



RATCH Group Public Company Limited

Management Discussion and Analysis

**For the Three-month and Six-month
Periods Ended June 30, 2024**

Abbreviation

The Company	RATCH Group Public Company Limited
The Group	RATCH Group Public Company Limited and its subsidiaries
PEA	Provincial Electricity Authority
EGAT	Electricity Generating Authority of Thailand
COD	Commercial Operation Date
EBITDA	Earnings before Interest, Tax, Depreciation and Amortization
FX	Foreign Exchange Rate
IPP	Independent Power Producer
PPA	Power Purchase Agreement
SPP	Small Power Producer

Projects/Companies

CS	Coc San Hydroelectric Power Plant, operated by Lao Cai Renewable Energy Stock Company, a wholly-owned indirect subsidiary
LG	Lincoln Gap 1&2 Wind Farm Project, operated by Lincoln Gap Wind Farm Pty Ltd., a wholly-owned indirect subsidiary (currently owned by RASA)
HKH	Hin Kong Power Holding Company Limited, a joint venture in proportion of 51 %
HKP	Hin Kong Combined-Cycle Power Plants, operated by Hin Kong Power Company Limited, a direct joint venture in proportion of 51 %
HPC	Hongsa Thermal Power Plants, operated by Hongsa Power Company Limited, an indirect joint venture in proportion of 40 %
NN2	Nam Ngum 2 Hydroelectric Power Plant, operated by SouthEast Asia Energy Limited, a direct joint venture in proportion of 33.33 %
PE	Paiton coal-fired thermal power plants, operated by PT Paiton Energy, an indirect joint venture in proportion of 36.26 %
PNPC	Xe-Pian Xe-Namnoy Hydroelectric Power Plant, operated by Xe-Pian Xe-Namnoy Power Company Limited, a direct joint venture in proportion of 25 %
RAC	RATCH-Australia Corporation Pty Ltd, a wholly-owned indirect subsidiary
RASA	RATCH-Australia South Australia (Holdings) Pty Ltd., an indirect subsidiary wholly-owned by RAC
RCO	RATCH Cogeneration Power Plant, operated by RATCH Cogeneration Company Limited, a wholly-owned subsidiary
R E N	R E N Korat Energy Cogeneration Power Plant, operated by REN Korat Energy Company Limited, a direct joint venture in proportion of 40 %
RER	RATCH Energy Rayong Power Plant, operated by RATCH Energy Rayong Company Limited
RG	Ratchaburi Power Plants, operated by Ratchaburi Electricity Generating Company Limited, a wholly-owned subsidiary
RHIS	RH International (Singapore) Corporation Pte Ltd, a wholly-owned indirect subsidiary
SCG	Ratch Pathana Energy Public Company Limited (previous name : “Sahacogen (Chonburi) Public Company Limited”), a subsidiary in proportion of 51.67 %
SP	Snapper Point Gas-Fired Power Plant, operated by Port Adelaide Energy Pty Ltd., a wholly-owned indirect subsidiary (currently owned by RASA)

Executive Summary

Industry and Economic Situation

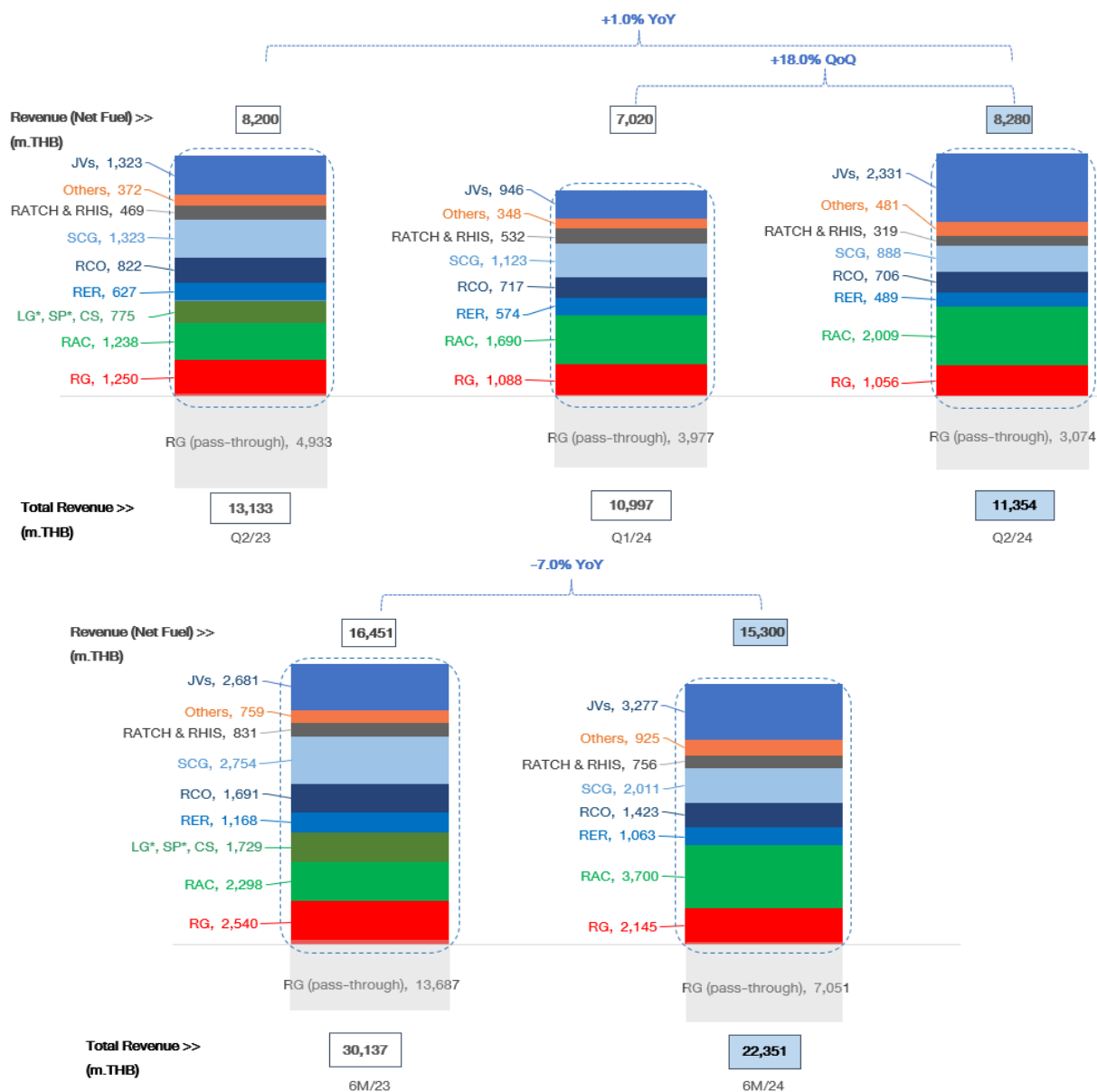
The Ministry of Finance has revised its economic growth forecast for this year to 2.7%, up from the previous forecast of 2.4% and the 1.9% growth in the previous year. This revision is driven by three key factors; (1) exports are performing better than expected, supported by a projected growth of 3.2% in key trading partners' economies (2) international tourist arrivals and spending are exceeding expectations, reflecting the positive impact of the government measures to kickstart the sector and (3) the government is expected to spend more efficiently, with a continuous rise in spending toward the end of the fiscal year. Domestically, economic stability is expected to be robust, with an inflation rate forecasted at 0.6%, due to the downward adjustment in prices of certain food items. Additionally, the decline in prices of goods in the energy category is attributed to the government's initiatives to alleviate the cost of living.

On June 12, 2024, the Monetary Policy Committee (MPC) decided to maintain the policy rate at 2.50%, as it considered that the Thai economy continues to grow, driven mainly by domestic demand and tourism. Export growth remains subdued as some merchandises faces additional pressures from higher competition. Inflation is projected to gradually increase towards the target range since the 4th quarter of 2024. The majority of the Committee deems that the current policy interest rate is consistent with the economy converging to its potential, as well as conducive to safeguarding macro-financial stability.

The U.S. Energy Information Administration (EIA) estimates that crude oil consumption will increase from the 2nd quarter of 2024 onward, leading to a decline in global oil inventories until early 2025. This is expected to put upward pressure on crude oil prices for the remainder of 2024. However, the EIA forecasts that crude oil inventories will start to rise and balance out at an average of 0.3 million barrels per day in the 3rd quarter of 2025 due to the expansion of production capacity from non-OPEC countries.

On July 31, 2024, the Energy Regulatory Commission (ERC) approved to maintain fuel tariff (Ft), applicable between September and December 2024 at 0.3972 THB per unit which keeps the price of electricity at an average of 4.18 THB per unit.

Total Revenues

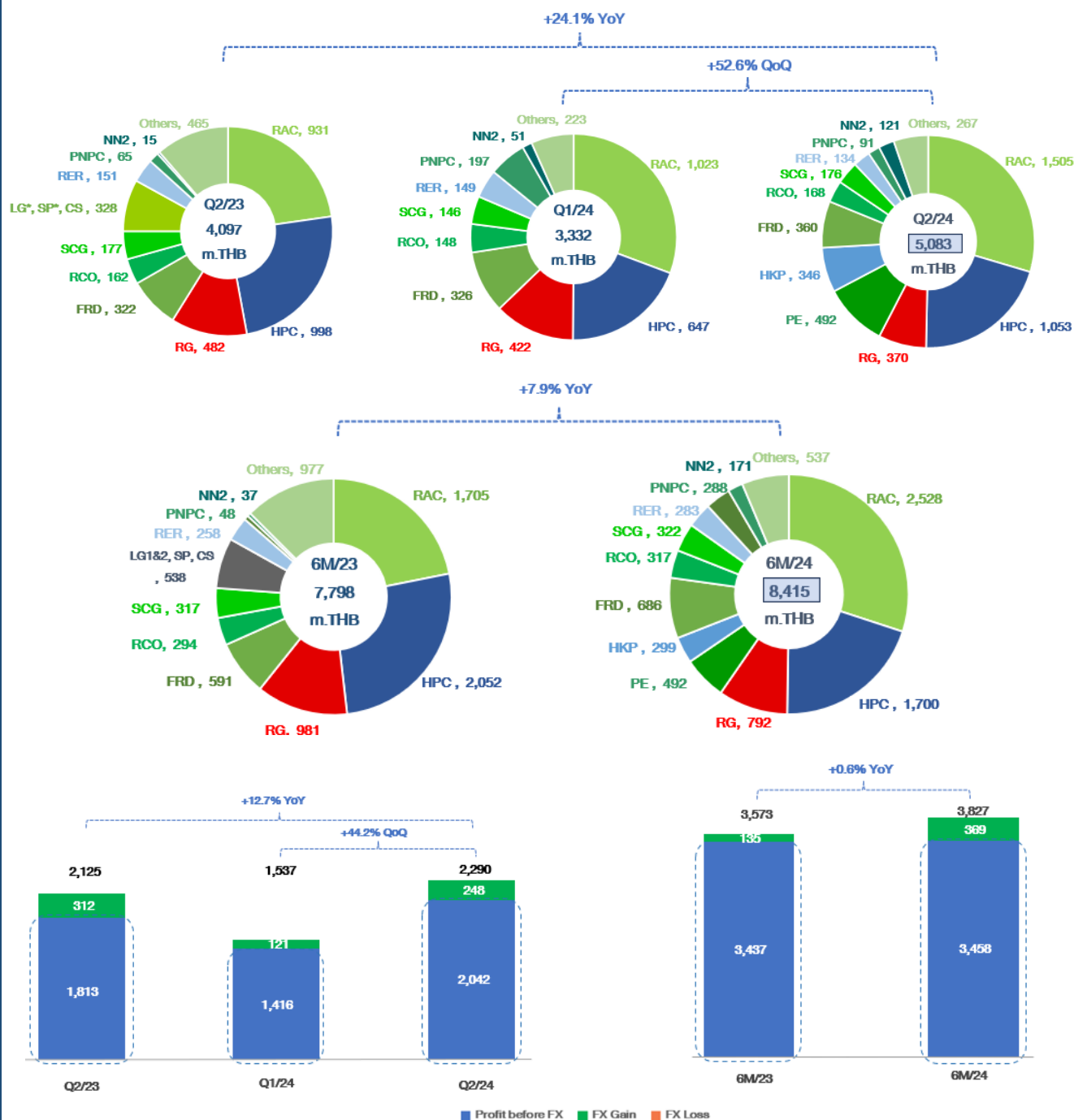


Note : * On December 19, 2023, LG and SP power plants were restructured to be under RASA, a subsidiary of RAC.

In the 2nd quarter 2024, the total revenues were THB 11,354 million. By excluding the Energy Payment (pass-through), the total revenue increased QoQ and YoY by 18.0% and 1.0% respectively. The main reasons were that the Company recognized the share profit of HKP Block 1 since the commercial operation date on March 1, 2024, as well as, the Company recognized the share profit of PE which was acquired since April 30, 2024. However, the revenue from sales of SPPs decreased due to a reduction in the average gas price.

In the 1st half of 2024, the total revenues were THB 22,351 million. By excluding the Energy Payment (pass-through), the total revenue decreased YoY by 7%, mainly due to lower revenue from SPPs sales resulting from lower average gas prices. Additionally, the Company recognized lower share profit from HPC due to planned maintenance which has conducted since the end of 2023 to maintain the efficient operation and profit contribution.

EBITDA and Profit to Owner of the Company



In the 2nd quarter and 6M period of 2024, the EBITDA were THB 5,083 million and THB 8,415 million, respectively with the profit attributable to the Company THB 2,290 million and THB 3,827 million, respectively. The main reasons for the increases QoQ and YoY were that the Company recognized the share profit of HKP Block 1 since the commercial operation date on March 1, 2024, as well as, the Company recognized the share profit of PE which was acquired since April 30, 2024.

1. Significant Events of the 2nd Quarter of 2024

Significant Events of the 2nd Quarter of 2024 are as follows

1.1 Success in Share Purchase Closing to Invest in Thermal Power Plant Business : Paiton Energy in Indonesia

On April 30, 2024, RHIS has successfully purchased 36.26% of shares to invest in PT Paiton Energy and Minejesa Capital B.V., Paiton Energy Thermal Power Plant (Paiton) and to invest at 65% in power plant operation and maintenance business of IPM Asia Pte with the investment valued by USD 596.41 million or equivalent to approximately THB 22,101.56 million. This is in line with Company's the investment and partnership strategies, which aim to create opportunities for joint investments in power and related businesses for the Company's Group in the future.

Paiton power plant is the coal-fired thermal power plants with total capacity of 2,045 megawatts located in Paiton Power Generation Complex in Probolinggo, East Java in the Republic of Indonesia. It has been secured by the long-term Power Purchase Agreement with PT Perusahaan Listrik Negara (Persero) (PT PLN) of which the contractual period will end in 2042, and has been commercially operating since May 1999.

Progress of Projects under Construction (as of June 30, 2024)



Hin Kong Power Plant (HKP) Block 2	
Type of Power Plant	IPP
Type of Fuel	Natural Gas
Install Capacity (MW)	770
Location	Ratchaburi Province
Ownership	51%
PPA	25 Years with EGAT
COD	Year 2025
Progress	99.40%



R E N Korat Energy Power Plant (R E N)	
Type of Power Plant	Cogeneration IPS Power Plant
Type of Fuel	Natural Gas
Install Capacity (MW)	31.2
Location	Nakhon Ratchasima Province
Ownership	40%
Customers	Industrial Promotion Zone, Nakhon Ratchasima Province
COD	Year 2024
Progress	98.77%



The Expansion of NNEG Phase 3	
Type of Power Plant	SPP Cogeneration
Type of Fuel	Natural Gas
Install Capacity (MW)	30
Location	Pathumthani Province
Ownership	40%
Customers	Industrial Users
COD	Year 2024
Progress	56.12%



Calabanga Power Plant	
Type of Power Plant	Solar Power Plant
Install Capacity (MW)	74.1
Location	Luzon Island, Philippines
Ownership	49%
COD	August 2024
Progress	98.60%



Song Giang 1 Power Plant	
Type of Power Plant	Hydroelectric Power Plant
Install Capacity (MW)	12
Location	Khanh Hoa Province, Vietnam
Ownership	46.22%
COD	Year 2024
Progress	58.17%



Wood Pellet Production and Sale Project	
Type	Wood Pellet Production and Sale
Capacity	60,000 Tons per Year
Location	Champasak Province, Lao PDR
Ownership	25%
Contract Term	15 Years
COD	Year 2024
Progress	94.45%



MRT Pink Line Extension Project	
Technology	Monorail
Route	Sirat – Muang Thong Thani
Ownership	10%
Contract Term	30 Years
COD	Year 2024
Progress	Civil Works = 66.90% Railway System = 47.12%



Intercity Motorway Bang Pa-In – Nakhon Ratchasima (M6)	
Type	Designing, Construction, Civil Works Maintenance and Installation of Toll- Collection System
Route	Bang Pa-In – Nakhon Ratchasima
Ownership	10%
Contract Term	Phase 1: Designing and Construction – 3 Years Phase 2: Maintenance – 30 Years
COD	Year 2025
Progress	46.56%



Intercity Motorway Bang Yai – Kanchanaburi (M81)	
Type	Designing, Construction, Civil Works Maintenance and Installation of Toll- Collection System
Route	Bang Yai – Kanchanaburi
Ownership	10%
Contract Term	Phase 1: Designing and Construction – 3 Years Phase 2: Maintenance – 30 Years
COD	Year 2025
Progress	57.70%

2. Operation Performance according to Consolidated Financial Statement

Analysis of Revenues

Unit : Million THB

	Q2/2023	Q1/2024	Q2/2024	Increase(Decrease)%		6M/2023	6M/2024	Increase (Decrease)%
				QoQ	YoY			YoY
Revenue from sales and rendering of services	10,397	8,888	7,598	-14.5%	-26.9%	24,890	16,487	-33.8%
RG	5,842	4,784	3,862	-19.3%	-33.9%	15,531	8,647	-44.3%
RAC	1,184	1,572	1,519	-3.3%	28.2%	2,190	3,091	41.2%
LG*, SP*, CS	548	46	52	12.1%	-90.6%	1,483	98	-93.4%
RCO	822	717	706	-1.5%	-14.2%	1,690	1,423	-15.8%
SCG	1,300	1,118	875	-21.8%	-32.7%	2,726	1,993	-26.9%
RER	627	574	487	-15.1%	-22.2%	1,167	1,062	-9.0%
Others	75	77	98	27.0%	31.2%	104	175	68.3%
Revenue from leases contracts	615	567	562	-0.9%	-8.6%	1,242	1,129	-9.1%
Share of profit of associates and joint ventures	1,323	946	2,331	146.4%	76.2%	2,681	3,277	22.3%
IPPs	1,104	602	1,930	220.5%	74.8%	2,213	2,532	14.4%
SPPs	119	106	125	18.2%	4.6%	212	231	8.7%
Hydro Power Plants	72	245	212	-13.7%	193.3%	71	457	539.9%
Renewable Power Plants	(12)	28	50	77.8%	503.7%	91	78	-14.0%
Infrastructure and Others	40	(35)	15	142.1%	-62.7%	94	(20)	-121.6%
Other incomes	797	596	863	44.8%	8.2%	1,325	1,458	10.1%
Management service income	65	75	83	11.3%	28.4%	130	158	21.8%
Interest income	435	434	325	-25.1%	-25.3%	843	759	-9.9%
Dividend Income	17	-	1	-	-91.8%	17	1	-91.8%
Other income	280	87	453	420.5%	61.9%	335	540	61.3%
Total revenues	13,133	10,997	11,354	3.2%	-13.5%	30,137	22,351	-25.8%

Note: * On December 19, 2023, LG and SP were restructured to be under RASA, a subsidiary of RAC.

• **RG Power Plant**

Key Revenue Drivers	Q2/2023	Q1/2024	Q2/2024	Increase (Decrease) %		6M/2023	6M/2024	Increase (Decrease) %	
				QoQ	YoY			YoY	
Electricity Sale Volume to EGAT (GWh)									
Natural Gas	1,619	1,461	1,235	-15.5%	-23.7%	3,631	2,696	-25.8%	
Heavy Oil	-	-	-	-	-	389	-	-100.0%	
Diesel Oil	-	-	-	-	-	1	-	-100.0%	
	1,619	1,461	1,235	-15.5%	-23.7%	4,021	2,696	-33.0%	
Average Fuel Price									
Natural Gas (THB/mmBTU)	422	360	359	-0.3%	-14.9%	462	360	-22.1%	
Heavy Oil (THB/Litre)	-	-	-	-	-	16	-	-100.0%	
Diesel (THB/Litre)	-	-	-	-	-	28	-	-100.0%	

Revenue from sales decreased QoQ and YoY mainly due to the lower electricity generation, corresponding to lower dispatch instruction by EGAT, together with the decrease in fuel price. The planned shutdowns of the power plants were as follow.

Planned Maintenance	6 Months / 2023	6 Months / 2024
Thermal Power Plant Unit 1	-	-
Thermal Power Plant Unit 2	-	-
Combine Power Plant Unit 1	-	-
Combine Power Plant Unit 2	-	CI : Apr 12 - 20, 24 (9 days)
Combine Power Plant Unit 3	MI : Jun 3 - 29, 23 (27 days)	CI : Feb 4 - 18, 24 (15 days)

CI : Combustion Inspection , MI : Minor Inspection

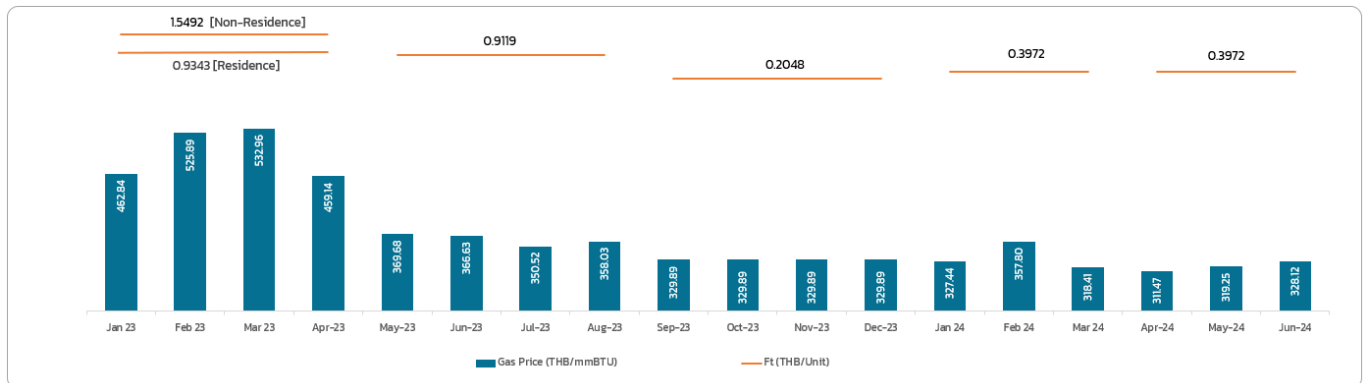
• **RAC Power Plants**

Revenue from sales increase QoQ and YoY mainly as LG and SP, which are power plants located in Australia, have been restructured to be under RASA, a subsidiary of RAC since December 19, 2023. This restructuring will increase flexibility in management and can also reduce the administrative expenses in the future.

The details of key power plants were as follow:

- LG - Revenue from sales increase YoY mainly due to the increase in the revenue from PPA. While, revenue from sales decreased QoQ mainly due to decrease in the sale of Large-Scale Generation Certificates (LGCs).
- SP - Revenue from sales increase QoQ mainly due to the higher electricity generation, and the revenue from sales increase YoY mainly due to the increase in the revenue from PPA.
- Mt. Emerald - Revenue from sales increase QoQ and YoY mainly due to the increase in the average wind speed.
- Collector and Starfish Hill - Revenue from sales decrease QoQ and YoY mainly due to the decrease in the average wind speed.

- **RCO & SCG Power Plants**



The revenue from sales decreased QoQ mainly due to the decrease in average gas price, resulting in lower Energy Payment of RCO and SCG, together with Ft which was lower than that of the previous year as shown in the above paragraph leading to a decline in revenue from sales YoY.

- **RER Power Plant**

The revenue from sales decreased QoQ and YoY mainly due to the decrease in average gas price, resulting in lower Energy Payment of RER.

Share of Profit of Associates and Joint Ventures

IPPs

- Paiton coal-fired Thermal Power Plants (PE)

The Company recognized the share profit of PE, which were acquired since April 30, 2024.

Key Revenue Drivers	Unit 3	Unit 7/8
Availability Factor (%)	100.00	99.97
Dispatch Factor (% DF)	88.08	71.19

- Hin Kong Combined-Cycle Power Plants (HKP)

The Company recognized the share profit of HKP Block 1 since the commercial operation date on March 1, 2024. The power plant had an Availability Factor after commercial operation of 97.68% and Dispatch Factor (DF) of 98.78%.

- Hongsa Thermal Power Plants (HPC)

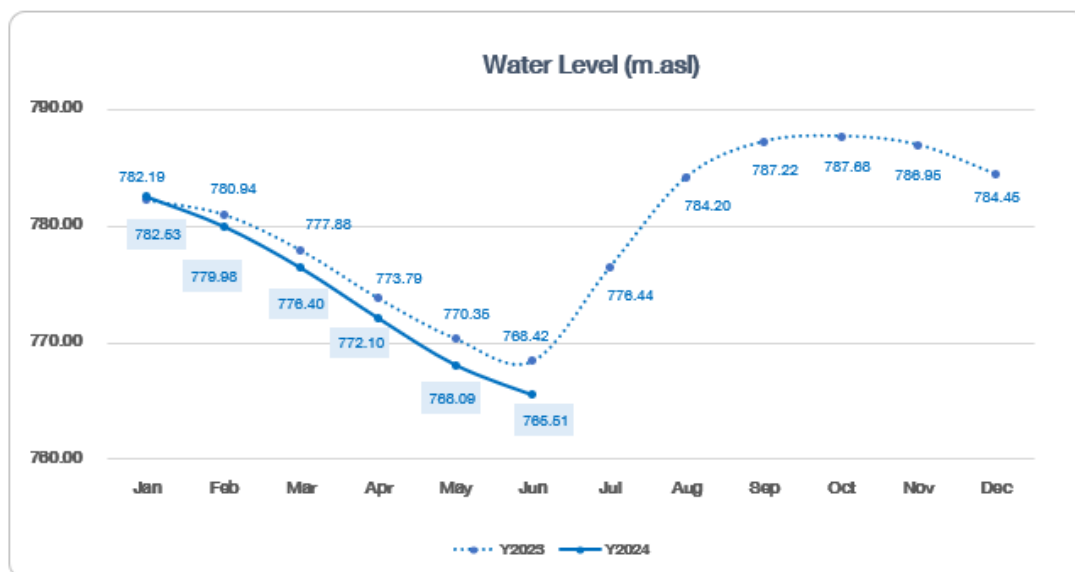
Key Revenue Drivers	Q2/2023	Q1/2024	Q2/2024	Increase (Decrease) %		6M/2023	6M/2024	Increase (Decrease)%
				QoQ	YoY			YoY
Commercial Equivalent Availability Factor (%)	89.98	74.54	93.77	25.8%	4.2%	93.00	84.16	-9.5%
EGAT Dispatch Factor (% DF)	102.94	103.14	103.30	0.2%	0.3%	102.69	103.23	0.5%
EDL Dispatch Factor (% DF)	120.84	125.66	118.84	-5.4%	-1.7%	118.96	121.76	2.4%
Average FX (THB/USD)	34.82	35.94	36.88	2.6%	5.9%	34.42	36.41	5.8%

Planned Maintenance	6M / 2023	6M / 2024
Power Plant – Unit 1	-	-
Power Plant – Unit 2	-	-
Power Plant – Unit 3	-	Jan 1 – Feb 21, 24 (52 days)

In the 2nd quarter of 2024, the share profit of HPC increased QoQ and YoY mainly due to increasing in availability payment revenue. While, in the 6M period of 2024, the Power Plant – Unit3 was shut down for planned maintenance, resulting in a decrease in availability payment revenue.

Hydro Power Plants

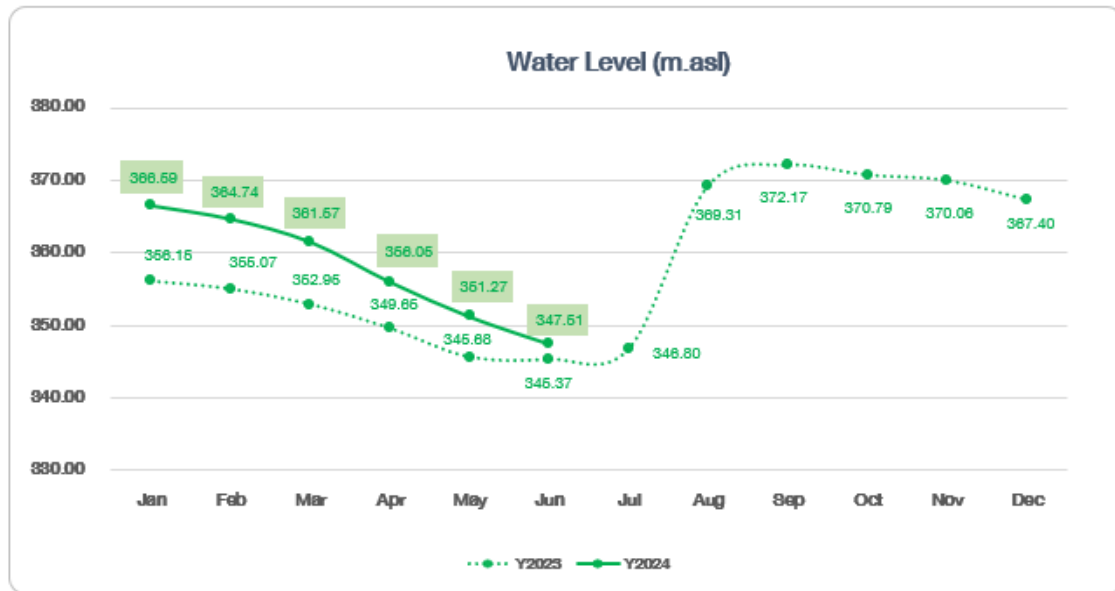
- Xe-Pian Xe-Namnoy Hydro Power Plant (PNPC)



Planned Maintenance	6M / 2023	6M / 2024
Power Plant - Unit 1	Feb 4 - Mar 4, 23 (29 days)	-
Power Plant - Unit 2	-	-
Power Plant - Unit 3	Feb 19 - Mar 4, 23 (14 days)	-

The share profit of PNPC increased YoY mainly due to the higher electricity generation, resulting from management of the amount of water flowing into the reservoir in the 2nd half of 2023. In addition, there was the planned shutdown of the power plants in the 1st quarter of 2023 in order to maintain the operation effectively and continue to generate profit. However, the share profit of PNPC decreased QoQ mainly due to reduced water inflow into the reservoir caused by lower rainfall.

- Nam Ngum 2 Hydro Power Plant (NN2)



The share profit of NN2 increased QoQ and YoY, mainly due to the higher electricity generation, resulting from management of the amount of water flowing into the reservoir in the 1st half of 2024. In addition, in the 1st half of 2023, El Niño occurred, causing the amount of inflow into the reservoir decreased.

Analysis of EBITDA and Profit to Owner of the Company

Unit : Million THB

	Q2/2023	Q1/2024	Q2/2024	Increase (Decrease) %		6M/2023	6M/2024	Increase (Decrease)%
				QoQ	YoY			YoY
Total Revenue	13,133	10,997	11,354	3.2%	-13.5%	30,137	22,351	-25.8%
Cost of Sales	8,389	7,017	5,591	-20.3%	-33.4%	21,127	12,608	-40.3%
<i>RG</i>	5,652	4,611	3,713	-19.5%	-34.3%	15,157	8,324	-45.1%
<i>RAC</i>	203	486	338	-30.6%	66.1%	380	824	116.8%
<i>LG*, SP*, CS</i>	313	4	4	14.2%	-98.6%	943	8	-99.2%
<i>RCO</i>	651	559	529	-5.2%	-18.7%	1,379	1,088	-21.1%
<i>SCG</i>	1,083	926	651	-29.7%	-39.9%	2,326	1,578	-32.2%
<i>RER</i>	461	409	342	-16.3%	-25.9%	895	750	-16.2%
<i>Others</i>	25	22	14	-35.9%	-41.9%	47	37	-22.5%
Administrative expenses	647	648	680	4.9%	5.1%	1,213	1,328	9.5%
Total Expenses	9,036	7,665	6,271	-18.2%	-30.6%	22,340	13,936	-37.6%
EBITDA	4,097	3,332	5,083	52.6%	24.1%	7,798	8,415	7.9%
Less Depreciation and Amortization	990	1,035	1,070	3.4%	8.0%	2,083	2,105	1.1%
(Gain) Loss on Fair Value Adjustment of Derivatives	(45)	(437)	218	150.0%	580.3%	(264)	(218)	-17.3%
Finance Costs	1,001	1,025	1,175	14.6%	17.4%	2,025	2,200	8.6%
Tax Expenses	239	211	469	122.5%	96.8%	346	680	96.5%
Profit before FX	1,913	1,497	2,151	43.7%	12.4%	3,608	3,648	1.1%
Gain (Loss) on FX	312	121	248	104.9%	-20.5%	135	369	173.4%
Profit for the Period	2,225	1,618	2,399	48.2%	7.8%	3,743	4,017	7.3%
Non-Controlling Interests	100	81	108	33.5%	8.4%	170	190	12%
Profit to Owner of the Company	2,125	1,537	2,290	49.0%	7.8%	3,573	3,827	7.1%
Effect of Gain (Loss) on FX	312	121	248	104.9%	-20.5%	135	369	173.4%
Profit to Owner of the Company before FX	1,813	1,416	2,042	44.2%	12.7%	3,437	3,458	0.6%

Note: * On December 19, 2023, LG and SP were restructured to be under RASA, a subsidiary of RAC.

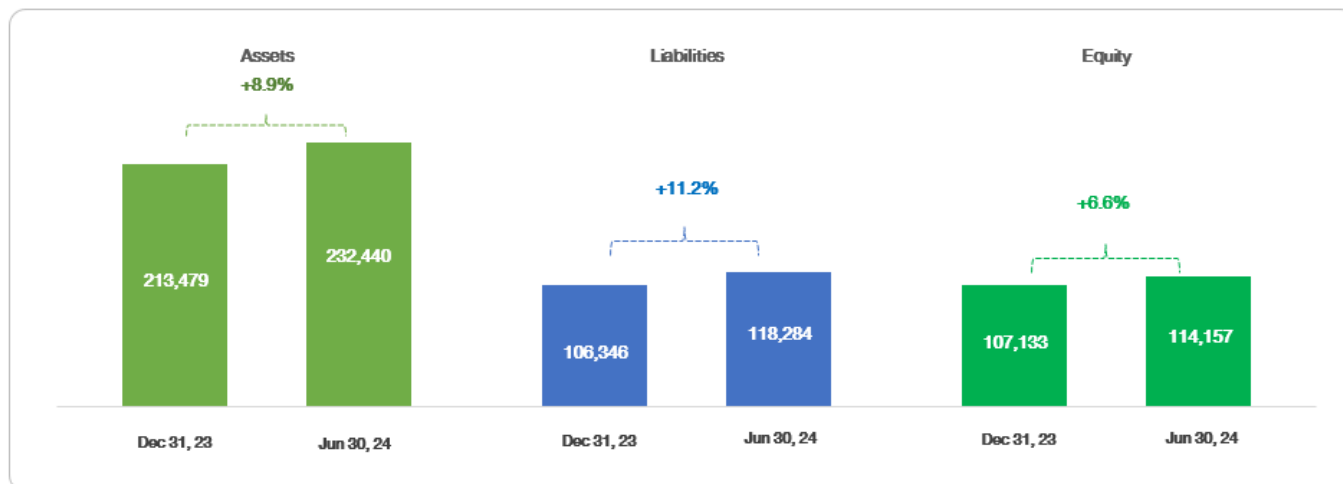
In the 2nd quarter and 6M period of 2024, EBITDA was THB 5,083 million and THB 8,415 million respectively. EBITDA increased QoQ and YoY due to the changes in total revenue as described above; while, the change in cost of sales was due to the reason as follows:

Cost of Sales

- **RG Power Plant** – Cost of sales decreased QoQ and YoY as the power plants generated lower electricity, corresponding to lower dispatch instruction by EGAT and the decrease in fuel price.
- **RAC Power Plant** – Cost of sales increased YoY mainly as LG and SP have been restructured to be under RASA, a subsidiary of RAC.
- **RCO, SCG & RER Power Plant** – The cost of sales decreased QoQ and YoY due to the decline in average gas price.

From the EBITDA described above, the Company also had depreciation and amortization, effect of fair value adjustment of derivatives, finance costs, and tax expenses. As a result, in the 2nd quarter and 6M period of 2024, profit to owner of the Company were THB 2,290 million and THB 3,827 million, respectively.

3. Analysis of Statement of Financial Position



Assets

Assets increased in the amount of THB 18,961 million or 8.9%. The main reasons were as follows:

- Investments in joint ventures and associates increased in the amount of THB 28,309 million. The main reasons were from the share of profit contributed during the year in the total amount of THB 3,277 million and additional investments in the amount of THB 23,043 million and exchange rate adjustment in the amount of THB 3,163 million. While dividend received from joint ventures and associates was in the amount of THB 820 million.
- Property, Plant and Equipment increased in the amount of THB 1,526 million. As USD appreciated in relative to THB, Property, Plant and Equipment value in USD increased.
- Cash and cash equivalents decreased in the amount of THB 13,275 million, the details are described in no.4.

Liabilities and Equity

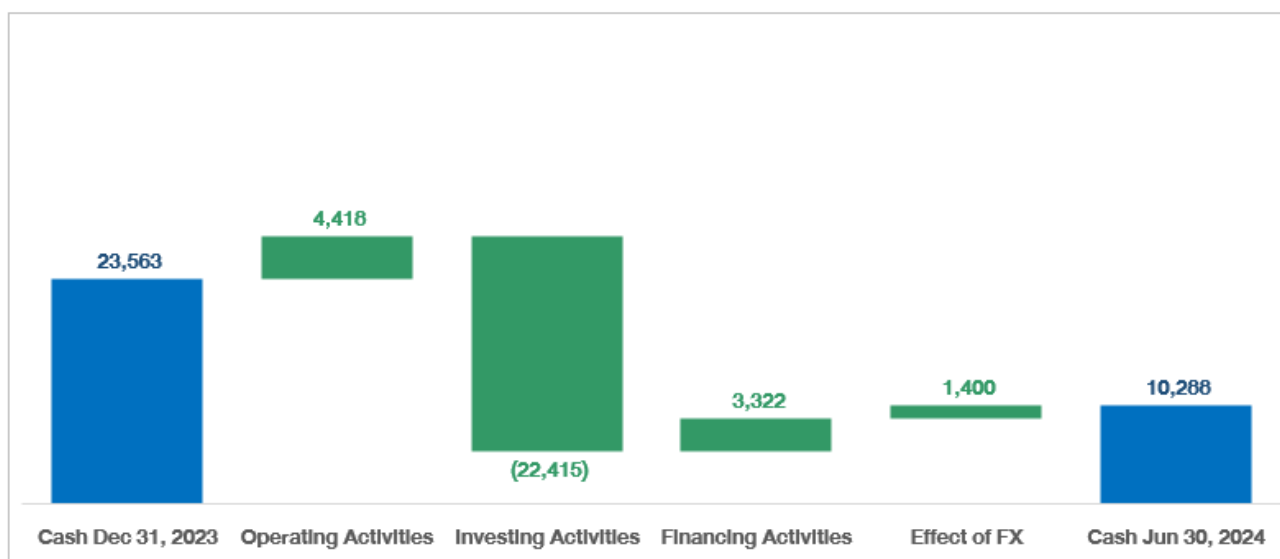
Liabilities increased in the amount of THB 11,938 million or 11.2%. The main reasons were as follows:

- The Group received loans from financial institutions in the amount of THB 7,873 million. In addition, as USD appreciated in relative to THB, the liabilities value in USD increased.

Equity increased in the amount of THB 7,023 million or 6.6%.

- The Company had the profit of the 6M period 2024 in the amount of THB 3,827 million.
- Other components of equity increased in amount of THB 5,089 million mainly due to translation reserve in the amount of THB 6,365 million.
- The dividend payment in accordance with shareholders' resolution in the Annual General Meeting of Shareholders in April 2024 decreased retained earnings in the amount of THB 1,740 million.

4. Analysis of Cash Flows



Cash and cash equivalents of the Company and its subsidiaries as at June 30, 2024 were THB 10,288 million, decreasing by THB 13,275 million from THB 23,563 million on December 31, 2023. The details were summarized below:

Net cash from operating activities increased cash flow in the amount of THB 4,418 million. The reason was the operating result of the 1st half of 2024 improved cash position by THB 4,304 million, adjusted by the change in operating assets and liabilities in the amount of THB 114 million.

Net cash used in investing activities decreased cash flow in the amount of THB 22,415 million. The main reason was the Company has paid for investment in Paiton Energy Thermal Power Plant Project.

Net cash from financing activities increased cash flow in the amount of THB 3,322 million. The main reasons were as follows:

- Net cash received from financial institutions in the amount of THB 7,873 million.
- The Company paid for interest expenses during the period in the amount of THB 1,904 million.
- The Company paid dividend to owners in the amount of THB 1,739 million.

5. Significant financial ratios (excluded the effect of foreign exchange rate of the Company and its subsidiaries)

