



**erex Co., Ltd. [9517]**

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

**Daiwa High Growth Energy WEEK**

**September 30, 2024**

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Inquiries concerning this material

erex Co., Ltd. / IR&PR Department

E-mail: [ir.info@erex.co.jp](mailto:ir.info@erex.co.jp)

**I . Business / Financial Results of the Past 10 Years**

**II. 1Q Results of FY March 2025 and Future Outlook**

**III. Growth Strategy**

**IV. Carbon Credit-Based De-Carbonization Initiatives**

# Business / Financial Results of the Past 10 Years



## Retail Business

Ranked 11<sup>th</sup> out of about 700 new power companies in terms of power sales volume \*April 2024

Nationwide sales network through various sales channels

Diverse rate plans including CO2-free



## Trading Business

Thorough risk management by utilizing futures, etc.

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

## Overseas Development

### Fuel Business

Top class biomass fuel procurement in Japan

In-house fuel procurement and development

Acquisition of certification including the supply chain

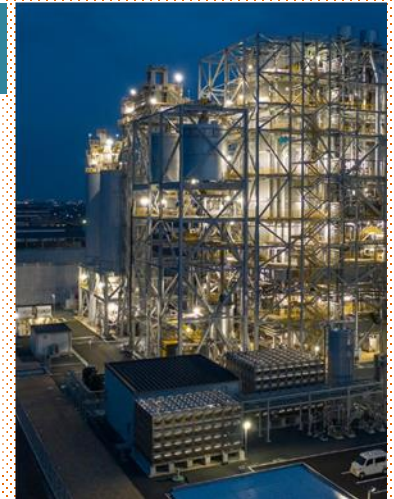


### Power Generation Business

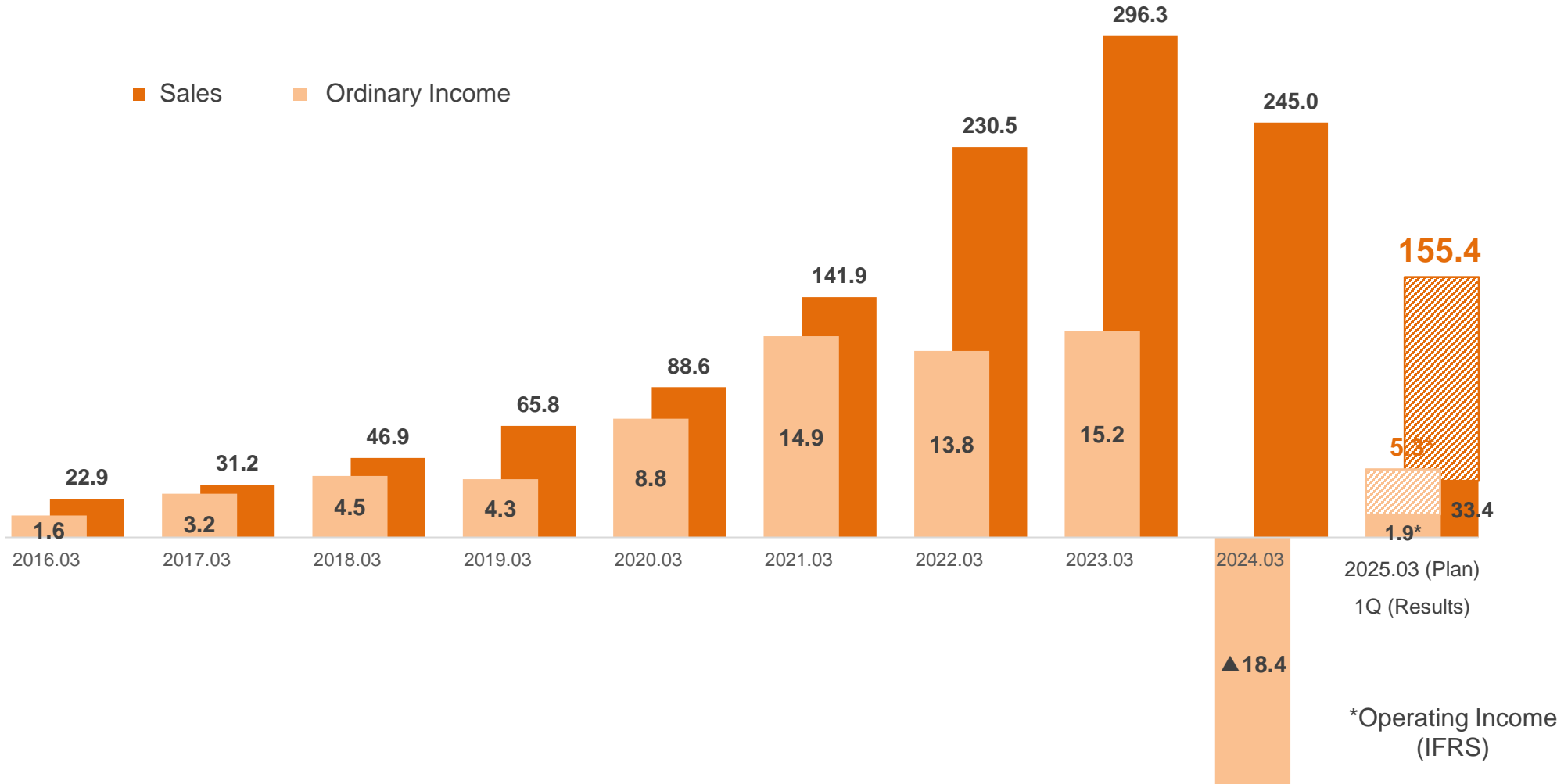
\* 793MW supply capacity in Japan, mainly biomass power generation

Promotion of fuel conversion

Know-how of biomass power plant construction and operation



- Sales and earnings grew steadily through FY March 2023. Significant losses were recorded in FY March 2024 due to overpriced procurement
- Reflecting on the results of FY March 2024, structural reforms have been implemented. erex Group plans 155.4 billion yen sales / 5.3 billion yen operating income for FY March 2025



# 1Q Results of FY March 2025 and Future Outlook

**Structural Reforms Announced in May This Year in Light of Significant Losses**

**Imbalance between Procurement and Sales**



**Balance Optimization**  
Procurement on a case-by-case basis at reasonable quantities and prices for retail sales volume

**Lack of Coordination among Divisions**



**Reinforcement of Collaboration among Divisions**  
Establishment of SCR Office, Supply & Demand Strategy Office, and Overseas Business Management Dept. across the organization

**Damage to Financial Strength**



**Improvement of Financial Strength**  
Alliance with strategic partners  
Securing funds for overseas business growth through 3<sup>rd</sup> party allocation of new shares

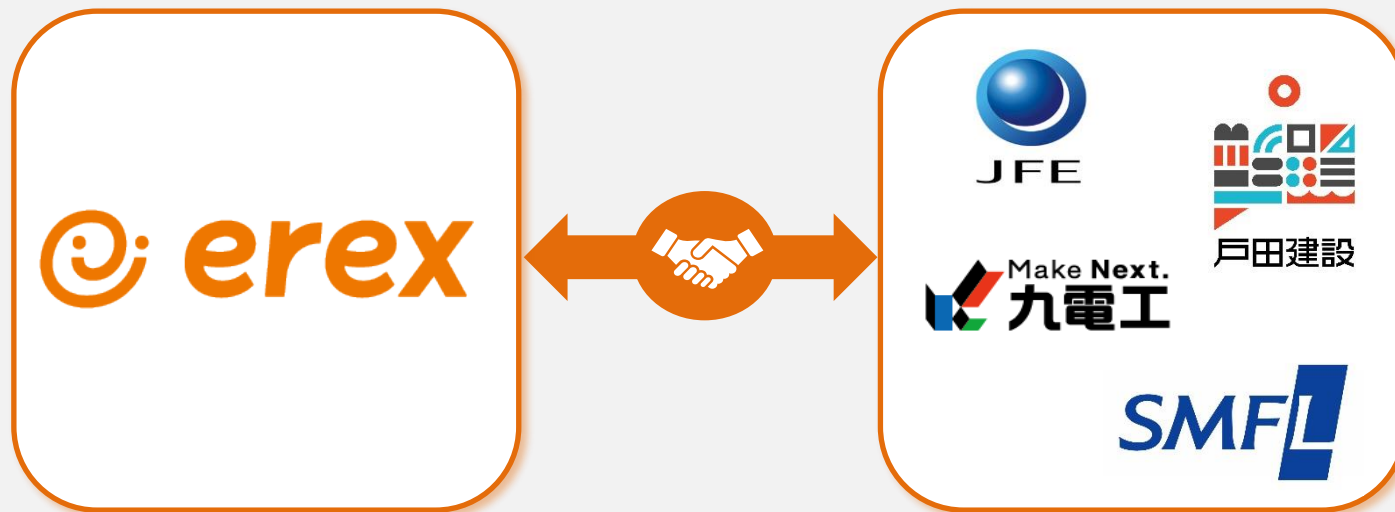
**Structural reforms led to a return to profitability in the 1Q of FY March 2025**

**By continuing the initiatives in the 2Q and beyond, erex Group aims to make sure that the full-year plans are achieved with potential further upside**



**1. Concrete discussions are underway with JFE Engineering Corporation, TODA CORPORATION, KYUDENKO CORPORATION, and Sumitomo Mitsui Finance and Leasing Company Limited for business developments in Japan and overseas**

- ✓ Business alliance agreements have been signed with JFE Engineering and TODA CORPORATION



**2. In addition to the above Japanese companies, erex Group is developing businesses with leading companies such as Vinacomin Power\* and Power China\***

\*Vinacomin Power: A group company of the Vietnam Coal and Mineral Industries Group, a major state-owned enterprise in Vietnam

\*Power China (China Power Construction): Electric power infrastructure construction company with sales of approximately 12 trillion yen. The company has built several power plants in Cambodia

- **Sales with negative spread have been eliminated and the balance between procurement and retail sales has been optimized, resulting in erex Group's return to profitability**

## **Net Sales/Operating Income: Steady Progress vs Plans**

### **Power Sales Volume Grew due to the Effect of New Measures, Including the Development of New Retail Rate Plans**

- 1. High Voltage: Strong sales of erex Group's proprietary new rate plans (launched in July 2023) that reference futures prices**
  - ✓ Power sales volume increased by +38.3% YoY
  - ✓ New rate plans are expected to account for more than 30% of all high voltage demands by the end of the year
- 2. Low Voltage: Sales grew due to acquisition of large project contracts and tie-in with high voltage projects**
  - ✓ Net sales increased by +6.0% YoY
- 3. Corporate PPA, Aggregation: Multiple discussions are underway**
  - ✓ Concrete discussions with major companies are underway

(Billion Yen)	FY March 2024 1Q (Results)	FY March 2025 1Q (Results)	YoY (Amount)	YoY (%)
Net Sales	55.9	33.4	▲22.4	▲40.2%
EBITDA <sup>*1</sup>	▲2.5	4.4	6.9	-
SG&A Expenses	2.7	2.1	▲0.5	▲21.0%
Operating Income	▲4.5	1.9	6.4	-
Income Before Income Taxes	▲3.8	3.1	6.9	-
Net Income <sup>*2</sup>	▲3.3	1.7	5.0	-

\*1 EBITDA: Income before income taxes + Interest expense + Depreciation & Amortization, etc.

\*2 Net income attributable to the owners of the parent company

## Operating Income

- Factors that led to better-than-planned 1Q results, such as an increase in the power sales volume and the number of customers, are expected to continue. In terms of procurement, erex Group will continue to procure power in line with demands in the 2Q and beyond, curbing the occurrence of procurement surplus and minimizing the impact of electricity market price fluctuations
- High-voltage retail fully-fixed plans and hybrid plans maintain strong results. These plans are not affected by market prices and do not generate negative spreads as procurement is fixed at the time of contract through electricity futures, etc.

## Income Before Income Taxes

- Progress vs the full-year plan was 71.6% as of the 1Q due to foreign exchange gain of about 1.3 billion yen resulting from the yen depreciation. (For fuel imports, for which strong yen is a positive factor, 90% or more of the amount for FY March 2025 has already been booked for foreign exchange. Benefits can be enjoyed in case of yen appreciation in FY March 2026 and beyond)

(Billion Yen)	FY March2025 1Q (Results)	FY March 2025 Full Year (Plans)	Progress Rate vs Full Year Plans
Net Sales	33.4	155.4	21.5%
EBITDA* <sup>1</sup>	4.4	-	-
SG&A Expenses	2.1	-	-
Operating Income	1.9	5.3	35.5%
Income Before Income Taxes	3.1	4.3	71.6%
Net Income* <sup>2</sup>	1.7	1.8	92.7%

\*1 EBITDA: Income before income taxes + Interest expense + Depreciation & Amortization, etc.

\*2 Net income attributable to the owners of the parent company

# Growth Strategy

# Expanding Domestic & Overseas Businesses Toward De-Carbonization in Southeast Asia

Operating Income:

5.4 billion yen

Income Before Income Taxes:

4.3 billion yen

**FY2024**

【Japan】

Stable domestic earnings

【Overseas】

Start of operation of the 1<sup>st</sup> overseas biomass power plant

17.0-18.0 billion yen

**FY2027**

【Japan】

Sales expansion of CO2-free plans

Expansion of fuel business

【Overseas】

Expansion of overseas power generation business

Profit Contribution from Carbon C

50.0+α billion yen

**FY2030 - FY2035**

【Japan】

Establishment of a new power business that provides de-carbonization value

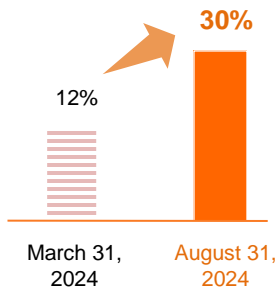
【Overseas】

Solidifying position as a leading biomass company

## Retail and Trading Business

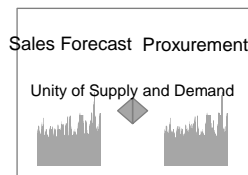
### Growth of Power Sales Volume

Ratio of Hybrid Plan & Fully Fixed Plan



- Development of new rate plans that meet customer needs (hybrid plans, fully fixed plans, etc.)
- Reinforcement of acquisition of contracts with high usage and high gross profit (corporate customers, etc.)
- Utilization of various sales channels such as via the web, switching at the time of move, etc.

### Continuation of Integrated Supply and Demand Management



- Daily inter-departmental coordination of sales unit prices for each customer during the contract period (mainly one year ahead).  
⇒No price mismatch
- Sharing of sales status in real time and leveraging all trading channels to execute necessary transactions  
⇒Building neutral position

### Corporate PPA, Aggregation Business

- To meet the renewable energy needs of customers, erex Group is strengthening its aggregator function by leveraging the supply-demand coordination functions it has developed over the years. In discussions with several major companies
- Providing customers with integrated services based on power generation, trading, and retail for the utilization of renewable energy

## Fuel and Power Generation Business

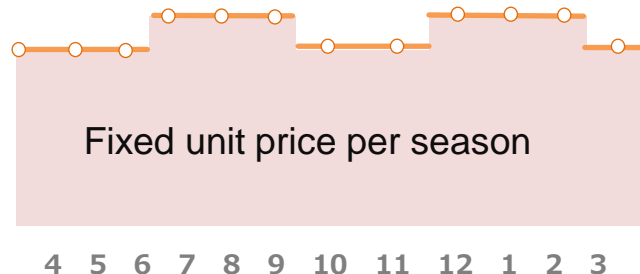
- Increase in fuel sales to 3rd parties
  - ✓ Fuel supply with the operation of Sakaide Power Plant in 2025
  - ✓ Supply to new biomass power plants of other companies
- Fuel conversion at the Itoigawa Power Plant
  - ✓ Implementation of biomass co-firing

- Contracts for fully-fixed and hybrid plans **expanded to approximately 30% of all high-voltage contracts** (as of July 2024), driving the growth of power sales volume
- Inquiries have increased mainly from customers who want to increase the predictability of electricity rates. **Plans that are not affected by market prices and do not generate negative spreads because procurement is fixed in advance using electricity futures**

### Fully-Fixed Plan

- ❑ Fixed unit price \* Unit price varies depending on the season
- ❑ No impact from fuel price fluctuations, etc, Easy to predict electricity costs

### No risk of Fluctuation



### Hybrid Plan

- ❑ Combination of market-linked and fully fixed
- ❑ Avoiding the risk of large fluctuations while enjoying the benefits of inexpensive markets,

### Risk Soaring / Risk Avoidance

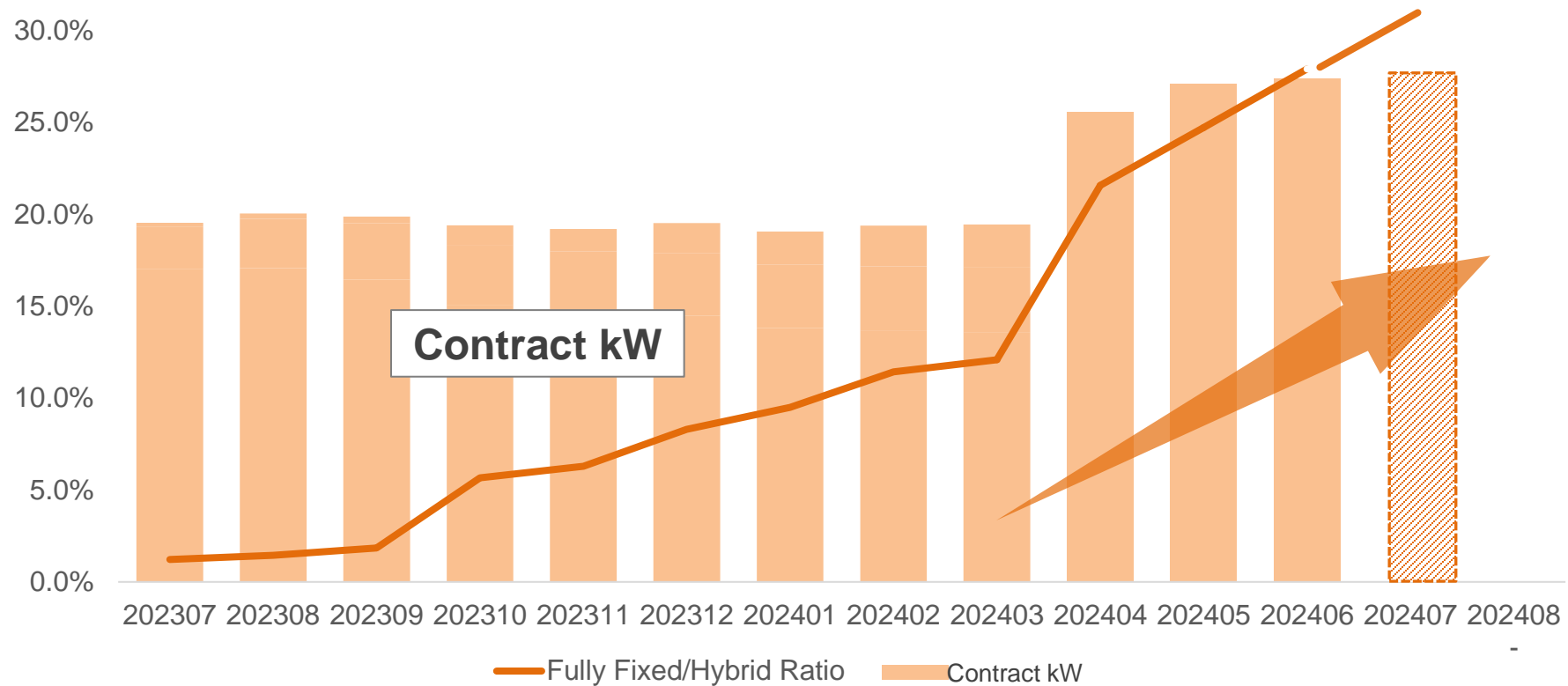




Increased inquiries for fully-fixed & hybrid plans led to an increase in power sales volume  
Increased inquiries mainly from customers who want to increase predictability of electricity rates  
Plans that do not depend on market prices and do not generate negative spreads because procurement is fixed in advance by electricity futures

[Futures Plan Ratio]

### Ratio of Fully-Fixed and Hybrid Contracts





## 1<sup>st</sup> Stage Implementation of Co-Firing Trial

### 【Achievements and Current Policy】

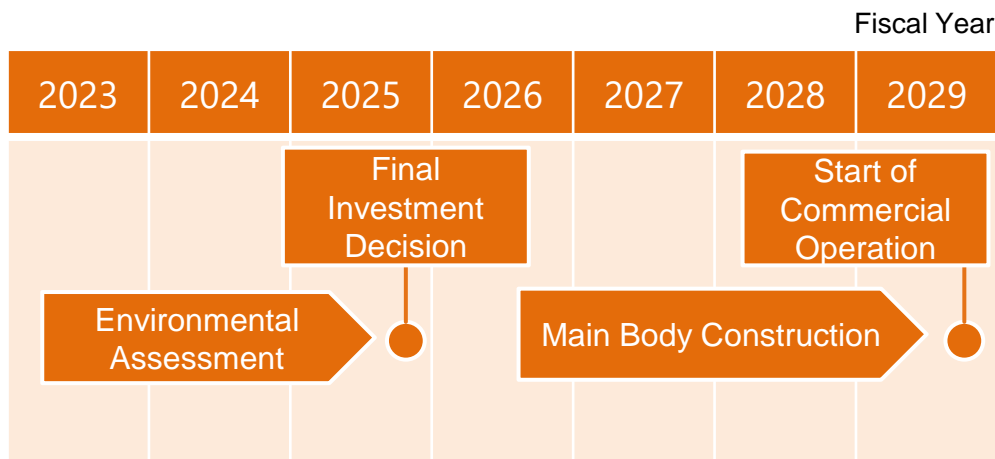
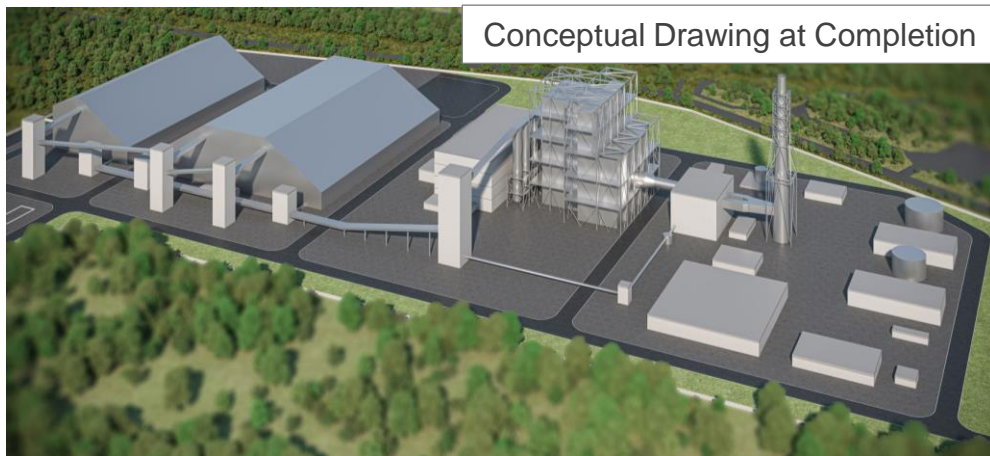
- **Implementation of multiple biomass co-firing tests using existing facilities**
  1. Sep 2023: 30% wood pellet co-firing
  2. Dec 2023: Several % sorghum pellet co-firing
  3. Sep 2024: 30% PKS co-firing (test ongoing)
- **Various biomass co-firing tests are planned to select suitable biomass fuel types for the Itoigawa facility**
  1. Wood pellets, sorghum pellets (test completed)
  2. PKS (test ongoing)
  3. Wood chips, other new fuels (under consideration)

## 2<sup>nd</sup> Stage Implementation of Continuous Co-Firing Operation

### 【Outlook for the Future】

- Selection of optimal biomass fuel types through various biomass co-firing tests
- Consideration of facility modification plans according to the selected fuel type and biomass fuel logistics
- Evaluation of the business feasibility of the modification plan
- Also oriented toward trading of non-fossil values through biomass co-firing

## ■ Environmental assessment process is steadily underway

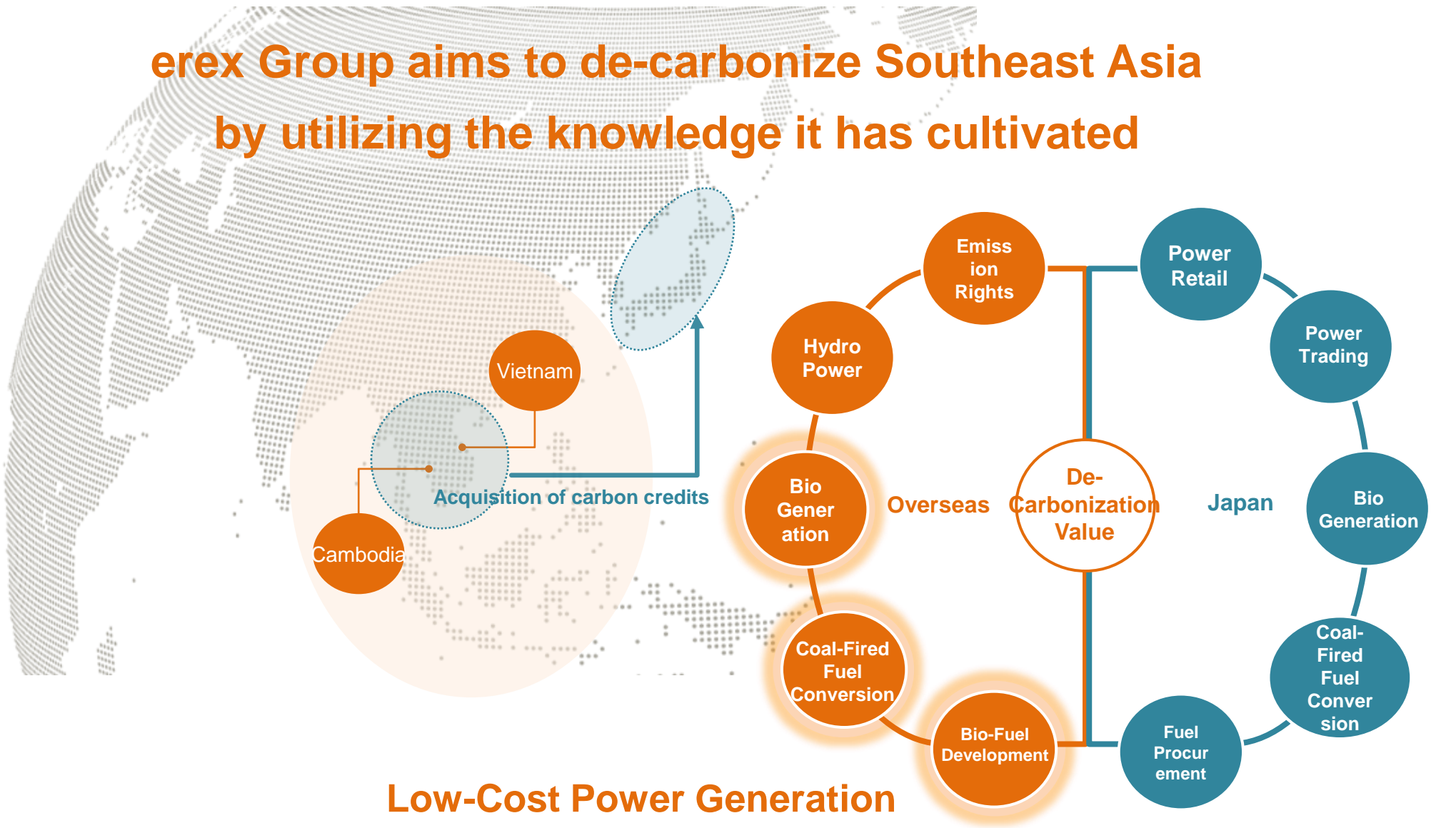


Facility Output	300MW (World's Largest Level)
Planned Construction Site	Near Higashikou, Seiro Town, Niigata Prefecture
Boiler Type	Ultra-Supercritical Pressure Re-Fired Boiler (Biomass Combustion Method)
Assumed Annual Power Generation	Approx. 2,000 GWh
CO2 Reduction	Approx. 1 million tons per year

# Carbon Credit-Based De-Carbonization Initiatives

# Strong Defence & Development

# erex Group aims to de-carbonize Southeast Asia by utilizing the knowledge it has cultivated



Low-Cost Power Generation

Improvement of Energy Self-Sufficiency

# Issues in Southeast Asia

Power Shortages due to Population Growth

Risk of Energy Price Hikes

Response to De-Carbonization

Decline in Energy Self-Sufficiency

Improvement of Income Level

Job Creation

## Providing the Solution of “Biomass Power Generation”

### Stable Power Supply

- Stable power supply that is not affected by weather conditions
- Being able to improve energy self-sufficiency and support economic growth

### De-Carbonization

- De-carbonization is a global issue, and without de-carbonization, response to an increasingly globalized society is not possible
- Biomass power generation is optimal in Southeast Asia, where biomass resources are abundant

### Contribution to Employment & Increased Income

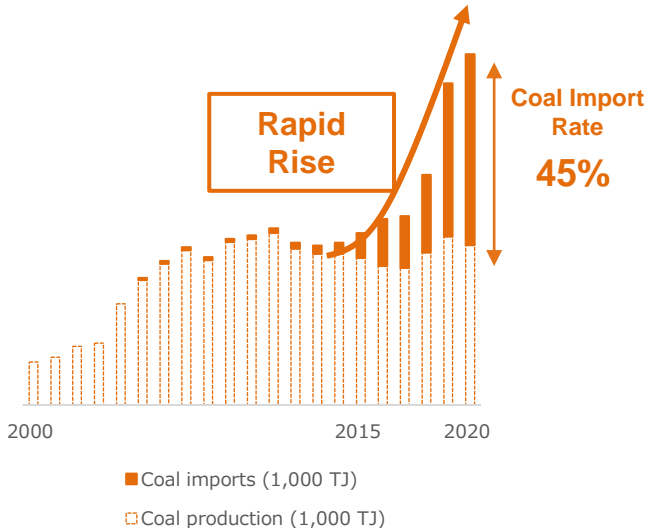
- Income of agricultural workers is increased in the production of biomass fuels
- Expected to cover a wide range of fields such as power generation, fuel accumulation and transportation

**Issues for Asian Countries**

**Entering “Import-Phase” of Fossil Fuels and Power  
➔ Facing Declining Energy Self-Sufficiency Rate**

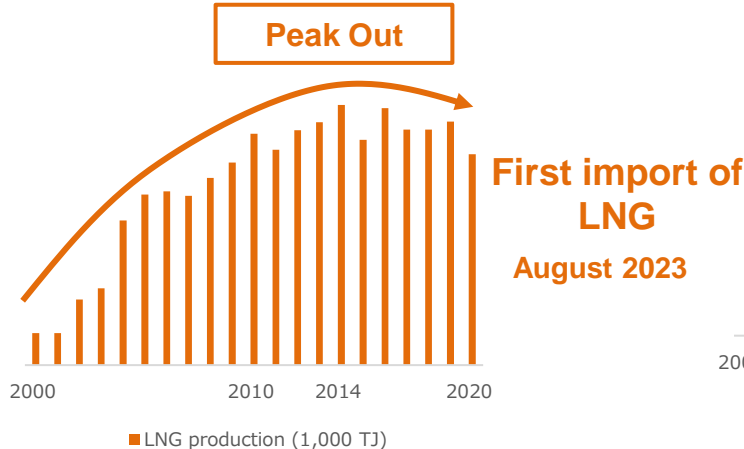
**Vietnam: Rising Coal Import Rate**

- ✓ 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.



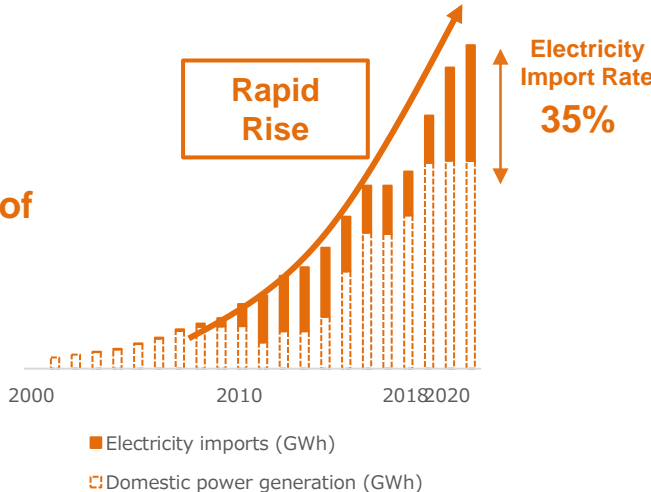
**Vietnam: Reaching the Peak in Natural Gas Production**

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



**Cambodia: Rising Electric Power Import Rate**

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





- The first commercial biomass power plant (20MW) in Vietnam is under construction. The plant will also be erex Group’s first overseas power plant and will start operations in December 2024
- Construction of Hau Giang Biomass Power Plant was approved in the 7<sup>th</sup> National Power Development Plan (PDP7)
- The project was selected for Financing Programme for Joint Crediting Mechanism (JCM) Model Projects (\*1) in FY2022 (\*2)



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

\*1 Ministry of the Environment, Japan has been implementing the “JCM Model Projects,” which provides financial supports covering up to half of the initial investment costs. The purpose of this model projects is to financially support the implementation of projects which reduce GHG emissions by utilizing leading decarbonizing technologies in developing countries, and in return, to acquire JCM credits for achievement of Japan’s GHG emission reduction and the partner countries’ emission reduction target. This project is being implemented with the cooperation of the Vietnamese and Japanese governments

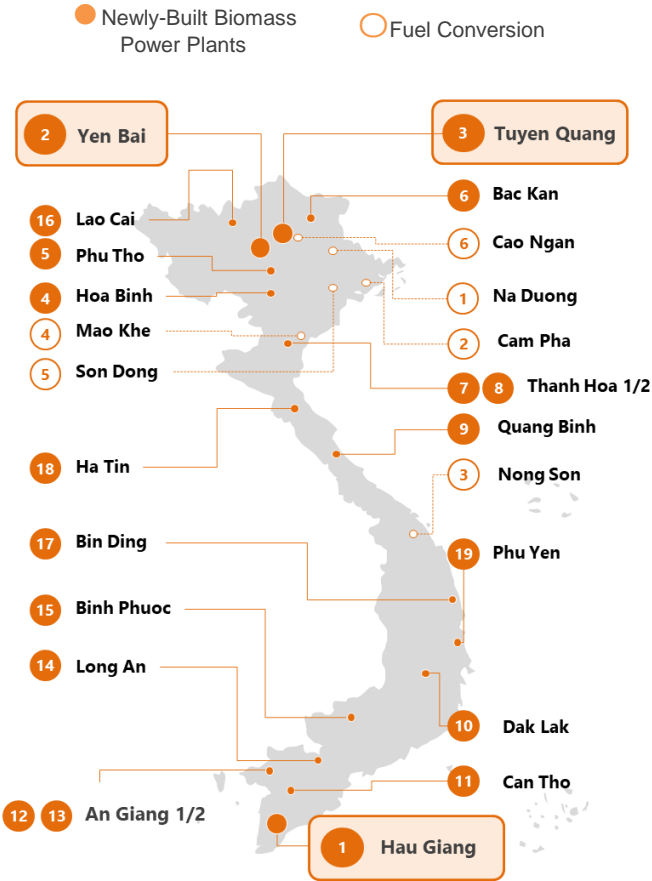
\*2 The announcement was made on July 1, 2022

- Construction of biomass power plants in Yen Bai and Tuyen Quang is scheduled to start by the end of the year
- The project was selected for Financing Programme for Joint Crediting Mechanism (JCM) Model Projects (\*1) in FY2023 (\*2)

Power Plant Overview

Power Plant Name	Yen Bai Biomass Power Plant Tuyen Quang Biomass Power Plant
Investing Company (Plan)	erex Co., Ltd. 100%
Power Sales Price	8.47US cent/kWh (based on the local FIT system)
Generation Output	50MW
Fuel	Woody Residue (approx. 500,000 t/year)
Construction Period	Approx. 2.5 years
Funding (Plan)	Project Finance (about 30% equity)

<Each Project Site>



\*1 Ministry of the Environment, Japan has been implementing the "JCM Model Projects," which provides financial supports covering up to half of the initial investment costs. The purpose of this model projects is to financially support the implementation of projects which reduce GHG emissions by utilizing leading decarbonizing technologies in developing countries, and in return, to acquire JCM credits for achievement of Japan's GHG emission reduction and the partner countries' emission reduction target. This project is being implemented with the cooperation of the Vietnamese and Japanese governments

\*2 The announcement was made on March 22, 2024

- Co-firing biomass fuels with coal-fired power generation can promote de-carbonization while maintaining power generation capacity
- Initiatives are contributing to energy transitions recommended by the Asian Zero Emissions Community (AZEC)

### JCM Feasibility Study

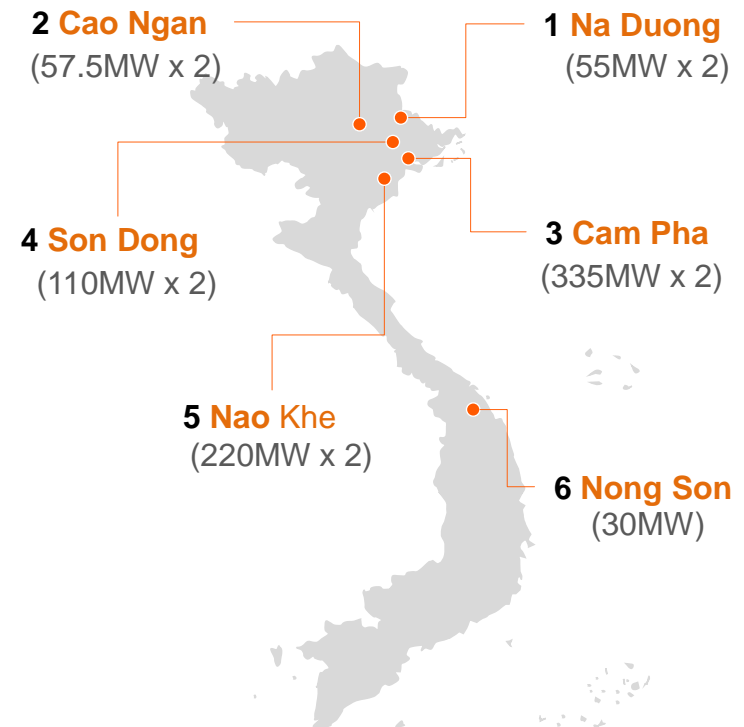
- Commissioned to carry out the "Infrastructure Development Study for Bilateral Credit Acquisition, etc." (JCM Feasibility Study) project for the Ministry of Economy, Trade and Industry in FY2023
- Prepared and submitted a draft methodology for issuing carbon credits using the Na Duong Power Plant in Lang Son Province (No.01 in the map on the right) as a model case
- Conducted research on issues such as emission factors, a variable that determines CO<sub>2</sub> emissions from PJ, and shared the results of economic feasibility calculations, etc. with the Vietnamese Ministry of Natural Resources and Environment

### NEDO Demonstration Project

- Selected for "International Demonstration Project on Japan's Energy Efficiency Technologies"
- Preparations underway for co-firing tests at coal-fired power plants in Vietnam

### Vinacomin Power

#### Coal-Fired Power Plants (Total 1,585 MW)



- Factories to process woody residues into pellets are under construction. Tuyen Quang factory is to start operations in around December 2024 and Yen Bai in around January 2025
- Final terms for raw materials (woody residues, etc.) necessary for pellet factory operations are being discussed with several suppliers in the vicinity of the pellet factories, and agreements for the supply of raw materials are scheduled to be signed
- The pelletized fuel are scheduled to be exported to Japan and other countries. Contracts for transportation from the pellet plant to the export port and warehouses near the export port have already been secured

Yen Bai Pellet Factory      Tuyen Quang Pellet Factory



### Northern Part

Acacia, eucalyptus, and other woody residues

Wood Pieces after Processing



Core after Veneer Removal and Unusable Wood Pieces



### Southern Part

Rice husks, rice straw, and other agricultural residues

New fuels such as new sorghum

Rice Husks



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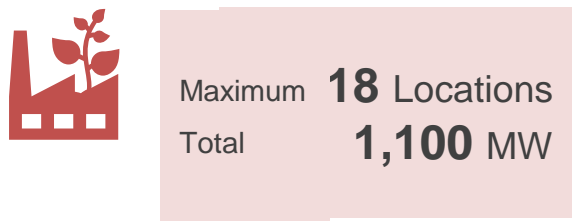
- Construction of factories to produce wood pellets mainly from unused resources such as woody residues is underway in Tuyen Quang and Yen Bai
- Pelletized fuel is scheduled to be exported to Japan and other countries
- Japan Bank for International Cooperation (JBIC) and Sumitomo Mitsui Banking Corporation provide co-financing

Pellet Factory in Tuyen Quang

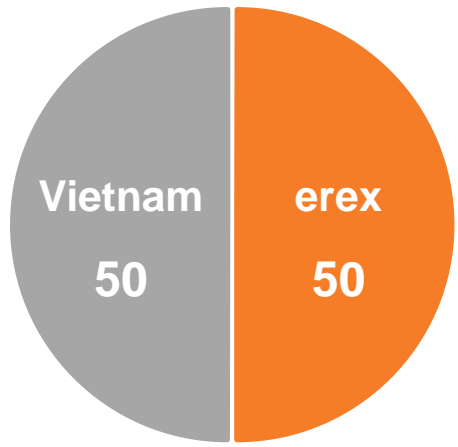
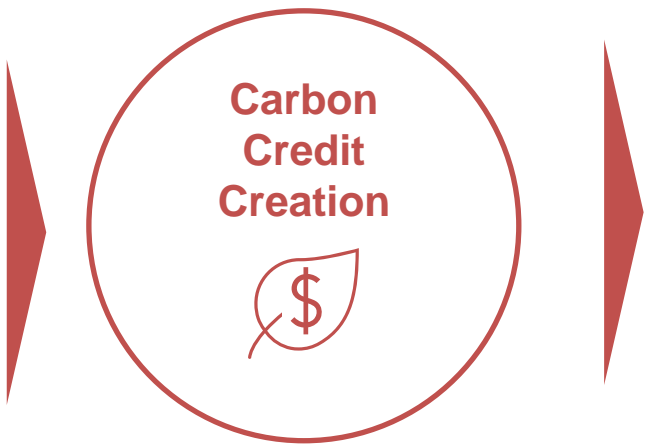
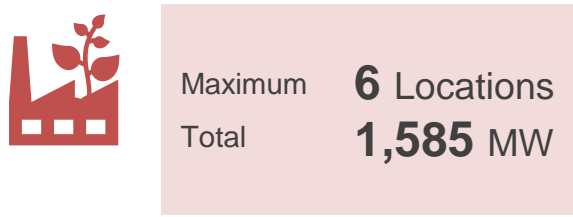
Business Company Name	EREX SAKURA BIOMASS TUYEN QUANG CO.,LTD.
Business Operation	erex Sakura Biomass Tuyen Quang Factory
Investing Company	erex: 97% SAKURA GREEN ENERGY JOINT STOCK COMPANY: 3%
Start of Operations	December 2024
Investment Amount	20,400,000USD

- Carbon credits are an effective way to achieve de-carbonization, and countries are focusing their efforts on them
- In September 2024, discussions were held with the Vietnamese Minister of Natural Resources and Environment regarding carbon credits to be generated from erex Group’s project
- Discussions with the Vietnamese government are steadily progressing for erex Group to acquire 50% of the carbon credits that belong to the country of Vietnam among the credit generated by erex Group’s projects
- Vietnam and erex plan to form a joint task force to establish carbon credit ETS market

Newly-Built Biomass Power Project



Fuel Conversion Project



\* Attributable to Vietnam

Hydroelectric Power Generation Business

- Construction is to be completed by the end of 2025, backed by an abundance of water
- High level PPA of 7.9¢/kWh, featuring excellent economic efficiency (global average: 5.4¢/kWh) \*Even during the low operating period (7 months) in the dry season, purchase of 3,577 operating hours per year is ensured
- Construction has entered the final stage, with the start of construction of dam, power generation tunnels, etc.
- The second hydroelectric power plant (20 MW) with the same conditions downstream is under consideration for completion in May 2026

Conceptual Drawing at Completion



Biomass Power Generation Business

- Based on the high potential of various unused biomass fuels and the plantation and afforestation system, a joint feasibility study with Power China (Power Construction Corporation of China)\*, which is highly trusted by the Cambodian government, including the site location, will be conducted this fall, aiming to start construction of the first unit by the end of this year at the earliest
- The Cambodian government has requested the construction of multiple units to back out high-priced electricity imports from neighboring countries and to secure a stable power source that contributes to decarbonization

Business Company Name	SPHP CO., Pte Ltd.
Start of Operations (Schedule)	2025
Total Investment Cost	USD233.6 million
Power Sales Price	7.9¢/kWh (35 years)
Power Sales to	EDC (Electricite du Cambodge)
Power Generation Capacity	80MW
Investment Ratio	erex 67% Asia Energy Power Co. Ltd. 33%



Main Dam Area



Diversion Tunnel



River Bridge



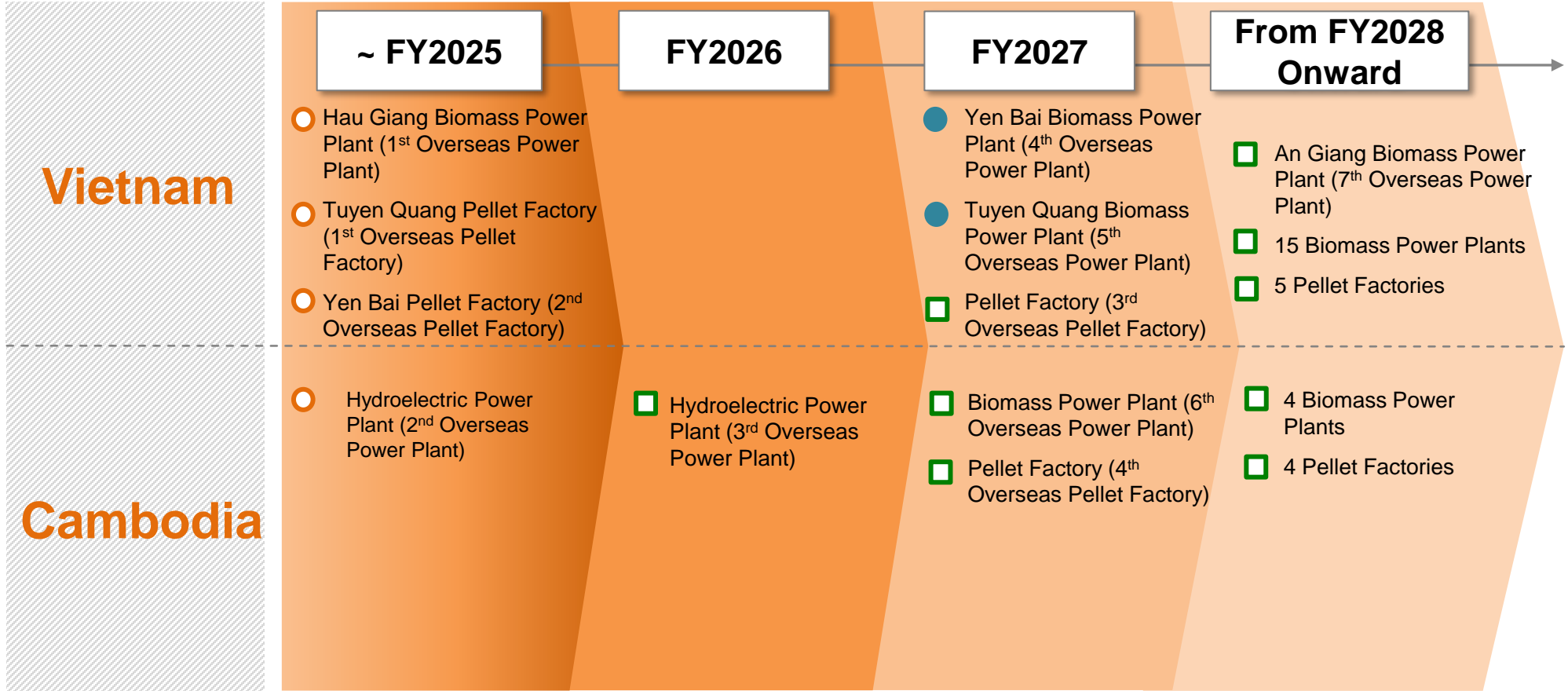
Upstream Tentative Deadline

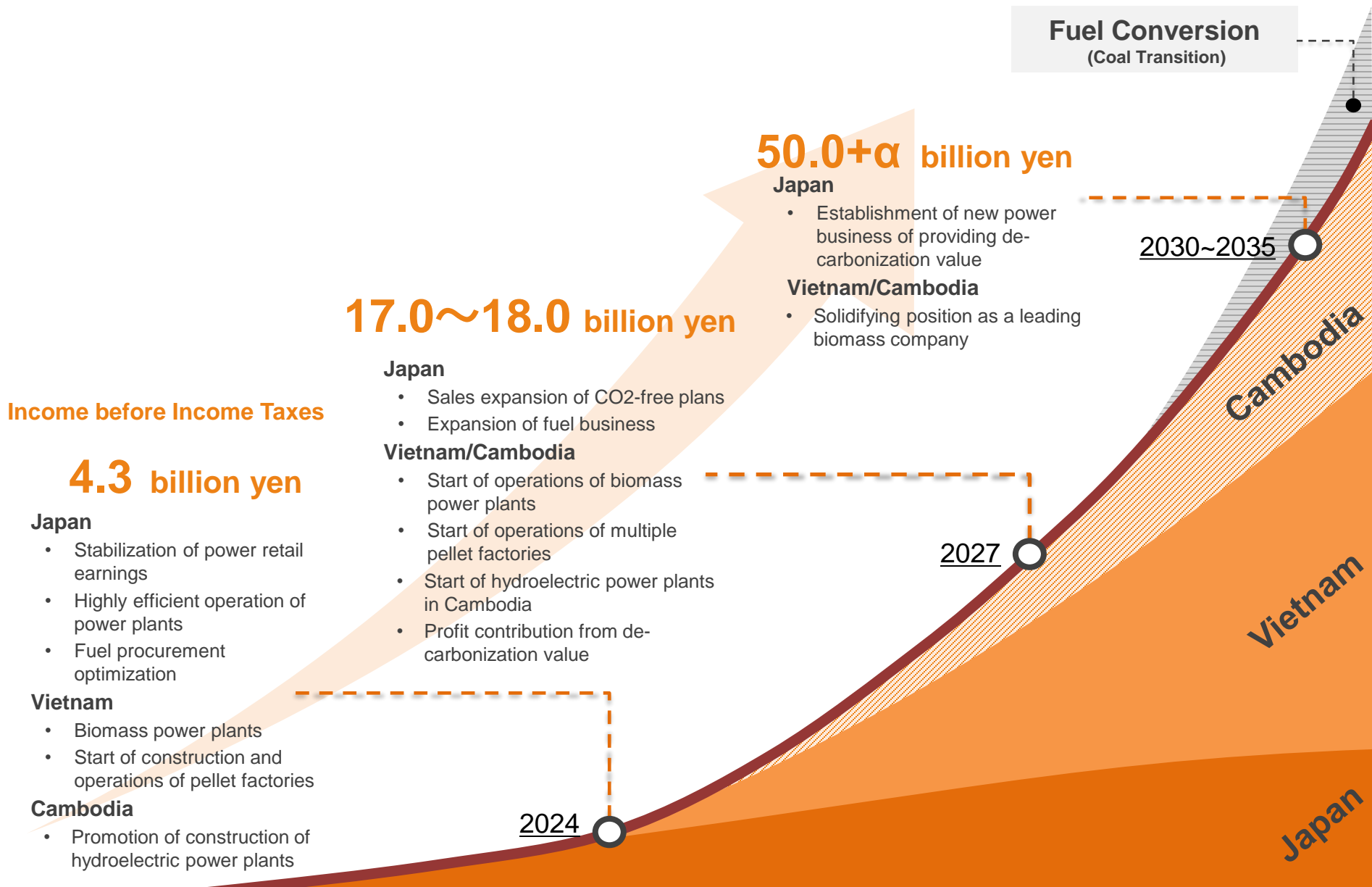




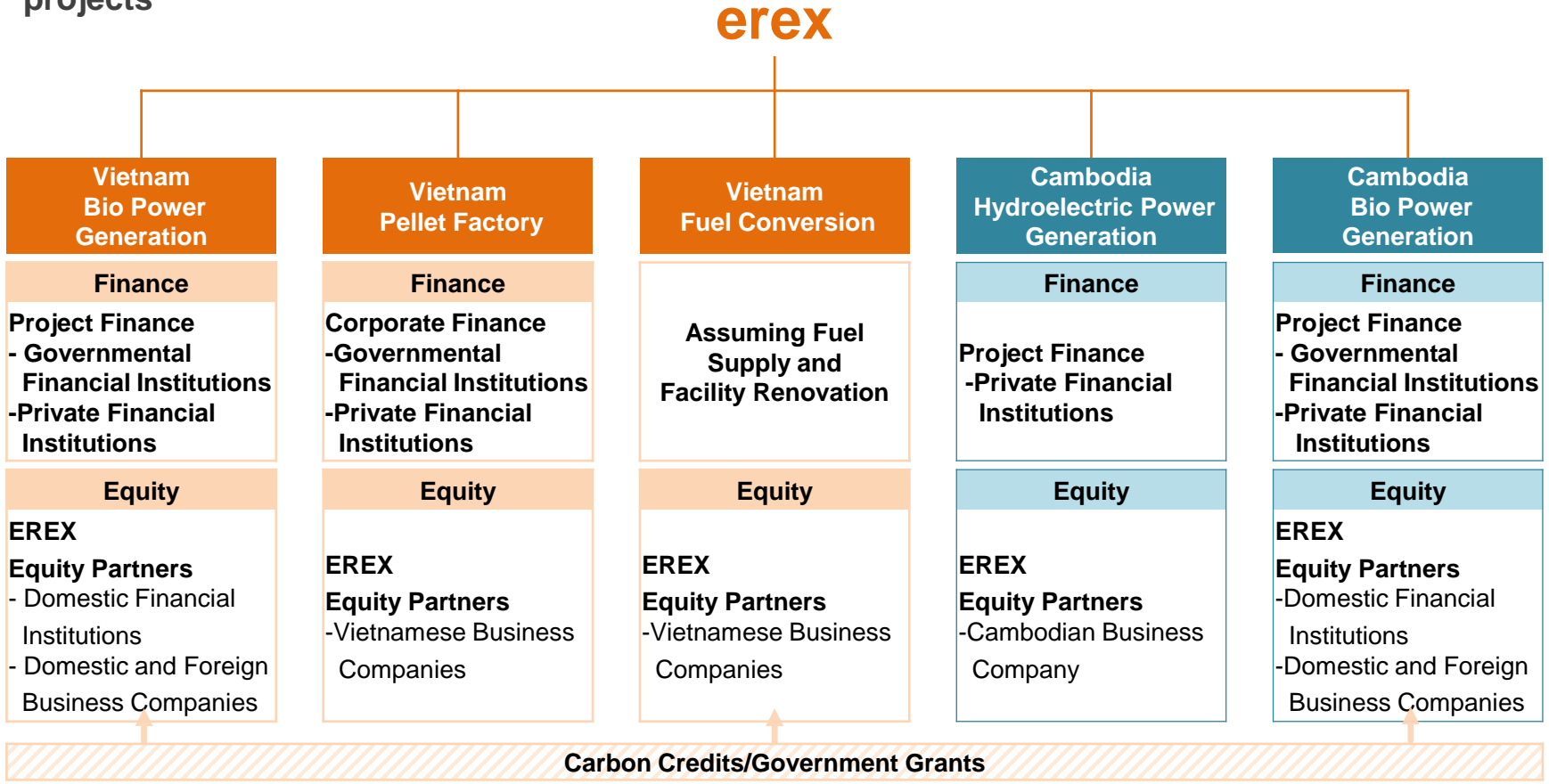
## Overseas business is progressing steadily toward early monetization, contributing to the expansion of basic earning power

○ Construction has already started    
 ● Investment decision has already been made    
 □ Pipeline Project





- erex Group plans to finance overseas power plants, pellet factories, etc. through PJ (Project Finance) and CP (Corporate Finance) from public financial institutions such as Japan Bank for International Cooperation and private financial institutions such as Sumitomo Mitsui Banking Corporation, depending on the type of project
- The equity portion is majority funded by erex Group. Discussions are underway with domestic and foreign business companies, domestic financial institutions, and other partners
- erex Group aims to maximize profitability through government subsidies and carbon credits for projects



## Strong Defence

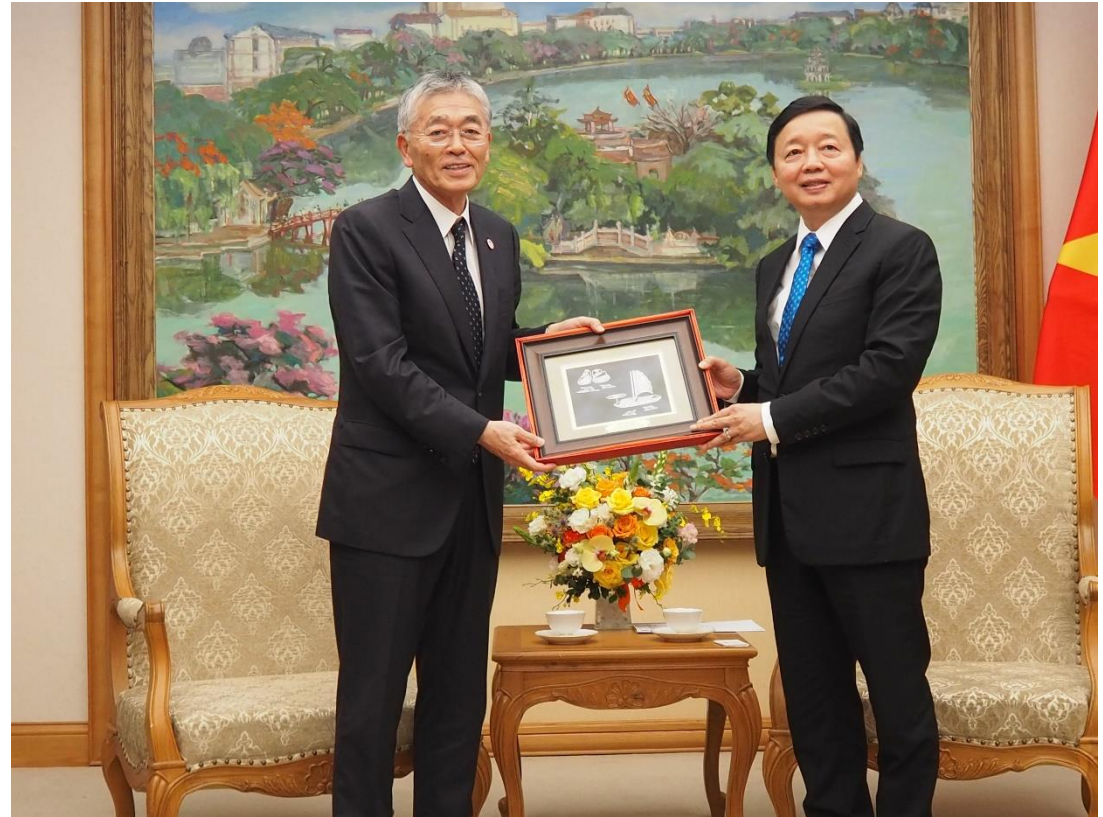
- **Current Financials of the Domestic Business**
  - ✓ Returned to profitability in the 1Q due to the elimination of loss factors in the previous period
  - ✓ 1Q retail results exceeded the plans, while the main factors for better-than-expected results are expected to continue
- **Domestic Growth Strategy**
  - ✓ Growth of power supply contracts through development of new rate plans, etc.
  - ✓ Expansion of aggregator, corporate PPAs, etc.
- **Fund Raising**
  - ✓ Capital increase through third-party allotment implemented in May

## Developments

- **Growth Strategy in Southeast Asia**
  - ✓ Stable supply of biomass/hydroelectric power, contributing to de-carbonization and increased employment/income
  - ✓ Promoting transition by biomass power generation to achieve both improvement of energy self-sufficiency and stable decarbonization power supply
  - ✓ Sales is expected to start to be recognized in December
- **Carbon Credit**
  - ✓ Bringing the value of de-carbonization in Southeast Asia to Japan
  - ✓ A major source of earnings in the mid/long term
- **Fund Raising**
  - ✓ Expansion of business with domestic and overseas partners
  - ✓ Overseas business is centered on project financing by government-affiliated financial institutions



Prime Minister Pham Minh Chinh  
In front of the Prime Minister's Office  
(May 5, 2023)



Meeting with Deputy Prime  
Minister Tran Hong Ha  
(May 5, 2023)



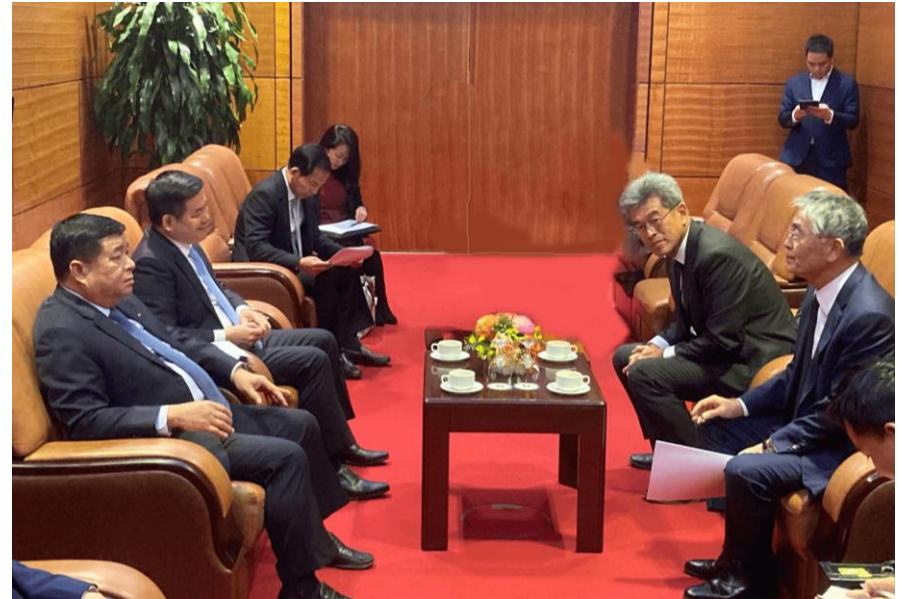


《December 13, 2022》

Hitoshi Honna, President of erex  
Pham Thi Thanh Tra, Minister of the Interior  
Signing Ceremony of Educational Support  
for Young Central and Local Government Bureaucrats  
and Female Bureaucrats in Vietnam

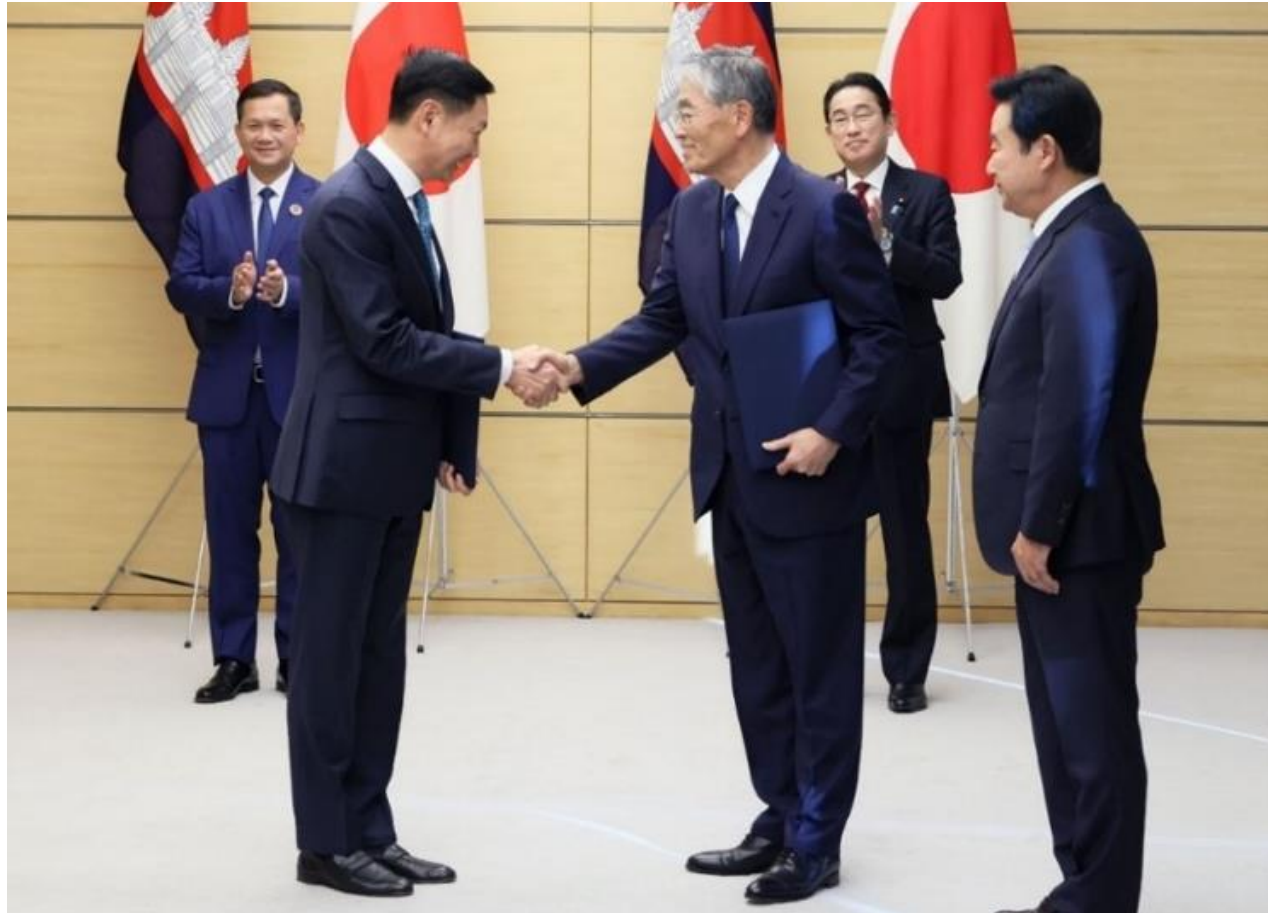


Currently 17 young, female Vietnamese bureaucrats are  
studying at Japanese educational institutions



《December 14, 2022》

[Back] Minister of Planning and Investment, Nguyen Chi Dung,  
[Front] Minister of Commerce and Industry, Nguyen Hong Dien,  
Hitoshi Honna, President of erex, Discussions on PDP8



The Exchange of Documents Ceremony of the MOU  
(Memorandum of Understanding) Held in the Presence of  
Prime Minister Kishida and Prime Minister Hun Manet

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