



Thai Solar Energy Public Company Limited



# OPPORTUNITY DAY

## Q3 2023

NOV 22, 2023



# DISCLAIMER

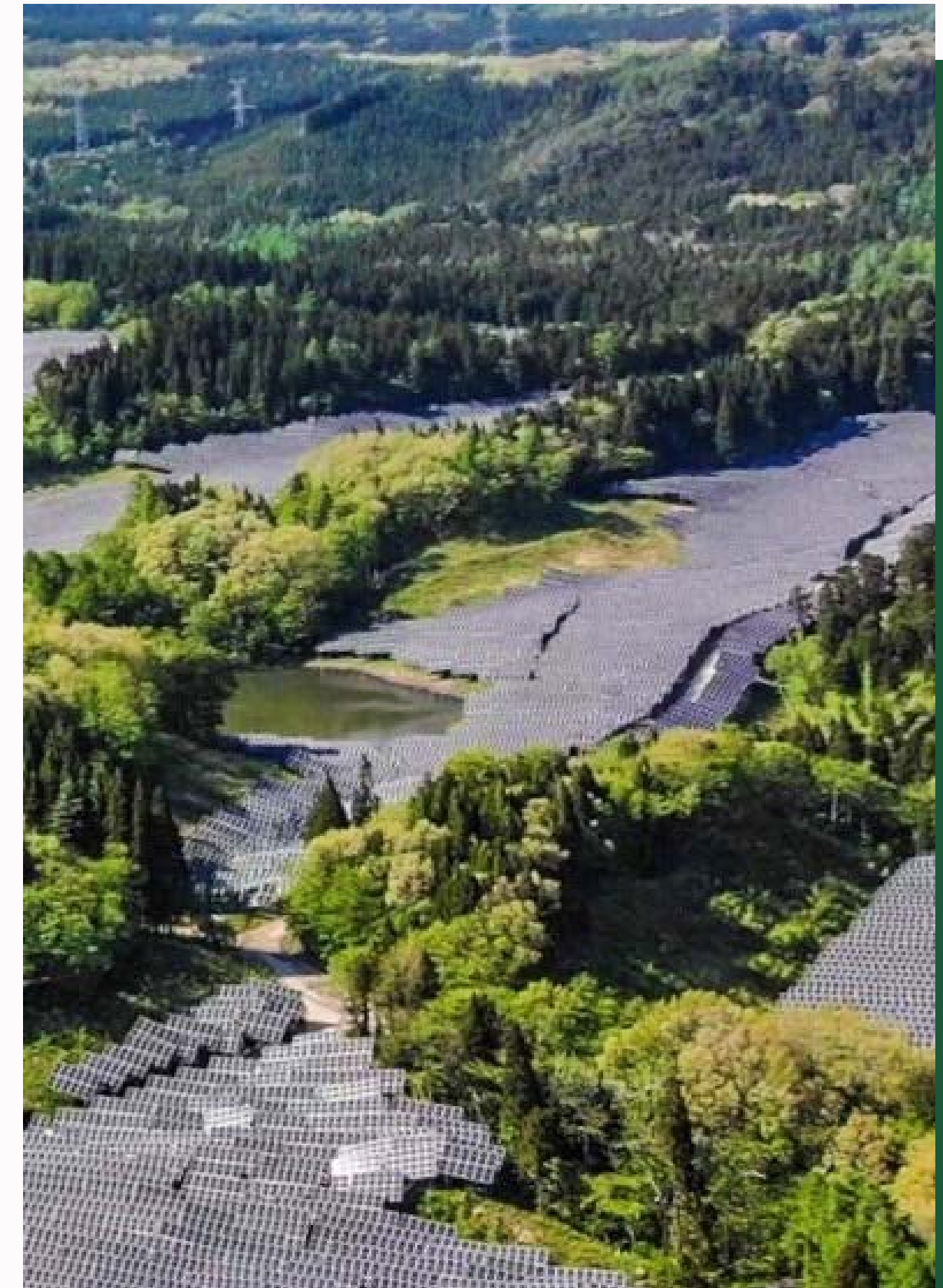
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# AGENDA

- 01 Company Overview
- 02 Financial Highlights of Q3 2023
- 03 Business Outlook
- 04 Q&A




# COMPANY OVERVIEW

Summary of Corporate Information

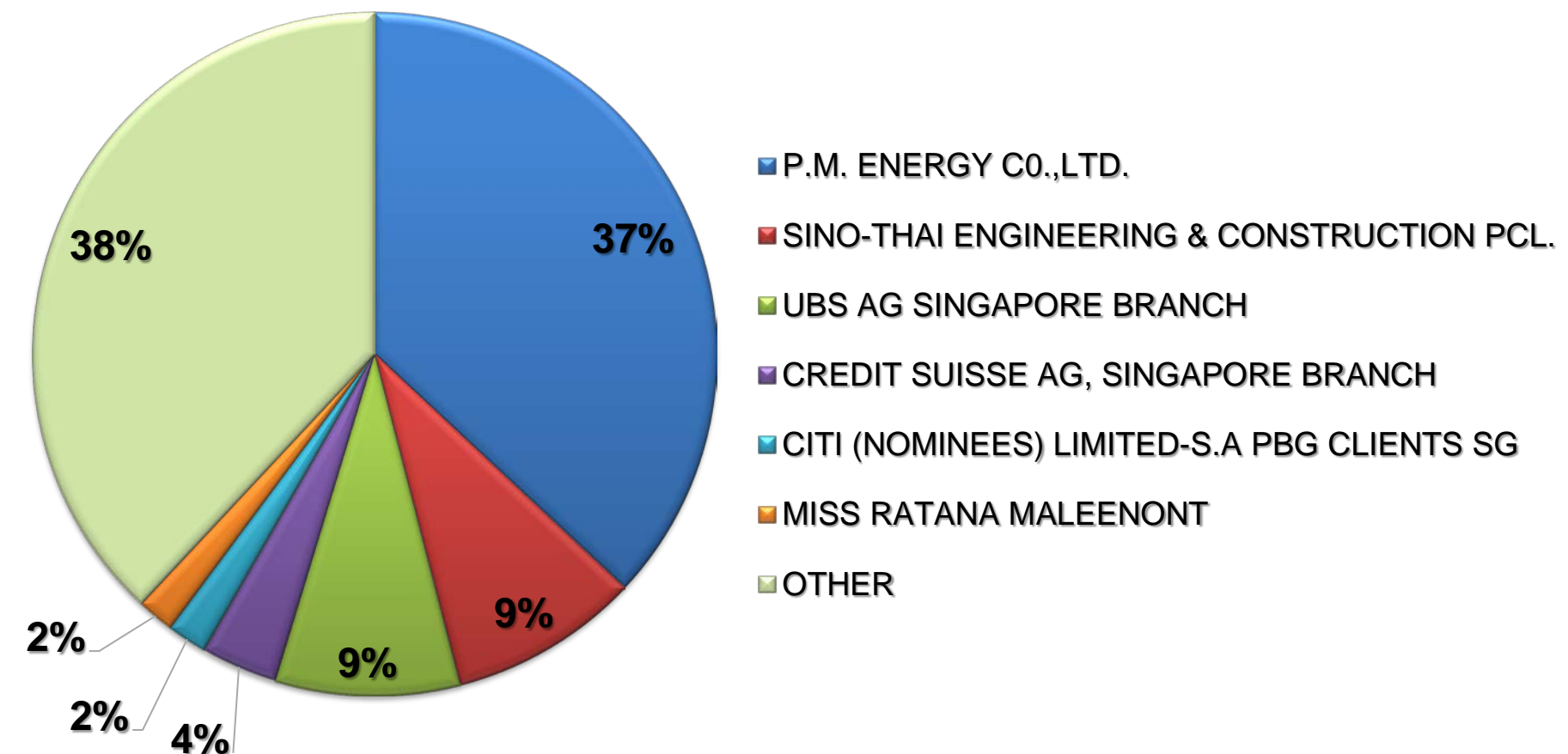
# COMPANY OVERVIEW

Thai Solar Energy Public Company Limited (“TSE”) was established in 2008 with a mission to establish a solid footprint in Thailand in the solar power industry and expand into other renewable energies as well as developing an international solar power business focusing in Asia and Oceania regions.

## Stock Information

<b>Company:</b>	Thai Solar Energy Public Company Limited
<b>SET Symbol:</b>	TSE
<b>Listed in:</b>	<b>MAI</b> on October 30, 2014 Moved to <b>SET</b> since May 14, 2019
<b>Paid up Capital:</b>	THB 2,117 million
<b>Sector:</b>	Energy & Utilities
<b>Industry:</b>	Resources
<b>CG Score:</b>	
<b>Credit Rating:</b>	BBB- stable

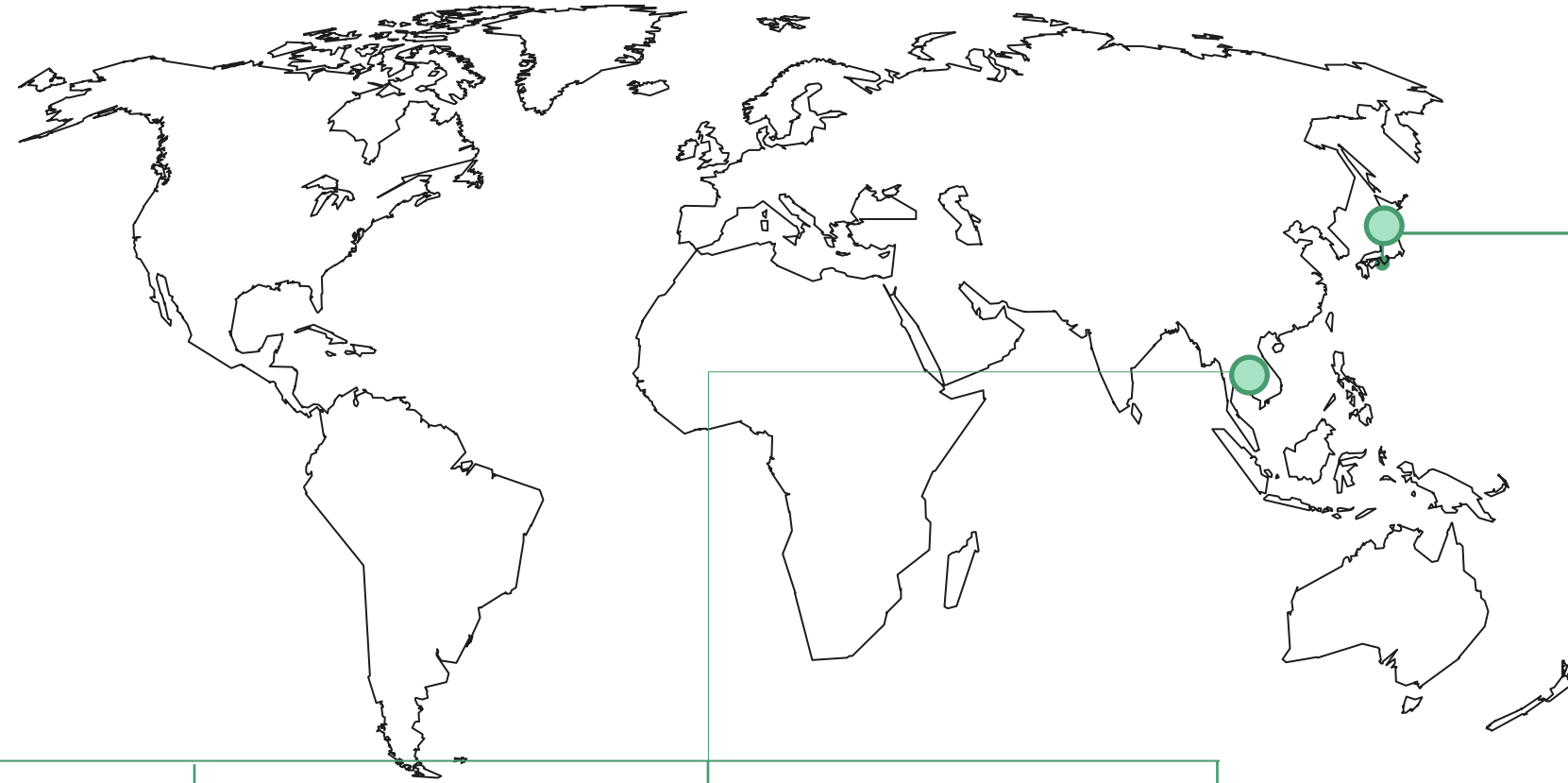
## Major Shareholders as of 25 May 2023








# CORE BUSINESS

We generate and distribute electricity from solar power and biomass to government and private company in Thailand and Japan.

**TOTAL CAPACITY 374.86 MWac**





Solar PV Farms in TH	Solar PV Rooftops	Biomass	Awarded New PPA Solar PV Farms in TH	Solar PV Farm in JP
109 MWac – 16 Farms 8 MWac – 1 Floating	14 MWac – 14 Rooftops	22.2 MWac – 3 Plants	88.66 MWac – 7 Farms	133 MWac – 1 Farm
				

# MILESTONES

## 2008 – 2014



### Solar Farms & Solar Rooftops (TH)

- 2008:** > Established TSE 
- 2011:** > Majority owned by Dr. Cathleen Maleenont  
> COD a Solar Thermal (4.5 MW)
- 2013:** > COD 5 TH Solar PV projects (40 MW) / Partnership with GPSC (TSE 60%)
- 2014:** > **Listed in MAI on OCT 30, 2014**   
> COD 5 TH Solar PV projects (40 MW) / Partnership with GPSC (TSE 60%)  
> COD 5 Solar Rooftop projects (5 MW)



## 2015 – 2017


### Solar Farms (JP) & Biomass (TH)

- 2015:** > **Expanded TSE's business operation in Japan**   
> COD a Solar PV JP project (0.5 MW)  
> COD 9 Solar Rooftop projects (9 MW)
- 2016:** > COD a Solar PV "SLC" project (1 MW)  
> COD 4 JP Solar PV projects (6.5 MW)  
> **Invested in 3 Biomass projects**
- 2017:** > **Mega project in Japan "Onikoube" (147 MWp)** 



## 2018 – 2019

### Merger & Acquisition

- 2018:** > COD Biomass 3 projects (22.2 MW)  
> COD a JP Solar PV project "Jyoso" (1.25 MW)  
> **Acquired a new project "INS" in Ang Thong province (2.0 MW) in Oct 2018**
- 2019:** > COD Solar PV JP: Hanamizuki (13.5 MW)  
> Fully Operate Biomass 3 projects (22.2 MW)  
> **Moved to SET on May 14, 2015**   
> Capital Increase to 2,117.7 MB. completely in Oct 2019.  
*Note: TSR 212 million shares Total 530 MB.*  
> **Acquired 3 new projects:**
  1. "BSS" in Ayutthaya province (5 MW) in Mar 2019
  2. "BSE" in Udonthani province (5 MW) in Aug 2019
  3. "SSP" in Ang Thong province (8 MW) in Nov 2019

## 2020 – 2021

### Private PPA

- 2020:** > Start mega project "Onikoube" Construction and receive project loan from BBL  
> **Invested in a Floating Solar PV farm project in Prachinburi province (8.0 MW) in Jun 2020**  
> Acquired: "EES" in Krabi province (5.0 MW) in Jul 2020  
> Disposed: "BSE" in Udonthani province (5.0 MW) in Sep 2020
- 2021:** > **COD Floating Solar PV project (8 MWp) since May 25, 2021**  
> Disposed investment in 6 small Solar Farms in Japan (totaling 8.24 MW) in Sep 2021



## 2022 – Onward

### Exploring Investment Opportunity overseas Expanding Private PPA

- 2022:** > Divested in a solar farm "Hanamizuki" 13.5 MW in Japan in Mar 2022  
> **Acquired a new project "SCT" Solar Tracking in Nakhonsawan province (8.0 MW) in Jun 2022.** The acquisition process was completed in Jul 2022
- 2023:** > Signed acceptance conditions of the Procurement of Electricity generated from Renewable Sources under the Feed-in Tariff (FiT) Scheme 2022 - 2030 for Power Plants with no Fuel Costs in 2022  
> **COD "Onikoube" project (147 MWp) since 10 May 2023**



# FINANCIAL HIGHLIGHTS OF Q3 2023

Summary of TSE's Financial Performance

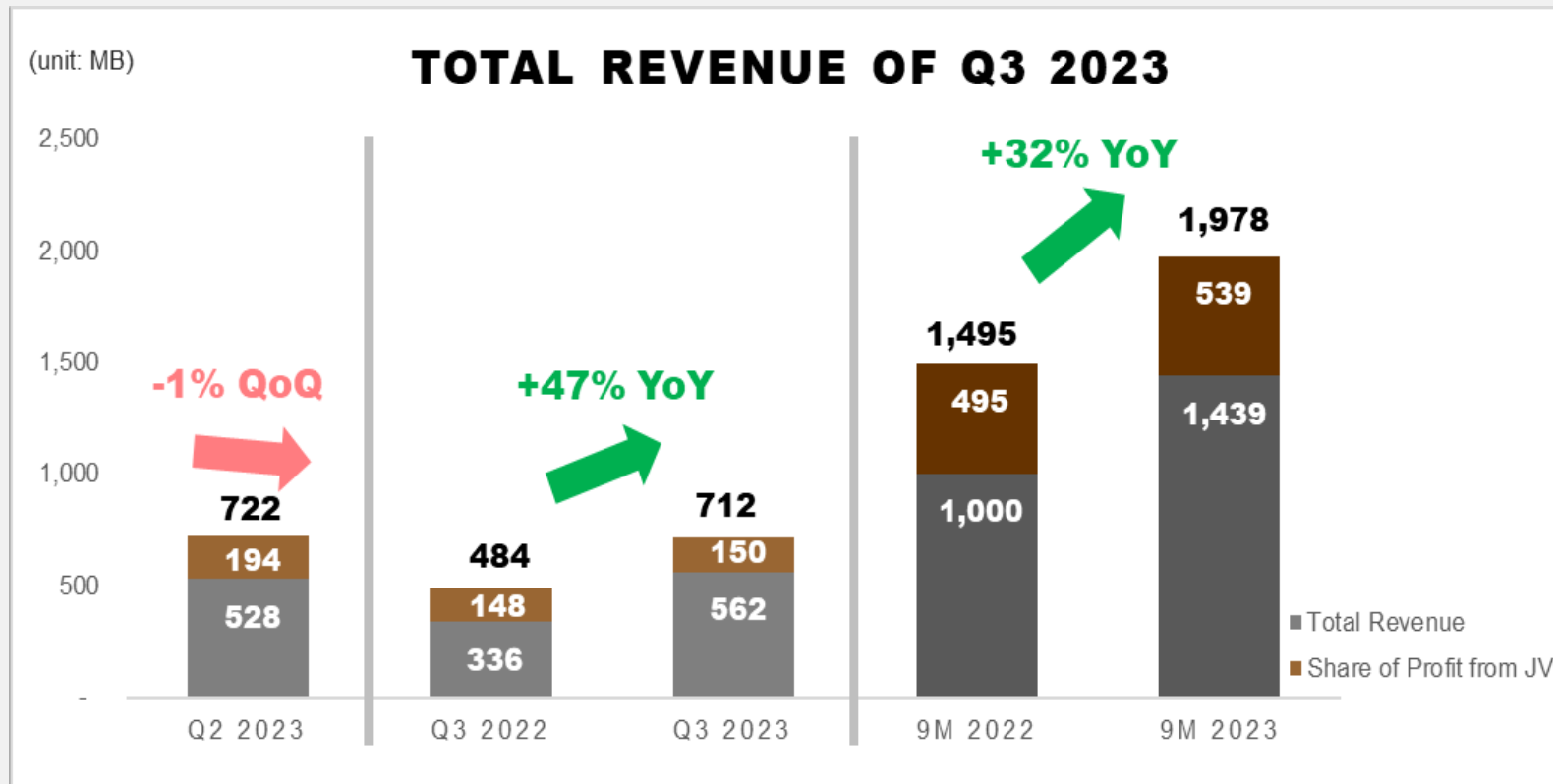


# INCOME STATEMENT

Unit: MB

TSE - Consolidated	Q3/2023	Q3/2022	%Change	9M/2023	9M/2022	%Change
<b>Revenue</b>						
Electricity sales	543.6	318.2	70.8%	1,342.8	956.5	40.4%
Management fee	15.8	14.6	7.8%	45.7	40.6	12.5%
<b>Total revenue</b>	<b>559.4</b>	<b>332.9</b>	<b>68.0%</b>	<b>1,388.5</b>	<b>997.1</b>	<b>39.3%</b>
COGS	(326.3)	(216.8)	50.5%	(831.8)	(663.5)	25.4%
<b>Gross Profit</b>	<b>233.1</b>	<b>116.0</b>	<b>100.8%</b>	<b>556.7</b>	<b>333.6</b>	<b>66.9%</b>
Other Income	2.5	3.0	-15.9%	45.2	6.1	638.5%
Administrative Expense	(55.4)	(42.8)	29.3%	(270.3)	(163.2)	65.6%
Gain (loss) on Exchange Rate	(0.6)	(22.4)	97.1%	57.8	(36.5)	258.4%
Other gains (losses)	(52.2)	-	-100.0%	(52.2)	234.4	-122.2%
<b>Profit (loss) before Interest and Income tax</b>	<b>127.4</b>	<b>53.8</b>	<b>136.8%</b>	<b>337.2</b>	<b>374.4</b>	<b>-10.0%</b>
Interest expenses	(148.0)	(78.5)	88.5%	(349.0)	(230.6)	51.3%
<b>Profit (loss) before Income tax</b>	<b>(20.6)</b>	<b>(24.7)</b>	<b>16.8%</b>	<b>(11.9)</b>	<b>143.9</b>	<b>-108.3%</b>
Share of Profit from Investment in Joint Venture	150.4	148.4	1.4%	539.2	495.1	8.9%
Income tax expenses	(9.2)	(2.2)	318.2%	(21.2)	(7.9)	167.6%
<b>Net Profit for the period</b>	<b>120.6</b>	<b>121.5</b>	<b>-0.7%</b>	<b>506.1</b>	<b>631.1</b>	<b>-19.8%</b>
Extraordinary items	52.2	-	100.0%	167.7	(234.4)	171.5%
<b>Net Profit from Normal Operation for the period</b>	<b>172.8</b>	<b>121.5</b>	<b>42.2%</b>	<b>673.8</b>	<b>396.6</b>	<b>69.9%</b>

# TOTAL REVENUE AND EBITDA

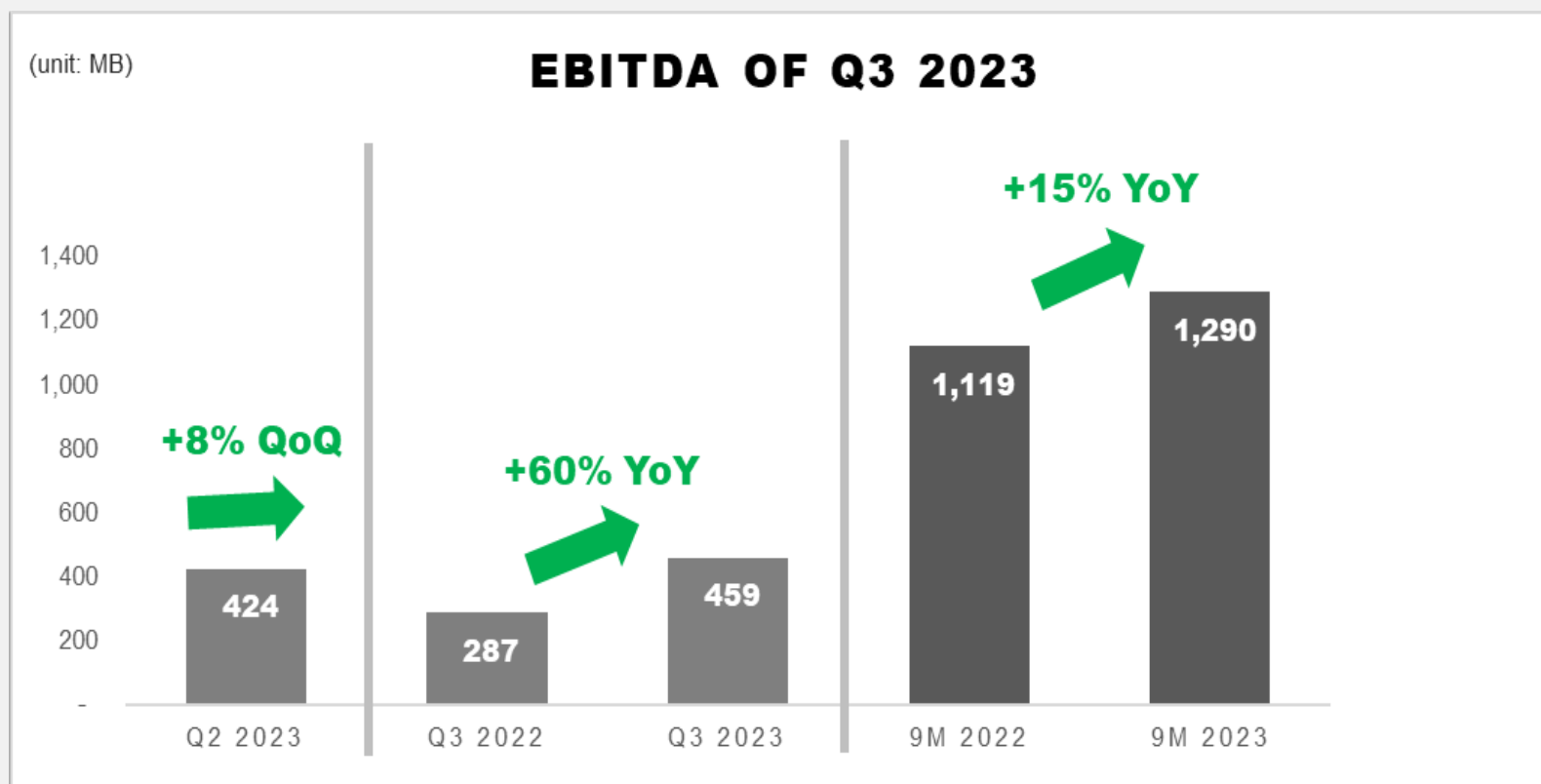


## TOTAL REVENUE

The group's generated total revenue including share of profit from JV of Q3/2023 increased to 712 MB or +47% YoY but slightly decreased 1% QoQ. In the same time, our total revenue including share of profit from JV of 9M/2023 increased to 1,978 MB or 32% YoY.

The group's total revenue mainly increased from the commercial operation commencement of solar farm project in Japan, the Onikoube project, with selling capacity of 133 MW (the project was COD in May 2023), and from the increase in share of profit from investment in Joint Ventures, and from last year's increase of the Fuel Adjustment Charge (Ft).

a one-time fee expense related to the Onikoube project at the amount of 116 MB in Q2/2023

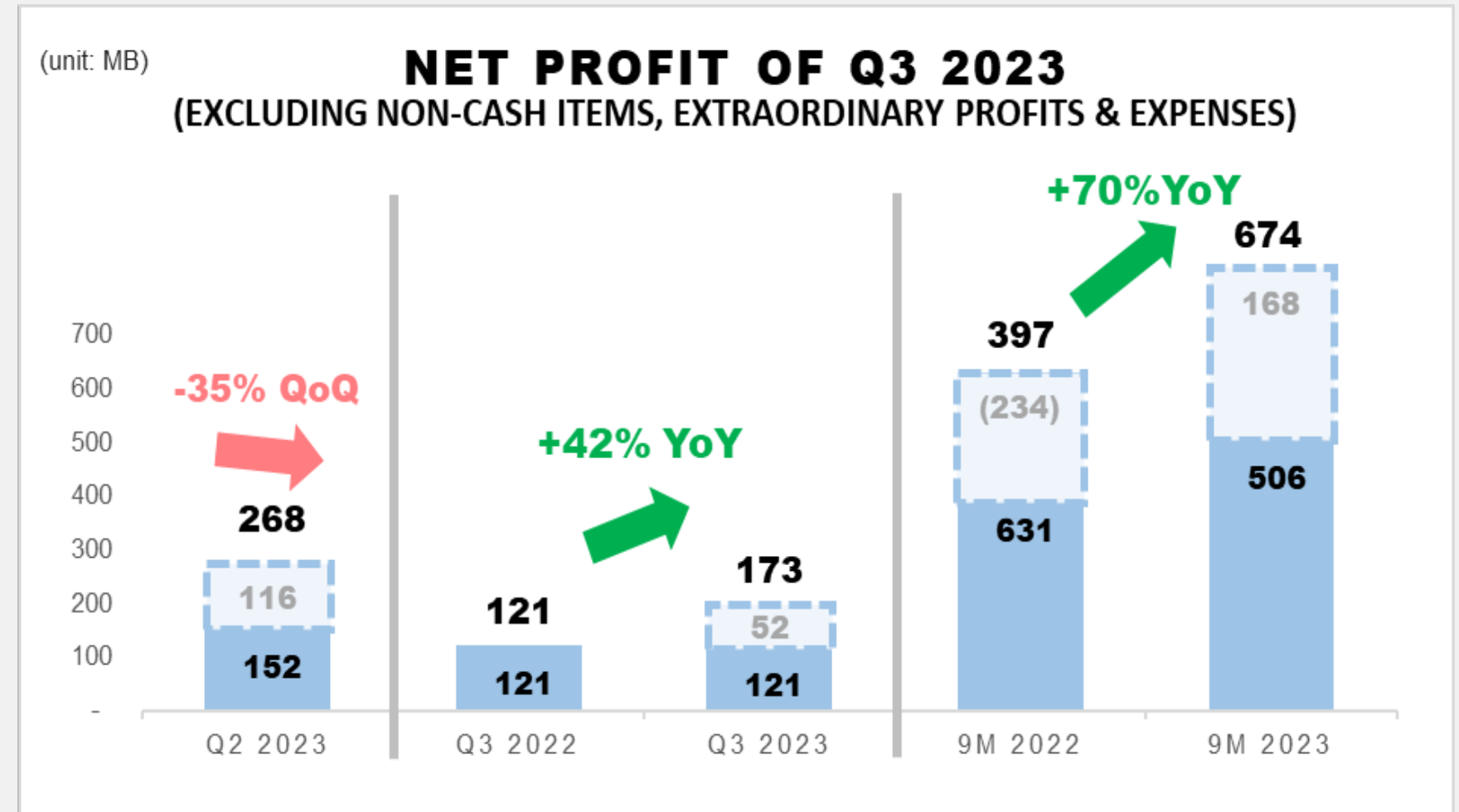
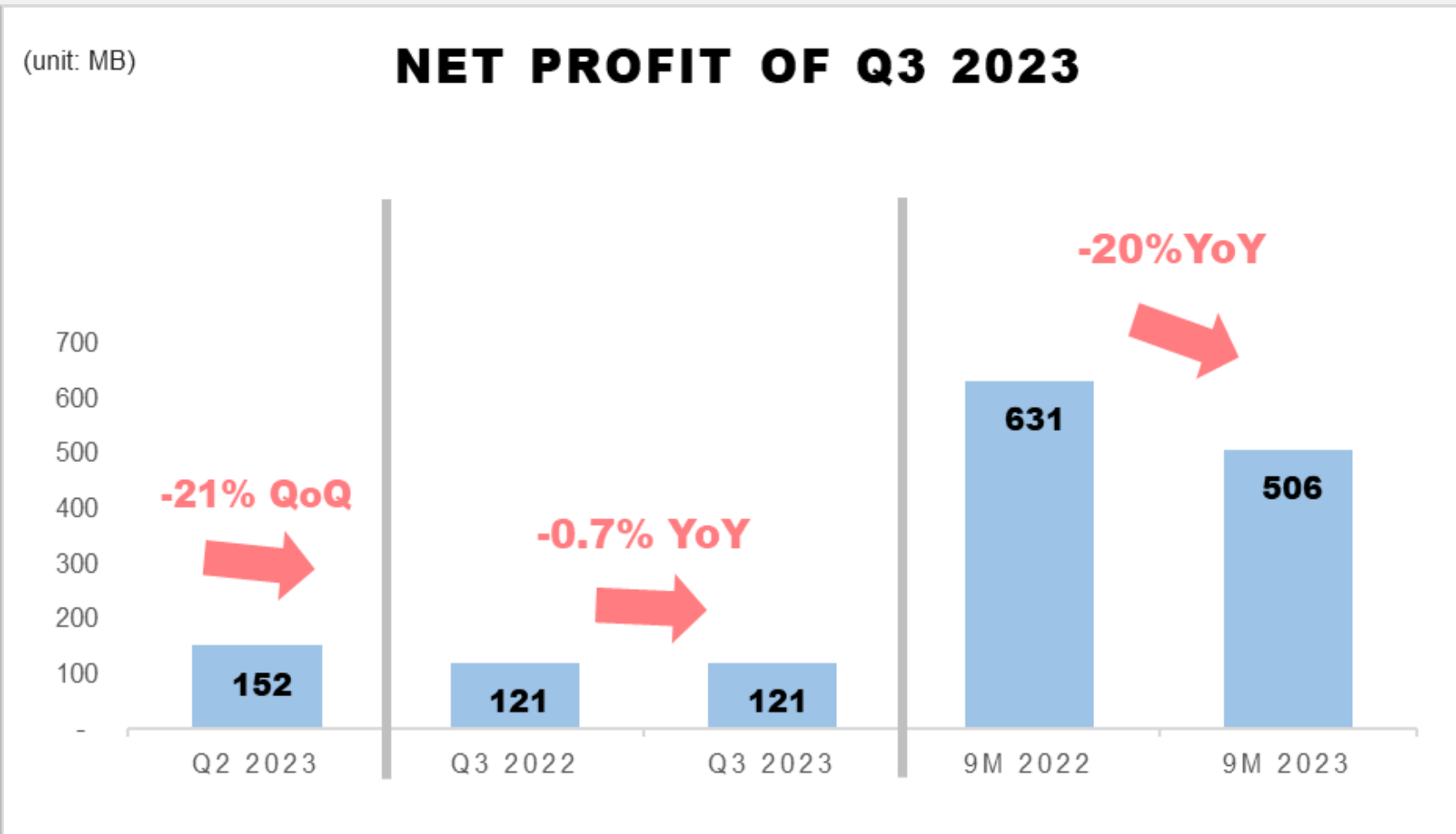


## EBITDA

EBITDA of Q3/2023 increased to 459 MB or +60% YoY and +8% QoQ. In the same time, EBITDA of 9M/2023 increased to 1,290 MB or +15% YoY.

Although, there was extraordinary items as follows: 1) a non-cash item, loss on disposal and write-off of equipment, amounted to 52 MB in Q3/2023, 2) a one-time fee expense related to the Onikoube project at the amount of 116 MB in Q2/2023 and 3) a one-time recognition of extraordinary profit from divestment solar farm in Japan at the amount of 234 MB in Q1/2022. The group's EBITDA was increased from 1) the increased total revenue, reflecting better operating performance as production capacity increases, 2) a continuous cost reduction drive in the Group's biomass projects and 3) the Fuel Adjustment Charge (Ft) increase.

# NET PROFIT

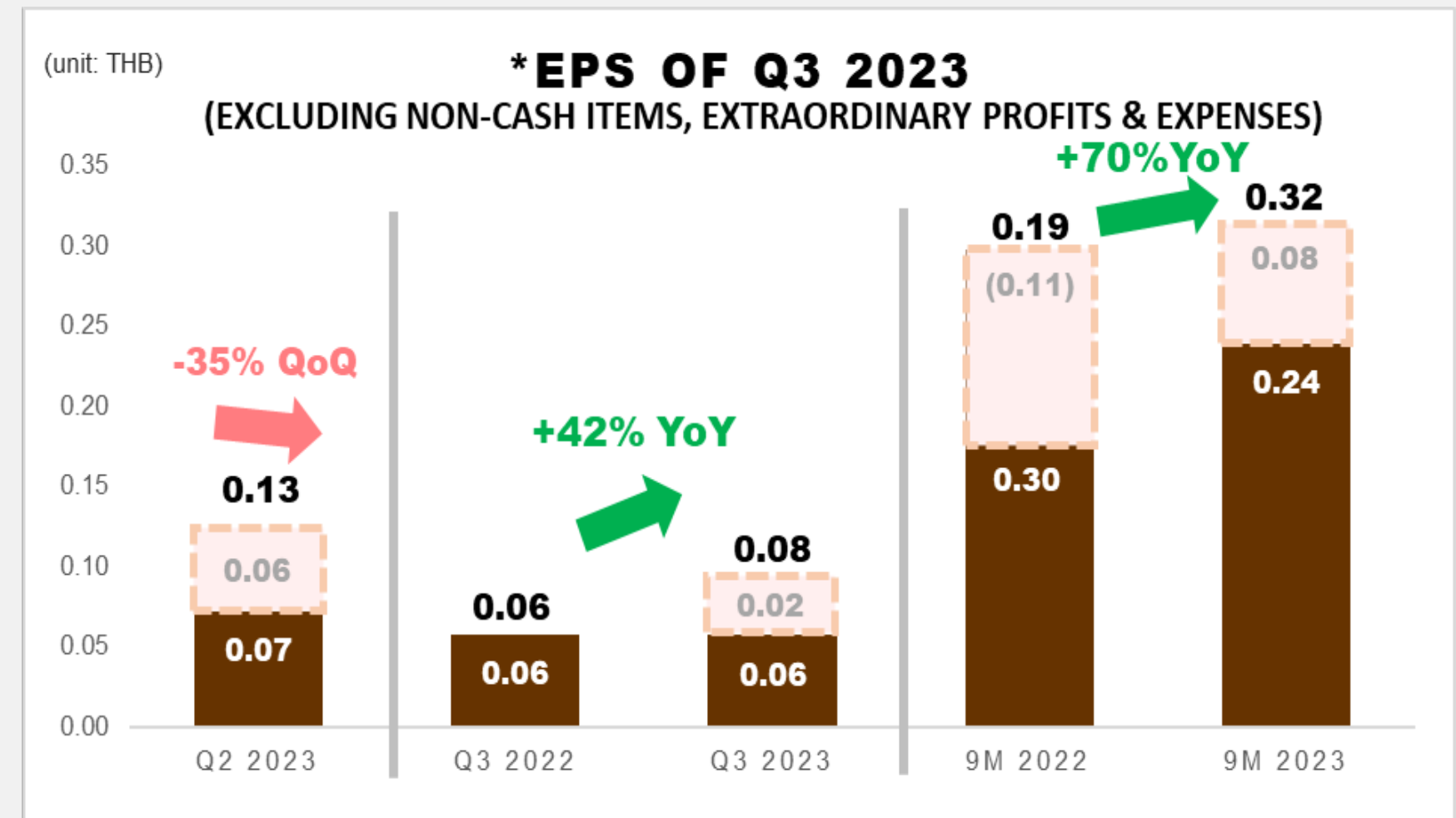
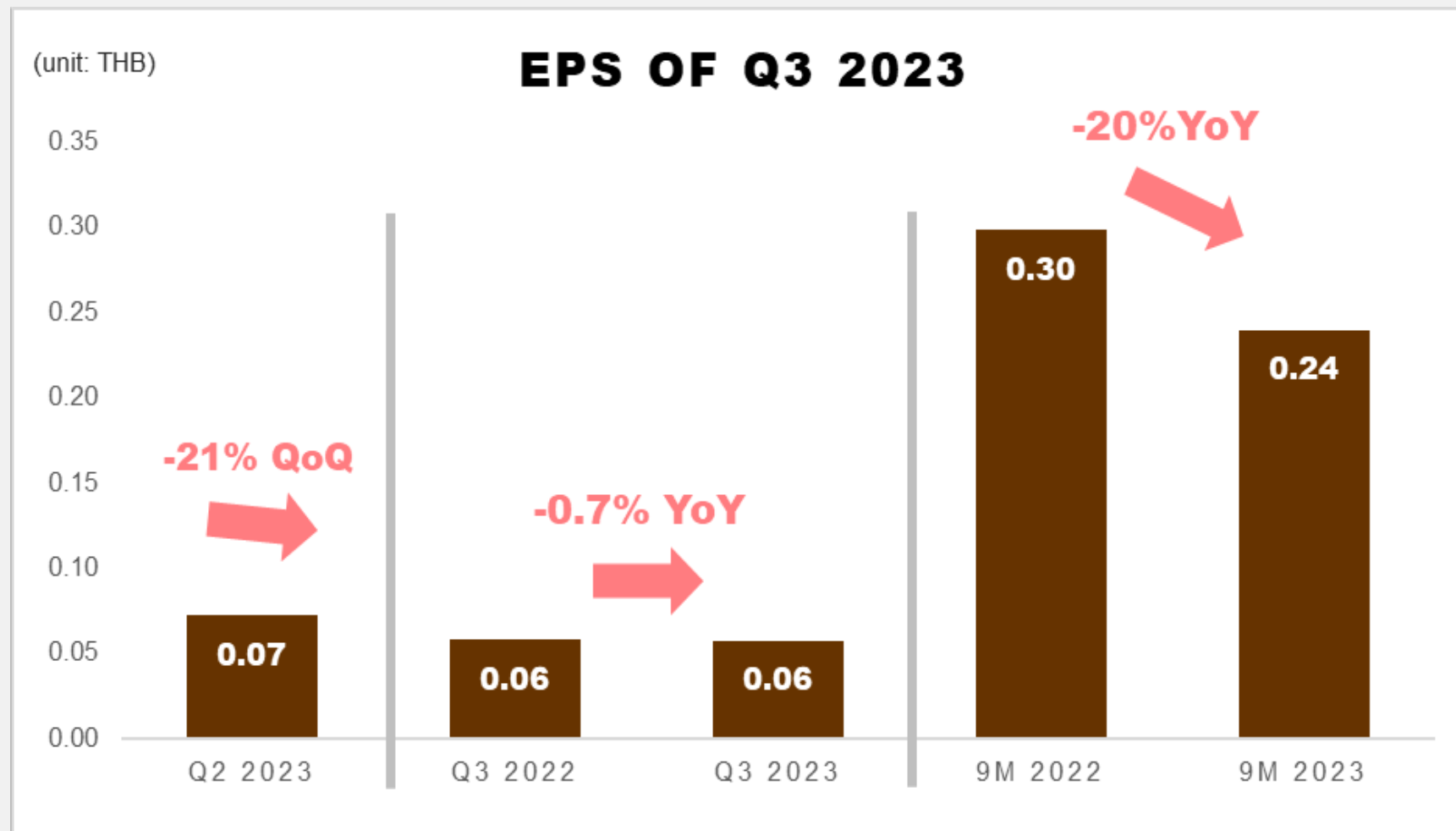


## NET PROFIT

Due to the non-cash loss on disposal and write-off of equipment at the amount of 52 MB, the one-time fee expense related to the Onikoube project at the amount of 116 MB in Q2/2023 and the increase of finance costs from the increase of interest rate since YE2022 (for a total increase of 1.25%) therefore the group's net profit of Q3/2023 slightly decreased to 121 MB or -0.7% YoY and -21% QoQ. Excluding the non-cash items and the one-time fee expenses, the group's profit of Q3/2023 would be 173 MB, an increase of 52 MB or +42% YoY and a decrease of 95 MB or -35% QoQ. The increase of the group's net profit from normal operation of Q3/2023 reflecting better operating performance as production capacity increases.

For 9M/2023, the net profit decreased to 506 MB or -20% YoY largely due to the one-time recognition of extraordinary profit from divestment solar farm in Japan at the amount of 234 MB in Q1/2022, the non-cash loss on disposal and write-off of equipment and the one-time fee expense related to the Onikoube project at the total amount of 168 MB and the increase of finance costs since YE2022. Excluding such non-cash items and the extraordinary profits & expenses, the group's profit of 9M/2022 would be 397 MB, an increase of 277 MB or +70% YoY. The increase of the group's net profit from normal operation of 9M/2023 also reflecting better operating performance as production capacity increases.

# EPS



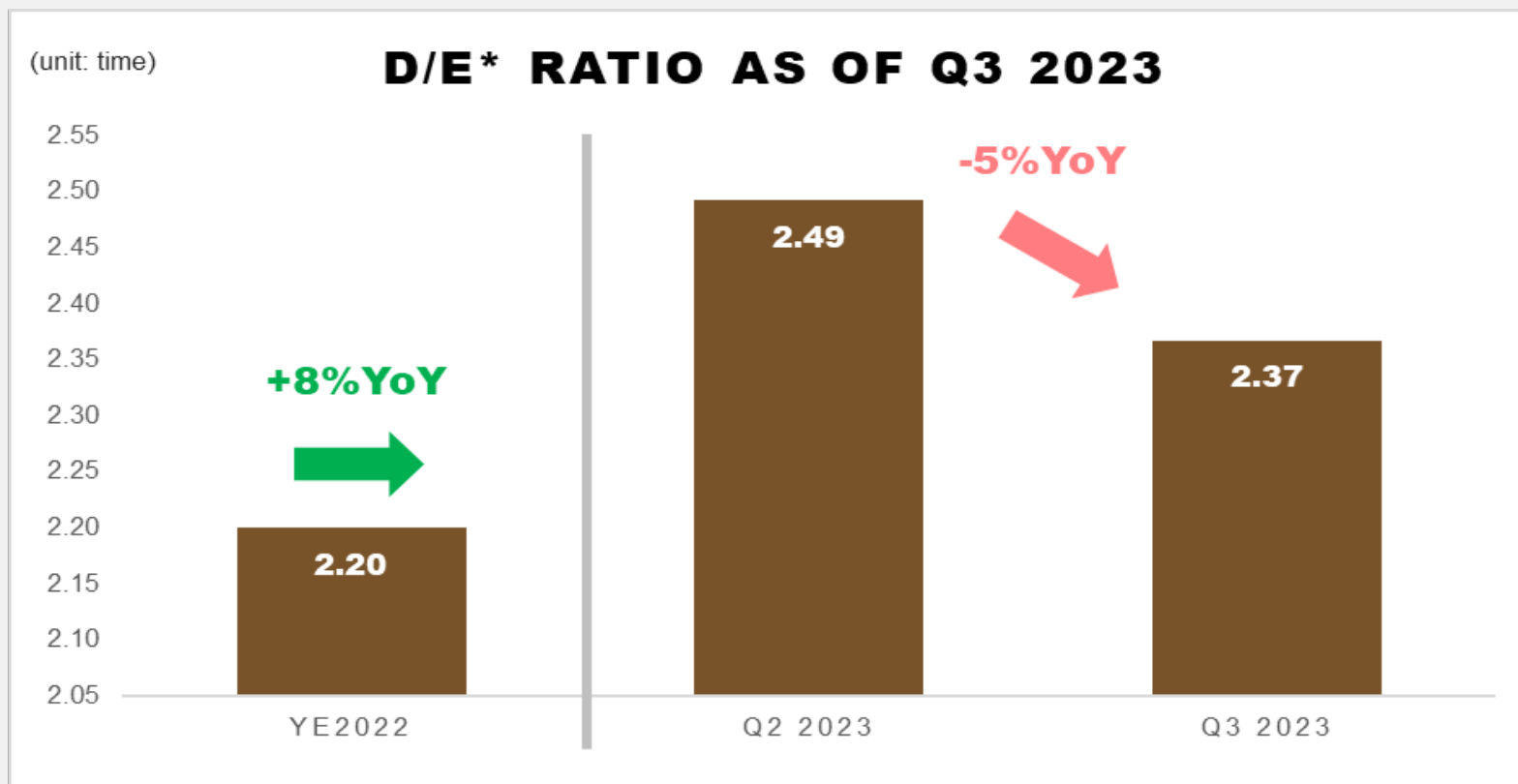
## EPS

The group's EPS of Q3/2023 and 9M/2023 decreased to 0.06 THB / share and 0.24 THB / share from last year respectively because of net profit reduction.

The reduction of net profit mainly due to the non-cash items and the extraordinary profits & expenses. Excluding such non-cash items and the extraordinary profits & expenses, the group's EPS of Q3/2023 and 9M/2022 would increase to 0.08 THB / share and 0.32 THB / share from last year respectively.

However, the group's net profit from normal operation of Q3/2023 was increased about 42% YoY and for 9M/2023 was increased about 70% YoY.

# D/E RATIO AND ROE

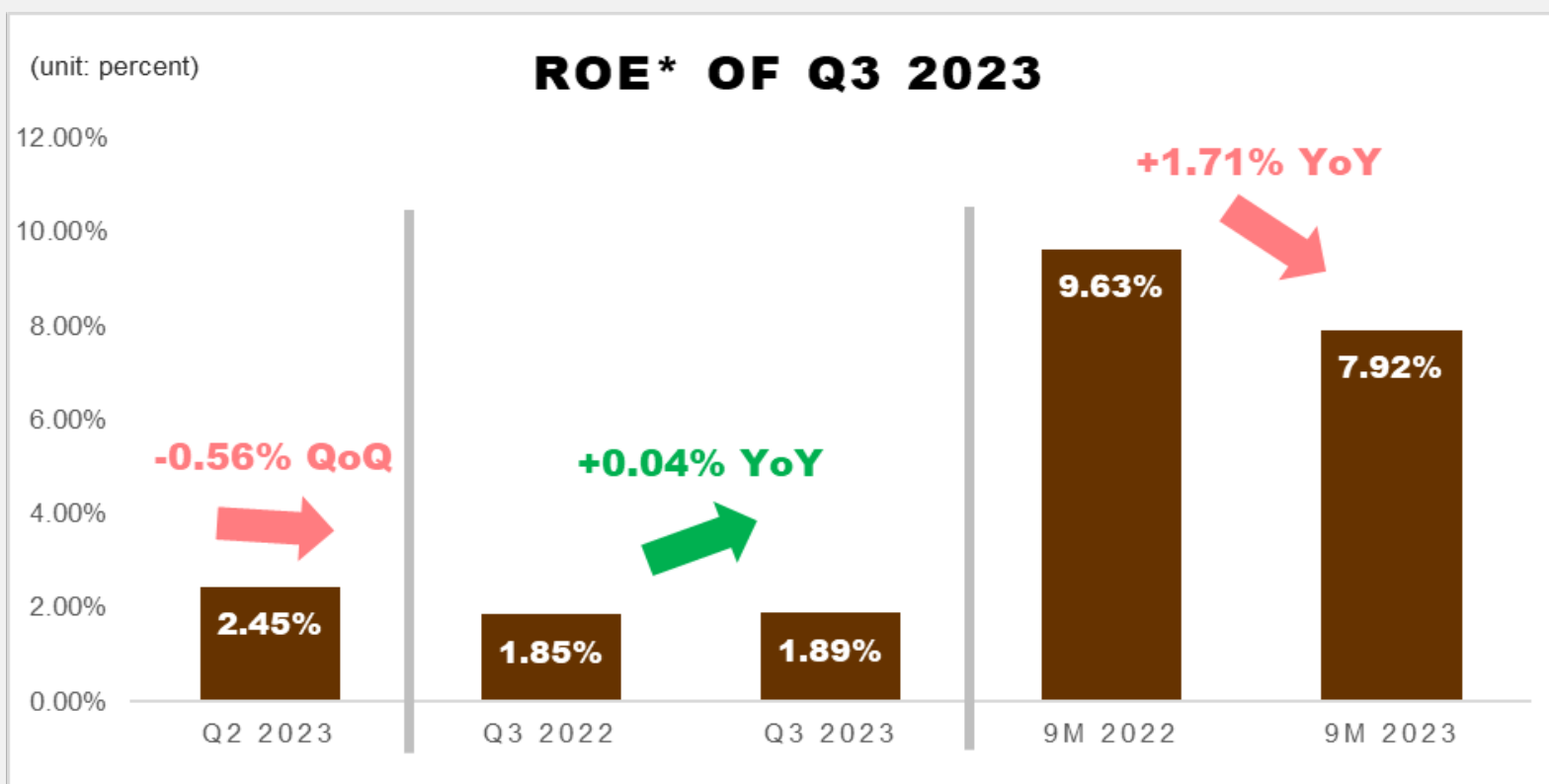


## D/E RATIO

The group's D/E ratio at the end of Q3/2023 increased to 2.37 times or +8% as compared to YE2022 because there was a recognition of long-term liabilities to support our Japan's PV farm, Onikoube, since Q2/2023 and the group's has paid dividends in Q2/2023.

But the group's D/E ratio at the end of Q3/2023 decreased to 2.37 times or -5% as compared to the end of Q2/2023 because of repayment in short-term borrowings from financial institutions and increase of retained earnings.

Note: - Equity is average equity attributable to owners of the parent



## ROE

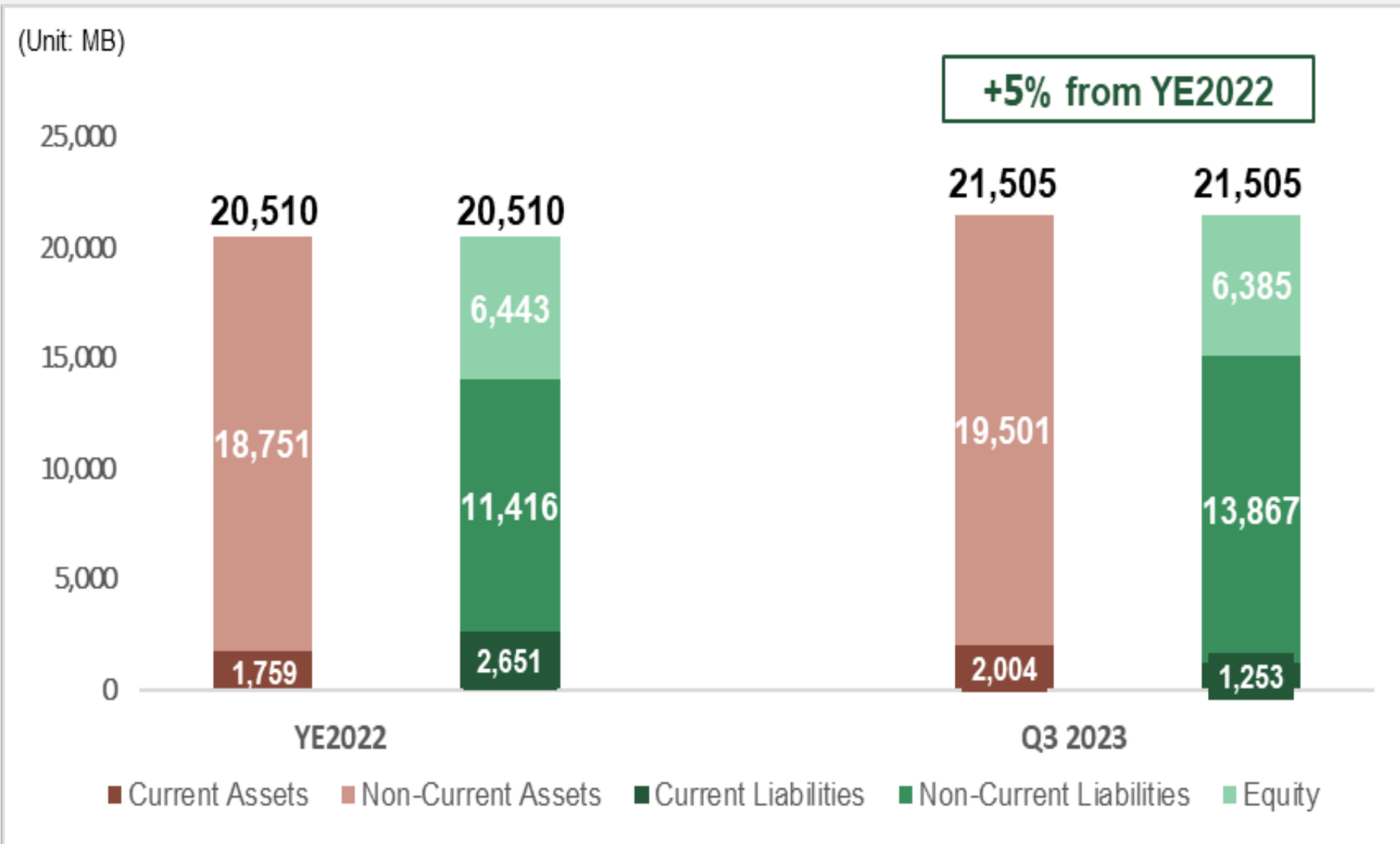
The group's ROE of Q3/2023 increased to 1.89% or +0.04% YoY and decreased -0.56% QoQ and for 9M/2023, the group's ROE decreased to 7.92% or -1.71% YoY because of net profit reduction.

The reduction of net profit was from the non-cash items and the extraordinary profits & expenses. Excluding such non-cash items and the extraordinary profits & expenses, the group's ROE of Q3/2023 and 9M/2022 would increase to 2.70% YoY and 10.54% YoY respectively.

However, the group's net profit from normal operation of Q3/2023 was increased about 42% YoY and for 9M/2023 was increased about 70% YoY.

Note: - Equity is average equity attributable to owners of the parent  
- ROE is annualized ROE

# FINANCIAL POSITION OF Q3 2023



In Q3 2023, overall operating performance for 3-month and 9-month (exclude non-cash item & extraordinary profit) was increased as compared to Q2 2023 mainly due to increase in new project PV farm, Onikoube and the Fuel Adjustment Charge (Ft) resulting in grew up in revenue

### TOTAL ASSETS +4.9%

The group's total assets were at THB 21,505 million, increasing by THB 995 million or 5% compared to THB 20,510 million of December 31, 2022 mainly due to increase in property, plant and equipment related to our Japan's PV farm, Onikoube.

### TOTAL LIABILITIES +7.5%

the group's total liabilities were at THB 15,120 million, increasing by THB 1,053 million or 7.5% compared to THB 14,067 million of December 31, 2022 resulting from increase in long-term borrowings to support our Japan's PV farm, Onikoube.

### EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT -2.6%

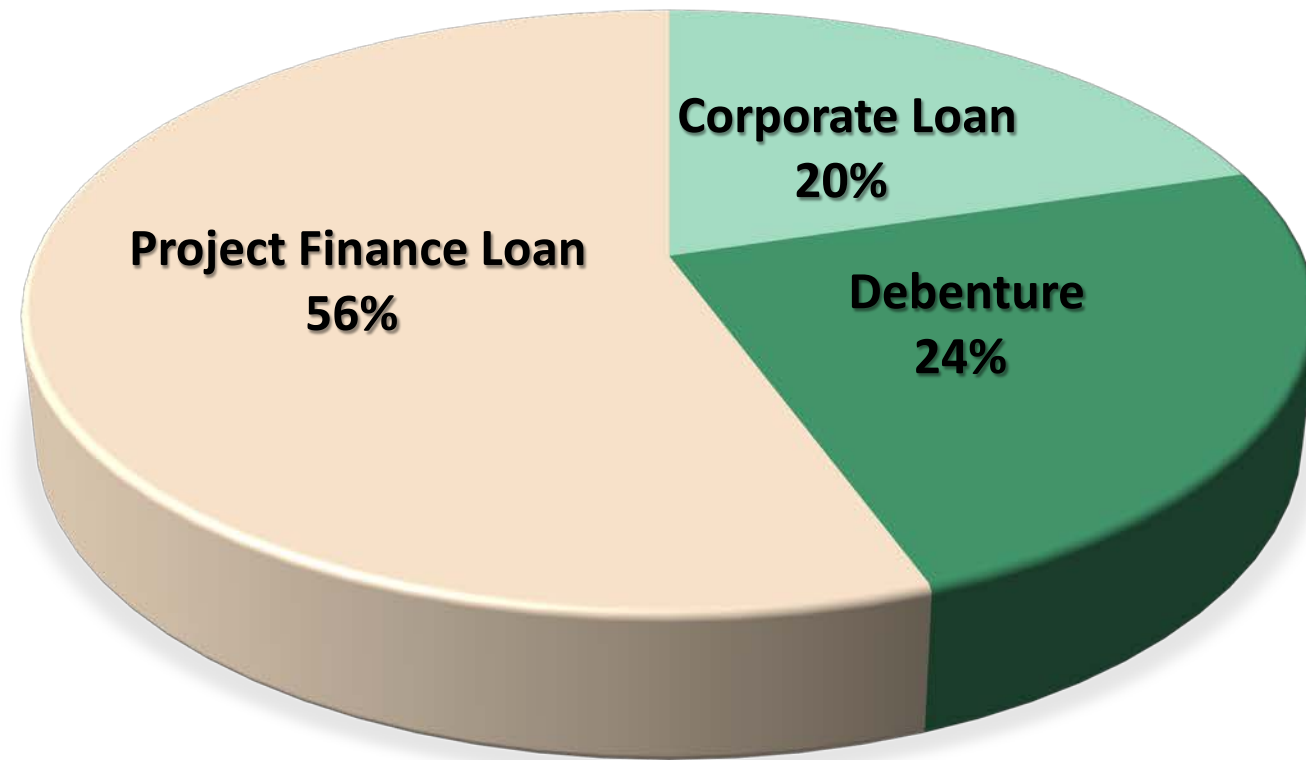
the group's total equity was at THB 6,385 million, decreasing by THB 58 million or 1% compared to THB 6,443 million of December 31, 2022 from a dividend payment in Q2/2023.

FINANCIAL POSITION	YE2022	Q3 2023	+/- (%)
Assets	20,510	21,505	+4.9%
Liabilities	14,067	15,120	+7.5%
Equities*	6,443	6,385	(0.9%)

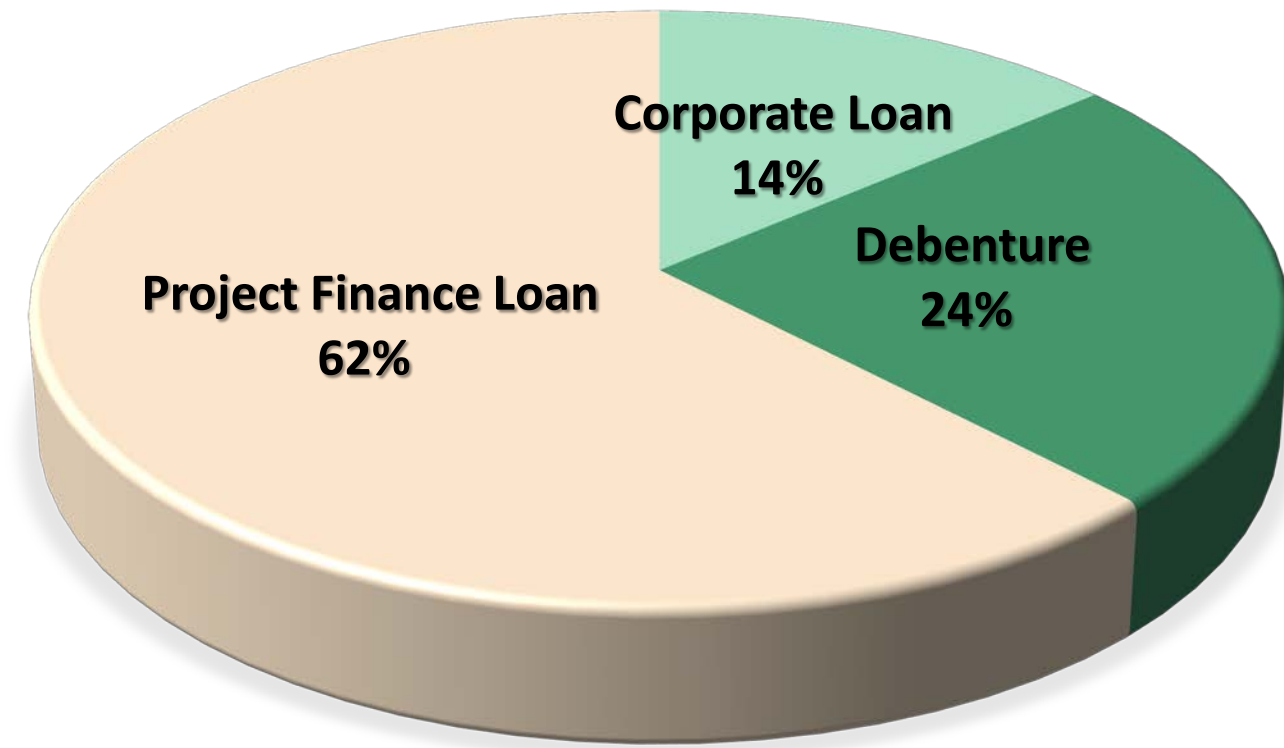
Note: \*Average Equity attributable to owners of the parent

# INTEREST BEARING DEBT

YE2022



Q3/2023



## INTEREST BEARING DEBT

Most of the group's Interest bearing debt (IBD) was from project finance loan, and the proportion of project finance loan to IBD of Q3/2023 increasing by 6% from 56% at the end of last year to 62% Because of an increase of Onikoube Project Finance Loan drawdown.

The remaining of interest bearing debt was from corporate loan and debenture, and the proportion of corporate loan and debenture to IBD of Q3/2023 decreasing by 6% from 44% at the end of last year to 38%. Because of an increase from schedule repayment.

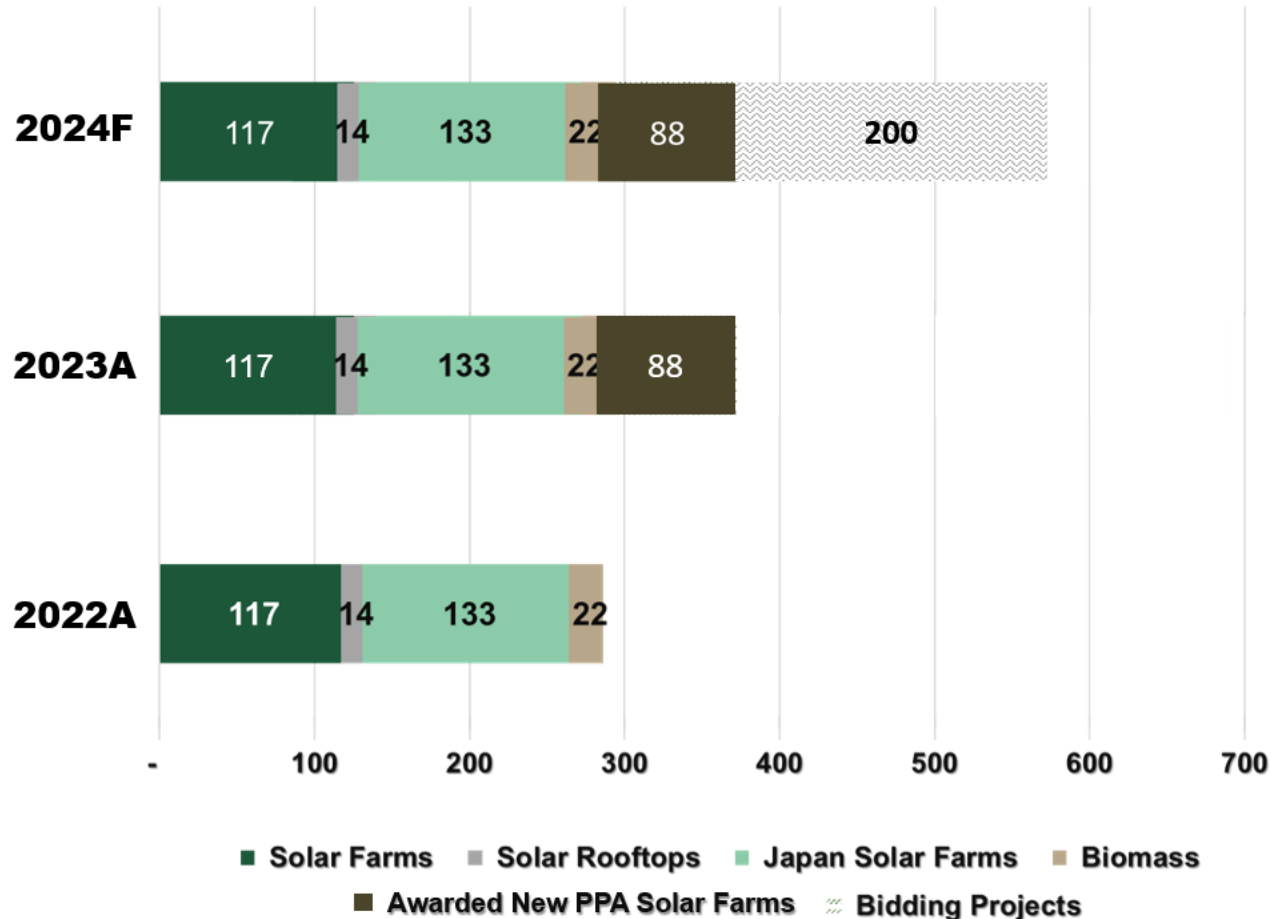
# BUSINESS OUTLOOK

Summary of TSE's Business Plan



# CAPACITY GROWTH FORECAST

Growth from New Projects under PDP Plan Bidding



## Renewable Energy Projects under PDP Plan in FiT Format for the year 2024 – 2030F

### SPP

Small Power Producer (10 – 90 MW)

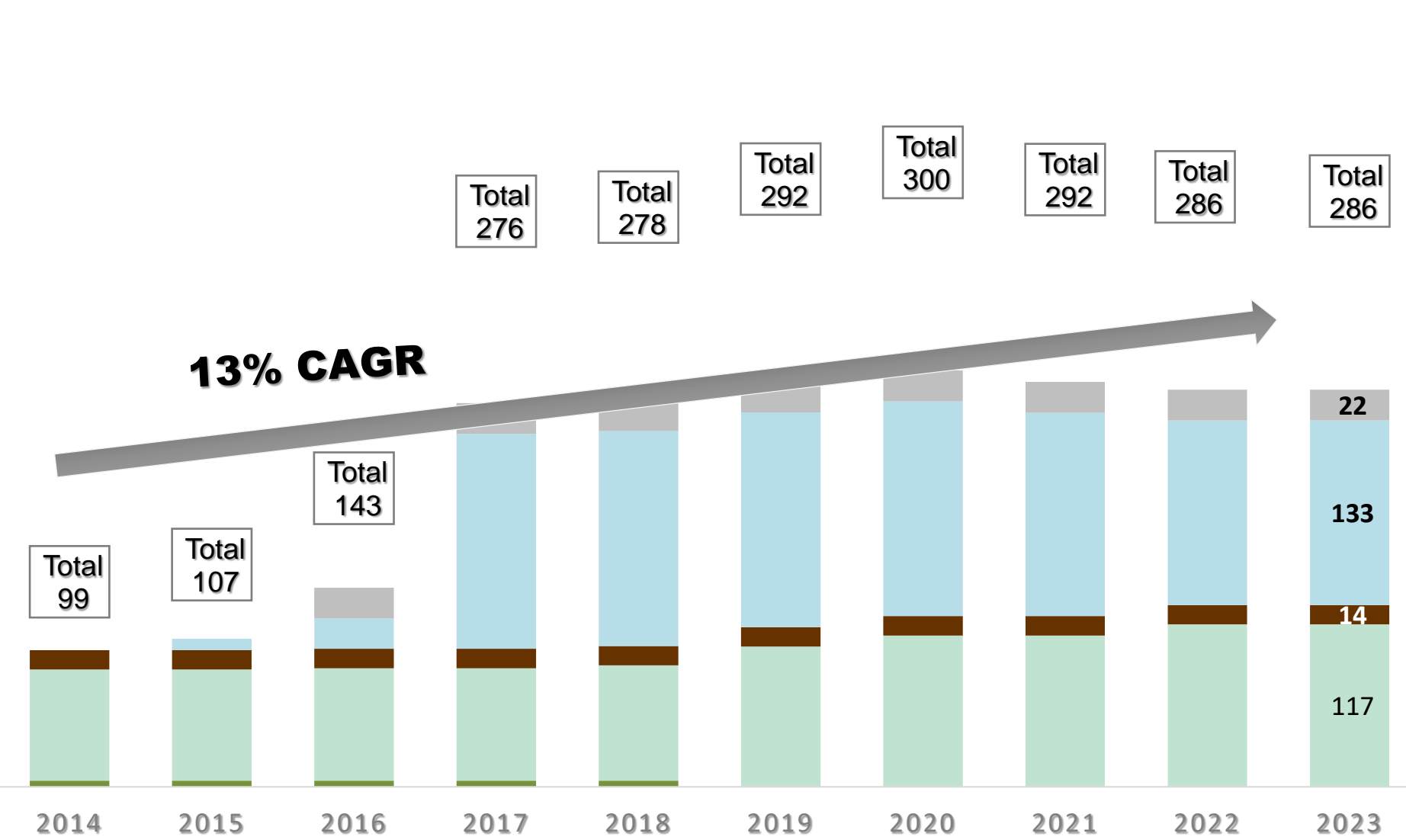
### VSPP

Very Small Power Producer (<10 MW)

# CAPACITY GROWTH

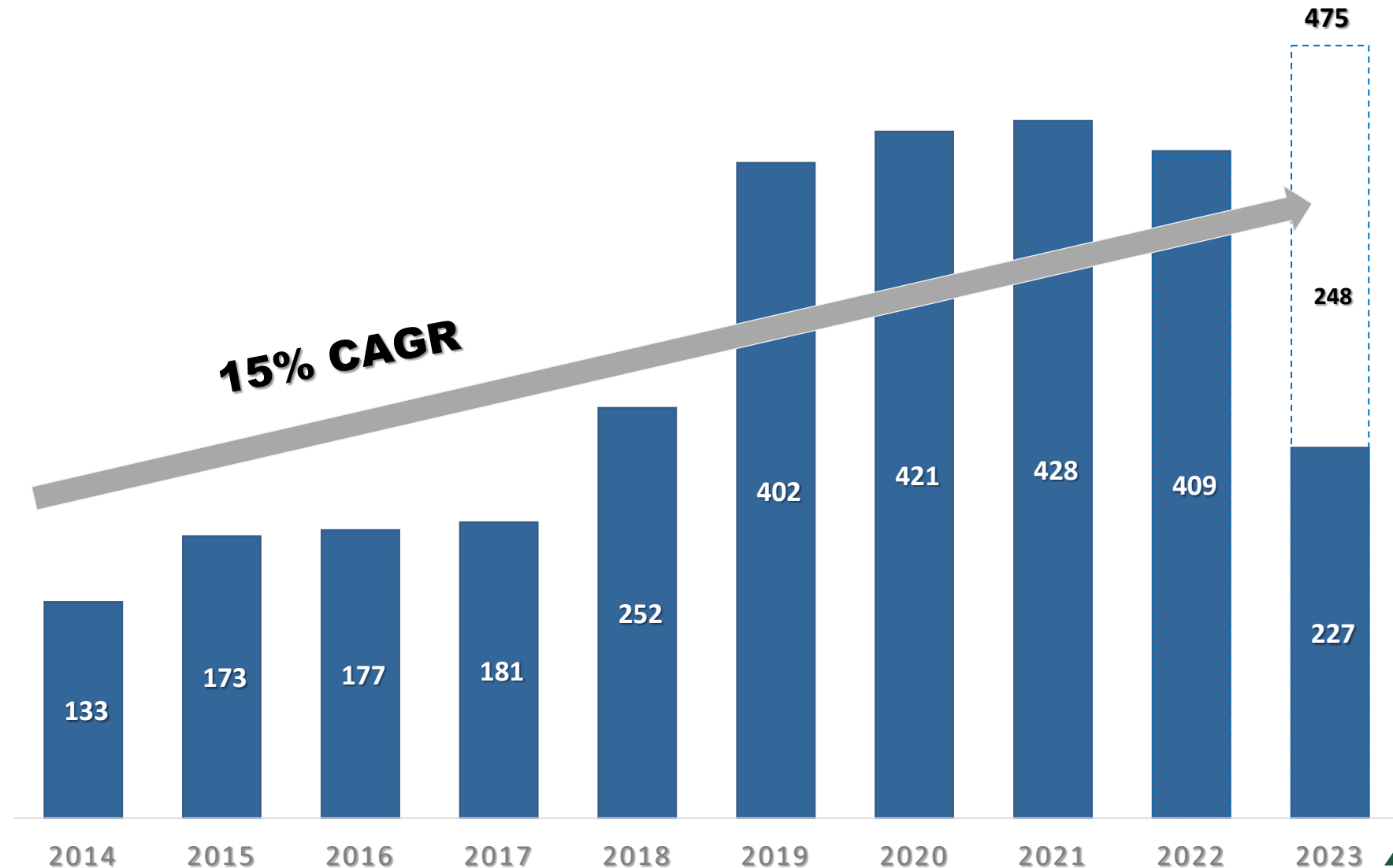
## ACQUIRE CAPACITY (MW PPA)

■ Thermal 
 ■ Solar Farms 
 ■ Solar Rooftops 
 ■ Japan Solar Farms 
 ■ Biomass 
 Total



## POWER OUTPUT PRODUCTION (MIL KWH)

■ Actual 
 □ Forecast



# BUSINESS PLAN

TARGET TO HAVE OVER 500 MW OF CAPACITY  
WITHIN 7 YEARS

01

Acquiring New Solar Projects  
under PDP Plan - Phase 1

status

TSE acquired 88 MWppa

02

Acquiring New Solar Projects  
under PDP Plan - Phase 2

status

TSE targeting to submit  
additional 200 MWppa

03

Expanding into  
**Private PPA**

Expert team & Top-tier equipment

04

Expanding into  
**Waste to Energy**

05

Acquiring Existing  
**Solar & Biomass** projects

06

**Other  
Opportunities**

# Q & A

# THANK YOU

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