



Thai Solar Energy Public Company Limited

---

# Opportunity Day 1Q2023

June 1, 2023

# DISCLAIMER

The information contained in this presentation is provided by Thai Solar Energy Public Company Limited (“**TSE**”) solely for information purposes.

This presentation does not constitute or form part of any offer or invitation by or on behalf of **TSE** for sale or subscription of or solicitation or invitation of any offer to or recommendation to buy or subscribe for any securities of **TSE**, nor shall it or any part of it form the basis of or be relied on in connection with any contract, commitment or investment decision in relation thereto (“Securities”) in Thailand, the United States or any other jurisdiction.

The information contained herein does not take into consideration the investment objectives, financial situation or particular needs of any particular investor, and should not be treated as giving investment advice.





01 COMPANY OVERVIEW

02 FINANCIAL HIGHLIGHTS OF 1Q2023

03 OUTLOOK

# VISION AND MISSION

## VISION

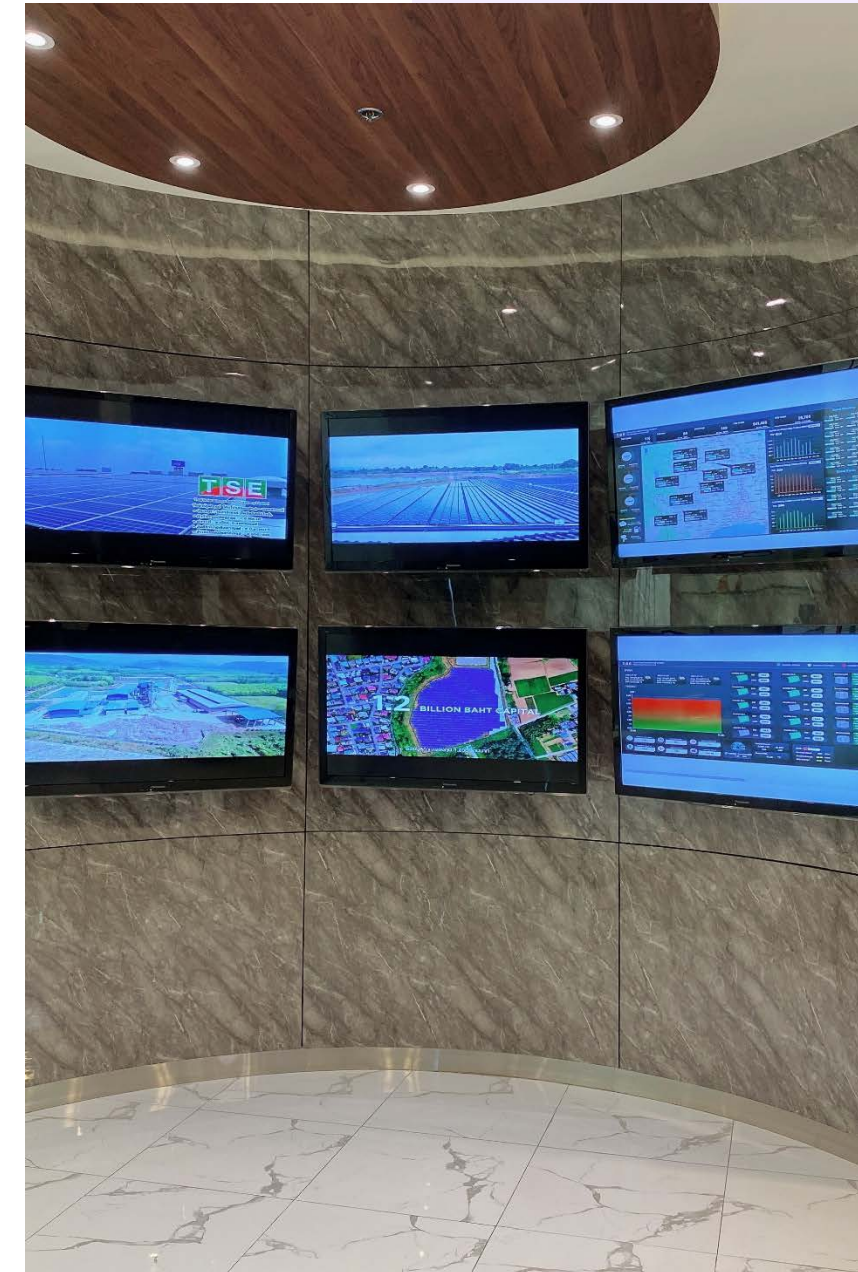
To become a world-class regional leader in providing renewable energy through reliable technologies to serve both commercial and social societies.

## 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 & Oceania regions.

# 01 COMPANY OVERVIEW

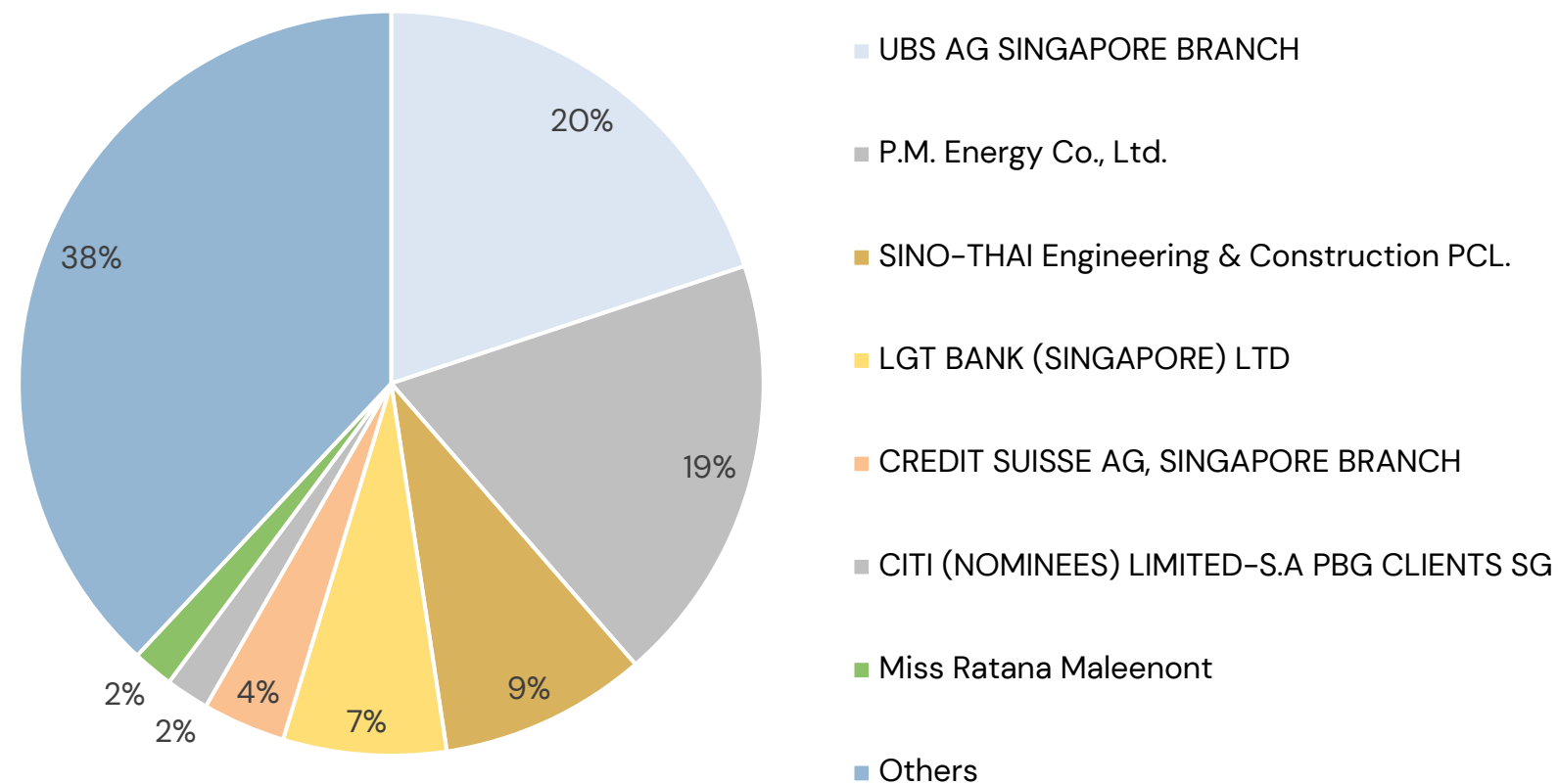
Summary of Corporate Information



# 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.

**TSE Major Shareholders RD 31 March 2023**



## Stock Information

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

# CORE BUSINESS

## TSE and its subsidiaries (“the Group”)

The Group’s core businesses are generation and distribution of electricity from solar power and biomass to government and private company in Thailand and Japan.

TOTAL CAPACITY OF **286.20** MWac

SOLAR PV (264 MWac)

BIOMASS (22.2 MWac)



**Solar PV Farms**

242 MWac



**Solar PV Rooftops**

14 MWac



**Floating Solar PV**










8 MWac



**Biomass**

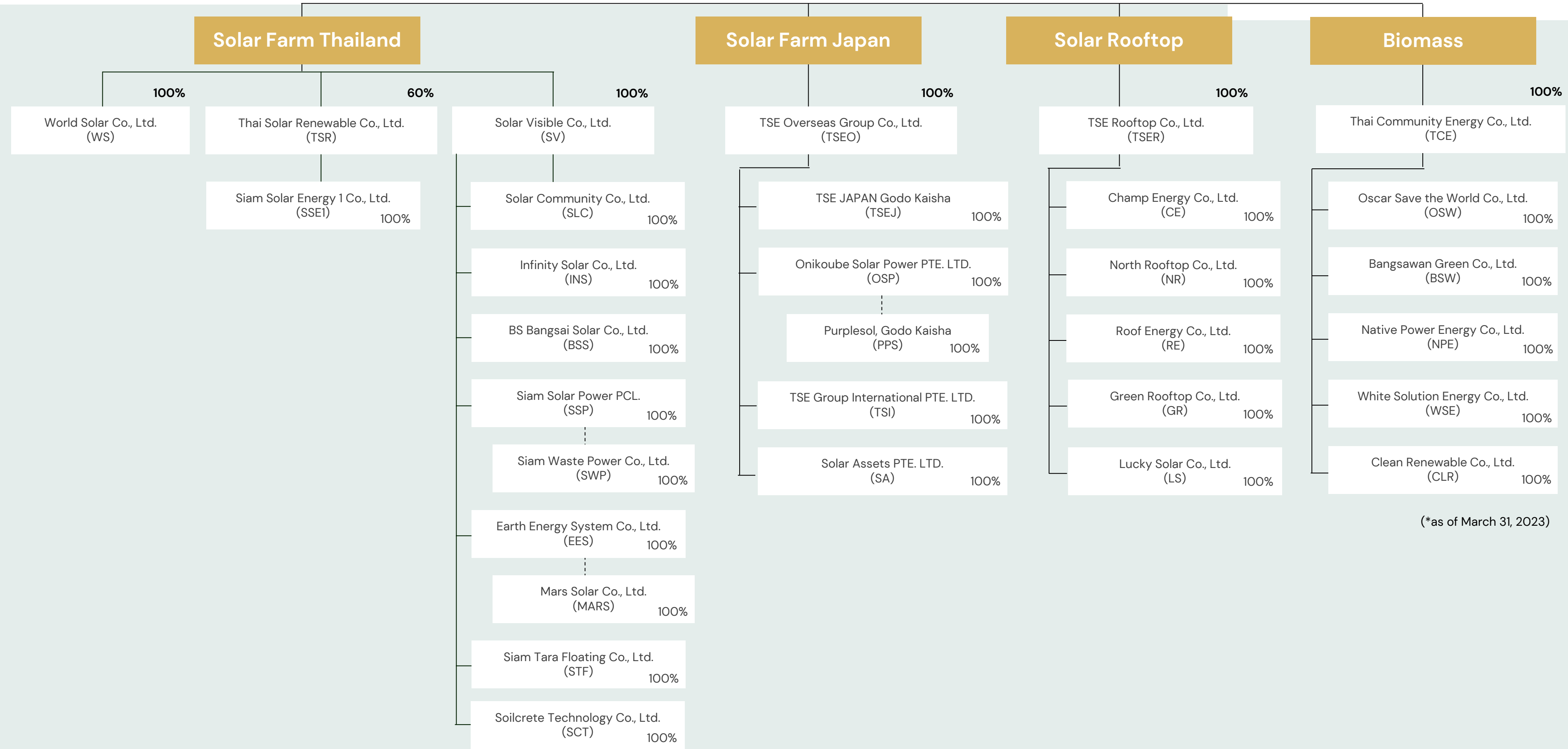
22.2 MWac

# MILESTONES

2008 – 2014	2015 – 2017	2018 – 2019	2020 – 2021	2023 – onward
<p><b>Solar Farms + Rooftops (TH)</b></p>	<p><b>Solar Farms (JP) + Biomass (TH)</b></p>	<p><b>Merger &amp; Acquisition</b></p>	<p><b>Private PPA</b></p>	<p><b>Exploring Investment Opportunity overseas + Expanding Private PPA</b></p>
<p><b>2008:</b> &gt; Established TSE </p> <p><b>2011:</b> &gt; Majority owned by Dr. Cathleen Maleenont &gt; COD Solar Thermal (4.5 MW)</p> <p><b>2013:</b> &gt; COD Solar PV TH 5 projects* (40 MW) *Partnership with GPSC  (TSE 60%)</p> <p><b>2014:</b> &gt; <b>Listed in MAI on 30 OCT 2014</b> &gt; COD Solar PV TH 5 projects* (40 MW) *Partnership with GPSC (TSE 60%) &gt; COD Solar Rooftop 5 Projects (5 MW)</p> 	<p><b>2015:</b> &gt; <b>Expanded TSE's business operation in Japan</b>  &gt; COD Solar PV JP 1 project (0.5 MW) &gt; COD Solar Rooftop 9 projects (9 MW)</p> <p><b>2016:</b> &gt; COD Solar PV "SLC" 1 project (1 MW) &gt; COD Solar PV JP 4 projects (6.49 MW) &gt; <b>Invested in Biomass 3 projects</b></p> <p><b>2017:</b> &gt; <b>Large Investment in Japan "Onikoube" project (147 MWp)</b> </p> 	<p><b>2018:</b> &gt; COD Biomass 3 projects (22.2 MW) &gt; COD Solar PV JP: Jyoso (1.25 MW) &gt; <b>Acquired</b> a new project "INS" in Ang Thong province (2.0 MW) in OCT 2018</p> <p><b>2019:</b> &gt; COD Solar PV JP: Hanamizuki (13.5 MW)  &gt; Fully Operate Biomass 3 projects (22.2 MW) &gt; <b>Moved to SET on 14 MAY 2019</b> &gt; Capital Increase to 2,117.7 MB. completely in OCT 2019. Note: TSR 212 million shares Total 530 MB.</p> <p>&gt; <b>Acquired:</b></p> <ol style="list-style-type: none"> <li>"BSS" in Ayutthaya province (5 MW) in MAR 2019</li> <li>"BSE" in Udonthani province (5 MW) in AUG 2019</li> <li>"SSP" in Ang Thong province (8 MW) in NOV 2019</li> </ol>	<p><b>2020:</b> &gt; Start project "Onikoube" Construction and receive project loan from BBL &gt; <b>Invested in a Floating Solar PV farm project in Prachinburi province (8.0 MW) in JUN 2020</b> &gt; Acquired: "EES" in Krabi province (5.0 MW) in JUL 2020 &gt; Disposed: "BSE" in Udonthani province (5.0 MW) in SEP 2020</p> <p><b>2021:</b> &gt; <b>COD Floating Solar PV project (8 MWp) since 25 May 2021</b> &gt; Disposed investment in 6 small Solar Farms in Japan (totaling 8.24 MW) in SEP 2021</p> 	<p><b>2022:</b> &gt; Divested in a solar farm "Hanamizuki" 13.5 MW in Japan in MAR 2022 &gt; <b>Acquired</b> a new project "SCT" Solar Tracking in Nakhonsawan province (8.0 MW) in JUN 2022. The acquisition process was completed in JUL 2022.</p> <p><b>2023:</b> &gt; 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 2022. &gt; COD "Onikoube" project <b>(147 MWp) since 10 May 2023</b></p>  <p>Ref. photo of "Onikoube" project</p>



# COMPANY STRUCTURE



(\*as of March 31, 2023)

# 02 FINANCIAL HIGHLIGHTS OF 1Q2023

Summary of TSE's Financial Performance



# HIGHLIGHTS OF 1Q2023

---

TSE have been awarded as renewable energy power producers and supplier to Thai Government according to the notification of ERC from renewable energy sources under the Feed-in Tariff (FiT) scheme 2022–2030 for the power plants with no fuel costs B.E. 2565 (2022) for **7 projects with total Installed Capacity of 128.89 MW and total Selling Capacity of 88.66 MW.**

- 2 SPP projects
- 4 VSPP projects and
- 1 Solar and battery energy storage system (BESS) project.



# 100% CONSTRUCTION COMPLETION WITH COD IN MAY,2023



(As of May, 2023)

The Onikoube Power Plant has started Commercial Operation Date (COD) on **10 May 2023**.

### Summary of "Onikoube" Project

Installed Capacity (MWp):	147
Selling Capacity (MWac):	133
Purchase Rate (FiT JP¥):	36
Location:	Miyagi Province, Japan
Off-taker:	Tohoku Utility
COD:	May 2023
Status:	Complete construction
Operated by:	OSP
Start Project Construction:	In April, 2020

### Project Components

EPC by:	TOSHIBA	
PV Module by:	Trina Solar	
Inverter by:	Huawei	

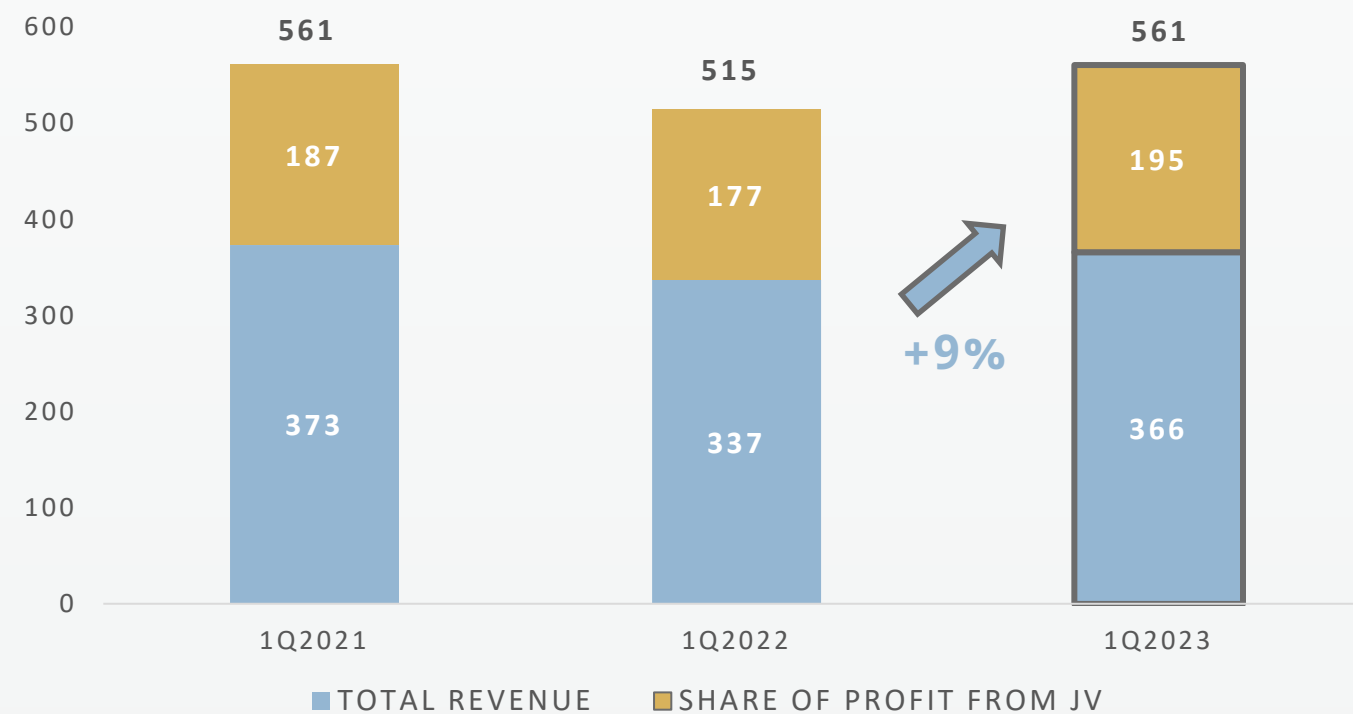
# INCOME STATEMENT 1Q2023

	Consolidated (Unit: Thousand Baht)		
	1Q2023	1Q2022	% Change
<b>Revenue</b>			
Electricity Sales	331.24	322.71	3%
Management Fee	14.69	12.53	17%
Share of Profit from joint ventures	195.05	177.44	10%
Other Income	19.86	1.87	962%
<b>Total Revenue</b>	<b>560.84</b>	<b>514.55</b>	<b>9%</b>
COGS	(214.52)	(231.52)	-7%
<b>Gross Profit</b>	<b>346.31</b>	<b>283.03</b>	<b>22%</b>
Administrative Expenses	(56.98)	(77.78)	-27%
Other gains (losses)	35.88	(19.30)	-290%
<b>Profit (loss) before Interest expense and Income tax</b>	<b>325.22</b>	<b>185.96</b>	<b>74%</b>
Finance costs	(89.05)	(78.30)	14%
<b>Profit before Income Tax</b>	<b>236.18</b>	<b>107.66</b>	<b>118%</b>
Income tax expenses	(2.90)	(3.15)	-8%
<b>Net Profit from Normal Operation</b>	<b>233.28</b>	<b>104.50</b>	<b>123%</b>
Extraordinary Gain	-	234.44	-100%
<b>Net Profit for the period</b>	<b>233.28</b>	<b>338.94</b>	<b>-31%</b>

# REVENUE AND EBITDA 1Q2023

(UNIT: MB)

## TOTAL REVENUE (3M) 1Q2023

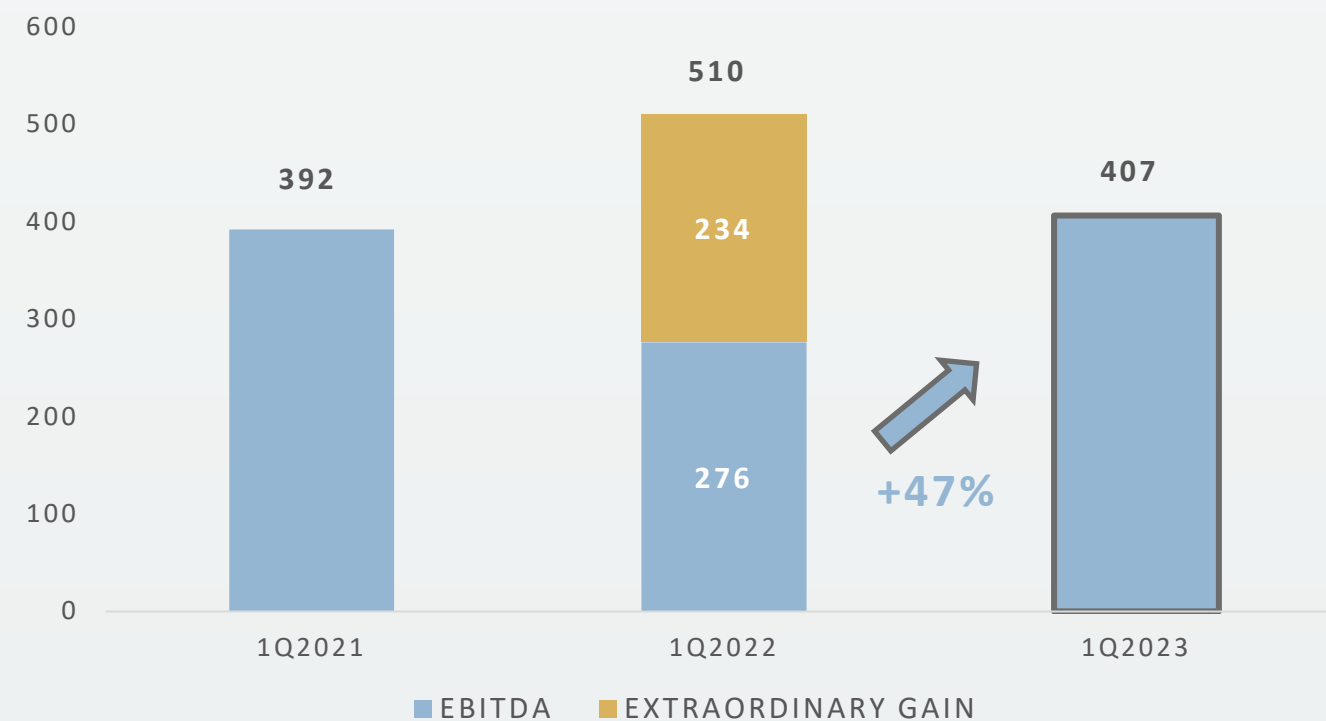


## TOTAL REVENUE AND SHARE OF PROFIT FROM JV +9%

Total revenue and Share of profit from JV in 1Q2023 were increased to 561 MB or +9% compared to 1Q2022 of 515 MB. Even though, the group's revenue in this quarter was decreased from divestment in solar farms in Japan in 1Q2022, but there were revenue from acquisition of new Solar farm named SOILCRETE which starting revenue and profit recognition since Q2/2022 onward including the announcement of ERC to increase the Fuel Adjustment Charge (Ft).

(UNIT: MB)

## EBITDA (3M) 1Q2023



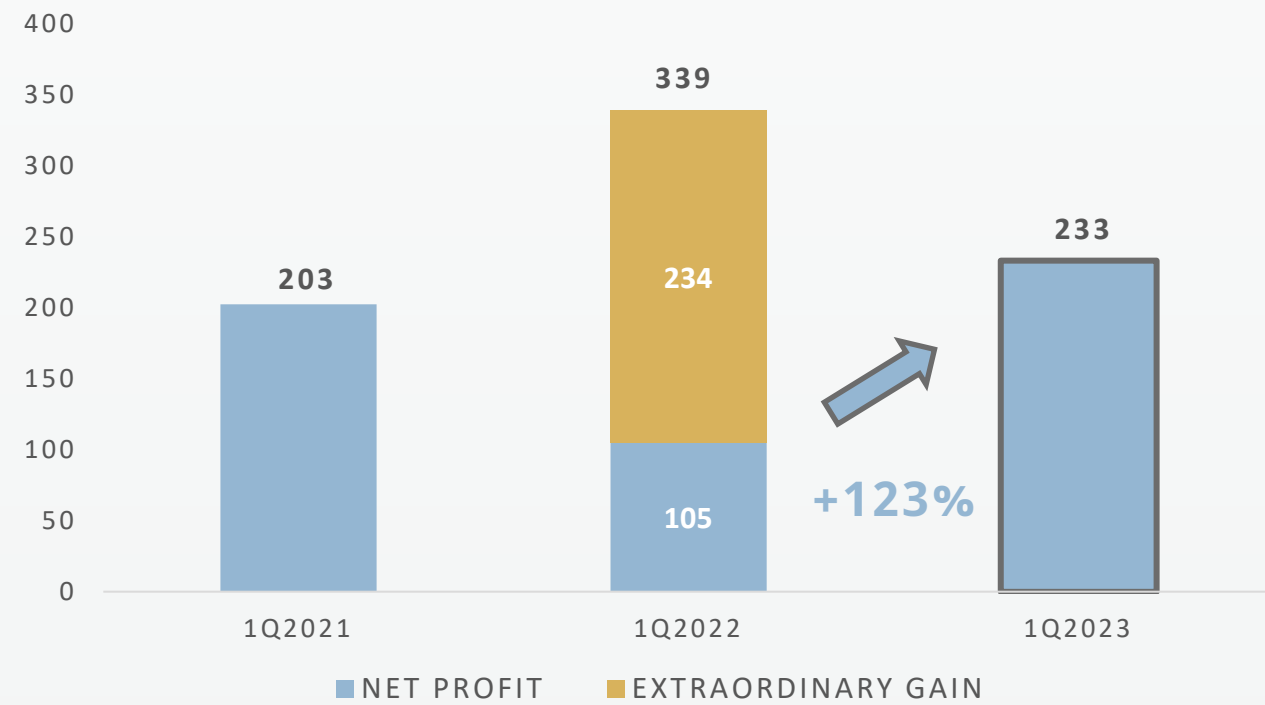
## EBITDA +47%

EBITDA in 1Q2023 was increased to 407 MB or +47% compared to 1Q2022 of 276 MB (exclude extraordinary gain). This was due to the Company has increased in revenue from new solar farm, the Fuel Adjustment Charge (Ft) and decrease in COGS as previously explained.

# NET PROFIT AND EPS

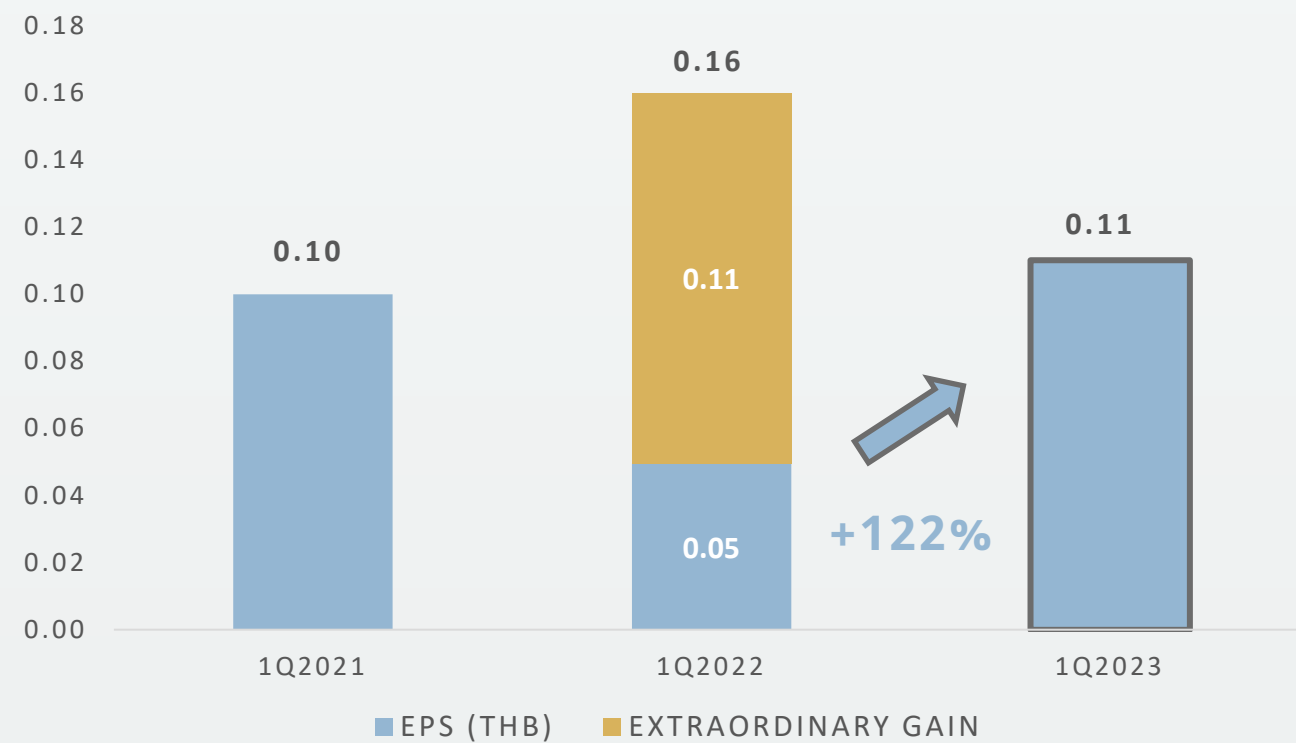
(UNIT: MB)

## NET PROFIT (3M)



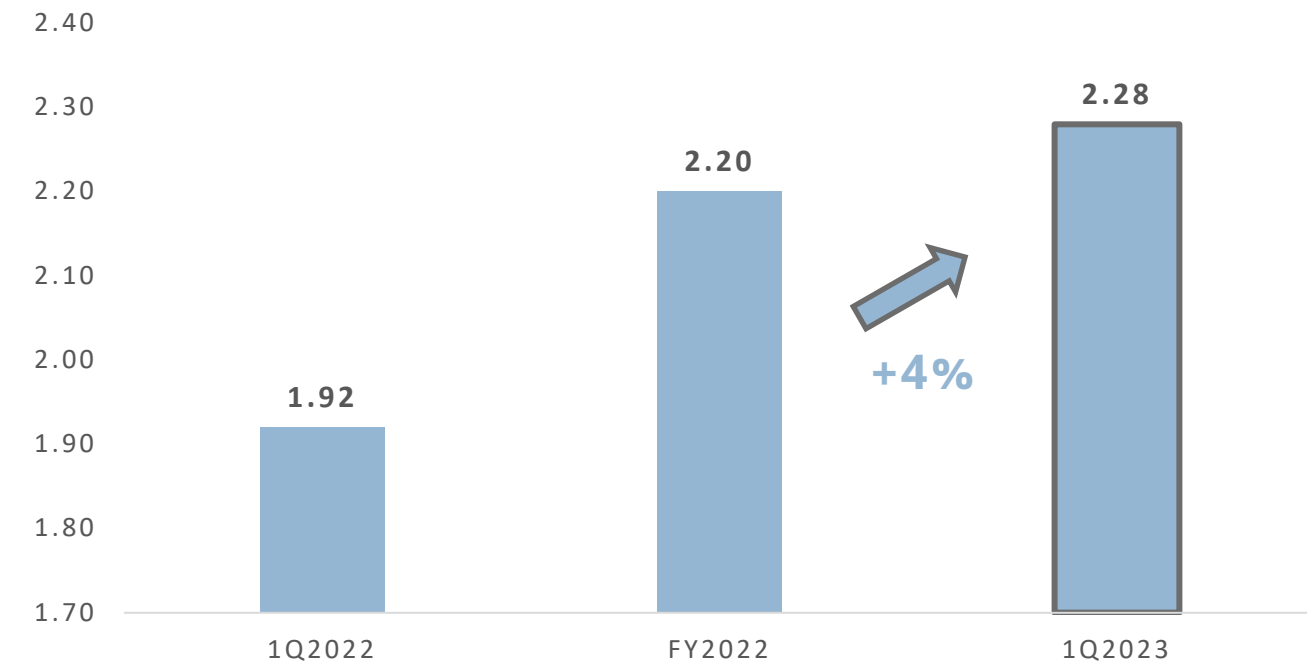
(UNIT: BAHT/SHARE)

## EPS (3M) (BAHT/SHARE)



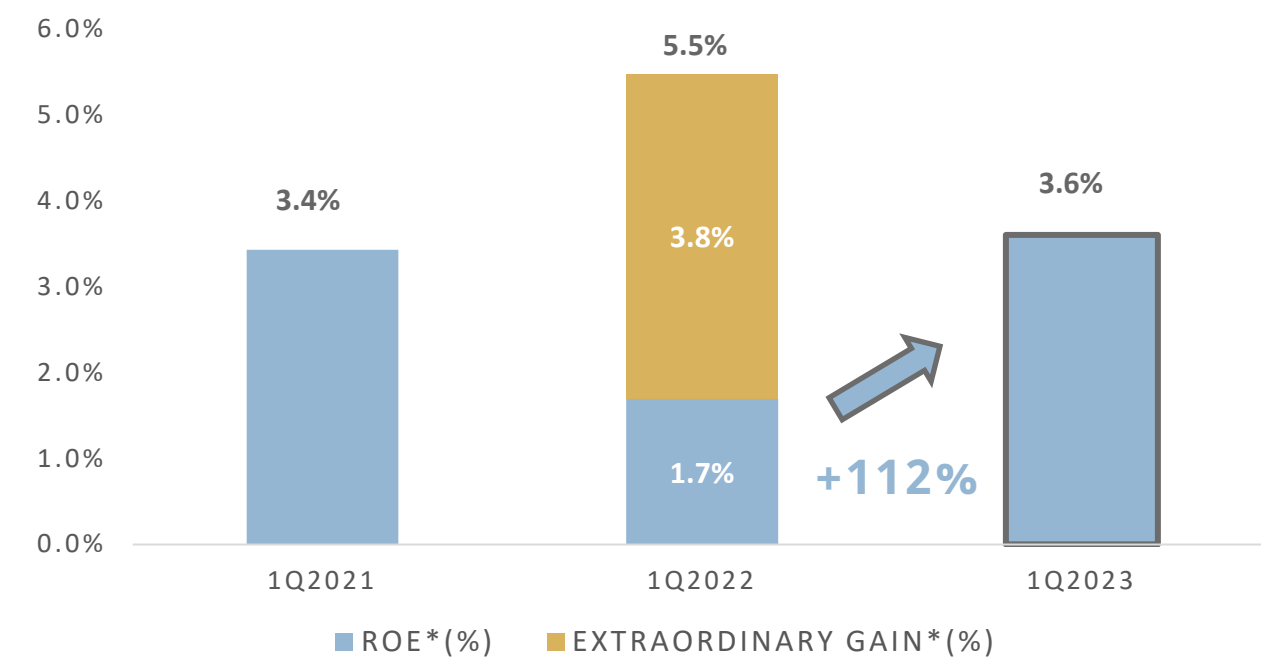
# D/E RATIO AND ROE

## D/E\* RATIO



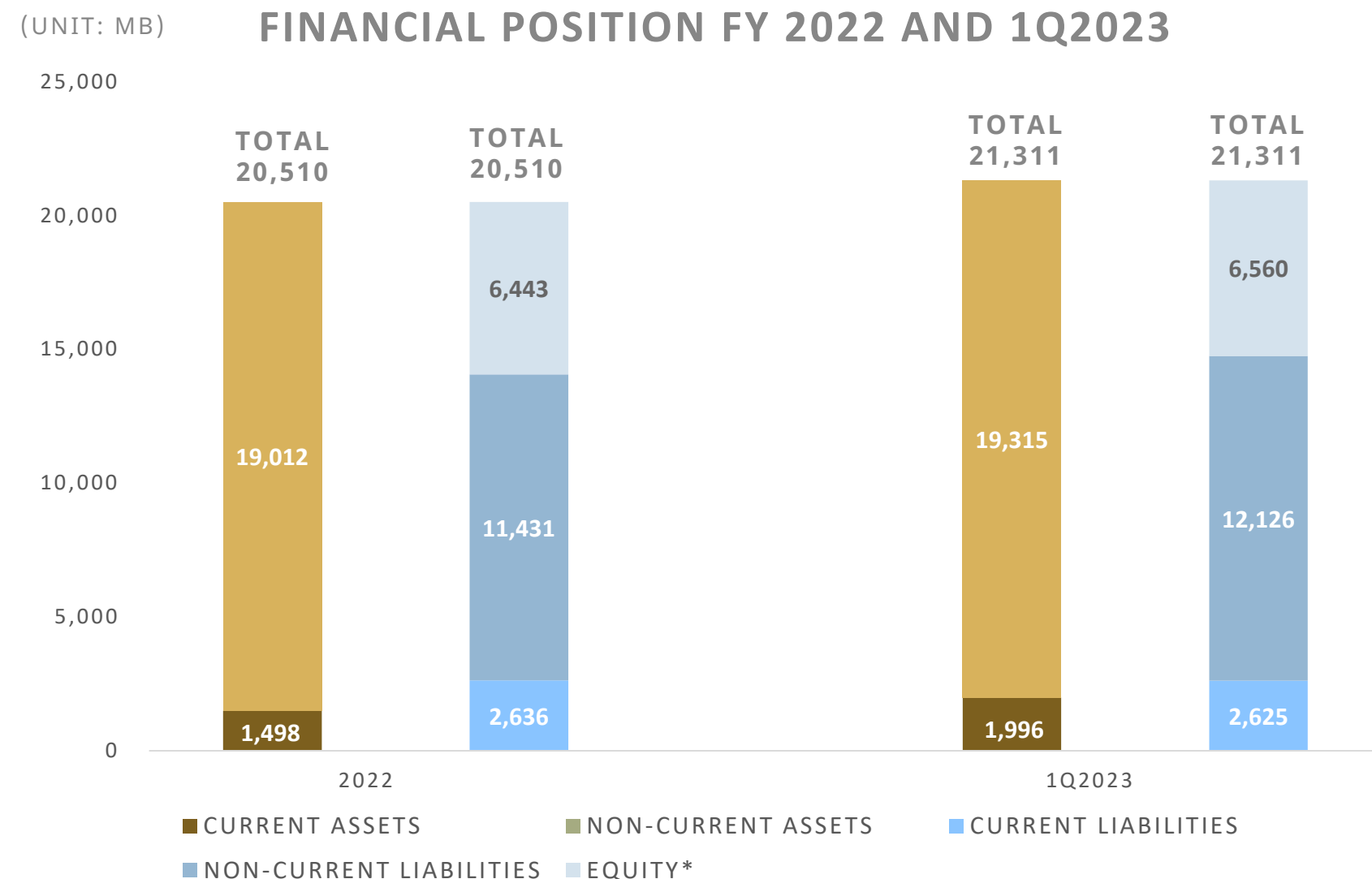
Note: \*Average Equity attributable to owners of the parent

## ROE\* (%) (3M)



Note: \* Annualized: ROE

# FINANCIAL POSITION 31 MARCH 2023



**TOTAL ASSETS**  
**+3.9%**

Increasing from 20,510 MB. to 21,311 MB. or +3.9%

**TOTAL LIABILITIES**  
**+4.9%**

Increasing from 14,067 MB. to 14,751 MB. or +4.9%

**EQUITY ATTRIBUTABLE TO OWNERS OF THE PARENT**  
**+1.8%**

Increasing from 6,443 MB. to 6,560 MB. or +1.8%

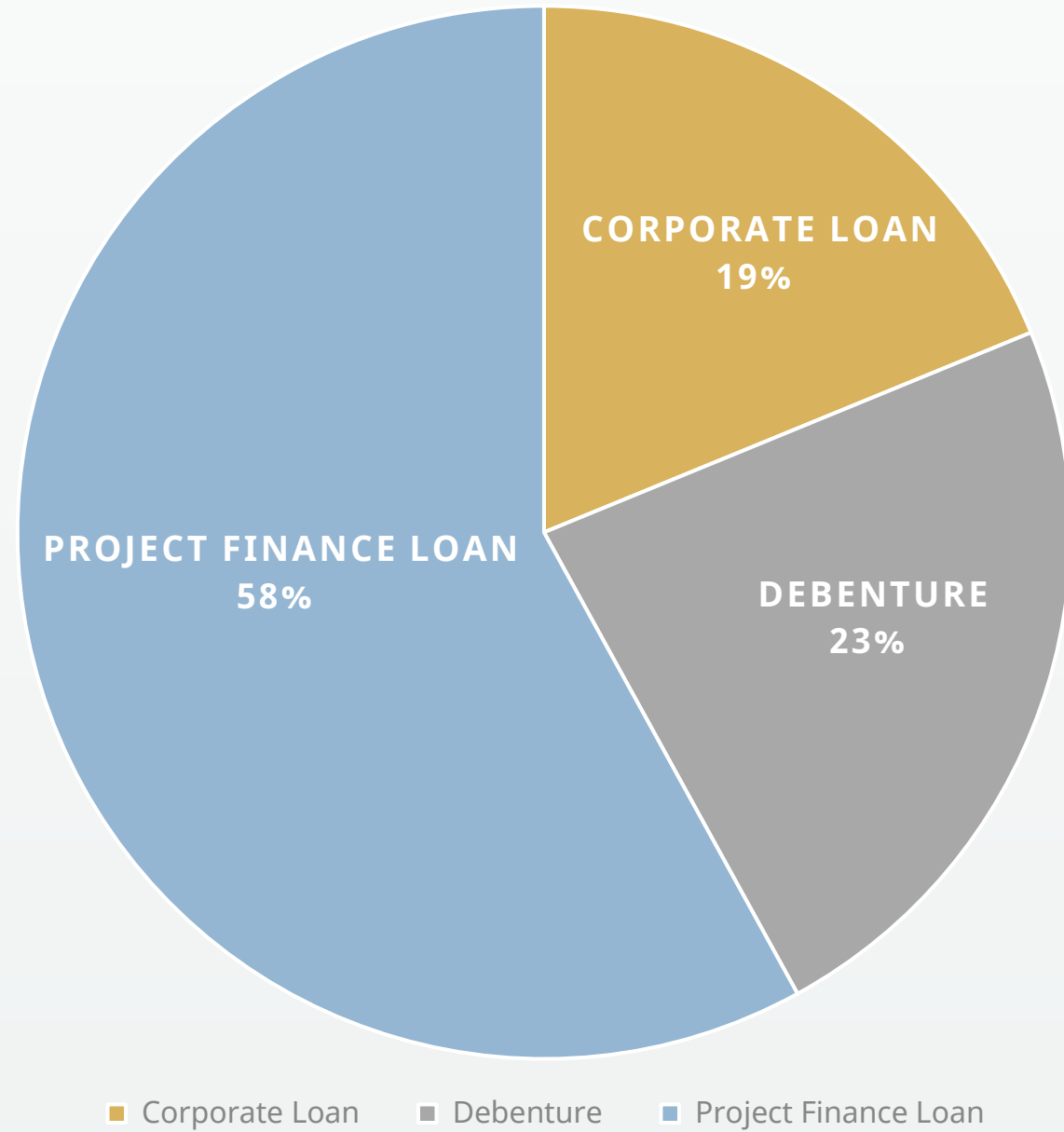
In 1Q2023, overall operating performance (exclude extraordinary profit) was increased as compared to 1Q2022 mainly due to increase in new project PV farm, the Fuel Adjustment Charge (Ft) resulting in grew up in revenue and also continuously efficient management of operating costs including administration expenses resulted in lower expenses and higher bottom-line number.

FINANCIAL POSITION	FY2022	FY1Q2023	+/- (%)
Assets	20,510	21,311	3.9%
Liabilities	14,067	14,751	4.9%
Equities*	6,443	6,560	1.8%

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



# DEBT STRUCTURE 1Q2023



## Project Finance Loan 58%

Most of interest bearing debt from Project Finance Loan for 58%, increased from Onikoube Project Finance Loan drawdown. 14% of Project Finance Loan from COD projects decreased accordingly from schedule repayment.

## Corporate Loan and Debenture 42%

The remaining interest bearing debt from Corporate Loan and Debenture for 42% decreased from schedule repayment.

# 03 OUTLOOK

Summary of TSE's Business Outlook  
and Investment Plan



## THAILAND

- Acquiring New Solar Projects under PDP Plan
- Penetrating Private PPA in Solar PV Farms
- Acquiring Existing Solar Projects in Thailand
- Expanding into Waste to Energy

## OVERSEAS

- Exploring new opportunities in renewable energy projects (i.e. Wind and Solar Farms) overseas



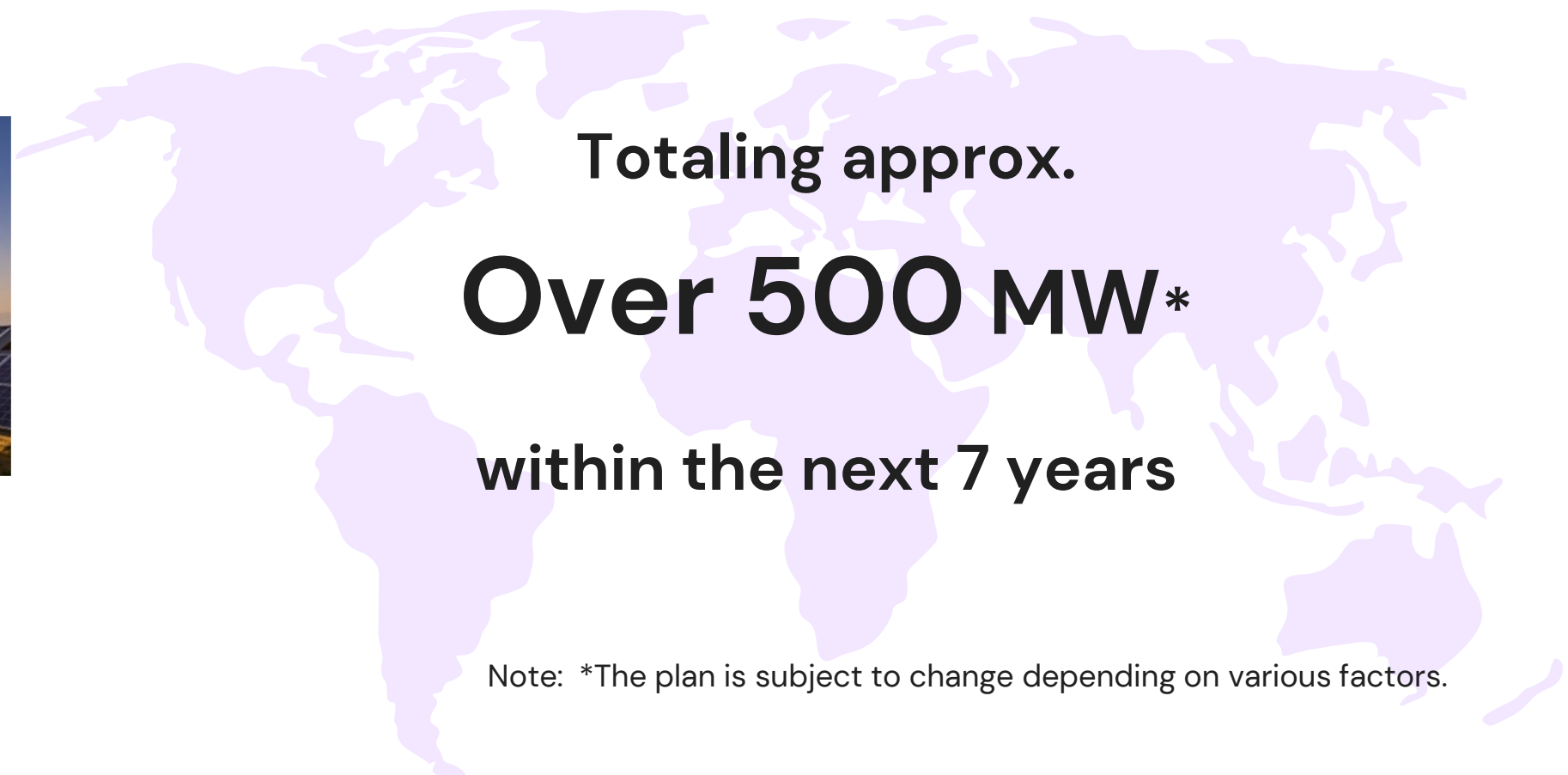
Solar PV Farm



Waste to Energy



Windfarm



Note: \*The plan is subject to change depending on various factors.

# CAPACITY GROWTH FORECAST

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

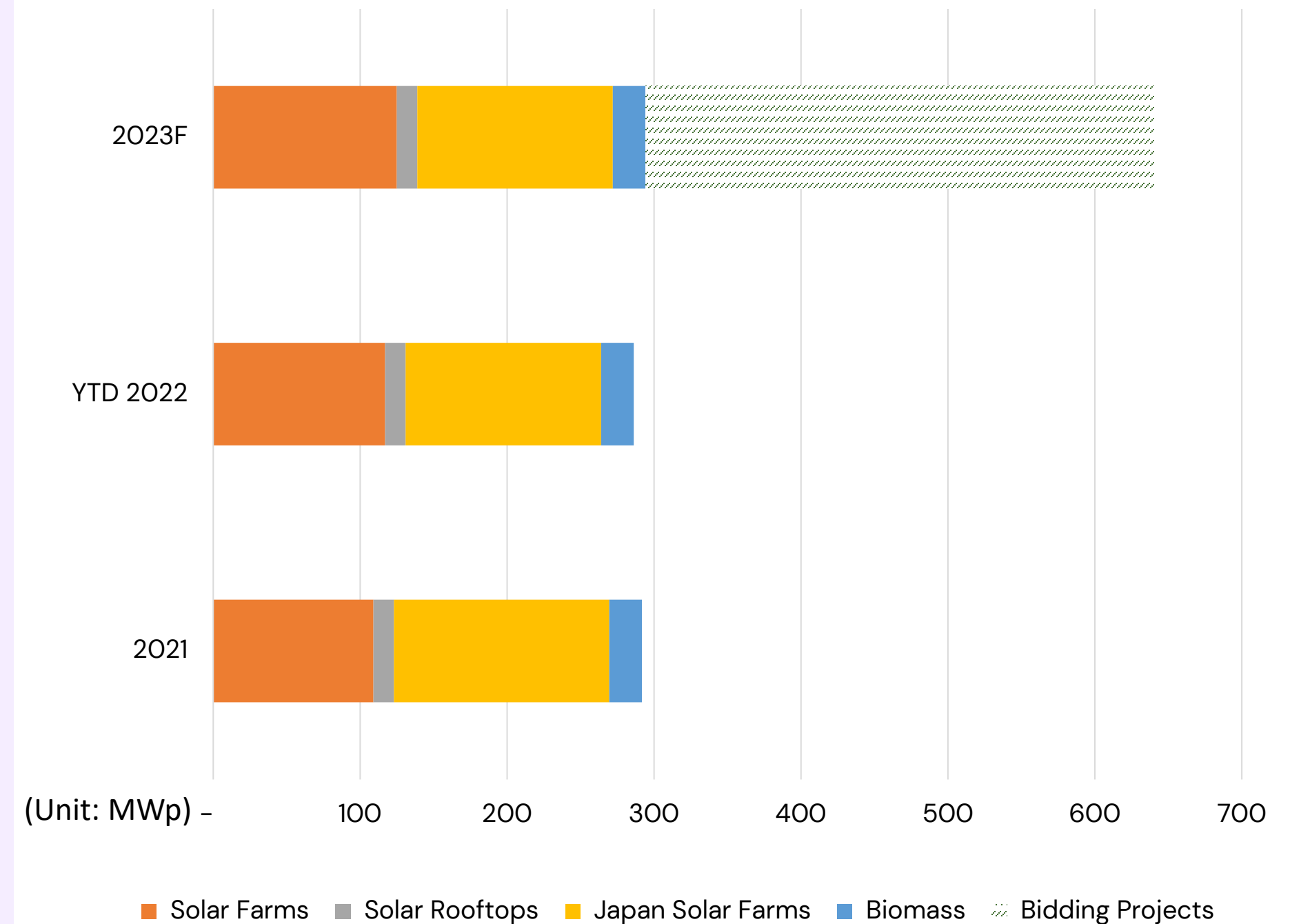
SPP

Small Power Producer (10 – 90 MW)

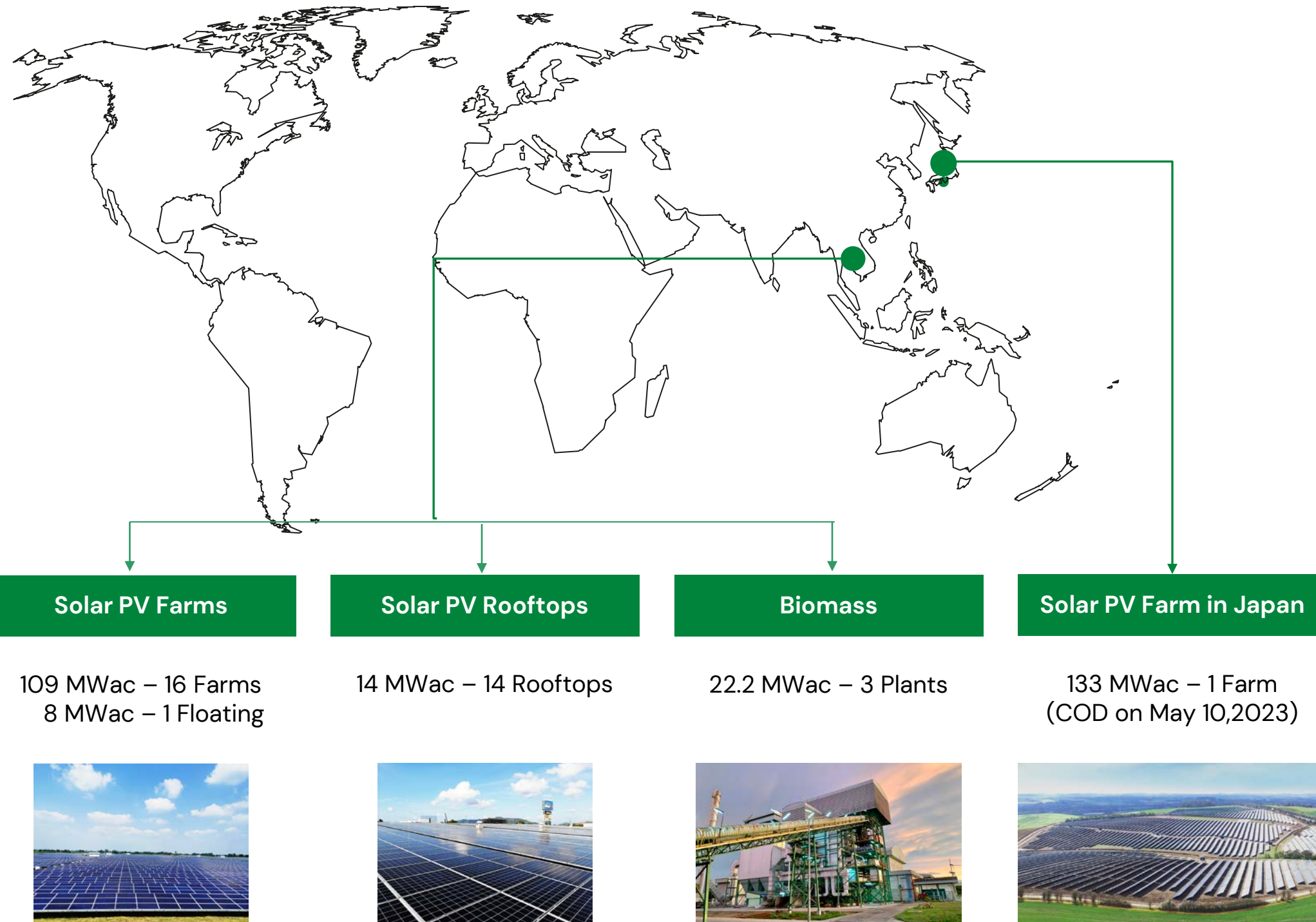
VSPP

Very Small Power Producer (<10 MW)

### Growth from New Projects under PDP Plan Bidding



# TSE's PROJECTS



**286.20 MWac**

Total of Selling Capacity (MW PPA)

**35 Projects**

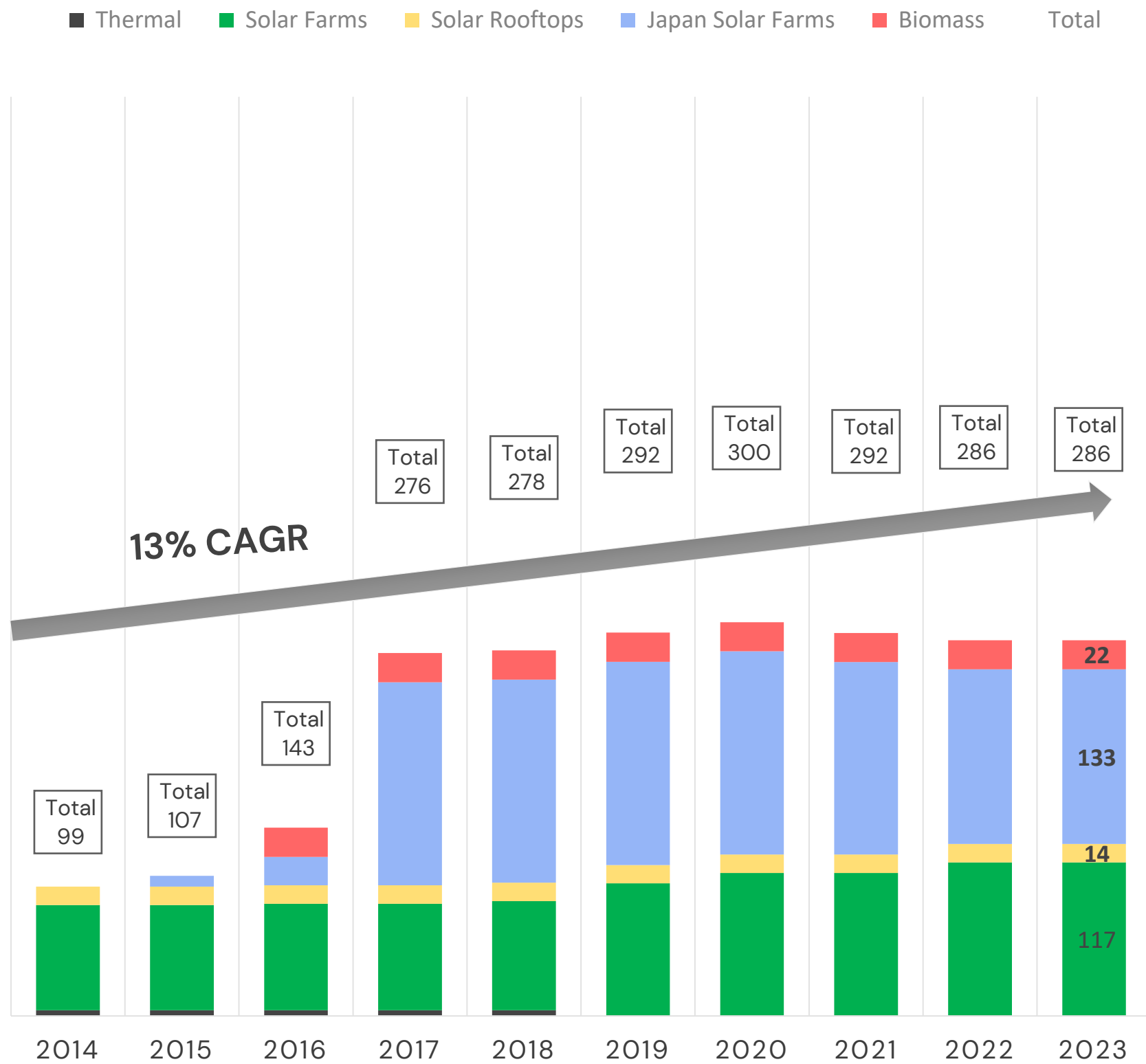
Total of TSE's Projects

Note: \*101 MW (69 MWe) > 10 projects – Partnership with GPSC (TSE 60%)

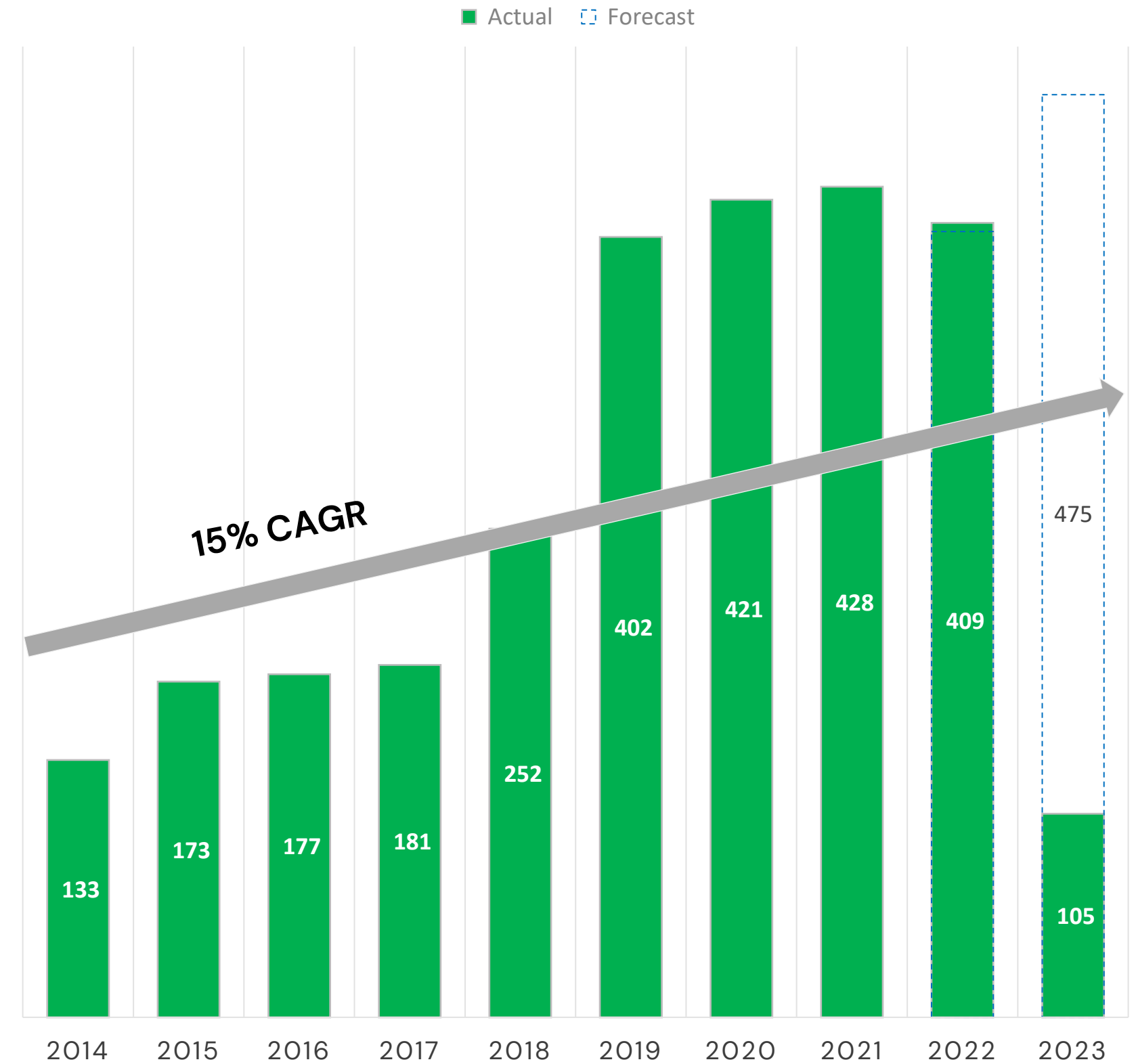
\*\* 286.20 MW > 35 projects (286.20 MWac) are in operation.

# CAPACITY GROWTH

## ACQUIRE CAPACITY (MW PPA)



## POWER OUTPUT PRODUCTION (MIL KWH)





# THANK YOU

**THAI SOLAR ENERGY PUBLIC COMPANY LIMITED**

***IR Contact***

*Tel. +66(0) 2258 4530-34 (IR #2222)*

*E-mail: [info@thaisolarenergy.com](mailto:info@thaisolarenergy.com)*

*Website: [www.thaisolarenergy.com](http://www.thaisolarenergy.com)*