

**TRANSFORMING
TOMORROW**

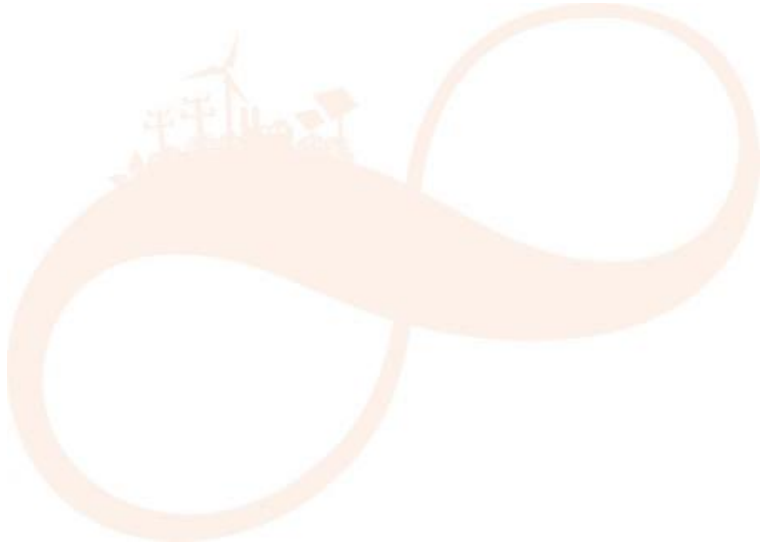
▶ Pathway to net zero



**SET OPPORTUNITY DAY
2Q 2023**

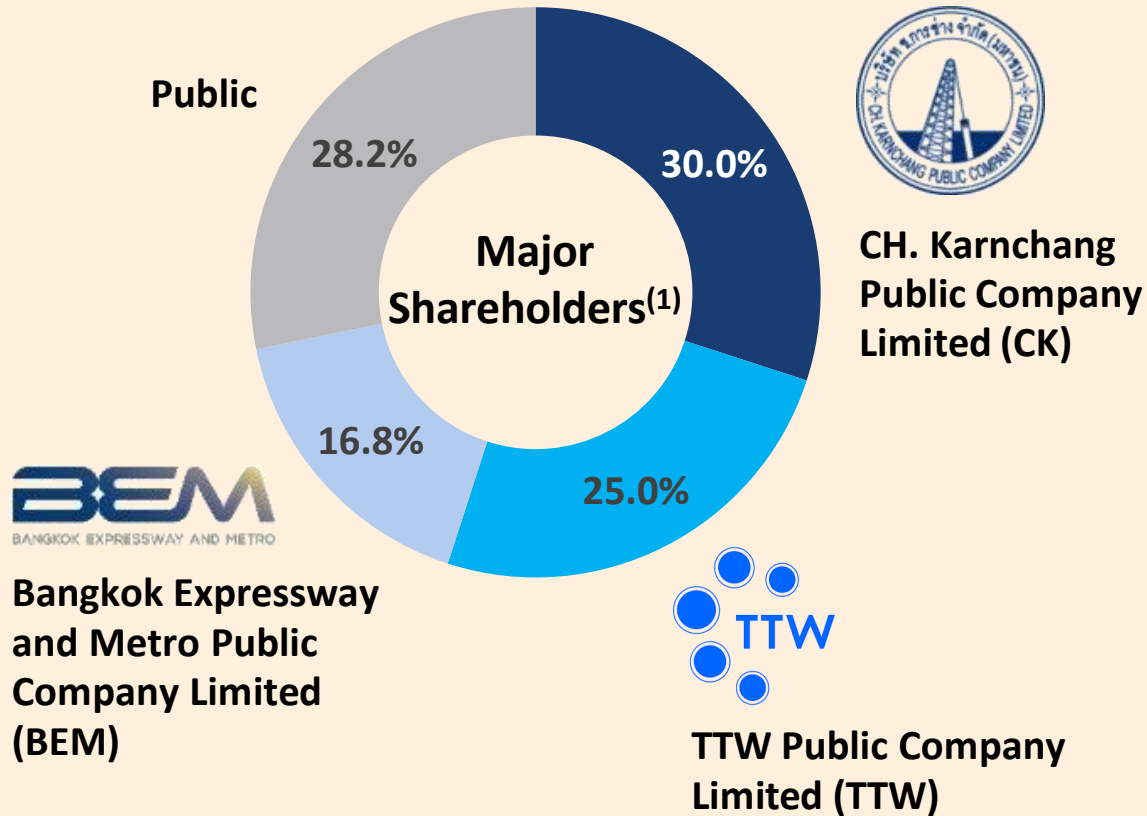
21 AUGUST 2023






- 1. Corporate Overview and Long-term Growth**
- 2. Key Developments from Q1 2023 to Date**
- 3. 1H 2023 Financial Performance**

The Power Investment Arm of CH. Karnchang Group



General Information

Symbol	:	CKP
Established Date	:	8 June 2011
Listed Date	:	18 July 2013
Paid-up Shares	:	8,129,382,729 shares
Par	:	Bt 1.00 per share
Registered Capital	:	Bt 8,129 mn
Market Cap	:	Bt 27,965 mn ⁽²⁾
Indices	:	SET 100 SET THSI SET CLMV
Sector	:	Energy
TRIS Rating	:	A / Stable
CG Score	:	

(1) As of 1 June 2023, (2) As of 10 August 2023

Hydro



1. Nam Ngum 2

Subsidiary



COD: Jan 2013
 Concession: 25 years
 Ownership: 46.0%
 Capacity MW: 615
 Equity MW: 283



2. Xayaburi

Associate



COD: Oct 2019
 Concession: 31 years
 Ownership: 42.5%
 Capacity MW: 1,285
 Equity MW: 482



3. Luang Prabang

Associate



SCOD: Early 2030
 Concession: 35 years
 Ownership: 50.0%
 Capacity MW: 1,460
 Equity MW: 730

Cogeneration



4. Bangpa-In Cogeneration

Subsidiary



	BIC1	BIC2
COD:	Jun 2013	Jun 2017
Periods:	25 years	25 years
Ownership:	65.0%	65.0%
Capacity MW:	118	120
Equity MW:	77	78

Total Installed MW Capacity: 3,627 MW

Total Equity MW Capacity: 1,733 MW

Solar



Bangkhenchai

Subsidiary

Ownership: 100.0%



Total Capacity 15 MW	Since
5. Bangkhenchai (8.00)	Aug 2012
6. Phachi (0.89)	Feb 2019
7. Banglen (0.97)	May 2019
8. Phutthamonthon Sai 5 (0.97)	Jun 2019
9. Mahachai (0.72)	Jun 2019
10. Krathum Ban (0.51)	Jul 2019
11. Khlong Preng (2.67)	Sep 2020

12. Nakhon Ratchasima Solar

Associate

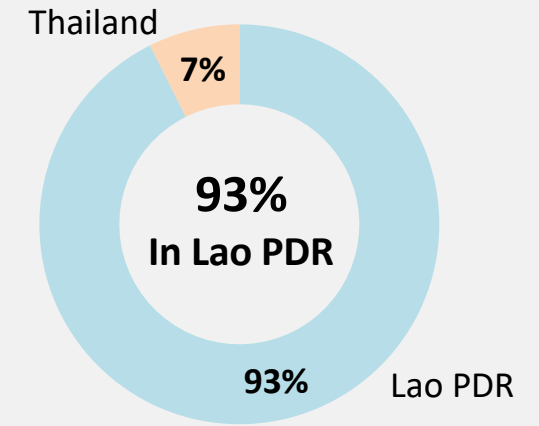
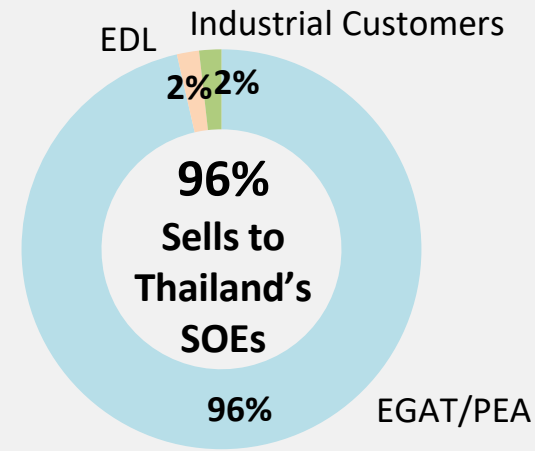
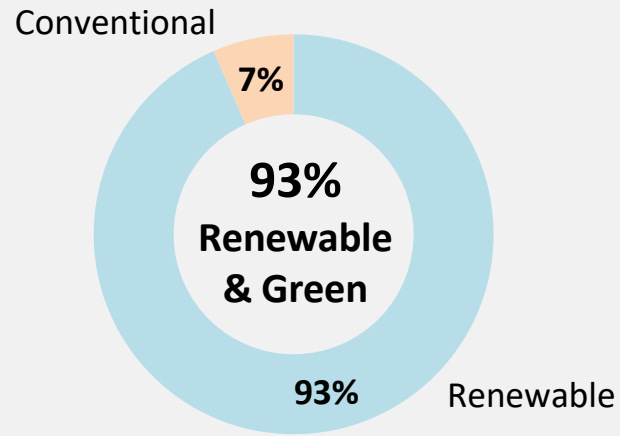
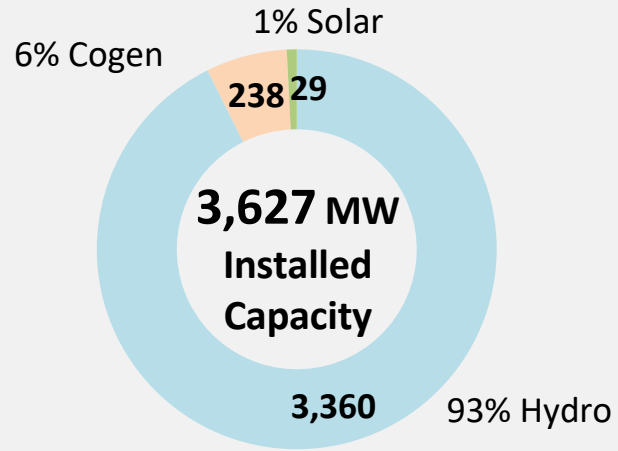
COD: Mar 2012
 Ownership: 30.0%
 Capacity MW: 6
 Equity MW: 2

13. Chiangrai Solar

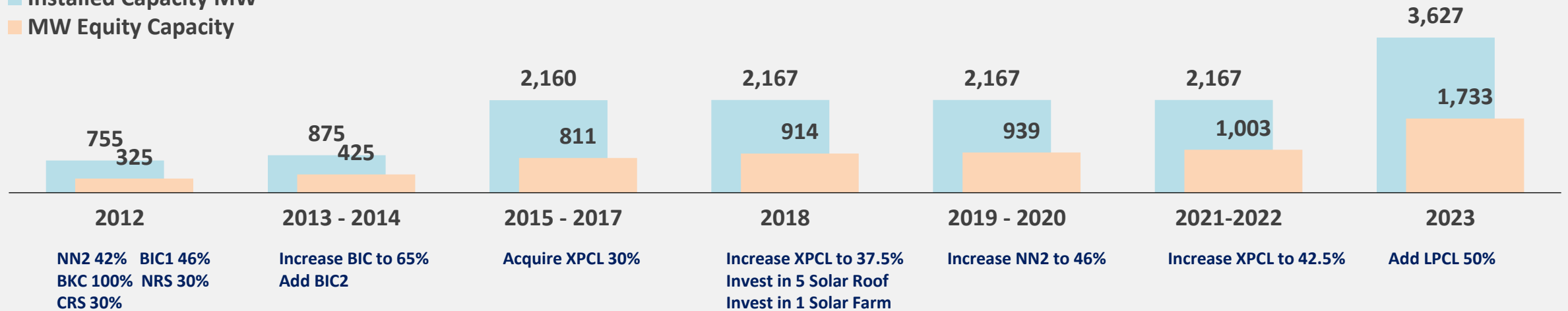
Associate

COD: Jan 2013
 Ownership: 30.0%
 Capacity MW: 8
 Equity MW: 2

Installed Capacity



■ Installed Capacity MW
■ MW Equity Capacity



Long-term Growth

TO BE ONE OF THE REGION'S **LARGEST PRODUCERS** OF ELECTRICITY FROM **RENEWABLES** WITH ONE OF THE **LOWEST CARBON FOOTPRINTS**



6,000
MW by 2027

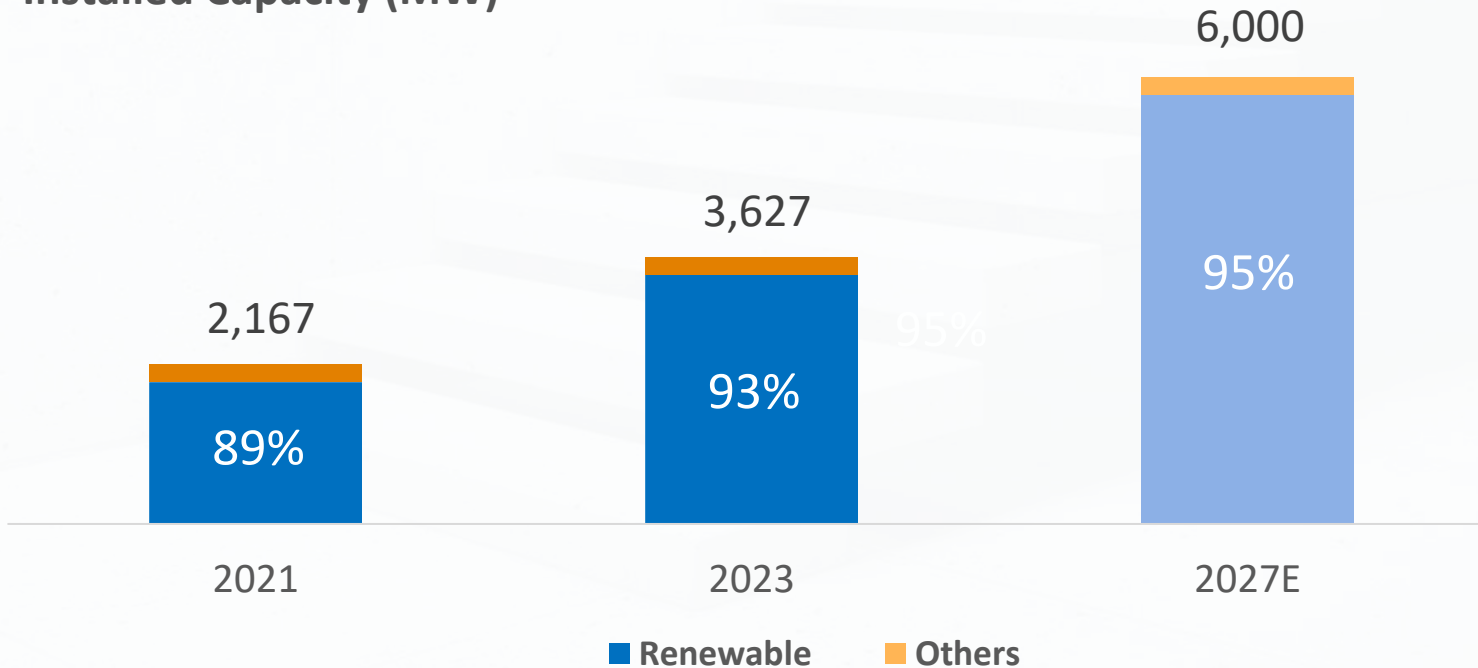


95%
RENEWABLE



ASEAN
FOCUSED

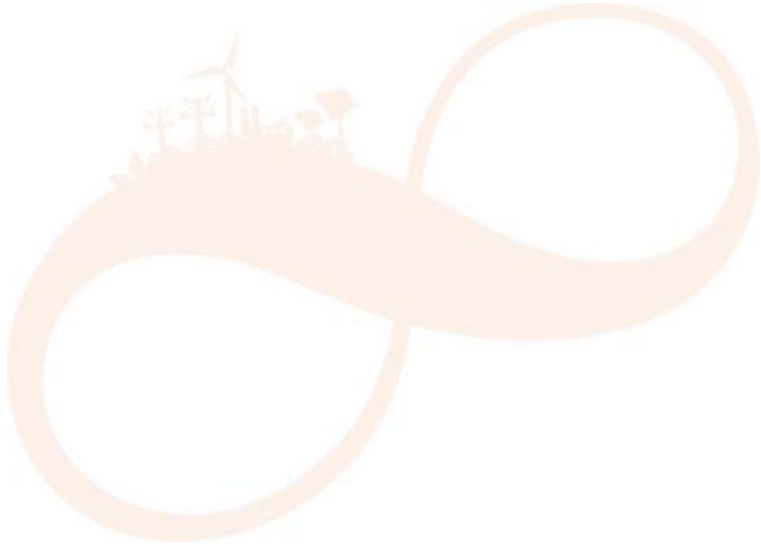
Installed Capacity (MW)



NET ZERO GHG EMISSION BY 2050



100%
INTERNAL RENEWABLE
ELECTRICITY USE
BY 2043



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Dividend Payment from 2022 Operating Results

Dividend payment of Baht 0.085 per share, totaling of Baht 691.0 million, was approved in the 2023 Annual Ordinary General Meeting.



LPCL Fulfilled Terms and Conditions under the Main Contracts

- Achieved the terms and conditions of Concession Agreement, Power Purchase Agreement, and Credit Facility Agreement as plan
- Expected COD in Early 2030



CKP Maintained Credit Ratings

TRIS Rating affirmed CKP's company rating at "A/Stable" and debentures rating "A-/Stable".



NN2 Maintained Credit Ratings

TRIS Rating affirmed NN2's company rating and debentures rating "A/Stable".

LPCL Investment

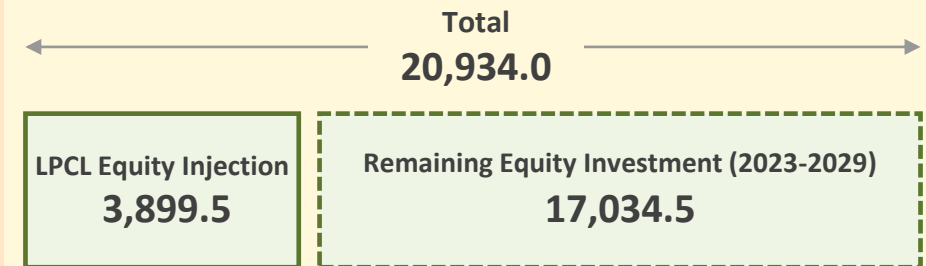


Luang Prabang Hydroelectric Power Project

Installed Capacity:	1,460 MW
Type:	Run-of-River
Concession Period:	35 years
SCOD:	Early 2030

- CKP holds 50.0% in Luang Prabang Power Company Limited (LPCL)
 - Total equity investment of LPCL: Bt 41,868 mn
 - CKP's proportion of equity investment: Bt 20,934 mn

Unit: Bt mn



ESG100 List of 2023



Included in the ESG100 list of 2023 by Thaipat Institution for the 2nd consecutive year.

The Asset ESG Corporate Awards 2022



Received the ESG Corporate Awards 2022 – Platinum Level from The Asset.

Asia Responsible Enterprise Awards 2023



Won Asia Responsible Enterprise Awards 2023 – Social Empowerment from AREA for the 2nd consecutive year.

The European Global Sustainability & ESG Awards 2023



Received 2 awards from The European Global Sustainability & ESG Awards 2023:

- Best Leadership in the Sustainable Energy Industry: Mr. Thanawat Trivisvavet – Thailand
- Best Sustainable Development Strategy Energy Industry

The Most Sustainable Hydro Power Company in Thailand Award



Received the Most Sustainable Hydro Power Company in Thailand Award from the Global Economics Magazine.

The Best Green Bond Hydropower Plant Framework – Thailand Award



Received the Best Green Bond Hydropower Plant Framework – Thailand Award from the International Finance Magazine.

Carbon Champion Certificate

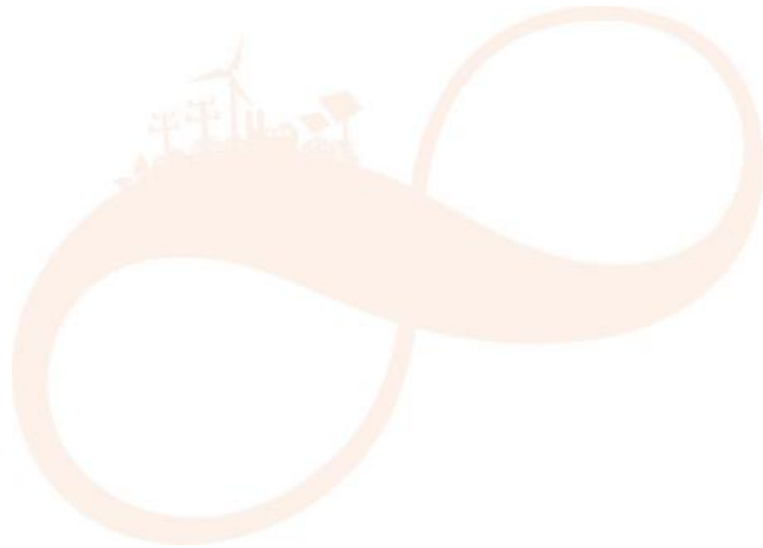


Received the Carbon Champion Certificate – Standard Tier Level from Enterprise Asia’s Carbon Champion Programme

CSR-DIW for Beginner Award 2022



Two solar power plants of BKC won CSR-DIW for Beginner Award 2022 by the Department of Industrial Works, Ministry of Industry



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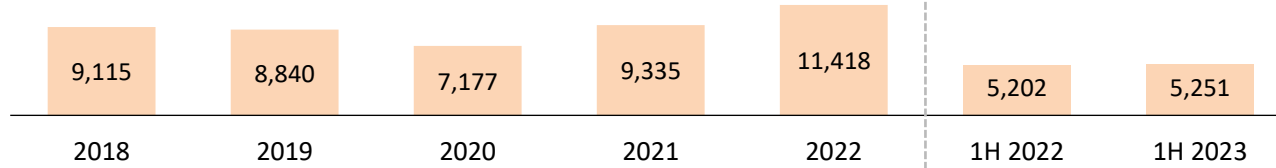
1H 2023 Consolidated Performance

Consolidated Financial Performance

Unit: Bt mn

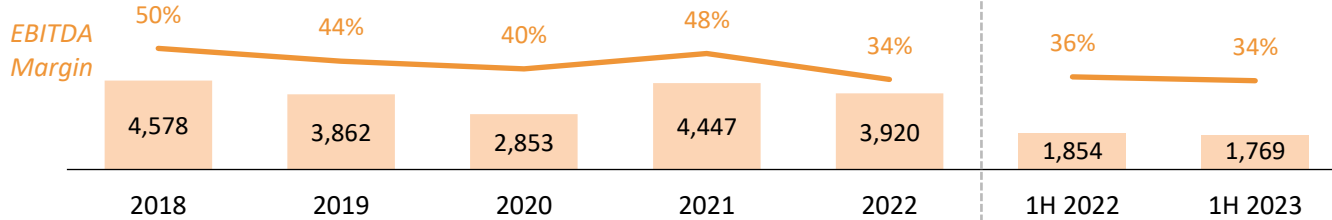
Revenue

+22.3% YoY +0.9% YoY



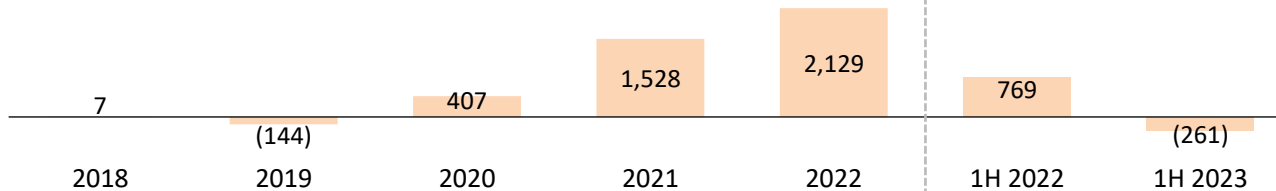
EBITDA⁽¹⁾

(11.8%) YoY (4.6%) YoY



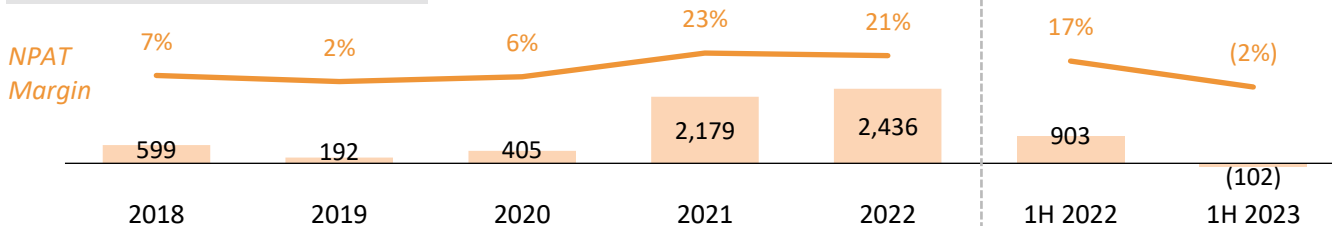
Share of Profits / (Loss)⁽¹⁾

+39.3% YoY (133.9%) YoY



NPAT⁽¹⁾

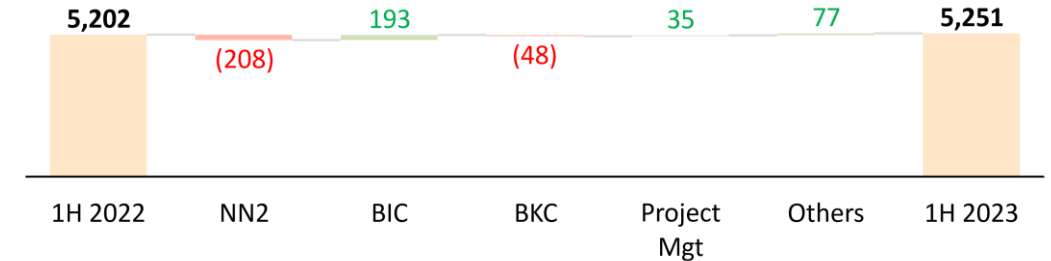
+11.8% YoY (111.4%) YoY



Performance Highlights

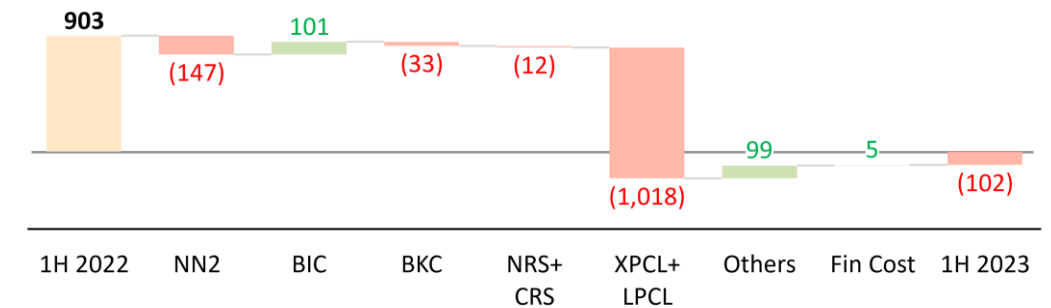
Unit: Bt mn

Revenue



- Total Revenues increased YoY mainly from BIC's Revenue, driven by the rises of retail Ft rate and natural gas price, and CKP's other income related to LPHPP;
- Partially offset by lower NN2's Revenue from decline in electricity sales volume and lower BKC's Revenue from adder expiration.

NPAT



- NPAT declined YoY mainly driven by lower share of profit from XPCL;
- Partially offset by higher contribution from BIC, mainly driven by higher retail Ft rate.

(1) Excluded non-recurring items

Remark: Effective Tax Rate of 1H/22 was 2.5%. 1H/23's Earnings Before Tax was negative, driven by the YoY decline in operating results; therefore, effective tax rate was not applicable.

NN2 1H 2023 Financial Performance

Consolidated
Subsidiary



Financial Performance

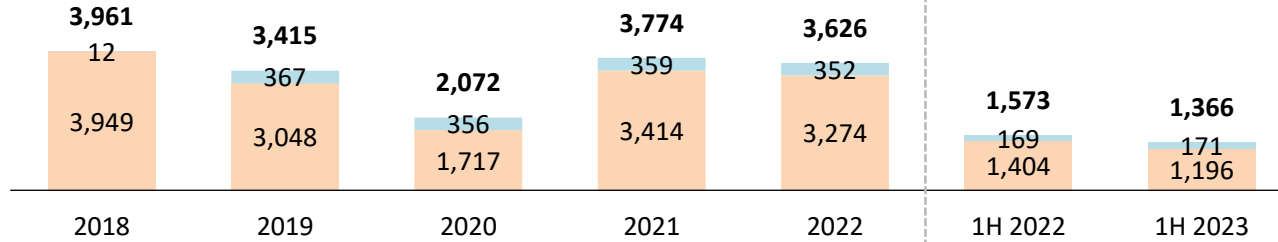
Unit: Bt mn

Revenue

Electricity Revenue
Other Income

(3.9%) YoY

(13.1%) YoY

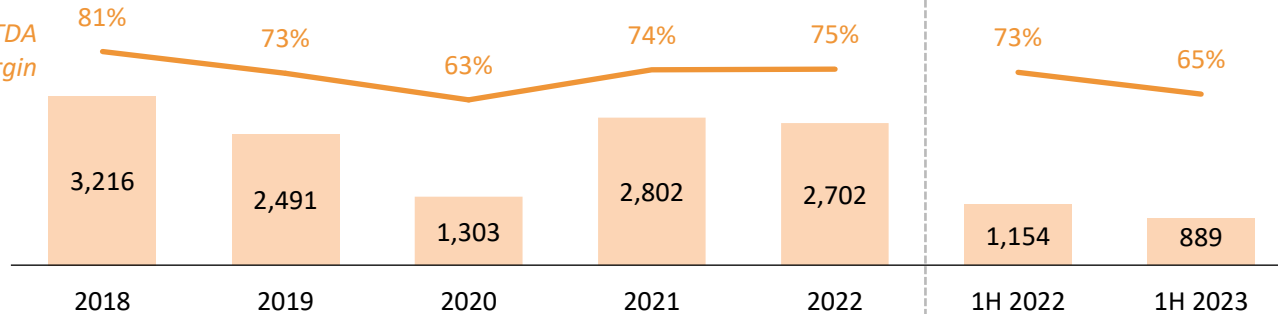


EBITDA⁽¹⁾

(3.6%) YoY

(23.0%) YoY

EBITDA
Margin

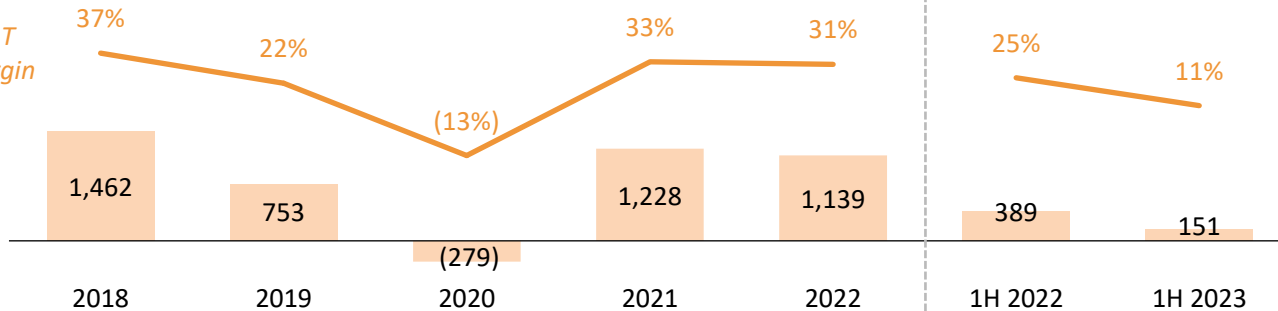


NPAT

(7.3%) YoY

(61.2%) YoY

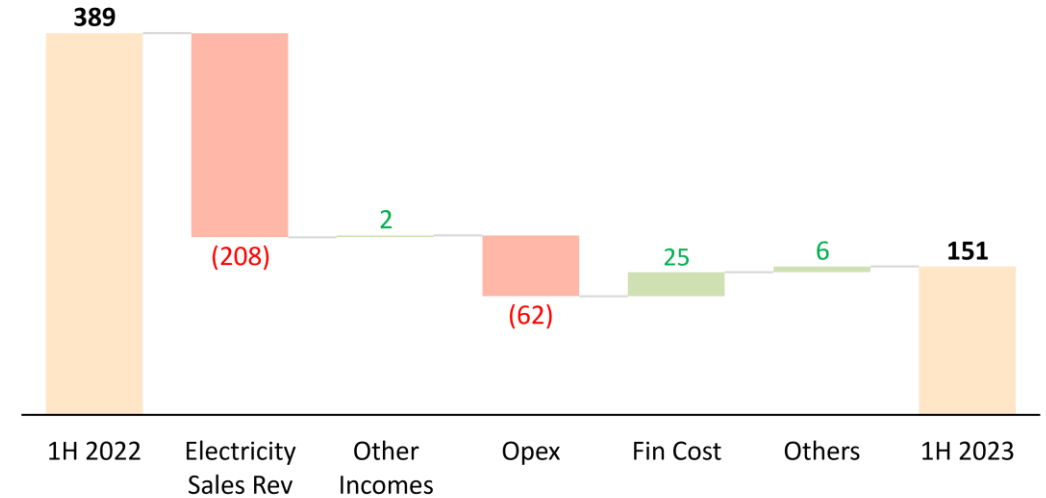
NPAT
Margin



Performance Highlights

Unit: Bt mn

NPAT



- NPAT declined mainly due to lower electricity sales following relatively low beginning reservoir level and lower inflow, together with an increase in operating cost mainly from the planned Major Overhaul;
- Partially offset by lower Finance Cost from redemption of matured Debentures.

Key Activities in 2023

- Major Overhaul during 2023-2025 (1 turbine per year)
- Close monitor of water inflow and declaration
- Debentures redemptions:
 - Bt 800 mn redeemed in March,
 - Bt 400 mn to be redeemed in September

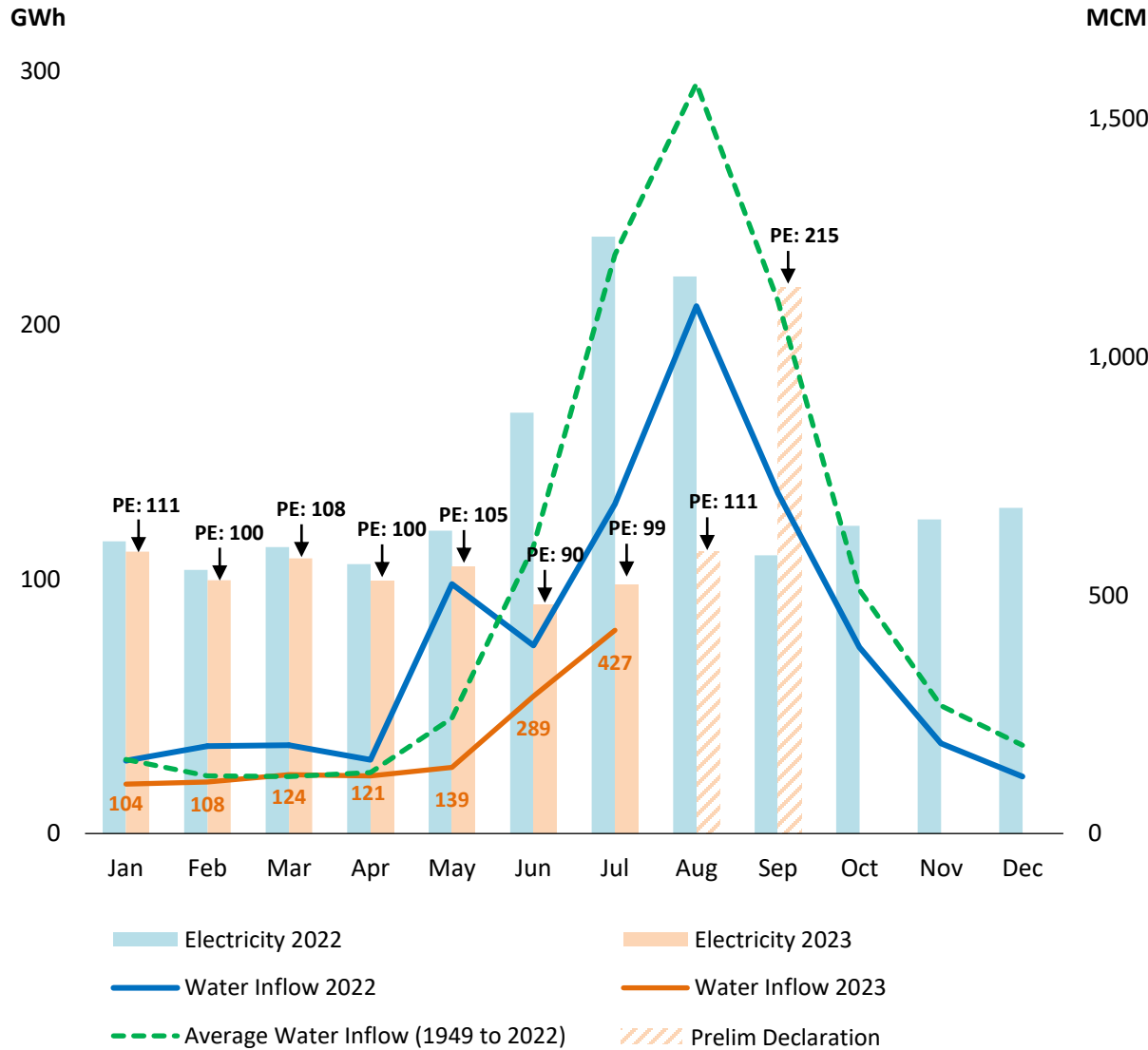
(1) Excluded FX Gain/(Loss)

NN2 1H 2023 Operation

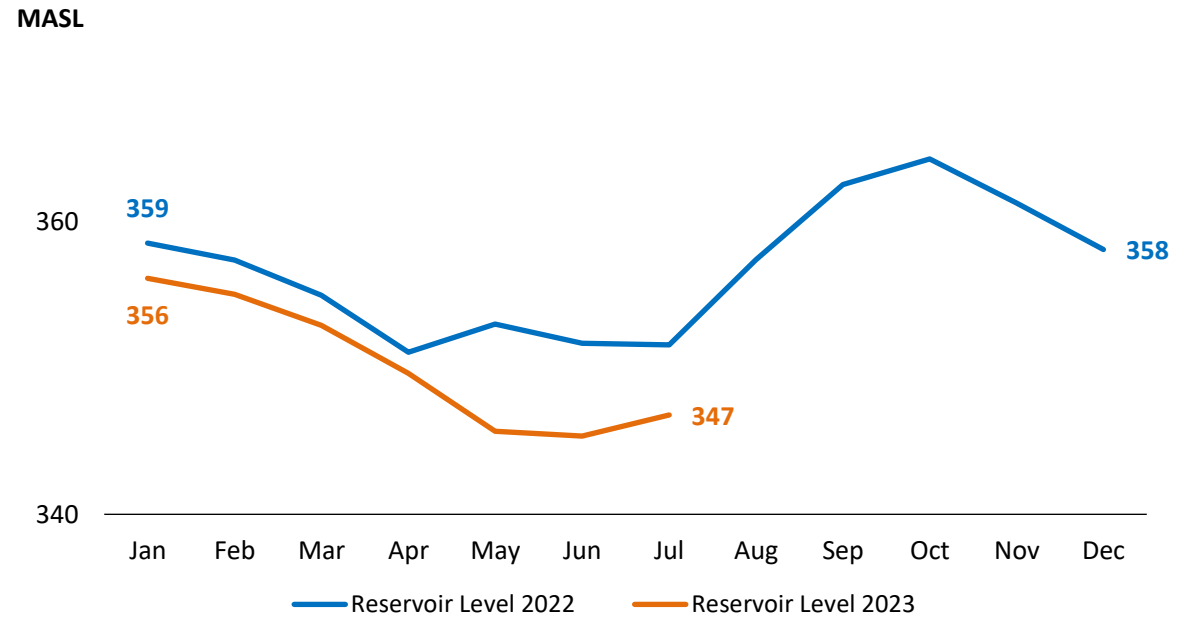
Consolidated
Subsidiary



Electricity Sales Volume and Water Inflow



Reservoir Level (End of Month)



Electricity Sales Volume

Unit: GWh

	2019	2020	2021	2022	1H 2022	1H 2023
Total (GWh)	1,685	920	1,845	1,659	722	614
<i>%YoY Change</i>	<i>(31.4%)</i>	<i>(45.4%)</i>	<i>+100.5%</i>	<i>(10.1%)</i>	<i>(21.4%)</i>	<i>(15.1%)</i>
Avg. Tariff (Bt/kWh)	1.81	1.87	1.85	1.97	1.94	1.95

	PE Tariff		SE Tariff	EE Tariff
US\$ per kWh	Bt per kWh	Total Bt equiv. ⁽¹⁾ 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 2023 Financial Performance

Share of Profit



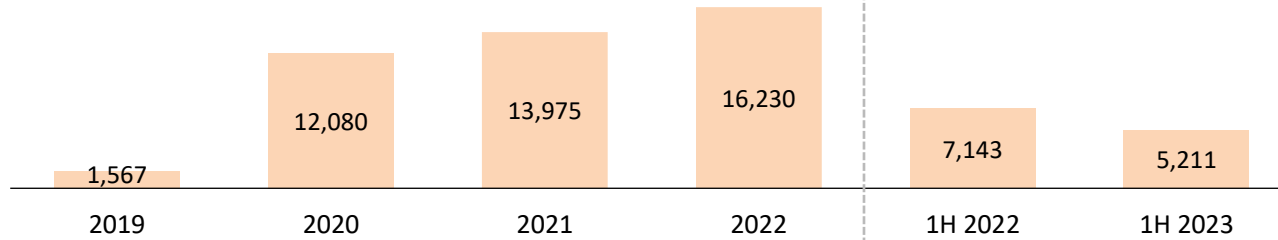
Financial Performance

Unit: Bt mn

Revenue

+16.1% YoY

(27.0%) YoY

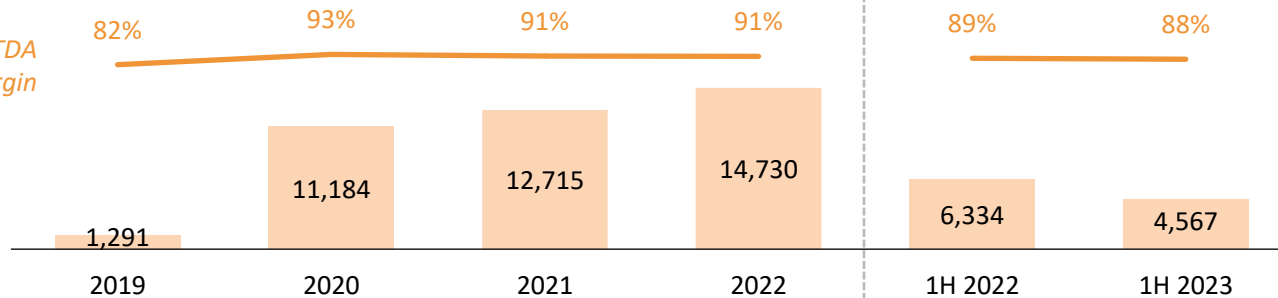


EBITDA⁽¹⁾

+15.8% YoY

(27.9%) YoY

EBITDA Margin

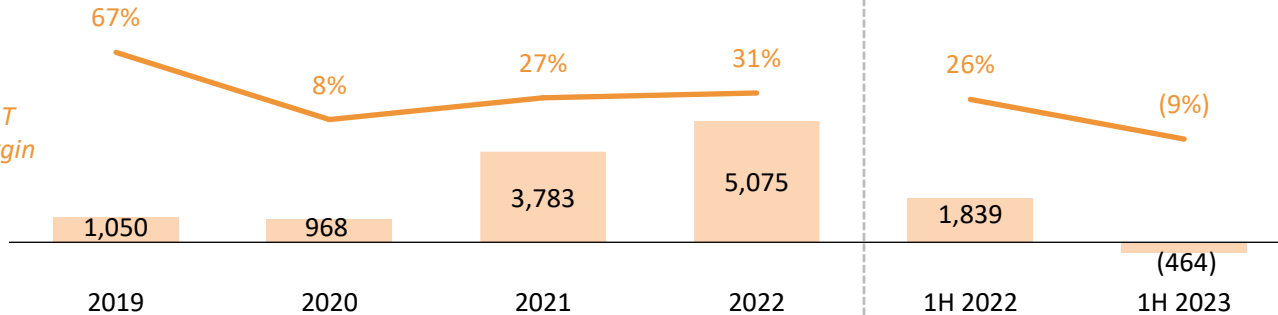


NPAT

+34.2% YoY

(125.3%) YoY

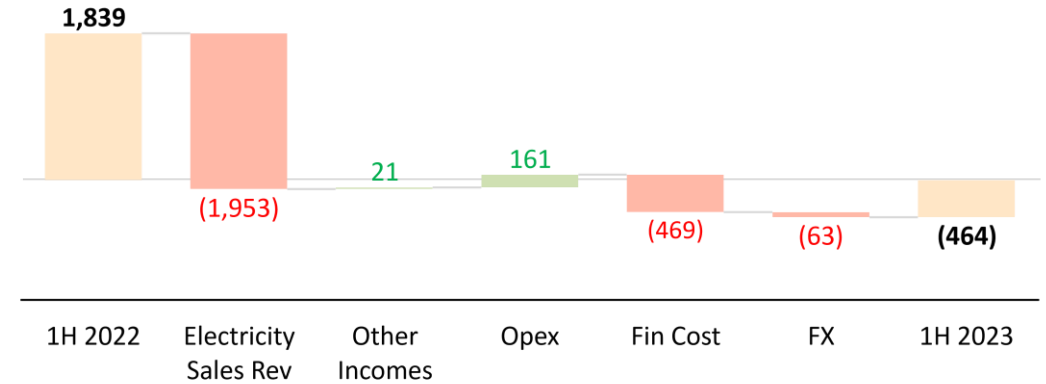
NPAT Margin



Performance Highlights

Unit: Bt mn

NPAT



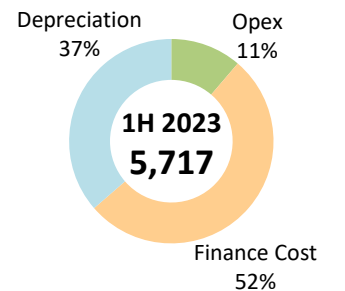
- 1H 2023 performance declined YoY, mainly driven by the YoY decline in electricity sales following lower water flow and the YoY increase in finance cost driven by rising global interest rate situation;
- Partially offset by lower Operating Expenses.

Key Activities in 2023

- Continue to optimize electricity declaration and production
- Close monitor of interest rate trend with plan for debenture issuance in 2H to reduce overall finance cost

Cost Structure

Unit: Bt mn



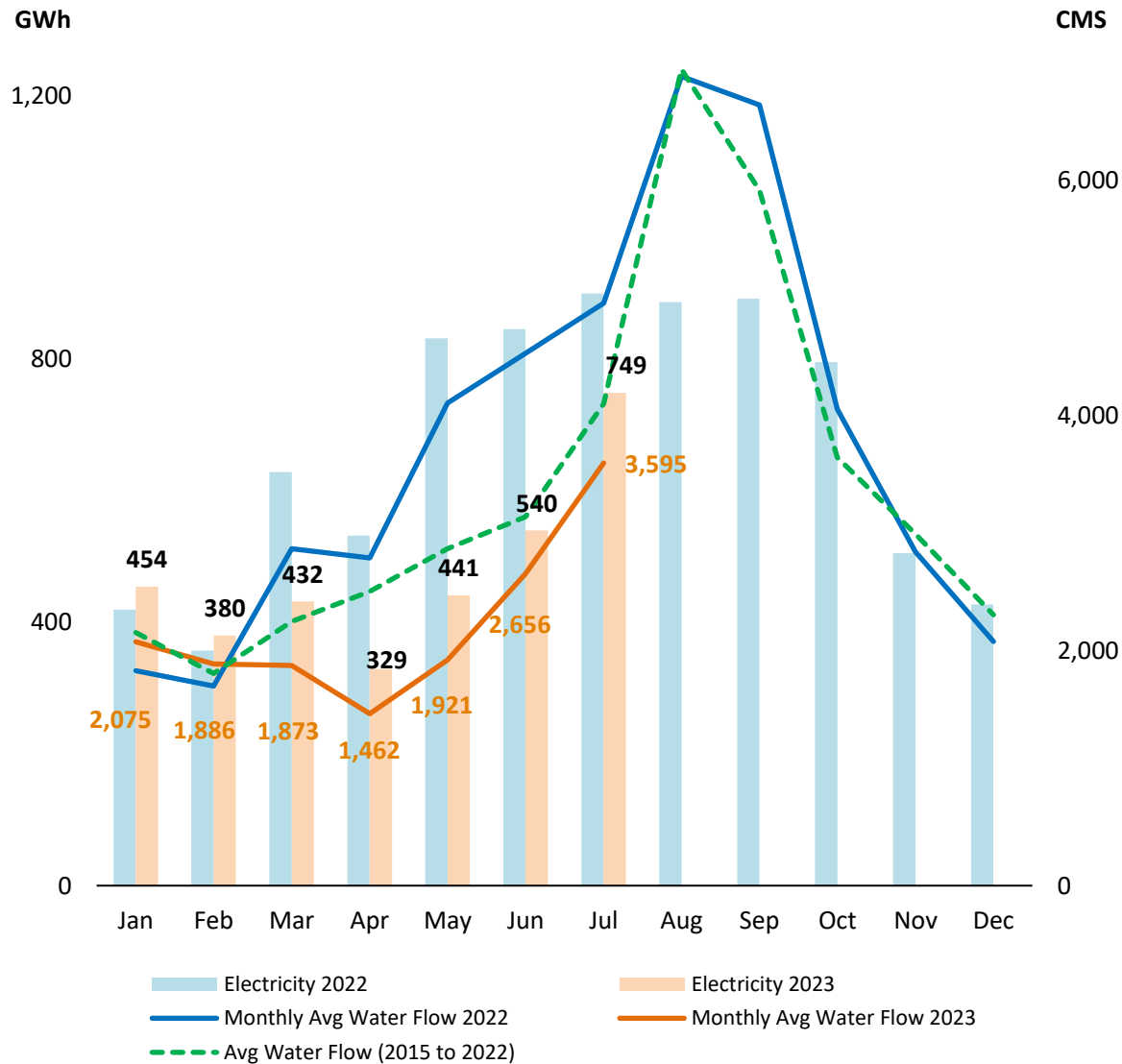
(1) Excluded FX Gain/(Loss)

XPCL 1H 2023 Operation

Share of Profit



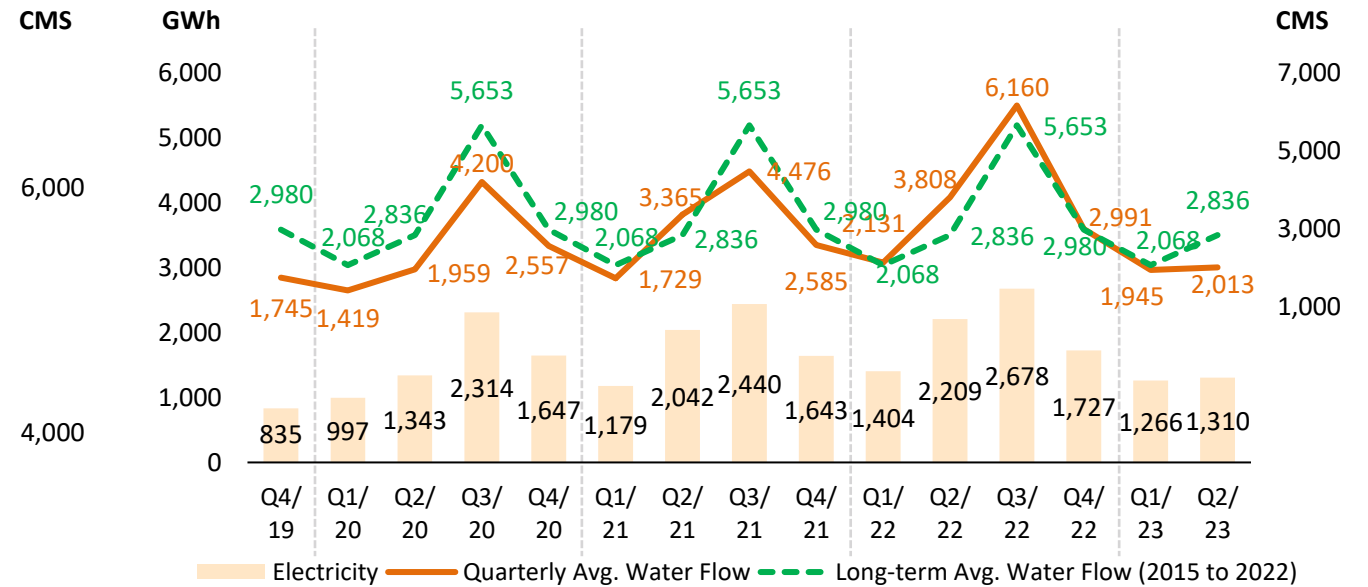
Monthly Electricity Sales Volume and Water Flow



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

(1) Outstanding SE Excess Account was 105 GWh; (2) Long-term exchange rate assumption is 1 US\$ = 34 Baht

Quarterly Electricity Sales Volume and Water Flow



Electricity Sales Volume

Unit: GWh

	2019	2020	2021	2022 ⁽¹⁾	1H 2022	1H 2023
Avg. Water Flow (CMS)	2,767	2,533	3,039	3,773	2,970	1,979
Grand Total	835	6,301	7,305	8,018	3,613	2,576
%YoY Change – Total		+655.0%	+15.9%	+9.8%	+12.2%	(28.7%)
Avg. Tariff (Bt/kWh)	1.88	1.91	1.91	2.01	1.95	1.99

Tariff Structure – EGAT

Year	PE Tariff			SE Tariff	EE Tariff
	US\$/kWh	Bt/kWh	Total Bt eq. ⁽²⁾ /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

BIC 1H 2023 Financial Performance

Consolidated
Subsidiary



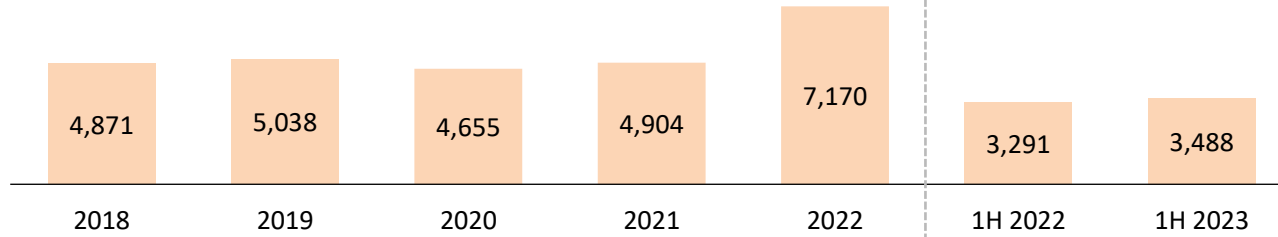
Financial Performance

Unit: Bt mn

Revenue

+46.2% YoY

+6.0% YoY

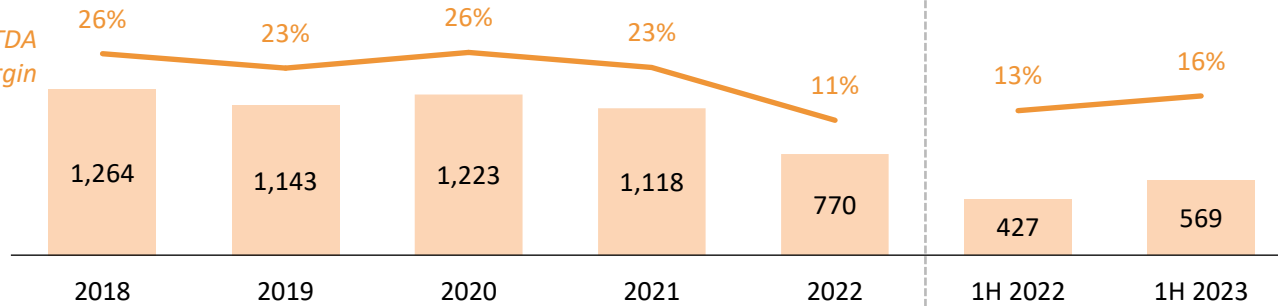


EBITDA

(31.1%) YoY

+33.2% YoY

EBITDA
Margin

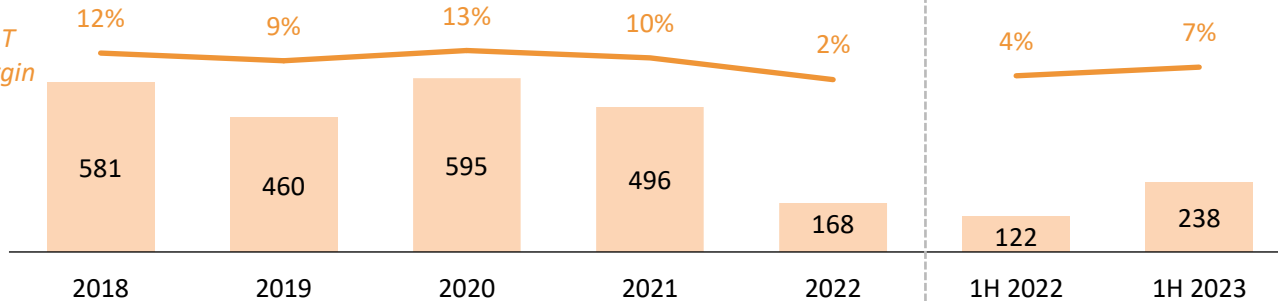


NPAT

(66.1%) YoY

+95.1% YoY

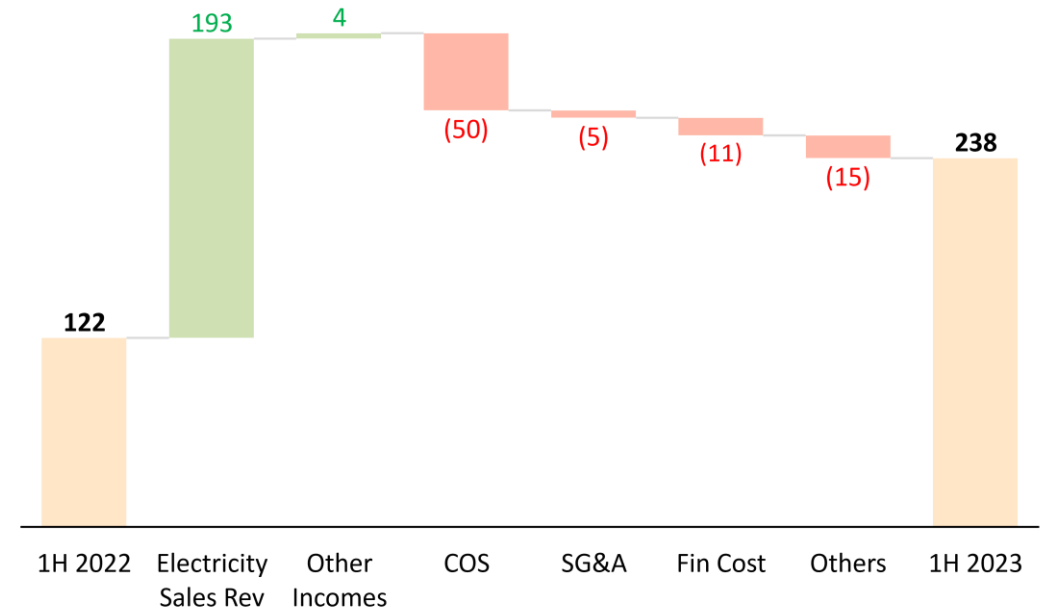
NPAT
Margin



Performance Highlights

Unit: Bt mn

NPAT



- 1H 2023 performance increased YoY, mainly driven by an increase in IUs electricity sales revenue due to improvement in retail Ft rate.

Key Activities in 2023

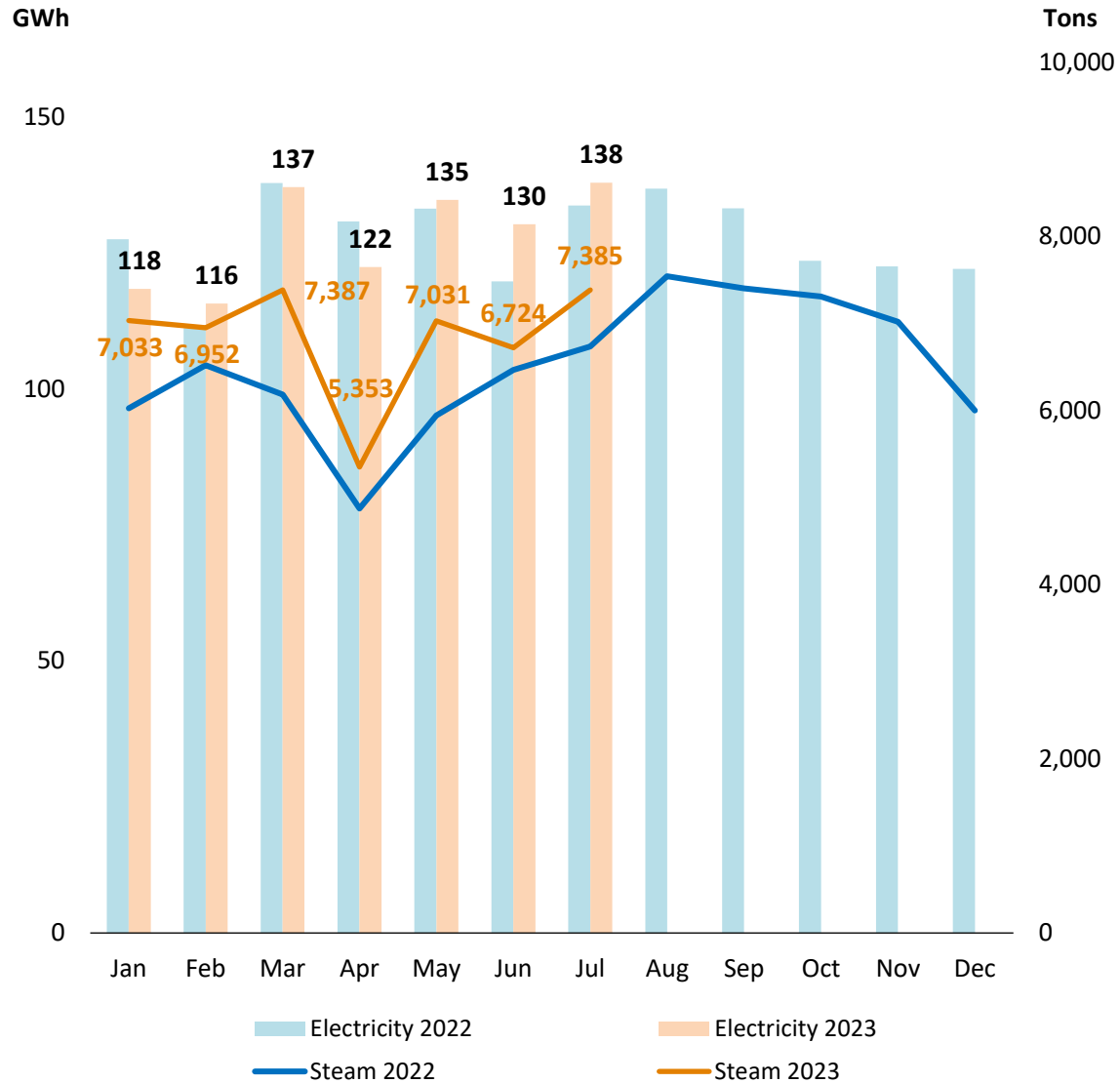
- Close monitoring of gas price and cash flow management
- Load optimization and improvement in overall plant efficiency

BIC 1H 2023 Operation

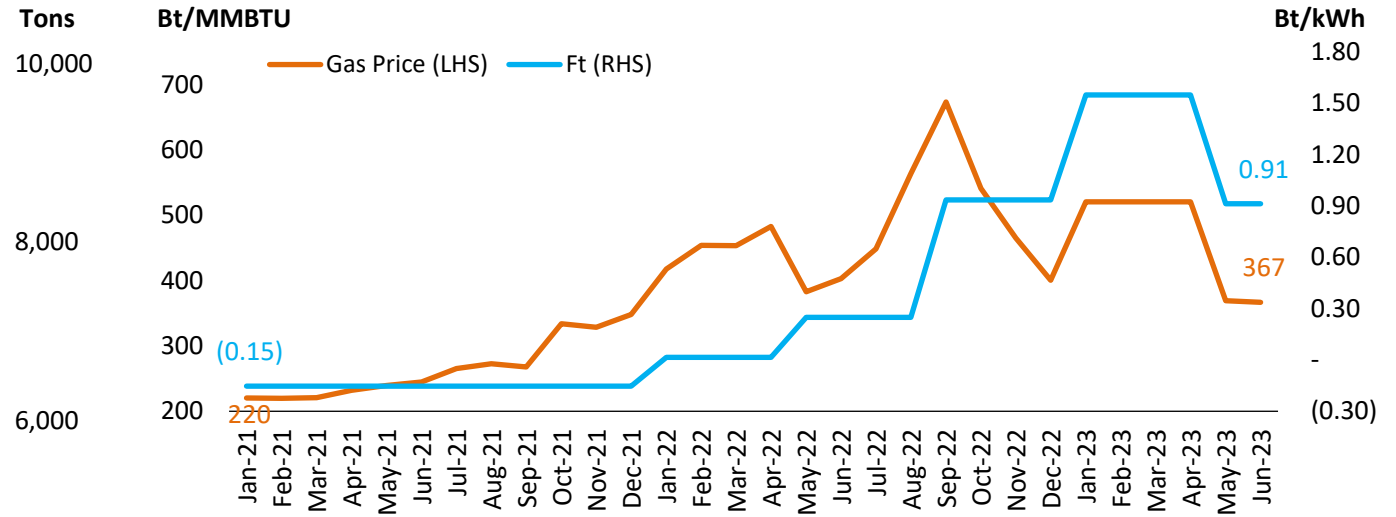
Consolidated
Subsidiary



Monthly Electricity and Steam Production



Gas Price and Ft



Electricity and Steam Sale Volume

Unit: GWh/Tons

	2019	2020	2021	2022	1H 2022	1H 2023
EGAT	1,250	1,236	1,238	1,233	607	615
IUs	311	300	306	299	153	144
Total (GWh)	1,561	1,536	1,544	1,532	760	759
Steam (Tons)	87,486	74,026	73,395	78,036	36,020	40,480
Avg. Tariff (Bt/kWh)	3.18	3.00	3.14	4.62	4.27	4.53
Avg. Gas Price (Bt/MMBTU)	273	245	266	474	432	470
<i>%YoY Chg. Electricity</i>	<i>+0.5%</i>	<i>(1.6%)</i>	<i>+0.5%</i>	<i>(0.8%)</i>	<i>+0.7%</i>	<i>(0.2%)</i>
<i>%YoY Chg. Steam</i>	<i>(7.4%)</i>	<i>(15.4%)</i>	<i>(0.9%)</i>	<i>+6.3%</i>	<i>(5.4%)</i>	<i>+12.4%</i>
<i>%YoY Chg. Gas Price</i>	<i>+5.8%</i>	<i>(10.4%)</i>	<i>+8.8%</i>	<i>+78.1%</i>	<i>+88.4%</i>	<i>+8.7%</i>

BKC 1H 2023 Financial Performance

Consolidated
Subsidiary



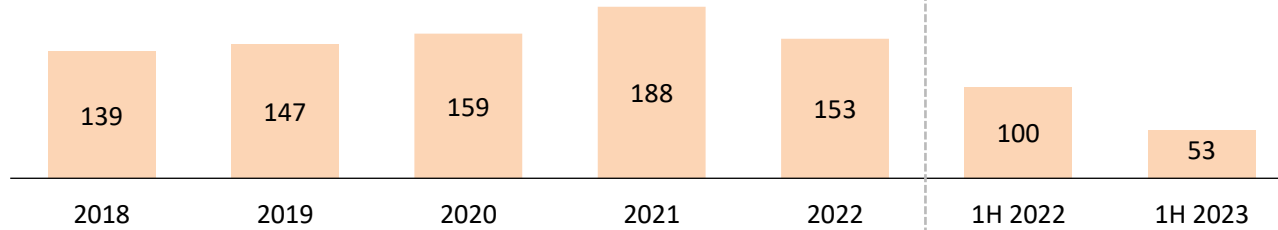
Financial Performance⁽¹⁾

Unit: Bt mn

Revenue

(18.7%) YoY

(46.9%) YoY

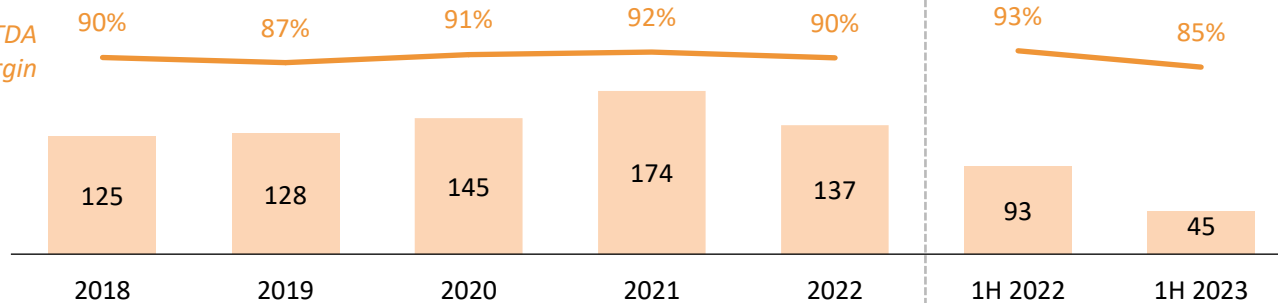


EBITDA

(20.9%) YoY

(51.2%) YoY

EBITDA
Margin

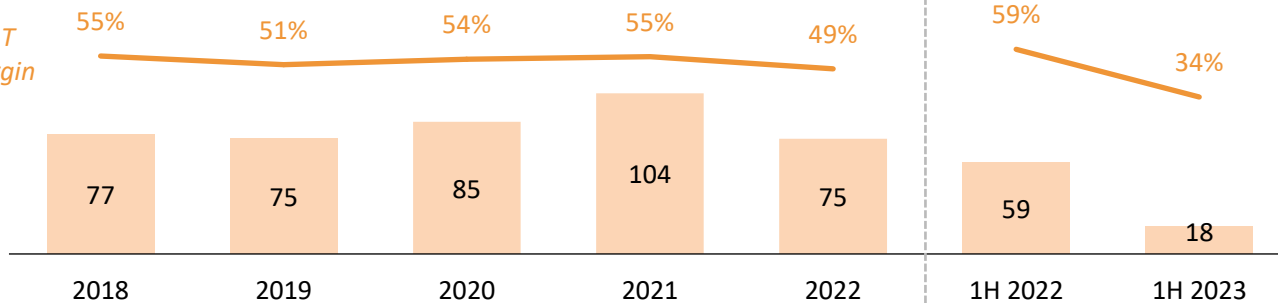


NPAT

(28.3%) YoY

(69.7%) YoY

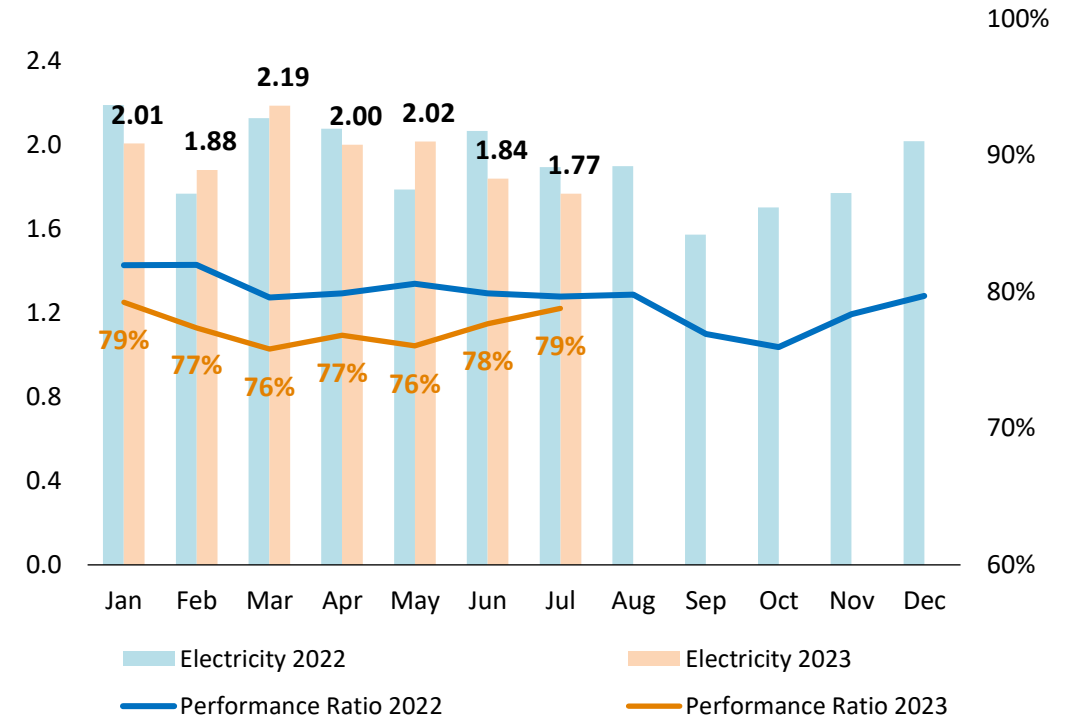
NPAT
Margin



Monthly Electricity Production⁽¹⁾

GWh

%



Electricity Sales Volume⁽¹⁾

Unit: GWh

	2019	2020	2021	2022	1H 2022	1H 2023
Electricity (GWh)	15.55	20.13	23.25	22.87	12.02	11.93
%YoY Change	+26.7%	+29.5%	15.5%	(1.6%)	(1.0%)	(0.7%)
Avg. Ft ⁽²⁾ (Bt/kWh)	(0.20)	(0.26)	(0.35)	0.25	(0.06)	1.10

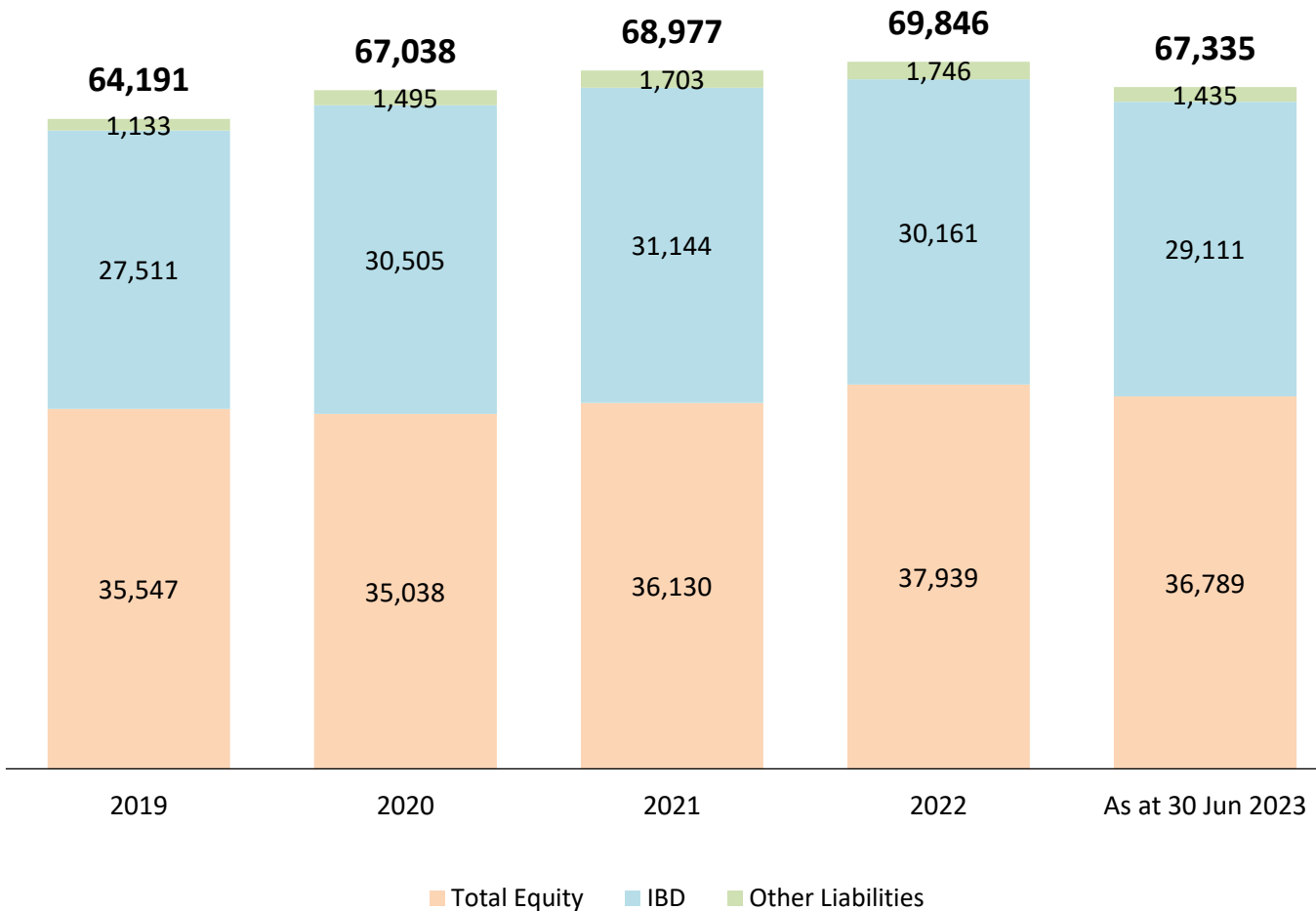
(1) Include Revenue and Electricity Sales of new solar rooftop power plants and solar farm; (2) Average wholesale Ft rate

Consolidated Financial Position as at 30 June 2023

Financial Position

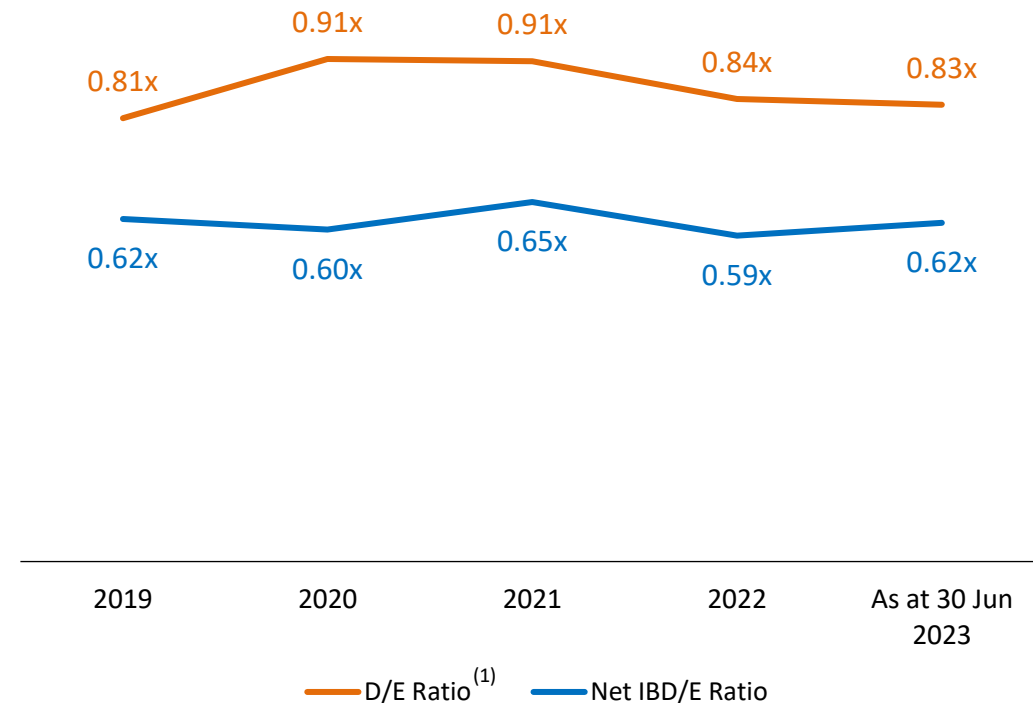
Unit: Bt mn

Total Assets decreased mainly due to additional sponsor loan to XPCL, the debentures redemption, the Company's dividend payment and the decline in investments in associates during 1H 2023.



Leverage Ratios

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

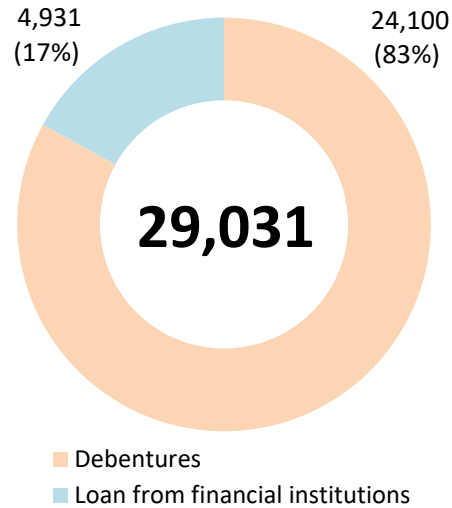
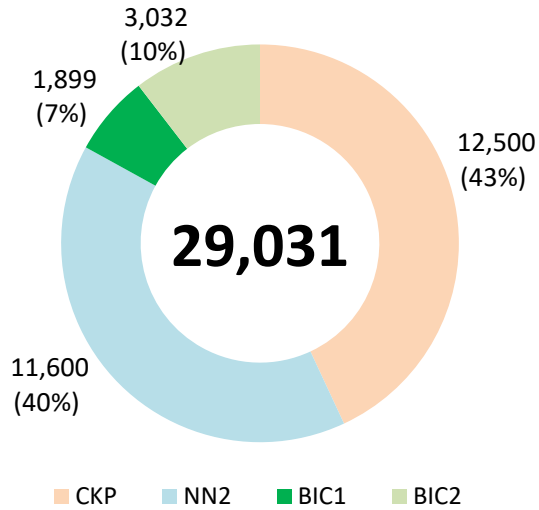


(1) D/E Ratio calculated from Total Liabilities divided by Total Shareholders' Equity

Long-term Loan and Credit Ratings

Long-term Loan and Debentures⁽¹⁾

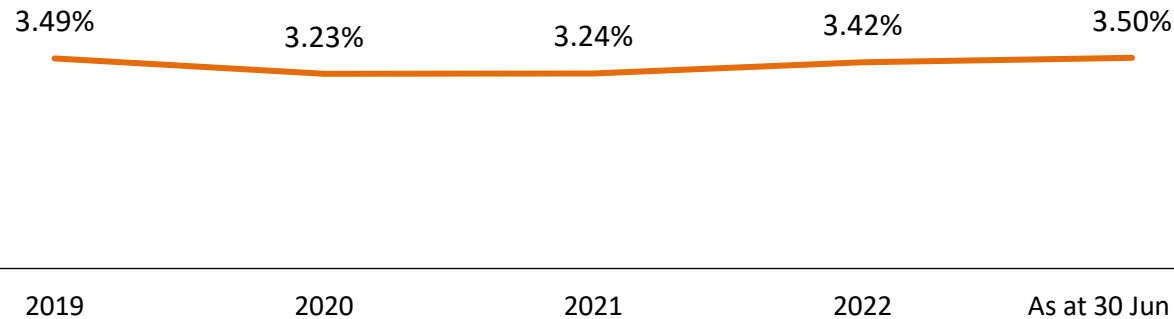
Unit: Bt mn



TRIS Ratings

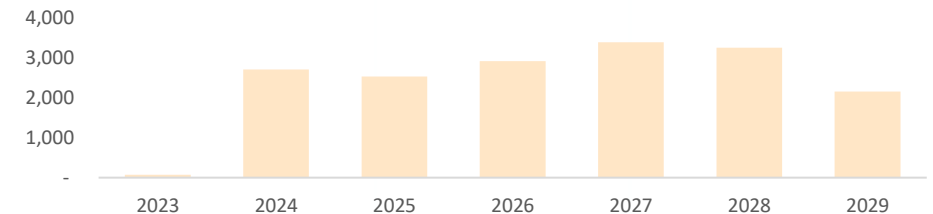
	Company Rating: A / Stable	Issue Rating: A- / Stable
	Company Rating: A / Stable	Issue Rating: A / Stable
	Company Rating: A- / Stable	Issue Rating: BBB+ / Stable

Average Cost of Debt



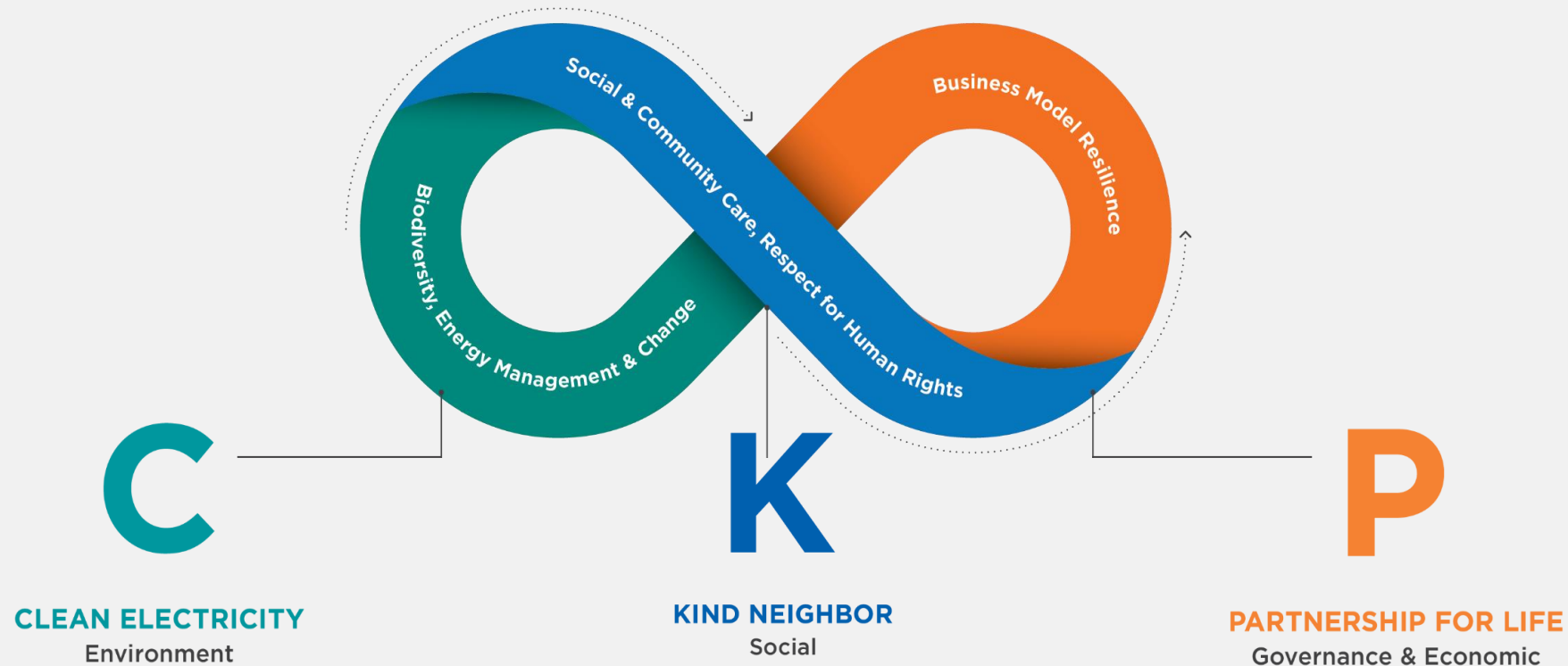
Investment & Capex Plan

	Status	Bt mn
New Investment Budget	2023	550
LPCL Equity Investment	2023 – 2029	17,000



(1) Loan and debentures outstanding before transaction costs

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