



**ACE**

ABSOLUTE CLEAN ENERGY  
PUBLIC COMPANY LIMITED



FTSE  
Russell

MSCI 

# Absolute Clean Energy Public Company Limited

Analyst Meeting : Q2'2022 Results

Ticker : ACE

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# Table of Contents for Analyst Presentation



I	Business Updates
II	Operating Performance
III	Financial Highlights



"ABA" VSPP Thoen Project





***Convert Plants and Agri-residue  
to Energy***

***ACE The clean energy leader***



**Convert *Waste*  
to Energy**



**Convert *Sunlight*  
to Energy**

***ACE The clean energy leader***



### Key Events

- On 11<sup>th</sup> May 2022, the Company made dividend payment of 2021 at the rate of THB 0.02 per share, totaling THB 203.5 million.
- On 15<sup>th</sup> June 2022, the Company BOD's meeting has approved the Share Repurchase Project for Financial Management Purpose (Treasury Stock) in the amount of not exceeding Baht 1,000 million, number of shares to be repurchased not exceeding 400 million shares.



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## Krabi MSW Power Plant

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“ALCP” VSPP Krabi Project





# Overview of ACE's Portfolio



## ACE Business Portfolio in Thailand : June 2022

### Power Type

### Power Plant

### Others



#### Biomass

#### Co- gen

#### MSW

#### Solar

#### Biogas

#### Waste Landfill

13+13+1<sup>/1</sup>

1+0

2+2

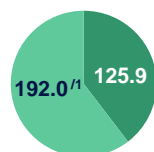
6+0

0+18

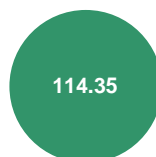
1+0

COD: 23  
Pipeline: 34<sup>/1</sup>

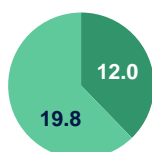
**Total: 57<sup>/1</sup>**



Total: 317.9<sup>/1</sup>



Total: 114.35



Total: 31.8



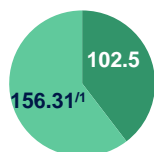
Total: 5.32



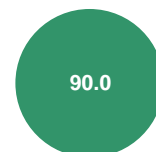
Total: 59.0

COD: 257.57  
Pipeline: 270.80

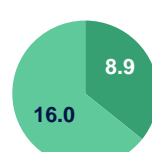
**Total: 528.37**



Total: 258.81<sup>/1</sup>



Total: 90.0



Total: 24.9



Total: 5.32<sup>/2</sup>



Total: 50.0

COD: 206.72  
Pipeline: 222.31

**Total: 429.03**

Existing

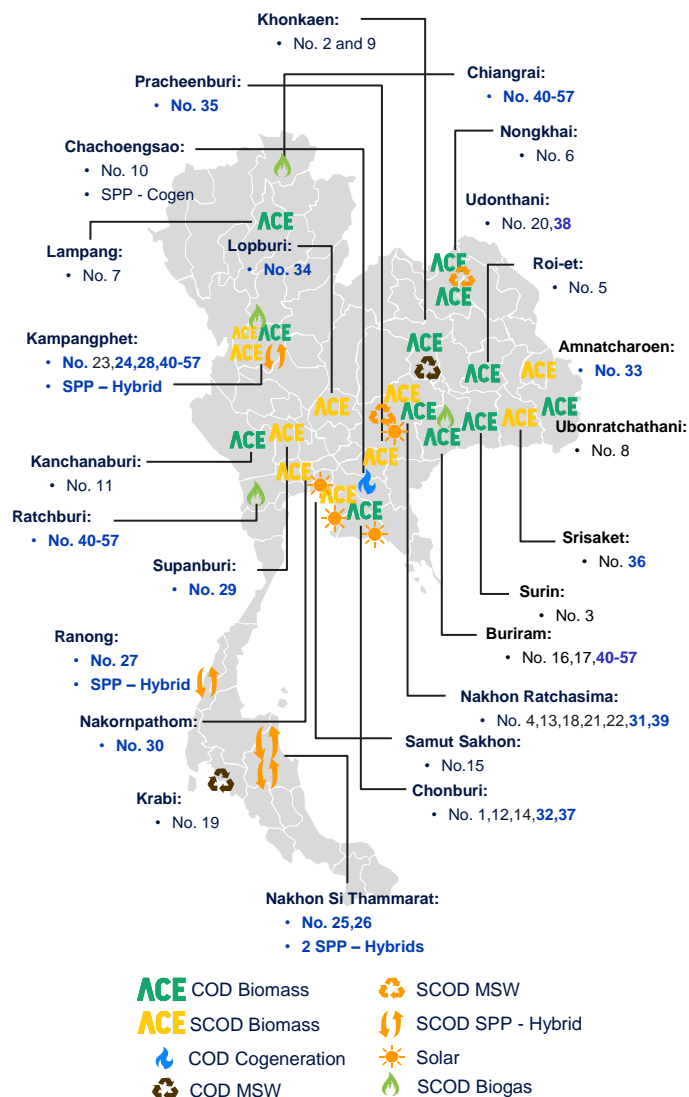
Under Development + Pending for Development

# Well-Balanced Portfolio with Diversified Locations



## Assets Overview

- Operating projects
- Under development projects & Pending for development projects



	Type	Installed / Equity MW	PPA MW	Location	COD / SCOD Date	Status	
Existing Projects (23 Projects)	1	VSPP - Biomass	9.9	8	Chonburi	24/4/2012	COD
	2	VSPP - Biomass	9.9	8	Khonkaen	2/5/2012	
	3	VSPP - Biomass	9.9	8	Surin	30/10/2012	
	4	VSPP - Biomass	9.9	8	Nakhon Ratchasima	16/1/2013	
	5	VSPP - Biomass	9.9	8	Roi-et	4/6/2013	
	6	VSPP - Biomass	9.9	8	Nongkhai	26/12/2013	
	7	VSPP - Biomass	9.9	8	Lampang	9/7/2014	
	8	VSPP - Biomass	9.9	8	Ubonratchathani	14/8/2015	
	9	VSPP - MSW	6	4.5	Khonkaen	29/11/2016	
	10	SPP - Cogen	114.35	90	Chachoengsao	10/2/2017	
	11	VSPP - Biomass	9.9	8	Kanchanaburi	16/8/2017	
	12	VSPP - Solar Rooftop	1	1	Chonburi	20/11/2018	
	13	VSPP - Solar Rooftop	0.73	0.73	Nakhon Ratchasima	22/2/2019	
	14	1 Solar Rooftop	1	1	Chonburi	27/9/2019	
	15	1 Solar Rooftop	0.83	0.83	Samut Sakhon	22/5/2020	
	16	VSPP - Biomass	7.5	6.5	Buriram (ACES)	24/1/2006	
	17	VSPP - Biomass	9.5	8	Buriram (ABE)	6/2/2008	
	18	VSPP - Biomass	9.9	8	Nakhon Ratchasima (AAE)	10/11/2011	
	19	VSPP - MSW	6	4.4	Krabi	28/12/2020	
	20	Waste Landfill	N/A	N/A	Udonthani	5/1/2021	
	21	1 Solar Rooftop	0.24	0.24	Nakhon Ratchasima	25/2/2021	
	22	Floating Solar	1.515	1.515	Nakhon Ratchasima	31/3/2021	
	23	VSPP - Biomass	9.9	8	Kamphangphet	26/11/2021	
24	1 SPP - Hybrid	20	13.31	Kamphangphet	Within 2023	PPA signed	
25,26	2 SPP - Hybrids	50	43	Nakhon Si Thammarat	TBD	PPA signed	
27	1 SPP - Hybrid	23	20	Ranong	TBD	EIA Approved	
28	VSPP - Biomass	9.9	8	Kamphangphet	Within 2024	PPA to be signed	
29	VSPP - Biomass	9.9	8	Supanburi	Within 2024		
30	VSPP - Biomass	9.9	8	Nakornpathom	Within 2024		
31	VSPP - Biomass	9.9	8	Nakhon Ratchasima	Within 2024		
32	VSPP - Biomass	9.9	8	Chonburi	Within 2024		
33	VSPP - Biomass	9.9	8	Amnatcharoen	Within 2024		
34	VSPP - Biomass	9.9	8	Lopburi	Within 2024		
35	VSPP - Biomass	9.9	8	Pracheenburi	Within 2024		
36	VSPP - Biomass	9.9	8	Srisaket	Within 2024		Under consideration of Administrative Court
37	VSPP - Biomass <sup>/1</sup>	9.9	8	Chonburi	Within 2024		PPA to be signed
38	VSPP - MSW	9.9	8	Udonthani	Within 2023	PPA to be signed	
39	VSPP - MSW	9.9	8	Nakhon Ratchasima	Within 2023	PPA to be signed	
40-57	VSPP - Biogas	59	50	Chiangrai / Kamphaengphet / Buriram / Ratchaburi	2023 - 2024	PPA to be signed	
<b>Total</b>		<b>57</b>	<b>528.37</b>	<b>429.03</b>			



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# Operating Performance

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“ACP1” VSPP Banbueng Project



# ACE's Biomass power plant (27 power plants, 317.9 MW)<sup>1,2,3</sup>



**ACP1 Ban Bueng**



**ALCP1 Si Chiang Mai**



**AAP2 Chokchai**



**ACP2 Phonthong**



**ALCP2 Sirindhorn**



**AAP1 Nam Phong**

**Remark:** /1 Including APP's capacity MW of 9.9, Currently, APP's shareholders sent LOI for APP share purchase proposal to ACE  
/2 Capacity MW  
/3 Including UA Wittaya plc biomass power plants of 26.9 MW

- **COD 13 power plants = 125.9 MW**
- **Under development 14 power plants = 192.0 MW**

# ACE's Biomass power plant (27 power plants, 317.9 MW)<sup>1,2,3</sup>



ACP3 Bo Ploy



AAPP1 Tanee



ABA1 Thoen



AAE Muang Korat



ABE Don Mon



ACES Muang Burirum



ACP4 Khlong Khlung

**Remark:** /1 Including APP's capacity MW of 9.9, Currently, APP's shareholders sent LOI for APP share purchase proposal to ACE  
/2 Capacity MW  
/3 Including UA Wittaya plc biomass power plants of 26.9 MW

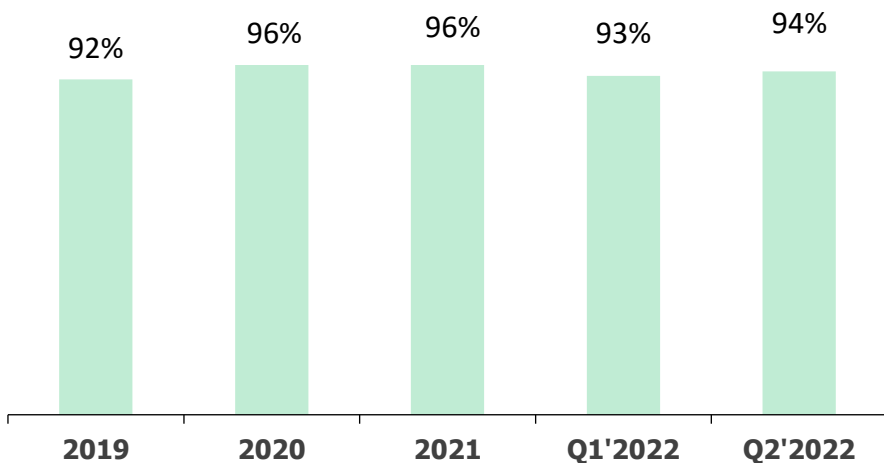
- **COD 13 power plants = 125.9 MW**
- **Under development 14 power plants = 192.0 MW**

# ACE's Biomass Operating Performance (10 Projects)

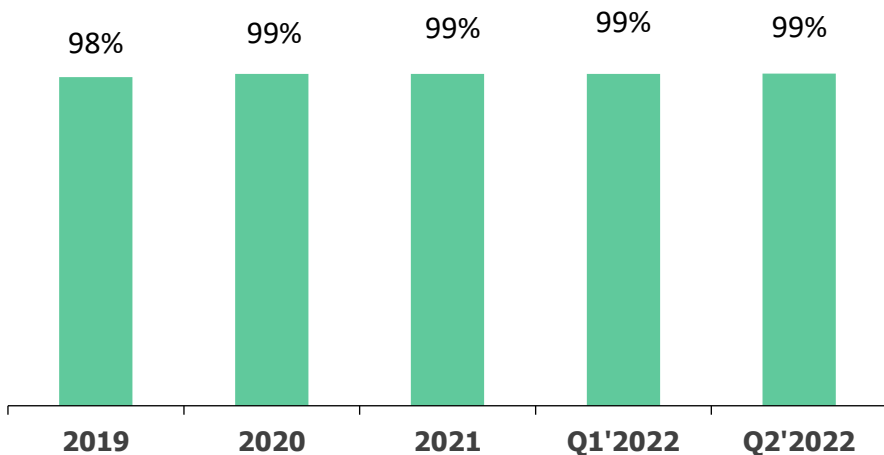


## Plant Performance (10 Projects)

### Availability Factor\*



### Capacity Factor\*\*



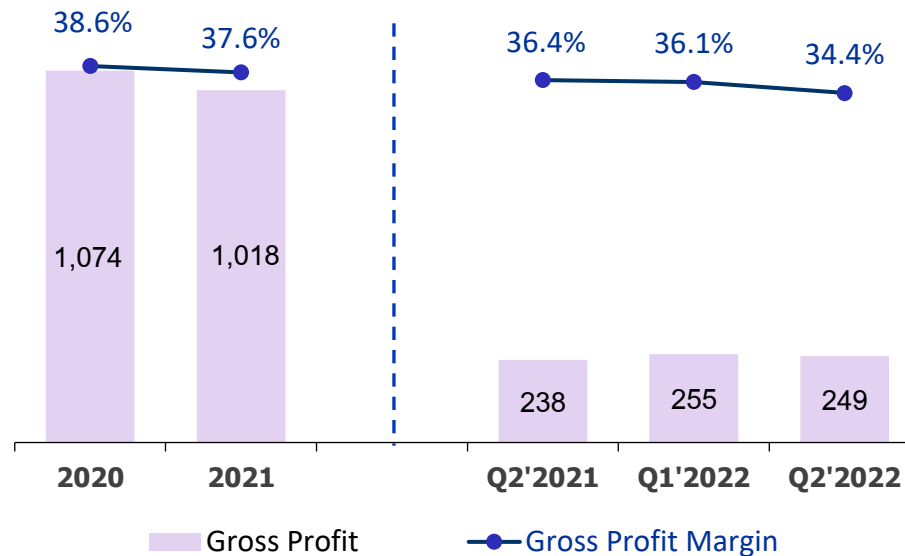
#### Remark:

\* Availability Factor = Total operating hours/(Days\*24 hours)

\*\* Capacity Factor = Electricity Unit sold /(Total operating hours\*Total selling Capacity)

## Gross Profit and Margin

Unit : THB mln



### Key Observation

- **Gross Profit and Gross Profit Margin**
  - **QoQ** : -2.4% in Gross Profit and -1.7% in Gross Profit Margin
  - **YoY** : +4.6% in Gross Profit and -2.0% in Gross Profit Margin
- **Gross Profit** decreased QoQ, due to the slightly increased of feedstock cost from Q1'2022.
- **Gross Profit** increased YoY, mainly from the COD of Khlong Khlung Power Plant Project on 26 November 2021.

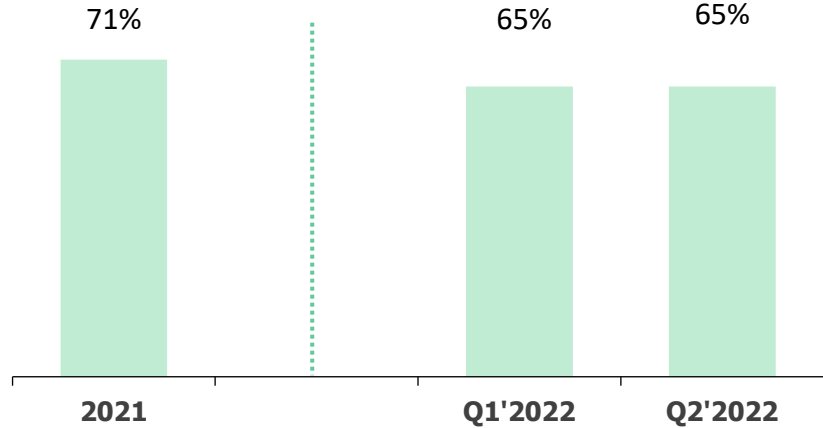


# ACE's Biomass Operating Performance (3 Acquired Projects)

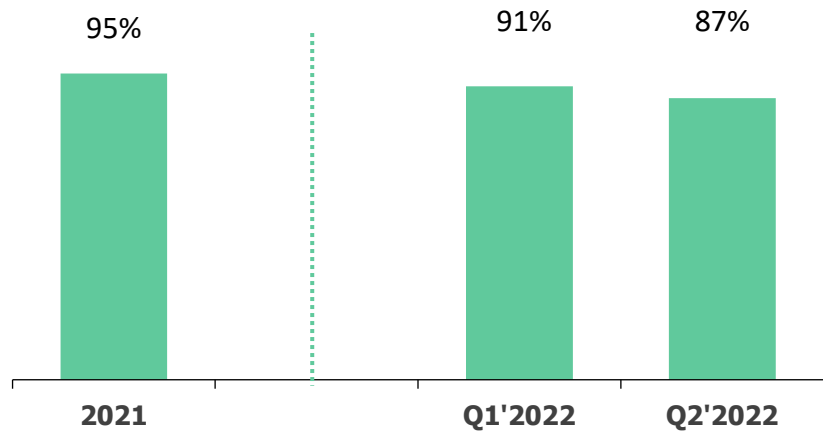


## Plant Performance (3 Acquired Projects)

### Availability Factor\*



### Capacity Factor\*\*

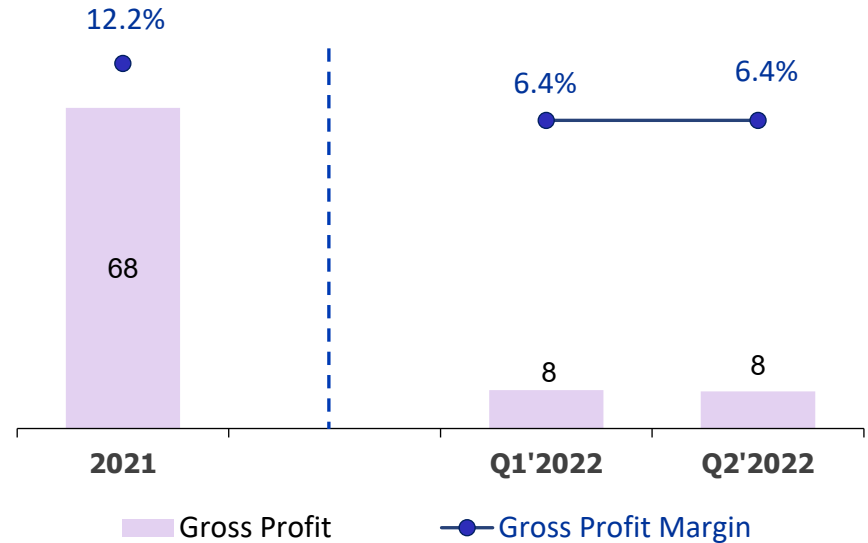


#### Remark:

\* Availability Factor = Total operating hours / (Days \* 24 hours)  
 \*\* Capacity Factor = Electricity Unit sold / (Total operating hours \* Total selling Capacity)

## Gross Profit and Margin

Unit : THB mln



### Key Observation

- 3 Biomass projects have been transferred to ACE since **21 Aug 2020**.
- ACES and ABE recommenced its operation on **15 Dec 2020** and **27 Dec 2020**, respectively.
- **Q2'2022** : **Gross Profit** was THB 8 mln and **Gross Profit Margin** was 6.4%, the same level compared to the previous quarter



**MSW Khon Kaen**



**MSW Krabi**

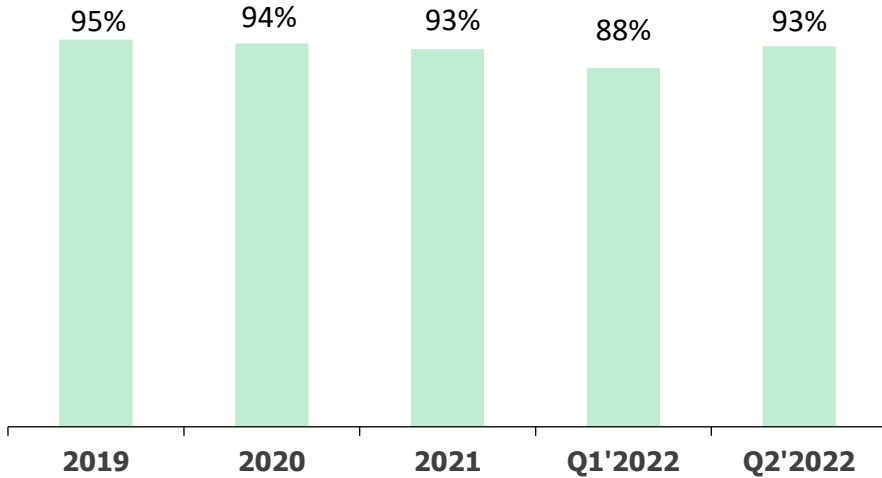
- *COD 2 power plants = 12 MW*
- *Under development 2 power plants = 19.8 MW*

# ACE's MSW Operating Performance

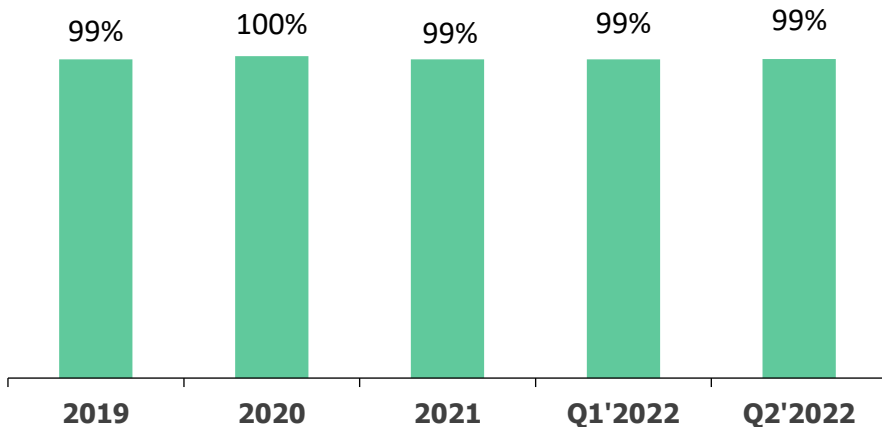


## Plant Performance (2 Projects)

### Availability Factor

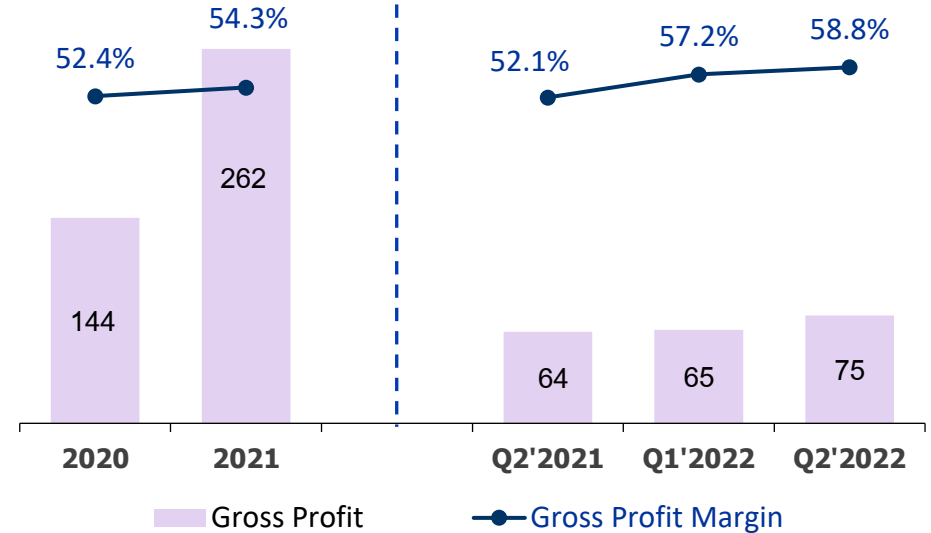


### Capacity Factor



## Gross Profit and Margin

Unit : THB mln



### Key Observation

- **Quarterly Gross Profit and Gross Profit Margin**
  - **QoQ : +15.3% in Gross Profit and +1.6% in Gross Profit Margin**
  - **YoY : +17.9% in Gross Profit and +6.7% in Gross Profit Margin**
- **Gross Profit in Q2'22** increased QoQ, mainly from the lower planned-shutdown hours than the previous quarter.



# ACE's Co-generation Power Plant



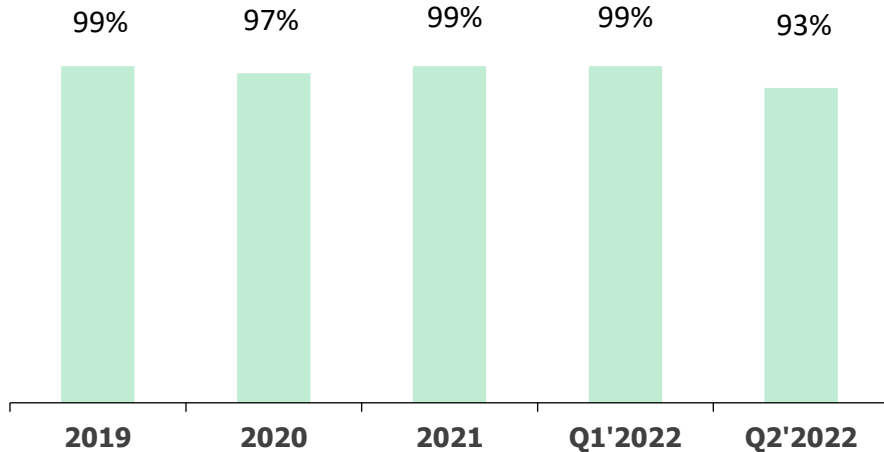
**AAA Chachoengsao**

# ACE's Co-Gen Operating Performance

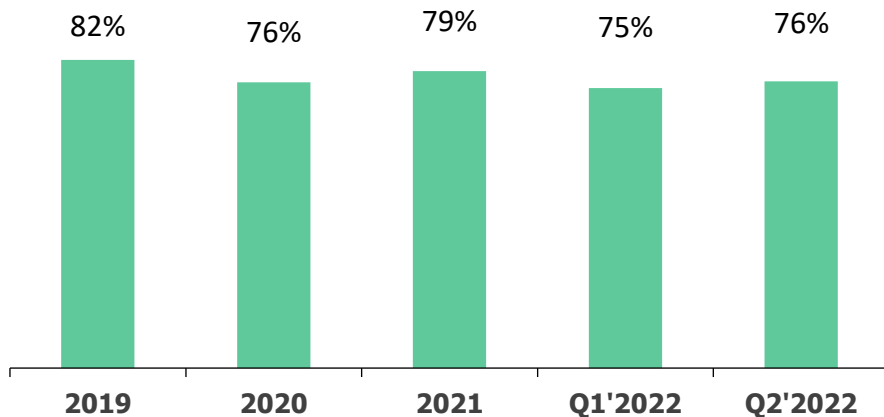


## Plant Performance (1 Project)

### Availability Factor

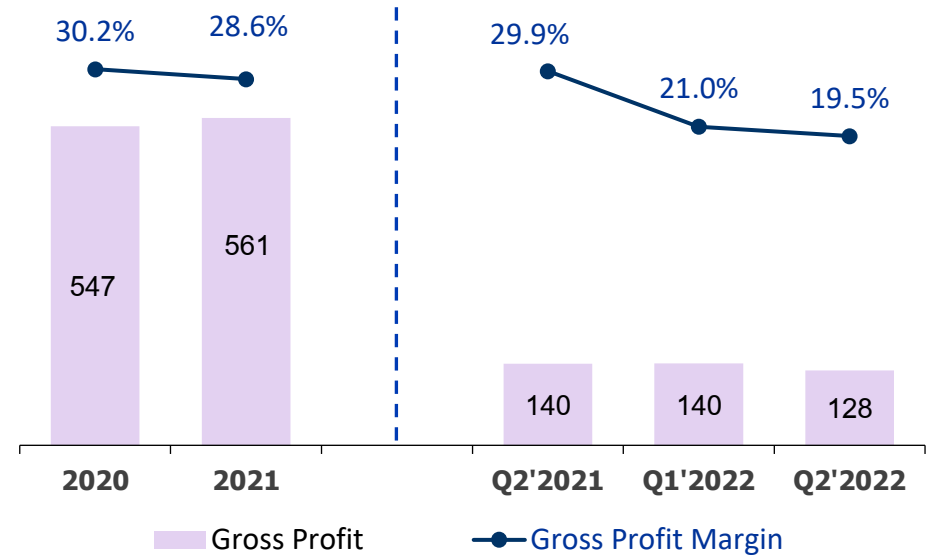


### Capacity Factor



## Gross Profit and Margin

Unit : THB mln



### Key Observation

- Quarterly Gross Profit and Gross Profit Margin
  - QoQ : -8.6% in Gross Profit and -1.5% in Gross Profit Margin
  - YoY : -8.1% in Gross Profit and -10.4% in Gross Profit Margin
- The gross profit in Q2'2022 decreased as the result of maintenance shutdown in Q2'2022
- Average Gas Price in Q2'2022 slightly decreased from Q1'2022 (-4.3% QoQ)

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# Financial Highlights

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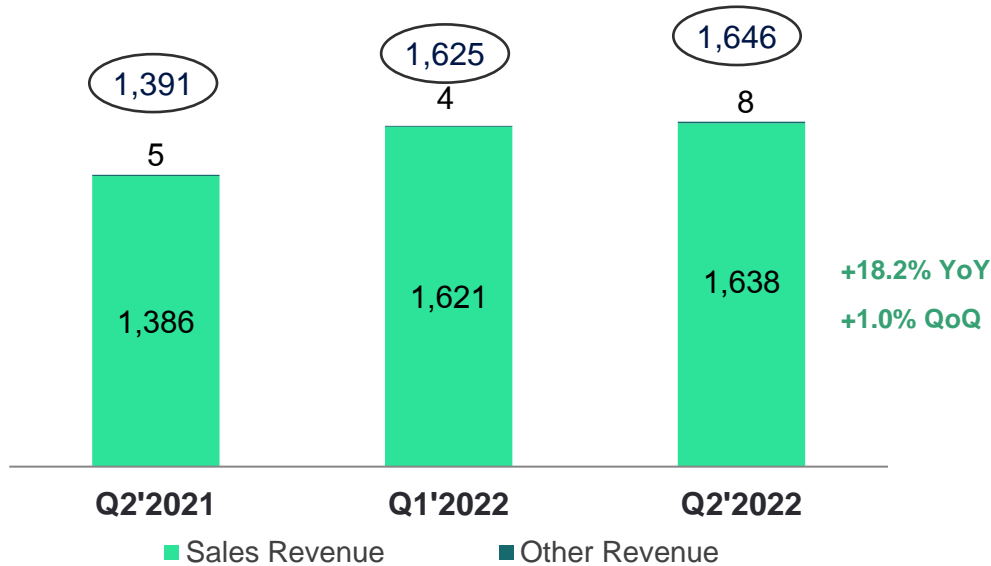
“AAA1” SPP Koh Kanoon Project



# Q2'2022 Financial Highlight P&L

## Revenue<sup>1</sup>

Unit : THB mln

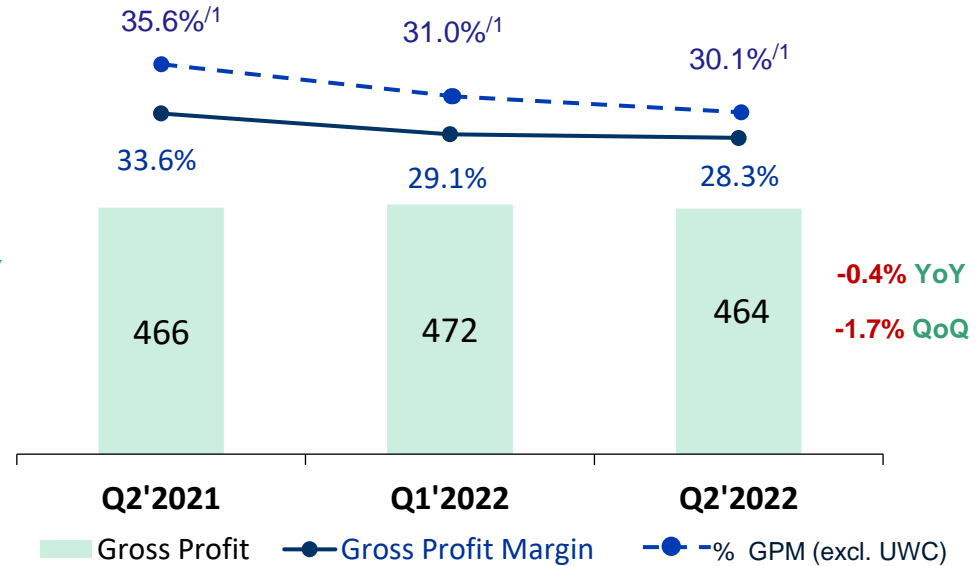


### Sale Revenue in Q2'22 was THB 1,638 mln

- **QoQ : +1.0%** mainly from the increase of Biomass and MSW power plant revenues from the lower planned-shutdown hours in the second quarter of 2022
- **YoY : +18.2%** results from:
  - The recognition of new biomass power plant in Khlong Khlung (COD 26 Nov 2021)
  - The increase of Co-Gen power plant revenue from an increase in unit rate which was adjusted in line with the average gas price

## Gross Profit and Margin

Unit : THB mln



### Gross Profit in Q2'22 was THB 464 mln

- **QoQ : -1.7%** from GP of Biomass *decreased* by THB 5.9 mln  
GP of MSW *increased* by THB 10.0 mln  
GP of Co-Gen *decreased* by THB 12.0 mln
- **YoY : -0.4%** from GP of Biomass *decreased* by THB 2.0 mln  
GP of MSW *increased* by THB 11.4 mln  
GP of Co-Gen *decreased* by THB 11.3 mln

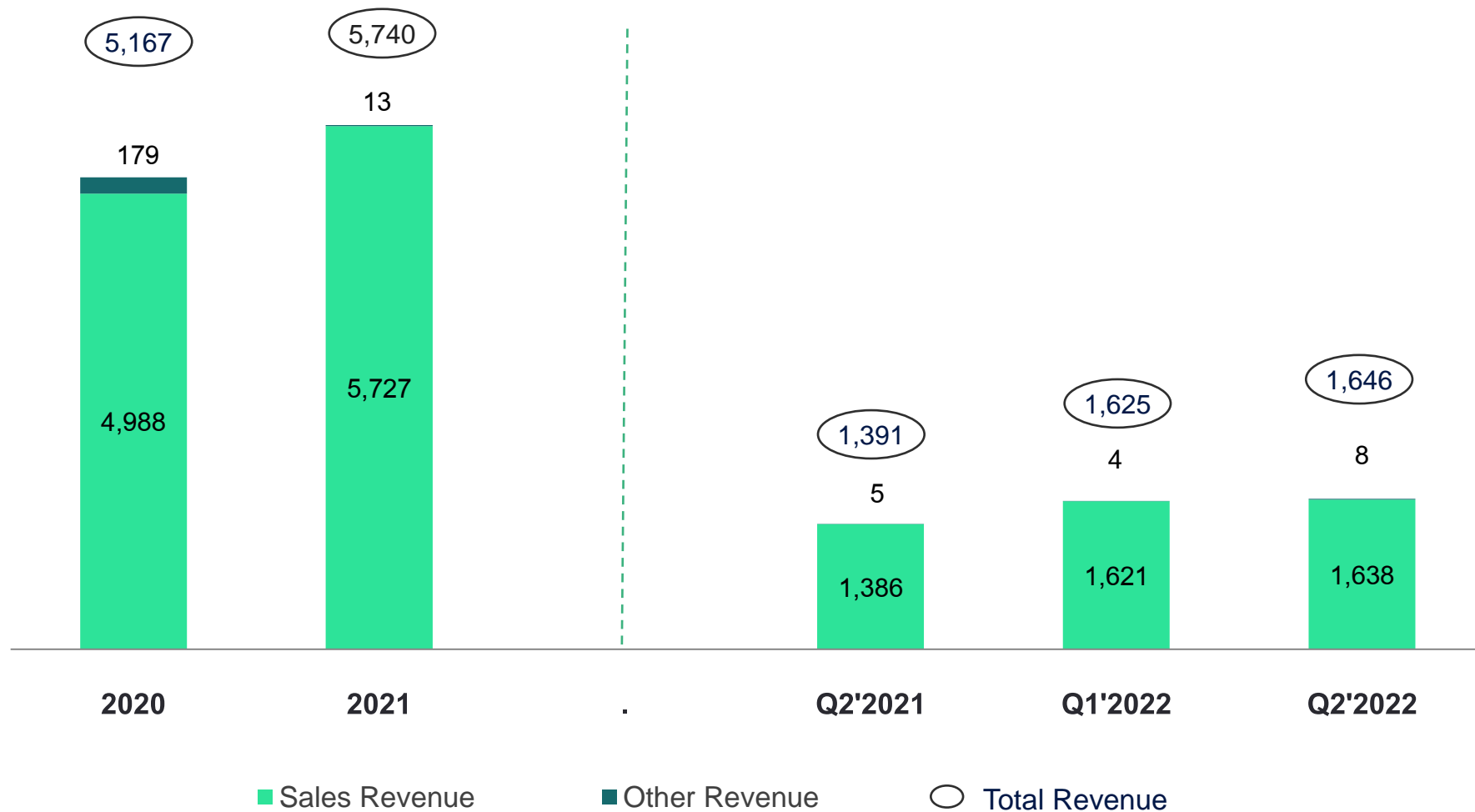
### Gross Profit Margin in Q2'22 was 28.3%

- **QoQ : -0.8%** mainly from the result of natural gas power plant maintenance shutdown in the second quarter of 2022
- **YoY : -5.3%** mainly from
  - the expiration of FIT Premium period of two biomass power plants
  - the average gas price increased which had impact to the gross profit margin but not affected to the absolute gross profit

# Financial Highlight – Revenue<sup>1</sup>



Unit : THB mln

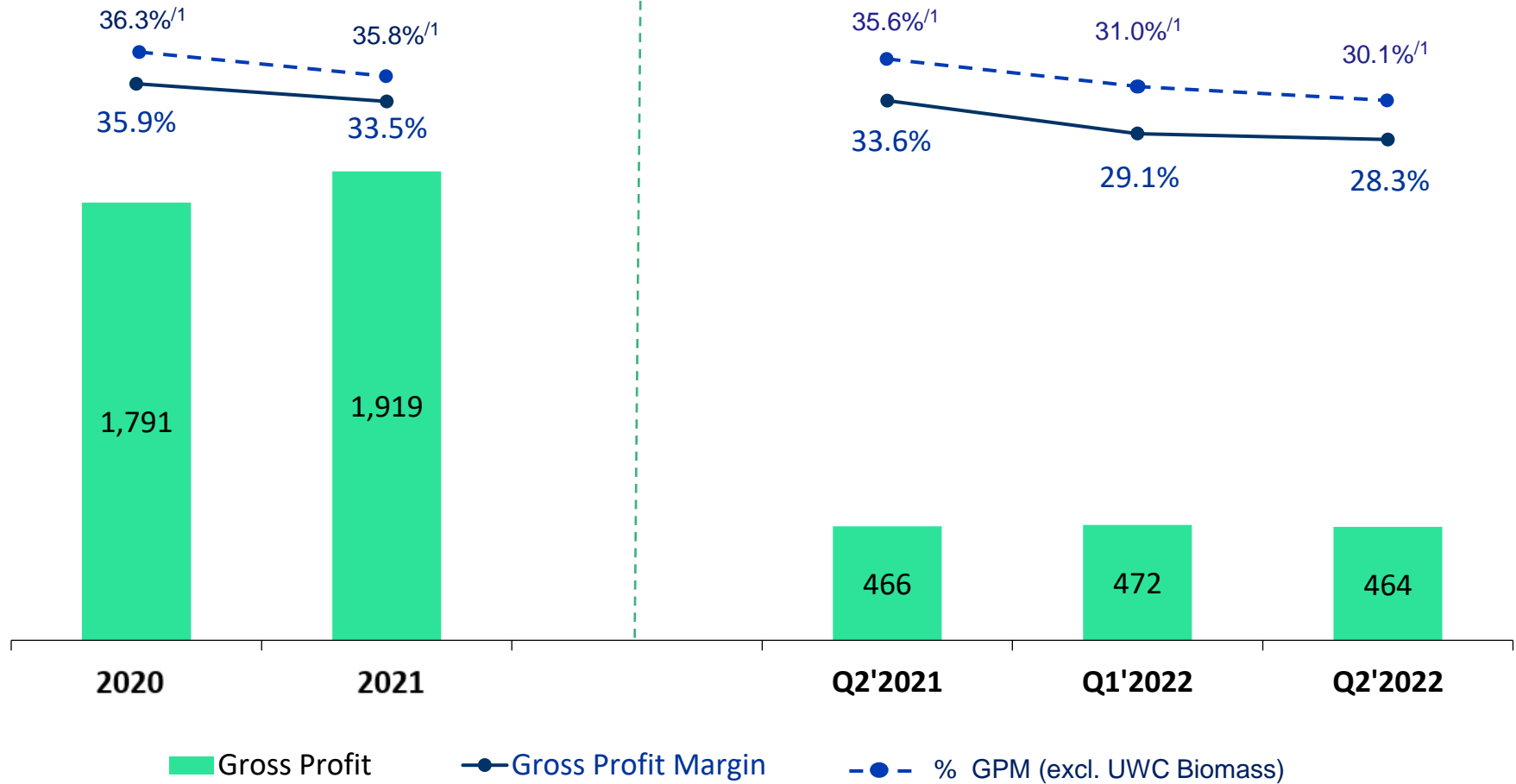


Remark: 1/ Exclude Construction Revenue

# Financial Highlight – Gross Profit and Gross Profit Margin



Unit : THB mln



**Remark:** 1/ Exclude GP from 3 UWC Biomass Power Plants.

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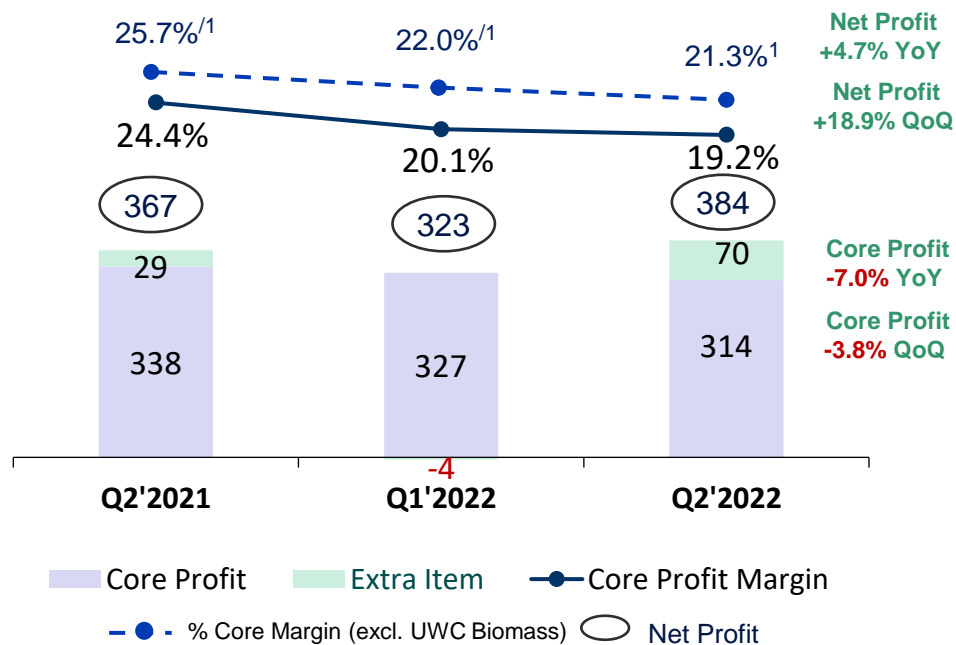


# Q2'2022 Financial Highlight P&L



## Core Profit / Net Profit

Unit : THB mln



### Core Profit in Q2'22 was THB 314 mln

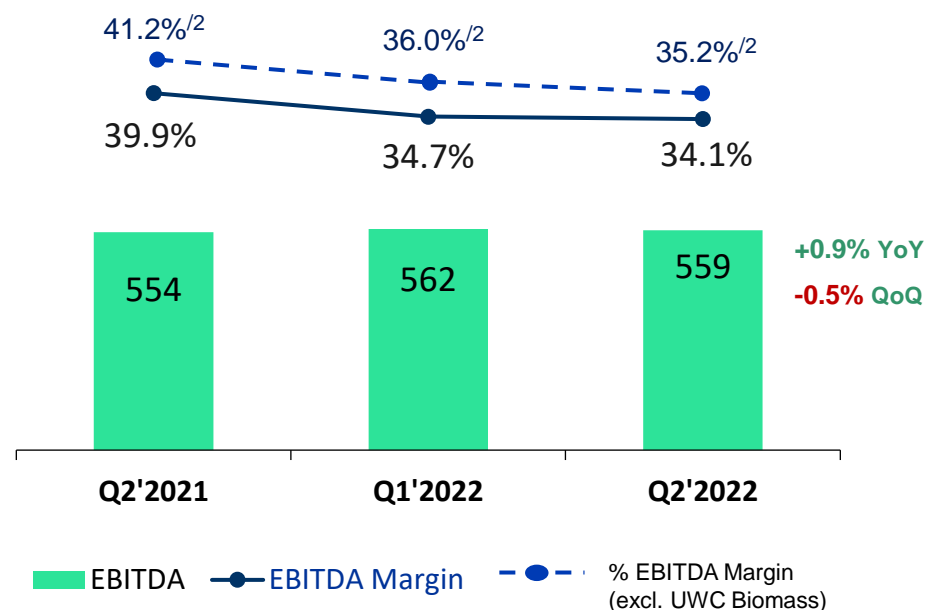
- **QoQ : -3.8%** mainly from the result of natural gas power plant maintenance shutdown and higher SG&A expenses from employee expenses and pre-operation expenses as the result from the expansion and new project development
- **YoY : -7.0%** results from the expiration of FiT Premium period of two biomass power plants and the increase of SG&A expenses

### Net Profit in Q2'22 was THB 384 mln

- **+18.9% QoQ** and **+4.7% YoY**: mainly from the gain of extra items (FX Gain)

## EBITDA and EBITDA Margin

Unit : THB mln



### EBITDA in Q2'22 was THB 559 mln

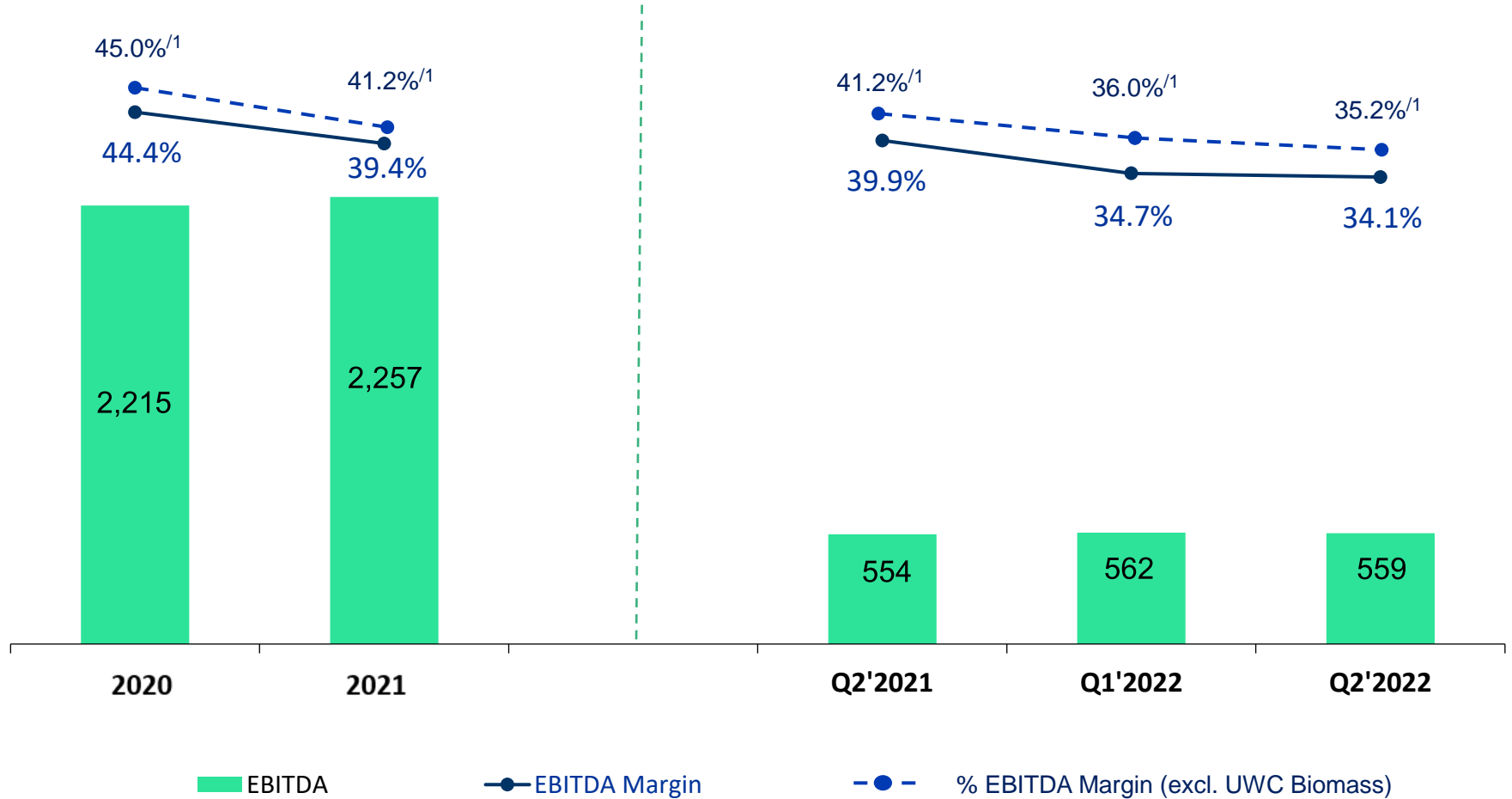
- **QoQ : -0.5%** mainly from the natural gas power plant maintenance shutdown and higher of SG&A expenses
- **YoY : +0.9%** mainly from the COD of Khlong Khlung Power Plant Project on 26 November 2021.

**Remark:** 1/ Exclude Core Margin from 3 UWC Biomass Power Plants .  
 2/ Exclude EBITDA from 3 UWC Biomass Power Plants.

# Financial Highlight – EBITDA



Unit : THB mln

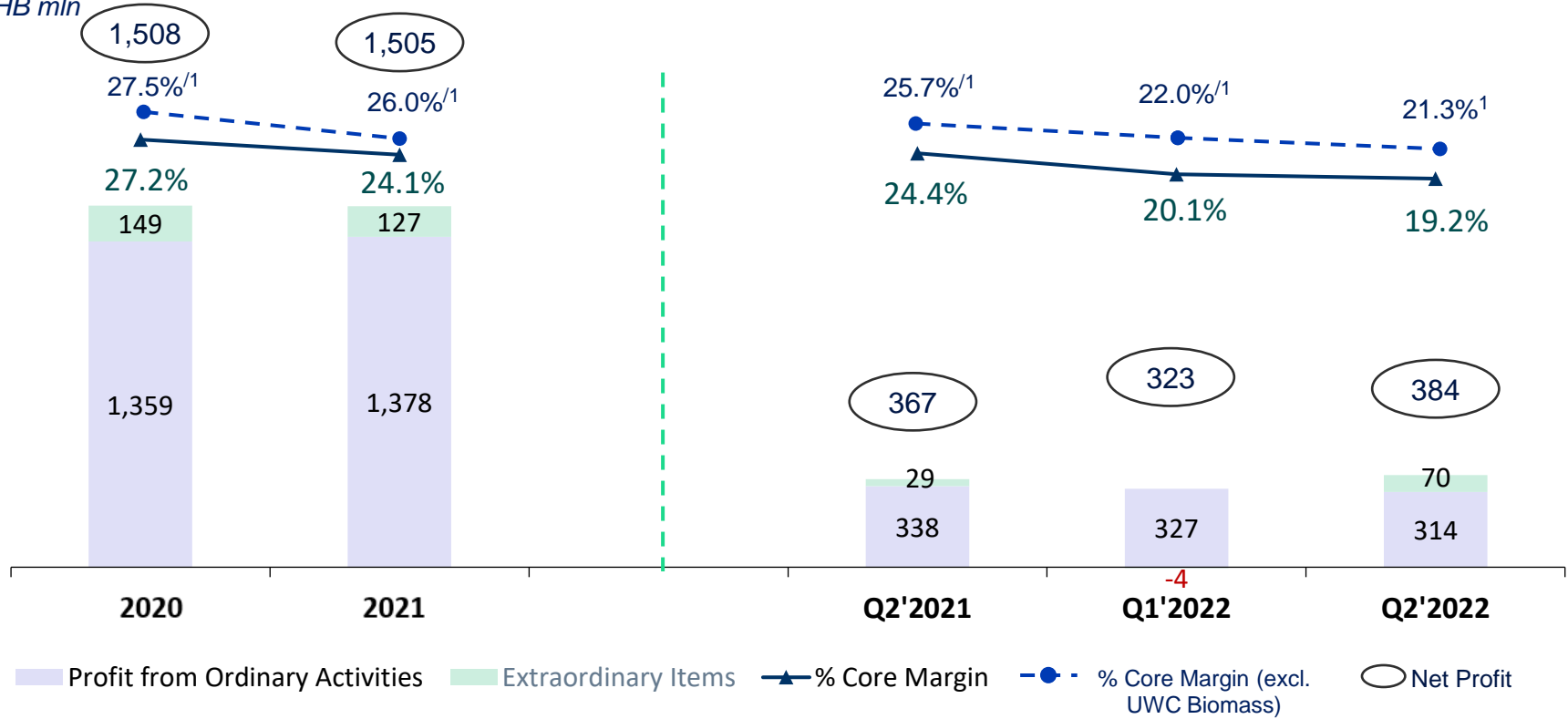


**Remark:** 1/ Exclude EBITDA from 3 UWC Biomass Power Plants.

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# Financial Highlight – Net Profit / Core Profit / Core Profit Margin

Unit : THB mln



	Q2-2021			Q1-2022			Q2-2022		
	Ordinary activities	Extraordinary items	Total	Ordinary activities	Extraordinary items	Total	Ordinary activities	Extraordinary items	Total
Profit before tax (EBT)	353	36	389	350	(5)	345	347	87	434
Tax income (expense)	(15)	(7)	(22)	(23)	1	(22)	(33)	(17)	(50)
<b>Net profit</b>	<b>338</b>	<b>29</b>	<b>367</b>	<b>327</b>	<b>(4)</b>	<b>323</b>	<b>314</b>	<b>70</b>	<b>384</b>



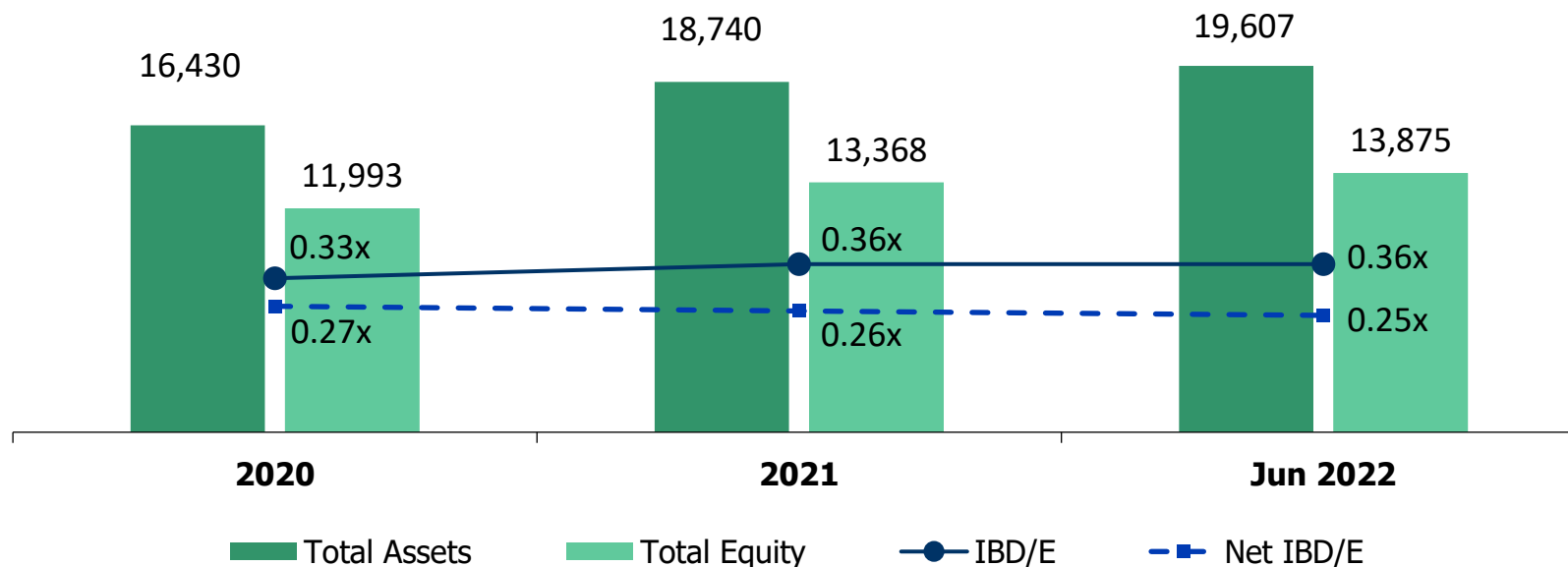
# ACE Capital Structure and Leverage Ratio



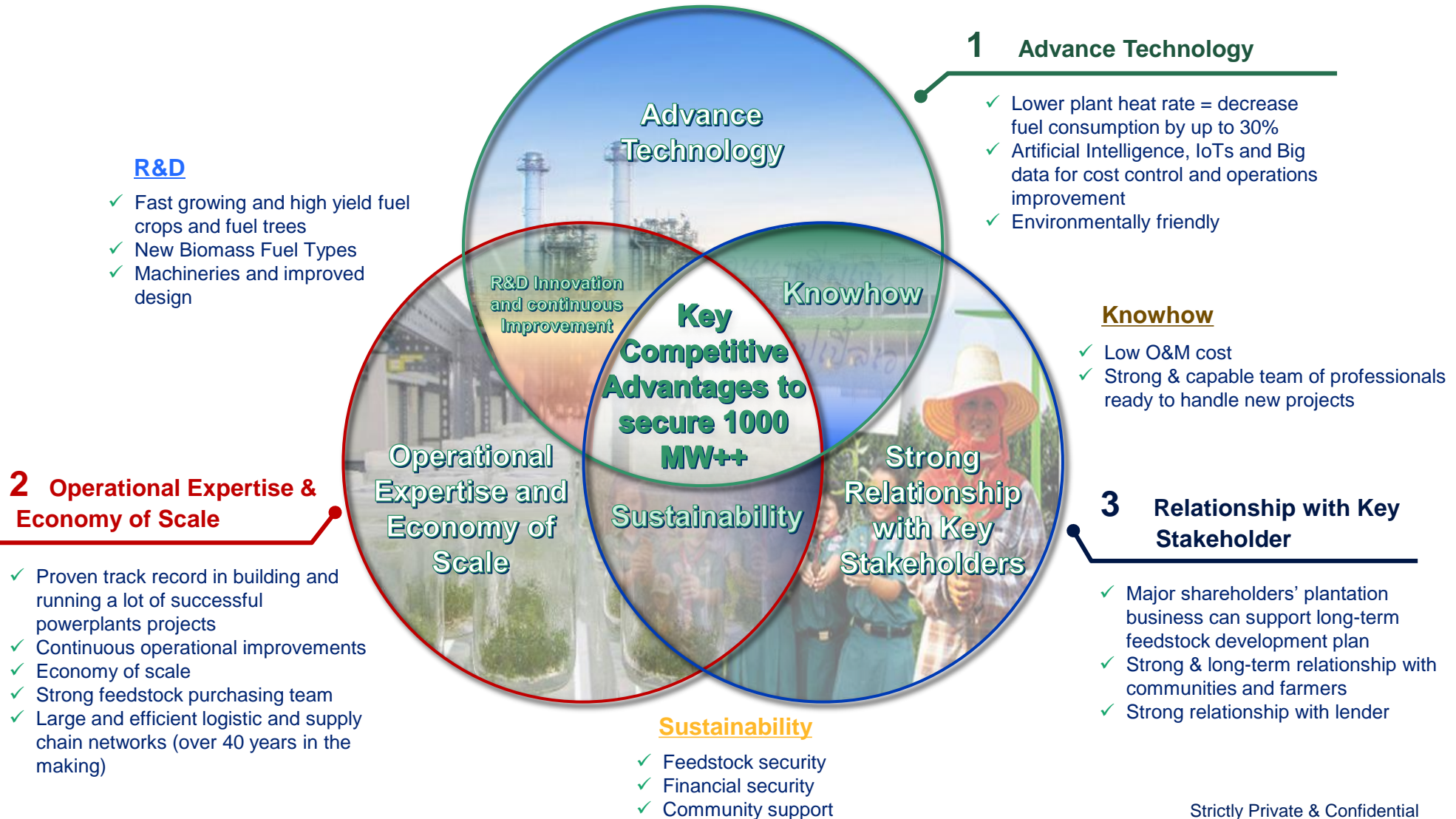
Unit: THB mln

	As of		
	Dec 2020	Dec 2021	Jun 2022
<b>Total Assets</b>	16,430	18,740	19,607
<b>Total interest-bearing debt</b>	3,948	4,780	5,025
Cash equivalent and restricted cash	760	1,326	1,489
<b>Net Interest-bearing debt</b>	3,188	3,454	3,536
<b>Equity</b>	11,993	13,368	13,875

Unit : THB mln



# ACE's 3 Core Value Represent Competitive Advantage to Secure New PPAs **ACE**



# ACE's Key Strengths and Opportunities



1

## Thailand's Leading Integrated Power Producer with Highest Growth Potential

- Largest and fast-growing Biomass Power Producer supported by PPA with PEA in Thailand
- No. 1 Renewable Power Producer in Thailand in terms of Equity MW Growth

2

## World Megatrend

- "Electrification" Era
- Global & Thailand Commitment to Zero Carbon which implies the rise of renewable energy
- Biomass is one of the most reliable renewable energy that can replace the base load provided by conventional energy.
- ESG Business

3

## Continuous Growth from Projects in the Pipeline and Future

- Power Plant's PPA with exceptional tariff rate
- Better technology which leads to higher efficiency and less feedstock / kWh
- Economy of Scale resulting in lower CAPEX, OPEX, and SG&A
- 28% share in the latest biomass power plant bidding

4

## Efficient Operational Capabilities with Continuous Improvement

- Lower Feedstock and O&M cost which leads to higher margin
- Stronger creditworthiness which leads to lower financing cost
- Peer-to-Peer Electricity Trading which leads to additional electricity sales

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## Low Downside Risk

- Secured Demand & Cashflow (Long term Power Purchase Agreement with the Government)
- Proven Operational Excellence & Feedstock Management
- Our business model commits to the greater good and has a positive Total Societal Impact (TSI)



# Total Societal Impact (TSI) and Environmental, Social & Governance (ESG)



## Biomass Power Plant

Contribute to the Paris Agreement

Decreasing greenhouse gas emission.

Future Potential

To provide base-load to grid in place of conventional energy

Solves PM 2.5 problem at the root

- Saves government's spending on putting down forest fires and farm fires
- Saves government's spending on PM 2.5 related health problems such as respiratory complications, masks distributions and water spraying in cities, from PM 2.5 particle.
- Prevents economic loss from the decrease in tourism due to PM 2.5 problems.

Positive Economic and Societal Impact

- Additional income to farmers
- Stabilize income for farmers under market uncertainty → reduce empty subsidies that the government has to give out
- Distribution of revenue to grassroots : Shift from LNG imports to purchasing fuel from individual Thai farmers

GDP Contribution<sup>1</sup>

THB 1.8 Billion / year / 9.9 MW biomass power plant

## Municipal Solid Waste (MSW) Power Plant

Contribute to the Paris Agreement

Decreasing greenhouse gas emission.

Future Potential

To provide base-load to grid in place of conventional energy

Solves MSW mountain problems

Save healthcare and environmental spending for the government from problems caused by MSW in landfills



**ACE**

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## Thank You

For further inquiry

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