



Thai Solar Energy Public Company Limited

OPPORTUNITY DAY YE2023

MAR 22, 2024



DISCLAIMER

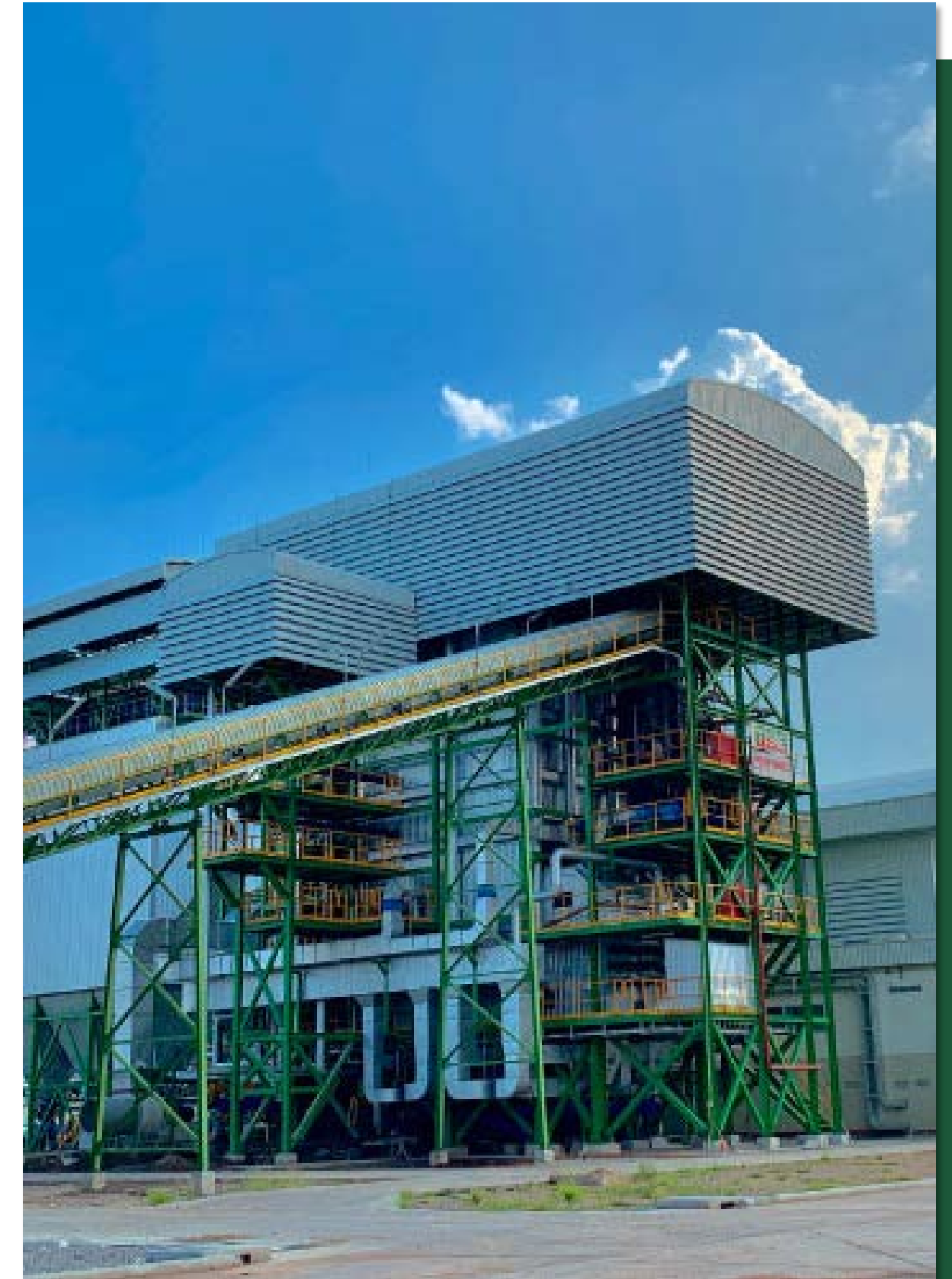
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AGENDA

- 01 Company Overview
- 02 Highlights of Y2023
- 03 Business Outlook
- 04 Q&A




COMPANY OVERVIEW

Summary of Corporate Information

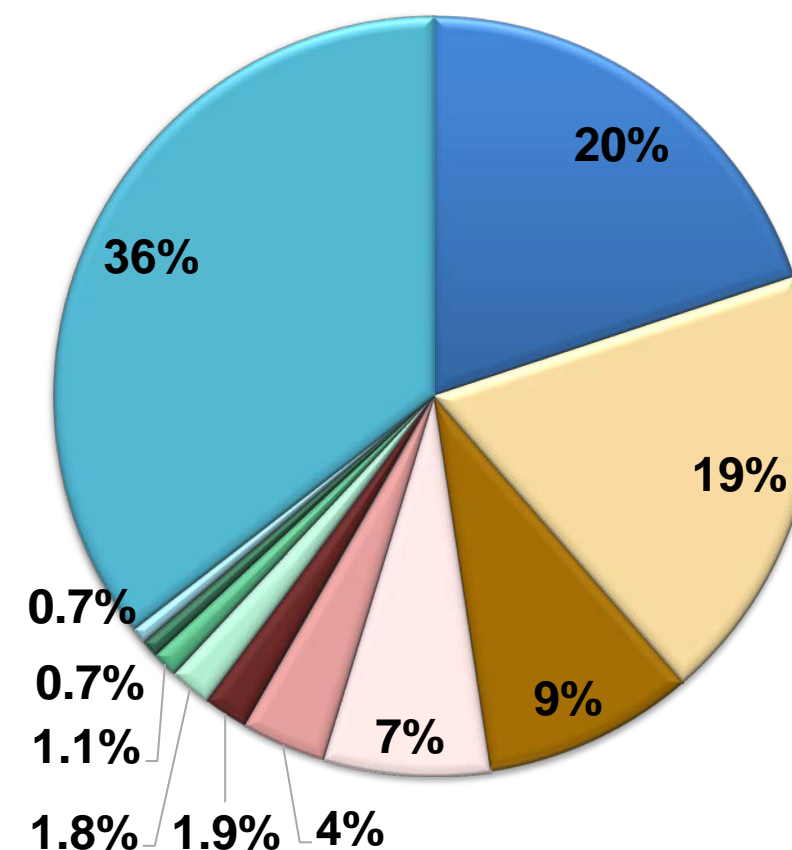
COMPANY OVERVIEW

Thai Solar Energy Public Company Limited (“TSE”) was established in 2008 as a producer and supplier of electricity from solar power and biomass to government and private company. And we have 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

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

Major Shareholders as of 28 December 2023





- UBS AG SINGAPORE BRANCH
- P.M. ENERGY CO.,LTD.
- SINO-THAI ENGINEERING & CONSTRUCTION PCL.
- LGT BANK (SINGAPORE) LTD
- CREDIT SUISSE AG, SINGAPORE BRANCH
- CITI (NOMINEES) LIMITED-S.A PBG CLIENTS SG
- MISS RATANA MALEENONT
- MR. ANAN RAWEESANGSUNE
- MR. SRICHAJ SUWANRAMPA
- MR. VACHIRA TAYANARAPORN
- OTHERS

TSE'S 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 for a total of 88.66 MW.
> **COD Mega project in Japan "Onikoube" (133 MWac) on May 2023 and divested on Dec 2023.**



TSE'S PROJECTS

TOTAL 41 PROJECTS AND CAPACITY 241.86 MWAC

Solar PV Farms & Floating in TH

**109 MWac – 16 Farms
8 MWac – 1 Floating**



Solar PV Rooftops

14 MWac – 14 Rooftops



Biomass

22.2 MWac – 3 Plants



**Awarded New PPA
Solar PV Farms in TH**

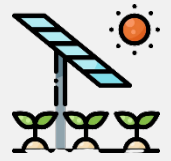
88.66 MWac – 7 Farms



HIGHLIGHTS OF Y2023

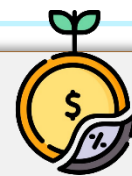
Summary of TSE's Event & Performance

SIGNIFICANT EVENTS IN Y2023

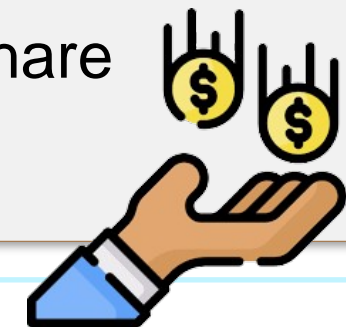


In April 2023, our group was awarded as renewable energy power producers and supplier to Thai Government for 7 projects with total capacity of 88.66 MWac. There are 3 SPP projects including battery energy storage system (BESS) project and 4 VSPP projects with a total investment value of 4,289 MB.

In May 2023, our solar farm project in Japan, the Onikoube project, has started Commercial Operation Date (COD), with total selling capacity of 133 MWac. And the project was divested in December 2023.



Our group continuously paid cash dividend for Y2023 performance @0.14 THB per share or equivalent to a dividend yield of 8%

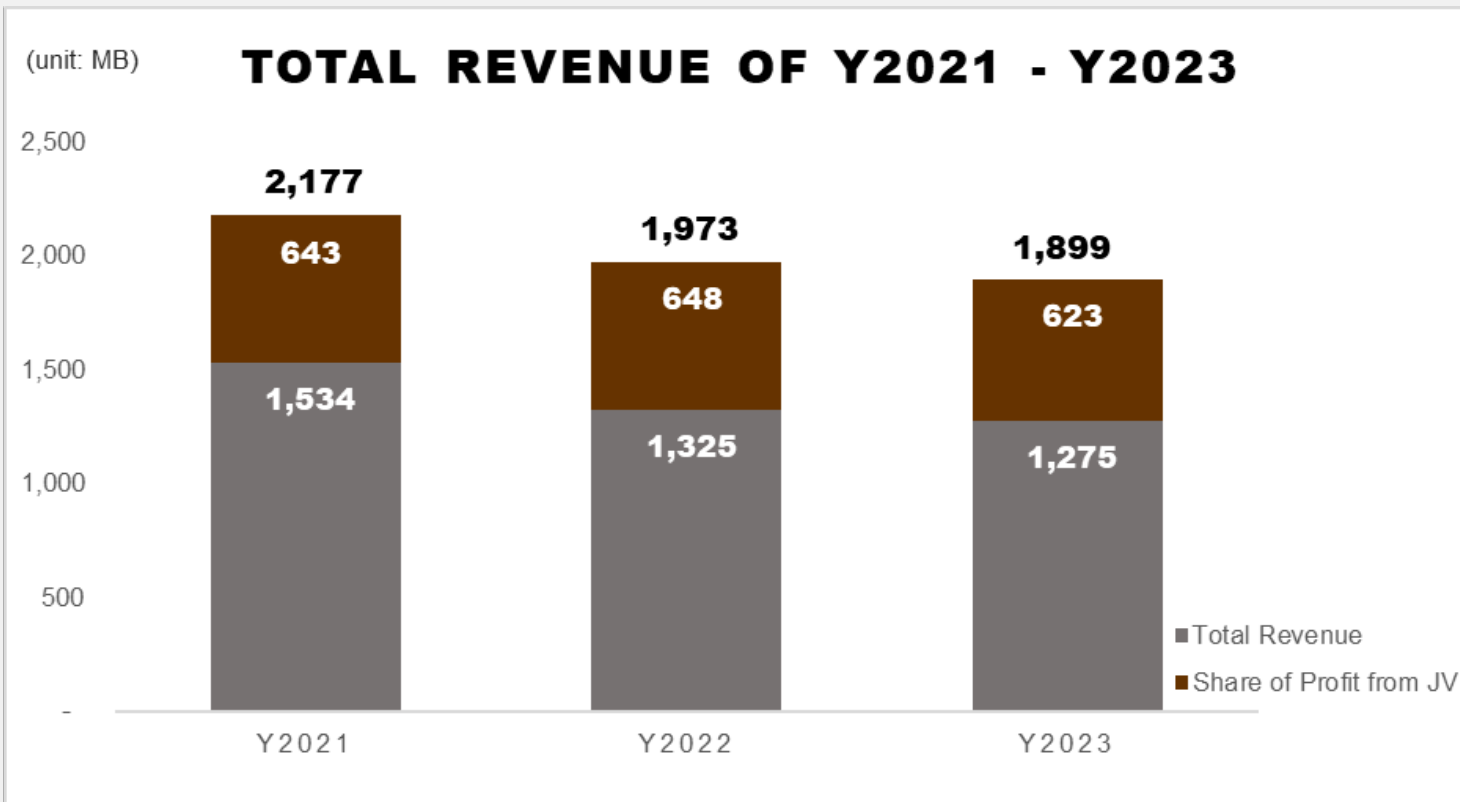


INCOME STATEMENT OF Y2023

Unit: MB

TSE - Consolidated	Y2023	Y2022	Change
Revenue			
Electricity sales	1,197	1,258	-5%
Management fee	63	55	15%
Other Income	15	12	27%
Total revenue	1,275	1,325	-4%
COGS	(868)	(893)	-3%
Gross Profit	407	432	-6%
SG&A	(331)	(207)	60%
Write-off financial assets	(1,036)	-	100%
Other gains (losses)	(319)	265	-220%
Profit (loss) before Interest and Income tax	(1,279)	491	-361%
Finance costs	(377)	(328)	15%
Profit (loss) before Income tax	(1,656)	163	-1116%
Share of profit from investment in joint venture	623	648	-4%
Income tax expenses	(3)	(15)	-80%
Net profit (loss) from Continuing Operation	(1,035)	796	-230%
Net profit (loss) from Discontinued Operation	(1,946)	(72)	2596%
Net profit (loss)	(2,981)	724	-512%
Extraordinary items:			
- Write-off financial assets	1,036	-	100%
- Expenses from divestment of investment in subsidiaries	344	-	100%
- Impairment loss - Spare part	57	-	100%
- Gain on divestment of investment in subsidiaries	-	(234)	-100%
Normalized Net Profit	401	561	-29%

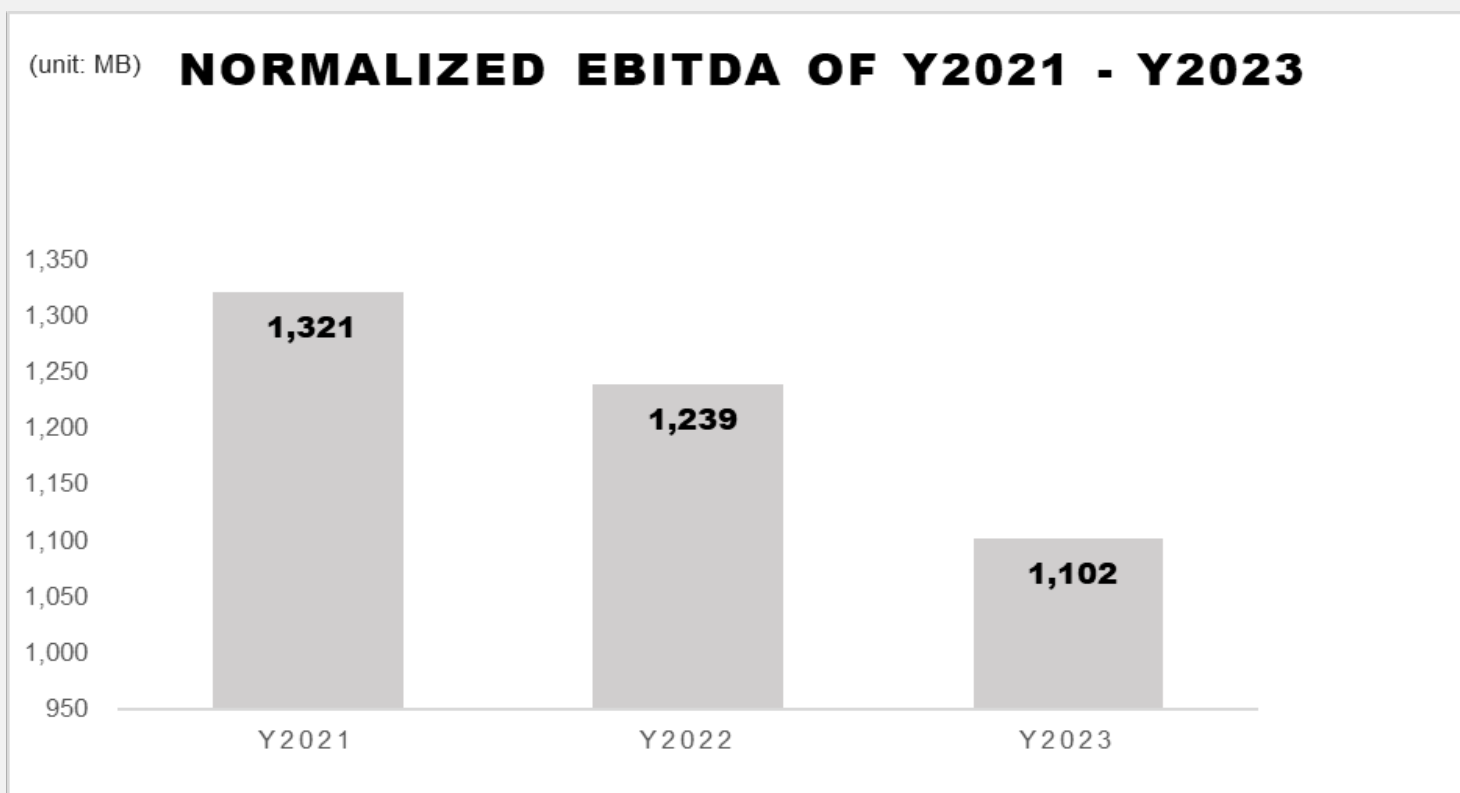
TOTAL REVENUE AND EBITDA OF Y2023



TOTAL REVENUE AND SHARE OF PROFIT FROM JV

The group's generated total revenue including share of profit from JV of Y2023 slightly decreased to 1,899 MB or -4% YoY.

The main reason of group's total revenue change was from an expiration of Siam Solar Power project (SSP) adder contract in Q2/2023 and because of a change in Fuel Adjustment Charge (Ft). In the same time, the group was recognized revenue from sales and services from Soilcrete project (SCT) for the entire year while the last year there was only 6-months revenues recognition.



NORMALIZED EBITDA

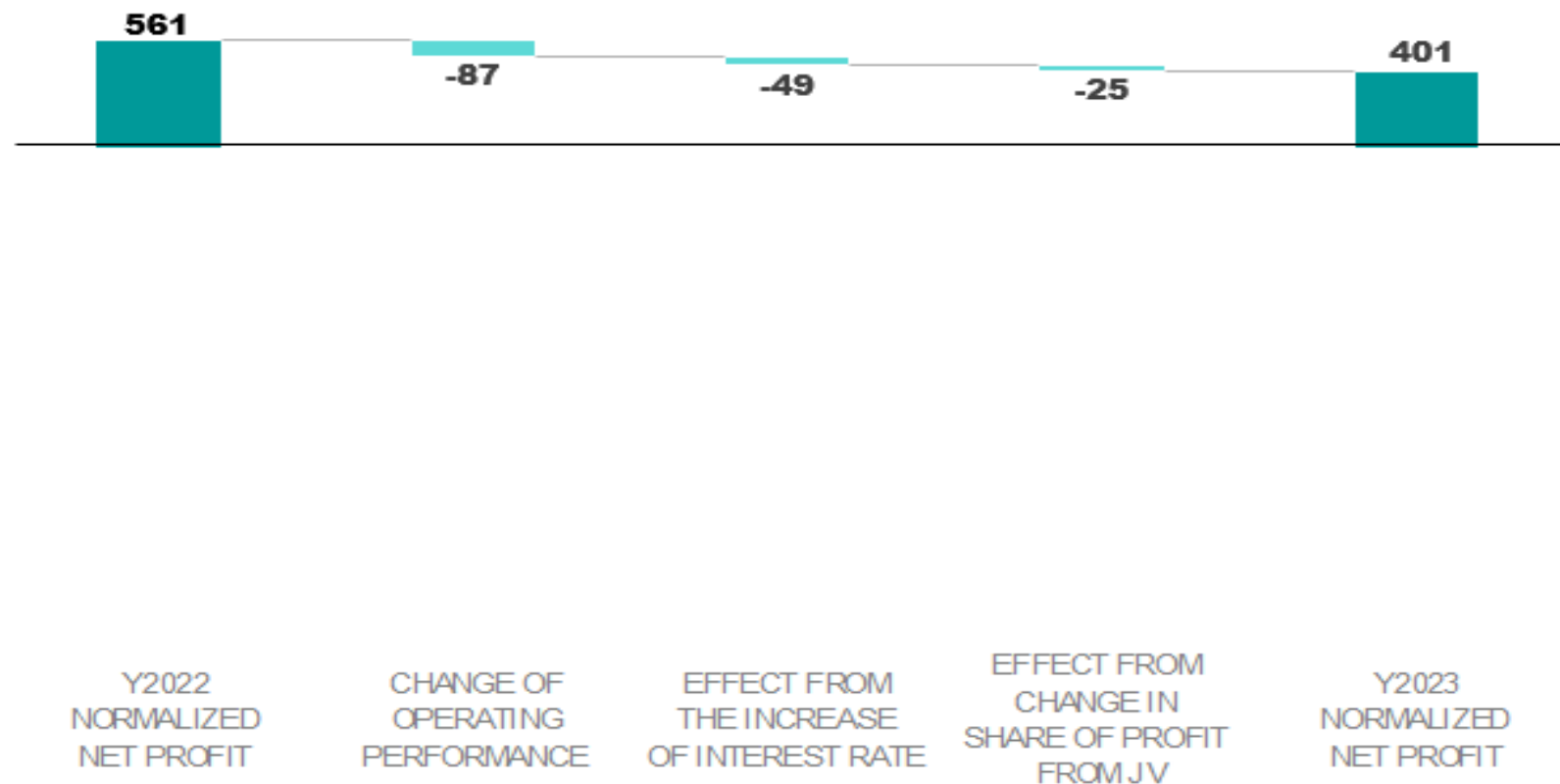
Normalized EBITDA of Y2023 decreased to 1,102 MB or -11% YoY.

Due to the expiration of adder contract, the change in the Fuel Adjustment Charge (Ft) and loss from exchange rate.

NET PROFIT OF Y2023

NORMALIZED NET PROFIT (LOSS) OF Y2022 - Y2023

(unit: MB)



NORMALIZED NET PROFIT (LOSS) OF Y2022 - Y2023

The group's normalized net profit of Y2023 decreased to 401 MB.

Due to reduction of operating performance and share of profit from JV because of:

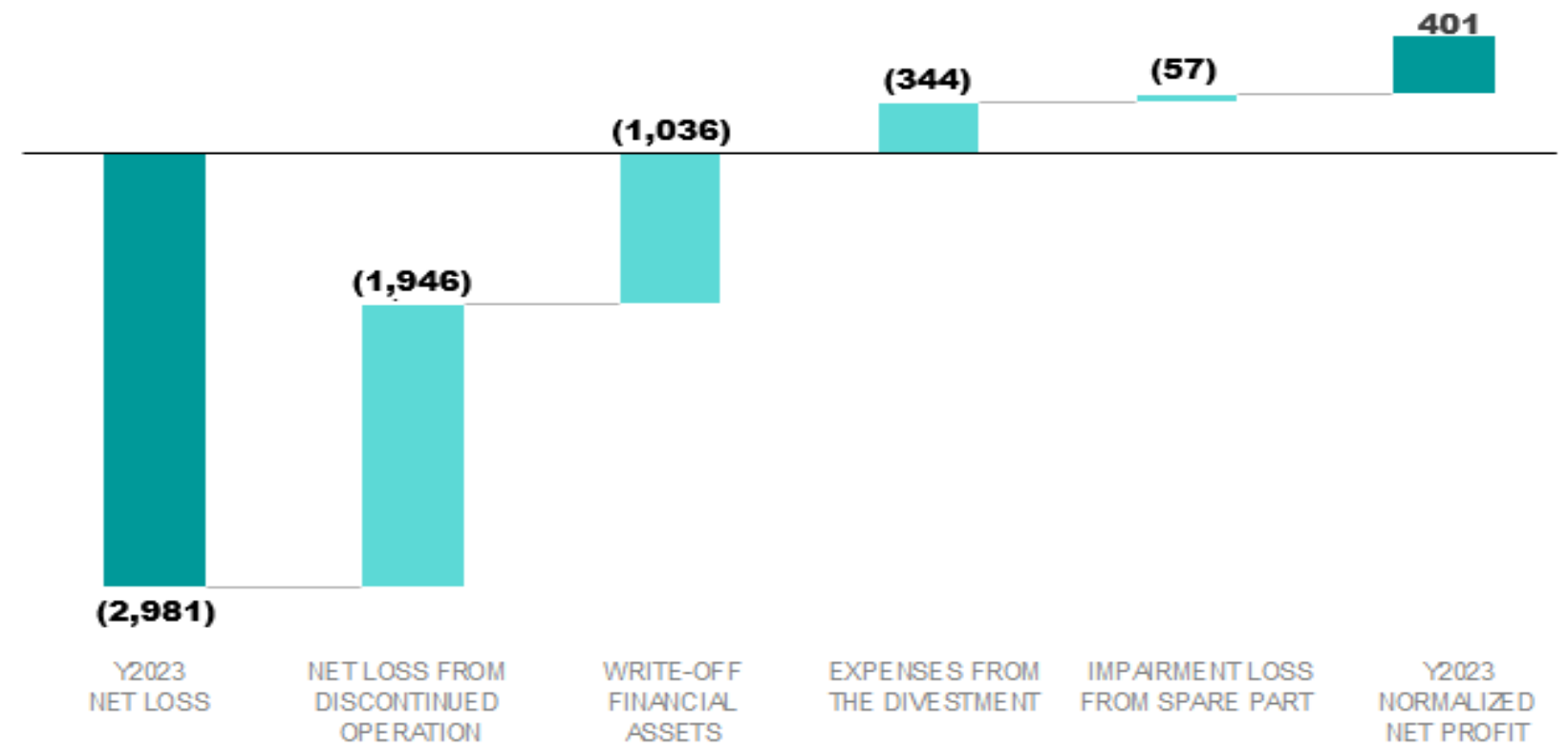
1. The expiration of adder contract
2. The change in the Fuel Adjustment Charge (Ft)

In addition, there was the increase of finance costs from the increase of interest rate since YE2022 (for a total increase of 1.25%)

However, there was a revenue recognition from sales and services from Soilcrete project (SCT) for the entire year and a continuous cost reduction drive in the group's Biomass projects.

NORMALIZED NET PROFIT (LOSS) OF Y2023

(unit: MB)



NORMALIZED NET PROFIT (LOSS) OF Y2023

The group's net profit (loss) of Y2023 decreased to -2,981 MB.

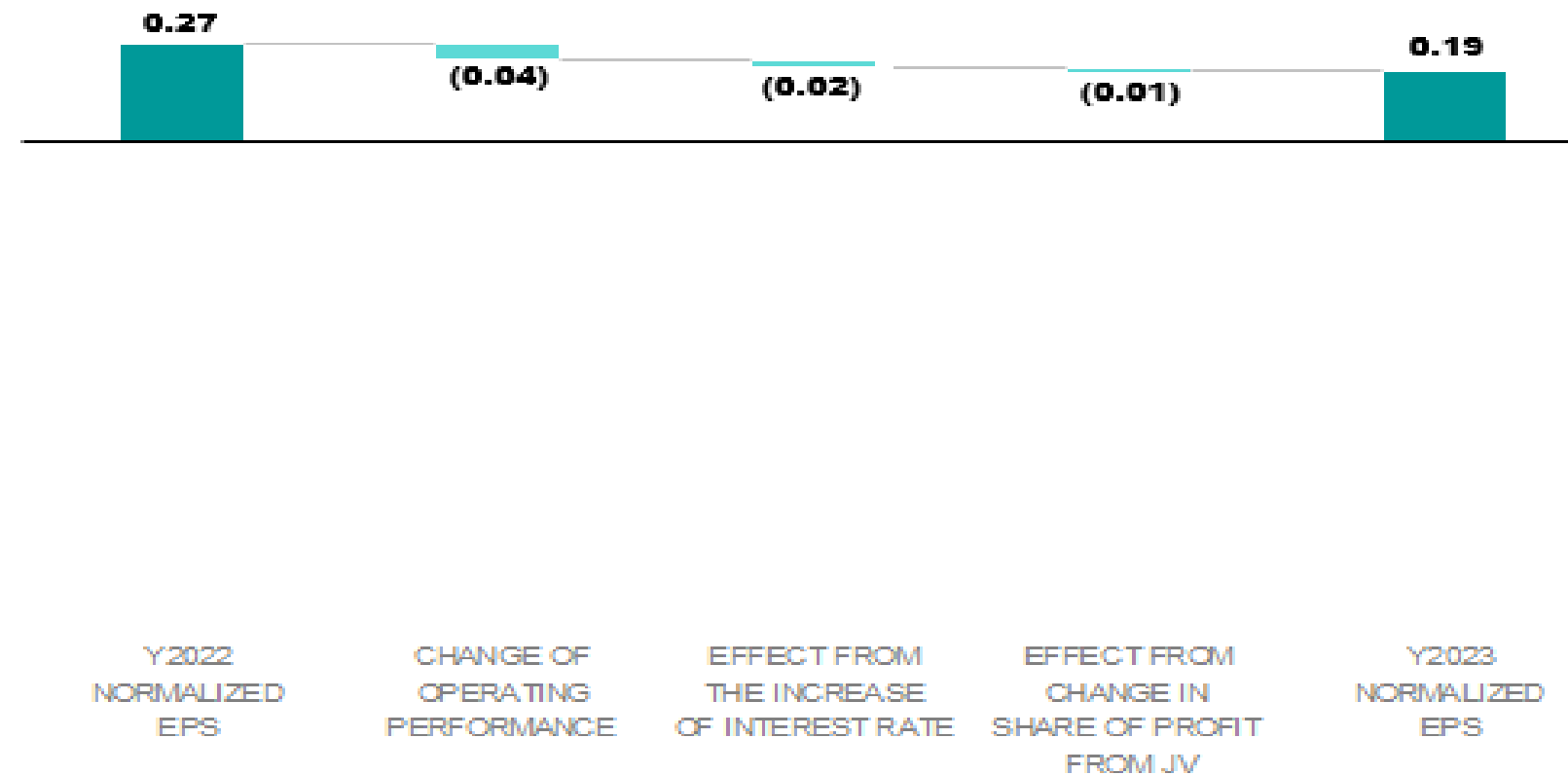
Mainly due to extraordinary items as follows:

1. Effect from divestment of investments in subsidiaries.
2. The impairment loss from spare part.

In addition, there was a one-time recognition of extraordinary profit from divestment solar farm in Japan last year.

EPS OF Y2023

(unit: MB) **NORMALIZED EPS OF Y2022 - Y2023**



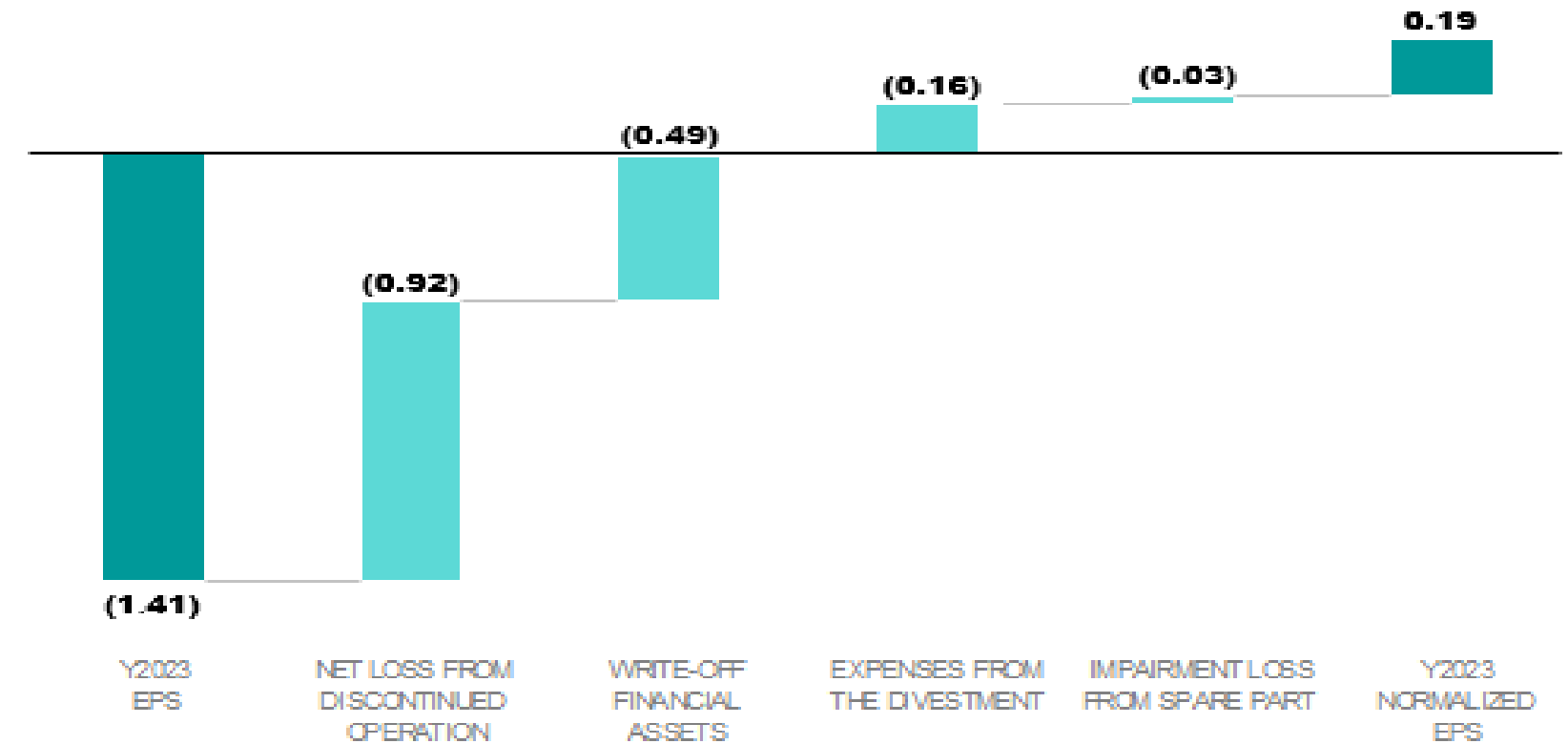
NORMALIZED EPS OF Y2022 – Y2023

The group's EPS of Y2023 decreased to THB 0.19 / share.

Due to reduction of operating performance and share of profit from JV, and the increased finance costs from the increase of interest rate since YE2022

However, there was a revenue recognition from sales and services from Soilcrete project (SCT) for the entire year and a continuous cost reduction drive in the Group's Biomass projects.

(unit: MB) **NORMALIZED EPS OF Y2023**



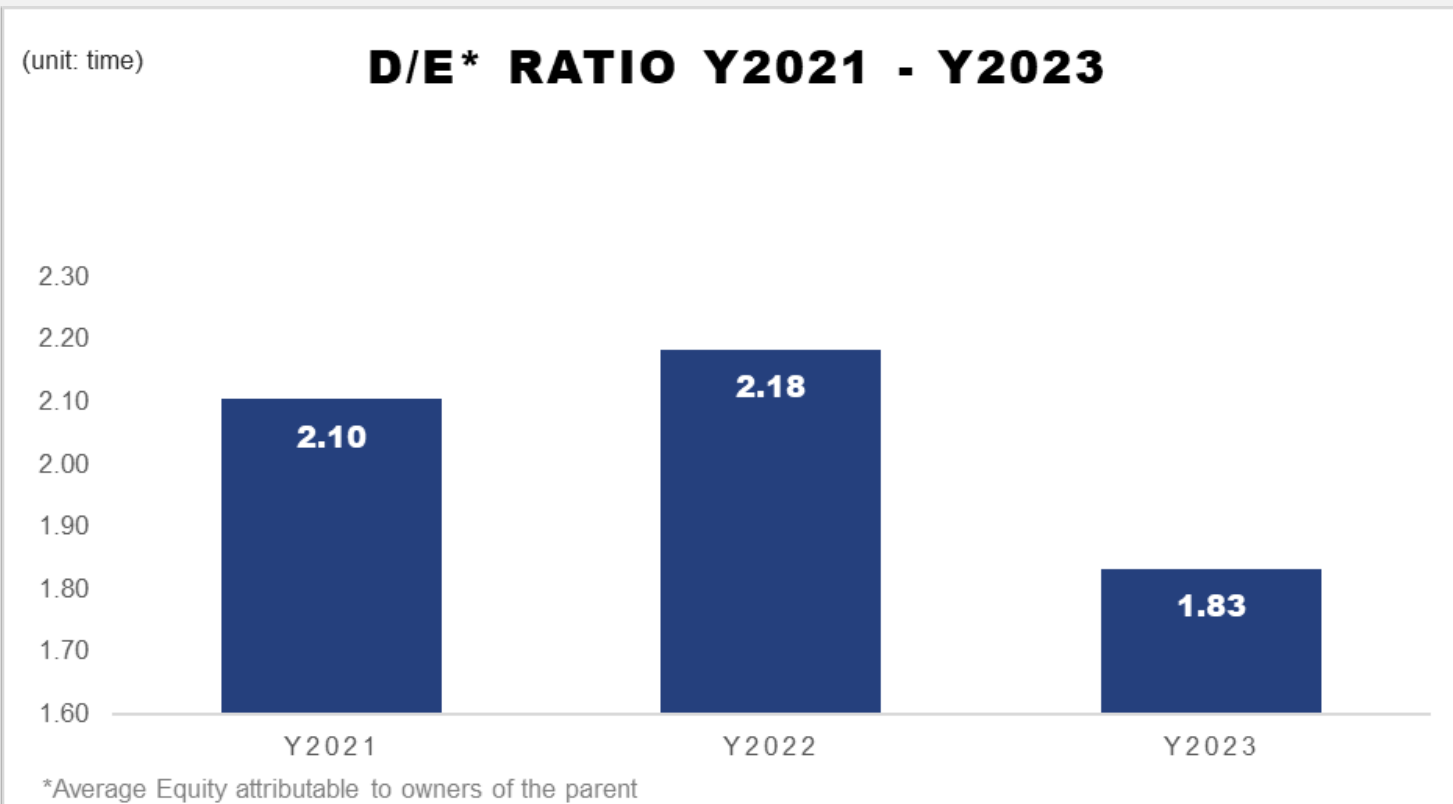
NORMALIZED EPS OF Y2023

The group's EPS of Y2023 decreased to THB -1.41 / share.

Mainly due to extraordinary items, effect from divestment and the impairment loss from spare part.

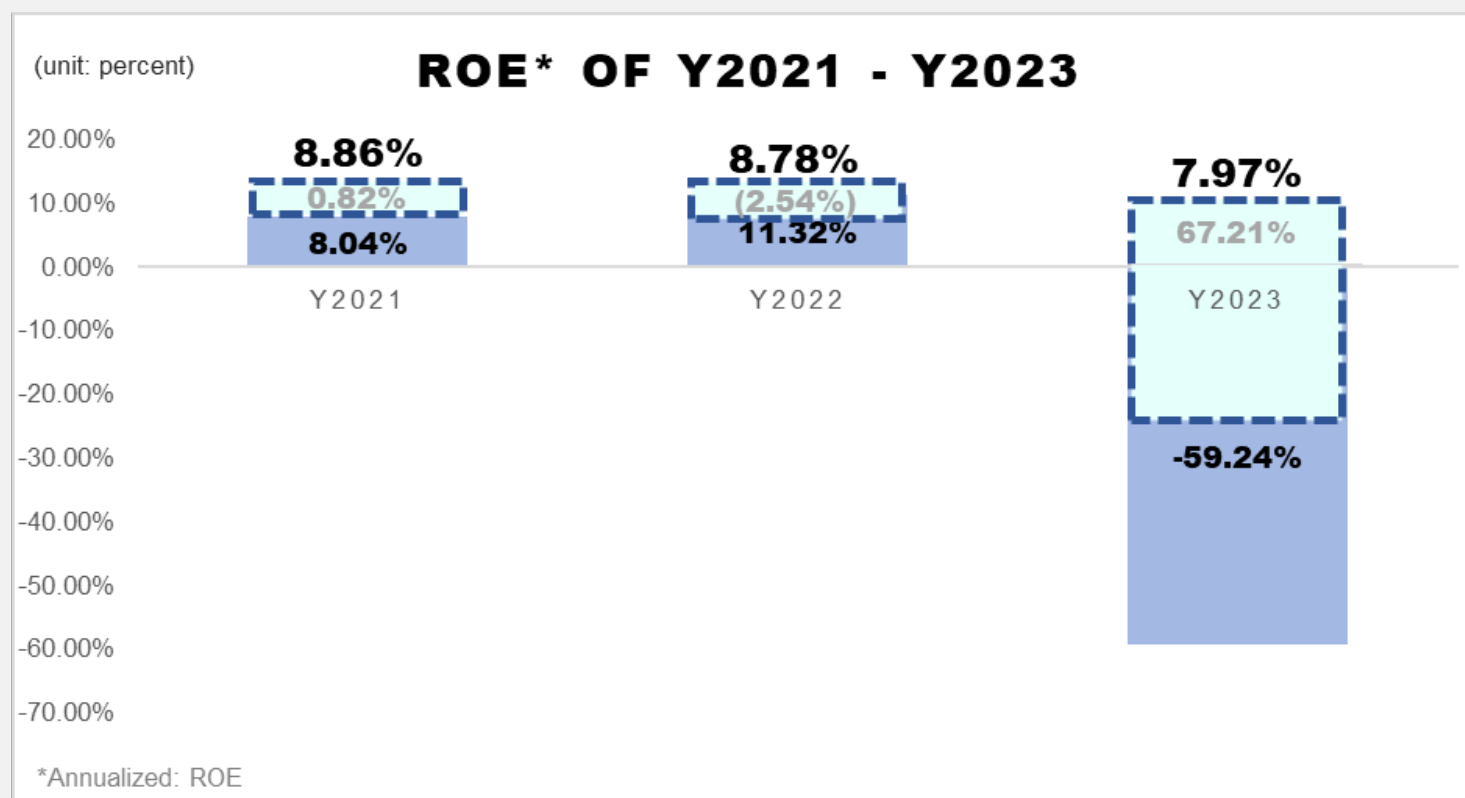
In addition, there was a one-time recognition of extraordinary profit from divestment last year.

D/E RATIO AND ROE OF Y2023



D/E RATIO

The group's D/E ratio at YE2023 decreased to 1.83 times or -16% as compared to 2.18 times at YE2022 because there was a repayment to long-term borrowings due to divestment of investments in the subsidiaries and the group's has paid dividends in Y2023.



ROE

The group's ROE of Y2023 amounted to -59.24%.

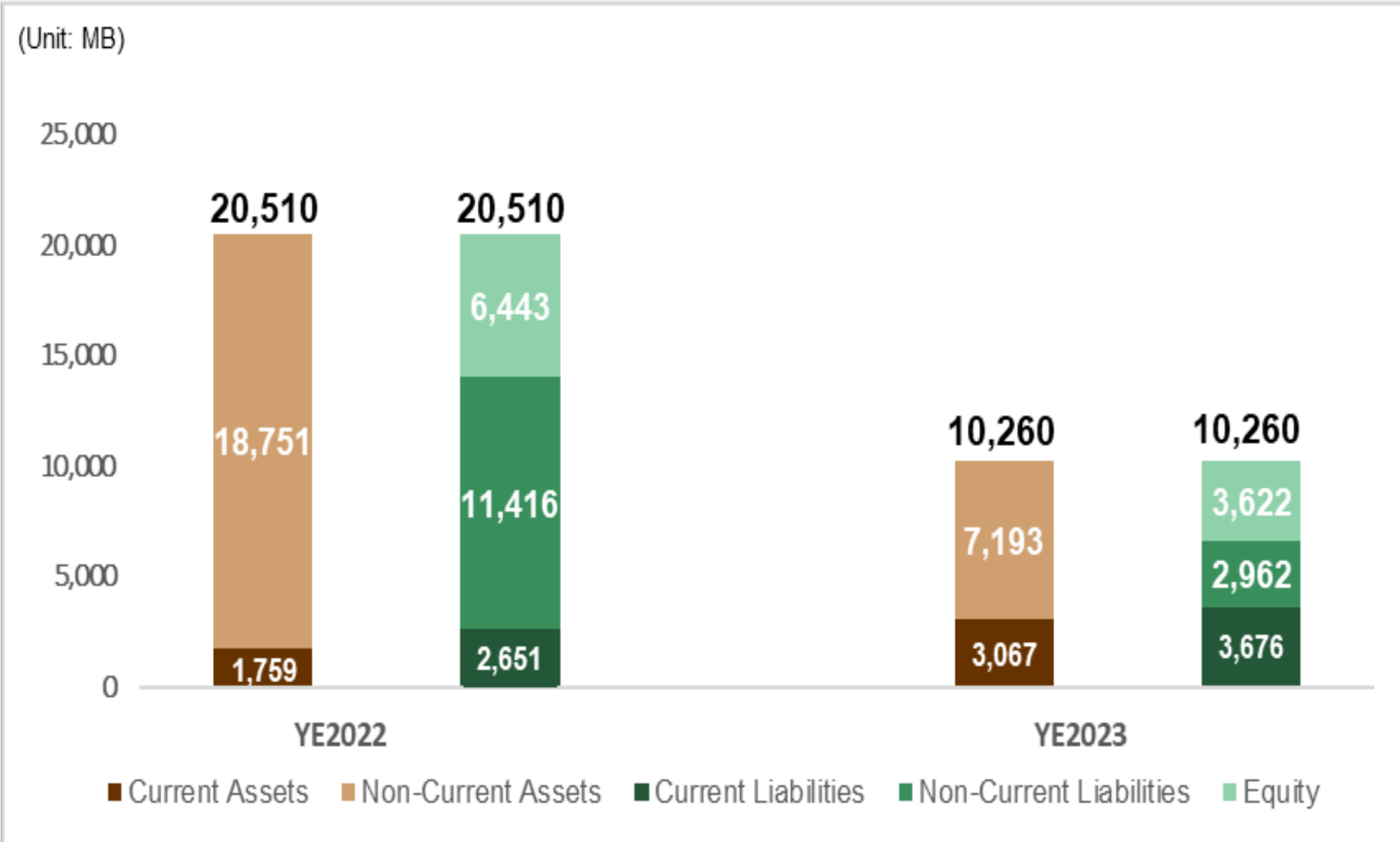
Although, there was a revenue recognition from sales and services from Soilcrete project (SCT) for the entire year and a continuous cost reduction drive in the Group's Biomass projects. But our net (loss) profits mainly affected by the divestment.

In addition, there was a dividend payment in Y2023 and one-time recognition of extraordinary profit from divestment last year.

Excluding such extraordinary items, the group's ROE of Y2023 and Y2022 would be 7.97% and 8.78% respectively.

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

FINANCIAL POSITION OF Y2023



In 2023, overall operating performance excluding non-cash item & extraordinary item was decreased as compared to last year mainly due to the adder contract expiration resulting in reduced revenue

TOTAL ASSETS -50.0%

The group's total assets were at 10,260 MB, decreasing by 10,250 MB or 50.0% compared to 20,510 MB of December 31, 2022 mainly due to decrease in property, plant and equipment from disposal of investments in the subsidiaries.

TOTAL LIABILITIES -52.8%

the group's total liabilities were at 6,638 MB, decreasing by 7,429 MB or 52.8% compared to 14,067 MB of December 31, 2022 resulting from repayment to long-term borrowings due to disposal of investments in the subsidiaries.

EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT -43.8%

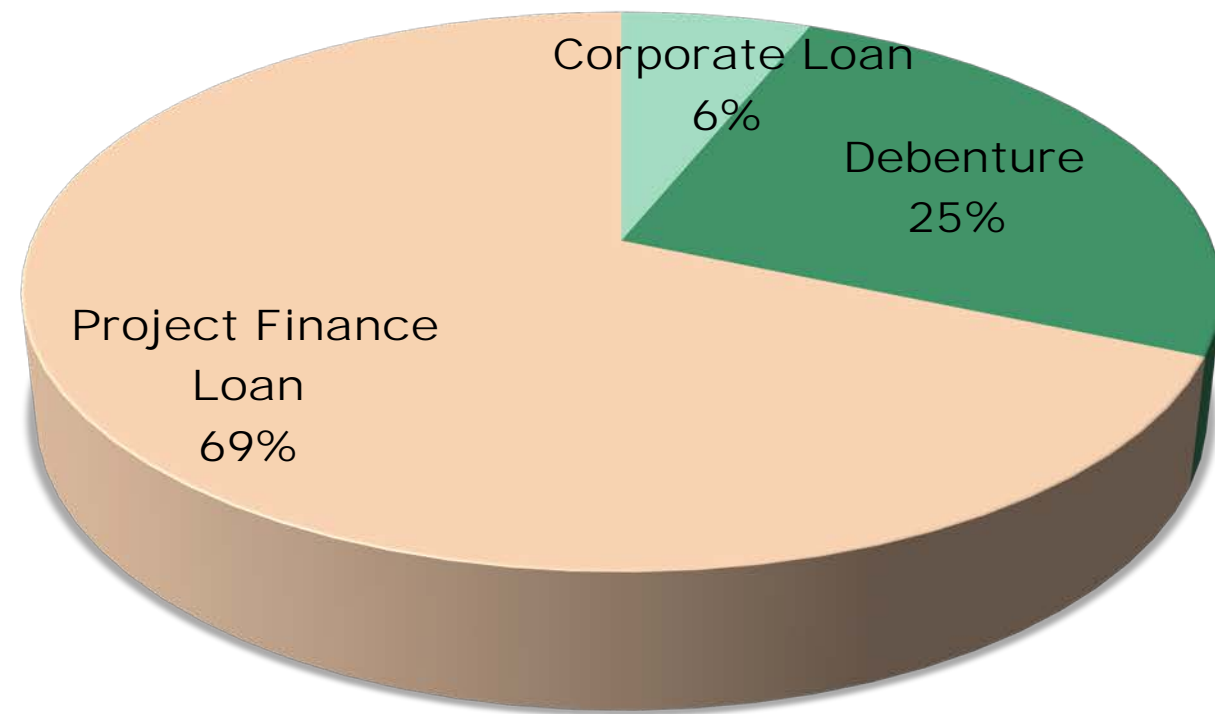
the group's total equity was at 3,622 MB, decreasing by 2,821 MB or 43.8% compared to 6,443 MB of December 31, 2022 from decrease in Normal Profit (loss) for the period and a dividend payment amounted to 191 MB.

FINANCIAL POSITION	Y2022	Y2023	+/- (%)
Assets	20,510	10,260	(50.0%)
Liabilities	14,067	6,638	(52.8%)
Equities*	6,443	3,622	(43.8%)

Note: *Average Equity attributable to owners of the parent

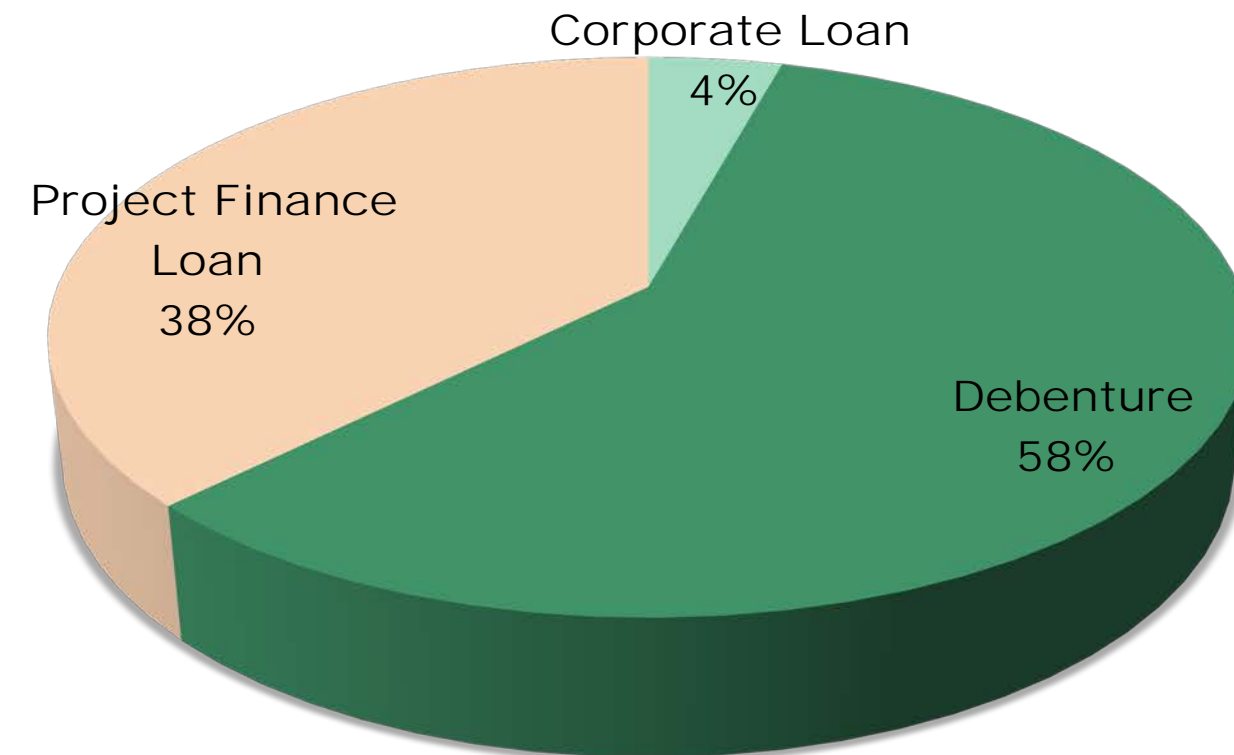
INTEREST BEARING DEBT OF Y2022 & Y2023

Y2022



TOTAL 13,510.96 MB

Y2023



TOTAL 6,073.45 MB

INTEREST BEARING DEBT

Most of the group's Interest bearing debt (IBD) was from debenture, and the proportion of debenture to IBD of Y2023 increasing by 30% from 24% at the end of last year to 54%, Because of a decrease of project finance loan from Onikoube Project divestment.

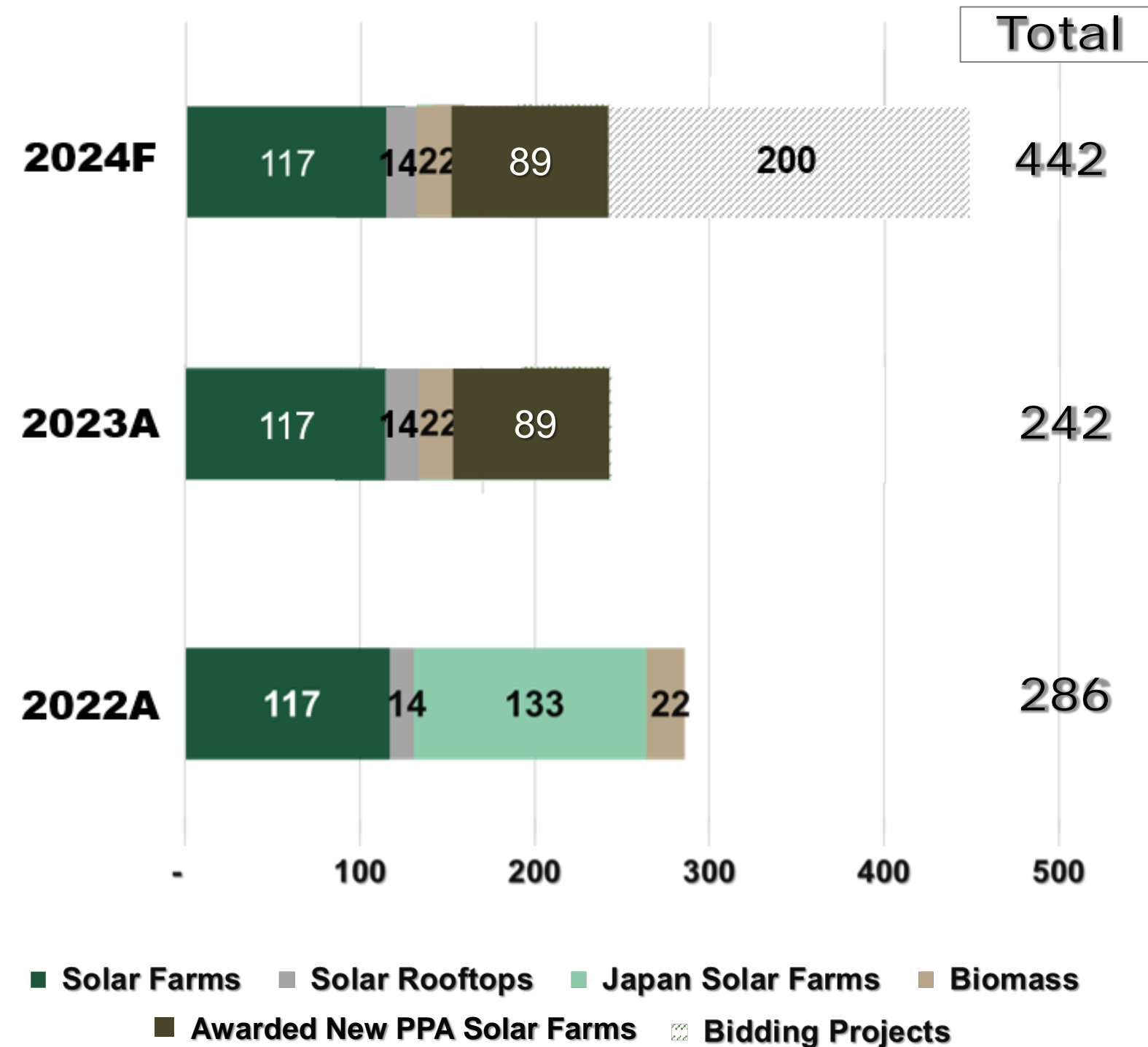
The remaining of interest bearing debt was from project finance loan and corporate loan, and the proportion of project finance loan and corporate loan to IBD of Y2023 decreasing by 30% from 76% at the end of last year to 46%. Because of a decrease of project finance loan from Onikoube Project divestment and 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

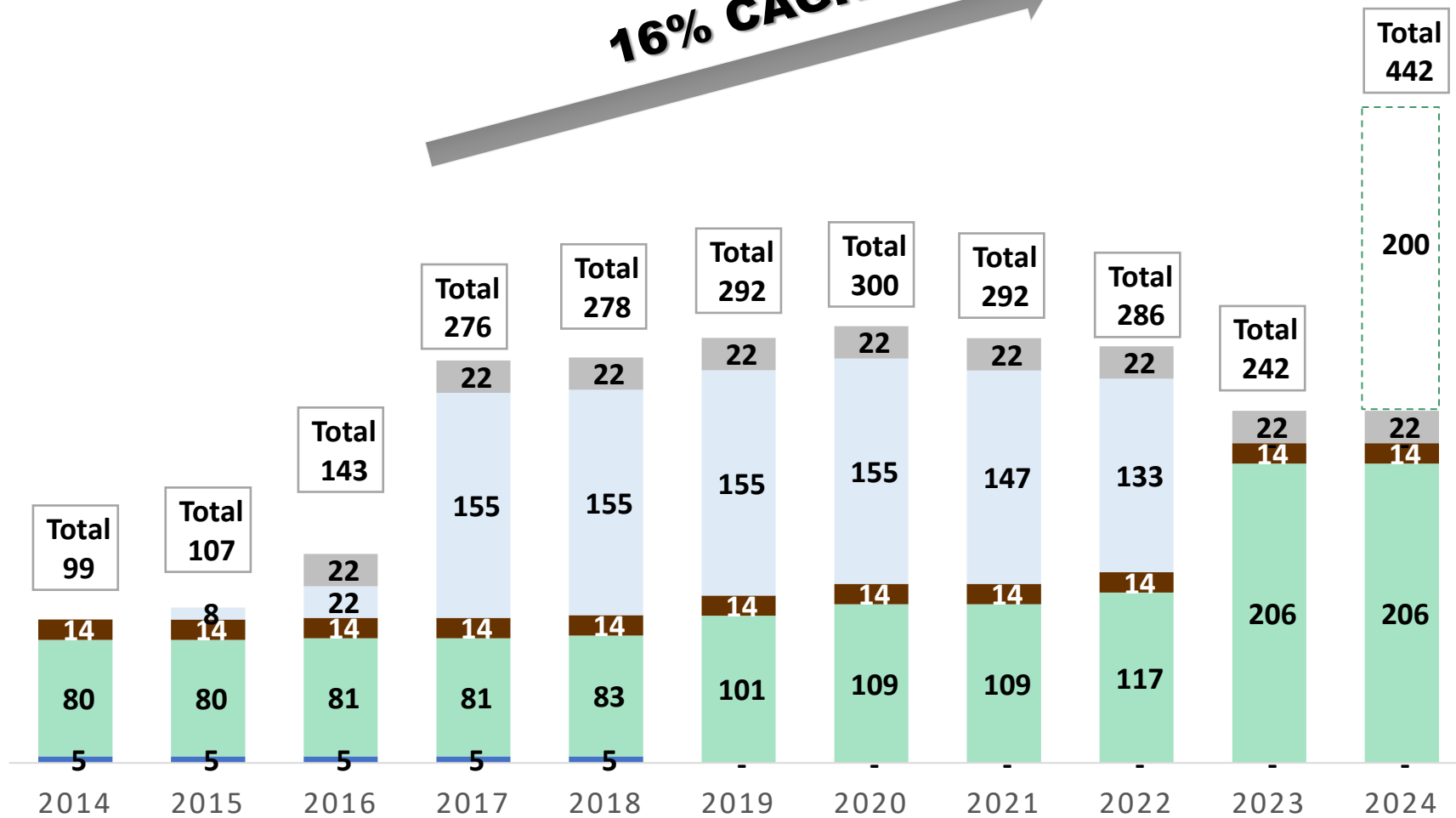
Very Small Power Producer (<10 MW)

CAPACITY GROWTH

ACQUIRE CAPACITY (MW PPA)

■ Thermal
 ■ Solar Farms
 ■ Solar Rooftops
 ■ Japan Solar Farms
 ■ Biomass
 Forecast

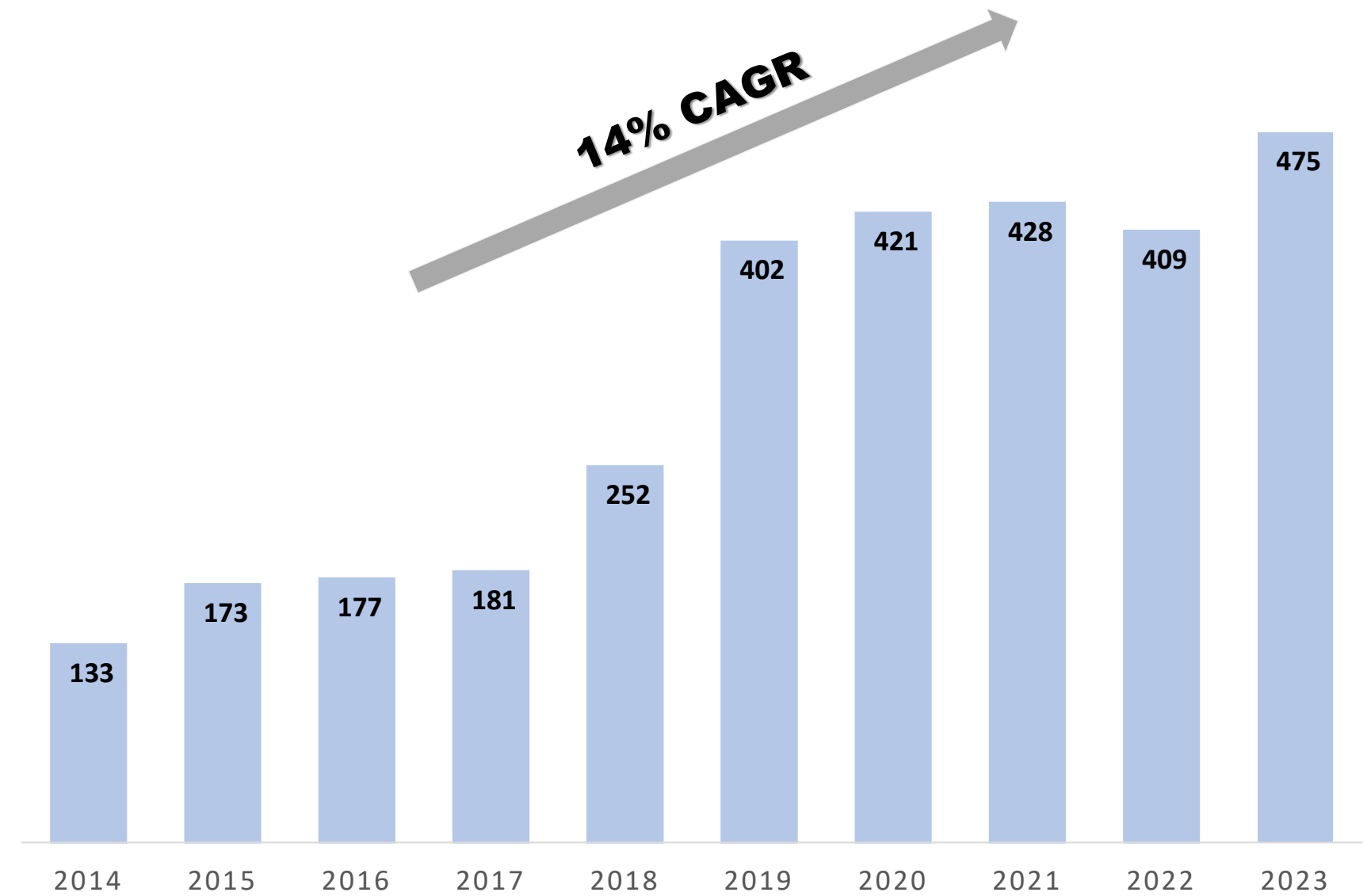
16% CAGR



POWER OUTPUT PRODUCTION (MIL KWH)

■ Actual

14% CAGR



BUSINESS PLAN

TARGET TO HAVE OVER 400 MW OF CAPACITY

01

Acquiring New Solar Projects
under PDP Plan - Phase 1

status

TSE acquired 88.66 MWppa

02

Acquiring New Solar Projects
under PDP Plan - Phase 2 & 3

status

TSE targeting to have
100 - 150 MWac

03

Expanding into
Private PPA

Expert team & Top-tier equipment

04

Expanding into
Waste to Energy

05

Acquiring
Existing
Projects

06

Expanding into
**Healthcare
Business**

Q & A

THANK YOU

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