

# Financial Results Briefing Session for the Fiscal Year Ended March 31, 2025 (Main)

May 14, 2025

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## Financial Results Briefing Session for the Fiscal Year Ended March 31, 2025 (Main)

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# Section 1: Medium to Long-term Strategy PAMCOvision 2031

## 1. Background of the Medium to Long-term Strategy PAMCOvision 2031 (1) Reflecting on the Previous Medium to Long-term Strategy PAMCO-2024

### 1) Comparison of Three-year Plan vs. Results (Consolidated)

**Sudden deterioration of the nickel business environment, leading to a major deviation from the plan**

(Million yen)	For Apr. 2022 through Mar. 2025 (three-year total)			Reason for change
	Plan	Results	Comparison	
Net sales	171,969	63,549	-108,420	<ul style="list-style-type: none"> <li>Many stainless-steel producers shifted to procuring NPI due to its price competitiveness after the expansion of NPI production resulted in excessive competition</li> <li>Continuation of the policy of maintaining volume production and sales from a profitability perspective</li> </ul>
Operating profit	2,959	-29,071	-32,030	<ul style="list-style-type: none"> <li>The ongoing impact of NPI prices and high raw material and energy costs, and upward-trending raw material costs</li> </ul>
Ordinary profit	11,215	-8,703	-19,918	<ul style="list-style-type: none"> <li>While equity-method investment income from the Philippine equity-method affiliate increased, supported by robust demand, a loss was recorded</li> </ul>
Profit attributable to owner of parent	9,986	-7,768	-17,754	—

## 1. Background of the Medium to Long-term Strategy PAMCOvision 2031 (1) Reflecting on the Previous Medium to Long-term Strategy PAMCO-2024

### 2) Progress of Priority Measures

#### Enhancement of the nickel business's cost competitiveness and the establishment of a new business were not achieved

Material issues	Priority measures	Progress	Reason not achieved
Restructuring of ferronickel production and sales systems with emphasis on profitability	Establishment of optimal production system by reviewing production strategy	Achieved	—
	Strengthening of cost competitiveness by reviewing procurement strategy	Not achieved	Rise in raw material and fuel prices
Acceleration of consideration of expansion into overseas smelting business	Promotion of overseas smelting projects and start-up of production	Not achieved	Review due to changes in the initially expected structure
Creation of new businesses that contribute to society	Promotion of production and sales of raw materials for LIB materials	Not achieved	Prioritization of new businesses
Diversification of business in Japan to contribute to a recycling-oriented society	Restructuring of recycling business	Not achieved	Delay in profitability verification
Enhancement of corporate value by addressing sustainability issues	Sustainability Promotion Council	Achieved	—
	Reduction of GHG emissions	Achieved	—
	Promotion of harmonious co-existence by contributing to the development of local communities and resource-providing countries	Partially achieved	—
	Promoting constructive dialogue with stakeholders	Achieved	—

## 1. Background of the Medium to Long-term Strategy PAMCOvision 2031 (1) Reflecting on the Previous Medium to Long-term Strategy PAMCO-2024

### 3) Progress of the Investment Strategy

**Investment in the nickel business was limited, and investment in new ventures did not materialize**

(Million yen)	PAMCO-2024 Plan	PAMCO-2024 Results	Change
Capital investment	3,850	1,696	-2,154
Domestic business	8,025	70	-7,955
Overseas business, resources	5,532	31	-5,501
R&D investment	1,035	152	-883
Total	18,442	1,949	-16,493

- Capital investment was limited to maintaining existing nickel facilities and implementing safety and environmental measures
- For the domestic business, the worsening cobalt market prevented a viable profitability forecast for the cobalt sulfate production and sales business, leading to the cessation of investment for the foreseeable future, even after due diligence
- For Pacific Metals' overseas businesses and resources, the impact of the shareholder restructuring of its Indonesian partner has reduced the priority of investment in overseas smelting businesses
- Regarding its R&D investment, Pacific Metals expects that sufficient pilot data will be obtained for its small-scale prototype

## 1. Background of the Medium to Long-term Strategy PAMCOvision 2031 (2) Results of the Past Decade and Activities to Overcome the Situation

**Over the past 10 years, Pacific Metals has had operating surpluses 2 times and ordinary profit surpluses 4 times**

Trend in operating results	Fiscal year ended March 31, 2016	Fiscal year ended March 31, 2017	Fiscal year ended March 31, 2018	Fiscal year ended March 31, 2019	Fiscal year ended March 31, 2020	Fiscal year ended March 31, 2021	Fiscal year ended March 31, 2022	Fiscal year ended March 31, 2023	Fiscal year ended March 31, 2024	Fiscal year ended March 31, 2025
Net sales (million yen)	47,649	38,697	41,210	49,062	44,133	32,217	57,129	34,852	15,521	13,175
Operating profit (million yen)	-15,357	-3,070	-3,239	176	-1,879	-493	4,806	-12,588	-9,114	-7,368
Ordinary profit (million yen)	-12,283	-515	-203	3,451	972	3,344	12,999	-4,960	-2,119	-1,622

### Factors for the downturn in performance

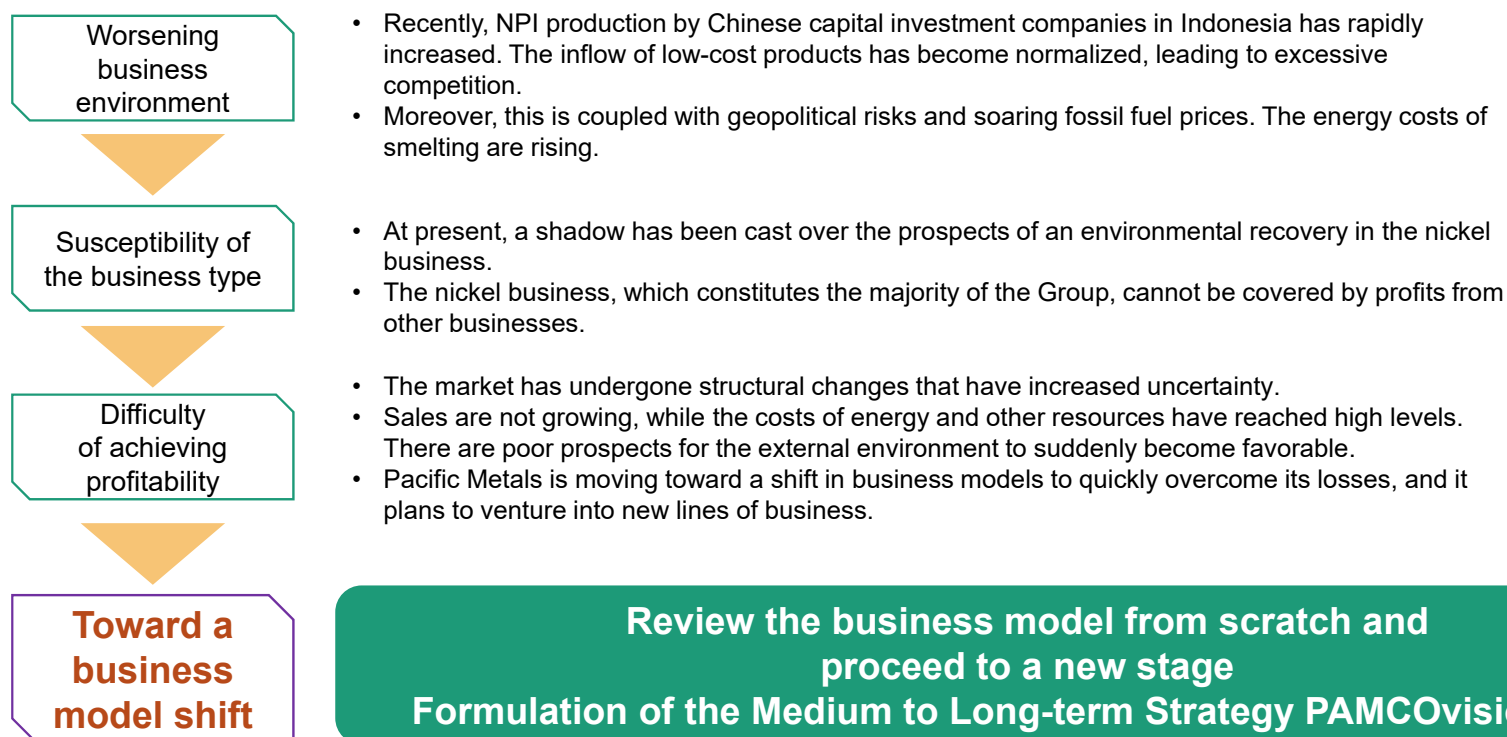
1. Trends in the LME and FX markets and resource-providing countries, etc., have had a significant impact on Pacific Metals' business performance
2. In recent years, the production of nickel pig iron (NPI) by Indonesian Chinese capital companies has suddenly increased; consequently, the market had an oversupply of NPI, driving prices down significantly  
Stainless steel producers are shifting to NPT procurement
3. There was also a direct impact on procurement prices due to soaring fossil fuel prices caused by resource nationalism and geopolitical risks
4. The environment transformed into one that exceeded the acceptable range of the business model

### Activities to overcome the situation

1. To diversify its businesses, Pacific Metals is investigating opportunities adjacent to its existing businesses
2. Pacific Metals is continuously investigating and has most recently been developing promising new businesses with joint venture partners, leveraging its proprietary operational technology in smelting and equipment-intensive industries, particularly in rare metals
3. Pacific Metals is planning to shift business models with the aim of achieving profitability quickly

## 1. Background of the Medium to Long-term Strategy PAMCOvision 2031 (3) Toward a Business Model Shift

### Toward a business model shift involving a reduction or withdrawal from the nickel business

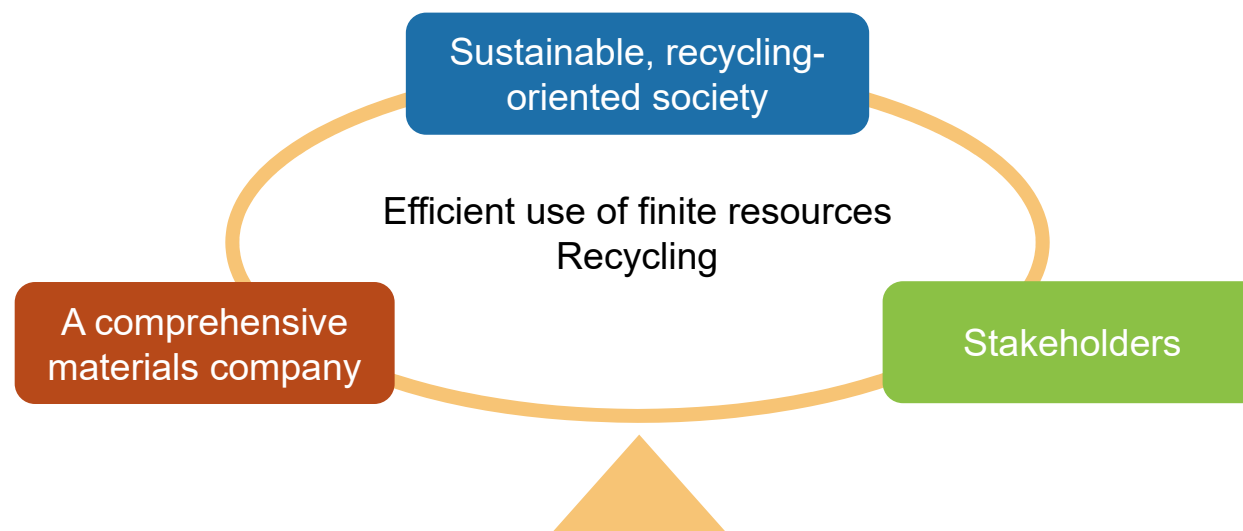




## 2. Pacific Metals' Vision

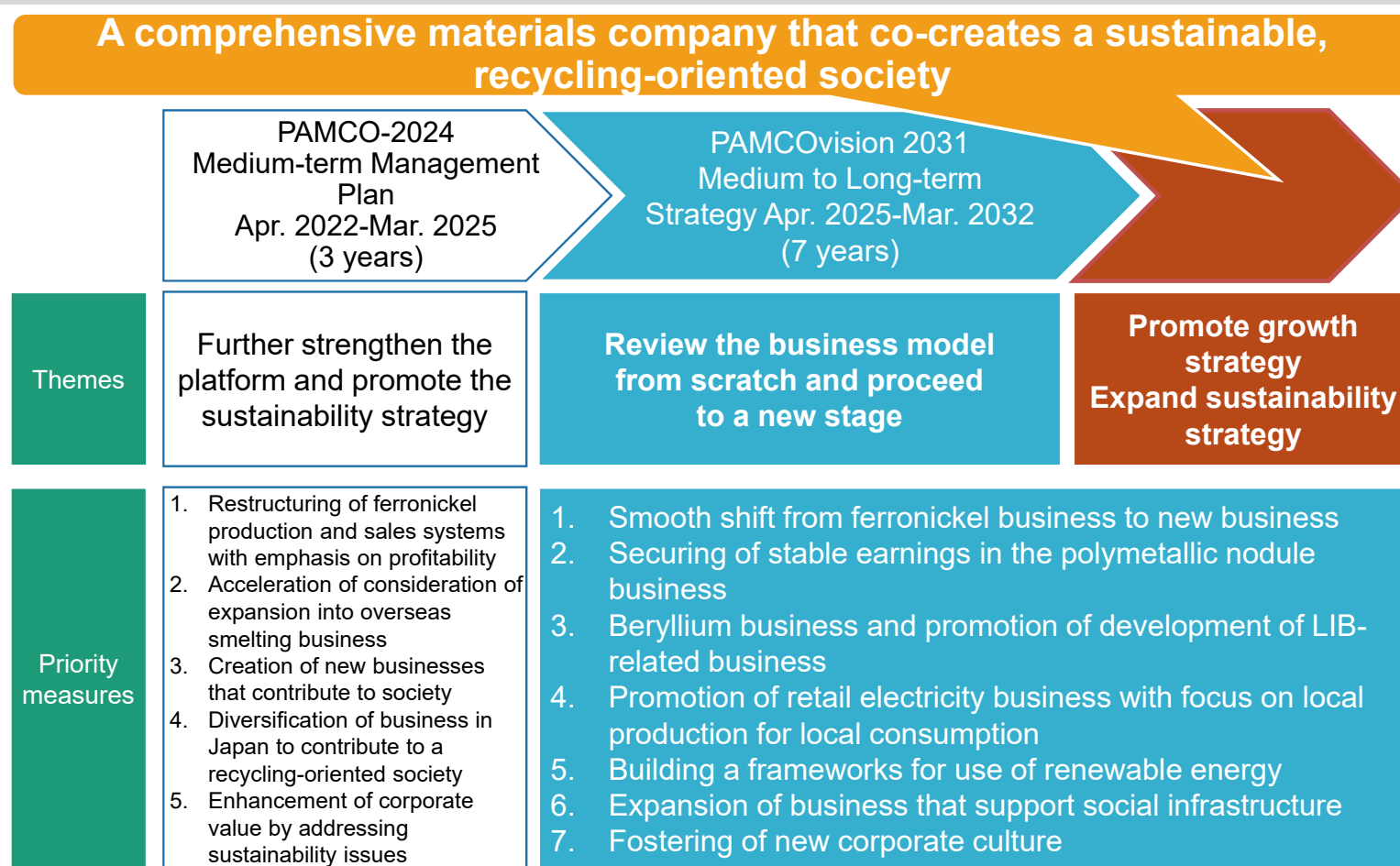
Management philosophy: Utilize the capabilities of people, provide offerings that enable the planet's resources to be used more effectively, and contribute to the happiness and well-being of human society

**Vision: A comprehensive materials company that co-creates a sustainable, recycling-oriented society**



**The Medium to Long-term Strategy PAMCOvision 2031 is the cornerstone of Pacific Metals' vision**

## 3. Medium to Long-term Strategy PAMCOvision 2031 (1) Comprehensive View of the Medium to Long-term Strategy PAMCOvision 2031



## 3. Medium to Long-term Strategy PAMCOvision 2031 (2) Restructuring of Business Portfolio

### 1) Business Diversification

**We will strive to diversify our business by entering new business areas where we have sown seeds to date**

#### **Metal smelting**

A world-leading polymetallic nodule metal smelting business utilizing underwater sources

- Considering a polymetallic nodule toll smelting business as a new core business
- Successfully conducted a polymetallic nodule smelting test at commercial-scale facilities

#### **Electricity**

A retail electricity business for high-voltage and extra-high-voltage businesses

- Collaborating with local power generation businesses to supply high value-added, locally sourced renewable energy

#### **Functional materials**

A beryllium business targeting the nuclear fusion power generation and existing beryllium alloy markets

- With the commercialization of nuclear fusion power generation as a catalyst, the nuclear fusion market is expected to expand significantly, with the nuclear fusion method that requires beryllium expected to account for half the market
- Supplying beryllium to existing markets and materializing potential demand will grow the existing beryllium market

#### **Resources recycling**

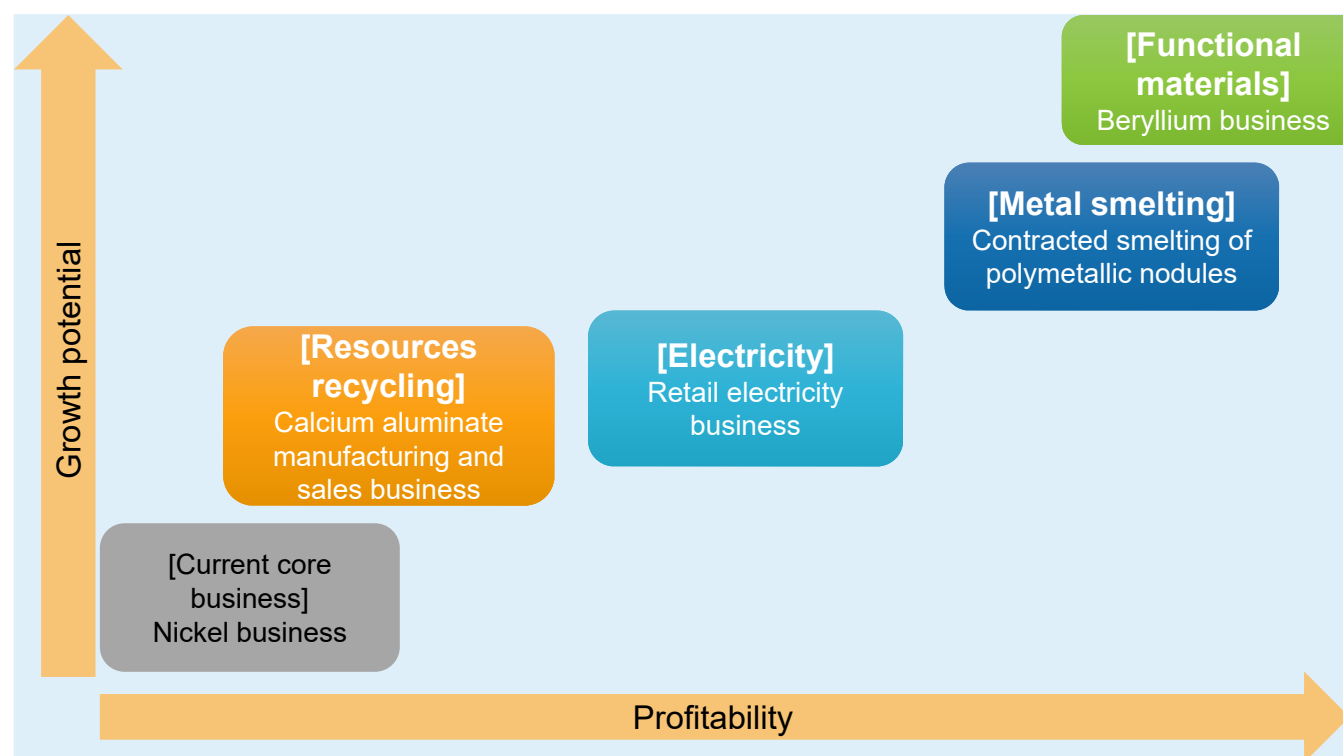
A calcium aluminate manufacturing and sales business through collaboration with Amita Holdings

- Against the backdrop of a low-carbon society, the shift from blast furnaces to electric arc furnaces is progressing, leading to an expansion in demand for calcium aluminate, which is necessary for removing impurities from electric arc furnace steel

## 3. Medium to Long-term Strategy PAMCOvision 2031 (2) Restructuring of Business Portfolio

### 2) Business Feasibility Analysis

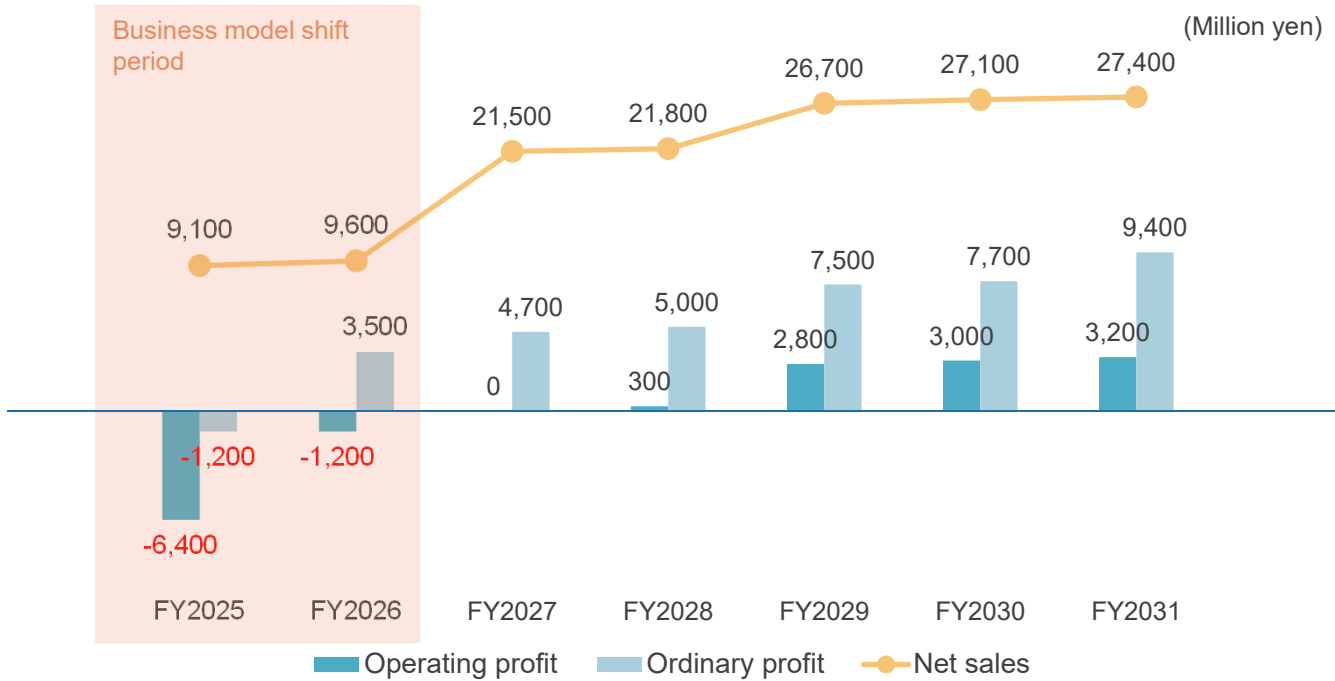
**With metal smelting and functional materials as our core businesses, combine electricity and resources recycling businesses**



3. Medium to Long-term Strategy PAMCOvision 2031 (2) Restructuring of Business Portfolio

3) Summary of Business Profit and Loss

By expanding applications in nickel business and launching retail electricity business, aim to achieve operating profit and ensure stable profitability from FY2027



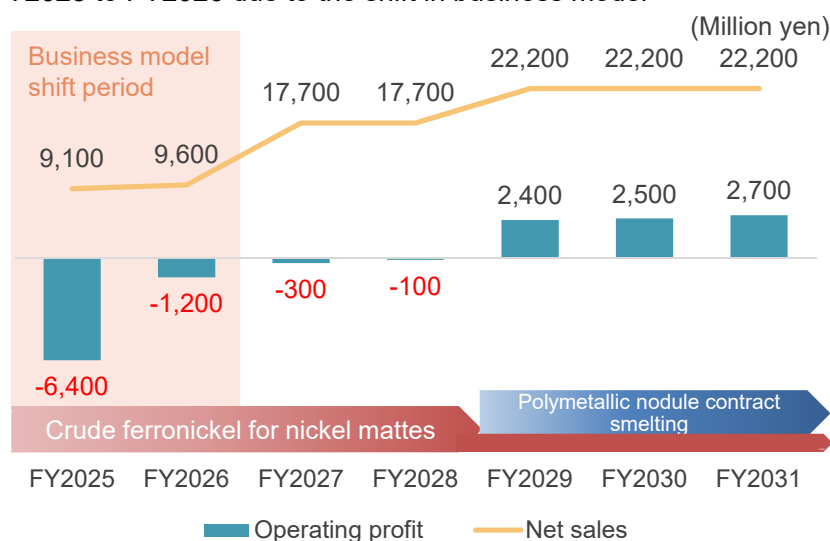
## 3. Medium to Long-term Strategy PAMCOvision 2031 (3) Business Overview

### 1) Metal Smelting Business

**We aim to smoothly transition from the nickel business to contracted smelting of polymetallic nodules**

#### Business strategy:

- For the nickel business, Pacific Metals aims to achieve a significant improvement in its business profit and loss **by expanding applications from stainless steel raw materials to matte raw materials, and a transition to this new focus** is under consideration
- Furthermore, **energy-related infrastructure**, which consumes large amounts of energy during resource smelting, will be utilized in new businesses. Therefore, Pacific Metals will **ensure it can be utilized swiftly and maintain the system without interruption.**
- The polymetallic nodule business will commence full-scale operation in FY2029; therefore, the Group's business results will be slow for the period from FY2025 to FY2026 due to the shift in business model



#### ◆Strengths of the business

- Maximize existing facilities and smelting technology to start the business with minimal capital investment
- The Pacific Metals plant has the advantage of being located in the largest logistics site in northern Tohoku

#### ◆Future business potential

- The spread of EVs has significantly expanded demand for nickel for LIBs
- Rare metals are expected to see continued growth as raw materials for the LIBs used in EVs
- Slag is expected to grow steadily as a raw material for ferro alloys

#### ◆The supply chain of polymetallic nodule products

- Nodules are shipped from The Metals Company (TMC) in Canada
- After Pacific Metals' contract smelting, the products are shipped to TMC. The products are sold by TMC in Canada or neighboring countries

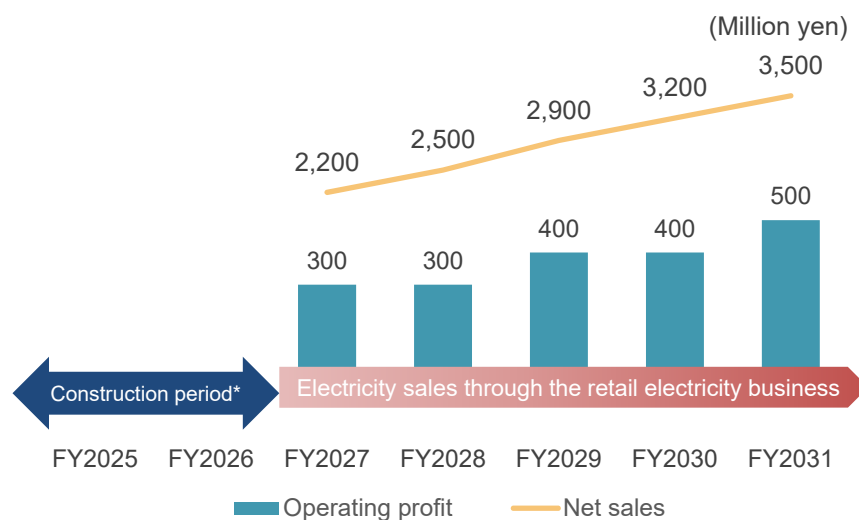
## 3. Medium to Long-term Strategy PAMCOvision 2031 (3) Business Overview

### 2) Retail Electricity Business

#### Establish a retail electricity business and enter the electricity market

Business strategy:

- Establish a retail electricity business for the high-voltage and extra-high-voltage sectors as a retail electricity business operator and aim to enter the electricity market
- Collaborate with local power generation businesses **to supply high-value-added, locally sourced renewable energy power generation**



#### ◆ Strengths of the business

- Proposals leveraging expertise in optimizing the balance of power consumption, including purchased electricity
- Proposals tailored to the needs of energy-intensive industries

#### ◆ Future business potential

- Develop an electricity business primarily focused on neighboring regions, and by proactively incorporating low-environmental-impact renewable energy, stable business development can be expected

\* Construction period: Due to the external sales condition negotiation period, the expected profit is limited to a certain amount

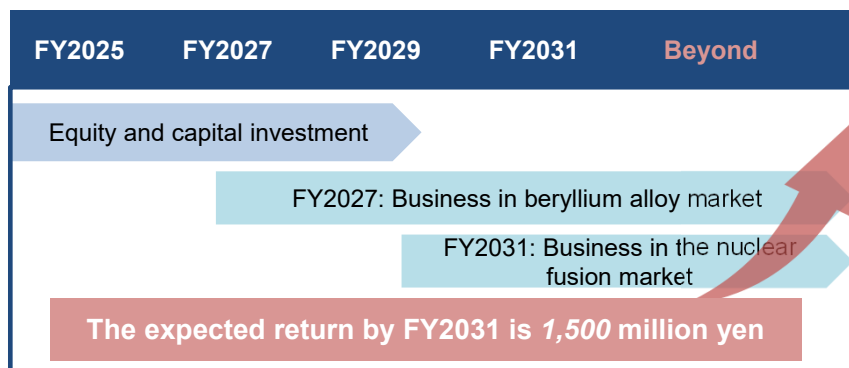
## 3. Medium to Long-term Strategy PAMCOvision 2031 (3) Business Overview

### 3) Beryllium Business

**Pacific Metals anticipates a substantial increase in profits resulting from the pilot project and commercialization of nuclear fusion power generation**

Business strategy:

- Pacific Metals expects manufacturing cost reductions to continue due to MiRESSO's innovative smelting technology, coupled with the growth of EVs, leading to an expansion in demand for electronics applications
- A comprehensive business cooperation agreement has been concluded with MiRESSO; the agreement involves the utilization of Pacific Metals' resources and initial equity participation
- **Enter the beryllium alloy market business**, and aim to **enter the nuclear fusion market business and participate as a business** in the future



**Social implementation of nuclear fusion power generation is expected; investment recovery by FY2035 is possible**

#### ◆ Strengths of the business

- Effective utilization of the extensive site
- Fully leverage Pacific Metals' comprehensive expertise in production technology, safety and health, and environmental management, capitalizing on the characteristics of the equipment-intensive industry

#### ◆ Future business potential

- Despite current demand limitations due to limited supply and high prices, Pacific Metals expects to convert potential demand into realized demand by lowering costs and catering to unmet needs
- Substantial future market growth driven by ongoing initiatives towards the implementation of nuclear fusion is anticipated.



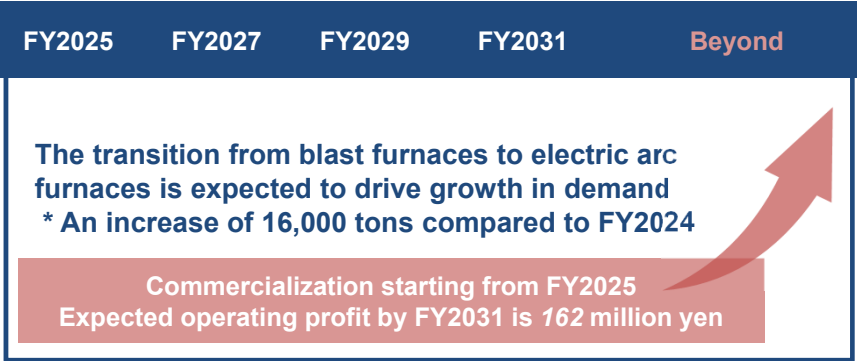
3. Medium to Long-term Strategy PAMCOvision 2031 (3) Business Overview

4) Calcium Aluminate Manufacturing and Sales Business

Driven by the shift from blast furnaces to electric arc furnaces, Pacific Metals intends to develop an environmental recycling business in cooperation with Amita Holdings

Business strategy:

- **The shift from blast furnaces to electric arc furnaces** is anticipated **to drive increased demand for calcium aluminate as a desulfurizing and slag-forming material**
- Pacific Metals will establish a calcium aluminate manufacturing and sales business in collaboration with Amita Holdings, aiming to build an environmental recycling business
- Pacific Metals **will leverage the technologies it has cultivated through its existing businesses** to enhance the added value of recycled raw materials
- Amidst the shift from blast furnaces to electric arc furnaces against the backdrop of transitioning to a low-carbon society, there is an expansion in demand for calcium aluminate, which is necessary for removing impurities from electric furnace steel



Demand expected to increase beyond FY2031 as well

- ◆ Strengths of the business
  - Reduce manufacturing costs by using recycled raw materials as the primary raw material
  - Collaboration with Amita Holdings (collection of recycled raw materials, relationships with electric arc furnace steel producers)
  - Provided test production samples to key potential customers and received positive feedback
- ◆ Future business potential
  - Expansion in demand for desulfurization and slagging agents due to the shift from blast furnaces to electric arc furnaces

## 3. Medium to Long-term Strategy PAMCOvision 2031 (4) Response to Material Issues Related to Sustainability

### Focus on higher priority material issues in light of the new business portfolio

- Organize material issues based on the new business portfolio, the SDGs, ESG, stakeholder opinions, and social issues
- Activities related to high priority material issues, including internal framework reviews, will be strengthened to enhance corporate value and to contribute to the realization of a sustainable society

#### Promote activities to achieve carbon neutrality

- Reduce greenhouse gas emissions
- Participate in initiatives to achieve a green transformation (GX)
- Targets for reduction in greenhouse gas emissions\*
  - ✓ 2030: 46% reduction (Compared to 2013)
  - ✓ 2050: Carbon neutrality Achieved

\* It is possible to carry out appropriate reviews in line with the business portfolio restructuring

#### Develop an environment for ensuring diversity and enhancing investment in human capital

- Develop an environment in which diverse talent can thrive, in light of the new business portfolio
- Enhance investment in securing and developing human capital
- Further ensure the effectiveness of investments by implementing performance evaluations and feedback

#### Promote harmonious co-existence through contributions to local communities and the supply chain

- Promote harmonious co-existence with local communities through contribution programs
- Contribute to the supply chain's sustainability by understanding and acting upon its needs

#### Promote constructive dialogue with stakeholders

- Implement timely, appropriate, and fair disclosure of the management status and financial status to Japanese and international stakeholders
- Actively communicate the market environment and Pacific Metals' unique strengths to promote understanding of its position and perspectives

## 4. Response to Realize Management That Is Conscious of Cost of Capital and Stock Price (1) Analysis of the Current Situation

### A low P/B ratio and low ROE have become the norm

#### P/B ratio

- The P/B ratio has consistently been below 1.
- Reliance on the highly volatile ferronickel business for Pacific Metals' primary operations has resulted in unstable performance
- Pacific Metals had a prolonged period in which it paid no dividends, and its stock market valuation was consistently low

#### ROE

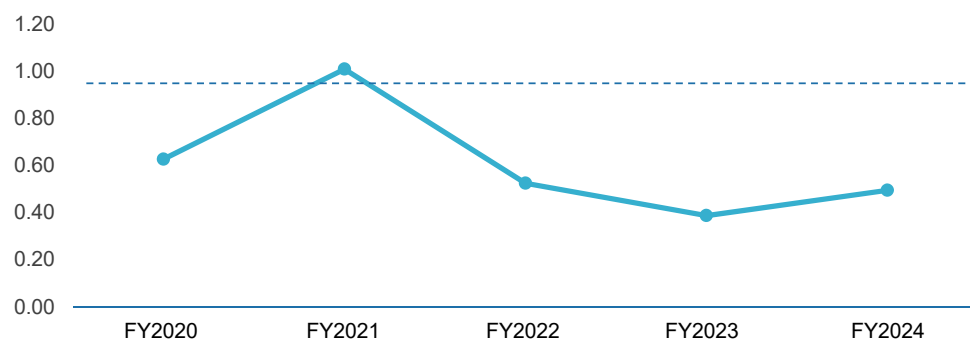
- The persistent downturn in performance has resulted in a consistently low ROE

#### Balance sheet

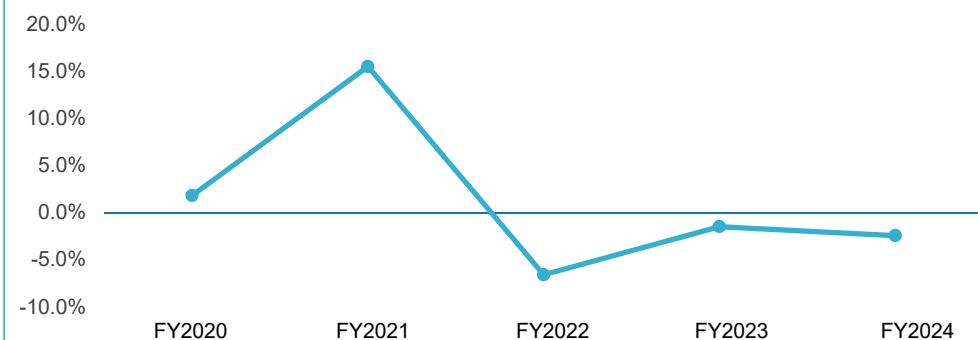
- As stated above, both the P/B ratio and ROE remain low
- As a result, Pacific Metals continues to operate with inefficient capital utilization

(In multiples)

Trends in the P/B ratio



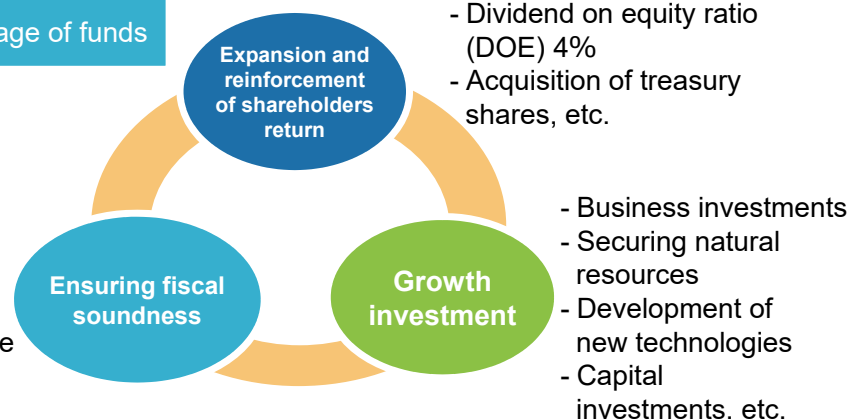
Trends in ROE



## 4. Response to Realize Management That Is Conscious of Cost of Capital and Stock Price (2) Initiatives to Enhance Corporate Value

**In executing the medium to long-term strategy, aim to realize management that is conscious of cost of capital and stock price**

### Diagram of usage of funds



### Management that is conscious of cost of capital and stock price

- Aim to achieve a target ROE of 8% by steadily executing the medium to long-term strategy
- Aim for a target P/B ratio of 1 as an indicator of management's consciousness of cost of capital

### Incentive-based compensation

- Pacific Metals' management is considering the implementation of incentive-based compensation as a key commitment to achieving its medium to long-term strategy

### Dialogues with shareholders and investors

- The director in charge of IR will spearhead constructive dialogues to ensure investors and shareholders understand the intrinsic corporate value of Pacific Metals
- Holding IR financial results briefing sessions (semiannually)
- Holding individual IR meetings (quarterly)
- Also, considering the enhancement of IR activities for individual investors

### ◆ Dividends of surplus

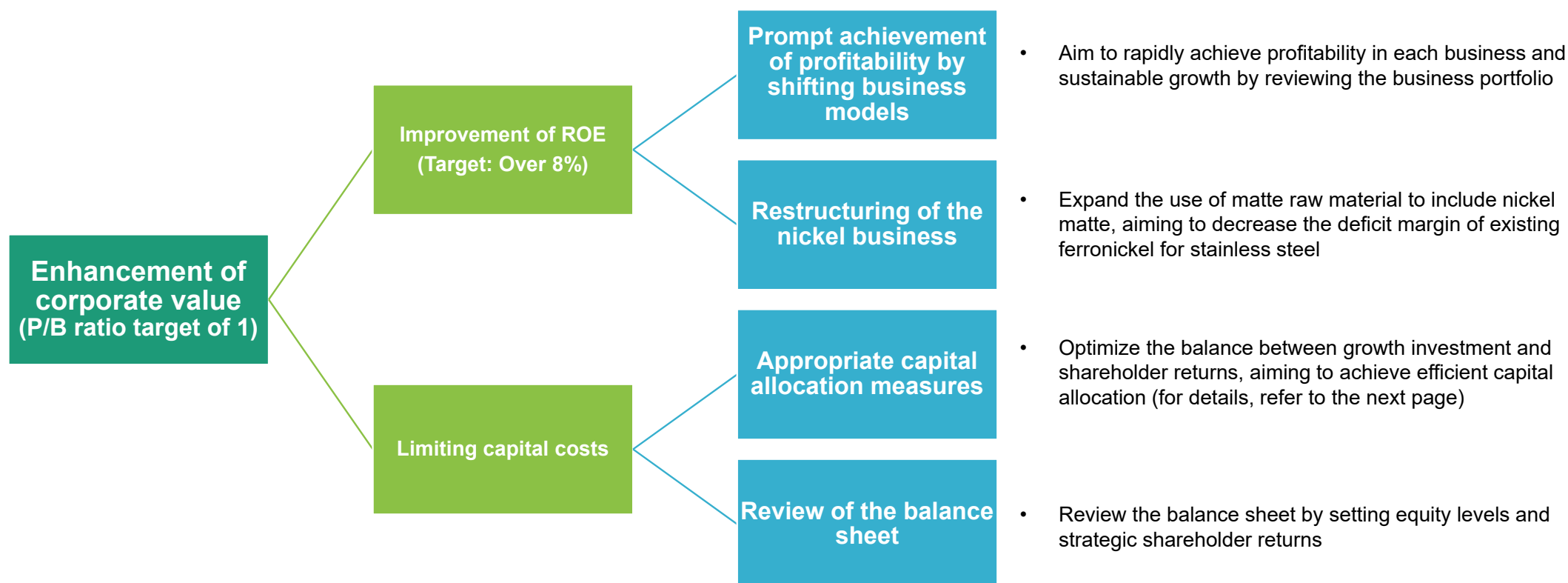
To secure funds for growth investments aimed at improving return on capital, and to comprehensively consider the balance with shareholder returns, Pacific Metals will clarify its commitment to providing stable dividends to shareholders by revising the previous dividend payout ratio target of 30% and introducing a **dividend on equity ratio (DOE) target of 4%** as a new indicator

### ◆ Internal reserve

Use the internal reserve as a fund to respond functionally to changes in the business environment and utilize it to invest in businesses, **make capital investments**, and **acquire treasury shares as part of capital policies**

## 4. Response to Realize Management That Is Conscious of Cost of Capital and Stock Price (3) The Story of Corporate Value Enhancement

**Aim to maximize corporate value by improving ROE and limiting capital costs**



## 4. Response to Realize Management That Is Conscious of Cost of Capital and Stock Price (4) Capital Allocation

**From FY2025 to FY2031, operating CF will be allocated to growth investment and shareholder returns**

### Cash in

Operating CF  
**Approx. 42**  
billion yen



For growth  
investment

**Approx. 23**  
billion yen

Shareholder  
returns

**Approx. 19**  
billion yen

### Cash out

Maintenance and renewal of aging infrastructure and investment in new business foundations (for nickel and for polymetallic nodules)

**Approx. 16** billion yen

- \* Maintenance and renewal of aging nickel smelting infrastructure for conversion to the next core business
- \* Existing infrastructure will be used as the basis for polymetallic nodules. Pacific Metals will invest in modification for underwater sources and efficient production.

For functional materials (related to beryllium)

**Approx. 7** billion yen

- \* A comprehensive business cooperation agreement has been concluded for beryllium; the agreement involves utilization of Pacific Metals' resources and initial equity participation. The intent is to develop a joint venture later.

Projected dividends

**Approx. 19** billion yen

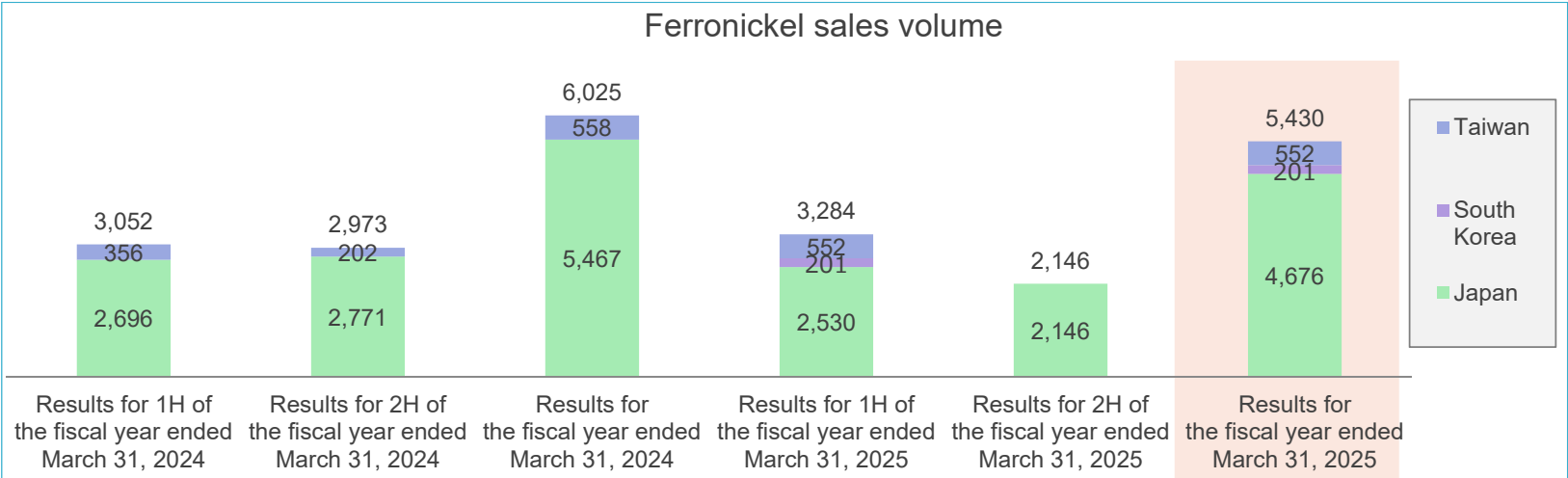
- \* For the time being, a DOE of 4% will be set.
- \* Acquisition of treasury shares, etc., will be decided as appropriate in consideration of the shareholder return policy.

## Section 2: Financial Results for the Fiscal Year Ended March 31, 2025

# Financial Results for the Fiscal Year Ended March 31, 2025

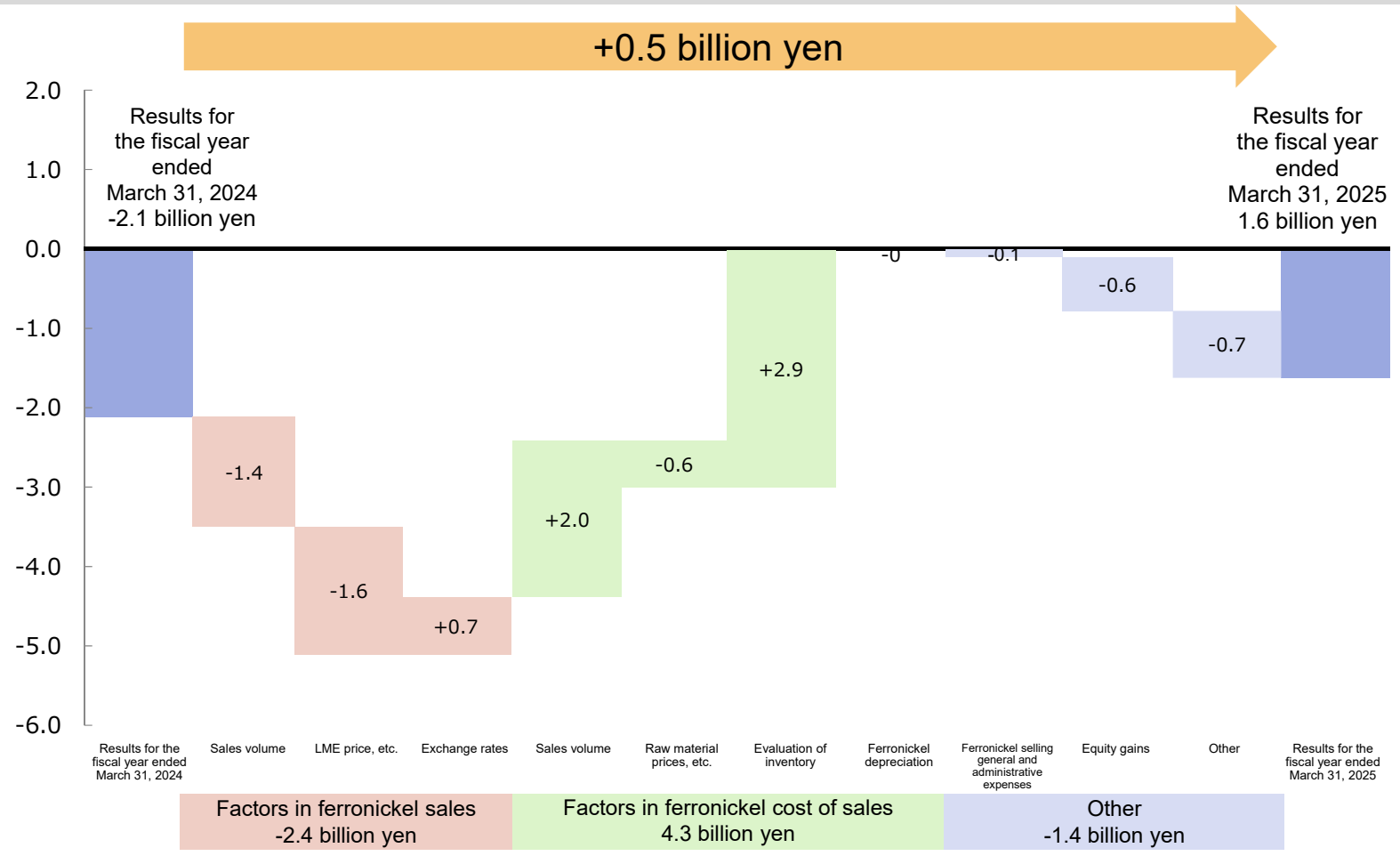
## 1. Summary of Financial Results

(Financial results)	Results for the fiscal year ended March 31, 2024		Results for the fiscal year ended March 31, 2025		Year-on-year (%)	(Results for the nickel business)	Results for the fiscal year ended March 31, 2024	Results for the fiscal year ended March 31, 2025	Year-on-Year (%)
	Amount (million yen)	Profit rate (%)	Amount (million yen)	Profit rate (%)					
Net sales	15,521	—	13,175	—	- 15.1	Production volume (Ni t)	6,035	3,888	-35.6
Operating profit (loss)	-9,114	-58.7	-7,368	-55.9	—	Sales volume (Ni t)	6,025	5,430	-9.9
Ordinary profit (loss)	-2,119	-13.7	-1,622	-12.3	—	Applicable LME nickel price (US\$/t)	21,208	17,108	-19.3
Profit attributable to owner of parent (loss)	-1,074	-6.9	-1,667	-12.7	—	[Applicable LME nickel price (US\$/lb.)]	[9.62]	[7.76]	
(Investment)	331	—	386	—	16.6	Applicable exchange rate (¥/US\$)	144.46	151.94	5.2
(Depreciation)	350	—	355	—	1.4				





2. Consolidated Ordinary Profit and Loss Analysis



## Section 3

# Appendices

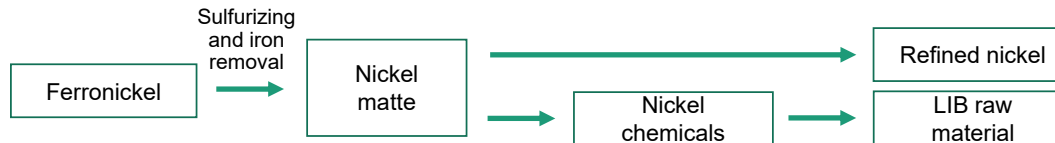
(Explanation of Each Business in the Medium to Long-term  
Strategy PAMCOvision 2031)

# 1. Medium to Long-term Strategy PAMCOvision 2031 (1) Business Overview

## 1) Metal Smelting Business (Nickel Business) [Appendix: Business Explanation]

### ◆What is nickel matte?

- Nickel sulfide, which serves as an intermediate raw material for nickel refining and LIB
- Manufactured by sulfurizing and removing iron from crude ferronickel (before sulfur removal) in a converter



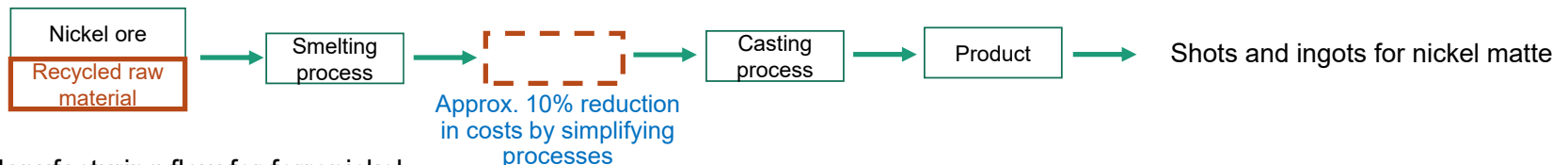
### ◆Benefits of shifting focus from raw materials for stainless steel to nickel matte

- Reduced costs due to the elimination of the desulfurization process (which removes sulfur, an element whose inclusion is avoided in stainless steel raw materials)
- Reduced costs due to the substantial use of recycled nickel as the main raw material
  - \* The amount of recycled raw material that can be used for stainless steel (SUS) is limited due to impurities

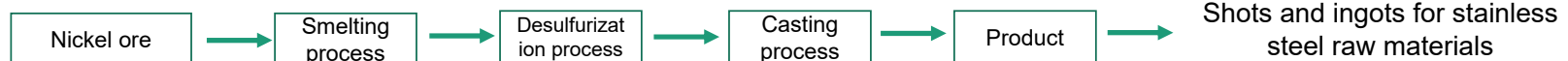
A decrease in variable manufacturing costs leads to an improved break-even point

### ◆Manufacturing flow comparison

#### Manufacturing flow for nickel raw material for nickel matte



#### Manufacturing flow for ferronickel



# 1. Medium to Long-term Strategy PAMCOvision 2031 (1) Business Overview

## 1) Metal Smelting Business (Contracted Smelting of Polymetallic Nodules) [Appendix: Business Explanation]

### ◆What are polymetallic nodules?

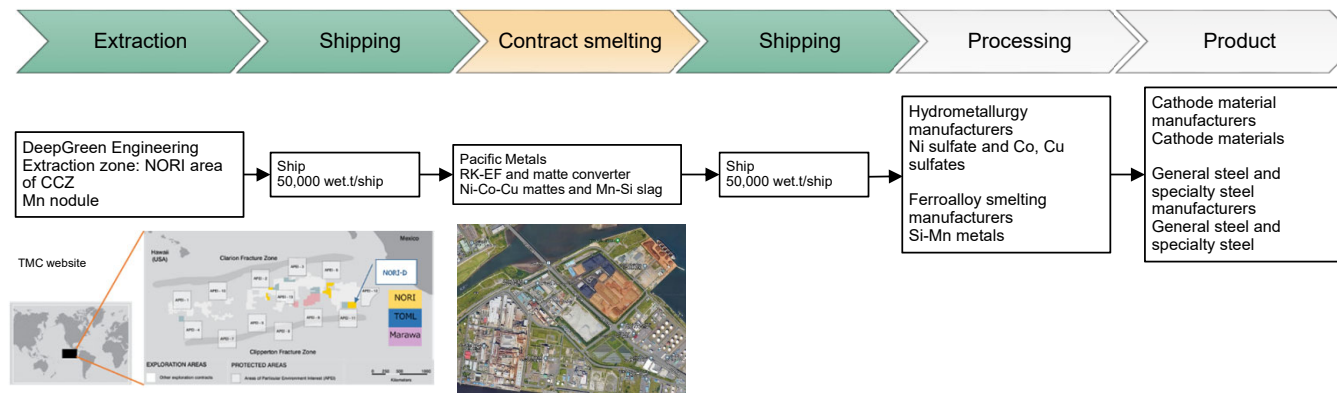
- A type of mineral that lies semi-buried in the seabed at depths ranging from 4,000 to 6,000 meters and is abundant in Mn, Ni, Cu, and Co
- In Japan, these metals are considered critical due to the trends toward decarbonization, supply chain fragmentation, and heightened geopolitical risks
- Estimates indicate that the polymetallic nodule reserves in just the Clarion-Clipperton Fracture Zone (CCZ) off Hawaii exceed the total resources of all mineral deposits combined

### ◆The importance of Pacific Metals' initiatives

- The technology and knowhow that Pacific Metals has cultivated over the years in the metal smelting business, which considers environmental impacts, can be applied
- Initial investment can be reduced by leveraging existing infrastructure and smelting facilities, enabling the domestic supply of critical metals to be competitive compared to smelting in other nations

### ◆Establishment of production methods via practical testing

- Establish a smelting method through pilot plant testing at Pacific Metals' facilities (kiln and electric furnace) using 2,000 tons of polymetallic nodules provided by TMC
- The outcomes of this testing will inform the planned modification of specific equipment to achieve an annual smelting capacity of 1.3 million tons of polymetallic nodules



# 1. Medium to Long-term Strategy PAMCOvision 2031 (1) Business Overview

## 2) Retail Electricity Business [Appendix: Business Explanation]

### ◆What is the retail electricity business?

- Electricity businesses are divided into three sectors: power generation, transmission and distribution, and retail; Pacific Metals operates in the retail sector, which involves selling electricity to plants and other facilities
- Commence a demand-side PPS (Power Producer and Supplier) operation to supply Pacific Metals sites with electricity at advantageous market prices

### ◆The importance of Pacific Metals' initiatives

- In the metal smelting business, Pacific Metals has substantial electricity needs and a proven history of optimizing the mix of purchased and in-house power generation to drive down manufacturing costs
- Consequently, Pacific Metals possesses extensive expertise developed over many year regarding how to procure electricity cheaply and consume it efficiently, enabling proposals tailored to the needs of energy-intensive industries
- Also, Pacific Metals will collaborate with local power generation businesses in using high value-added, locally sourced renewable energy

### ◆Structure of the business



### ◆Other electricity business

- Going forward, Pacific Metals plans to maximize the electricity load management capabilities inherent to capital-intensive industries and enter the Virtual Power Plant (VPP\*) market

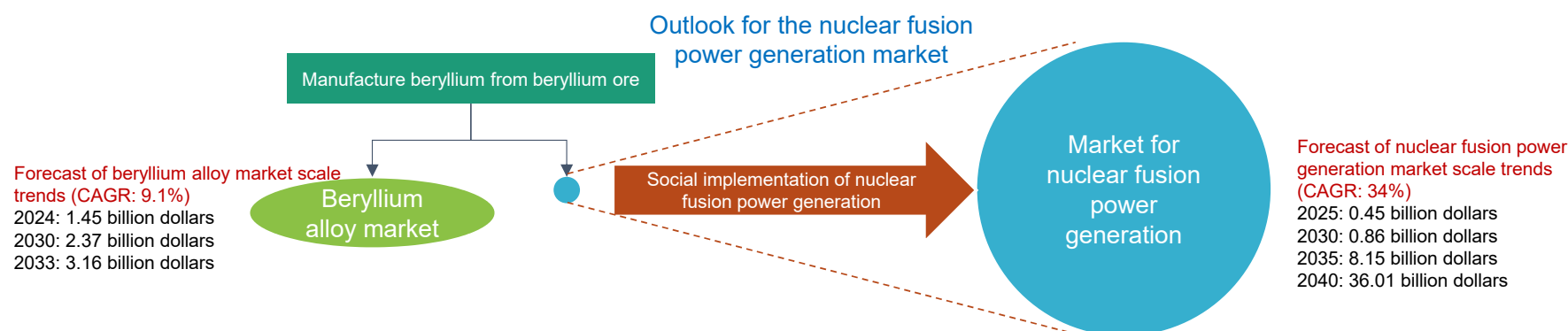
\* This framework employs ICT to integrate and control multiple distributed energy resources as if they were a single power plant, thereby regulating the balance of electricity supply and demand

## 1. Medium to Long-term Strategy PAMCOvision 2031 (1) Business Overview

### 3) Beryllium Business [Appendix: Business Explanation]

#### ◆What is the beryllium business?

- This business involves producing beryllium products from beryllium ore, with the future aim of selling such products to both the nuclear fusion power generation sector and the established beryllium alloy market



#### ◆The importance of Pacific Metals' initiatives

- MiRESSO, a certified venture spun off from the National Institutes for Quantum Science and Technology (QST) and based in Aomori Prefecture, aims to contribute to the social implementation of nuclear fusion power generation by commercializing its beryllium business
- With a long-established site in Hachinohe City, Aomori Prefecture, Pacific Metals has the facilities, infrastructure, knowledge, experience, and proven results in producing metals from diverse ores, which can generate numerous synergies in the commercialization of the beryllium business

Realizing synergies by pooling management resources and knowhow

Pacific Metals' participation in mass production for a nuclear pilot project on fusion power generation and the mass production phase after social implementation

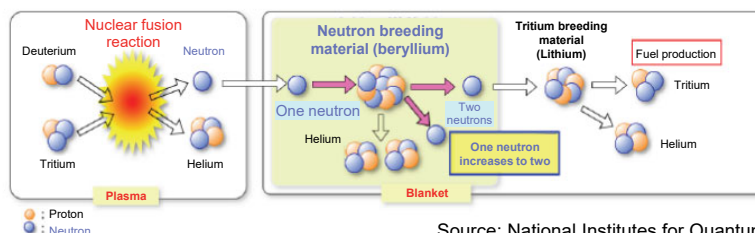
# 1. Medium to Long-term Strategy PAMCOvision 2031 (1) Business Overview

## 3) Beryllium Business [Appendix: Business Explanation]

### ◆The need for beryllium in nuclear fusion power generation

Beryllium is an essential metal that functions as a neutron multiplier in the tritium production process, which serves as the fuel for nuclear fusion reactions

- Nuclear fusion power generation relies on the rare isotope tritium as its fuel source, and through the nuclear fusion reaction, the generated neutrons are used to breed more tritium, which is then recycled as fuel
- Enhancing the tritium production efficiency and maintaining the nuclear fusion reaction requires neutron multiplication, for which beryllium is employed as a neutron multiplier material



Source: National Institutes for Quantum Science and Technology

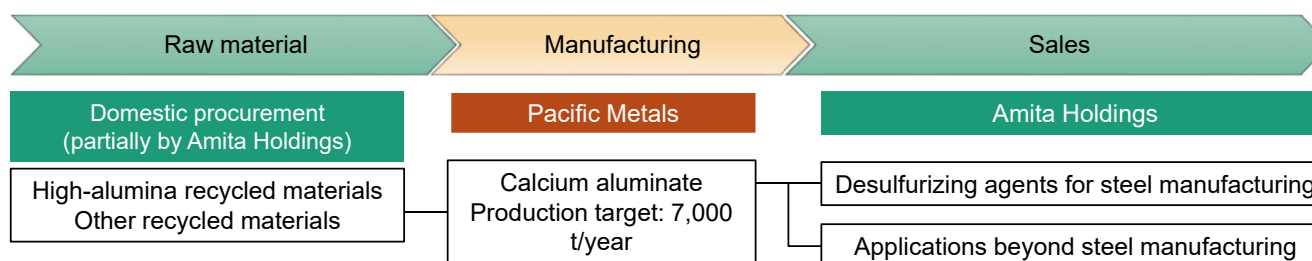
### ◆Growth drivers of the beryllium alloy market

Aerospace and defense	Increasing demand for lightweight, and high-strength materials leads to greater adoption of structural components and precision parts for commercial aircraft, etc.
Automotive	The spread of EVs and the trend towards higher-performance automotive components, alongside efforts to reduce vehicle weight to reduce CO2 emissions
Electronics	Accelerated digitalization is driving expanded demand for materials with high-speed transmission and low-loss properties, as well as high-performance contacts and connectors
Healthcare	A rise in the application of window materials for X-ray apparatuses and the rapid advancement of cutting-edge medical technologies

# 1. Medium to Long-term Strategy PAMCOvision 2031 (1) Business Overview

## 4) Calcium Aluminate Manufacturing and Sales Business [Appendix: Business Explanation]

- ◆What is calcium aluminate?
  - Calcium aluminate is primarily used as a desulfurizing agent in steel manufacturing. As the steel manufacturing industry transitions from blast furnaces to electric arc furnaces as part of decarbonization efforts, a greater need for more advanced desulfurizing agents is anticipated, which is forecast to result in growth in demand
- ◆Establishing production methods via practical testing
  - By conducting practical trials with its existing equipment (originally, a scallop shell incineration ash recycling facility), Pacific Metals has established a calcium aluminate manufacturing process
  - The primary high-alumina recycled raw material utilized in the trials was provided by a domestic partner with whom Pacific Metals has a long-term business relationship, thus ensuring a stable, ample supply for commercialization
- ◆Partnership with Amita Holdings
  - In collaboration with Amita Holdings, Pacific Metals intends to pursue resource circulation that incorporates recycled materials in addition to conventional raw materials
  - Utilizing Amita Holdings' extensive distribution network, Pacific Metals anticipates applications beyond desulfurizing agents for steel manufacturing







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