

erex Co., Ltd. [9517]



SMBC NIKKO Japan Series - Executive Conference Tokyo 2024
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Company Profile

To become a pioneer in the new era of electric power with renewable energy at its core

Opening up the future
with new ideas and
actions

Creating value with various
stakeholders with trust and
cooperation

Value

Mission

Co-Creation

Challenge and Speed

Do not forget the venture spirit and work boldly

Company Name

erex Co.,Ltd.

Location

〒104-0031
14F KYOBASHI EDOGRAND, 2-2-1
Kyobashi, Chuo-Ward, Tokyo

Incorporation

December 8, 1999

Capital Stock

JPY11.3 Billion (as of March 2023)

Representative Director and President

Hitoshi Honna

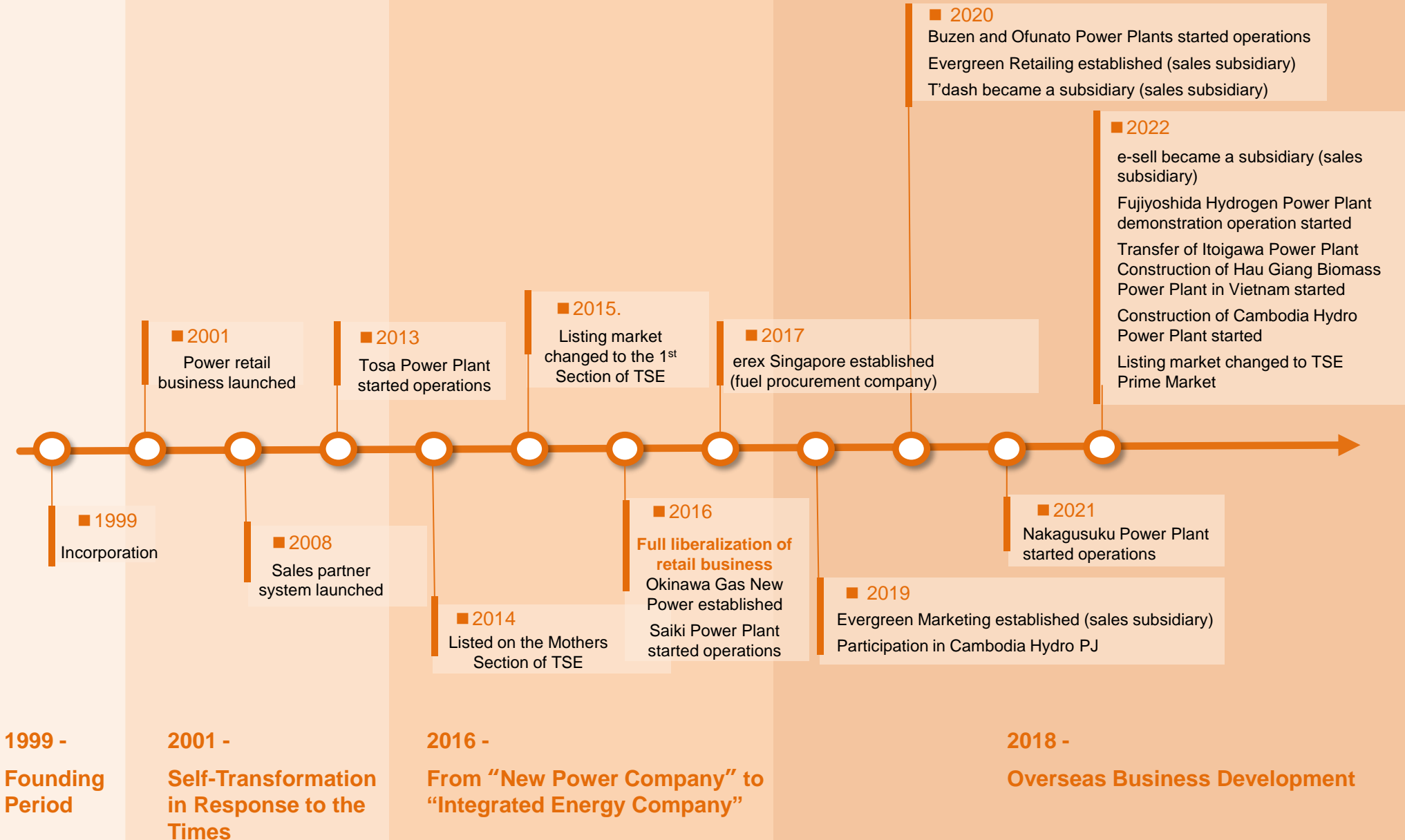
Listing Market

Tokyo Stock Exchange, Prime Market
(Securities Code: 9517)

Number of Employees

263 (as of March 2023)





Introduction of erex Group's Business



Retail Business

Ranked 11th out of approx. 700 new power companies in terms of power sales volume
*as of September 2023

Nationwide sales network through various sales channels

Diverse rate plans including CO2-free plans



Trading Business

Thorough risk management by utilizing futures, etc.

Reduction of procurement costs with numerous sources and a variety of procurement methods

Overseas Development

Fuel Business

Top class biomass fuel procurement in Japan

In-house fuel procurement and development

Certification including the supply chain

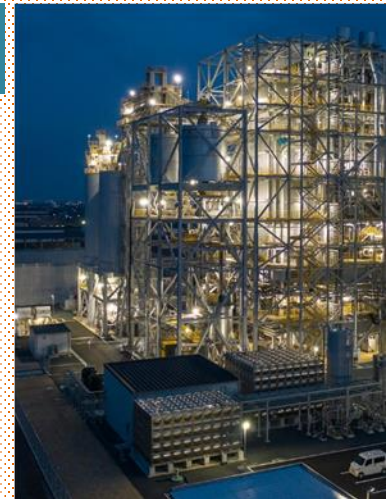


Power Generation Business

Domestic supply capacity of 793MW * centered on biomass power generation

Promotion of fuel conversion

Construction and operational know-how of biomass power plants



Retail and Trading Business

Retail: **Approx. 300,000** customers
 Power rate plans that **pursue both environmental value and economy**
 Trading: **Reduction of procurement risk** through a variety of methods

Fuel and Power Generation Business

Power Generation: **269 MW** of biomass power plants in operation
 Fuel: **Top-class** biomass fuel procurement in **in Japan**
In-house fuel procurement and development

Biomass fuels currently in use

PKS



Wood Pellet



Sales Subsidiaries



Hundreds of sales agents nationwide
 Various rate plans including CO2-free
 Diverse services such as energy conservation and post-FIT

erex Group



Power supply to individuals, corporations, public facilities, etc. mainly in the Chugoku area



Stable supply track record mainly to general households through its own sales network



JV with Okinawa Gas to sell power and gas as a set
 Utilizing power from in-house biomass power plant



● In operation
 ○ Under planning

Itoigawa Power Plant (coal)
 Generation output: 149MW
 Start of operations in Jul 2001
 *Biomass co-firing planned

Buzen Biomass Power Plant
 Generation output: 75MW
 Start of operations in Jan 2020

Saiki Power Plant
 Generation output: 50MW
 Start of operations in Nov 2016

Tosa Power Plant
 Generation output: 20MW
 Start of operations in Jun 2013

Sakaide Hayashida Biomass Power Plant
 Generation output: 75MW
 Scheduled to be in operation in 2025

Nakagusuku Biomass Power Plant
 Generation output: 49MW
 Start of operations in Jul 2021

Fujiyoshida Hydrogen Power Plant
 Generation output: 0.3MW
 Start of operations in Apr 2022

Ofunato Biomass Power Plant
 Generation output: 75MW
 Start of operations in Jan 2020

Niigata Mega Bio
 Generation output: 300MW
 Scheduled to be in operation in FY2029

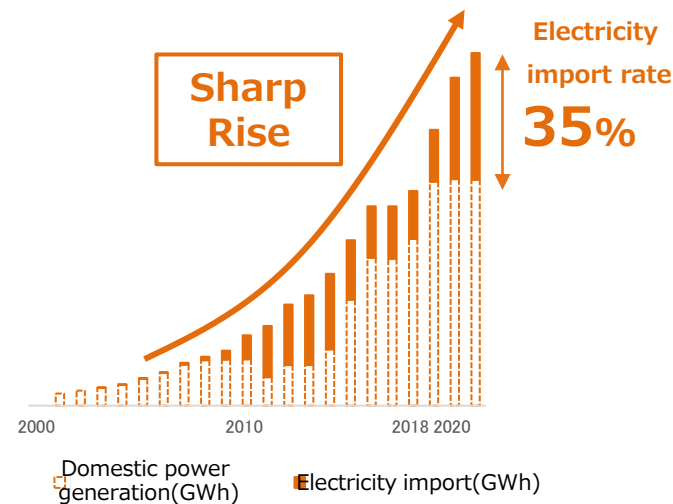
Significant business potential and social value

- Enhancing electricity demand in tandem with economic growth necessitates the implementation of specific measures

Vietnam : Increase in coal import rate



Cambodia : Increase in electricity import rate



- Decarbonization is inevitable
- Abundant biomass resources thanks to the tropical monsoon climate

➡ Biomass power generation stands out as the optimal solution

Both countries to be model countries of decarbonizations by erex

Stable Power Source

Biomass power generation is a stable power source that is not affected by weather conditions. Since biomass fuels are domestically developed, energy self-sufficiency can also be improved, which will support the economic growth of the countries.

De-Carbonization

De-carbonization is a global issue, and without de-carbonization, both countries will not be able to cope with an increasingly globalized society. Biomass is the best resource for them, especially toward 2030, as solar power cannot be further increased.

Contribution to Employment

The planned production of biomass fuels inevitably requires workers. Since the biomass fuel will naturally be purchased for fees, the wages of the workers will be guaranteed. In addition, a wide range of fields are expected, including power generation, fuel accumulation, and transportation.

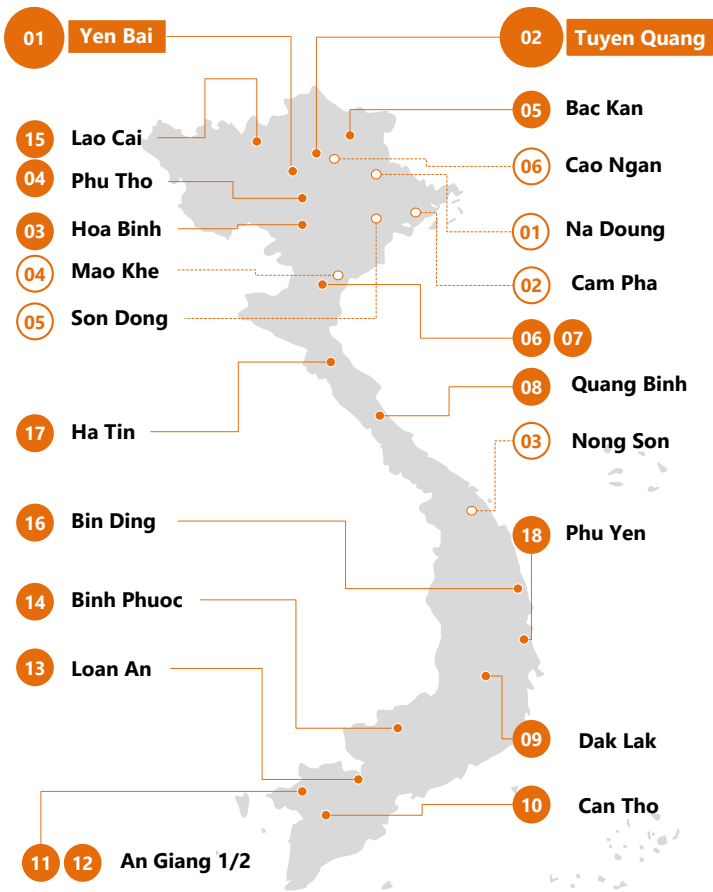
Newly-Constructed Biomass Power Plans, Coal-Fired Conversion

- Biomass at 18 sites (total 1,100 MW) is under planning
- Power plant design, etc. is progressing steadily. Final investment decision on the initial projects will be made as soon as the implementation plan for the 8th Power Development Plan in Vietnam (PDP8) is approved
- It is a project to gradually convert existing coal-fired power plants to bio co-firing in order to achieve stable supply, economy, and de-carbonization at the same time
- A memorandum of understanding with Vinacomin Power to study co-firing and construction of power plants has been signed

Fuel Development

- Development of unused biomass fuels such as woody residue, agricultural residue, etc. is being promoted
- A plant to pelletize the procured fuel is under planning
- Export to Japan is also being considered, only within Vietnam

Each PJ Site



New Construction PJ

01	Yen Bai
02	Tuyen Quang
03	Hoa Binh
04	Phu Tho
05	Bac Kan
06	Thanh Hoa 2
07	Thanh Hoa 1
08	Quang Binh
09	Dak Lak
10	Can Tho
11	An Giang 1
12	An Giang 2
13	Long An
14	Binh Phuoc
15	Lao Cai
16	Bin Ding
17	Ha Tin
18	Phu Yen

Conversion PJ

01	Na Dong
02	Cam Pha
03	Nong Son
04	Mao Khe
05	Son Dong
06	Cao Ngan

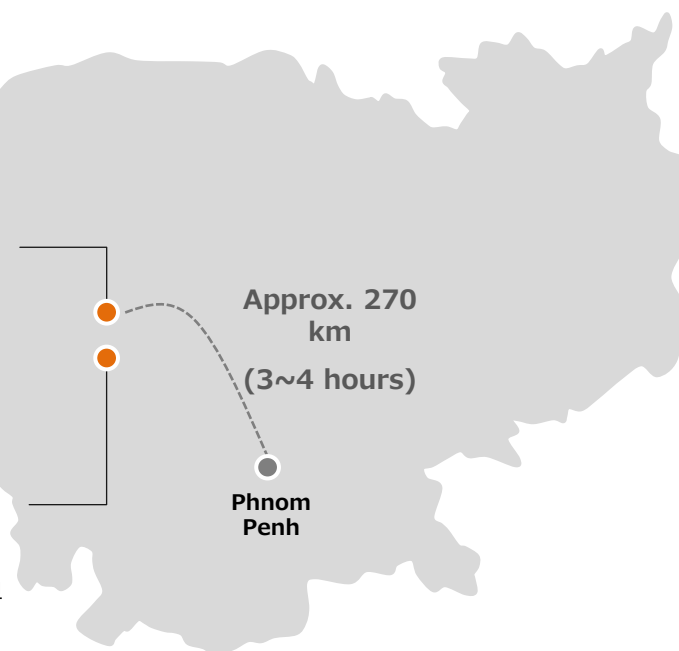
Hydroelectric Power Generation Business

- 80 MW hydroelectric power plant is under construction in Pursat Province
- There is potential to develop a small hydroelectric power plant downstream of the power plant under construction, and a study has been initiated for the development

<Power Generation Business MAP

Hydroelectric Power Generation Project

Potential Site for Biomass Power Generation

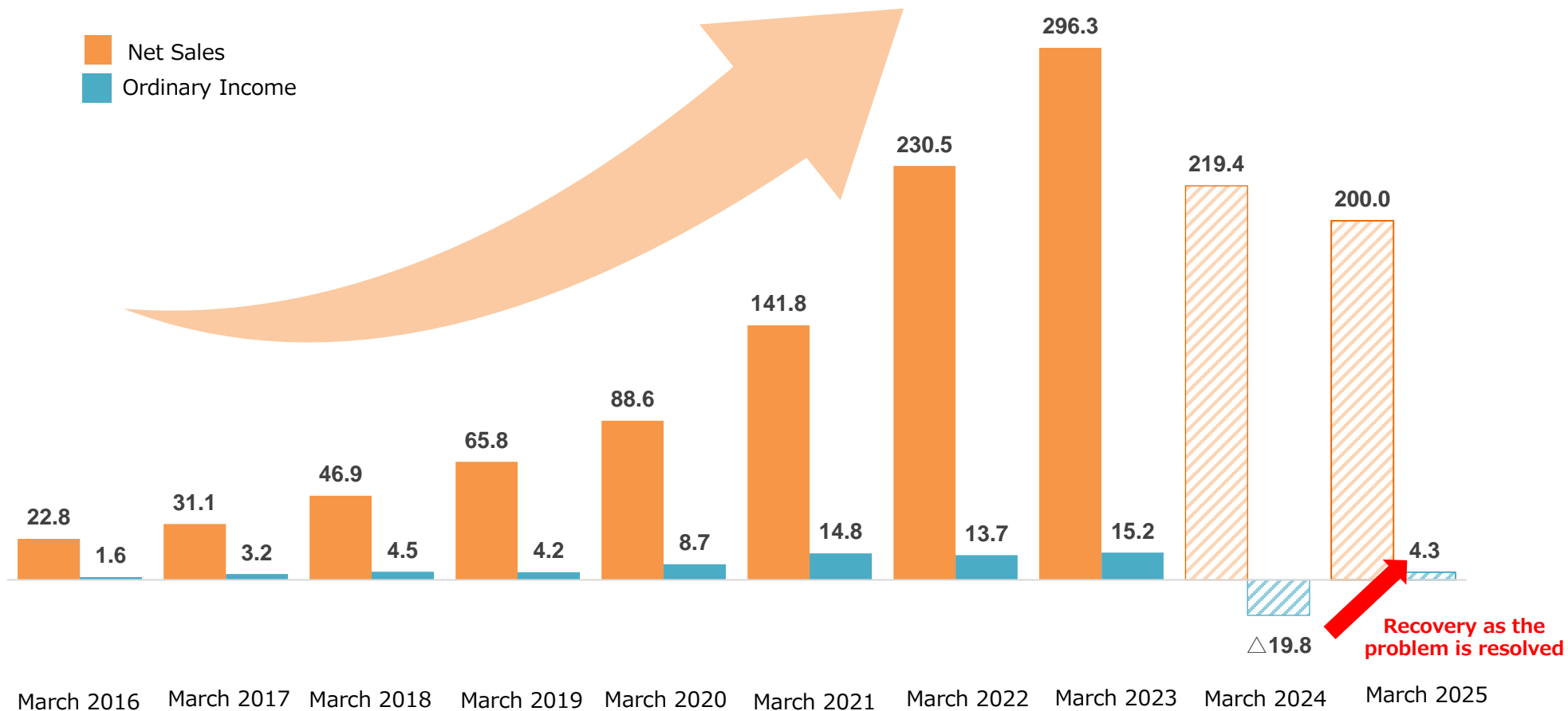


Biomass Power Generation Business

- A Memorandum of Understanding (MOU) has been signed with the Ministry of Mines and Energy of the Kingdom of Cambodia to confirm the roles and cooperation in energy development, including biomass fuel and biomass power generation
- Completion of the feasibility study is targeted by June 2024
- Fuel research is underway for rubber trees, acacia, coconuts, etc., and new acacia forests are being considered for cultivation in consultation with the Kingdom of Cambodia

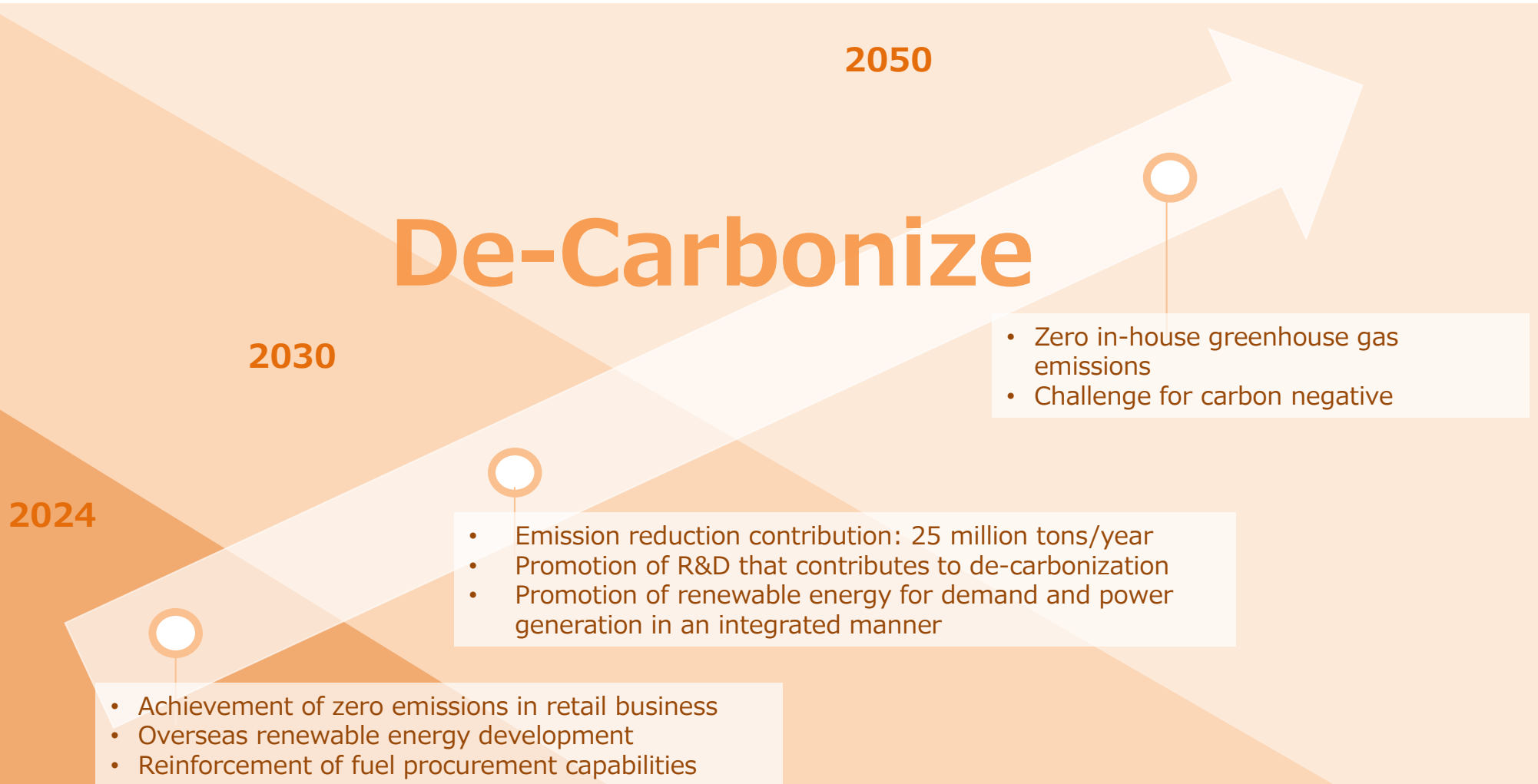
- Record-high sales and ordinary income were achieved in FY March 2023, but a loss is recorded in FY March 2024 due to delayed response to changes in the environment
- Return to profitability is planned in FY March 2025 due to resolution of expensive procurement, etc.

(JPY Billion)



- erex Group takes on the challenge to become carbon negative by 2050, based on contribution to 25 million tons/CO2 reduction in 2030
- Transformation into a "de-carbonized business entity" and establishment of biomass fuel business

De-Carbonize



Summary of Financial Results for the 3Q of Fiscal Year Ending March 31, 2024

- Net sales decreased by 37.4 billion yen year on year due to decreased demand for high-voltage retail, decreased wholesale volume to JEPX, and price declines
- The surplus of procured power was forced to be sold at cheap prices at JEPX, resulting in negative spread
- Positive retail earnings due to expansion of rate plans such as market-linked plans

(JPY Billion)	FY March 2023 1Q~3Q (Results)	FY March 2024 1Q~3Q (Results)	Increase/Decrease	YoY Comparison	FY March2024 Full Year Forecasts (Revised on Nov 10)
Net Sales	221.7	184.3	△37.4	△16.9%	219.4
EBITDA*	16.0	△10.5	△26.5	-	-
SG&A Expenses	8.0	7.9	△0.1	△2.1%	-
Operating Income	14.3	△15.1	△29.4	-	△21.3
Ordinary Income	11.1	△13.8	△24.9	-	△19.8
Net Income*	5.9	△15.8	△21.7	-	△22.0

*EBITDA... Income before income taxes + Interest expense + Depreciation + Amortization of goodwill, etc.

*Net income attributable to the owners of the parent company

[Note] Tentative accounting treatment had been applied for business combination in the previous fiscal year, but since the calculation of market value, etc. as of the date of the business combination was completed, the accounting treatment was finalized in the current fiscal year. As a result, some of the amounts of goodwill, etc. for the previous fiscal year have been changed.

- Net sales decreased by 20.7 billion yen year on year due to decreased demand for high-voltage retail, decreased wholesale volume to JEPX, and price declines
- The surplus of procured power was forced to be sold at cheap prices at JEPX, resulting in continued negative spread
- Positive retail earnings due to expansion of rate plans, including market-linked plans and new rate plans (including hybrid plan and fully fixed plan)

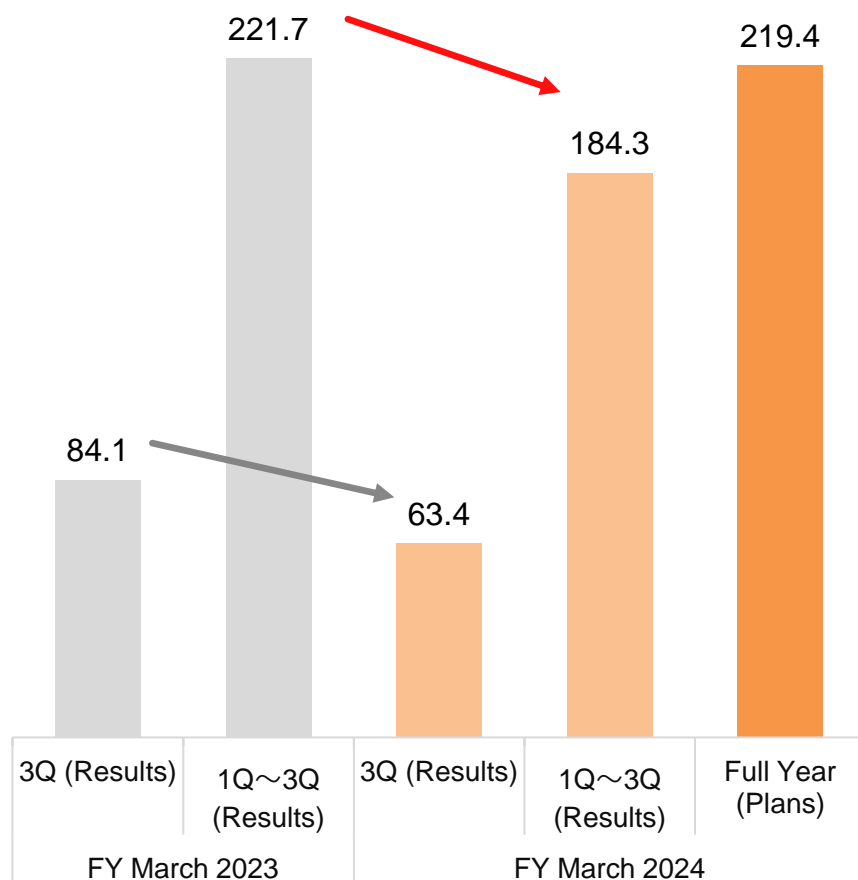
(JPY Billion)	FY March 2023 3Q (Results)	FY March 2024 3Q (Results)	Increase/Decrease	YoY Comparison
Net Sales	84.1	63.4	△20.7	△24.6%
EBITDA*	5.2	△3.4	△8.7	-
SG&A Expenses	2.7	2.5	△0.1	△7.3%
Operating Income	3.5	△4.4	△7.9	-
Ordinary Income	3.5	△4.6	△8.2	-
Net Income*	1.3	△4.7	△6.1	-

*EBITDA... Income before income taxes + Interest expense + Depreciation + Amortization of goodwill, etc.

*Net income attributable to the owners of the parent company

[Note] Tentative accounting treatment had been applied for business combination in the previous fiscal year, but since the calculation of market value, etc. as of the date of the business combination was completed, the accounting treatment was finalized in the current fiscal year. As a result, some of the amounts of goodwill, etc. for the previous fiscal year have been changed.

(JPY Billion)


Net Sales **JPY184.3** billion

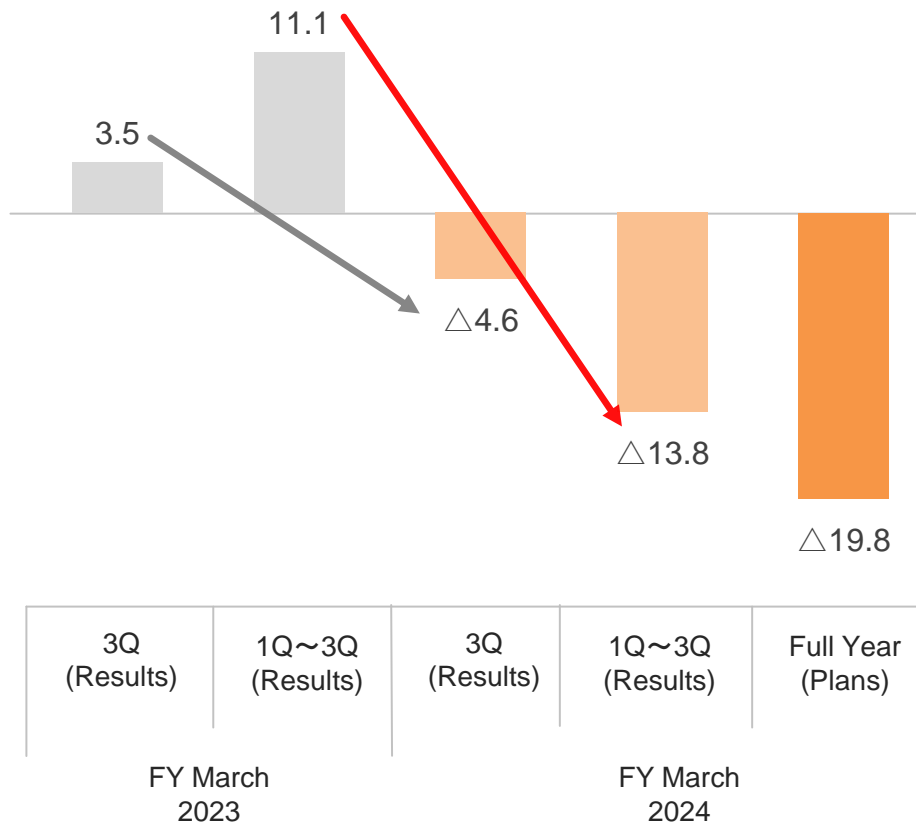
△ 16.9%YoY

(JPY Billion)	Net Sales (Composition Ratio)	
	FY March 2023 1Q~3Q (Results)	FY March 2024 1Q~3Q (Results)
High Voltage Retail	43.7	34.3 ^{*1}
Low Voltage Retail	29.9	29.8 ^{*1}
Wholesale (Including Sales to 3rd Parties by Power Plants)	144.6	111.0 ^{*2}
Fuel Sales to 3rd Parties, City Gas, etc.	3.3	9.1

^{*1}: Including subsidies to mitigate drastic changes

^{*2}: Buzen Biomass Power Plant is excluded from the scope of consolidation from the current fiscal year due to a change in operating rules. The impact of this exclusion is reflected.

(JPY Billion)



Ordinary Income

△ **JPY13.8 billion**

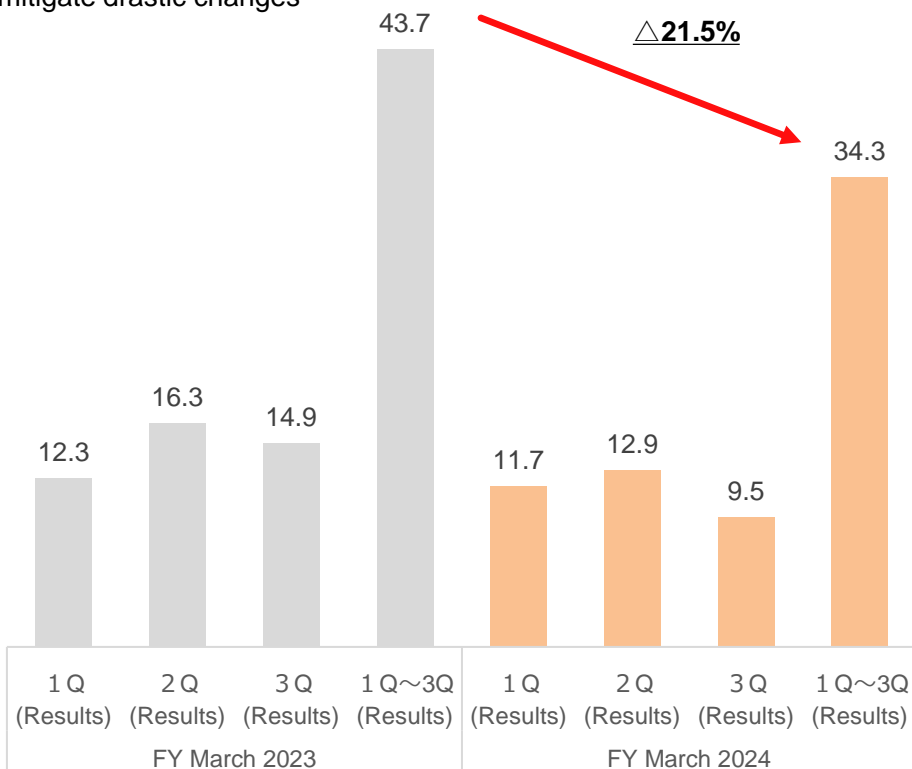
- Ordinary income decreased significantly due to procurement of relatively expensive power sources
- The surplus of procured power was forced to be sold at cheaper prices as wholesale at JEPX due to the change to market-linked plans at low-voltage and the decline in retail demands, resulting in negative spread
- Itoigawa Power Plant saw a significant decrease in profit in the 1H due to the impact of expensive price coal inventory, but the 3Q saw a significant improvement thanks to a switch to low-priced fuel in the current market
- Positive retail earnings due to expansion of rate plans such as market-linked plans

- While the power sales volume decreased by 42.4% due to a profit-oriented strategy with price hike, the unit prices rose, resulting in an increase in sales per customer
- Expansion of rate menus (the proprietary plans using the electricity market), reducing decline in net sales

Net Sales

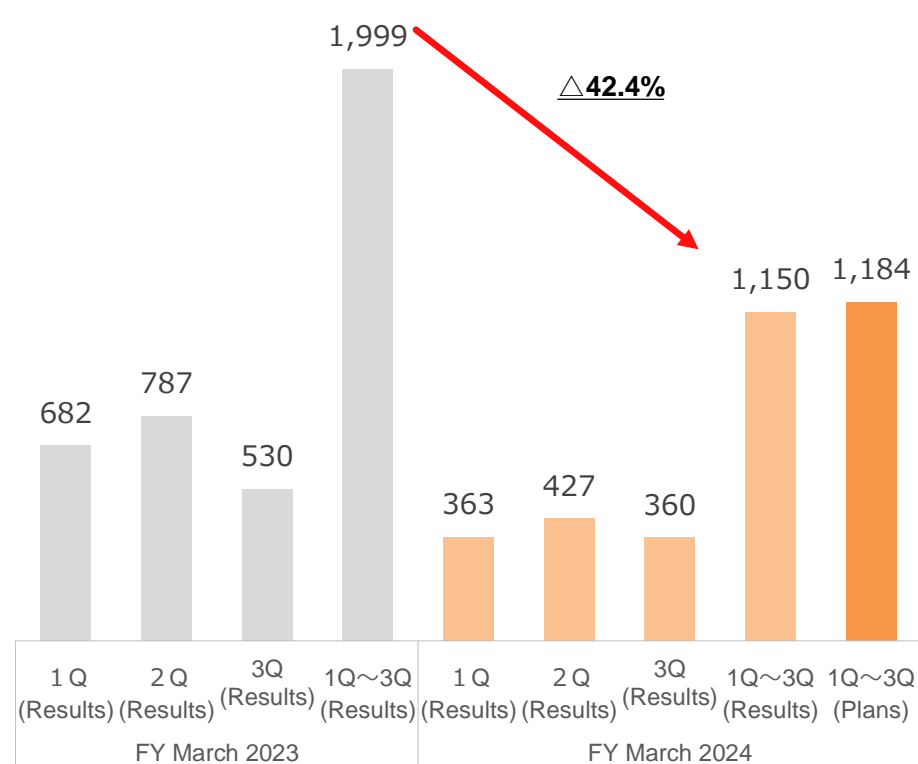
(JPY Billion)

* Including subsidies to mitigate drastic changes



Power Sales Volume

(GWh)

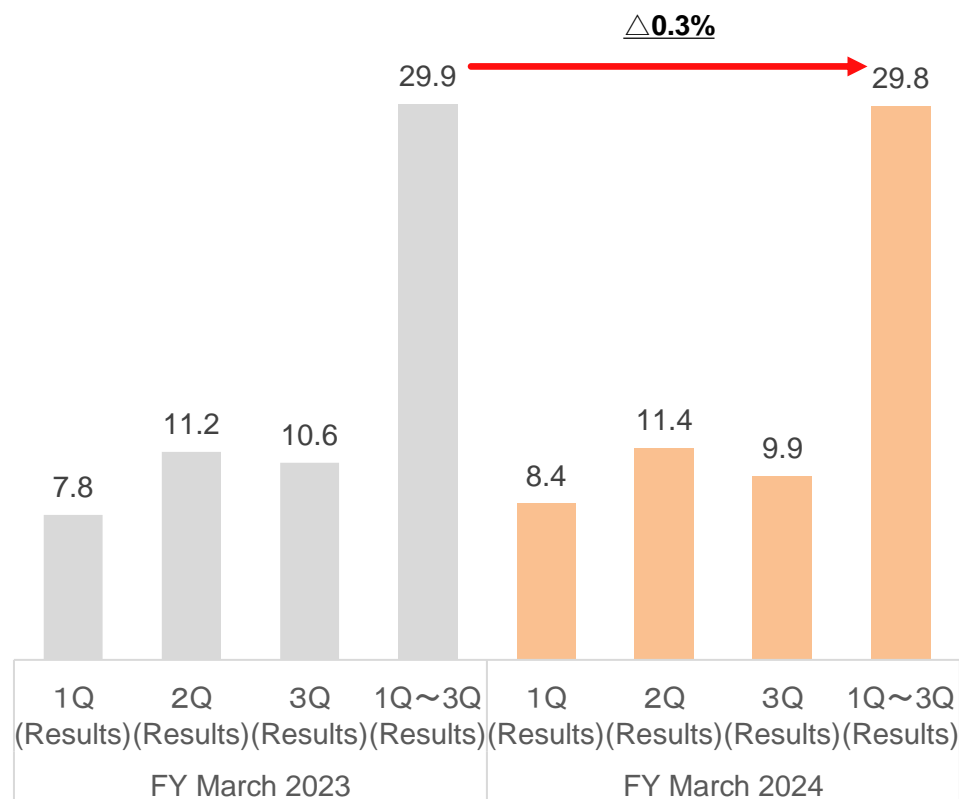


- Switching to market-linked plans stabilized profit margins
- Both power sales volume and the number of customers were largely unchanged from the previous year, but exceeded the plans due to the strengthening of the web-channel, etc.

Net Sales

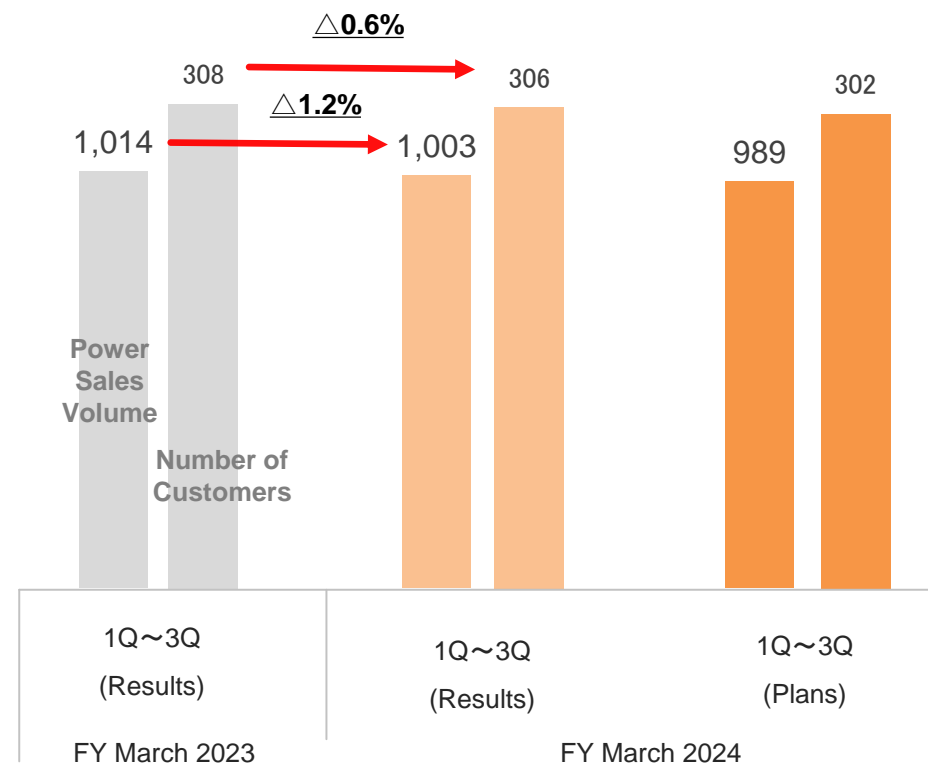
* Including subsidies to mitigate drastic changes

(JPY Billion)

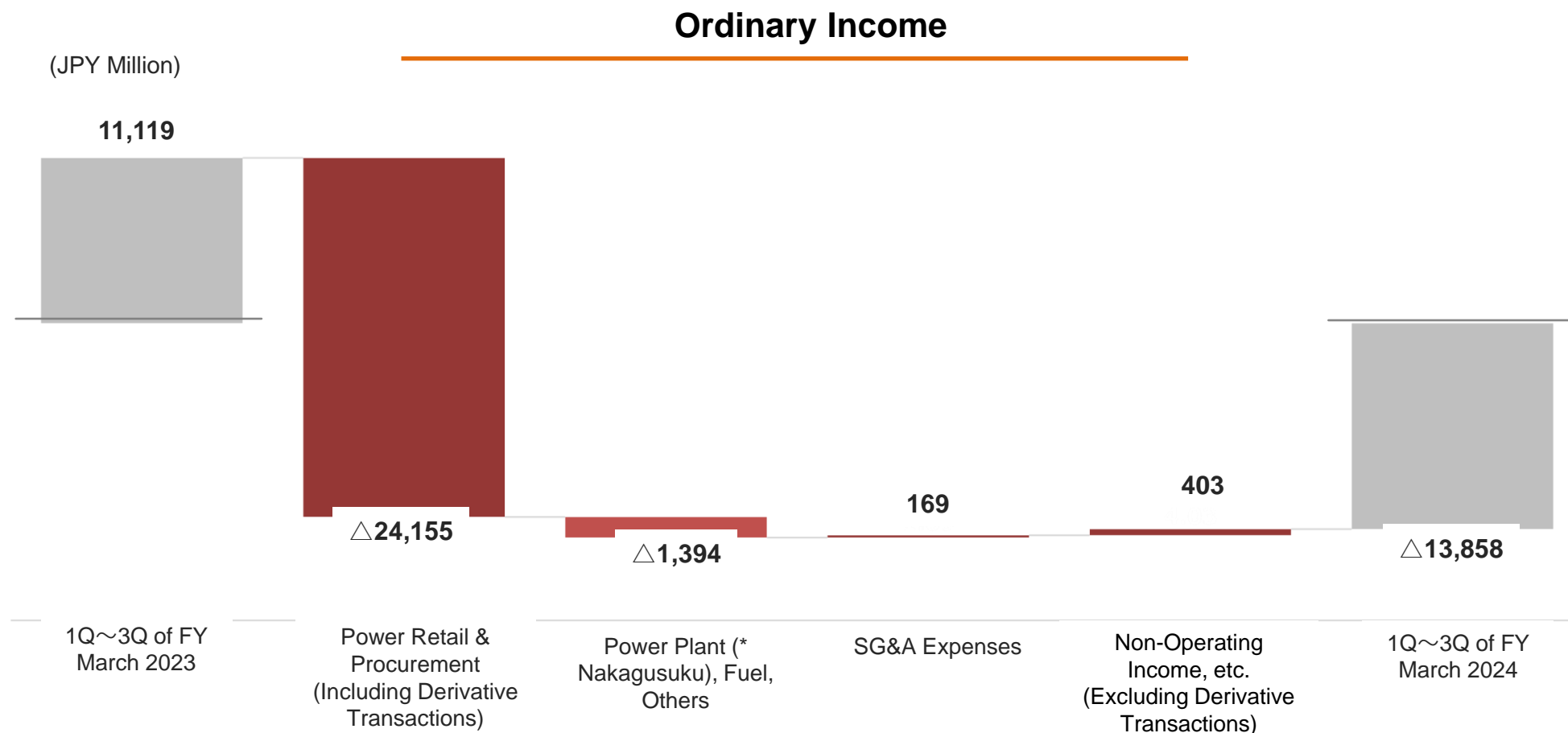


Power Sales Volume & Number of Customers

(Power Sales Volume: GWh)
(Number of Customers: thousands)



1Q~3Q of FY March 2024: Reasons for the YoY Changes in Ordinary Income



* Buzen Biomass Power Plant is excluded from the scope of consolidation from the current fiscal year due to a change in operating rules

[Note] Tentative accounting treatment had been applied for business combination in the previous fiscal year, but since the calculation of market value, etc. as of the date of the business combination was completed, the accounting treatment was finalized in the current fiscal year. As a result, some of the amounts of goodwill, etc. for the previous fiscal year have been changed.

(JPY Million)

<div><div>(1) Power Retail/Power Procurement (<u>Δ24,155</u>)</div><div><ul style="list-style-type: none">Profit decreased significantly due to procurement of relatively expensive power sourcesProfit decreased significantly as a result of wholesale of surplus power to JEPX with a negative spread due to decreased retail demands and the change to the market-linked plan at low-voltage retailProfit increased despite a significant decrease in high-voltage power sales volume due to a profit-oriented price hike strategyRetail profit was positive due to the expansion of rate plans such as market-linked plans</div></div>	<div><div>(2) Power Plant (Nakagusuku), Fuel, Others (<u>Δ1,394</u>)</div><div><ul style="list-style-type: none">Exclusion of Buzen from the scope of consolidation (from FY March 2024) (Δ1,430)Increase in cost of power generation at Nakagusuku (decrease in operation, etc.) (Δ637)External fuel sales, etc. (Δ303)FIP subsidy of Tosa Power Plant (+1,404) etc.</div></div>
	<div><div>SG & A Expenses (<u>+169</u>)</div><div><ul style="list-style-type: none">Agency fees (decrease) (+411)Sales promotion expenses (decrease) (+151)System-related expenses (increase) (Δ250)Others (increase) (Δ117) etc.</div></div>
	<div><div>Non-Operating Income, etc.: (<u>+403</u>)</div><div><ul style="list-style-type: none">Interest income from affiliates (increase) (+175) etc.</div></div>

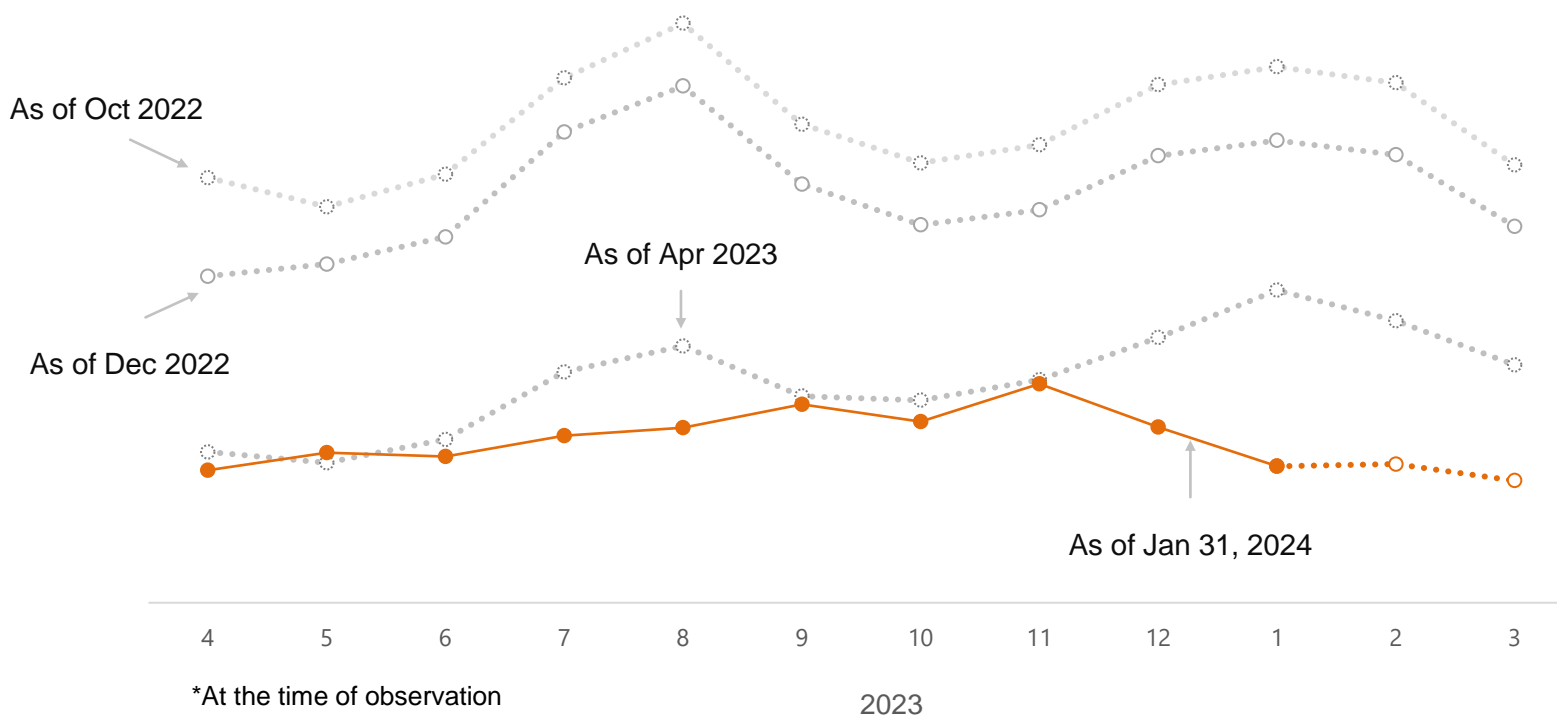
Summary of the Consolidated Balance Sheet



(JPY Billion)	FY March 2023 (End of the Period)	3Q of FY March 2024		
		Results	Increase/ Decrease	Major Reasons for Increase/Decrease
Current Assets	79.3	68.2	△11.0	<ul style="list-style-type: none"> Decrease in cash and deposits Decrease in accounts receivable/trade due to decrease in the number of customers
Noncurrent Assets	92.7	75.9	△16.7	<ul style="list-style-type: none"> Decrease in “buildings and structures” and “machinery and delivery equipment” due to the exclusion of Buzen New Energy (BNE) from the scope of consolidation Increase in investments in affiliates (due to exclusion of BNE from consolidation)
Total Assets	172.1	144.2	△27.8	
Current Liabilities	48.4	39.9	△8.4	<ul style="list-style-type: none"> Decrease in accounts payable/trade due to shorter turnover period Decrease due to payment of income taxes payable
Noncurrent Liabilities	49.7	46.7	△3.0	<ul style="list-style-type: none"> Decrease in long-term loans payable (due to exclusion of BNE from consolidation) Increase due to issuance of bonds
Total Liabilities	98.1	86.6	△11.4	
Capital Stock	57.5	40.4	△17.1	<ul style="list-style-type: none"> Decrease due to net loss and dividend payment
Accumulated Other Comprehensive Income	4.4	8.2	3.8	<ul style="list-style-type: none"> Increase in deferred hedge gain/loss on foreign exchange forward contracts
Noncontrolling Shareholders' Interest	11.9	8.7	△3.1	<ul style="list-style-type: none"> Due to exclusion of BNE from consolidation
Total Net Assets	73.9	57.5	△16.4	
Cash & Deposits	33.6	25.4	△8.2	<ul style="list-style-type: none"> Due to exclusion of BNE from consolidation Decrease due to increase in working capital and payment of income taxes payable
Interest-Bearing Debt	55.1	56.1	1.0	<ul style="list-style-type: none"> Decrease in long-term loans payable (due to exclusion of BNE from consolidation) Increase due to issuance of bonds Increase in loans payable for Vietnam business
Net Asset Ratio	36.0%	33.8%	△ 2.2%	<ul style="list-style-type: none"> Decrease in shareholders' equity due to net loss

- JEPX prices are assumed to remain low due to warm winter, excess power supply capacity, etc.

Tokyo Area Baseload Futures Prices (yen/kWh)



*At the time of observation

*Analyzed and prepared by erex Group

Observation	Annual Average (yen/kWh)
Oct 2022	37.1
Dec 2022	30.9
Apr 2023	16.5
Sep 2023	13.9
Jan 2024	12.0

Forecasts for FY March 2025

(Supplement to the Material Released on Nov 10, 2023)

- Forecasts are to return to profitability in FY March 2025 following the termination of procurement of relatively expensive PPA Sources
- Procurement sources are to be adjusted by retail rate plans to respond to price fluctuations at JEPX, etc. (see next page)

(JPY Billion)	FY March 2024 Full Year (Revised on Nov 10)	FY March 2025 Full Year (Forecasts)	Increase/ Decrease
Net Sales	219.4	200.0	△19.4
Operating Income	△21.3	4.7	26.0
Ordinary Income	△19.8	4.3	24.1
Net Income *	△22.0	2.8	24.8

<Reasons for the Increase/Decrease in Sales and Profits>

- Decrease in power wholesale due to elimination of procurement surplus
- Termination of procurement of relatively expensive PPA sources
- Elimination of sales to JEPX with negative spread

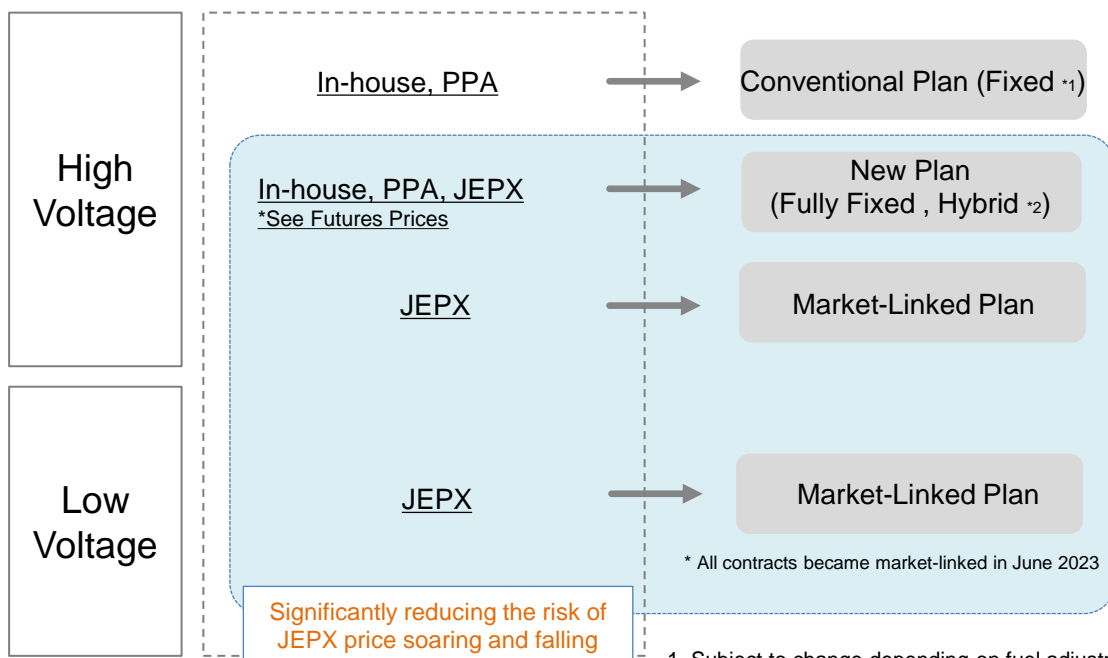
* Net income attributable to the owners of the parent company

- Relatively expensive procurement contracts, which have been the major factor of significantly negative earnings in FY March 2024, will be terminated by the end of FY March 2024
- Earnings have stabilized due to market linkage mainly in low-voltage retail
- In principle, no position-risk will be taken in FY March 2025, as erex Group will be procuring neutrally, including intra-period transactions
- Procurement from in-house power sources, PPA sources, and JEPX will be implemented according to retail rate plans

Basic Image of Power Procurement

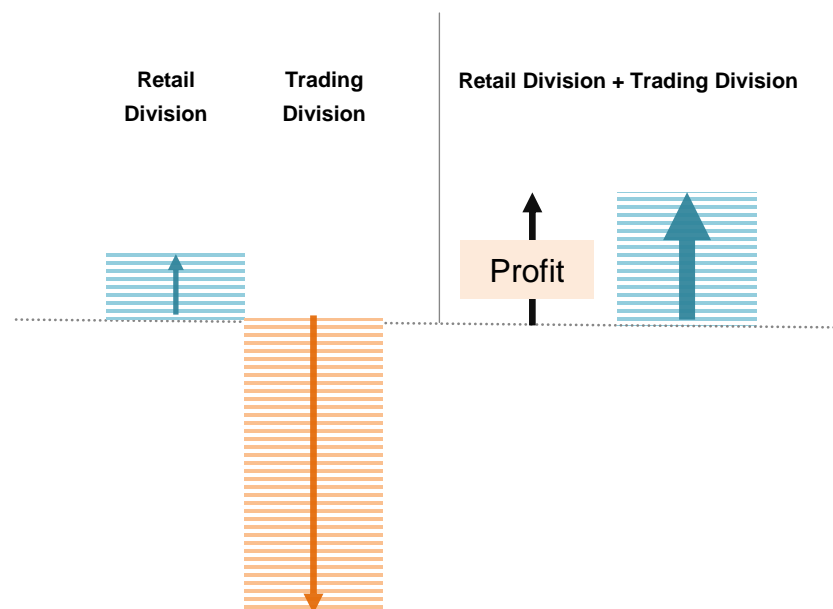
<Power Procurement>

<Retail Rate Plans>



Financial Improvement Image

Improved earnings by strengthening the integration of power sales and power procurement




1. Subject to change depending on fuel adjustment costs
2. Unit prices are fixed in summer and winter, and market-linked in other seasons

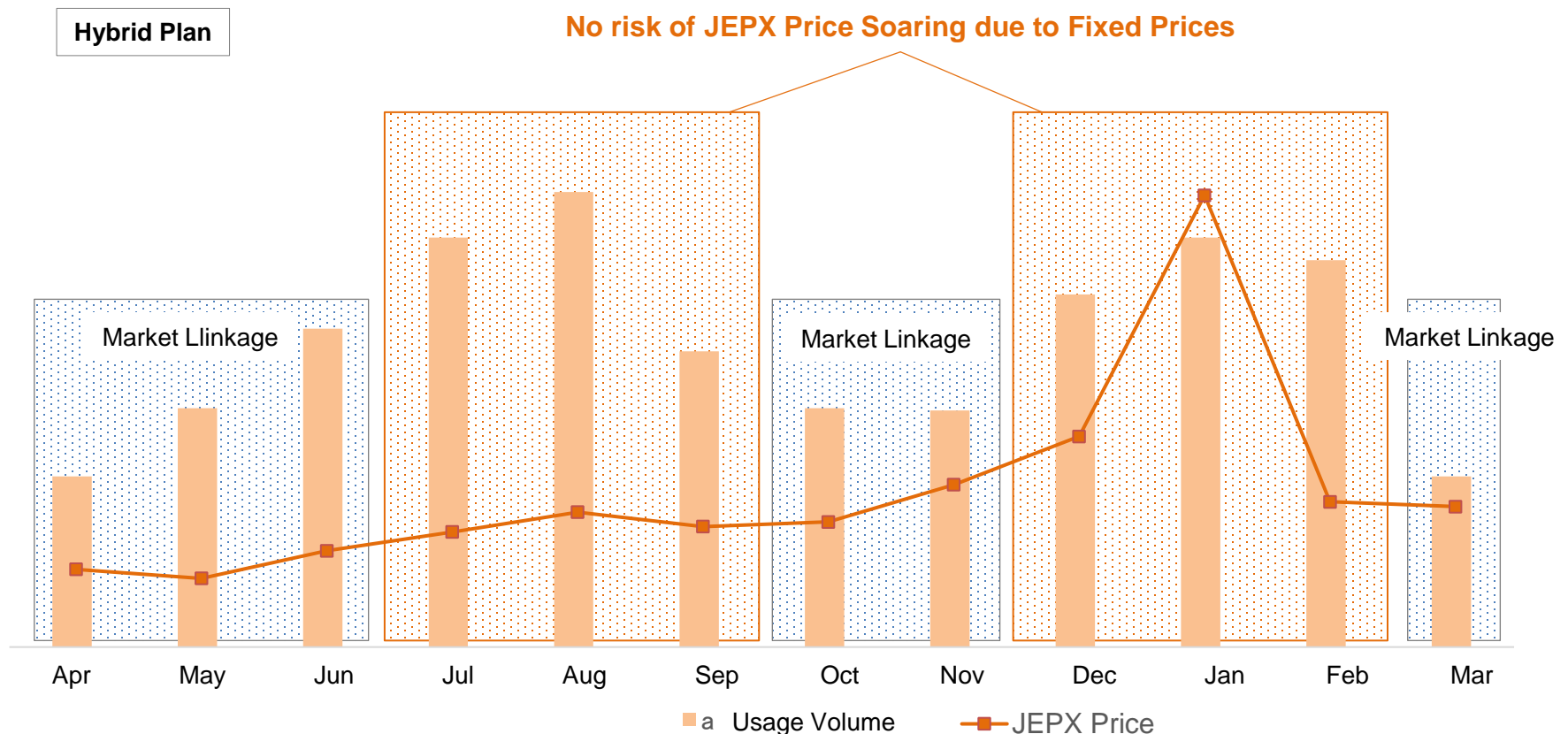
FY March 2024

FY March 2025

- Responding to changes in the market environment, with electric power market prices remaining low and customers becoming more environmentally conscious at an accelerating pace
- Strengthening differentiation strategy to become the power retailer of choice by offering multiple plans to meet customer needs

Category	FY March 2025
What erex Group Aims to be	<ul style="list-style-type: none"> ● To contribute to the de-carbonization of customers through power supply ● To provide inexpensive power through in-house power generation and cost reduction ● To create new value through the use of electricity futures, etc.  To become the power retailer of choice
High Voltage	<ul style="list-style-type: none"> ● To strengthen de-carbonization solutions ● To accelerate fully fixed plan offerings through sales agents ● To expands plans to meet customer needs, including market-linked and hybrid plans
Low Voltage	<ul style="list-style-type: none"> ● To promote environmental value by making all customers CO2-free ● To strengthen Web Channels ● To develop new sales agents (e.g., proposals when moving) ● To enhance new services using DR and post-FIT

- A plan that allows customers to enjoy the benefits when market prices fall while limiting the risk when market prices rise by setting fixed unit prices in summer and winter and linking other seasons to JEPX
- Inquiries are increasing for hybrid and fully fixed plans, which are based on erex Group's knowledge of risk management through electricity futures and derivatives trading ahead of competitors and rate plan design that captures retail needs



appendix

As of 2030

Ordinary Income of **JPY60.2 billion** in Japan and overseas

Net Sales
Ordinary
Income

JPY535.8 Billion

JPY60.2 Billion

+α *

* Upside from fuel conversion in Vietnam
and fuel business in other countries

[Breakdown]

Vietnam Business	Net Sales	192.1	Cambodia Business	Net Sales	39.2	Domestic Business	Net Sales	304.5
	Ordinary Income	31.6		Ordinary Income	13.7		Ordinary Income	14.9

- Southeast Asian countries are expected to continue to grow economically, and with that growth, energy consumption will also continue to increase. On the other hand, the trend toward de-carbonization is irreversible, and de-carbonization efforts need to be accelerated
- Southeast Asian countries are rich in biomass resources due to their climatic conditions, and the biomass business is strongly expected to be one of the solutions to the issues in Southeast Asia

Great Business Opportunities

Biomass business as a solution to social issues that Southeast Asia is facing

01 Securing stable power supply

- ✓ Southeast Asia, where economic growth continues, has a steadily rising demand for electric power and requires a base power source that can provide a stable supply

02 Securing a de-carbonization power supply

- ✓ The trend toward de-carbonization is irreversible and must be advanced in order to address the global economy

03 Contribution to employment

- ✓ Many jobs can be created in power plant operation as well as fuel collection, processing, transportation, and power plant maintenance

04 Improvement of living environment

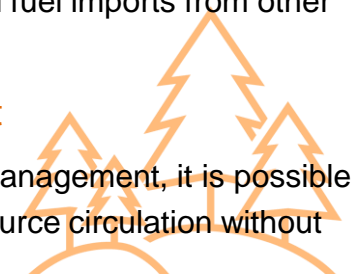
- ✓ By efficiently converting biomass resources that are burned in the field into electricity, air quality and other aspects of the living environment can be greatly improved

05 Improvement of energy self-sufficiency

- ✓ By utilizing domestic biomass, it is possible to reduce electricity imports and fossil fuel imports from other countries

06 Bioresource management

- ✓ Through proper resource management, it is possible to achieve sustainable resource circulation without illegal logging



- erex Group plans to expand business significantly in the future by taking advantage of know-how, etc. accumulated through business developments in Southeast Asian countries, centering on Vietnam and Cambodia

Business Case Study in Vietnam

- 20MW biomass PJ underway in Hau Giang Province, Vietnam (scheduled to start operations in FY2024)
- Construction of pellet factories has been started in Yen Bai/Tuyen Quang Province

Power Generation Capacity	20 MW
Power Sold to	Vietnam Electricity (EVN)
Investment Ratio (erex)	51% (Plan)
Power Sales Price	8.47 ϕ /kWh

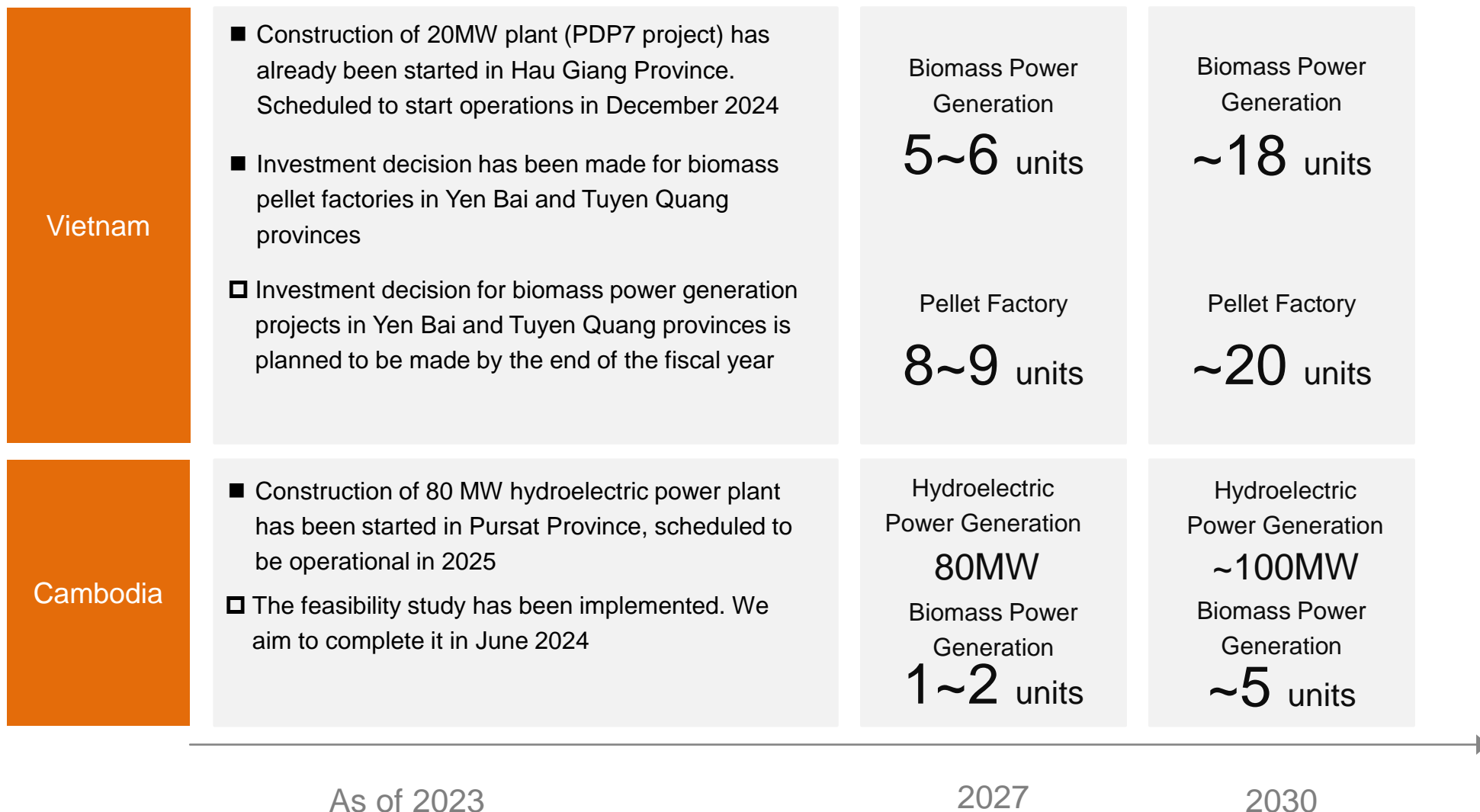


Business Case Study in Cambodia

- 80MW hydropower PJ underway in Pursat Province, Cambodia (scheduled to start operations in 2025)
- Study of additional downstream hydropower development has been started

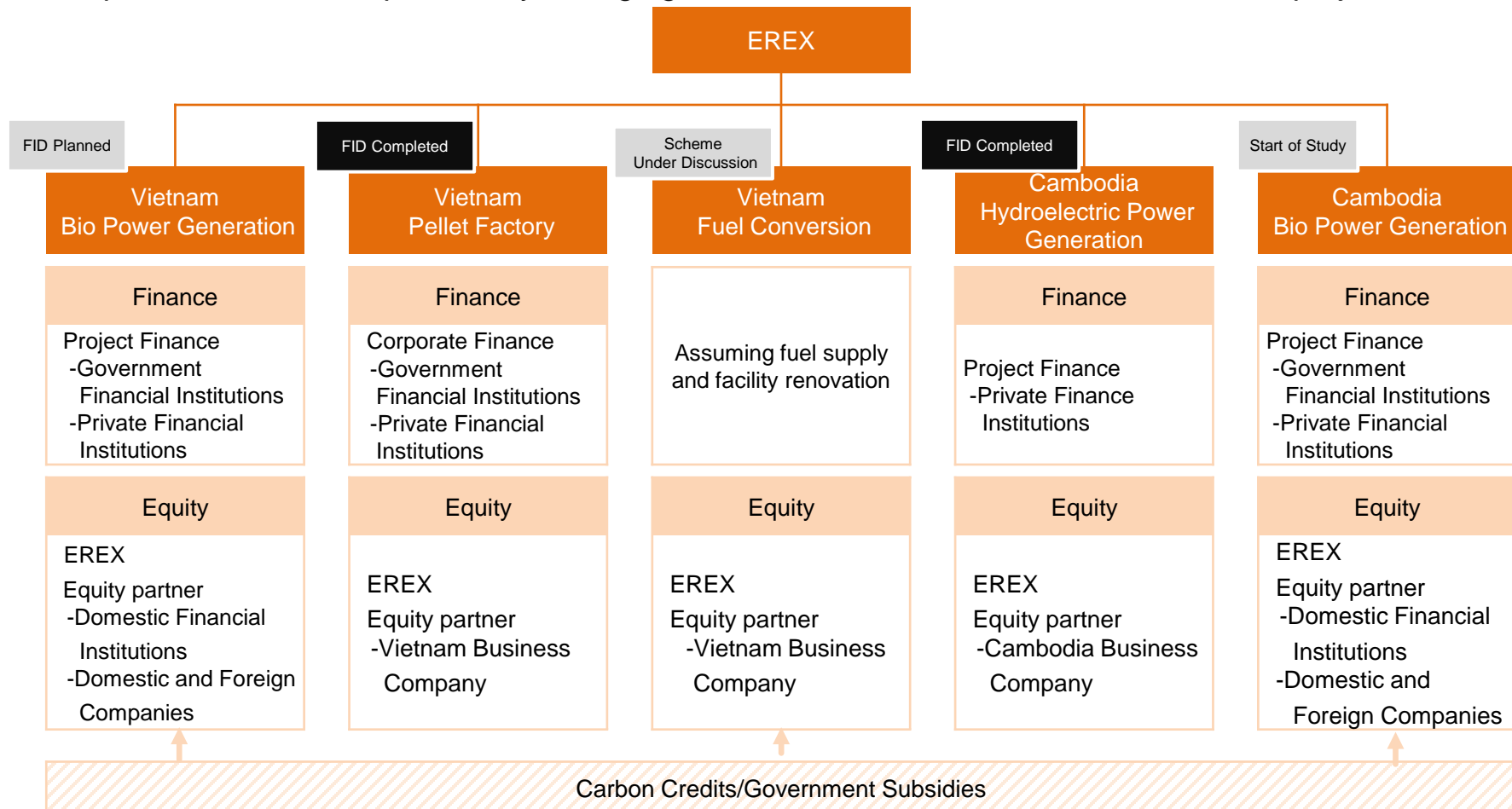
Power Generation Capacity	80 MW
Power Sold to	Electricité du Cambodge (EDC)
Investment Ratio (erex)	51% (Plan)
Power Sales Price	7.9 ϕ /kWh



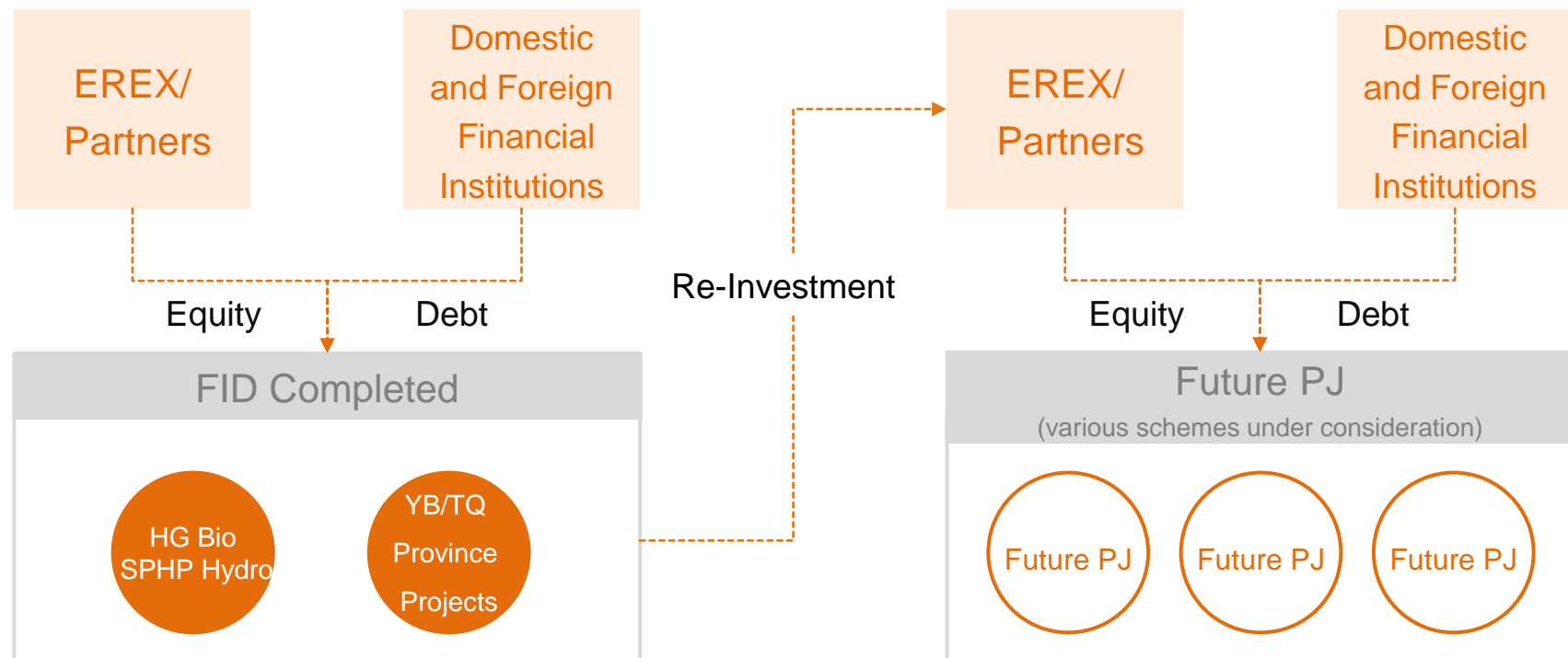


Overseas PJ Financing Scheme

- erex Group plans to finance overseas power plant construction and fuel development projects with project finance from government/private financial institutions and corporate finance, depending on the type of project
- The equity portion will be majority invested by erex Group. Discussions are underway with potential partners, including domestic financial institutions, major construction companies, and overseas business companies
- erex Group aims to maximize profitability through government subsidies and carbon credits for projects

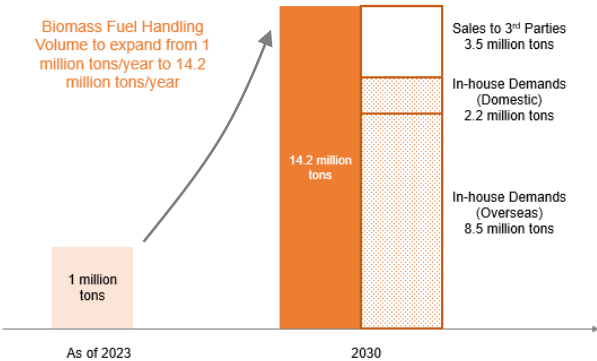
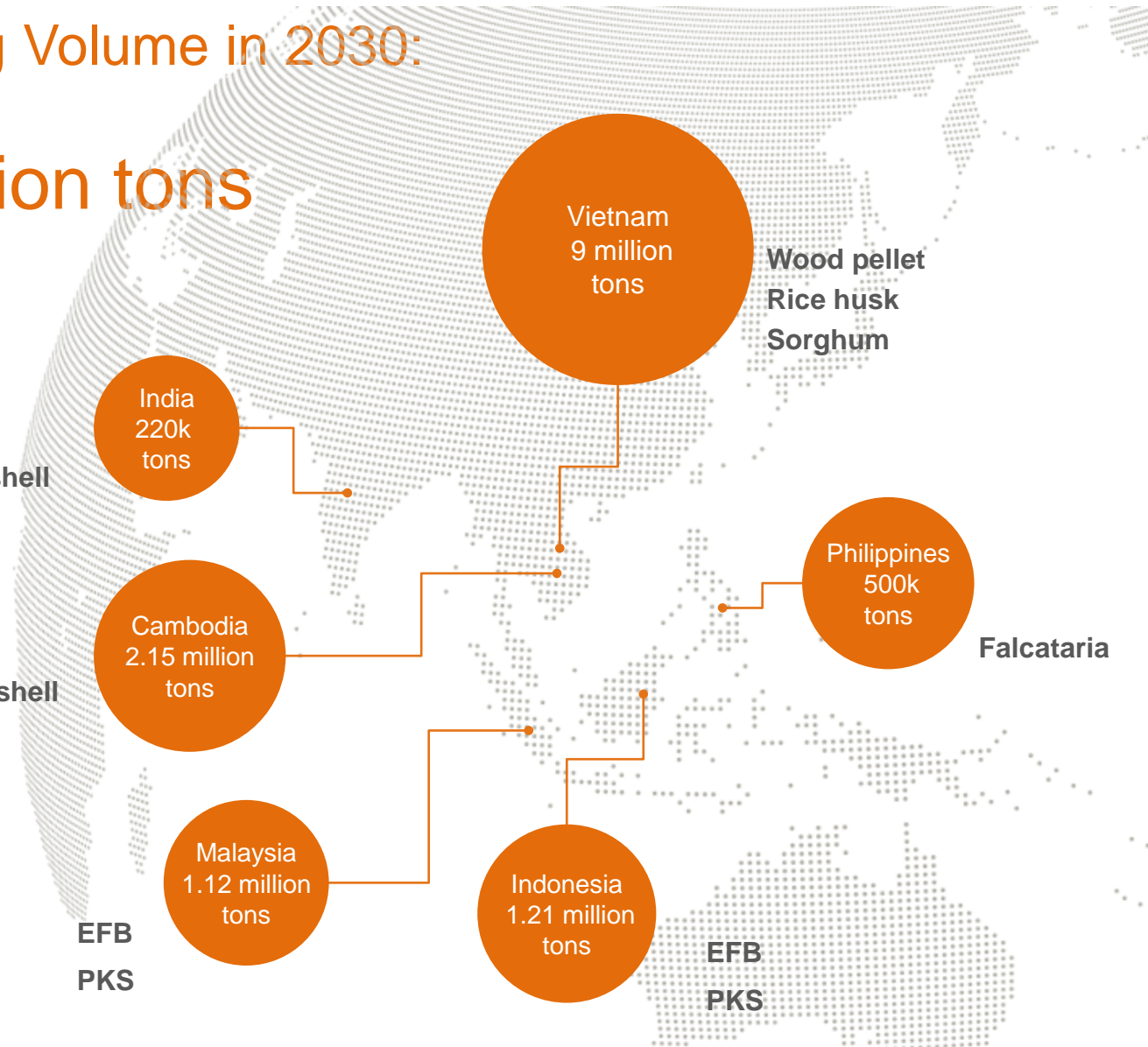


- Overseas project investment is based on the spirit of co-creation. Realization will be ensured by reinvesting profits according to the progress of the project and inviting a wide range of partners from Japan, Vietnam, and other countries (In addition to the ongoing project partners, discussions are underway with several potential partners)
- Financing will be extended through project finance and corporate finance by government and private financial institutions. On the other hand, various schemes, including project carve-outs, will be considered



Biomass Fuel Handling Volume in 2030:

14.2 million tons



As of January 2023, 28 ETS (Emissions Trading System) schemes are in force worldwide
8 more ETS schemes are expected to be implemented in the future*, including Japan and Vietnam, and global de-carbonization trend is expected to expand and accelerate

* Start in Japan will be in 2026, and in Vietnam in 2028
JCM is expected to be treated as an eligible credit in Japan's GX-ETS

EU-ETS
1,529 MtCO₂e

China-ETS
4,500 MtCO₂e

Japan
Under consideration

California
294 MtCO₂e

Vietnam
Under development

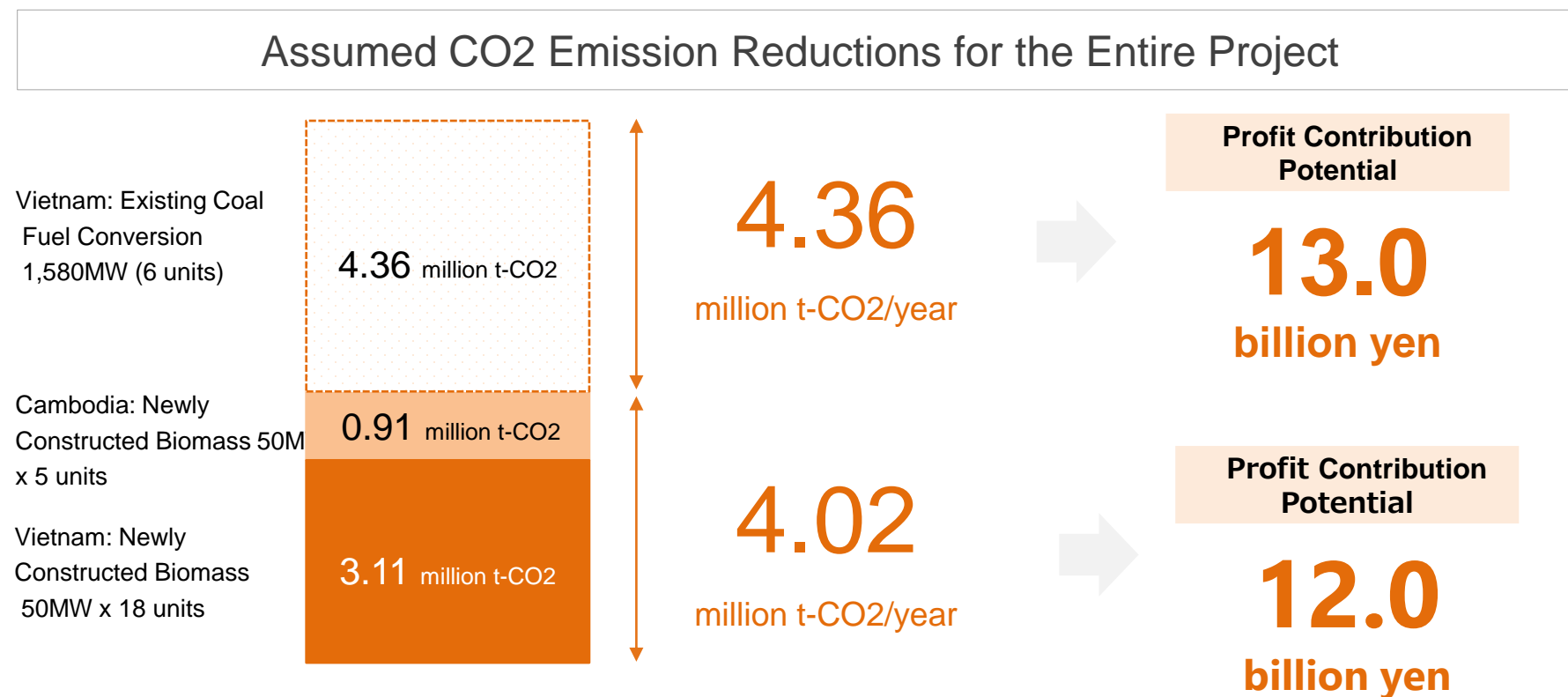
JCM
(Joint Crediting Mechanism)

[Reference] Overview of Emission Exchanges in Southeast Asia

Thailand	Established a trading platform in 2023
Indonesia	Exchange opened in 2023
Singapore	Exchange established in 2021
Malaysia	OTC trading of emission allowances started in 2023

- erex Group reports the project progress regularly to the Japanese and Vietnamese governments
- It is assumed that carbon credits* generated from the project will contribute to earnings in the future
- erex Group's proposal, "Feasibility Study on JCM Credit Generation through Fuel Conversion in Vietnam" was adopted by the Ministry of Economy, Trade and Industry (METI) for its FY2023 "Research of Infrastructure Preparation for Bilateral Credit Acquisition etc. (JCM Feasibility Study) in October 2023. Through this study, erex Group will contribute to the realization of de-carbonization in Vietnam

*Credits in conformance with Article 6.2 of the Paris Agreement are assumed



Assumptions: Emission reductions are calculated at 0.5 kg-CO2/kWh and a value of 3,000 yen/t conservatively.

To Stabilize domestic revenue base and grow overseas business

01 Retail and Trading Business

- Low-voltage (for households) business has already shifted to market-linked menus and will not be exposed to major risks even if market prices fluctuate significantly in the future
- In addition, high-voltage business is also shifting to sales centering on menus that combine market-linked and electricity futures contracts. In the future, excessive power procurement in preparation for market price fluctuations will basically not occur
- Steady growth will be built up by responding to customer needs centered on de-carbonization value

02 Power Generation and Fuel Business

- Although the business environment is becoming a headwind due to higher fuel prices resulting from the strengthening of fuel certification and the depreciation of the yen, erex Group will continue to work for stable operation by steadily securing relatively inexpensive fuel and further improving the efficiency of power plant operations, including reducing planned stoppages, by taking advantage of its position as the largest biomass procurer in Japan
- The value of biomass power generation as a stable, de-carbonization source of power generation is unchanged, and erex Group will steadily promote fuel conversion of Itoigawa coal-fired power plant and a mega non-FIT biomass project planned in Niigata.

03 Other New Businesses

- erex Group will enhance competitiveness by reducing the burden on the capacity market through DR and passing it on to customers
- erex Group plans to respond to growing demand from customers for NON-FIT solar PPA and storage battery projects

Current Initiatives and Future Plans

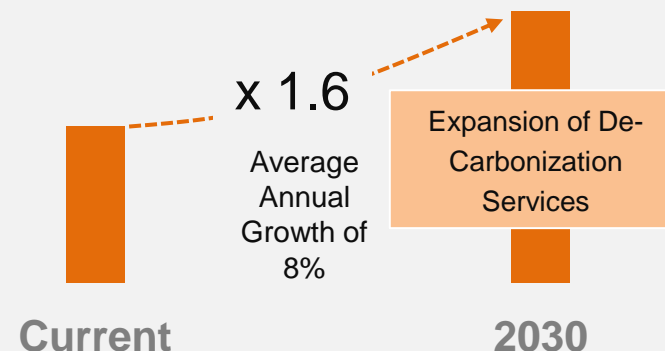
Illustrative Image of Growth

Retail

Trading

- High-voltage power business is focusing on sales of menus using power futures, etc. (fully fixed or hybrid of fully fixed and market change), as a result, has shifted to a system in which neither erex Group nor its customers are overly exposed to risk from JEPX price fluctuations
- Low-voltage power business (for households) has already shifted to plans that properly reflect the risk of JEPX price fluctuations. Price competitiveness is strong, partly because market prices have remained inexpensive
- erex Group is accelerating developments of new initiatives centered on de-carbonization value and DR business to meet customer needs

Power Supply (total of high-voltage and low-voltage)



Power Generation

Fuel

- Sakaide Biomass Power Plant will start commercial operations in FY2025
- The world's largest level biomass power plant (300 MW, Niigata Prefecture) will start commercial operations in FY2029
- erex Group promotes coal transition at Itoigawa Power Plant and other facilities by stably supplying inexpensive biomass fuels developed in overseas to domestic projects

Power Generation Output

418MW

Power Plant

6 units

Current

Power Generation Output

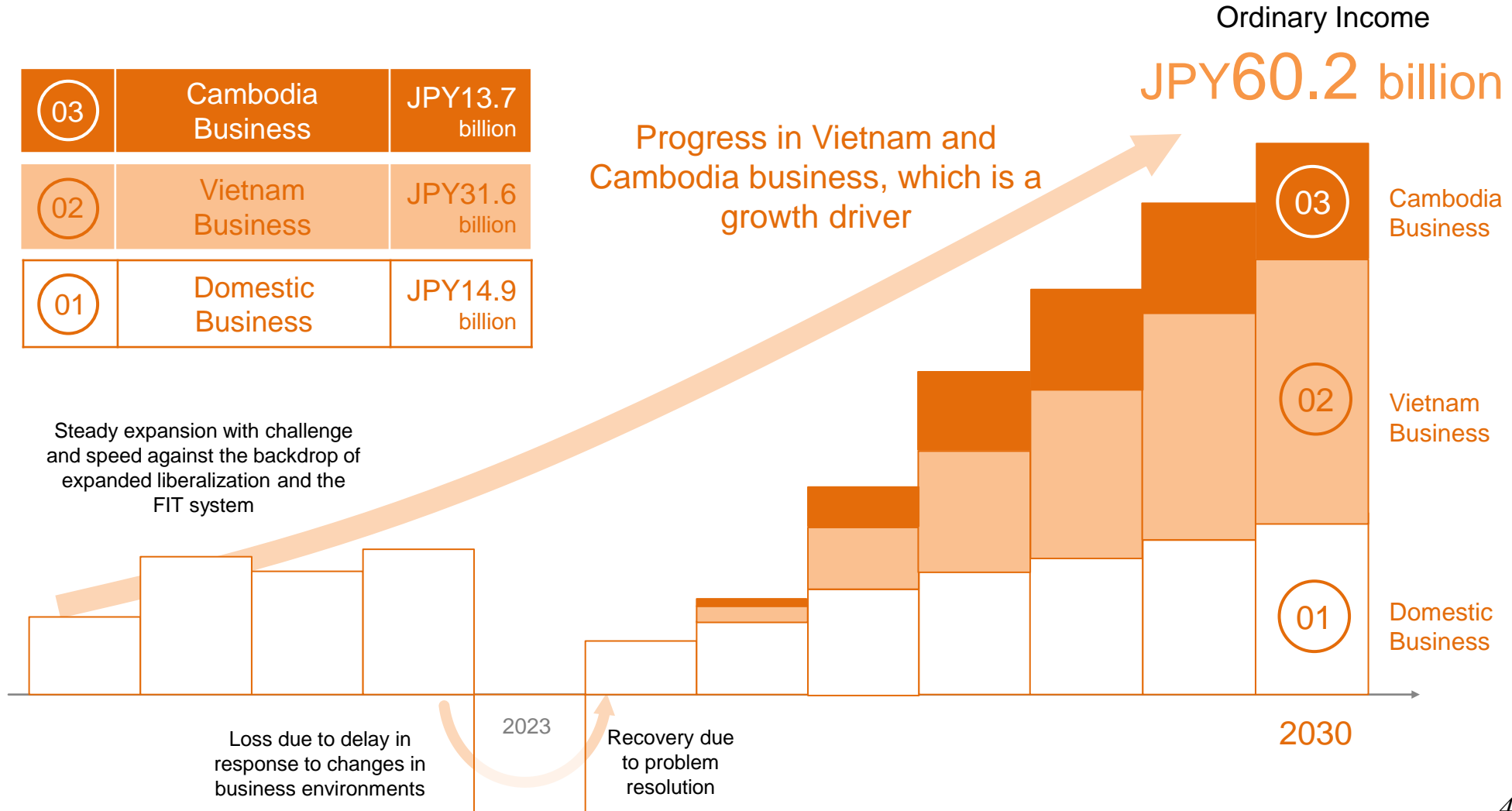
793MW

Power Plant

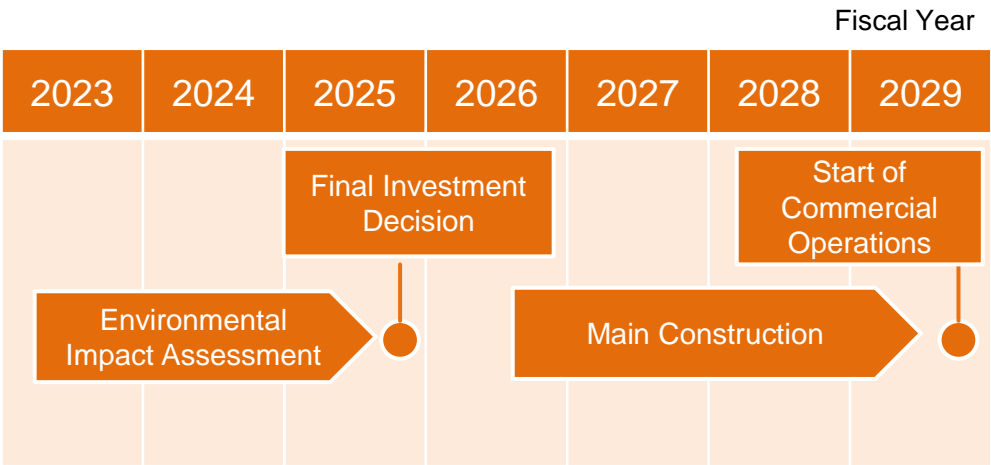
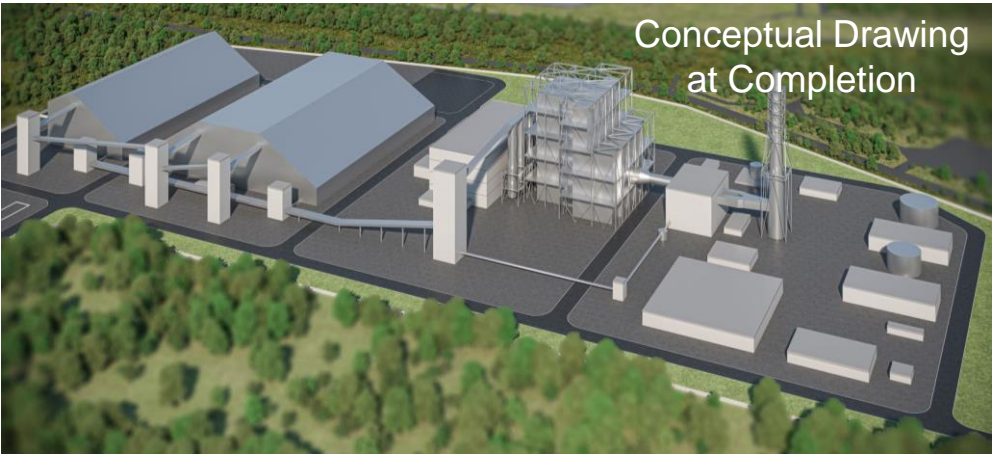
8 units

2030

Aiming for ordinary income of JPY60.2 billion in 2030 with overseas business as a growth engine



- Environmental assessment process is progressing steadily



Facility Output	300MW (the world's largest level)
Planned Construction Site	Near Higashikou, Seiro Town, Niigata Prefecture
Boiler Type	Ultra-supercritical pressure re-fired boiler (Biomass combustion method)
Assumed Annual Power Generation	Approx. 2,000 GWh
CO2 Reduction	About 1 million tons per year

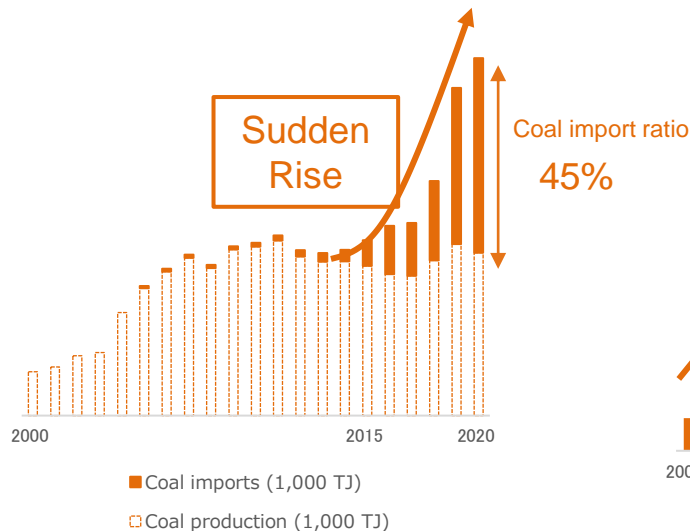
Issues for Asian Countries

Entering “import phase” of fossil fuels and power

➔Facing declining energy self-sufficiency

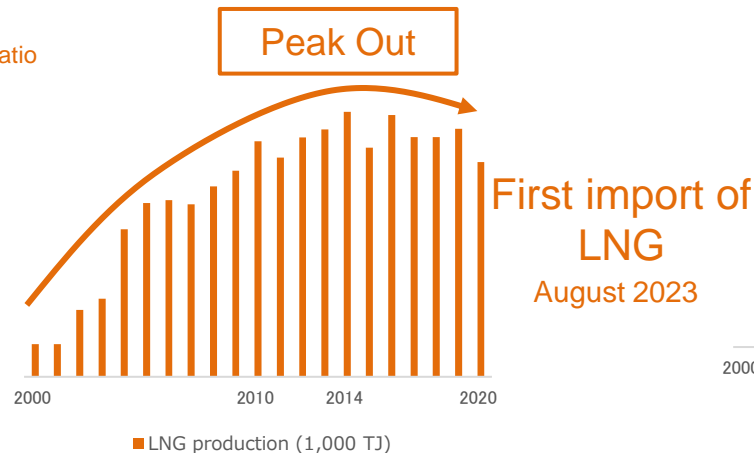
Vietnam: Rising Coal Import Ratio

- ✓ Coal-fired power generation accounts for 39% of Vietnam's power supply mix
- ✓ On the other hand, coal production has remained flat in recent years, and the import ratio is on the rise



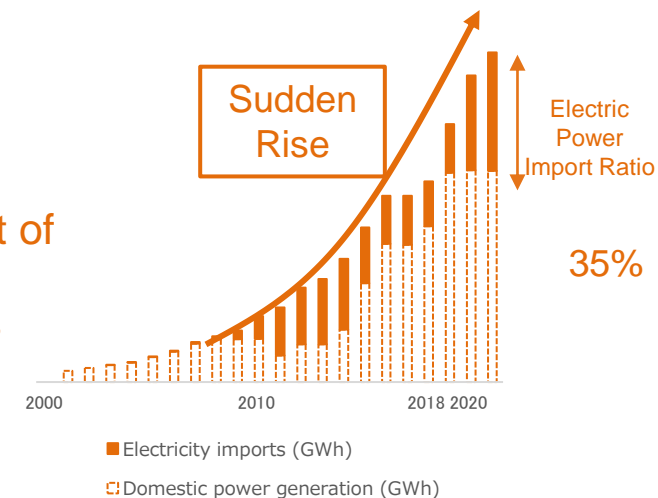
Vietnam: Natural Gas Production Has Peaked Out

- ✓ Natural gas production gradually increased since 2000, peaking in 2014 and then declining
- ✓ LNG imports started in August 2023



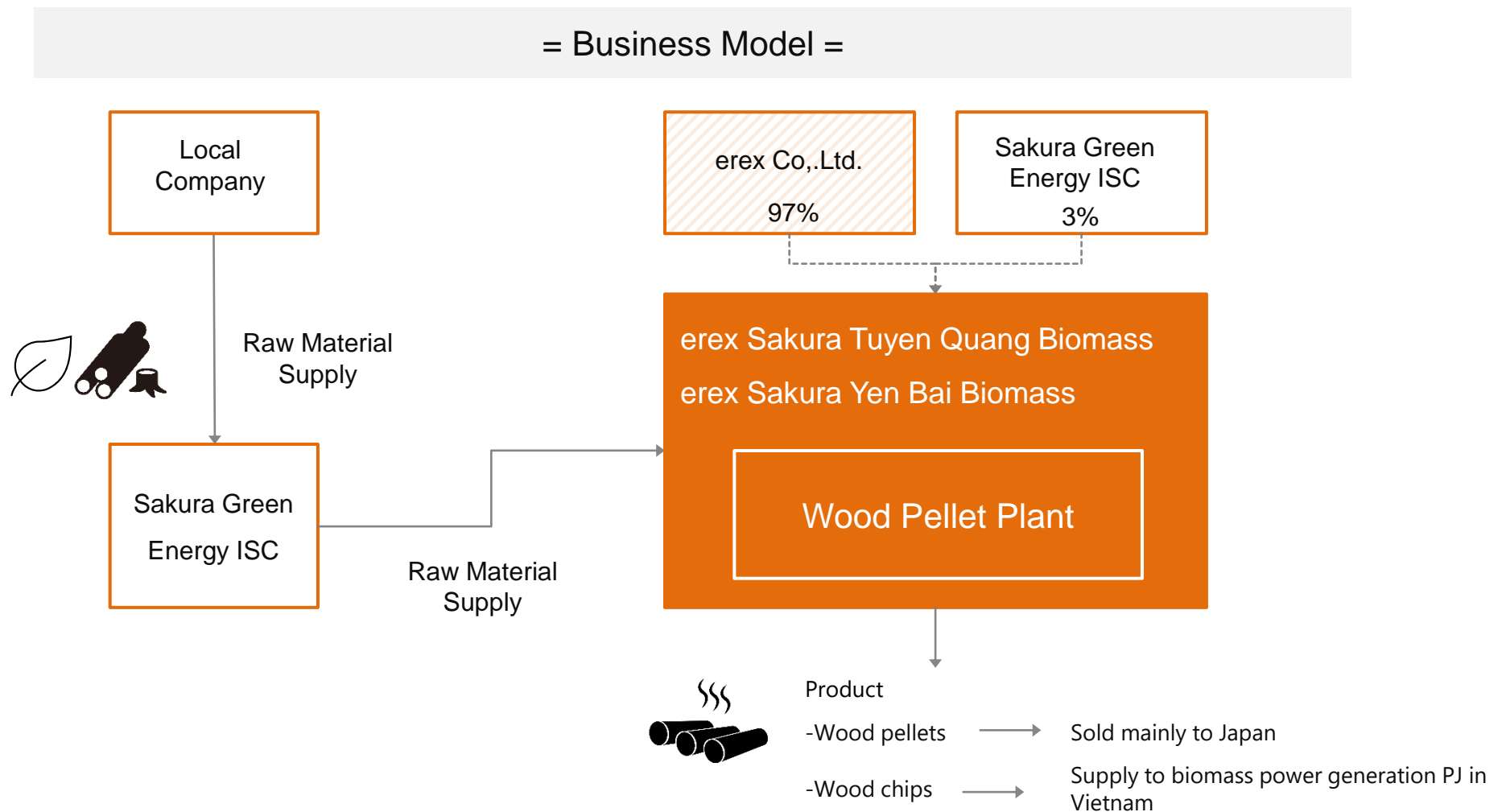
Cambodia: Rising Electric Power Import Ratio

- ✓ Electric power demand has quadrupled over the past decade (average annual growth of 18%)
- ✓ Electric power imports from neighboring countries have skyrocketed since 2010



	Notes
Vietnam: Bio-Power Generation	<ul style="list-style-type: none"> - In addition to electricity sales under the FIT system, CO2 credits generated through power generation will also be sold - Assuming 18 units in operation by 2030
Vietnam: Fuel	<ul style="list-style-type: none"> - 20 points of operation, fuel supply for newly constructed bio-power generation, additionally produced wood pellets sold to Japan and other countries
Cambodia: Hydro	<ul style="list-style-type: none"> - 80MW power plant, whose construction has started, is scheduled to start operations in 2025 - Further development (20MW) is under planning downstream
Cambodia: Bio- Power Generation	<ul style="list-style-type: none"> - The feasibility study has been implemented. We aim to complete it in June 2024 - Assuming up to 5 units to be in operation by 2030
Transitions, etc.	<ul style="list-style-type: none"> - Coal Transition in Vietnam - Wood pellet production business in Malaysia and other countries

Planning to start up fuel business prior to power generation PJ



The following two studies on fuel conversion of coal-fired power plants have been adopted

JCM Feasibility Study	
Name of Publicly Invited Project	FY2023 "Research of Infrastructure Preparation for Bilateral Credit Acquisition , etc. (JCM Feasibility Study)" *Project commissioned by the Ministry of Economy, Trade and Industry (Global Environmental Affairs Office, Industrial Science and Technology Policy and Environment Bureau)
Proposal Theme	Feasibility Study on JCM Credit Creation through Fuel Conversion in Vietnam
Objective	The absence of a fuel conversion system and low PPA prices are issues for de-carbonization in Vietnam, and in light of solving these issues by creating JCM credits, the feasibility of fuel conversion as a JCM project is investigated

NEDO International Demonstration Study on Conformity with Demonstration Requirements, etc.	
Name of Publicly Invited Project	FY2023 "International Demonstration Project on Japan's Energy Efficiency Technologies (Basic Study)" the 2 nd public invitation *Commissioned by NEDO
Proposal Theme	Demonstration Study on High-Ratio Co-firing of Biomass Fuel with Existing Coal-Fired Power Plants to Achieve Decarbonization (Quang Nam Province, Vietnam)
Objective	A study is conducted, aiming to achieve a significant reduction of CO2 emissions while reducing capital investment through high biomass co-firing, and to contribute to both securing a stable power supply and promoting de-carbonization in Vietnam and other Southeast Asian countries as an economical and realistic measure

Vietnam Business	Bio-Power Generation	<ul style="list-style-type: none"> - In addition to the Hau Giang Province project, for which construction has already started, and the Yen Bai/Tuyen Quang Province project, for which construction is scheduled to start within this year, PDP8 projects will be developed in sequence, with a maximum of 18 units planned to be in operation by 2030 - Purchase price conditions are assumed to be 10-α¢/kWh in the future, taking inflation and other factors into account - At least 50% of the CO2 value created is assumed to belong to the operator
	Fuel Business	<ul style="list-style-type: none"> - As with the Yen Bai and Tuyen Quang Province project, fuel business will be developed in conjunction with biomass power generation projects to be launched in the future - Revenues not only from fuel supply to power plants but also from sales of wood pellets to 3rd parties are assumed
Cambodia Business	Hydroelectric Power Generation	<ul style="list-style-type: none"> - Construction for the 80MW has already started - New 20MW development is planned downstream with similar economics
	Bio-Power Generation	<ul style="list-style-type: none"> - The F/S is underway. The construction will start as early as the 2H of FY2024. Up to 5 plants are assumed to be in operation in 2030 - Generation conditions will be discussed, but are assumed to be 10+α ¢/kWh, based on the electricity cost in Cambodia and electricity import prices from neighboring countries. At least 50% of the CO2 value created is assumed to belong to the operator.

- A memorandum of understanding (MOU) has been signed with the Ministry of Mines and Energy of the Kingdom of Cambodia to confirm the roles and cooperation in energy development, including biomass fuel and biomass power generation



The exchange of documents ceremony of the MOU held in the presence of Prime Minister Kishida and Prime Minister Hün Manêt



MOU Ceremony at the ASEAN-Japan Economic Co-Creation Forum 2023/12/16

Reference: METI: MOU for the AZEC Summit Meeting, December 2023, Agency for Natural Resources and Energy
<https://www.meti.go.jp/press/2023/12/20231218004/20231218004-9.pdf>

- Biomass power plant (PDP7) under construction in Hậu Giang Province is scheduled to start operations by the end of 2024, and the construction is currently progressing according to schedule
- Foundation work has been completed. Construction of each building and boiler installation are in progress



Capacity	20MW (10MW x 2)
Fuel	Rice husks: approx. 130,000 t/year
FIT Price	8.47¢/kWh

- erex Group's 1st integrated report "INTEGRATED REPORT 2023" has been published. (Only in Japanese language. English version is scheduled to be available in April)
- The purpose of this report is to provide stakeholders with a deeper understanding of erex Group, including Representative Director and President Hitoshi Honna's thoughts, sustainability initiatives, and financial strategy



INTEGRATED REPORT 2023

erex Group

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