

# ENERGY TRANSITION

OUR VISION  
SINCE DAY ONE

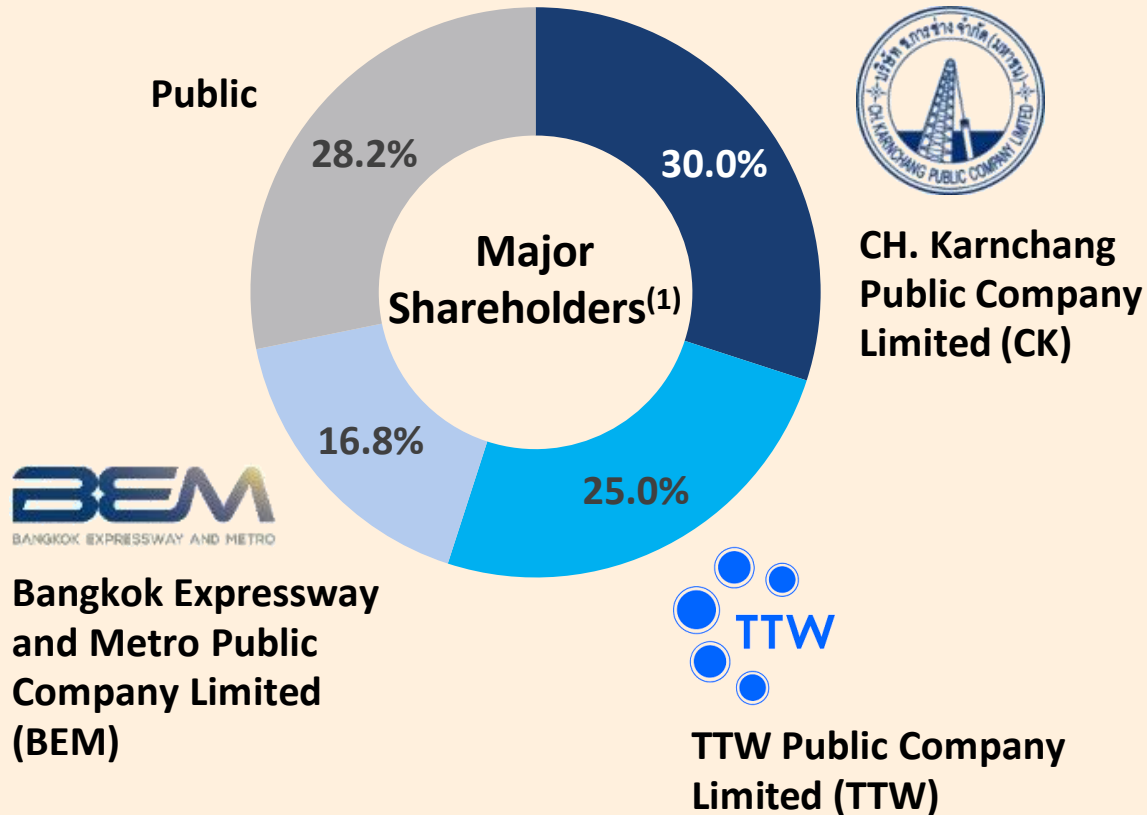
Q2 2024 OPPORTUNITY DAY

26 AUGUST 2024



- 1. Corporate Overview and Sustainability**
- 2. 1H 2024 Financial Performance**
- 3. Projects Progress Update**
- 4. Q&A**

## The Power Investment Arm of CH. Karnchang Group



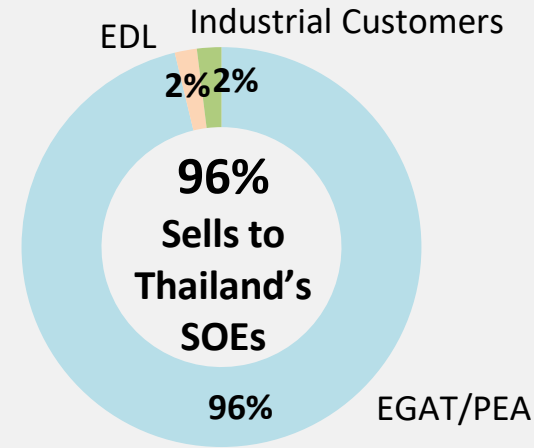
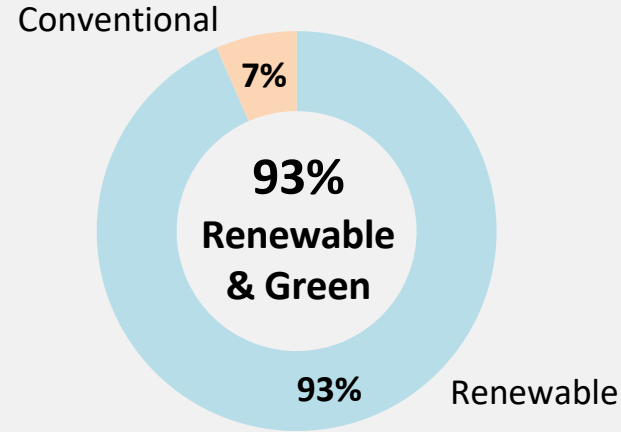
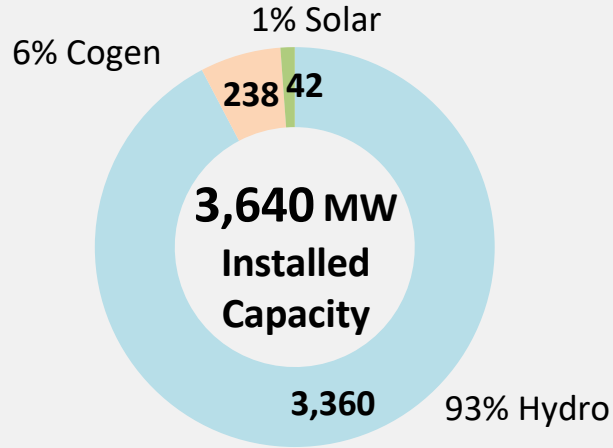
## General Information

<b>Symbol</b>	:	CKP
<b>Established Date</b>	:	8 June 2011
<b>Listed Date</b>	:	18 July 2013
<b>Paid-up Shares</b>	:	8,129,382,729 shares
<b>Par</b>	:	Bt 1.00 per share
<b>Registered Capital</b>	:	Bt 8,129 mn
<b>Market Cap</b>	:	Bt 31,705 mn <sup>(2)</sup>
<b>Indices</b>	:	SET 100 SET ESG SET CLMV
<b>Sector</b>	:	Energy
<b>TRIS Rating</b>	:	A- / Stable
<b>CG Score</b>	:	

(1) As of 28 June 2024, (2) As of 21 August 2024

# Portfolio Overview and Sustainability

## Installed Capacity



**95%**  
RENEWABLE  
BY 2043

**NET ZERO** GHG EMISSION  
BY 2050

## Power Plants in Lao PDR



**COD:** 2013  
**Ownership:** 46.0%  
**Capacity MW:** 615  
**Equity MW:** 283



**COD:** 2019  
**Ownership:** 42.5%  
**Capacity MW:** 1,285  
**Equity MW:** 546



**SCOD:** Early 2030  
**Ownership:** 50.0%  
**Capacity MW:** 1,460  
**Equity MW:** 730

## Power Plants in Thailand



**COD:** 2013 and 2017  
**Ownership:** 65.0%  
**Capacity MW:** 238  
**Equity MW:** 155

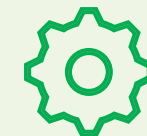


**COD:** 2012-2027  
**Ownerships:** 30%-100%  
**Capacity MW:** 29 ▶ 42  
**Equity MW:** 32

Increase Capacity

**100%**

INTERNAL RENEWABLE  
ELECTRICITY USE  
BY 2043



**OPERATIONAL  
EXCELLENCE &  
SYNERGY**

# ESG Strategy



## UNSDG

## Sustainability Framework

## Target

## 2023 Pathway Achievement



### Energy Management and Climate Change

- 2043: **100%** renewable electricity consumption
- 2043: **>95%** renewable capacity
- 2050: **Net Zero**

- **93%** renewable electricity consumption
- **93%** renewable capacity
- Achieved **0.7 mtco2e** GHG emissions reduction target

### Biodiversity

- 2023: **Develop** biodiversity roadmap
- 2026: **Assess** residual impacts at all sites
- 2040: **No Net Loss** of biodiversity

- **Completed** biodiversity roadmap
- **65%** screening and scoping for biodiversity
- **126** fish species migrated through XPCL



### Respect for Human Rights

- **100%** employee awareness on human rights
- **100%** value chain human rights risk and impact assessment
- **Zero case** of human rights violation across the value chain

- **100%** awareness achieved
- **100%** human rights risk and impact assessment achieved
- **Zero case** of human rights violation

### Social and Community Care

- 2026: **Create value** for society with renewable
- **Zero case** of unresolved complaints

- **40,330 Watts** of renewable electricity to local communities
- **Zero case** of unresolved complaints



### Business Model Resilience

- **Explore** new customers and geographies within ASEAN
- **Integrate** digital transformation and other innovations

- **Increase** BKC capacity of 6 MW
- **Sold** 40% of BKC's 2023 Renewable Energy Certificate (REC)



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# 1H 2024 Snapshot

NN2 Water Inflow

**906**  
MCM

▲ +2.4% YoY

XPCL Average Inflow

**1,856**  
CMS

▼ -6.2% YoY

BIC Average Gas Price

**333**  
Bt/MMBTU

▼ -29.1% YoY

GHG Intensity

**0.0834**  
tCO<sub>2</sub>e/MWh

Thailand Grid = 0.4999

Asia Responsible Enterprise Awards 2024



Won Asia Responsible Enterprise Awards 2024 – Social Empowerment

NN2 Electricity

**887**  
GWh

▲ +44.6% YoY

XPCL Electricity

**2,477**  
GWh

▼ -3.9% YoY

BIC Electricity

**754**  
GWh

▼ -0.6% YoY

CORE NPAT

**-93**  
BT mn

▲ +26.9% YoY

ESG100 List of 2024



Included in the ESG100 list of 2024

CKP Debentures No. 1/2024

Issue Size	Tenor	Average Interest Rate
Bt 4,000 mn	2-5 yrs	4.12%

CKP Dividend Payment 2024

Dividend	Total	Payout Ratio <sup>(1)</sup>
0.085 Bt/share	Bt 691 mn	158.7%

(1) Calculated from total dividend payout divided by net profit of separate financial statements

# CKP 1H 2024 Consolidated Income Statement

Description	First Half (Bt mn)		Changes	
	1H 2023	1H 2024	Inc/(Dec)	%
Revenue from Sales of Electricity and Steam	4,730.2	4,627.5	(102.7)	(2.2)
Project Management Income	189.0	192.6	3.6	1.9
Finance Income	264.3	274.7	10.4	3.9
Other Income	67.9	16.3	(51.6)	(76.0)
<b>Total Revenues</b>	<b>5,251.4</b>	<b>5,111.1</b>	<b>(140.3)</b>	<b>(2.7)</b>
Operating Expenses	(4,518.7)	(3,922.4)	(596.3)	(13.2)
Share of Profit (Loss) from Investments in Joint Ventures and Associated Companies	(260.8)	(678.6)	(417.8)	(160.2)
Foreign Exchange Gain	13.6	18.8	5.2	38.2
<b>Earnings Before Interest and Tax</b>	<b>485.5</b>	<b>528.9</b>	<b>43.4</b>	<b>8.9</b>
Finance Cost	(527.7)	(560.3)	32.6	6.2
Income Tax Expenses	(26.5)	(42.2)	15.7	59.2
Non-controlling Interests of the Subsidiaries	(33.8)	(313.4)	279.6	827.2
<b>Net Loss attributable to Equity Holders of the Company</b>	<b>(102.5)</b>	<b>(387.0)</b>	<b>(284.5)</b>	<b>(277.6)</b>
<u>Less:</u> Foreign Exchange Gain (Loss) attributable to Equity Holders of the Company	24.6	(294.1)	(318.7)	N/A
<b>Core Net Loss</b>	<b>(127.1)</b>	<b>(92.9)</b>	<b>34.2</b>	<b>26.9</b>

## Consolidated Subsidiaries

NN2	Nam Ngum 2 Power
BIC	Bangpa-In Cogeneration
BKC	Bangkhenchai

## Associate/Joint Venture

XPCL	Xayaburi Power
LPCL	Luang Prabang Power
NRS	Nakhon Ratchasima Solar
CRS	Chiangrai Solar

## FX attribute to CKP

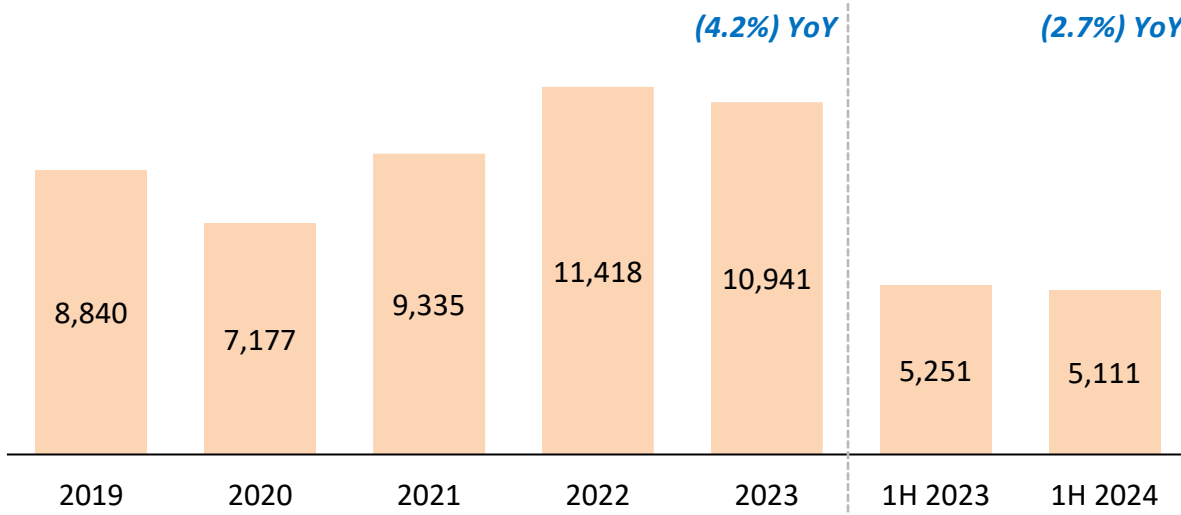
- FX Gain (Loss) in proportion of CKP's shareholdings
- Share of FX Gain (Loss) from Associates



# 1H 2024 Consolidated Performance

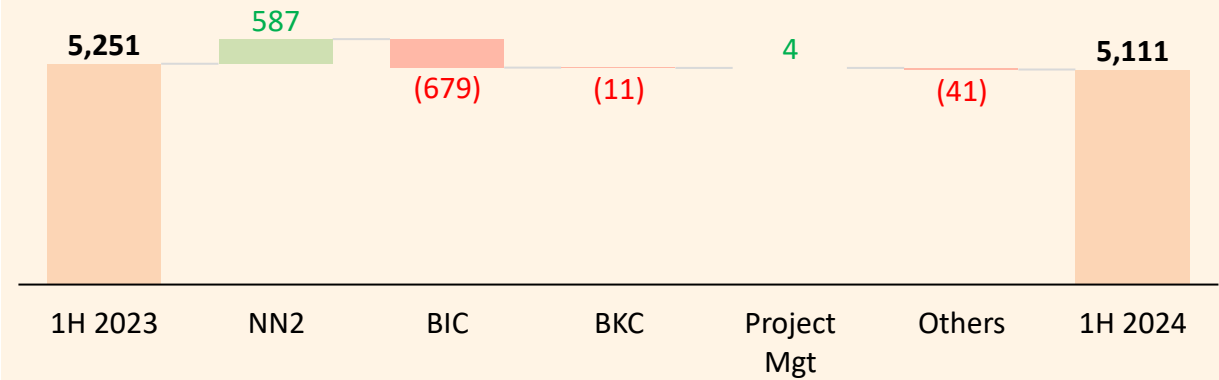
## Revenue

Unit: Bt mn



## Key Changes in Revenue

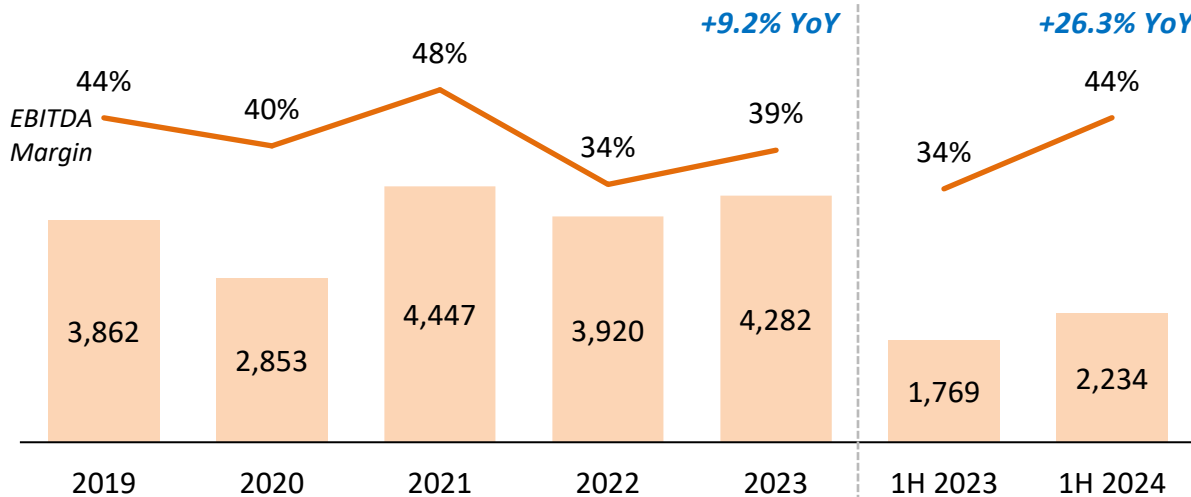
Unit: Bt mn



Revenue declined YoY mainly from the decrease in BIC's revenue due to lower natural gas price and ft; partially offset by higher electricity sales of NN2, driven by YoY higher storage level and water inflow.

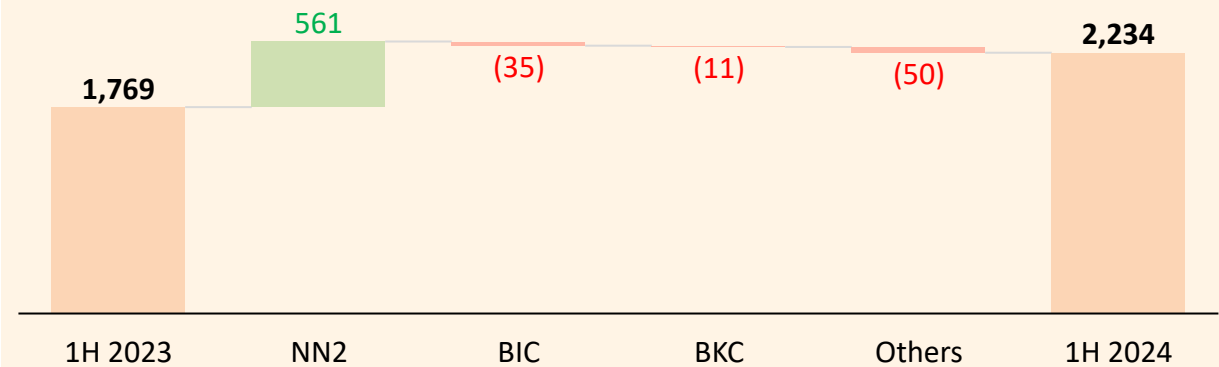
## EBITDA

Unit: Bt mn



## Key Changes in EBITDA

Unit: Bt mn

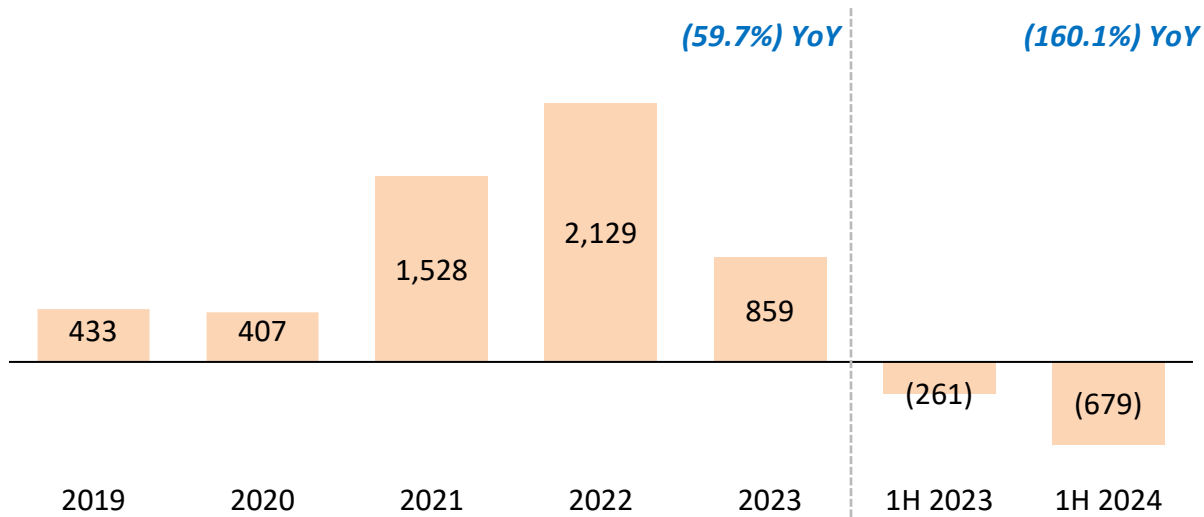


EBITDA increased YoY primarily driven by NN2's 1H 2024 performance.

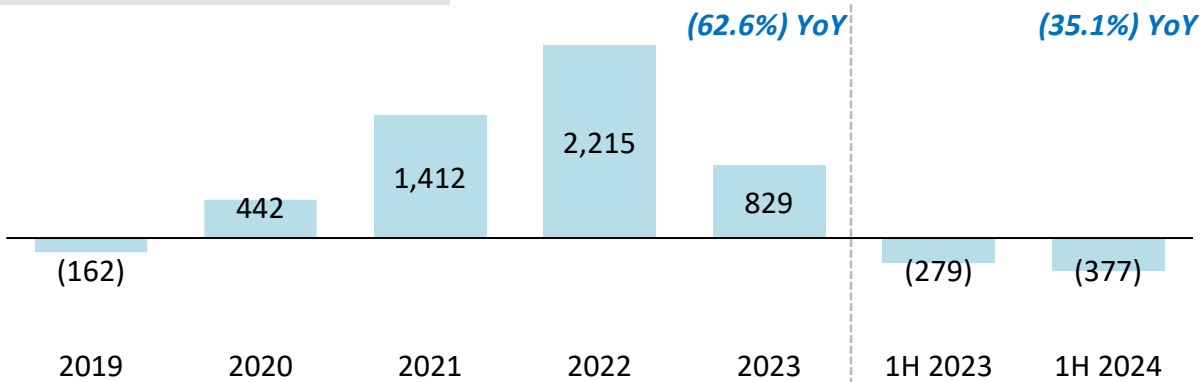
# 1H 2024 Consolidated Performance

## Share of Profits

Unit: Bt mn



## Core Share of Profits

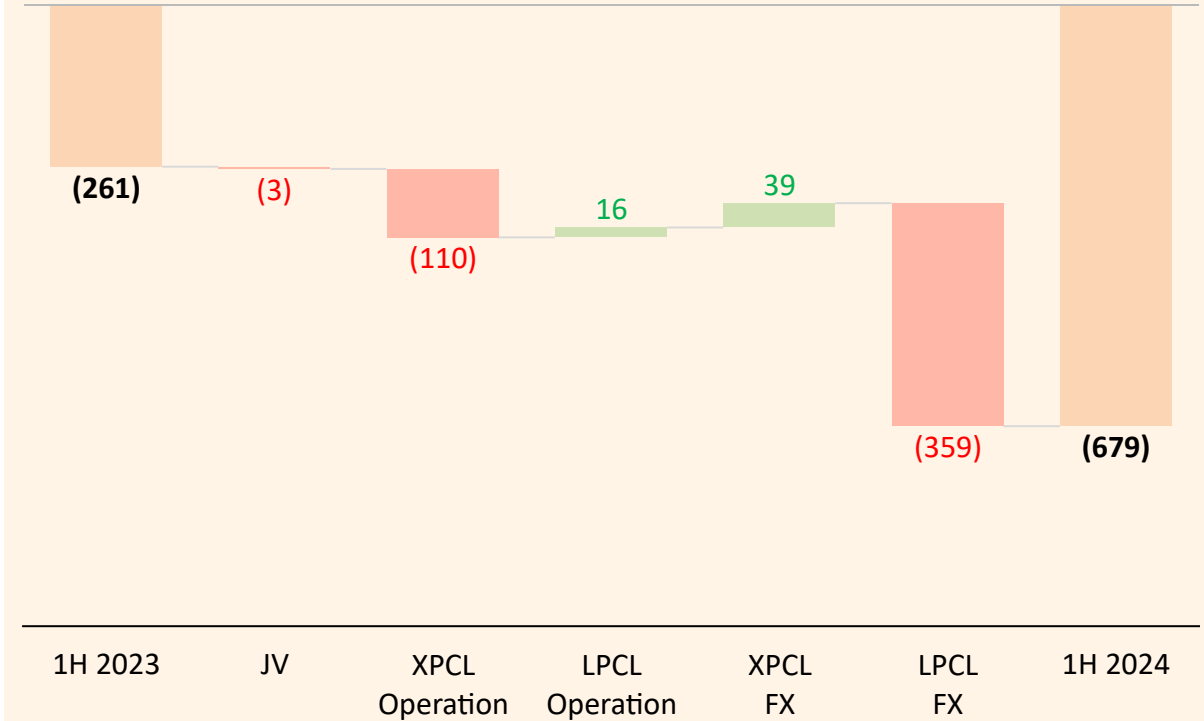


## Share of FX Gain/(Loss)

2019	595	2020	(34)	2021	116	2022	(86)	2023	30	1H 2023	18	1H 2024	(302)
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## Key Changes in Share of Profits

Unit: Bt mn

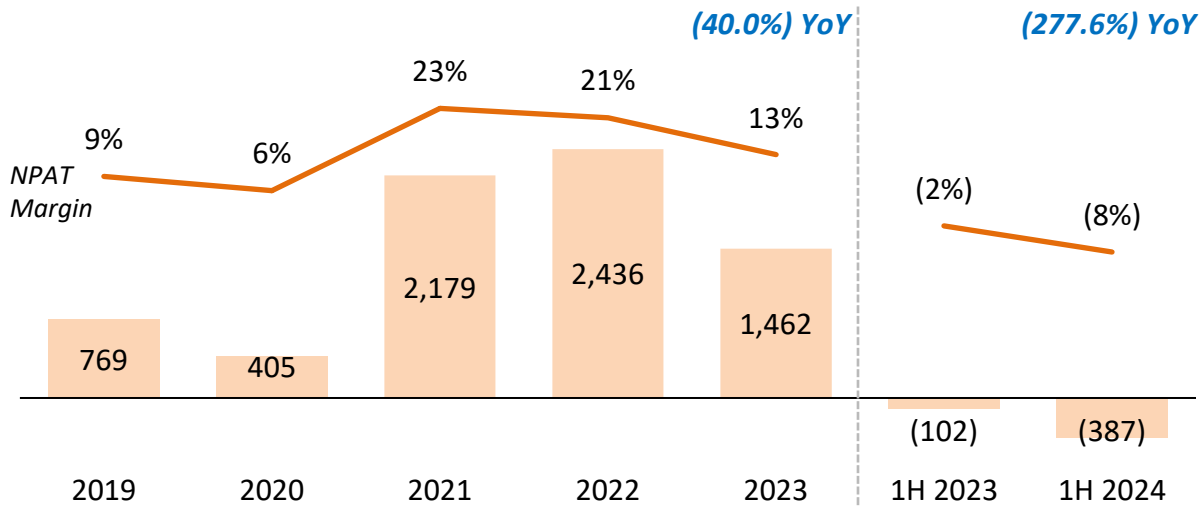


Decline in share of profits was mainly due to YoY drop in XPCL's performance from higher finance cost and lower water flow, coupled with share of FX Loss from LPCL due to THB depreciation against USD.

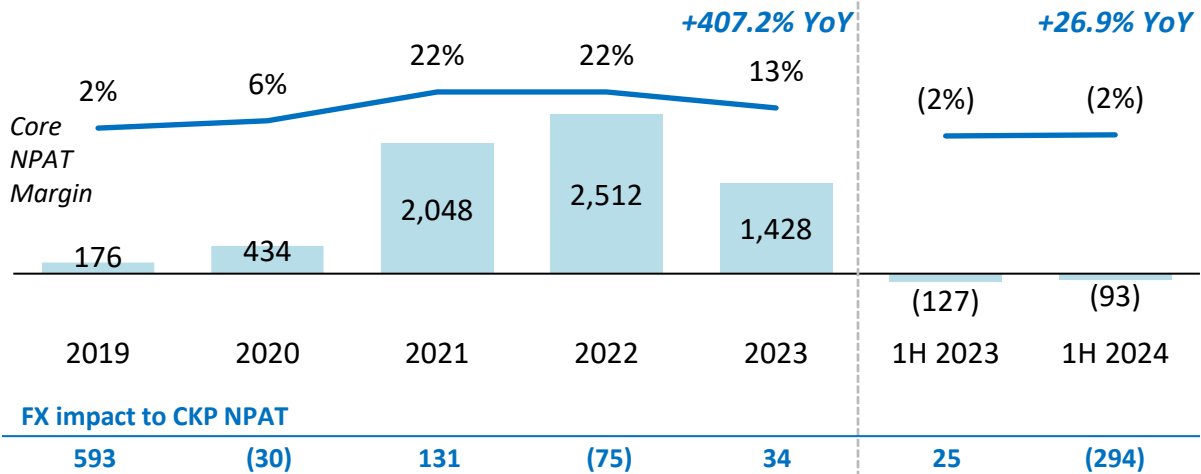
# 1H 2024 Consolidated Performance

## NPAT

Unit: Bt mn



## Core NPAT

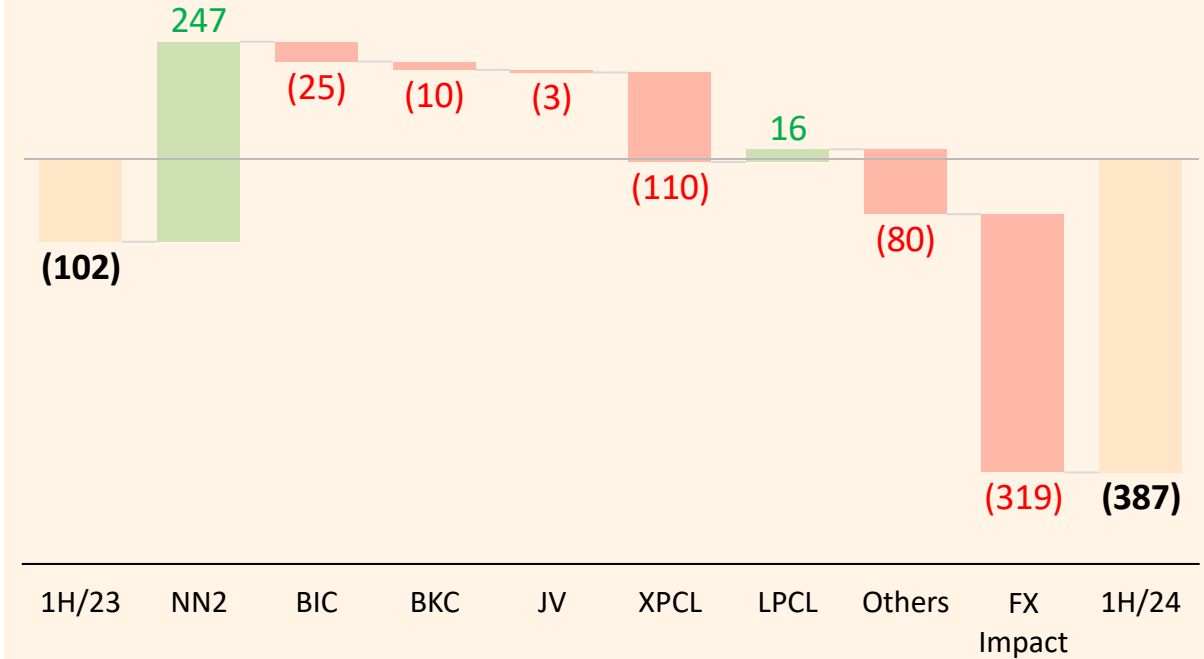


### FX impact to CKP NPAT

Year	FX Impact (Bt mn)
2019	593
2020	(30)
2021	131
2022	(75)
2023	34
1H 2023	25
1H 2024	(294)

## Key Changes in NPAT

Unit: Bt mn



- NPAT declined YoY mainly driven by the decline in share of profits from XPCL and the FX loss, which came mainly from the translation of US Dollar loan of LPCL.
- Excluding FX impact, Core NPAT improved YoY mainly driven by NN2's strong 1H performance, following high beginning water level and water inflow during 1H 2024.

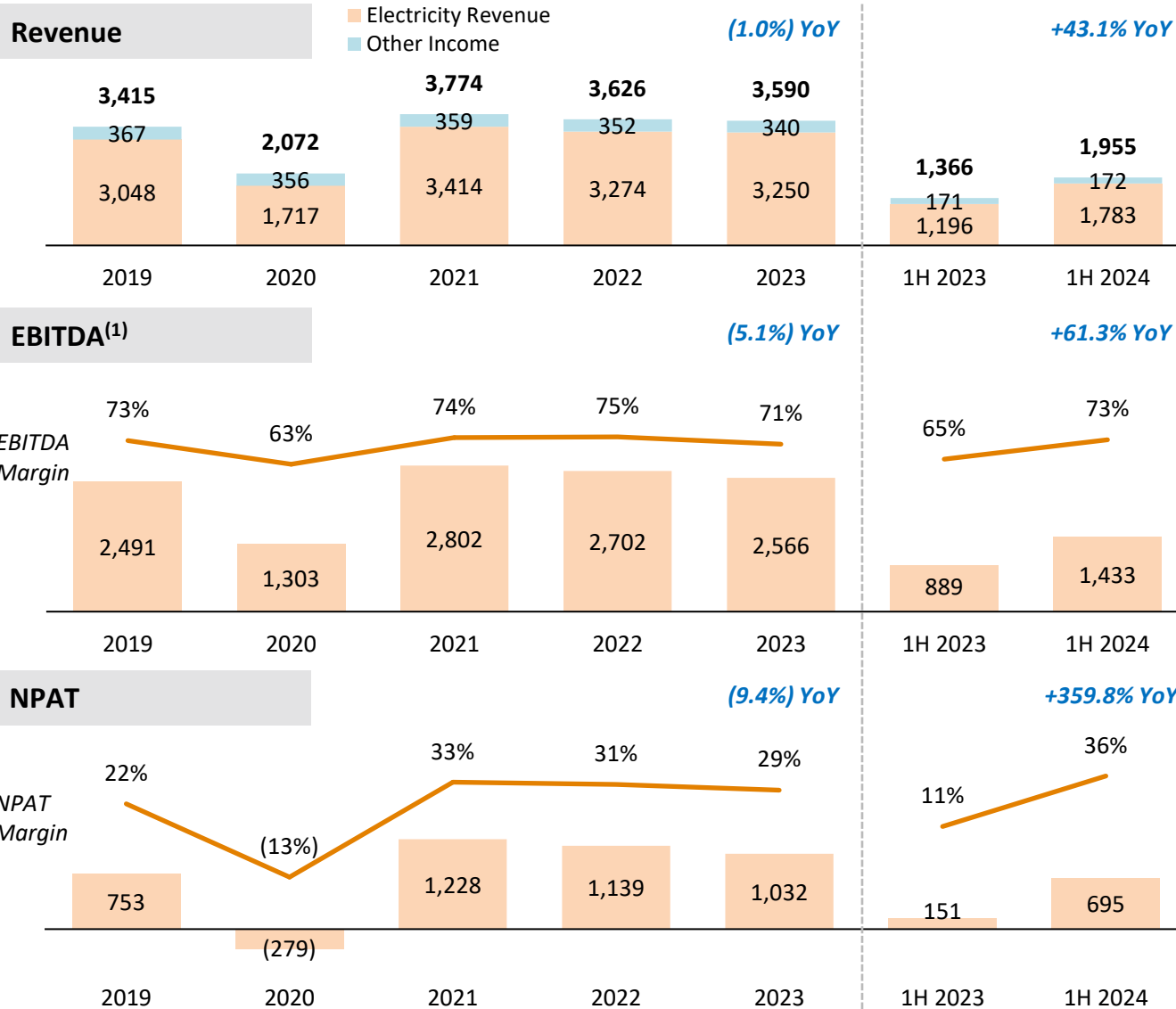
# NN2 1H 2024 Financial Performance

Consolidated  
Subsidiary



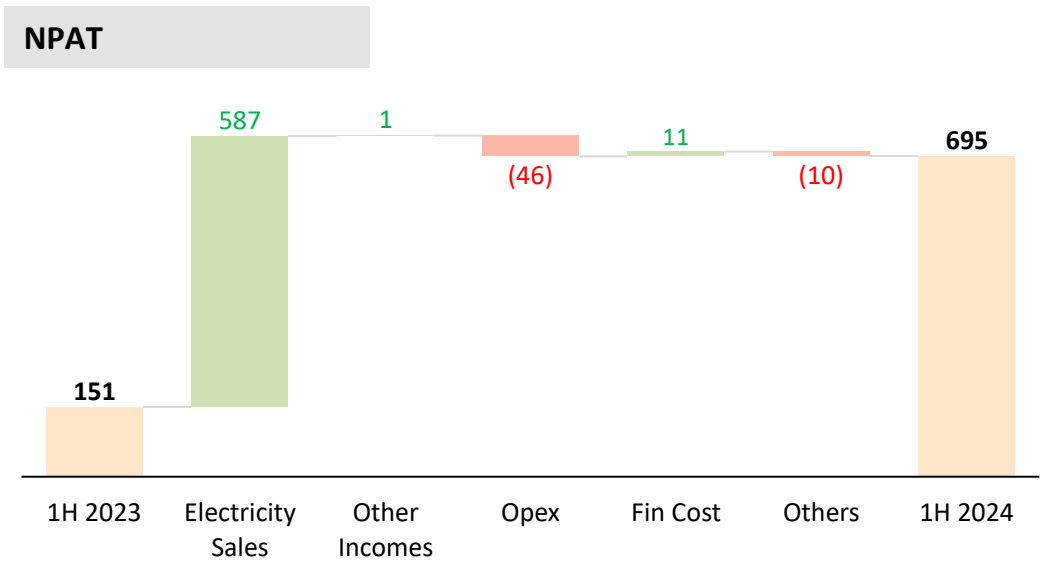
## Financial Performance

Unit: Bt mn



## Performance Highlights

Unit: Bt mn



- NPAT improved YoY mainly driven by higher Revenue from Sales of Electricity, FX Gain, and lower Finance Cost from redemption of matured Debentures;
- Partially offset by higher OPEX mainly from expenses related to the Major Overhaul, wheeling charge, and royalty fee.

## Key Activities in 2024

- Major Overhaul during 2023-2025
  - Unit #3 on 18 Nov – 28 Dec 2023 (completed)
  - Unit #1 on 3 Jan – 15 Feb 2024 (completed)
  - Unit #2 on 10 Nov – 24 Dec 2025
- Debentures redemptions of Bt 1,400 mn in October.

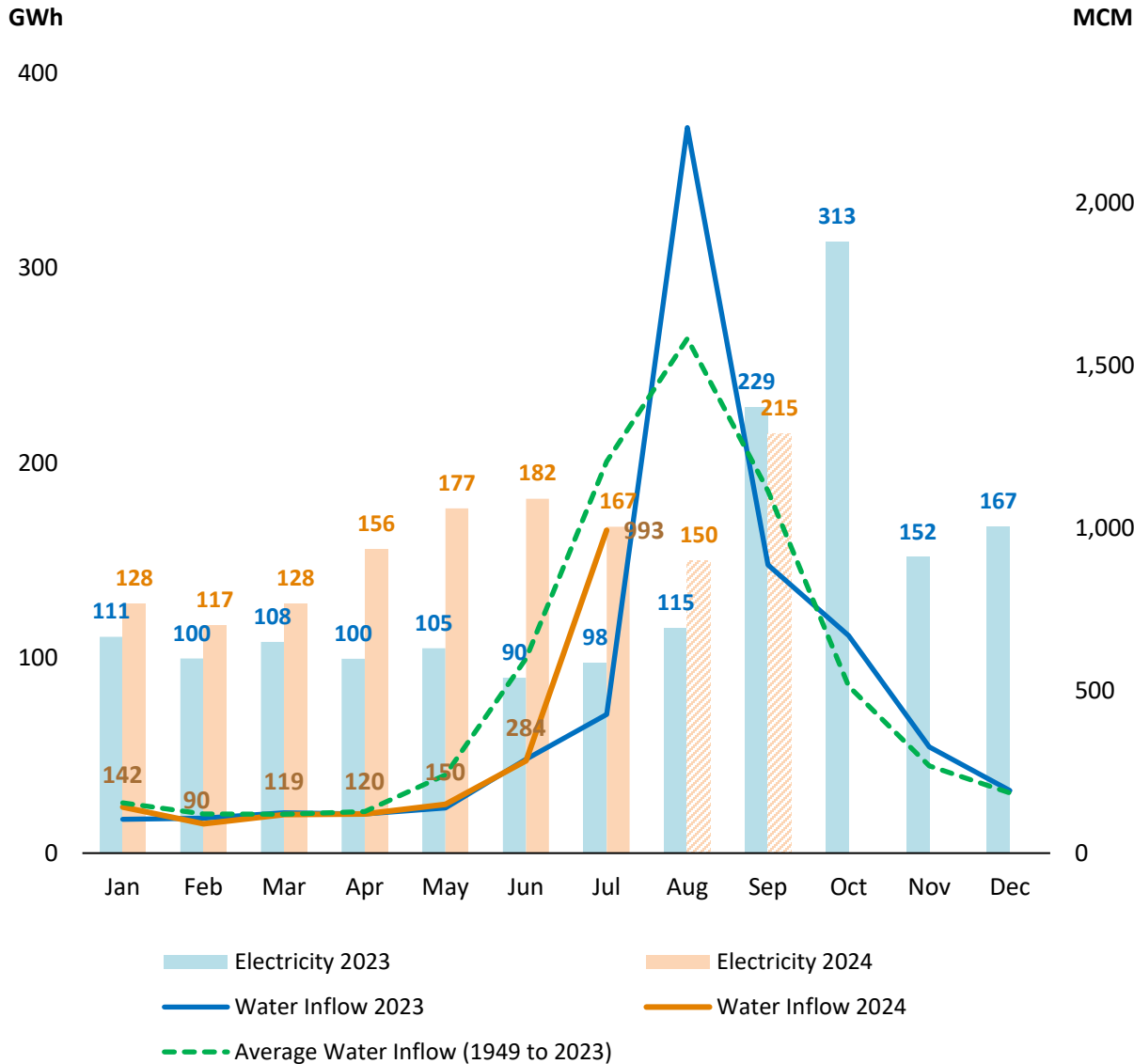
(1) Excluded FX Gain/(Loss)

# NN2 1H 2024 Operation

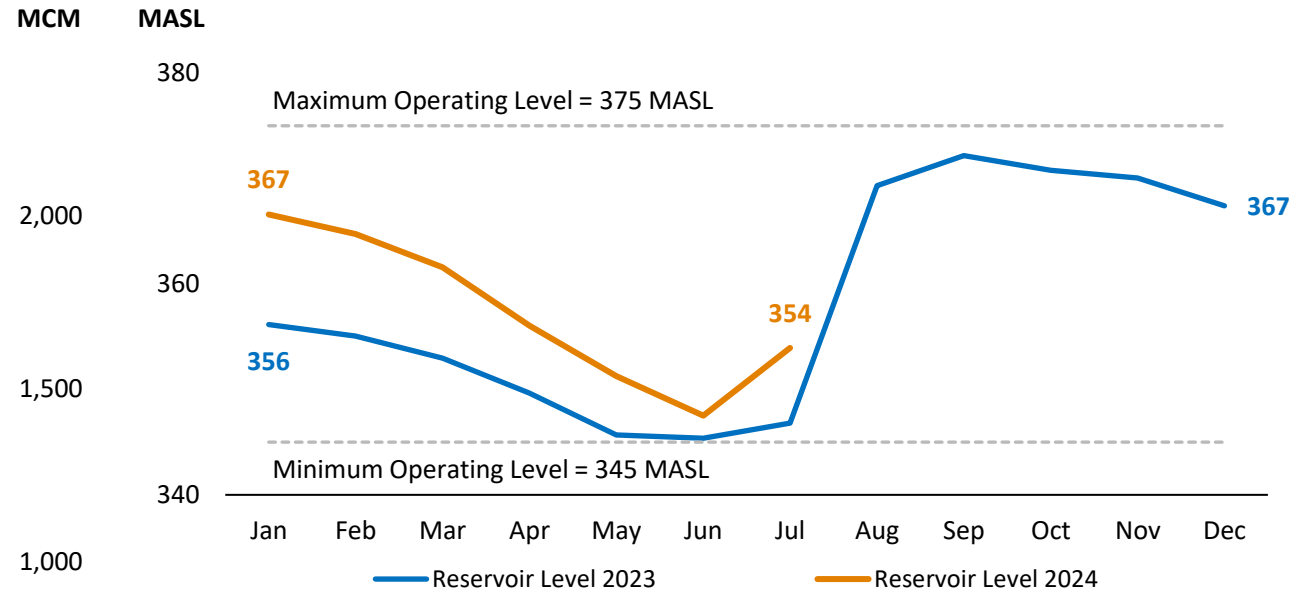
Consolidated  
Subsidiary



## Electricity Sales Volume and Water Inflow



## Reservoir Level (End of Month)



## Electricity Sales Volume

	2019	2020	2021	2022	2023	1H/23	1H/24
Water Inflow (MCM)	3,689	3,934	4,301	4,809	5,619	884	906
Total (GWh)	1,685	920	1,845	1,659	1,688	614	887
% Change	(31.4%)	(45.4%)	+100.5%	(10.1%)	+1.8%	(15.1%)	+44.6%
Avg. Tariff (Bt/kWh)	1.81	1.87	1.85	1.97	1.93	1.95	2.01

	PE Tariff		SE Tariff	EE Tariff
US\$ per kWh	Bt per kWh	Total Bt equiv. <sup>(1)</sup> per kWh	Bt per kWh	Bt per kWh
0.0267	1.041	1.948	1.353	1.145

(1) Long-term exchange rate assumption is 1 US\$ = 34 Baht

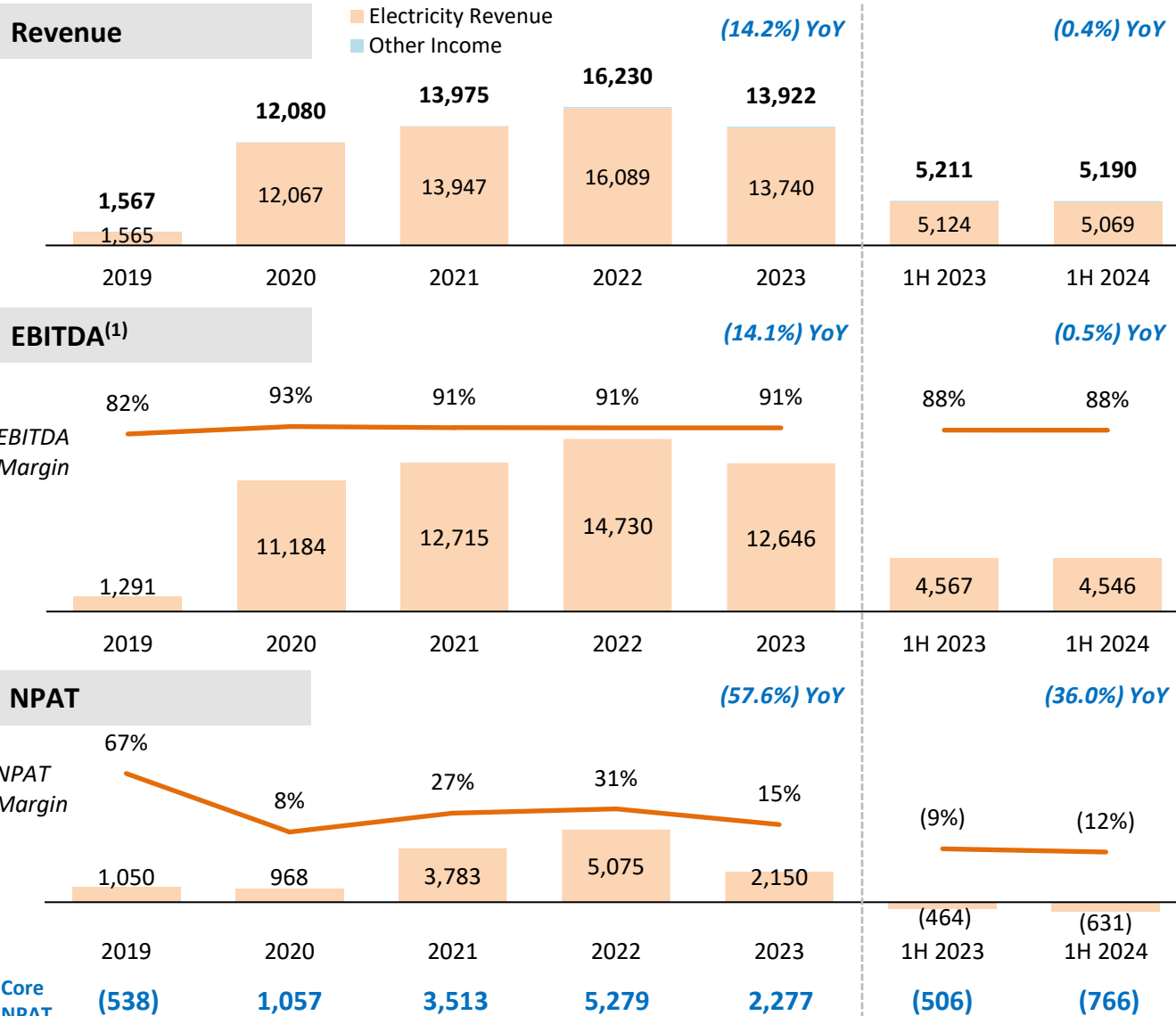
# XPCL 1H 2024 Financial Performance

Share of Profit



## Financial Performance

Unit: Bt mn

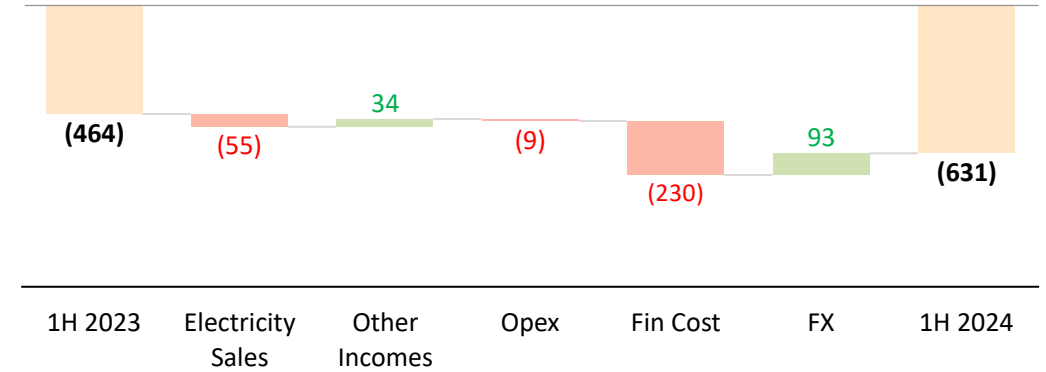


(1) Excluded FX Gain/(Loss)

## Performance Highlights

Unit: Bt mn

### NPAT



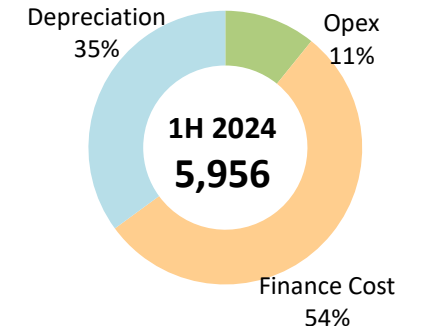
- NPAT declined YoY, mainly because a YoY increase in finance cost driven by rising global interest rates and the decreased electricity sales following lower water flow; partially offset by FX Gain and interest income.

## Key Activities in 2024

- Optimize electricity declaration and production
- Biodiversity Action Plan (BAP) and community care

## Cost Structure

Unit: Bt mn

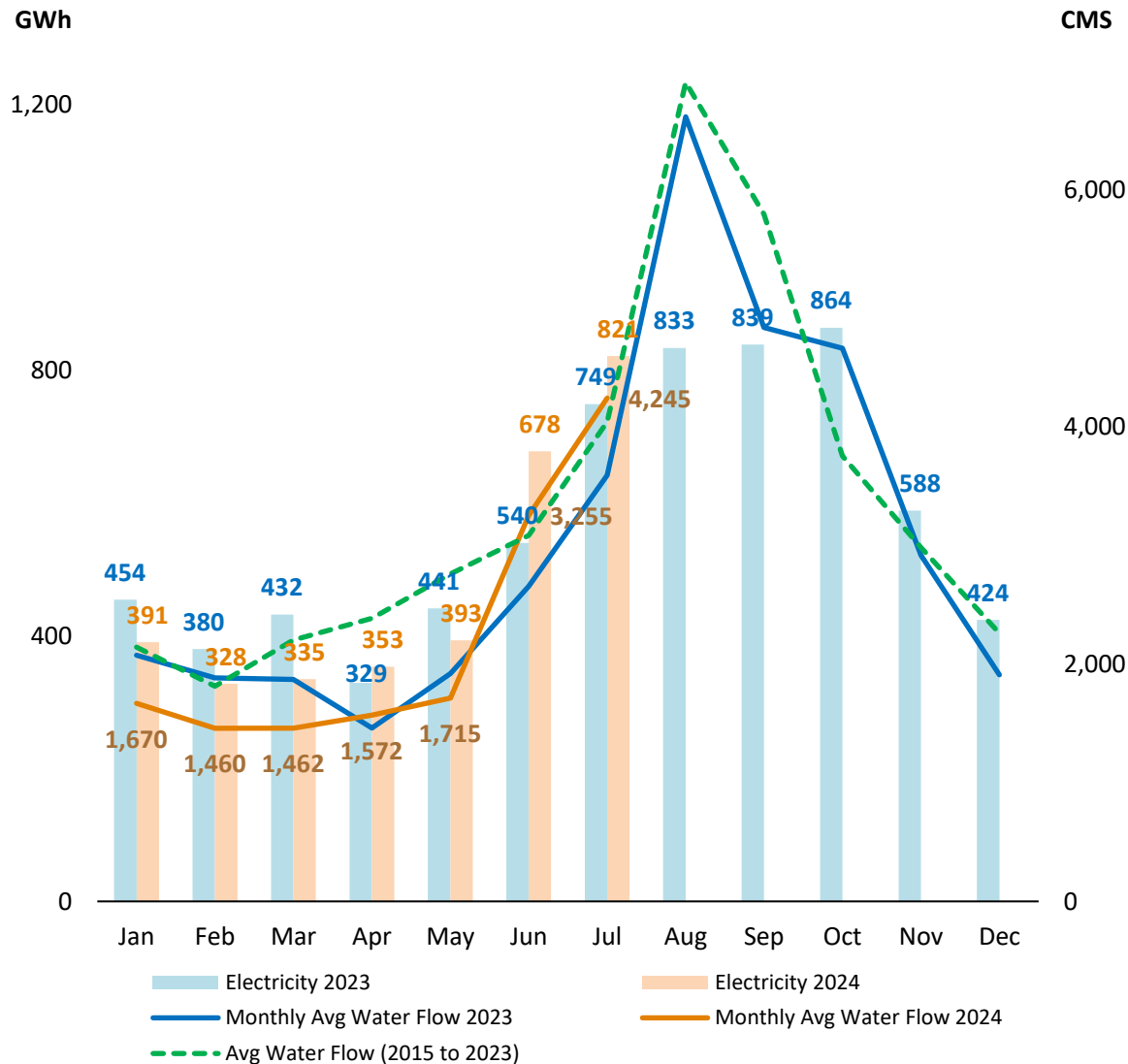


# XPCL 1H 2024 Operation

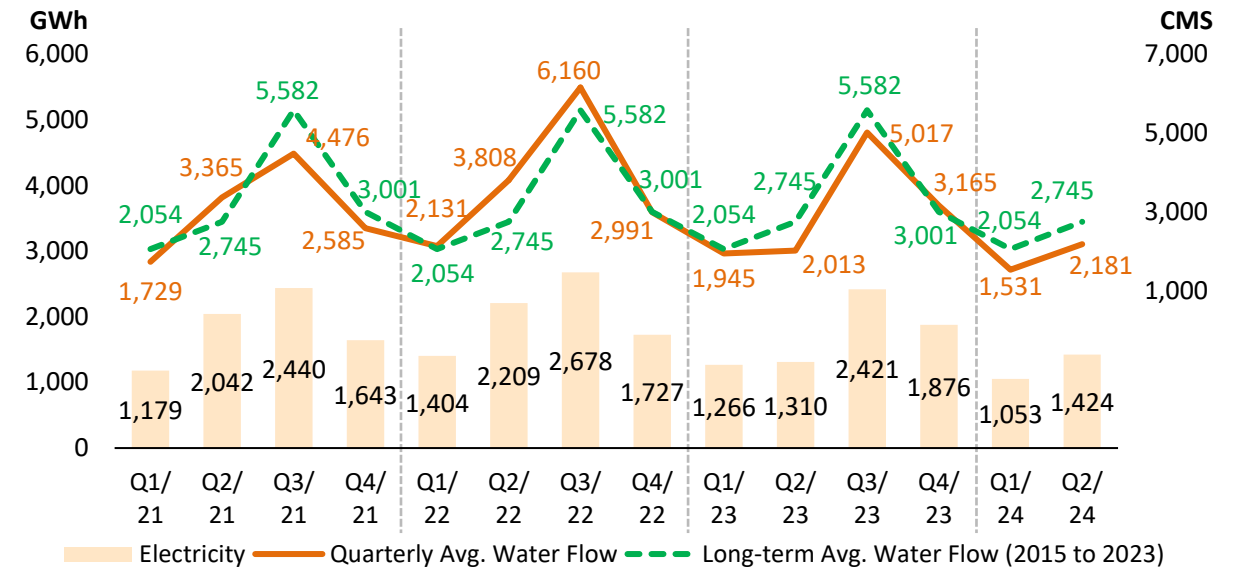
Share of Profit



## Monthly Electricity Sales Volume and Water Flow



## Quarterly Electricity Sales Volume and Water Flow



## Electricity Sales Volume

	2019	2020	2021	2022	2023 <sup>(1)</sup>	1H/23	1H/24
Avg. Water Flow (CMS)	2,767	2,533	3,039	3,773	3,035	1,979	1,856
Total (GWh)	835	6,301	7,305	8,018	6,873	2,576	2,477
% Change		+655.0%	+15.9%	-9.8%	(14.3%)	(28.7%)	(3.9%)
Avg. Tariff (Bt/kWh)	1.88	1.91	1.91	2.01	2.00	1.99	2.05

## Tariff Structure – EGAT

Year	PE Tariff			SE Tariff	EE Tariff
	US\$/kWh	Bt/kWh	Total Bt eq. <sup>(2)</sup> /kWh	Bt/kWh	Bt/kWh
2019-2024	0.0374	1.271	2.5419	1.652	1.050
2025 Onward	0.0374	1.271	2.5419	1.652	1.398

Note: XPCL Annual Supply Target: PE 4,299 GWh, SE 1,410 GWh

(1) Outstanding SE Excess Account was 119 GWh; (2) Long-term exchange rate assumption is 1 US\$ = 34 Baht

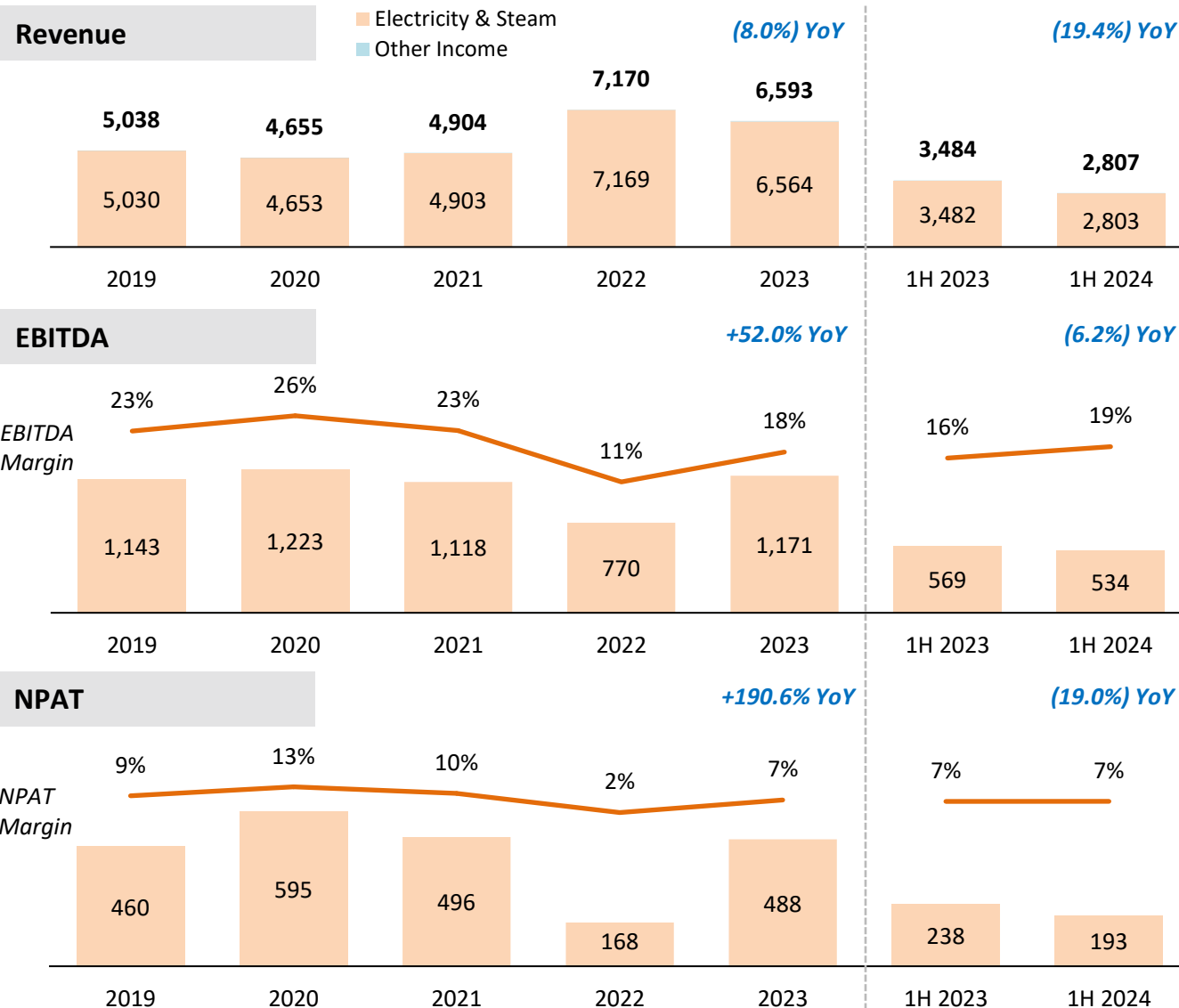
# BIC 1H 2024 Financial Performance

Consolidated  
Subsidiary



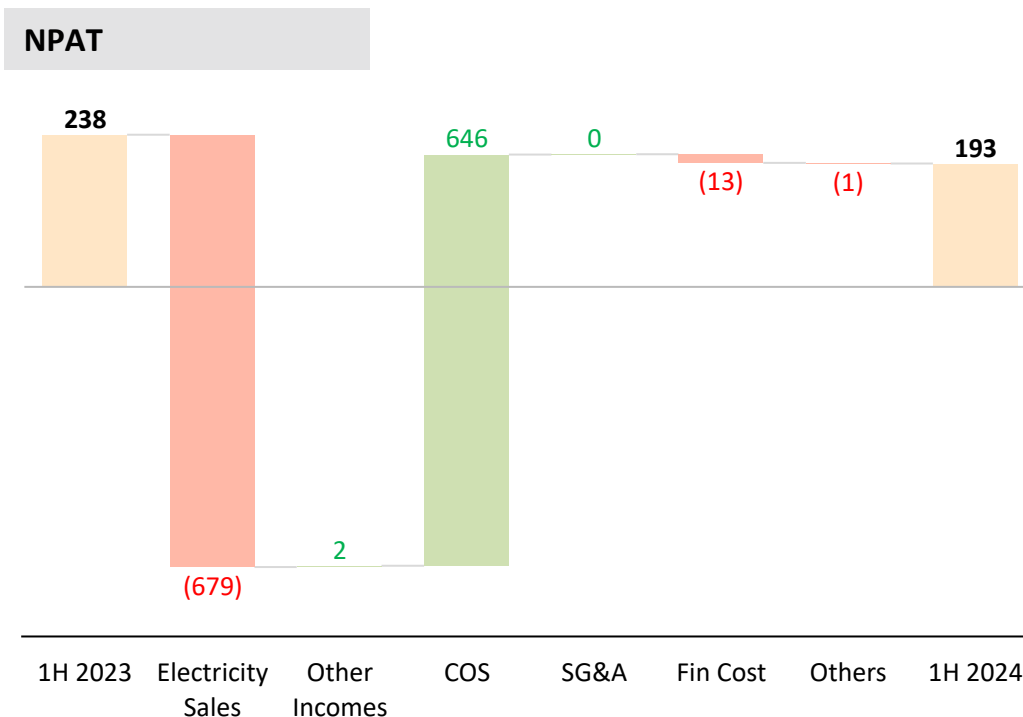
## Financial Performance

Unit: Bt mn



## Performance Highlights

Unit: Bt mn



- NPAT declined YoY, mainly due to the YoY lower electricity sales volume, lower Ft, and higher finance cost.

## Key Activities in 2024

- Close monitor of gas price and cash flow management
- Load optimization and improvement of overall plant efficiency

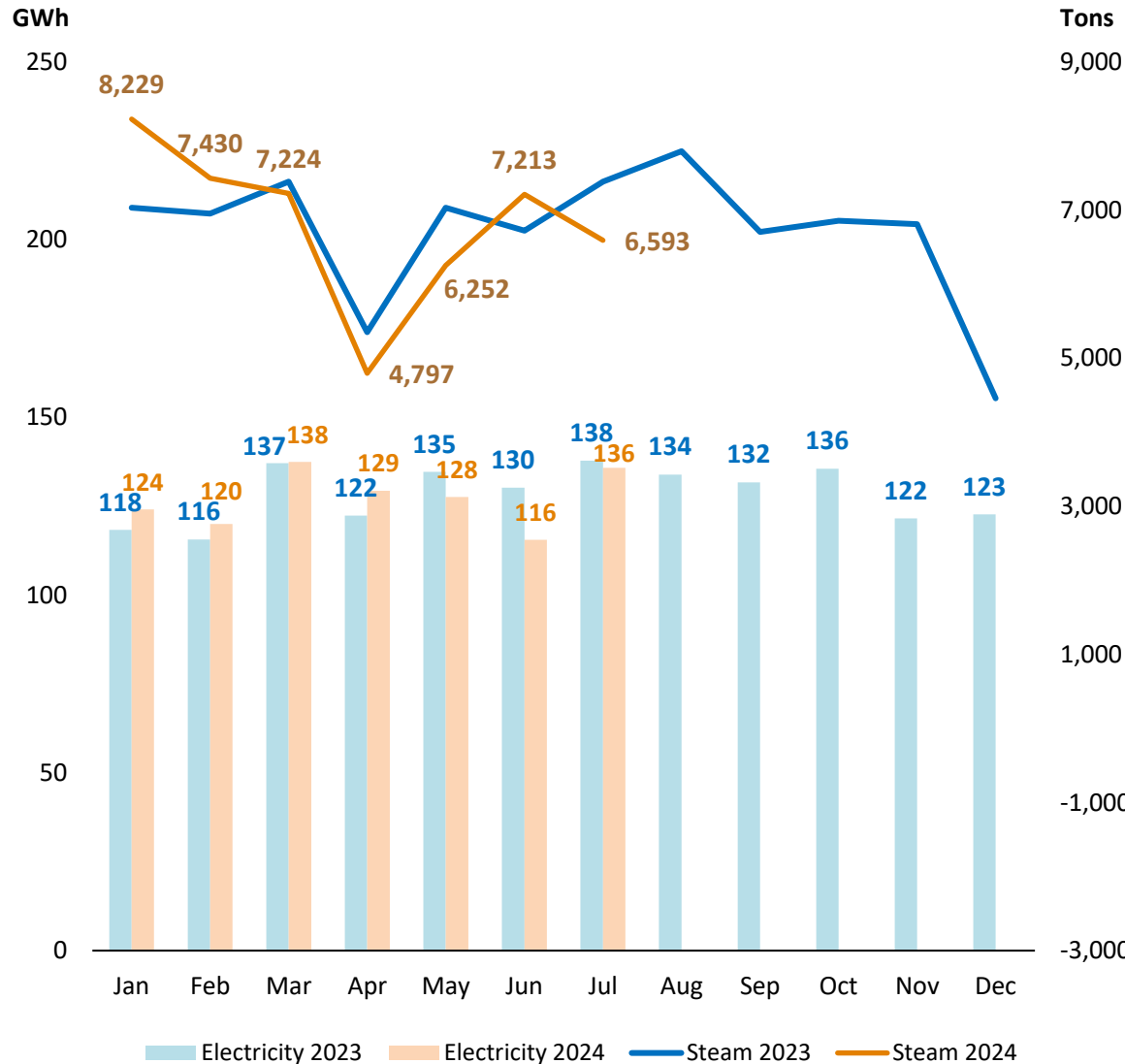


# BIC 1H 2024 Operation

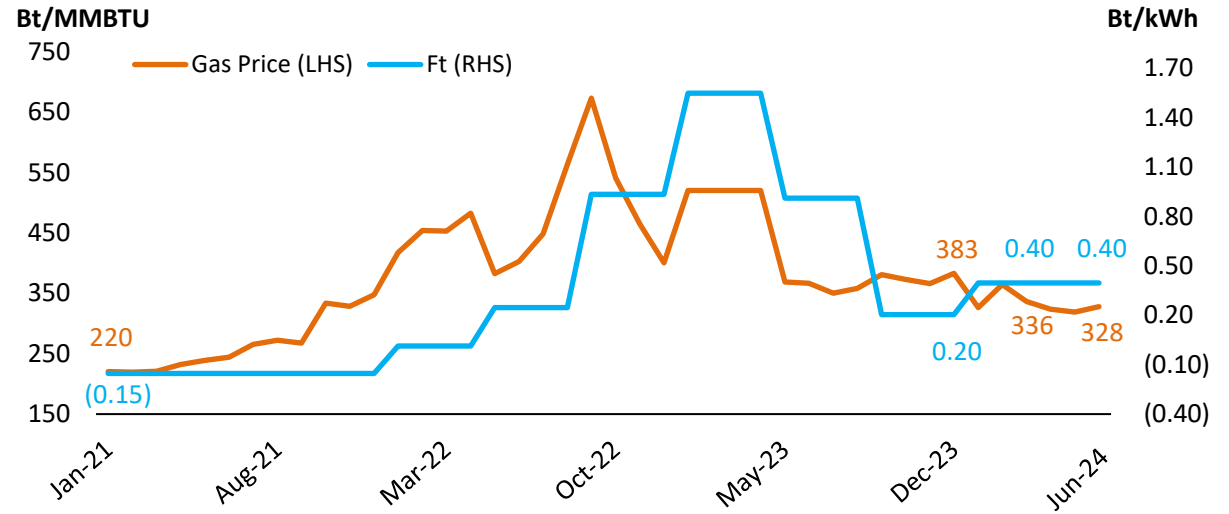
Consolidated  
Subsidiary



## Monthly Electricity and Steam Production



## Gas Price and Ft



## Electricity and Steam Sale Volume

Unit: GWh/Tons

	2019	2020	2021	2022	2023	1H/23	1H/24
EGAT	1,250	1,236	1,238	1,233	1,259	615	610
IUs	311	300	306	299	283	144	144
<b>Total (GWh)</b>	<b>1,561</b>	<b>1,536</b>	<b>1,544</b>	<b>1,532</b>	<b>1,542</b>	<b>759</b>	<b>754</b>
Steam (Tons)	87,486	74,026	73,395	78,036	80,492	40,480	41,145
<b>Avg. Tariff (Bt/kWh)</b>	3.18	3.00	3.14	4.62	4.12	4.54	3.64
<b>Avg. Gas Price (Bt/MMBTU)</b>	273	245	266	474	419	470	333
% Chg. in Electricity	+0.5%	(1.6%)	+0.5%	(0.8%)	+0.7%	(0.2%)	(0.6%)
% Chg. in Steam	(7.4%)	(15.4%)	(0.9%)	+6.3%	+3.1%	+12.4%	+1.6%
% Chg. in Gas Price	+5.8%	(10.4%)	+8.8%	+78.1%	(11.5%)	+8.7%	(29.1%)

# BKC 1H 2024 Financial Performance

Consolidated  
Subsidiary

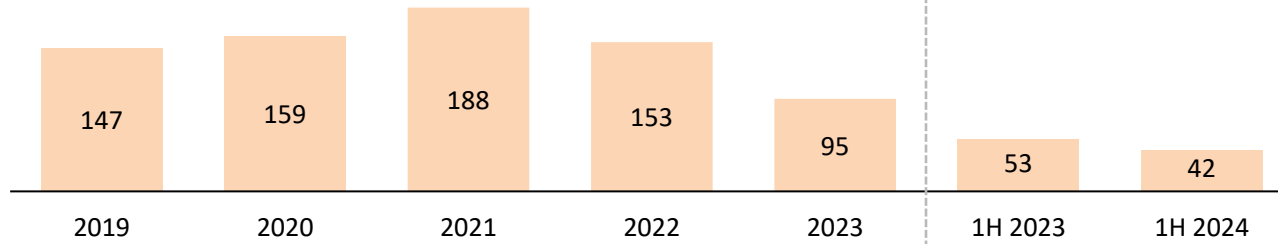


## Financial Performance<sup>(1)</sup>

Unit: Bt mn

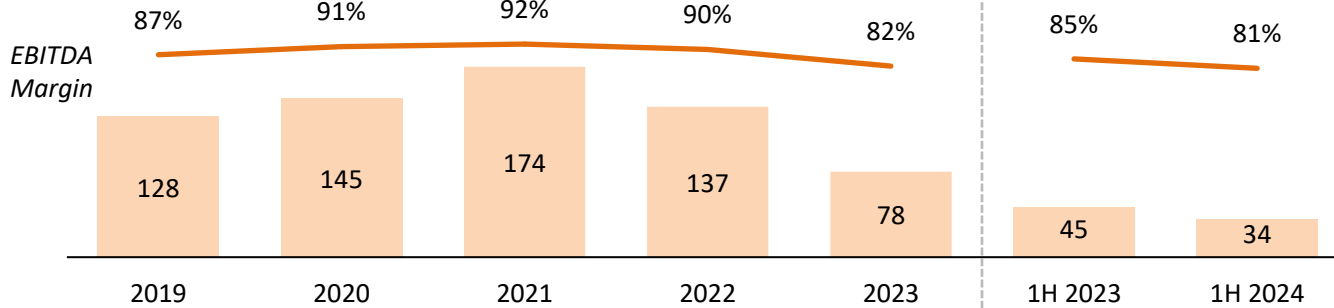
### Revenue

(38.0%) YoY (20.6%) YoY



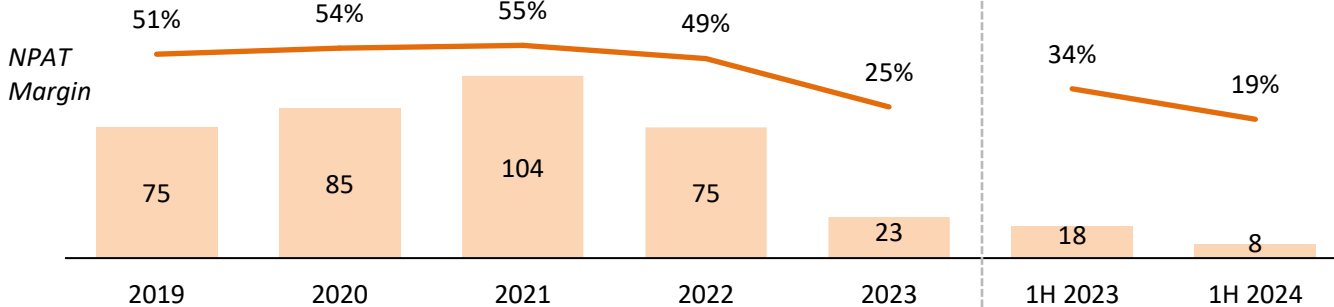
### EBITDA

(43.3%) YoY (24.6%) YoY

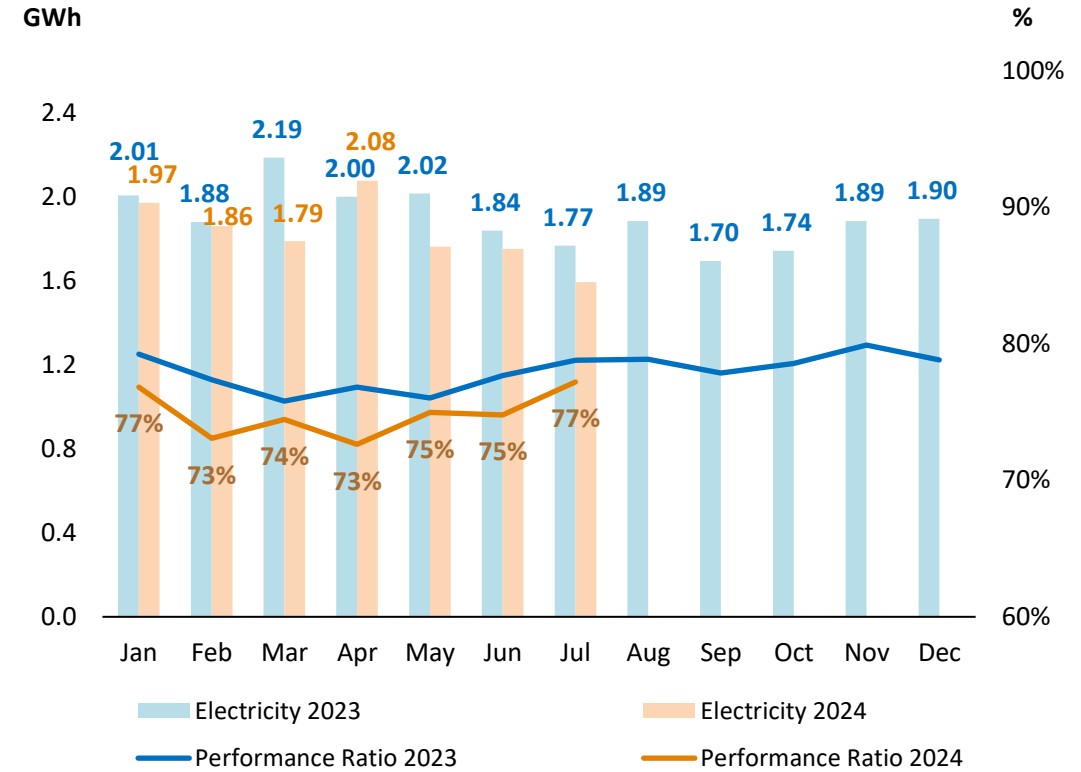


### NPAT

(68.6%) YoY (56.1%) YoY



## Monthly Electricity Production<sup>(1)</sup>



## Electricity Sales Volume<sup>(1)</sup>

	2019	2020	2021	2022	2023	1H/23	1H/24
Electricity (GWh)	15.55	20.13	23.25	22.87	22.81	11.93	11.22
% Change	+26.7%	+29.5%	15.5%	(1.6%)	(0.3%)	(0.7%)	(6.0%)
Avg. Ft <sup>(2)</sup> (Bt/kWh)	(0.20)	(0.26)	(0.35)	0.25	0.72	1.10	0.30

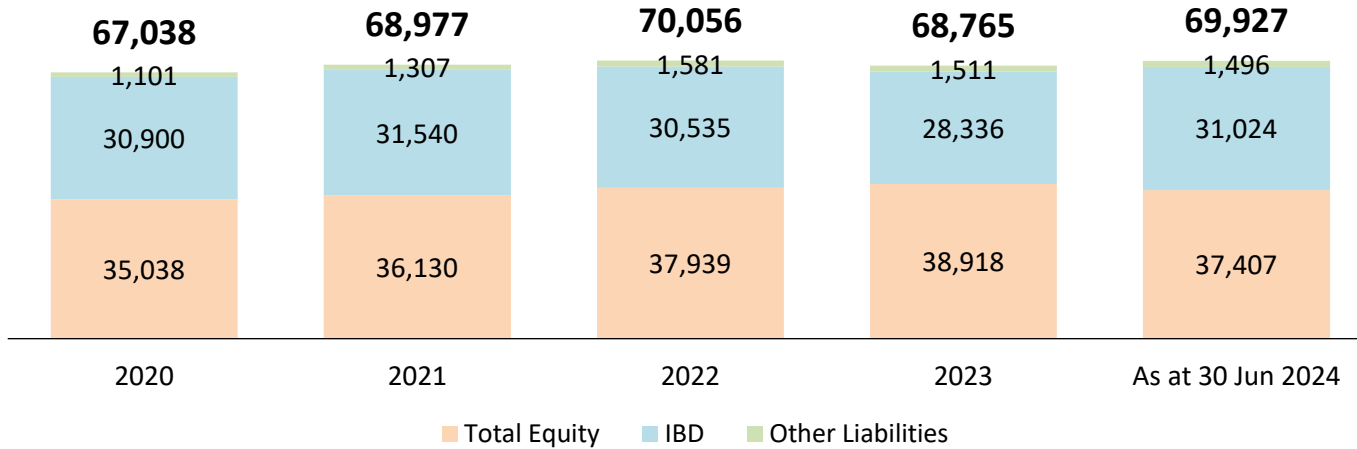
(1) Include Revenue and Electricity Sales of new solar rooftop power plants and solar farm; (2) Average wholesale Ft rate

# Consolidated Financial Position as at 30 June 2024

## Financial Position

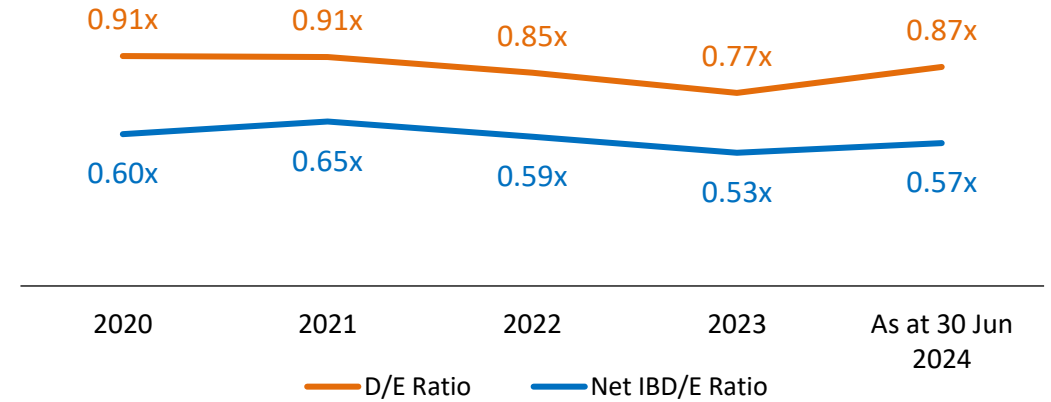
Unit: Bt mn

Total Assets slightly increased, mainly driven by cash from normal operation, proceeds from the Company's Debenture issuance and Promissory Note; offset by depreciation and amortization recognition.



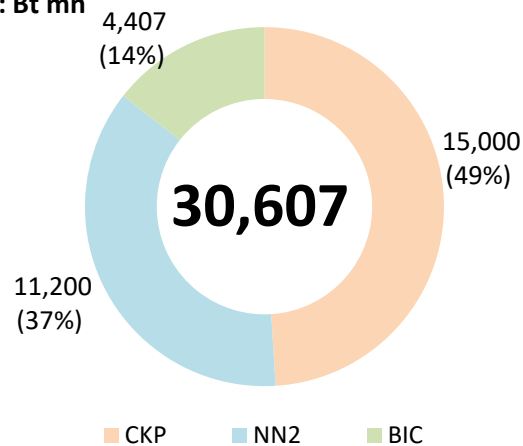
## Leverage Ratios

CKP's Debentures Covenant: Net IBD/E Ratio not exceeding 3.00x

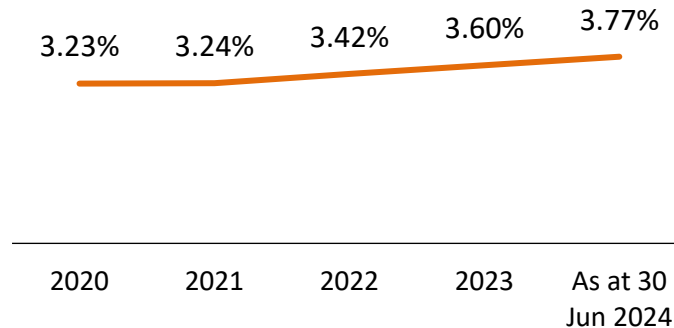


## Long-term Loan and Debentures<sup>(1)</sup>

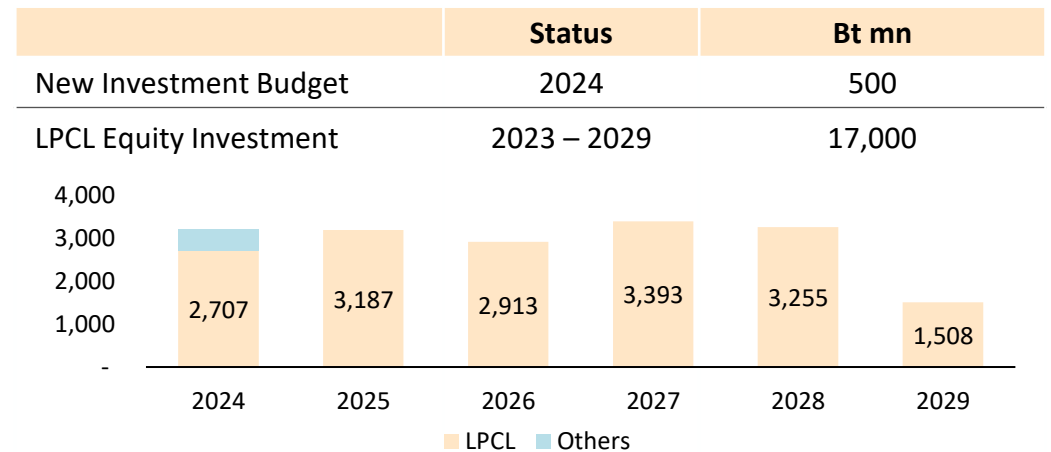
Unit: Bt mn



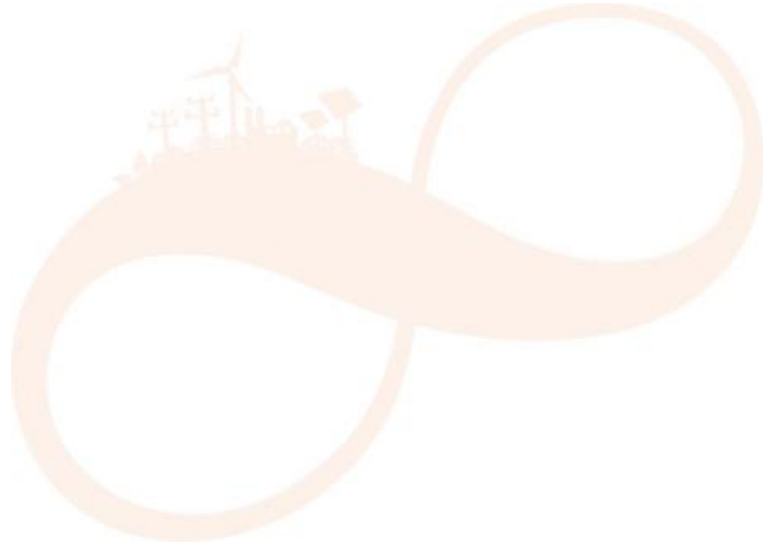
## Average Cost of Debt



## Investment & Capex Plan



(1) Excluding transaction costs



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- 3. Projects Progress Update**
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## LPCL Progress Update as of June 2024



- **Construction Progress:** 30%
- **CKP Shareholding:** 50%
- **CKP Equity Injection:** Bt 5,239 mn



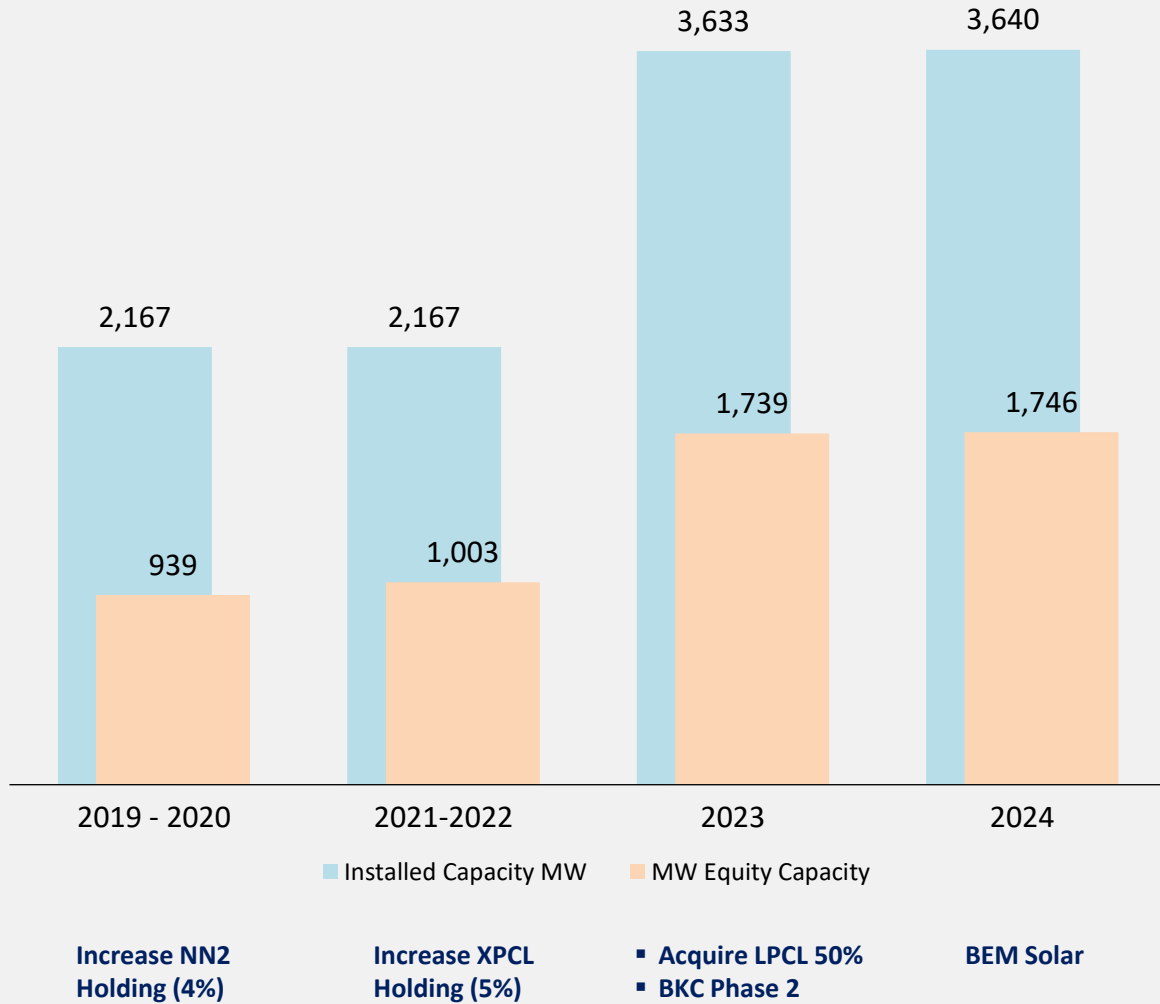
## Solar PPAs with BEM



- **Capacity:** 7 MW
- **Investment BG:** Up to Bt 250 mn
- **PPA Period:** 25 years from COD
- **CKP Solar MW:** 29 MW ► 42 MW

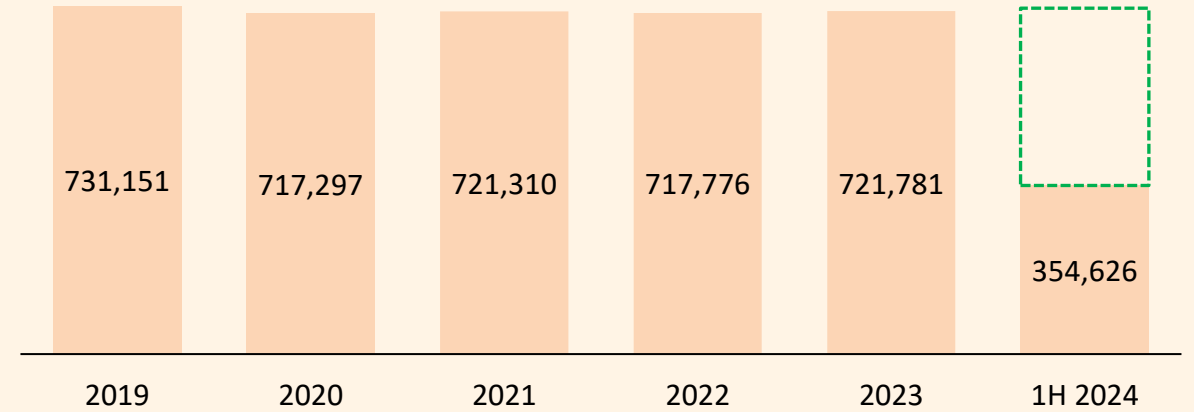
# Growth and Sustainability

## Capacity Growth



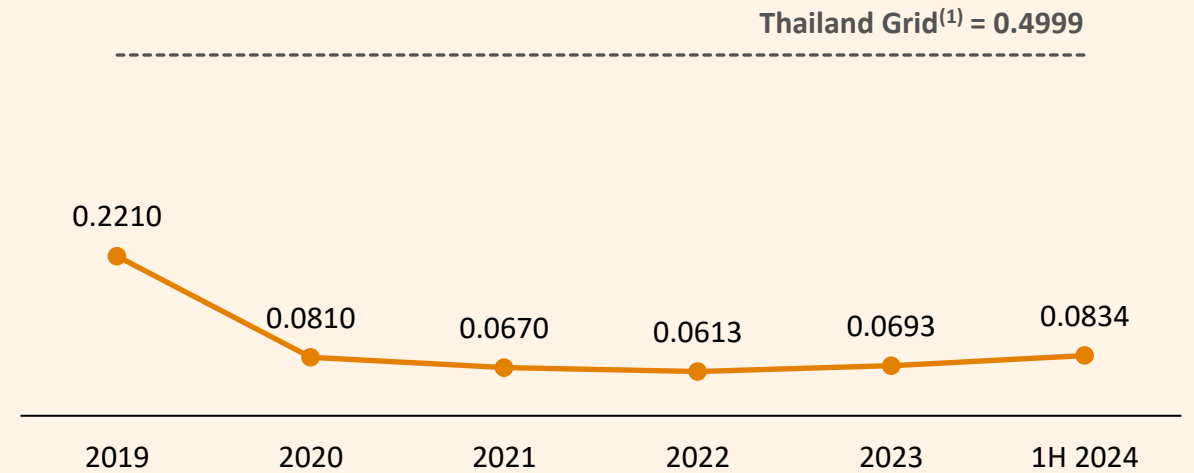
## Total GHG Emissions Scope 1 and 2

Unit: tCO<sub>2</sub>e

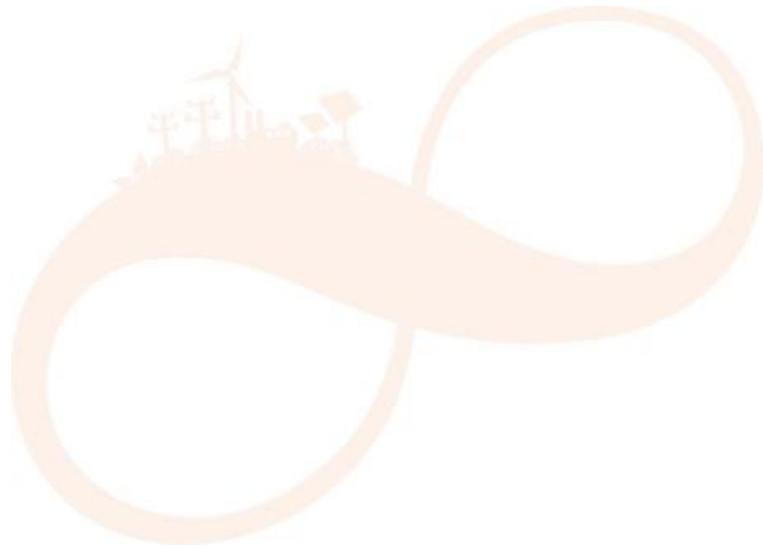


## GHG Intensity

Unit: tCO<sub>2</sub>e/MWh



(1) Source: Thailand Greenhouse Gas Management Organization (TGO)



- 1. Corporate Overview and Sustainability**
- 2. 1H 2024 Financial Performance**
- 3. Projects Progress Update**
- 4. Q&A**

## RENEWABLE ENERGY FOR A SUSTAINABLE FUTURE



### Investor Relations

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