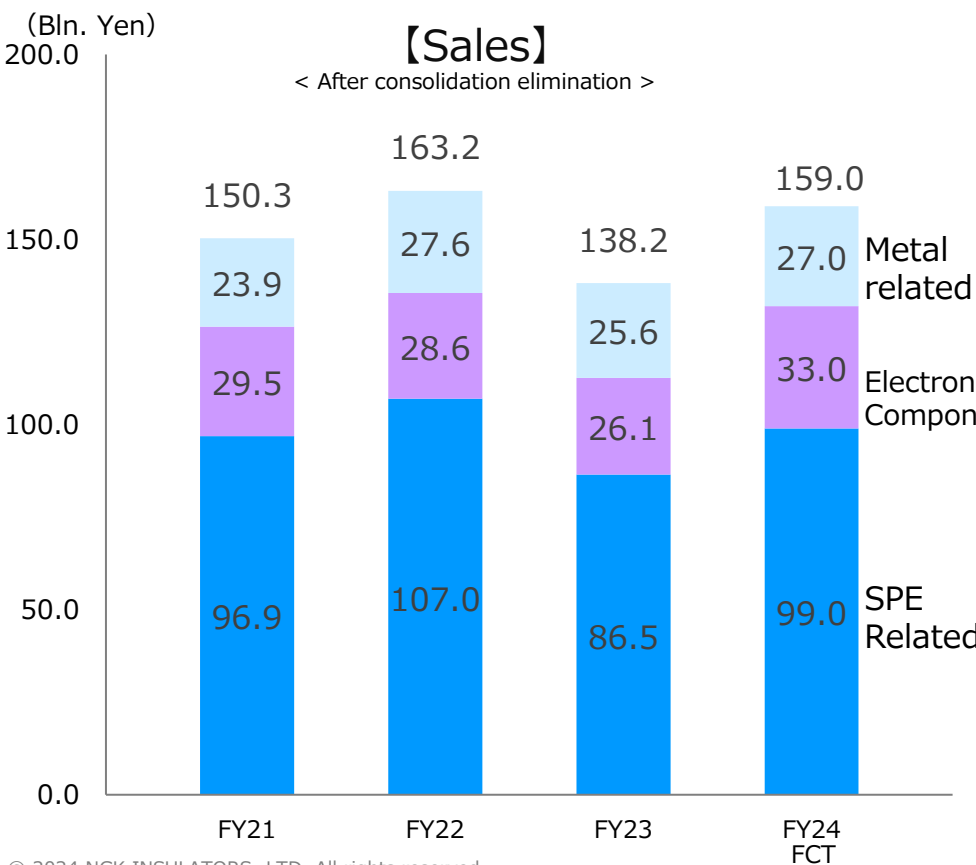
- Capital investment by major semiconductor manufacturers is expected to recover moderately in the second half of the year as a result of an improvement in the semiconductor supply-demand balance, which had been lingering mainly in memory chips. Business conditions in the semiconductor production equipment market are expected to turn to a recovery trend, and demand for our products is expected to increase gradually from the second half of the year, resulting in higher sales.

■ Electronic Components

- Demand for piezoelectric elements for HDDs has bottomed out as inventory adjustments have already been completed. Hyperscalers are expected to gradually resume investment in data centers, including renewal, while continuing to optimize costs, and increase sales and income due to increased demand for our products.
- Sales of crystal ceramic packages are expected to increase due to a gradual recovery in demand, especially for Bluetooth and other short-distance wireless devices, as inventory adjustment in the market progresses after the deterioration of the market in the previous year. We improve profitability by increased productivity and reducing costs.
- We anticipate one-time start-up costs associated with the increase in production capacity of Direct Copper Bonding(DCB) and Active Metal Blazing(AMB) substrates for power semiconductor modules.

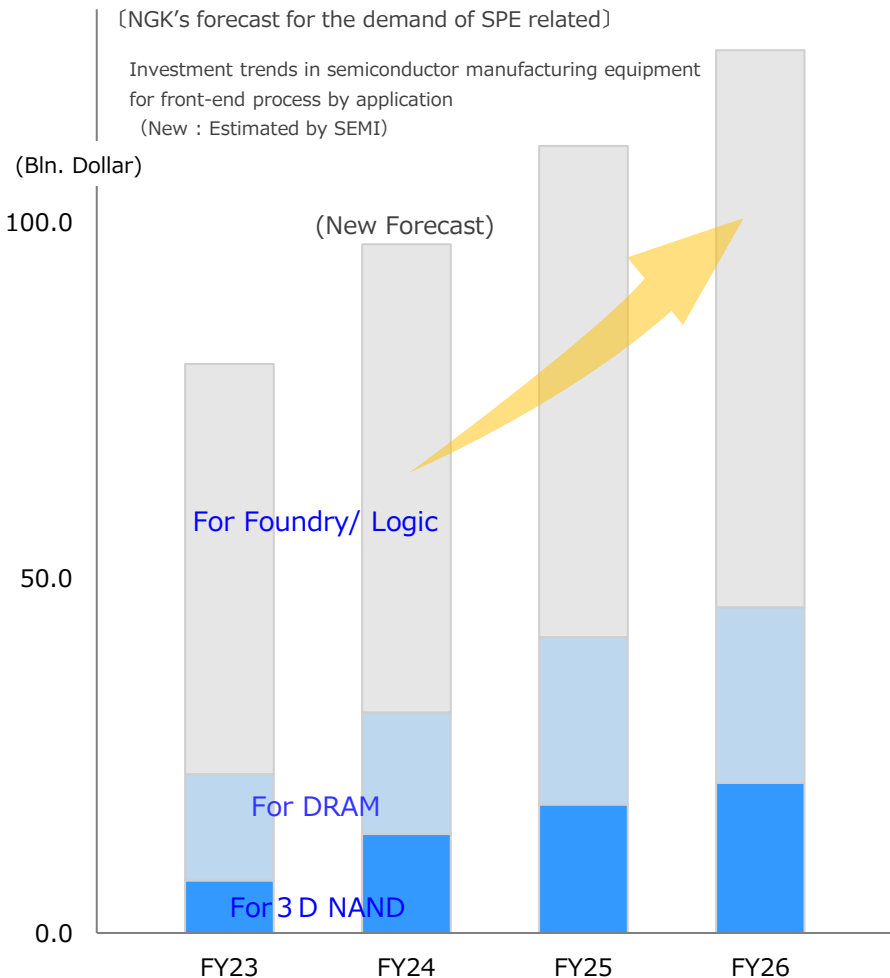
■ Metal Related

- Demand is expected to remain strong, especially in the automotive industry, and both sales and income are expected to increase slightly



The future perspective for the DS Business

■ Components for Semiconductor Production Equipment (SPE)

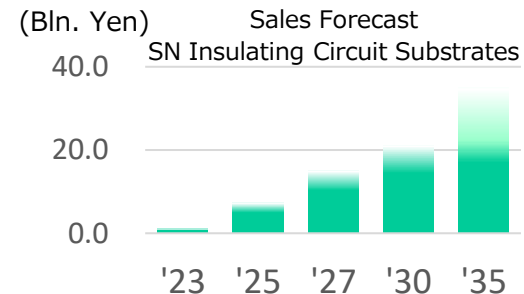
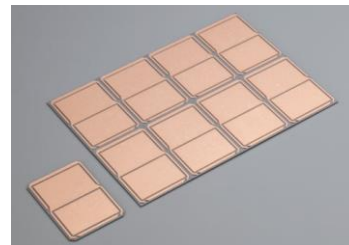


With the current semiconductor supply-demand adjustment, WFE investment is expected to recover moderately from the second half of 2024. The market will further expand due to the spread of AI-equipped smartphones, the expansion of the cloud AI market, and other advances in the digitalization of society, and we will continue to invest in increased production to ensure that demand for our products is captured.

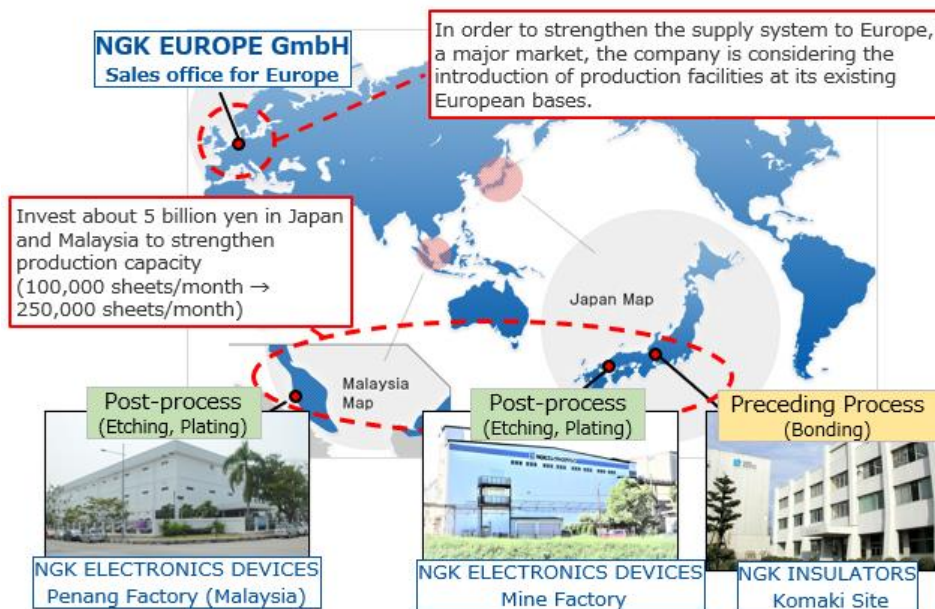
■ Electronic Components (DCB/AMB Circuit Substrate)

DCB/AMB circuit substrate is a product that maximizes the performance of power semiconductors used in inverters for EV and HEV motor control, etc., achieving high reliability and excellent heat dissipation characteristics through its unique bonding technology. The adoption of DCB/AMB circuit substrates will increase as power modules using SiC semiconductors increase, especially in BEVs.

Silicon Nitride(SN) Insulating Circuit Substrates



Looking ahead to future market expansion, we have decided to increase monthly production capacity to about 2.5 times the current level by FY2026. We aim to achieve sales of 20 billion yen in FY2030. In preparation for the increase in demand in Europe, a major market, the company is considering introducing production facilities at its existing European bases.



Forecasts for the Energy & Industry (E&I) Business

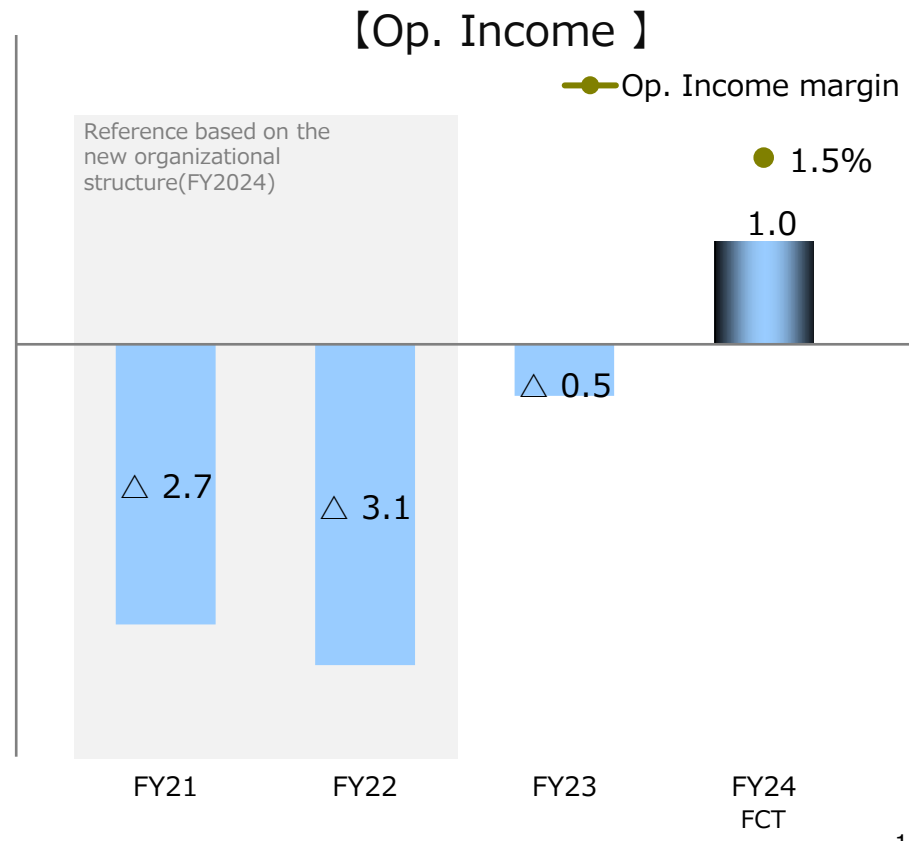
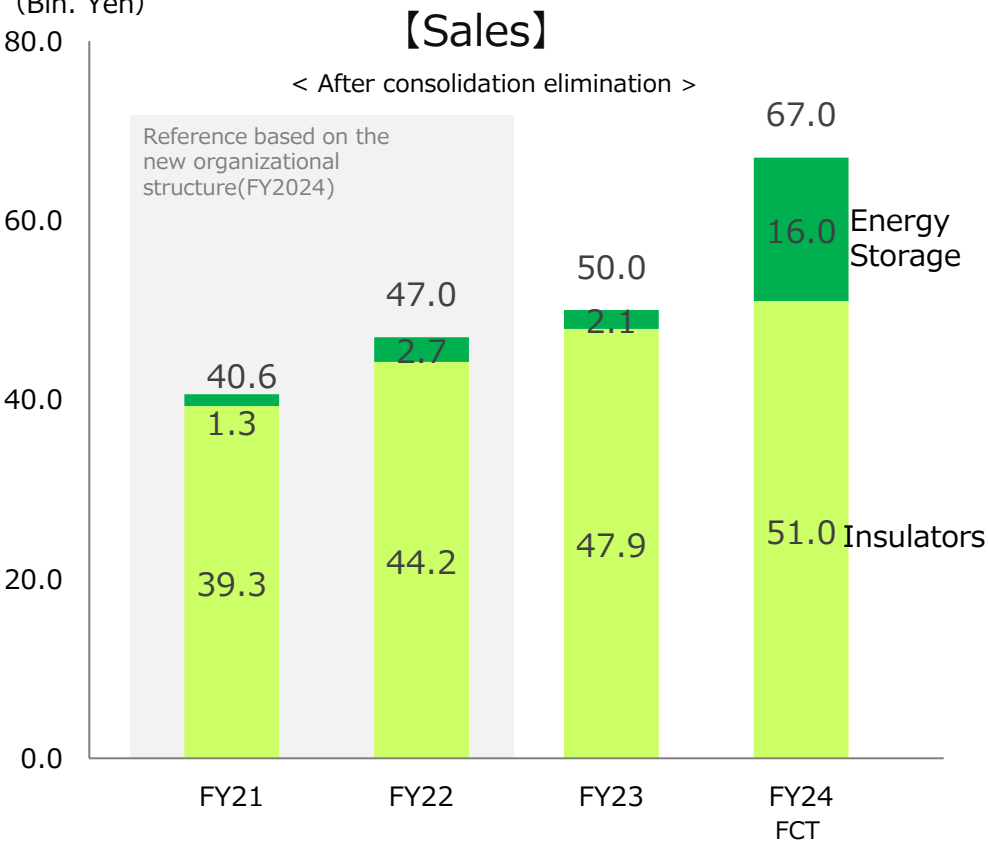
■ Insulators

- Although, in Japan, a revenue cap system has been launched for general electricity transmission and distribution companies, demand is expected to remain stable on the back of planned capital investment in the transmission and distribution network.
- In the U.S. and Australia, investment in renewable energy continues to boom. Demand is expected to remain strong due to plans to strengthen transmission and distribution networks.

■ Energy Storage

- Sales are expected to increase significantly due to orders and shipments of large-scale overseas projects under sales alliance with BASF.
- Despite the increase in volume, losses are expected to continue due to higher parts procurement costs and competition from lithium-ion batteries. In addition to cost reductions, we aim to improve profit and business growth by developing supply chains to cope with continued large-scale orders.

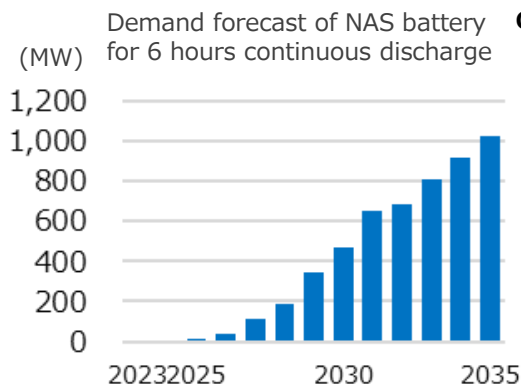
(Bln. Yen)



The future perspective for the E&I Business

■ NAS® batteries (Energy storage)

Assuming that potential demand for NAS® batteries (large capacity and long duration) will start in earnest from overseas, where the introduction of renewable energy is leading the way, from 2025, we will continue our sales alliance with BASF and actively participate in overseas demonstration projects.



<Overseas projects and applications>

Bulgaria Improvement of efficiency of renewable energy in operation Spt,2023~



South Korea Hydrogen Production Equipment in operation Aug,2020~



Improvement of efficiency of renewable energy in operation Apr,2023~



Germany Improvement of efficiency of renewable energy in operation Mar,2024~



Maldives Decarbonized desalination system in progress



Australia Supplying renewable energy to the mine in operation May,2023~

■ NAS installation sites ■ BASF-led projects

NGK has received order of NAS battery for large-scale Green hydrogen production project in Germany



- Destination : Federal Republic of Germany
- Client : BASF Stationary Energy Storage GmbH
- Final Recipient : HH2E AG(German Hydrogen Production Company)
- Purpose : Stable electricity supply to hydrogen production equipments from renewable energy power stations
- Volume of Sales : 72units of container type NAS battery(Equivalent to 18MW)

The current order is for the first phase of the large-scale project led by HH2E.

Negotiations for securing the order for the second phase has been ongoing.

To achieve Carbon Neutrality in 2050. the efforts to reduce CO2 emissions in business will be accelerating worldwide.

Germany, a leading renewable energy country, aims to increase its domestic hydrogen production capacity to 10,000 megawatts (10 gigawatts) by 2030.

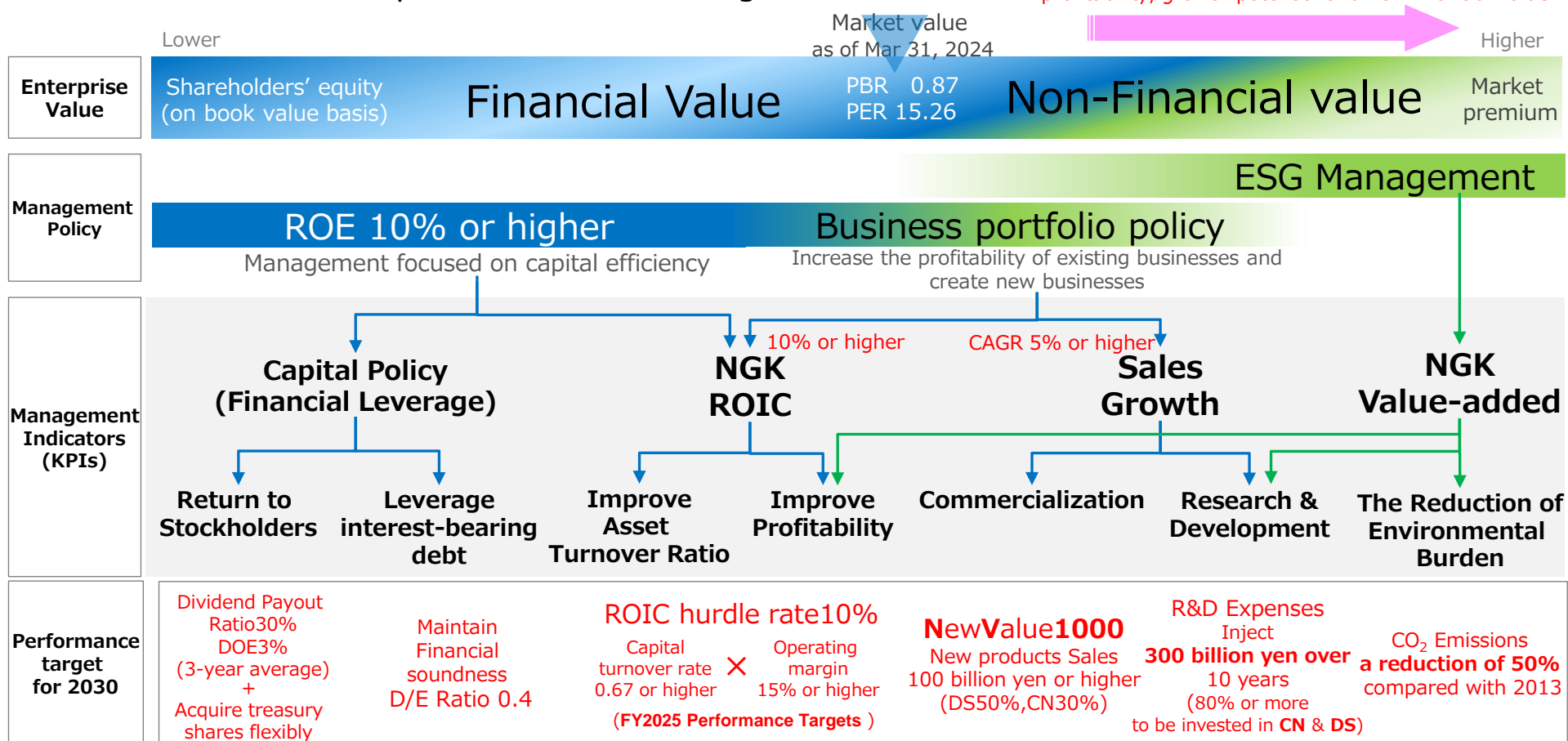
We expect further expansion of the adoption of large-capacity storage batteries for green hydrogen production applications.

Improving Enterprise Value

- **Enhance capital profitability** via corporate management that is conscious of the formula, $\text{Equity spread} = \text{ROE} - \text{Cost of shareholders' equity}$.
- **Ensure growth potential** through advancing **business portfolio management**, and **investment in intellectual capital (R&D, etc.)** and **human capital** for growth.
- **Upgrade non-financial value** primarily via **an effort to reduce environmental footprint and respect human rights**.

Estimation of the NGK's Capital Cost	
After-tax Debt Cost	1.1%
Capital Cost	8.5% (CAPM)
D/E Ratio	0.4
WACC	6.5%
Pre-tax WACC	9.3% (Hurdle rate)

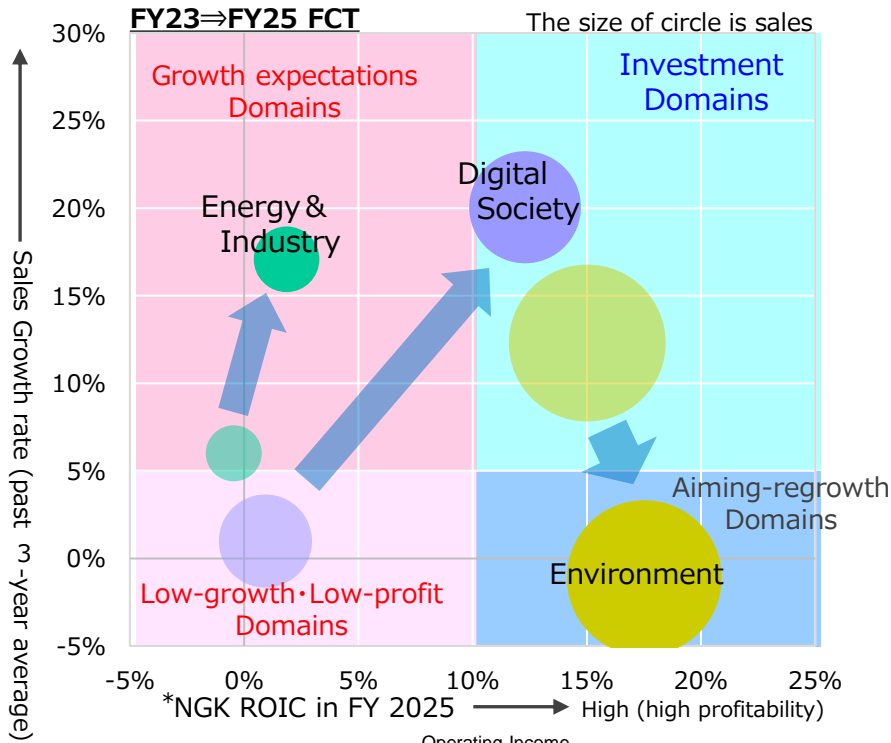
Relations between Enterprise Value and Management Indicators Aim to increase enterprise value by enhancing capital profitability, growth potential and non-financial value



Capital Profitability and Growth Potential of Existing Business

Business portfolio policy

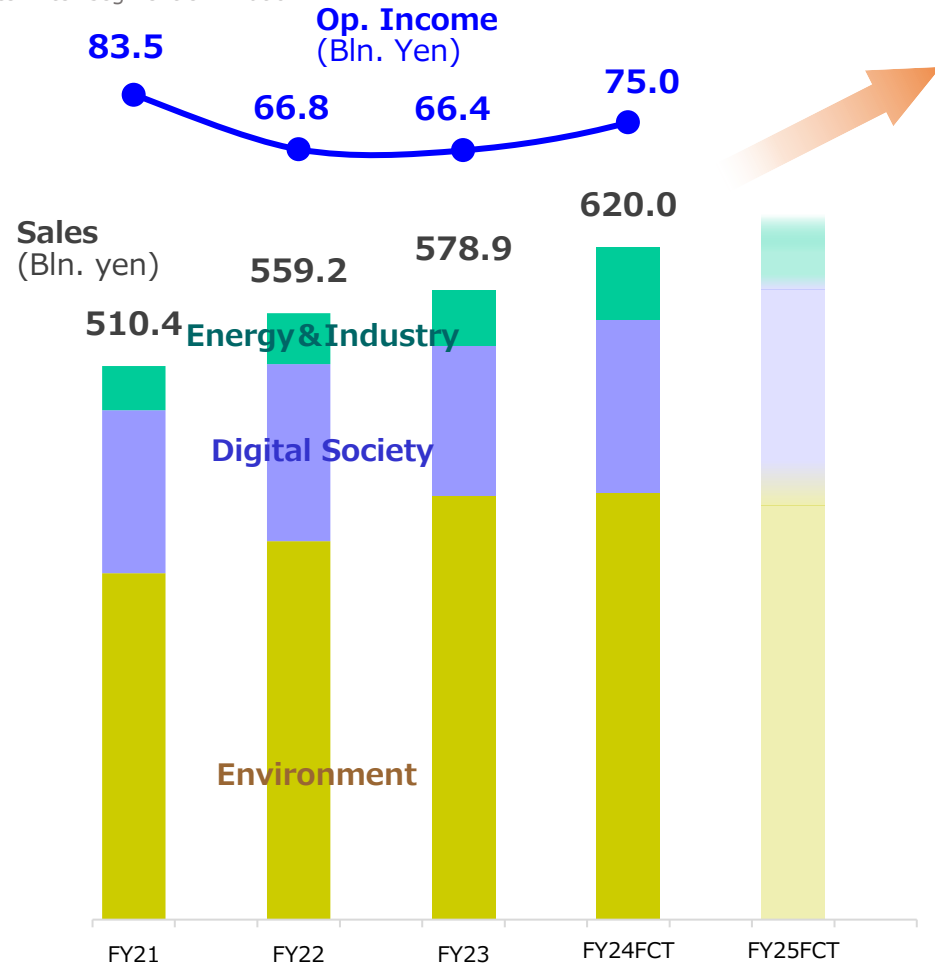
- Portfolio management pivoting on profitability and growth
- Scrutinize each product by using NGK-version of ROIC of 10% and a sales growth rate of 5% as the criteria.
- Inject management resources into investment domains and domains where we expect growth.
- Consider deciding whether or not to continue the business of each product that belongs to low-growth and low-profit domains.



* NGK ROIC = $\frac{\text{Operating Income}}{\text{Accounts receivable} + \text{Inventories} + \text{Fixed assets}}$
 Instead of "capital" and "liabilities", this is calculated based on business assets (accounts receivable, inventories, fixed assets) that can be managed by business divisions

Consolidated performance trends

<After inter-segment elimination>



FX Rate

	FY21	FY22	FY23	FY24FCT	FY25FCT
USD	113	135	144	145	145
EUR	131	141	157	155	155

The business segments were renamed from the beginning of FY2024.

As a result of this change, the operating results prior to FY2023 have been rearranged and presented using the same segment classification.

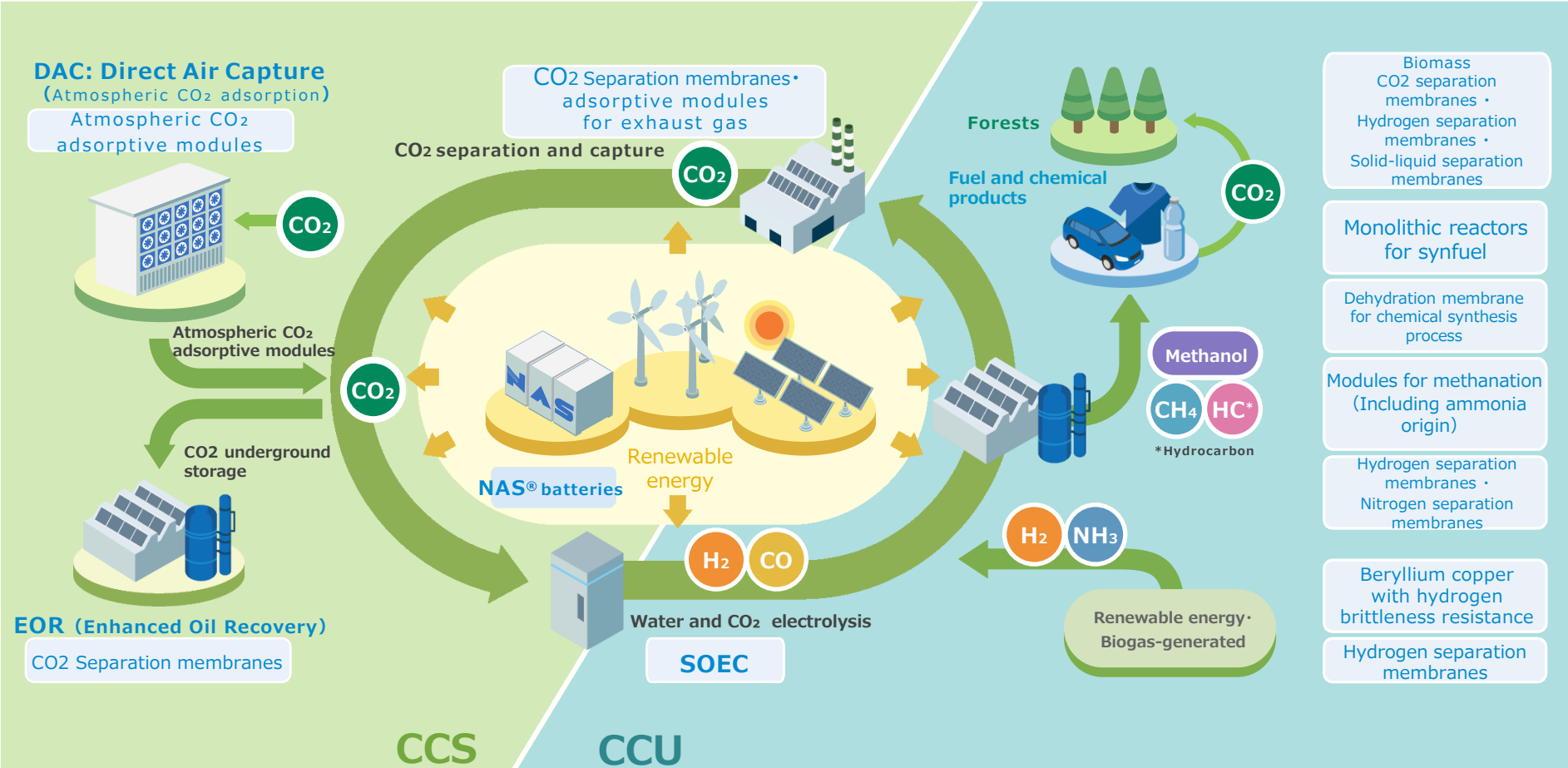
The Industrial Process Business was transferred from the Energy & Industry Division to the Environment Division

In the Environment Business, the industrial process Engineering Division will be incorporated, and the business will be converted into the CN/Bio business.

In the Digital Society business, we will expand the business with input including in-organic to meet high growth expectations.

Technology Development and Business Transformation Contributing to Carbon Neutral (CN)

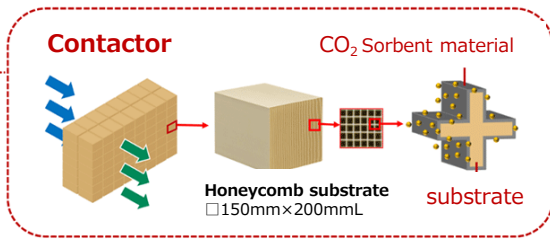
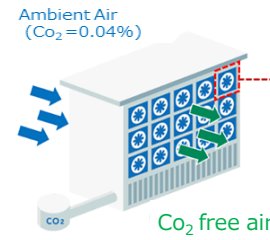
Manufacturing technology of catalyst converters and filters cultivated through **ceramics for automobile exhaust gas purification** and **Industrial process** for **engineering** will be integrated into the **Environment Business**. We aim to accelerate technological development in the carbon neutral and bio fields to achieve business transformation and profit growth by expanding synergies.



Technology Development and Business Transformation Contributing to CN

Development of "Direct Air Capture" (DAC)

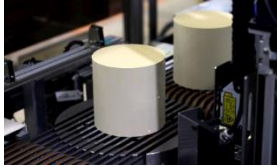
- ▶ Technology to recover atmospheric CO₂ (DAC : Direct Air Capture)
- ▶ Capture the low density of CO₂ in the atmosphere (CO₂ Density 0.04%)
- ▶ Propose thin-walled honeycomb ceramics with low pressure drop
- ▶ Approximately 1 billion tons of CO₂ would be captured by DAC in 2050 (Source: IEA report)
- ▶ Convert existing facilities for DAC productions



Need to produce 170 million liters/year of Honeycomb for DAC since 2040 (NGK's Est)

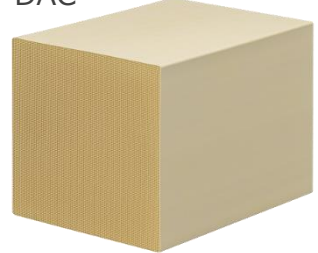


**Honeycomb production base
12 factories (9-countries)**



Manufacturing Facilities
Honeycomb Ceramic for automotive exhaust gas purifiers "Honeyceram"

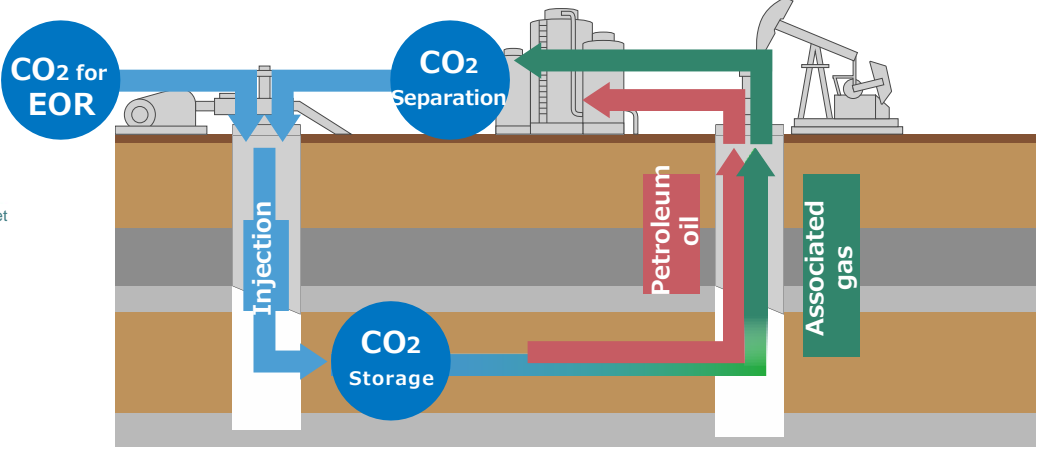
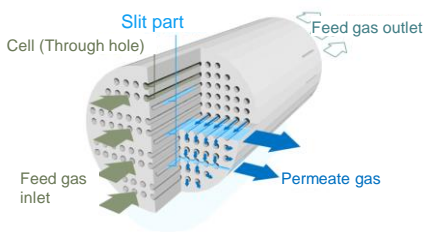
Convert facilities for Square type honeycomb ceramics for DAC



Development of "CO₂ Separation Membrane" (Sub-nano Ceramics) CO₂-EOR

- ▶ Technology compatible with **CO₂ emission control** **increased crude oil production**
- ▶ Improving oil recovered amount by injecting CO₂ into oil fields to reduce viscosity of the oil.
- ▶ There is demand for **separating and recovering CO₂** from **associated gas** and **re-injecting high-purity CO₂** back into the ground.

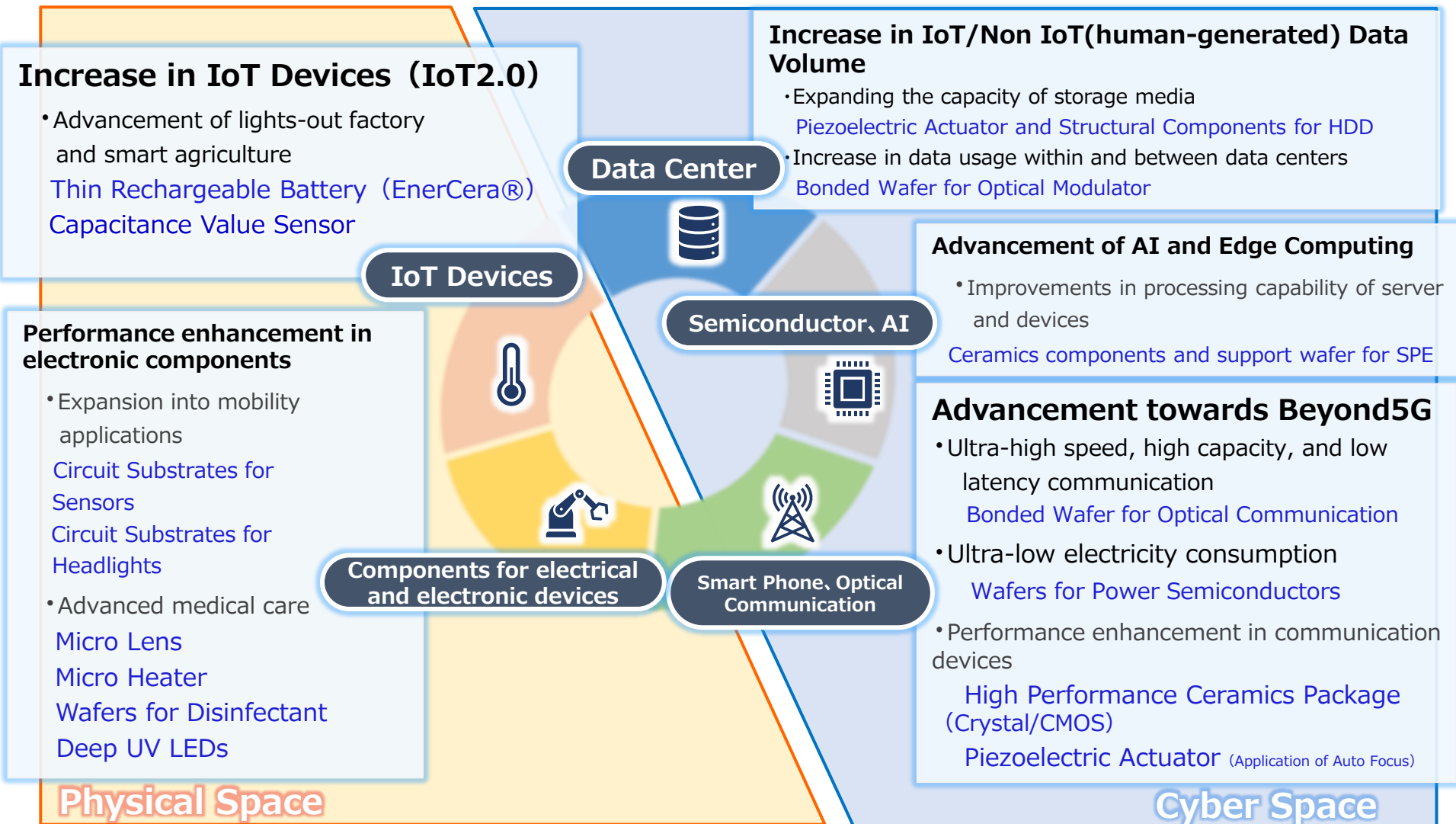
CO₂ can be separated from a large amount of accompanying gas under severe conditions (high pressure and high CO₂ concentration)



Demonstration testing underway in Texas in collaboration with the Japan Organization for Metals and Energy Security (JOGMEC) and JGC Corporation

Development of Products and Technologies That Contribute to the Digital Society

We will support the digital society from various aspects with products utilizing material characteristics of ceramics and technologies of precision machining, printing, and bonding with different materials.



■ In FY2030, the target is new business sales of 100 billion yen (NV1000)

We aim to achieve commercialization from the demonstration and development phases of an item with expected sales of 200 billion yen, and strive for the achievement of NV1000

Products in the development phase : About 100 billion yen



Hydrogen, Methanation related

Next generation DAC, SOEC, Hydrogen separation, membranes, Beryllium copper for hydrogen infrastructure. etc.



Semiconductors, SPE related

Next-generation wafer (GaN, AlN, SiC)
Next-generation SPE components etc.

Renewable and New energy related

Beryllium pebbles for nuclear fusion,
Green energy business etc.

Smartphone, Communication (Optical, Next-generation) related

High-Function package for information communication,
Bonded wafers for optical communications etc.

Elemental technology research phase

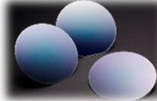
200 Bln. Yen

Development Phase

Products in the commercialization and demonstration phase : About 100 billion yen



Capture CO₂ contained in the atmosphere directly
DAC (Direct Air Capture)



Contribute to stabilized communication
Next-generation bonded wafer

Toward achieving NV1000!

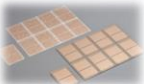


CO₂ separation, crude oil production, etc.
Sub-nano Ceramic Membrane

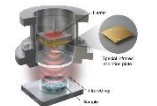


Support infrastructure resilience
ZNB (Zinc rechargeable batteries)

Demonstration Phase



Contribute to stable operation of EV power semiconductors
Active Metal Brazing (AMB) and Direct Copper Bonding (DCB) Substrates



Contribute to unmet medical needs
Organic Compound Crystal Search Service



Contribute to stable operation of renewable energy
VPP (Virtual Power Plant) Service

Commercialization phase
Active Metal Brazing (AMB) and Direct Copper Bonding (DCB) Substrates : 20 billion yen
Organic Compound Crystal Search Service : 3 billion yen

New Product Sales

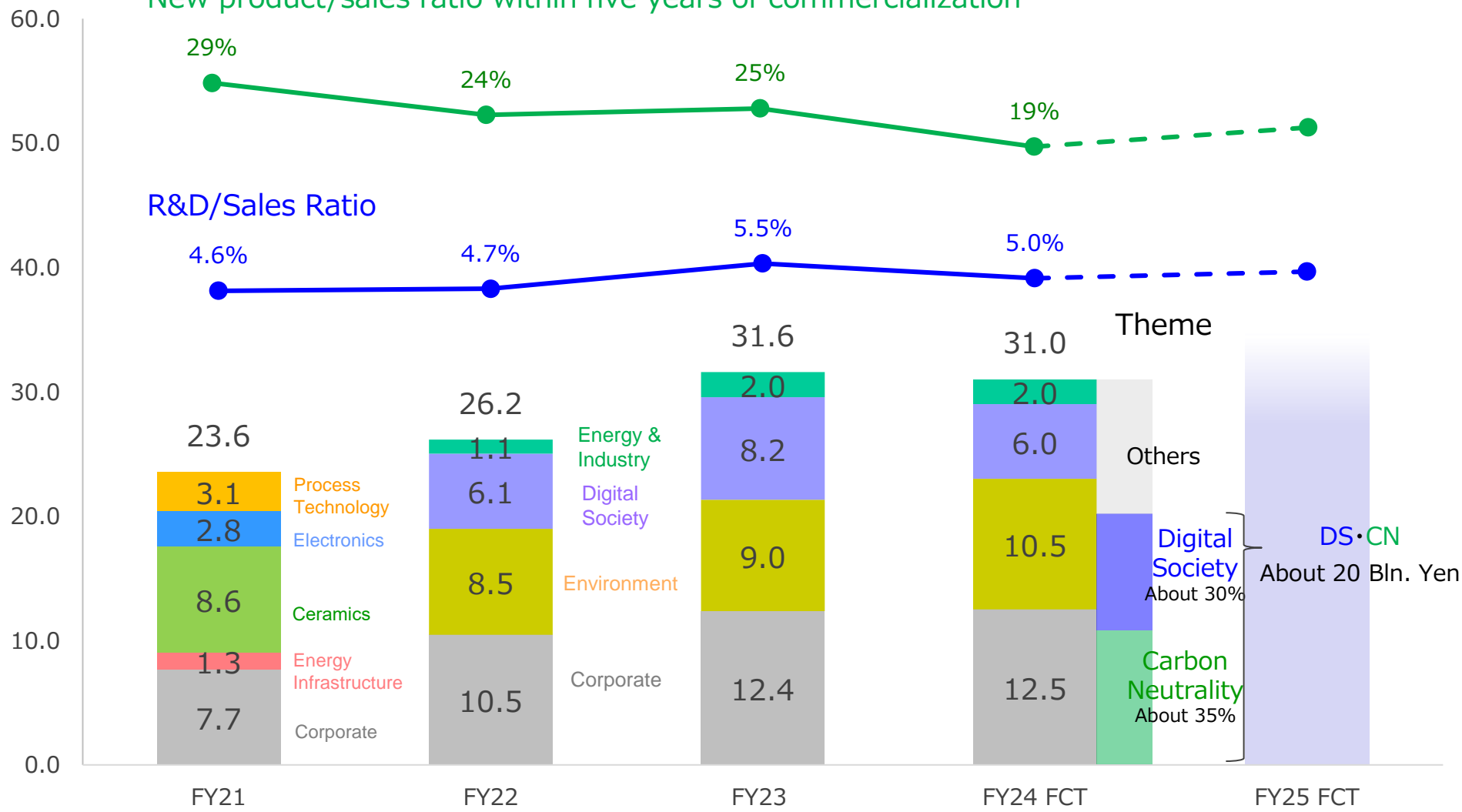
FY23

FY25

FY30

R&D Input

(Bln. Yen)



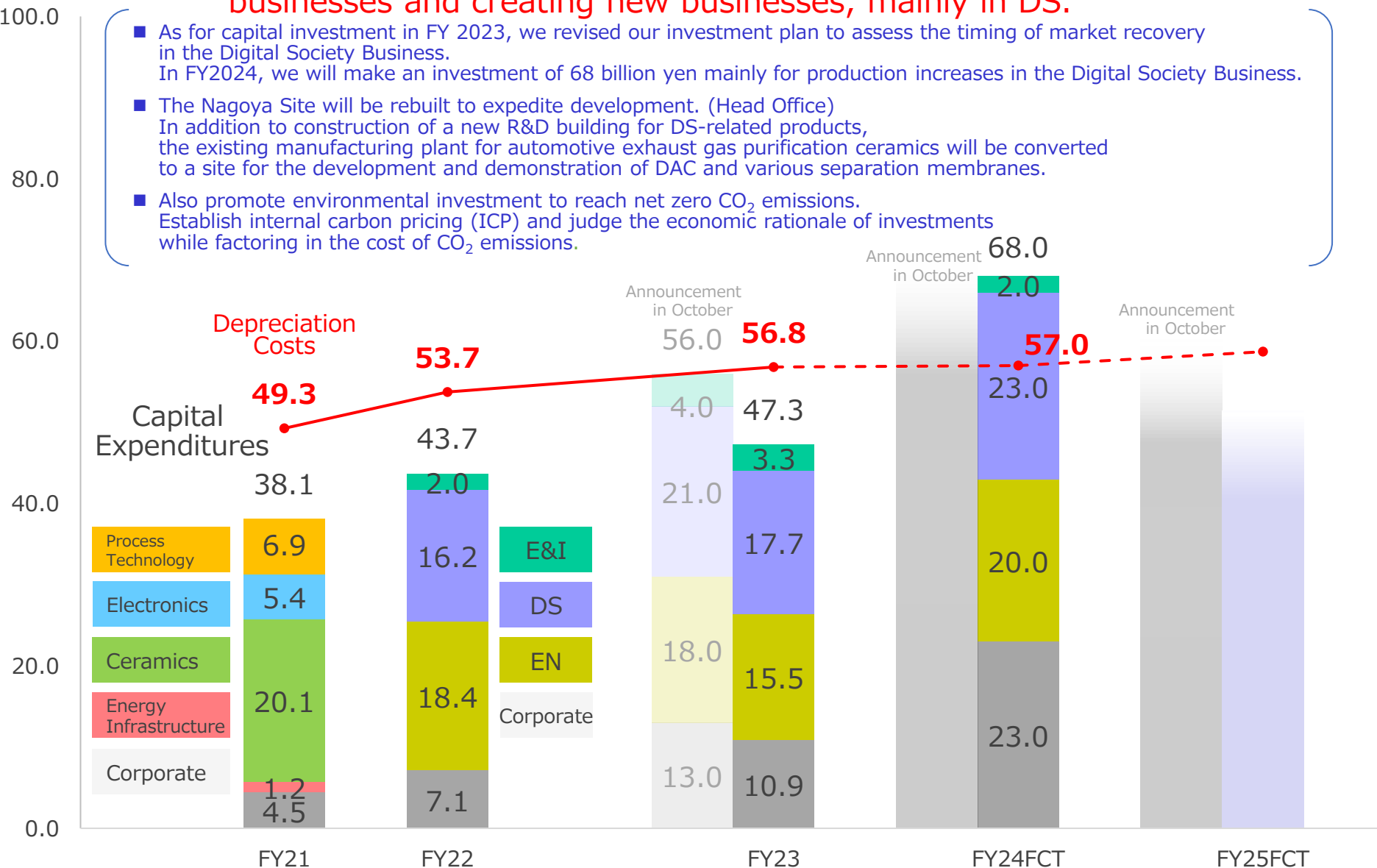
- In order to achieve NV1000, we expect to continue record high R&D spending, especially on CN and DS.
- To enhance our own technologies, the Corporate NV Creation, the Corporate R&D and the Corporate Manufacturing Engineering coordinate and proceed with the development of new products in each theme steadily. Simultaneously, actively acquire technologies and resources from outside.

Capital Expenditures & Depreciation Costs

Invest funds for expanding sales and income of existing businesses and creating new businesses, mainly in DS.

- As for capital investment in FY 2023, we revised our investment plan to assess the timing of market recovery in the Digital Society Business.
In FY2024, we will make an investment of 68 billion yen mainly for production increases in the Digital Society Business.
- The Nagoya Site will be rebuilt to expedite development. (Head Office)
In addition to construction of a new R&D building for DS-related products, the existing manufacturing plant for automotive exhaust gas purification ceramics will be converted to a site for the development and demonstration of DAC and various separation membranes.
- Also promote environmental investment to reach net zero CO₂ emissions.
Establish internal carbon pricing (ICP) and judge the economic rationale of investments while factoring in the cost of CO₂ emissions.

(Bln. Yen)



Improve Non-Financial Value by Promoting ESG Management

Promote initiatives for “the environment,” “society,” and “governance,” which are the bases of business activities, to solve social issues through products and services

NGK Value-added

$$\underbrace{(\text{Operating Income} - \text{CO}_2 \text{ Emission Cost}^* + \text{Labor Costs} + \text{R\&D})}_{\text{Short-term Profitability}} \times \underbrace{\text{ESG Target Achievement Rate}}_{\text{Mid to Long-term Growth Potential} \times \text{Super Long-term Sociality}}$$

Short-term Profitability

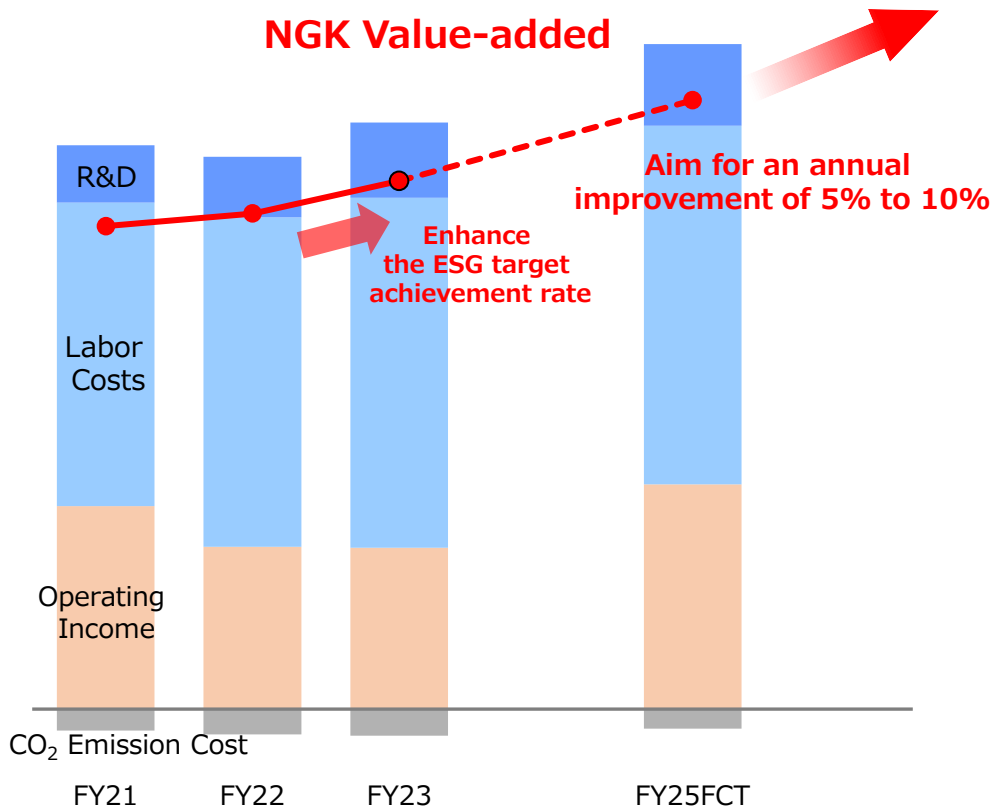
Mid to Long-term Growth Potential

× ESG Target Achievement Rate

Super Long-term Sociality

※CO₂ Emission Cost : Calculated based on ICP (\$140/t CO₂)

NGK Value-added



■ Environment

Accelerate efforts to provide environmentally effective products and services and achieve carbon neutrality

- November 2023: Issued green bonds for the third consecutive year.
- Reorganized part of the Head Office Plant into new product development bases such as DAC to accelerate commercialization of CCU and CCS related products.
- In addition to disclosing information about The Task Force on Climate-Related Financial Disclosures (TCFD) on our website and other sites, we quickly endorsed the Task Force for Nature-related Financial Disclosures (TNFD).

■ Social

Respect for human rights affected by business activities and enhancement of human resource investment.

- In June 2023, we formulated the “NGK Group Human Capital Management Policy,” the “Human Resources Development Policy,” and the “Internal Environment Development Policy.”
- Conducting a fact-finding survey questionnaire to conduct detailed CSR assessments of suppliers, the scope of the survey has been expanded to include major suppliers of Group companies in and outside Japan
- In addition to last year’s Platinum Kurumin certification, we were selected as a “Next Nadeshiko: Companies Supporting Dual-career and Co-parenting” company in recognition of our initiatives to create a comfortable working environment, including career support and promotion of male childcare leave.

■ Governance

Establish an organizational structure that ensures the legality of business activities and the transparency of corporate management and is capable of swiftly addressing change in the management environment.

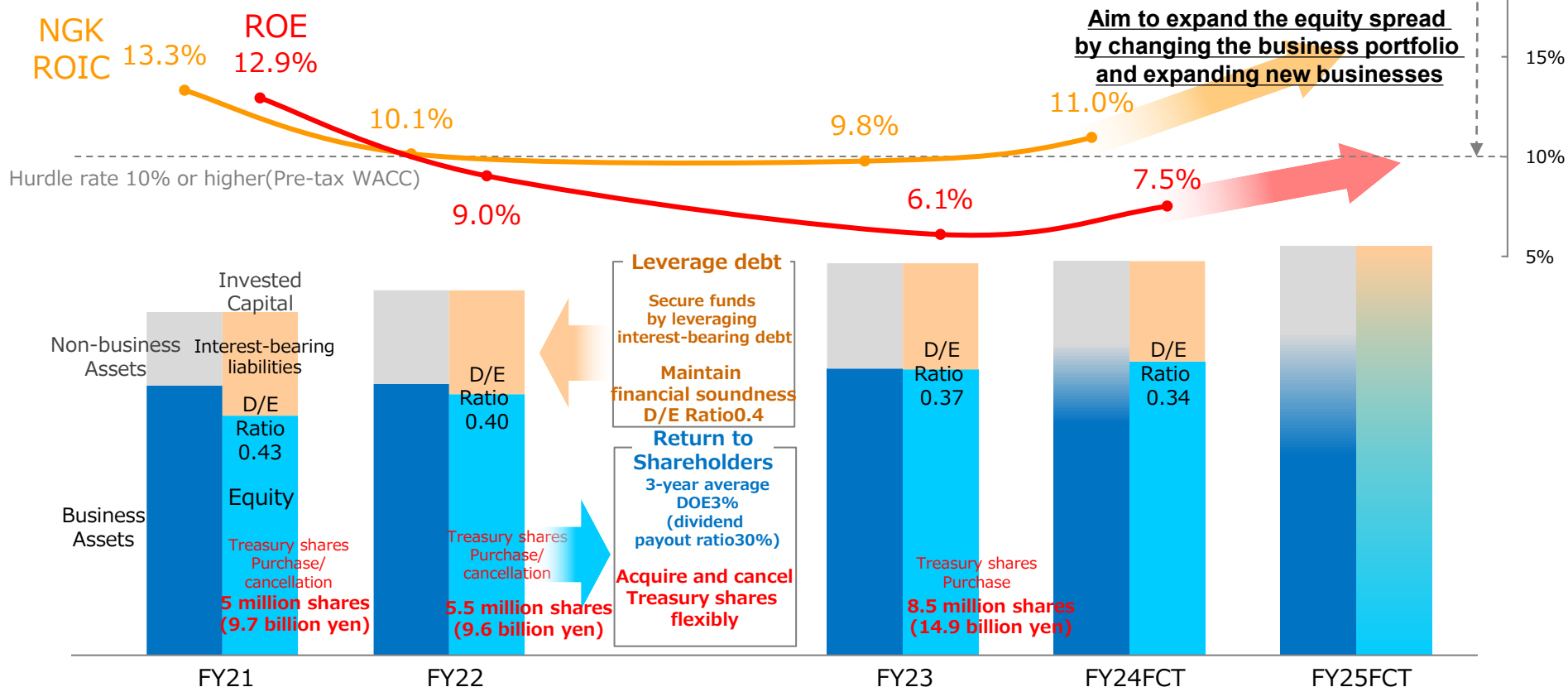
- The “NGK Group Corporate Business Principles and Code of Conduct” was established and disseminated to ensure that all employees have ethical standards and conduct appropriate business activities.
- The “NGK Group Anti-corruption Policy” was established to further elaborate the anti-corruption content of the Corporate Business Principles and Code of Conduct.

Capital Policy

- **Ensure profitability exceeding capital costs and financial soundness at the same time.**
Focus on capital efficiency with ROE as a management indicator and utilization of interest-bearing debt
- **Proactive shareholder returns from a medium- to long-term perspective**
Pay dividends while targeting a three-year average payout ratio of 30% and a three-year average DOE of 3%, and acquire and cancel treasury shares in a flexible manner.
- **Keep the income rate, assets turnover and financial leverage at healthy levels consistent with business strategy**
Adopted ROIC, which is highly related to ROE, as an internal management indicator (NGK-version of ROIC*)
Setting fund procurement through obtaining interest-bearing debt as the basis, aim for a debt-to-equity ratio of 0.4 to maintain financial soundness

Estimation of the NGK's Capital Cost	
After-tax Debt Cost	1.1%
Capital Cost	8.5%(CAPM)
D/E Ratio	0.4
WACC	6.5%
Pre-tax WACC	9.3%(Hurdle rate)

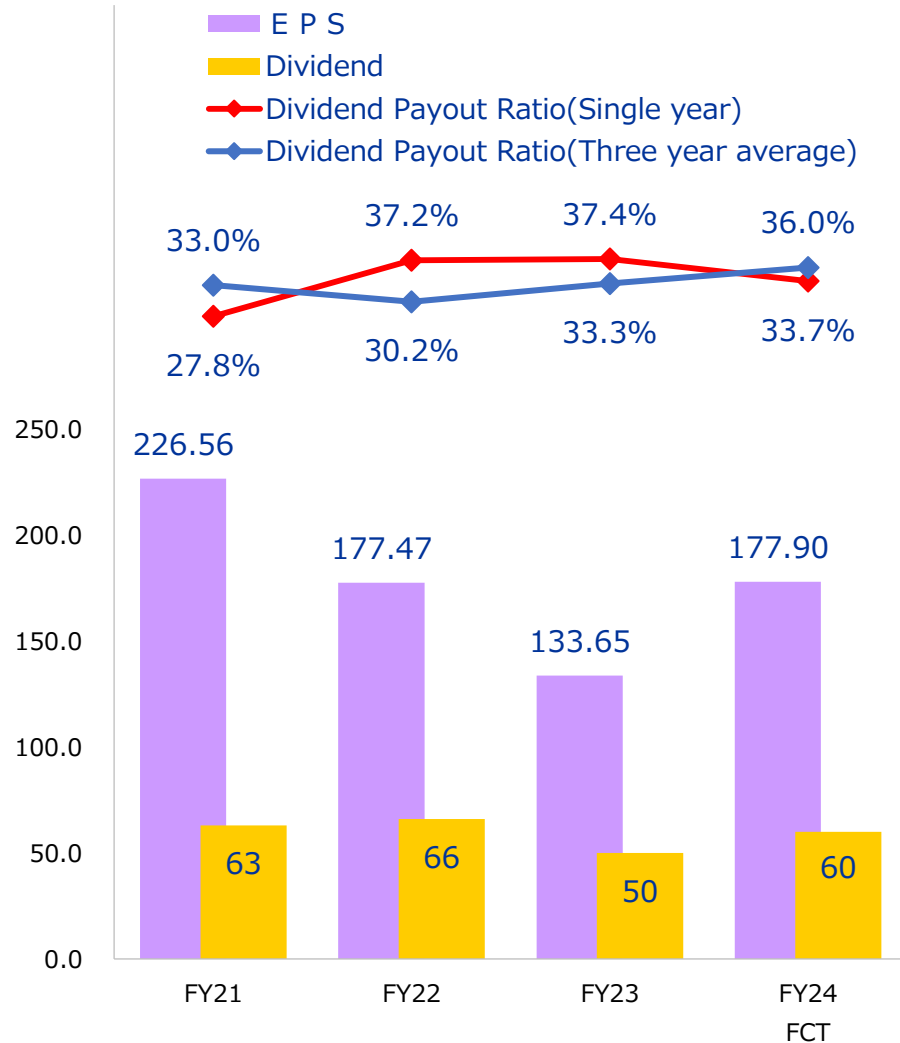
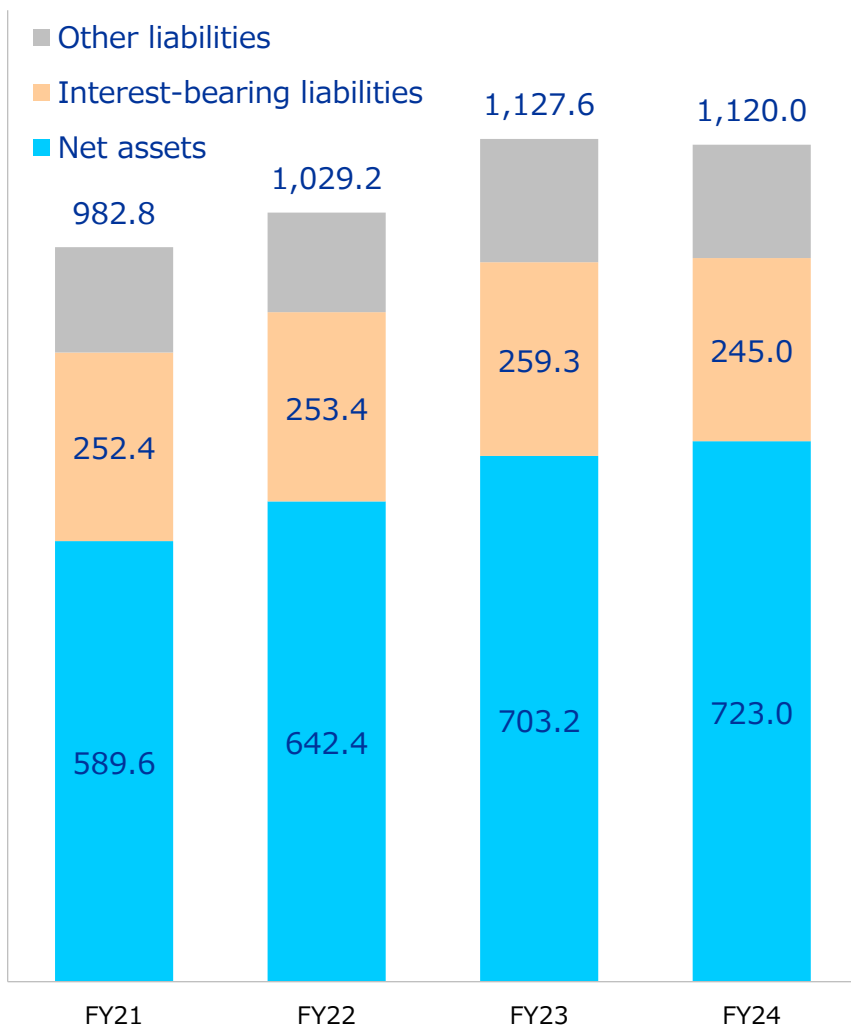
*NGK-version of ROIC = Op. Income ÷ Business assets (sales receivables + inventories + fixed assets)



Total Assets & Dividend

(Bln. Yen)

(Yen)



ROE	12.9%	9.0%	6.1%	7.5%
D/E Ratio	0.43	0.40	0.37	0.34

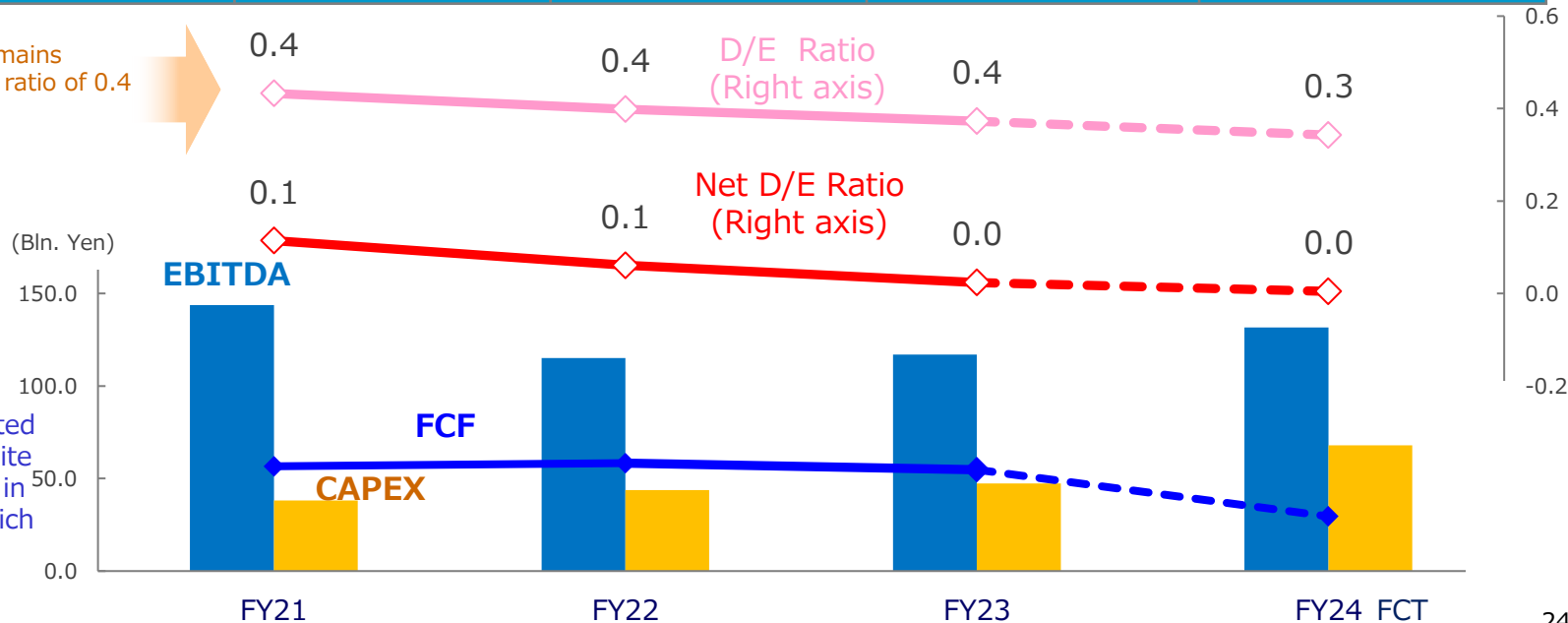
Equity ratio of 50% or higher will be maintained.

DOE	Single year	3.6%	3.4%	2.3%	2.5%
Three-year average	3.0%	3.0%	3.0%	2.7%	

Summary of Cash Flow

(Bln. Yen)	FY21	FY22	FY23	FY24Forecast
Operating Activities	94.8	97.9	99.2	106.0
Investing Activities	(46.3) Investment(37.4)	(52.0) Investment(43.1)	(68.6) Investment(45.1)	(48.0) 設備投資支払(68.0)
Financing Activities	(45.3) New loans + 15.0 Repayment (34.0) Treasury stock Purchase (9.7)	(34.6) New loans + 29.6 Repayment (32.8) Treasury stock Purchase (9.6)	(36.1) New loans + 34.5 Repayment(36.4) Treasury stock Purchase (14.9)	(30.0) New loans+25.0 Repayment (38.0)
Effect of Exchange Rate Changes on Cash & Cash Equivalents	5.5	2.6	8.1	1.0
Net Increase (Decrease) in Cash & Cash Equivalents	8.8	14.0	2.6	29.0
Cash & Cash Equivalents at End of Period	154.9	168.9	171.4	200.5

Invest funds in growth domains based on a debt-to-equity ratio of 0.4



Free cash flow is expected to remain positive despite aggressive investment in digital society (DS), which is a growth domain.

Sales by Product (Annual)

(Bln. Yen)



<After inter-segment elimination>	FY2021	FY2022	FY2023	FY2024 Forecast
Honeycomb filters	70.4	81.3	90.1	90.0
GPF	33.9	36.8	49.8	47.0
Cd-DPF·LSH	78.3	84.3	85.5	83.0
SiC-DPF	46.3	59.7	71.9	74.0
Sensors	63.7	58.7	64.6	66.0
Industrial Processes *	26.9	28.3	28.8	34.0
Environment Business	319.5	349.1	390.7	394.0
SPE related	96.9	107.0	86.5	99.0
Electronics components	29.5	28.6	26.1	33.0
Metal related	23.9	27.6	25.6	27.0
Digital Society Business	150.3	163.2	138.2	159.0
Energy Storage	1.3	2.7	2.1	16.0
Insulators	39.3	44.2	47.9	51.0
Energy & Industry Business	40.6	47.0	50.0	67.0
Total	510.4	559.2	578.9	620.0

*The business segments have been changed from the beginning of FY2024.

As a result of this change, the operating results prior to FY2023 have been rearranged and presented using the same segment classification. Industrial Processes Business was transferred from the Energy & Industry Division to the Environment Division.

Sales by Product (Semi Annual)

(Bln. Yen)



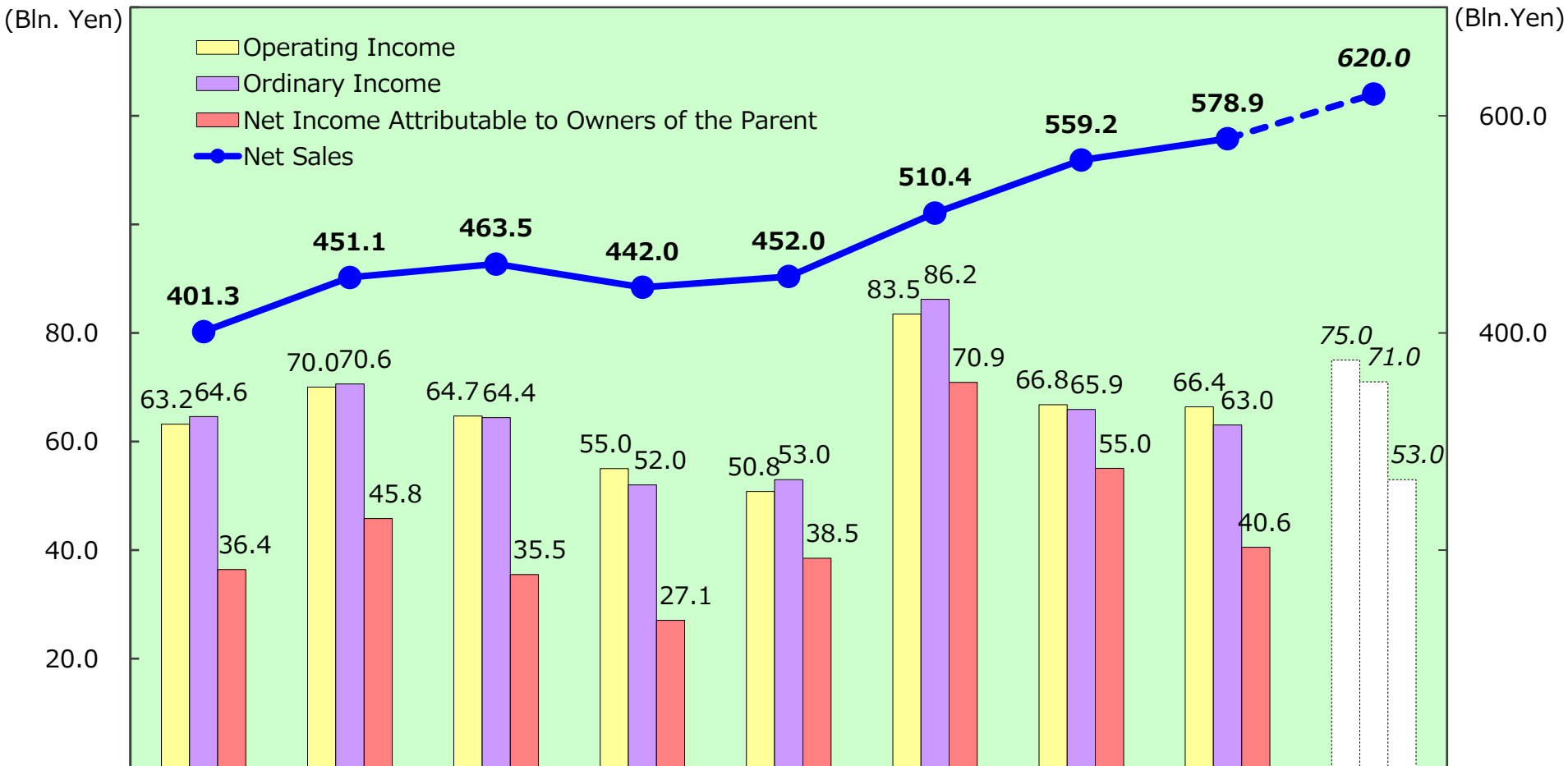
<After inter-segment elimination>	FY2023		FY2024 Forecast	
	1H	2H	1H	2H
Honeycomb filters	45.2	44.9	45.5	44.5
GPF	24.9	24.9	23.0	24.0
Cd-DPF·LSH	42.9	42.6	41.5	41.5
SiC-DPF	34.0	37.9	37.0	37.0
Sensors	32.9	31.8	34.0	32.0
Industrial Processes *	13.5	15.4	14.0	20.0
Environment Business	193.3	197.4	195.0	199.0
SPE related	41.8	44.7	46.0	53.0
Electronics components	11.7	14.4	14.5	18.5
Metal related	12.6	13.0	12.5	14.5
Digital Society Business	66.1	72.1	73.0	86.0
Energy Storage	0.7	1.4	3.0	13.0
Insulators	22.8	25.1	24.0	27.0
Energy & Industry Business	23.5	26.5	27.0	40.0
Total	282.9	296.0	295.0	325.0

*The business segments have been changed from the beginning of FY2024.

As a result of this change, the operating results for FY2023 have been rearranged and presented using the same segment classification.

The Industrial Process Business was transferred from the Energy & Industry Division to the Environment Division.

Consolidated Operating Results



	FY2016	FY2017	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023	FY2024
FX Rate									
USD	¥109	¥111	¥111	¥109	¥106	¥113	¥135	¥144	¥145
EUR	¥119	¥129	¥128	¥121	¥124	¥131	¥141	¥157	¥155
ROE	8.8%	10.4%	7.6%	5.8%	7.9%	12.9%	9.0%	6.1%	7.5%
EPS	¥112.71	¥142.42	¥110.35	¥84.73	¥121.61	¥226.56	¥177.47	¥133.65	¥177.90
Dividend	¥40	¥44	¥50	¥50	¥30	¥63	¥66	¥50	¥60

The purpose of this brief is information disclosure for better understanding of NGK Group's policies, projections and financial condition.

This brief does not solicit buying and selling of NGK's shares.

The figures included in this brief, including the business performance targets and figures, are all projected data based on the information currently available to the NGK Group, and are subject to variable factors such as economic conditions, competitive environments and future demands. Accordingly, please be advised that the actual results of business performance may differ substantially from the projections described here.



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