



Banpu Power FY23 & 4Q23 results

Opportunity Day

12th March 2024



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01

Highlights 2023

2023 highlights

Financial highlight

THB 30.4 bn

Revenue

Record-high contribution from Temple I and II CCGT in the US

THB 12.3 bn

Consol. EBITDA*

Record-high contributions from thermal assets

THB 5.3 bn

NPAT

Strong performance supported by resilient operational results

0.44

Net D/E

Maintained net D/E at a low level

THB 0.8

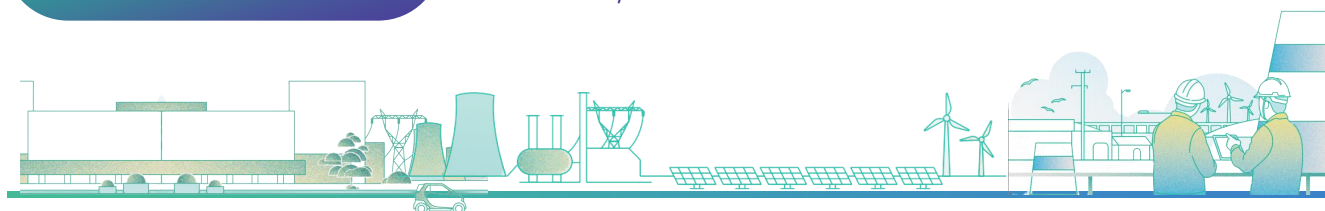
Dividend per share

Record-high since listed contribution from excellent performance

Portfolio highlight

3,642 MW

TOTAL COMMITTED CAPACITY**
From 3,337 MW in 2022



OPERATIONAL UPDATES



Establishment of ESG Committee

to support Banpu Power to achieve its sustainability goals, deliver long-term value to its stakeholders, and make positive impact to the society.



First realized revenue from the sale of carbon emissions allowances

from CHP plant, contributing to the overall portfolio's decarbonization efforts.

AWARDS



from the Sustainability Excellence and Business Excellence Categories

- Commended Sustainability Award
- Outstanding Company Performance Award
- Outstanding CEO Award



CREDIT RATING



A+ with a '**stable**' outlook

on the company, reflecting the company's stable cash flow, proven track record of strong operations and quality of power portfolio

Empowering sustainable growth through quality MW and investments

1Q23



MoU for BLCP ammonia co-firing with EGCO Group, BLCP Power Ltd., JERA Co., Inc., Mitsubishi Corp., and Mitsubishi Heavy Industries, Ltd



65.1% shareholding in Durapower, increased from 47.7%, to scale up energy storage business



ESG Committee established to ensure transparent sustainability governance guided by the concept of 'Powering Energy Sustainability with Quality Megawatts'



Acquisition of 4.51% in Green Li-ion, a li-ion battery recycling technology provider

2Q23



Investment in 14.2% stake in E2W company, Oyika a Singaporean-based company with a robust network of battery swapping stations in Southeast Asia



Investment in Iwate Tono, a 58 MWh utility scale battery farm project in Japan, expected to COD by 2025, to enhance expansion in energy trading



23.81% shareholding in EVOLT, an EV charging infrastructure provider from 20%

3Q23



Acquisition of Temple II Power Plant with a capacity of 755 MW



Won an innovative district cooling project for Thailand's Government Complex Center Zone C, providing 14,000 RT* cooling capacity for reliable, energy-efficient chilled water to complex buildings, expected to COD by 2024



E-bike Rental Agreement with CP All to use for services at 7-Eleven stores, promoting use of electric bikes in Thailand

4Q23



Investment of 40% shares in SVOLT Energy Technology (Thailand), a manufacturer and distributor of li-ion batteries for EVs



39.18% shareholding in Beyond Green Co., Ltd., increasing from 30%



Increased shareholding in Oyika to 15.91%, increasing from 14.2%



Continuous improvements across BPP's thermal portfolio

Temple I and Temple II:

Transformer Temperature Improvement

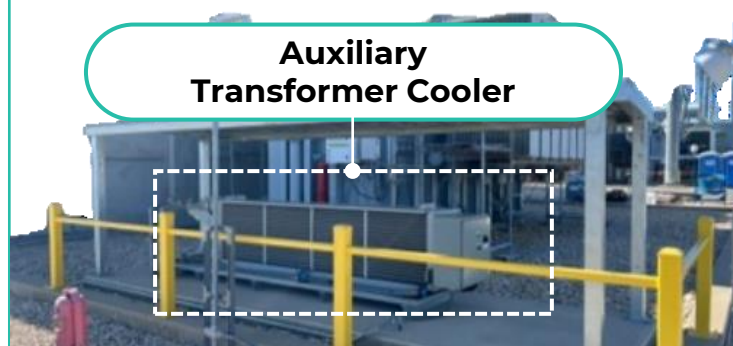
Installed auxiliary transformer coolers to control GSU temperatures during high ambient temperatures, enhancing output capacity with wet compression

Demineralization Pump Skid Cover Improvement

Mitigated winter-related issues at Temple I and II's demineralization pumping station with the installation of a permanent structure skid

Improvement Impact

- **Enhanced plant reliability, reduced outage rate, increased output capacity**
- **Extended lifetime of transformer and pumping station**



SLG: Heat Supply Capacity Expansion

To meet rising community heat demand, supply was raised to 20 M sq. m. in 2023, with plans to reach 30 M sq. m. in Phase 2

Improvement impact

RMB 30 M per year

Potential increase in gross profits when utilized at full capacity



Zhengding: Biomass Co-firing

Ongoing trial to achieve 10% biomass co-firing at coal equivalent costs. A subsequent trial is scheduled for April 2024, incorporating 20 tons of biomass

Improvement impact

10%

reduction in coal consumption, with potential for additional revenue from CO₂ allowance trading



BLCP: Boiler Failure Predictive Model

To reduce opportunity cost from unplanned shutdown caused by steam boiler tube leaks and to address inspection challenge due to limitation access in certain area of steam boiler

Improvement Impact

THB 37 M

Annual reduction in O&M costs

Efficient tube inspections and lower opportunity cost



HPC: Electric-Powered Trucks for Limestone Transportation

Conversion of 11 diesel-powered trucks to electric for initial phase, in collaboration with Meuang Ngern Enterprise, and Thai EV Company

Improvement Impact

THB 0.8 M

Annual transportation cost reduction

1.7 Mtpa

Estimated CO₂ emission reduction



Asset showcase: resilient US Power assets during the winter storm

US WINTER STORM CONDITIONS

JAN. 14-17, 2024



Approx. -9°C (15°F)

Potent Arctic blast brought very low temperatures with minimal precipitation.

Maintained 24/7 operations

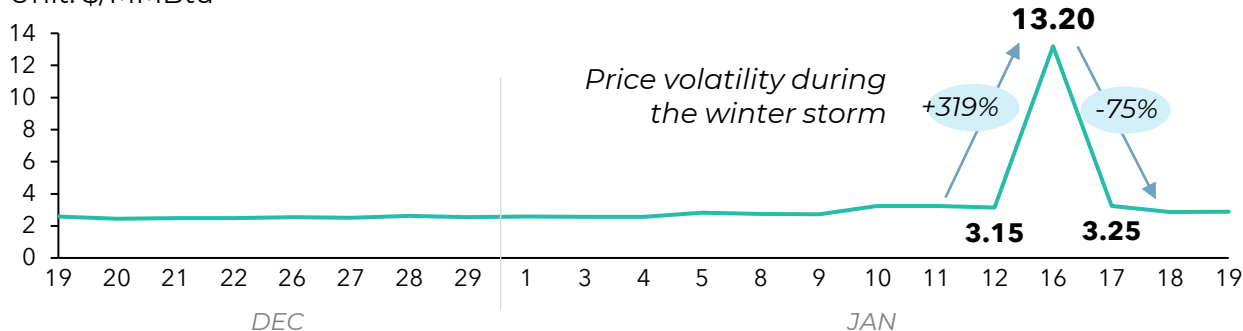
Temple I and II navigated the storm smoothly, overcoming uncertainties in load, weather, and the ERCOT market with a dedicated team of full-time staff operating and monitoring the plant.

Moderate Market Prices Amidst Unexpected Power Surges

Market prices remained moderate due to an unexpected increase in wind, solar, and ESS power output, coupled with lower-than-anticipated outage rates, with one peak power price observed around 8AM.

Dec'23-Jan'24 Day Ahead Henry Hub Prices

Unit: \$/MMBtu



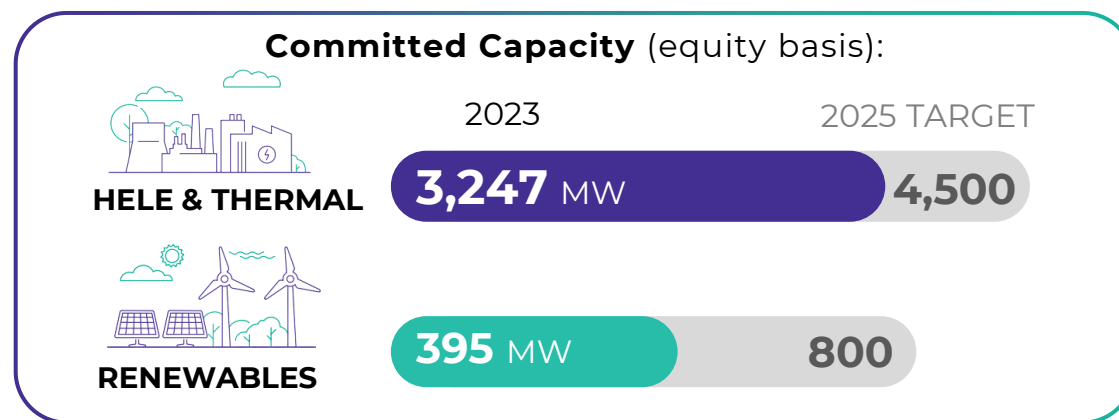
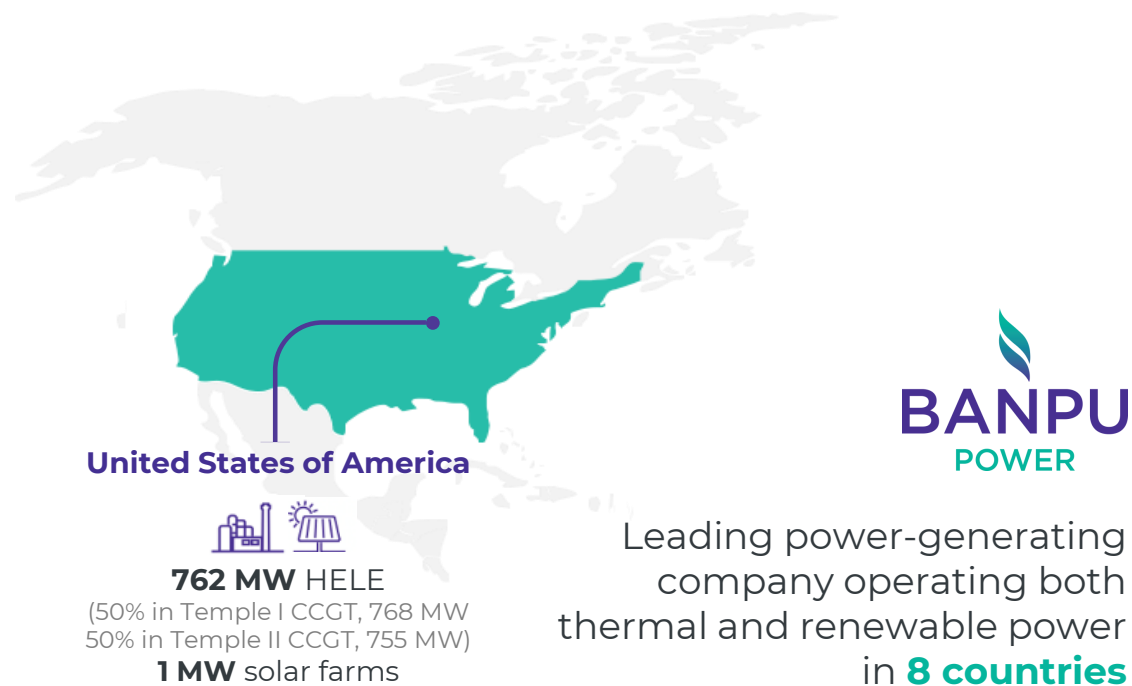
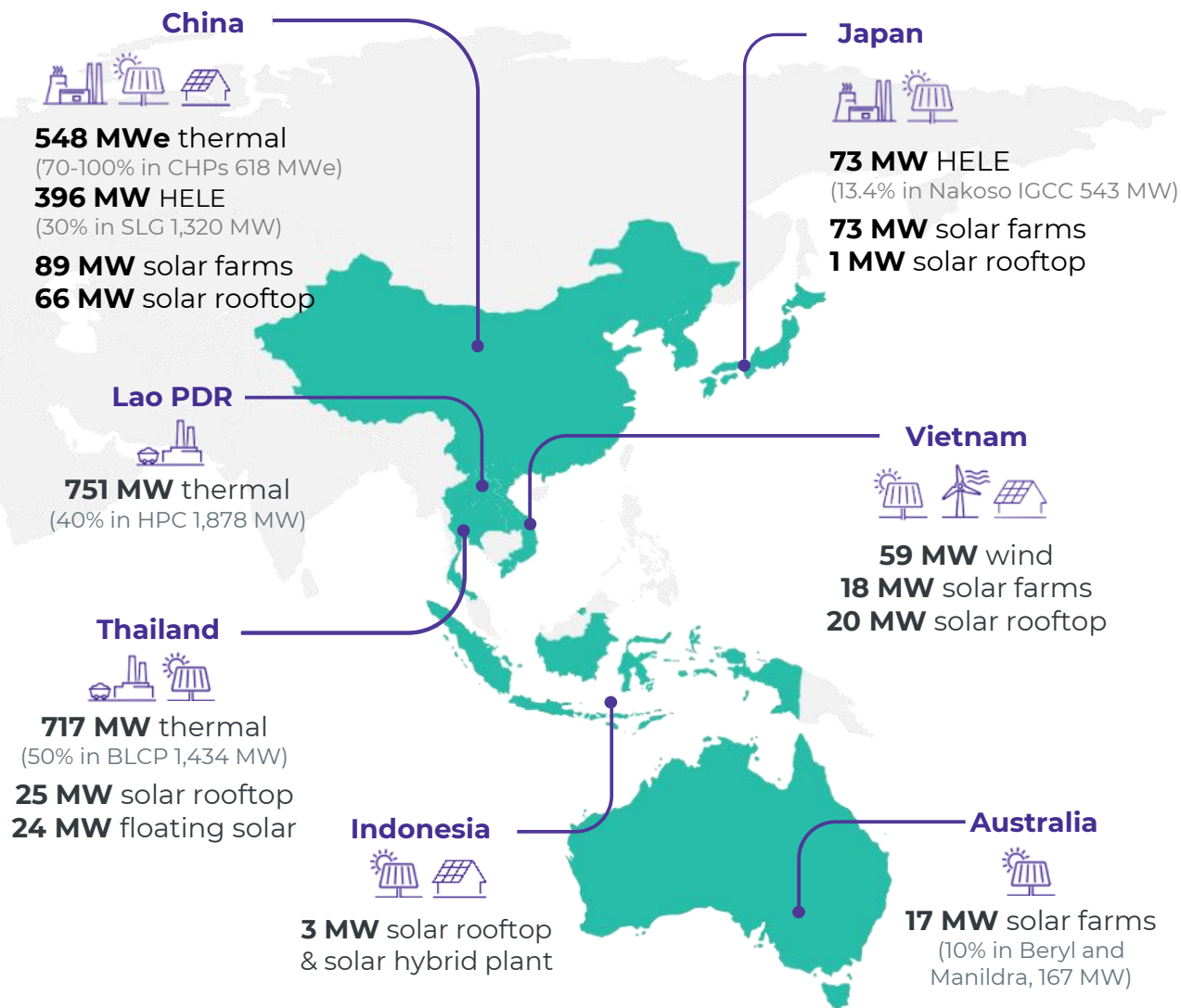
Mitigation measures: White Plastic and Structure Implementation



Installation of temperature monitoring sensors and portable water heater inside the structure



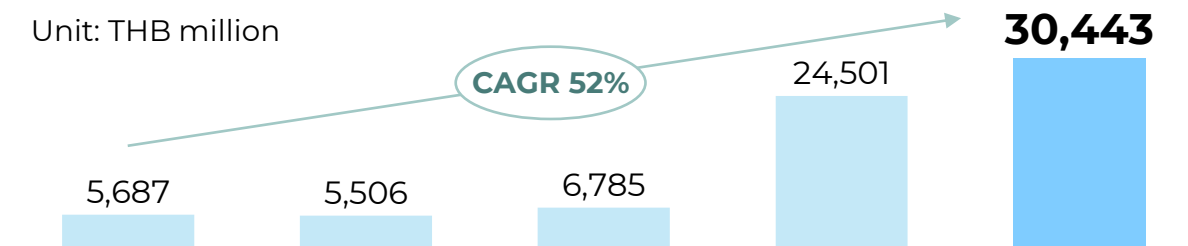
Diverse and robust portfolio across the Pacific Rim



Excellent financial performance and resilient balance sheet

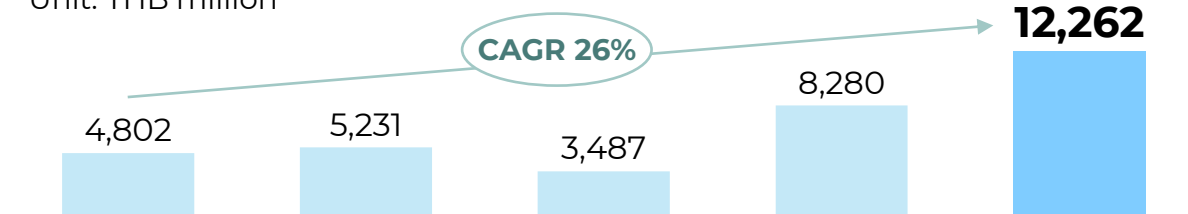
REVENUE

Unit: THB million



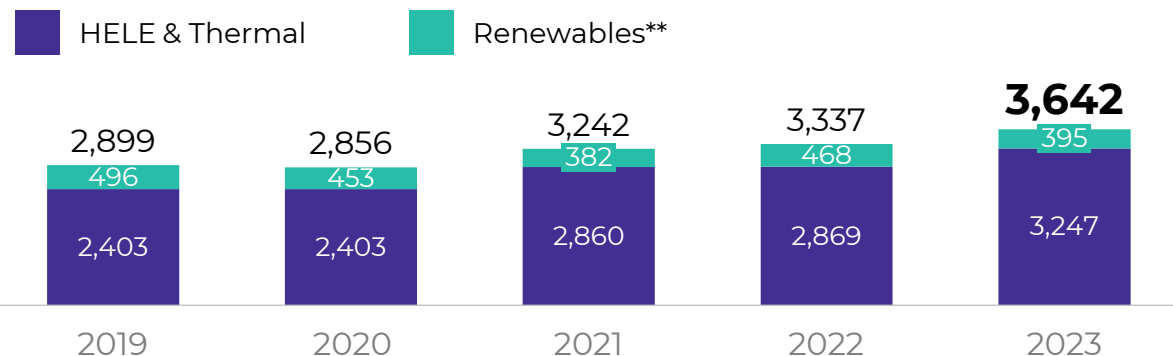
EBITDA*

Unit: THB million



POWER PORTFOLIO

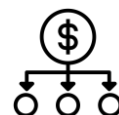
Unit: MW (committed capacity)



BPP continues to exhibit strong financial performance positioned to support future *Greener, Smarter* growth opportunities



Strong and robust cash flow generation, from BPP's portfolio of agile and flexible assets, which is well-positioned to capture both, upside potential from merchant markets, and generate stable returns from PPA-based assets, providing consistent returns to shareholders and support BPP's strategic growth.



Diversified but robust portfolio, comprising of a mix of quality megawatts from high efficiency, low emission baseload thermal power plants, and renewable assets across the Pacific Rim, allowing BPP to navigate through diverse economic conditions while capitalizing on opportunities across geographies.



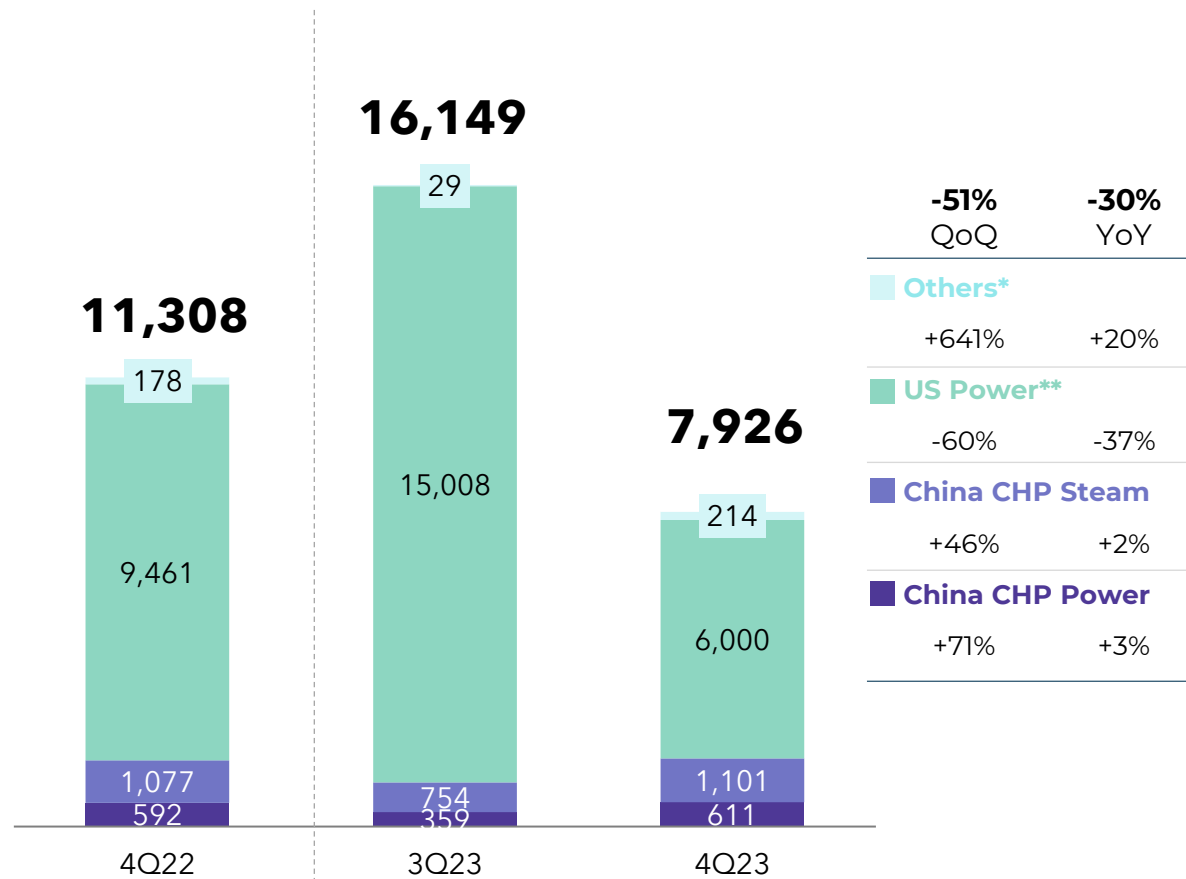
Robust financial and risk management, reinforced by a solid balance sheet, ample liquidity, and a prudent debt-to-equity ratio, which enables BPP to continue to grow sustainably.

Financial performance

Banpu Power consolidated revenue – 4Q23 and FY23

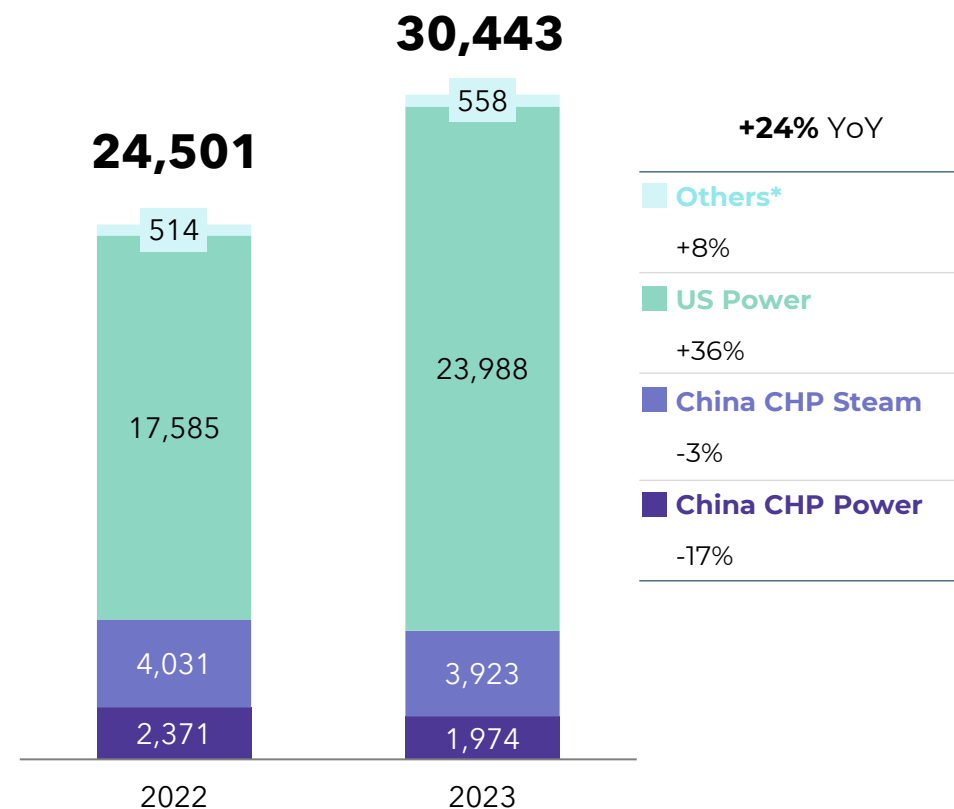
Consolidated Sales Revenue, by quarter

THB million



Consolidated Sales Revenue, by year

THB million



Note: *Others i.e., hot water, cooling water and Zhengding solar rooftop

** Included accounting adjustment of previous quarter conforming with group policy;

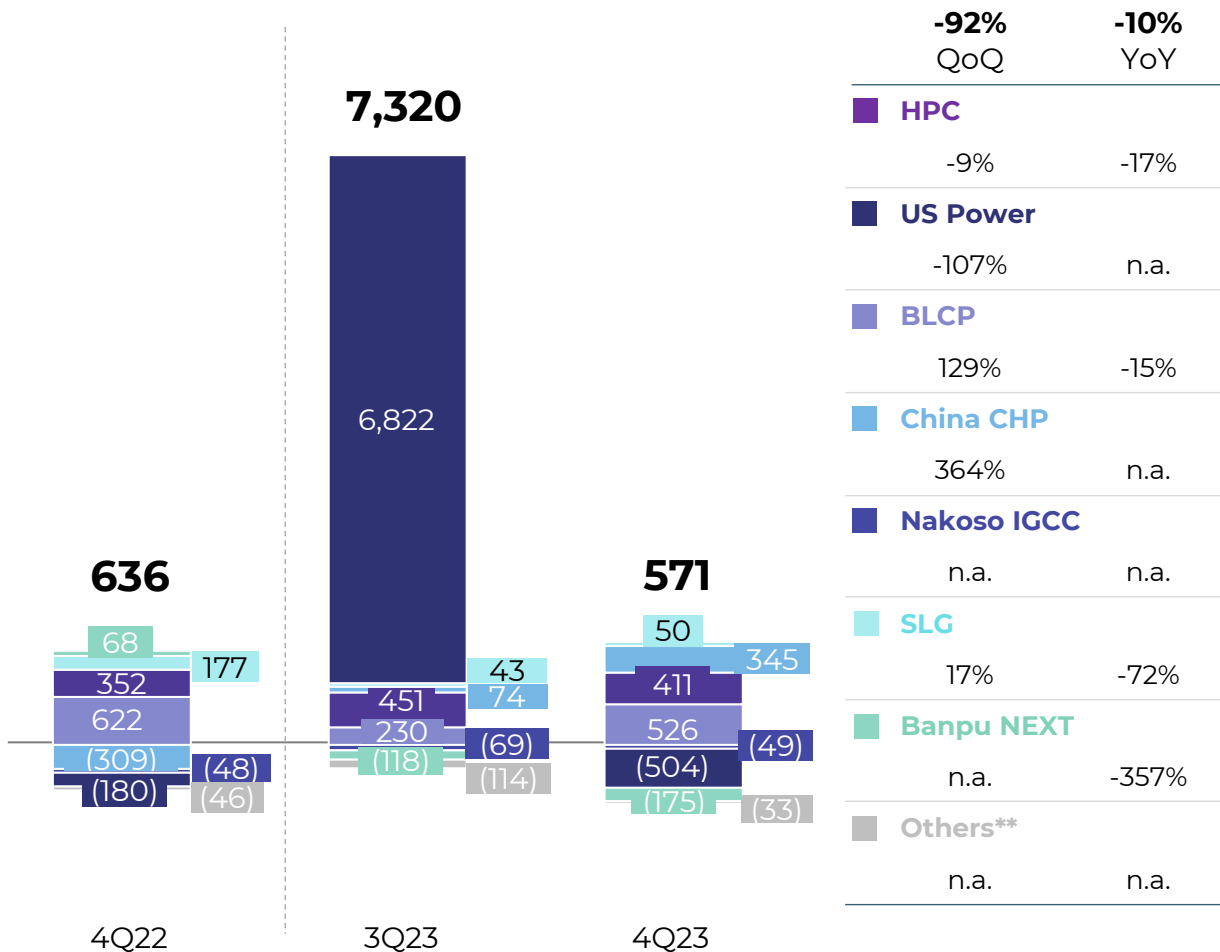
4Q22 = USD 228 M (approx. to THB 7,972 M) (an adjustment recorded in revenue USD 228 M , USD 186 M was recorded in cost of sales, and USD 42 M was recorded in realized loss on derivatives)

4Q23 = USD 98 M (approx. to THB 3,450 M) (an adjustment recorded in revenue USD 98 M and realized loss from derivative USD 98 M)

Banpu Power consolidated EBITDA – 4Q23 and FY23

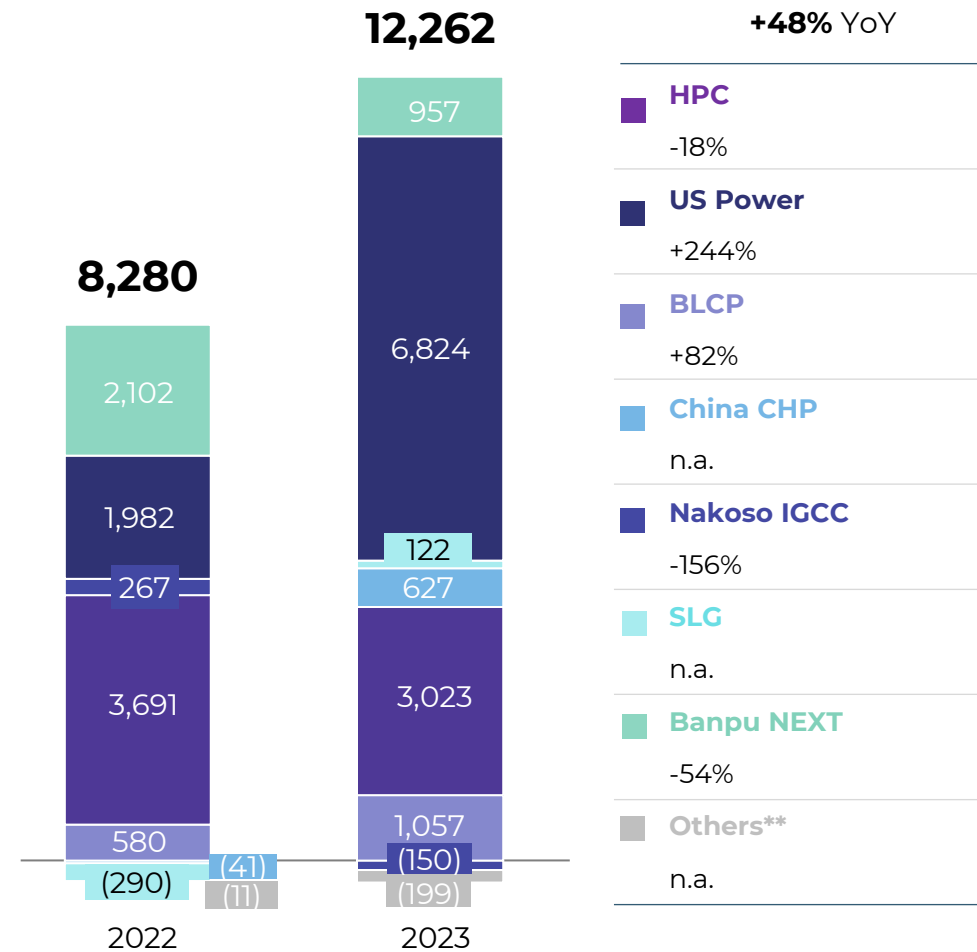
Consolidated EBITDA*, by quarter

THB million



Consolidated EBITDA*, by year

THB million



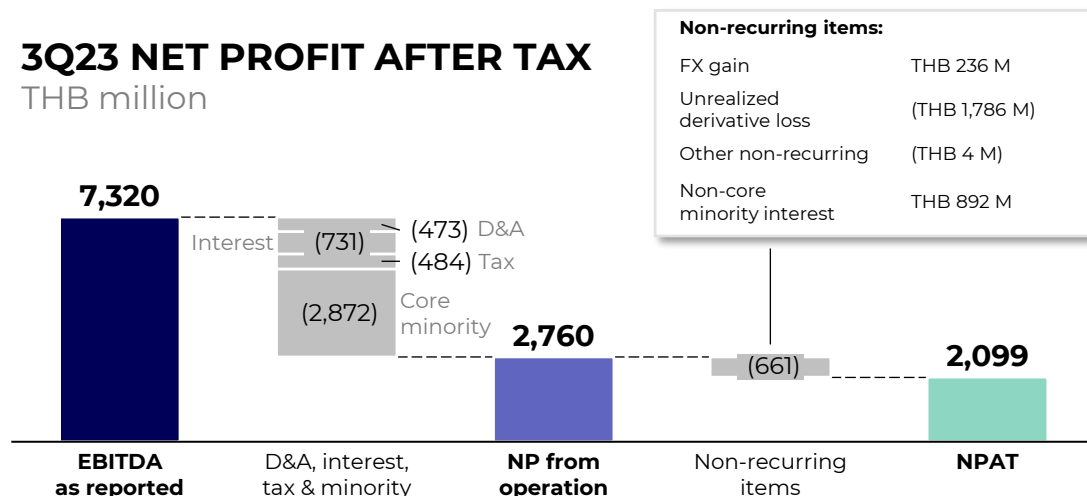
Note: *EBITDA includes realized gain / (loss) from derivative

**Others i.e., Head office - BPP

Banpu Power consolidated NPAT – 4Q23 and FY23

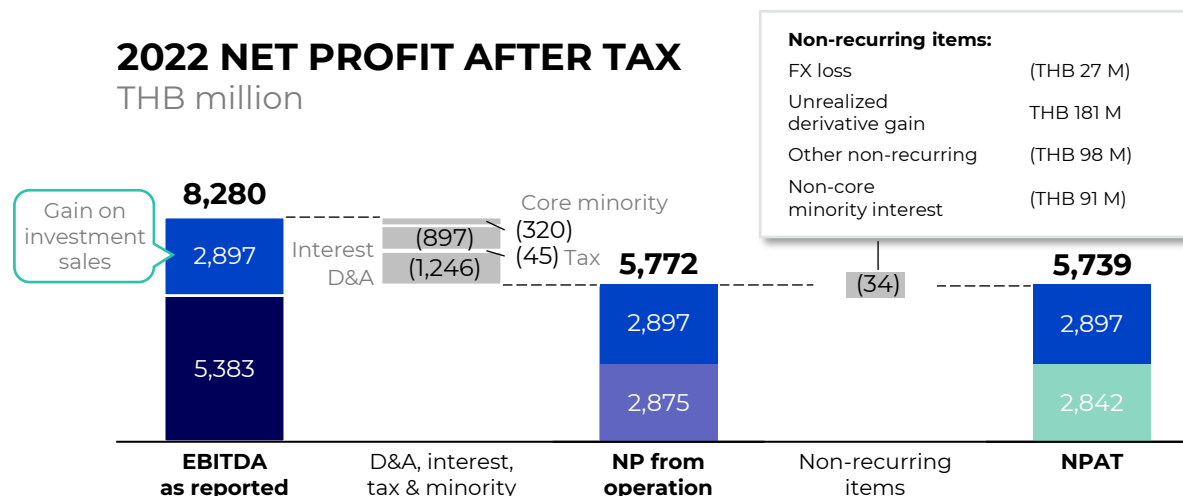
3Q23 NET PROFIT AFTER TAX

THB million



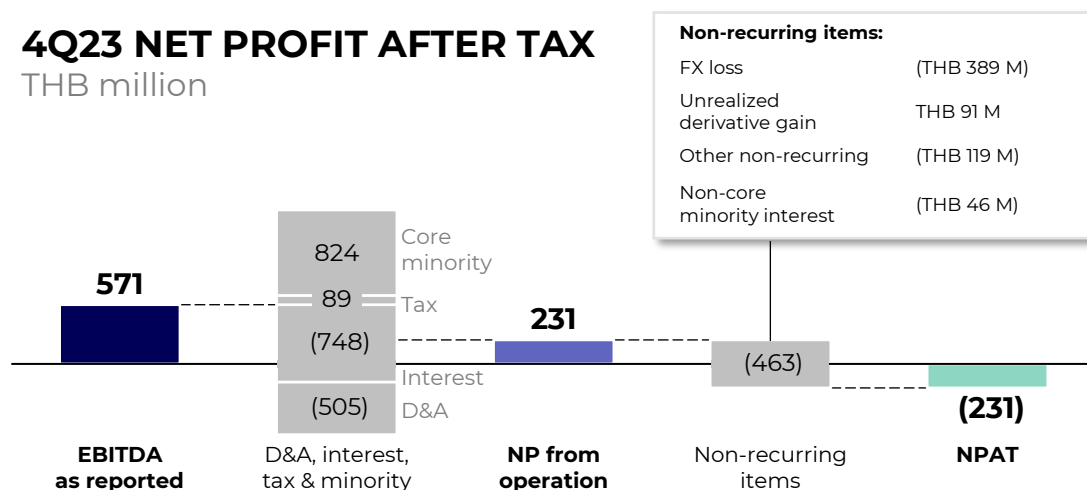
2022 NET PROFIT AFTER TAX

THB million



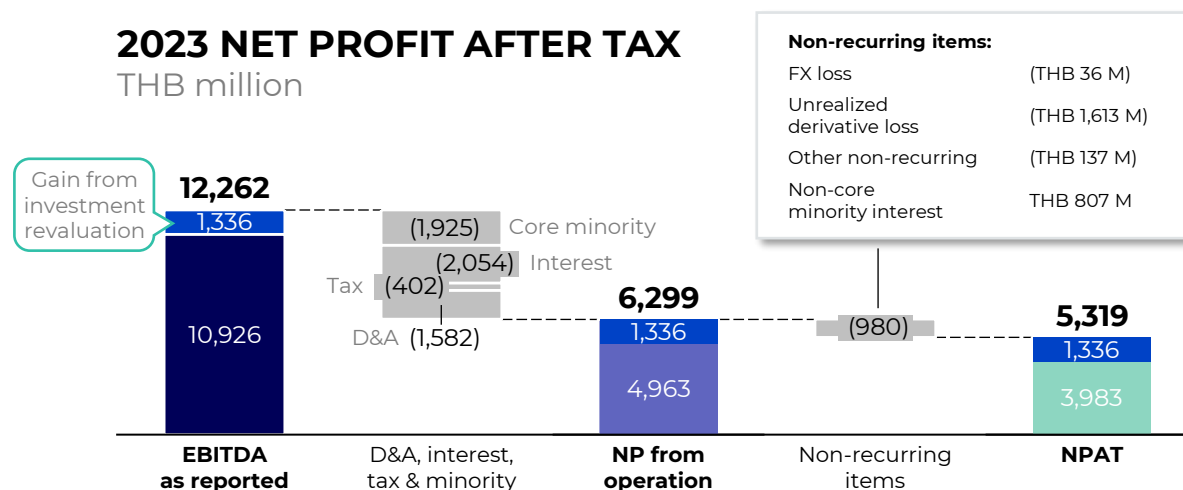
4Q23 NET PROFIT AFTER TAX

THB million



2023 NET PROFIT AFTER TAX

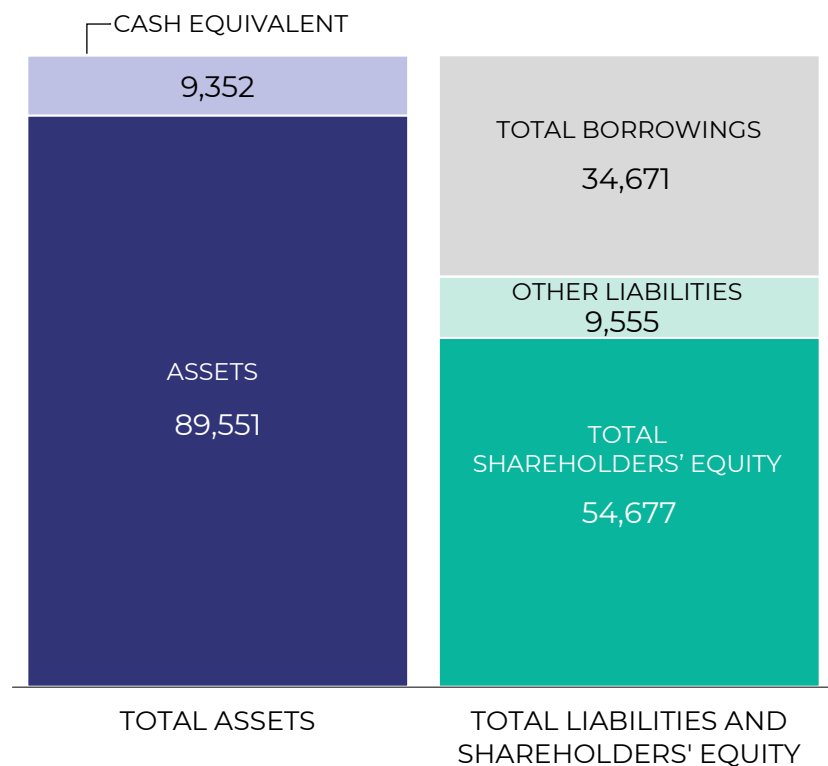
THB million



Banpu Power consolidated financial position – FY23

2023 Consolidated Financial Position

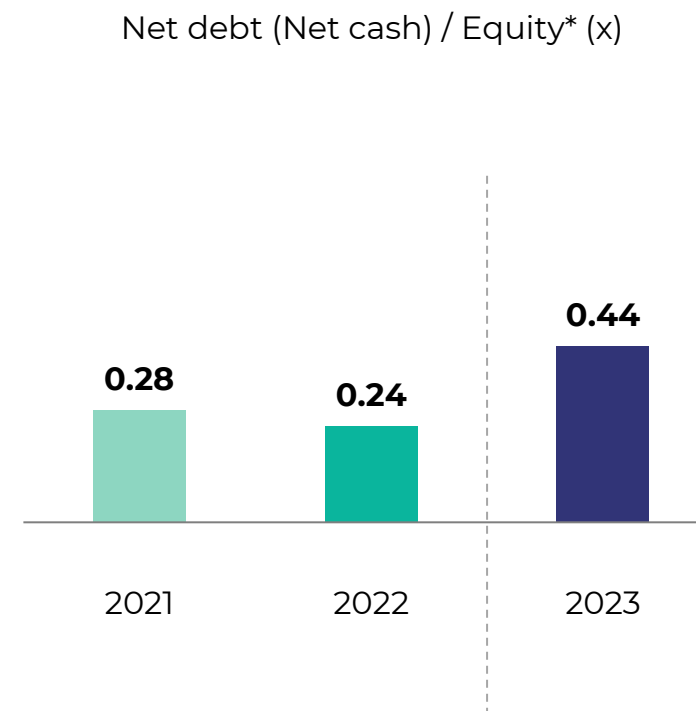
THB million



31 December 2023

In 2023, total assets were THB 98,903 M, an increase of THB 21,238 M from 2022. The net D/E ratio increased from 0.24 to 0.44 due to the acquisition of Temple II in 2023.

Gearing Ratios



Note: *Net debt to book value of shareholders' equity

Thermal performance

China CHP: operational performance

China Combined Heat and Power (CHP) Plants

In 2006, Banpu invested into 3 combined heat and power plants in China with total of 548 equity MWe at present.

Quarter update: All plants operating as planned with no disruptions.



ZHENG DING CHP

HEBEI, CHINA

Ownership: 100%

Power capacity: 139 MWe

LUANNAN CHP

HEBEI, CHINA

Ownership: 100%

Power capacity: 246 MWe

ZOUPING CHP

SHANDONG, CHINA

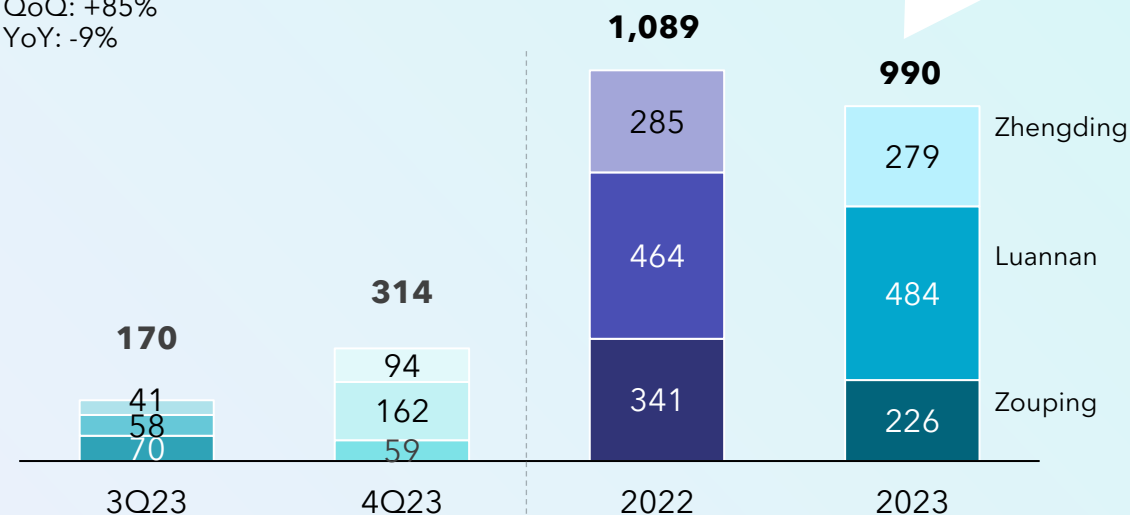
Ownership: 70%

Power capacity: 233 MWe

Electricity sold (GWh)

QoQ: +85%

YoY: -9%

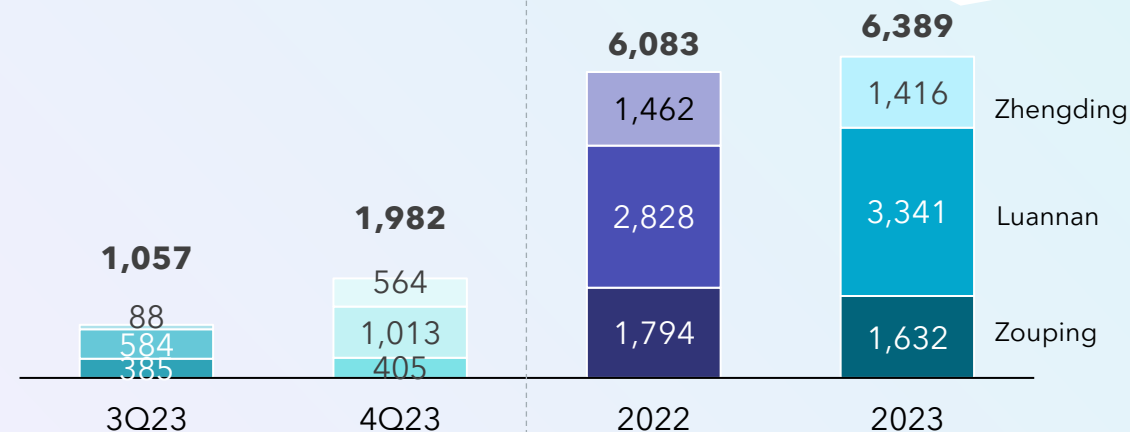


QoQ increase due to the seasonal increase in power sales and higher steam offtakes during winter. However, the YoY decreased due to lower steam demand from Xiwang Group.

Steam sold ('000 t)

QoQ: +88%

YoY: +5%

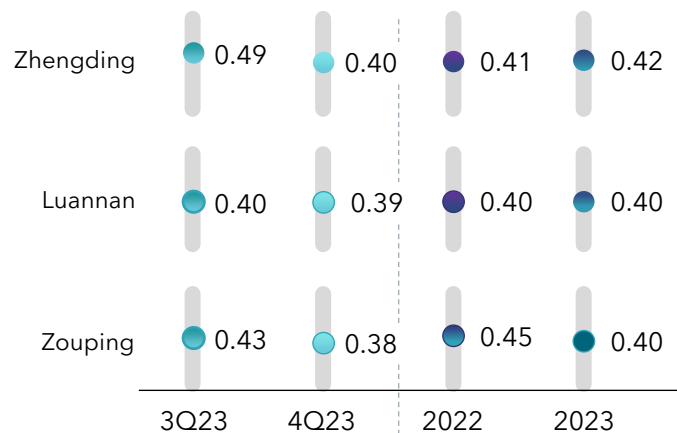


YoY increase due to higher industrial steam sold in Luanan plant with higher demand from customers, namely Zhonghong and Paper Mill.

China CHP: financial performance

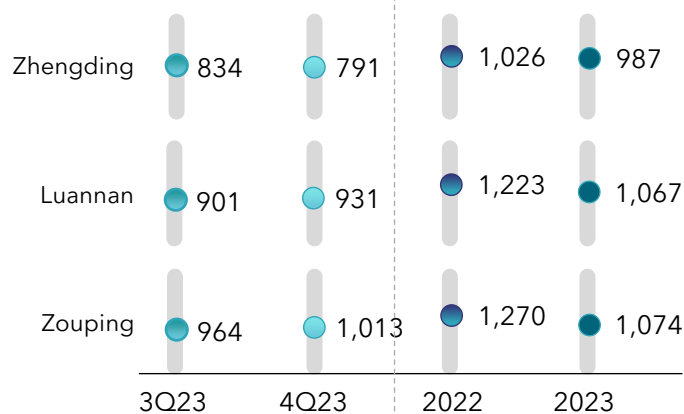
Tariff (RMB/kWh)

Higher YoY power tariff in ZD plant driven of optimal utilization of TOU mode in power trading market



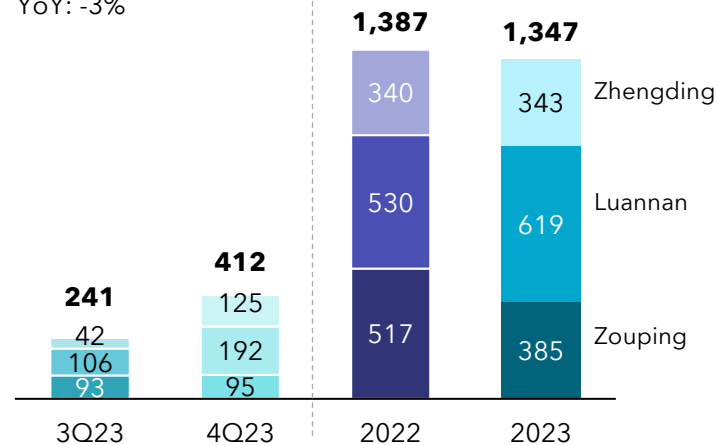
Coal price (RMB/t)

In Y23, the domestic coal price shows a downward trend due to ample supply at mines, high stockpiles, increased hydropower generation, and relaxed coal import policies



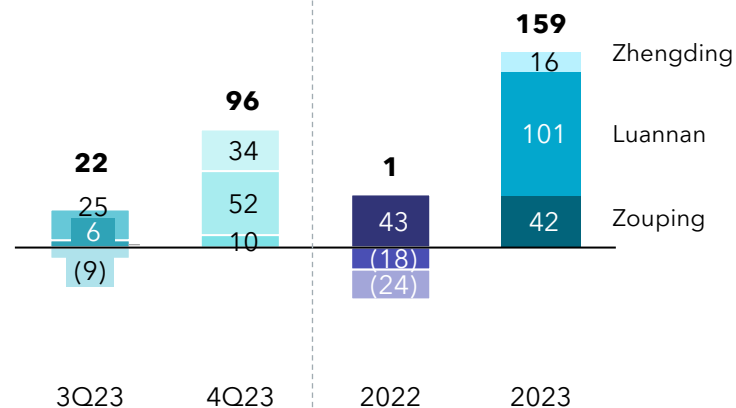
Total revenue (RMB M)

QoQ: +71%
YoY: -3%



EBITDA (RMB M)

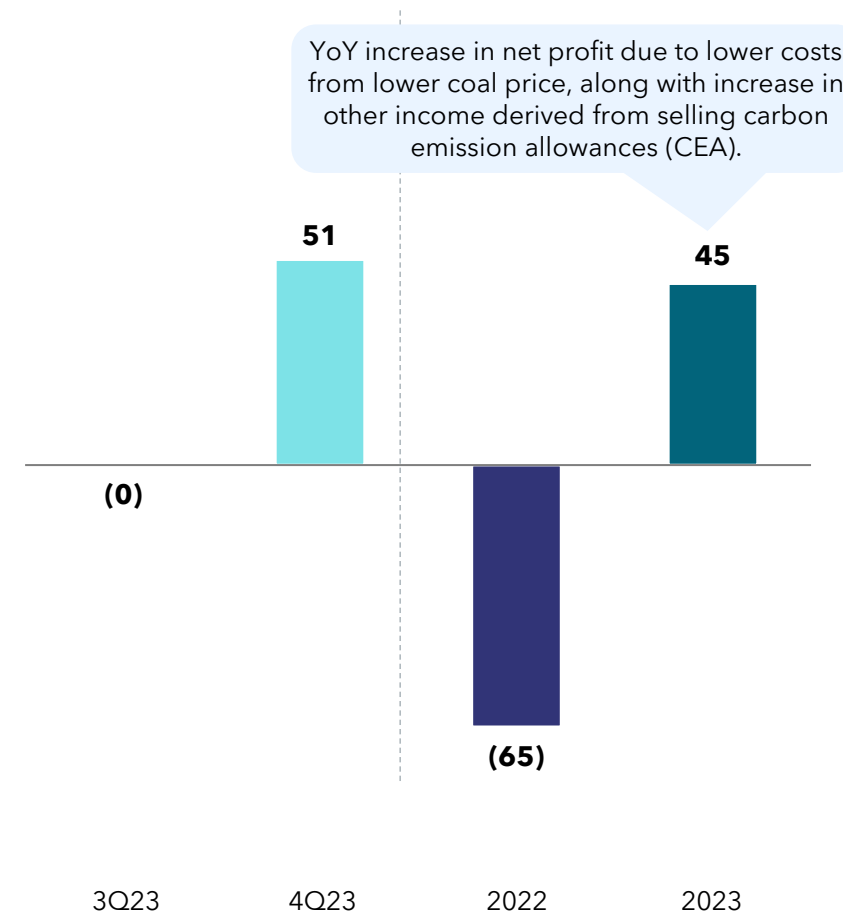
QoQ: +335%
YoY: n.a.



Profit contribution to BPP (RMB M)

QoQ: n.a.
YoY: n.a.

Based on Banpu Power's
100% interest for Luannan and
Zhengding, and 70% for Zouping



SLG: operational & financial performance

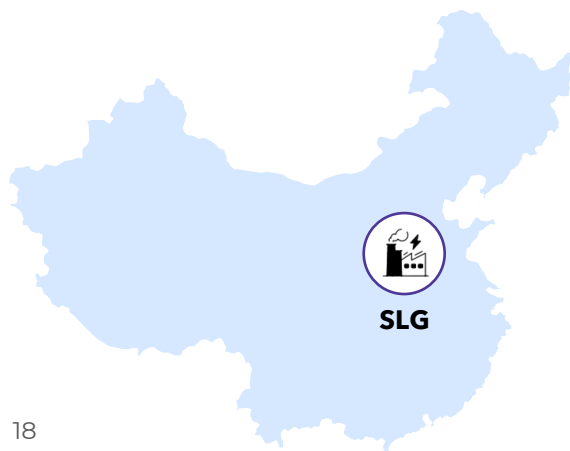
Shanxi Lu Guang Power Plant

Commissioned in 2021, SLG is a high efficiency coal-fired power plant that utilizes best of class technology to significantly lower emissions.

Quarter update: Unit #1 operated continuously throughout Q4, except for an 11.6-hour shutdown on Nov. 4 due to a false alarm regarding low EH oil pressure. Unit #2 operated without interruptions throughout Q4, following the completion of heat supply modification and reconnection with the grid on 10 October 2023.

As for the heat supply expansion project:

1. The new heating station started a trial run on 22 Dec. 2023, and was officially operational on 27 Dec. 2023
2. Unit #2's modification was completed on 10 Oct. 2023
3. Unit #1's modification is scheduled for Q2 2024



SHANXI LU GUANG

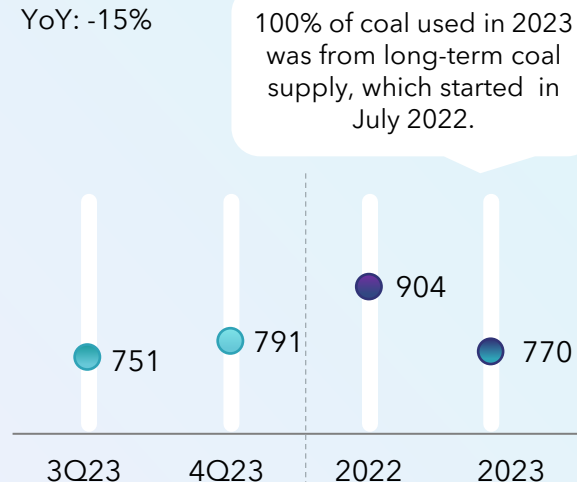
SHANXI, CHINA

Ownership: 30%

Power capacity: 1,320 MW

Standard coal price (RMB/t)

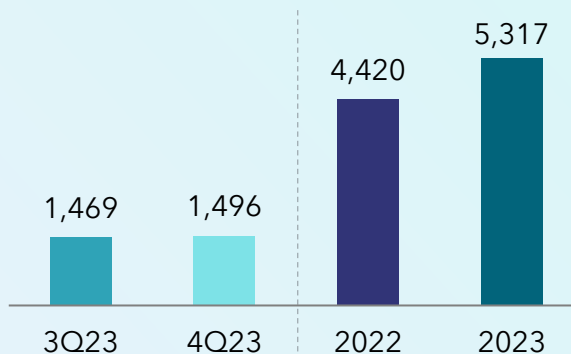
QoQ: +5%
YoY: -15%



Electricity sold (GWh)

QoQ: +2%
YoY: +20%

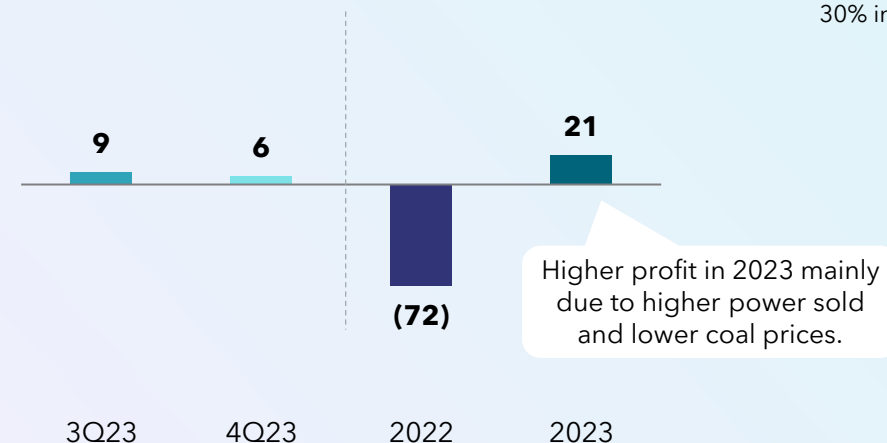
Higher power sold in 2023 due to higher power demand, along with the easing of COVID-related restrictions.



Profit contribution to BPP (RMB M)

QoQ: -33%
YoY: n.a.

Based on Banpu Power's
30% interest

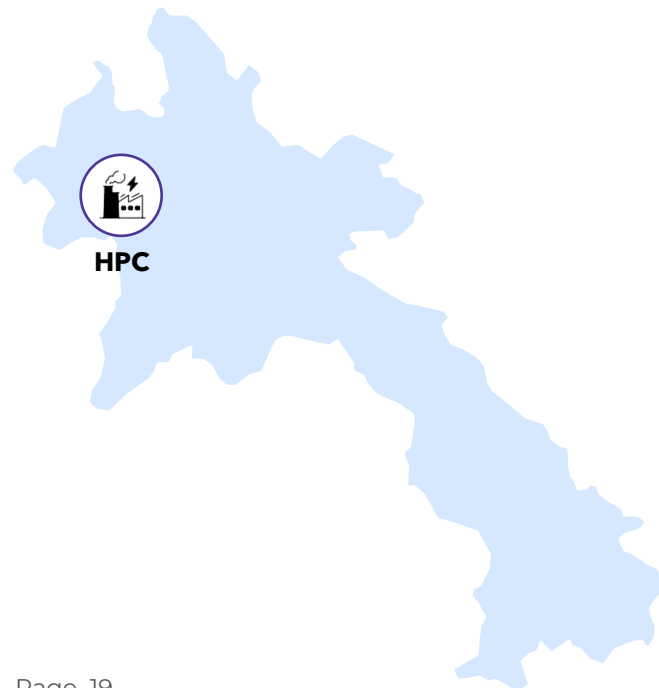



HPC: operational performance

HPC Power Plant

HPC is a lignite mine mouth power plant that commissioned between 2015 and 2016, making it Lao's largest power generating asset in terms of capacity.

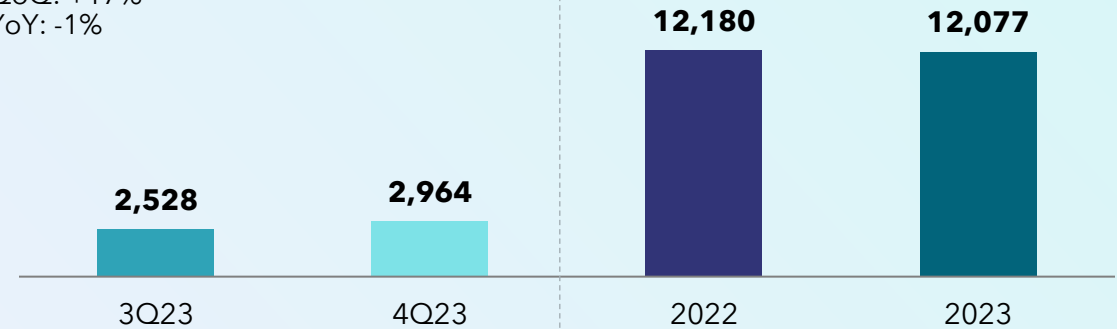
Quarter update: Conducted yearly maintenance at Unit #2 between 8 - 30 October 2023 and extended major inspections from 24 December 2023 to 16 February 2024.



HPC
 **XAYABURI, LAOS**
Ownership: 40%
Power capacity: 1,878 MW

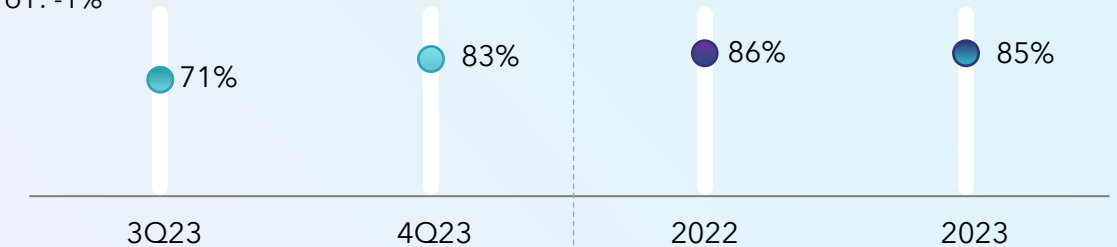
Net generation (GWh)

QoQ: +17%
YoY: -1%



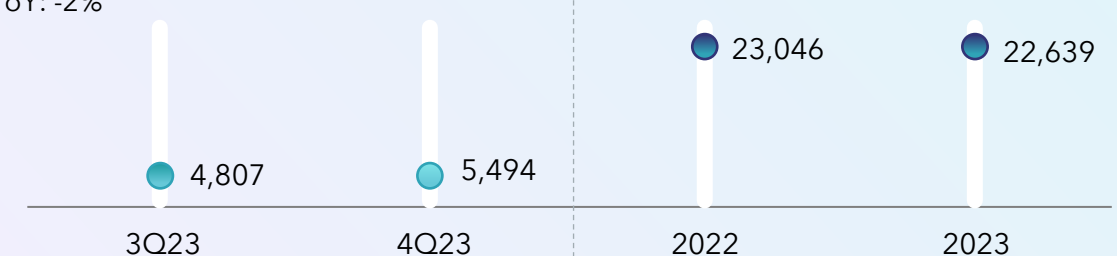
Equivalent availability factor (%)

QoQ: +12%
YoY: -1%



Contracted availability hour (hrs)

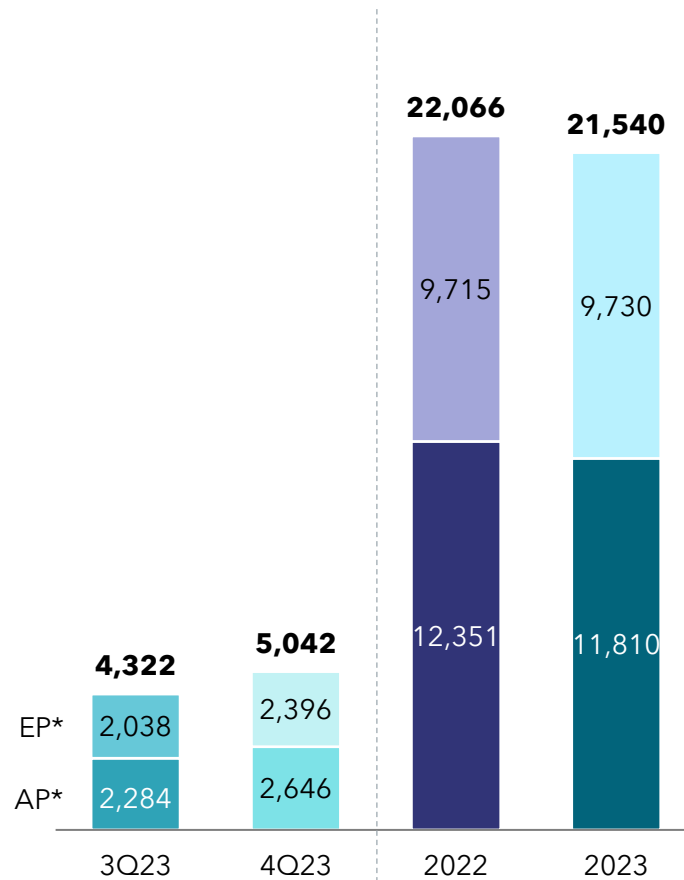
QoQ: +14%
YoY: -2%



HPC: financial performance

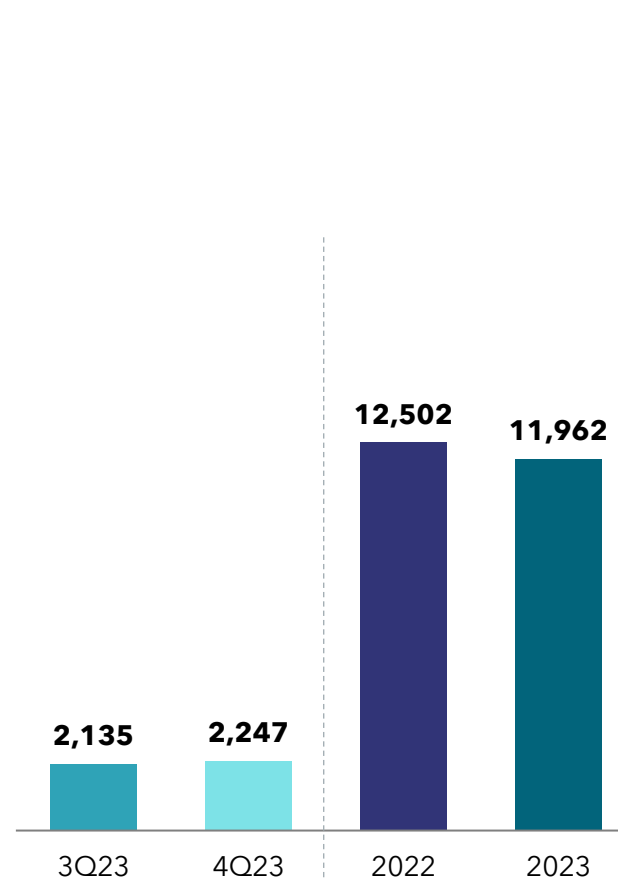
Total revenue (THB M)

QoQ: +17%
YoY: -2%



EBITDA (THB M)

QoQ: +5%
YoY: -4%

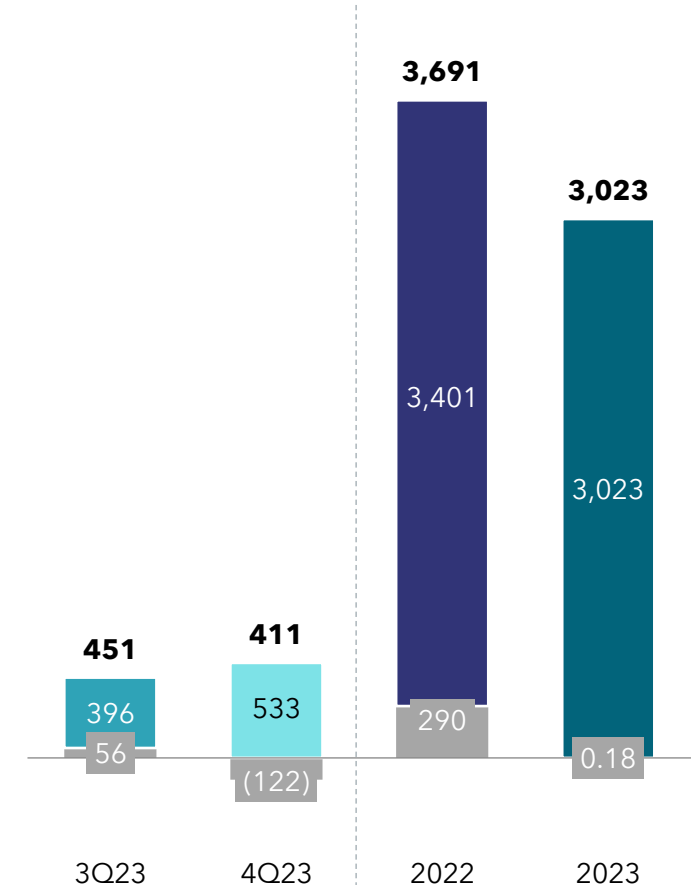


Profit contribution to BPP (THB M)

QoQ: -9%
YoY: -18%

Based on Banpu Power's 40% interest

■ FX Gain/loss



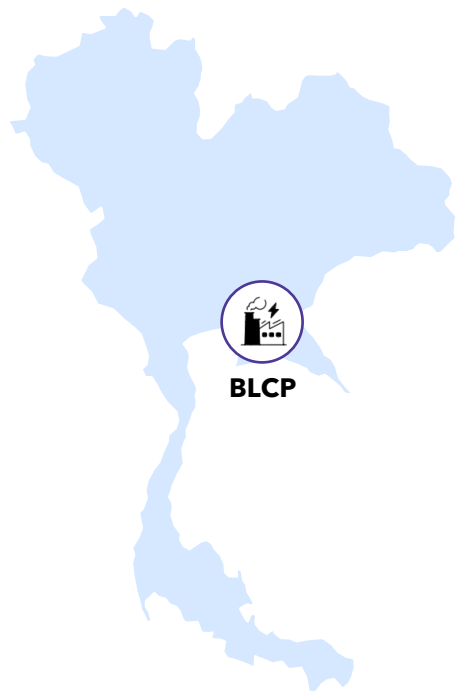
Note: *100% basis for availability payment (AP), energy payment (EP)


BLCP: operational performance

BLCP Power Plant

BLCP is a coal-fired power plant located in Map Ta Phut Industrial estate, Rayong with Unit 1 and 2 COD in 2006 and 2007, respectively.

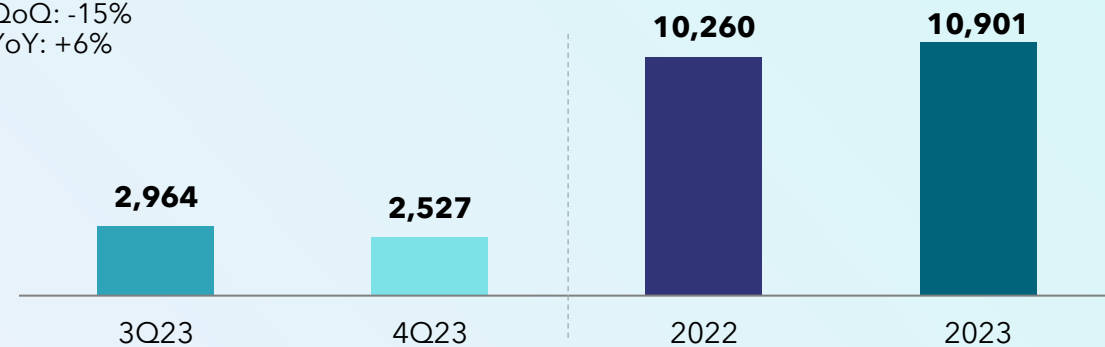
Quarter update: Operating as planned, with a minor inspection of the unit rescheduled for January 2024



BLCP
 **RAYONG, THAILAND**
Ownership: 50%
Power capacity: 1,434 MW

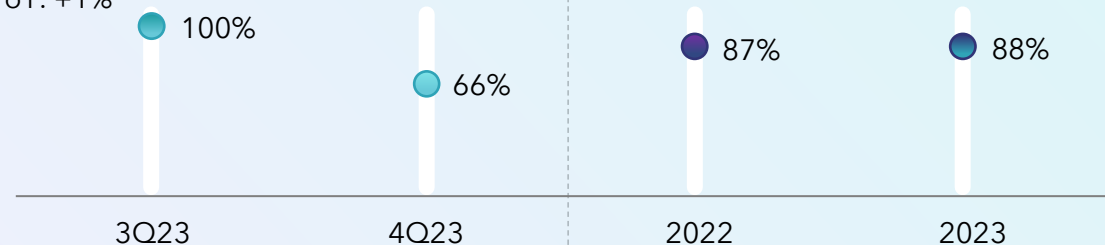
Net generation (GWh)

QoQ: -15%
YoY: +6%



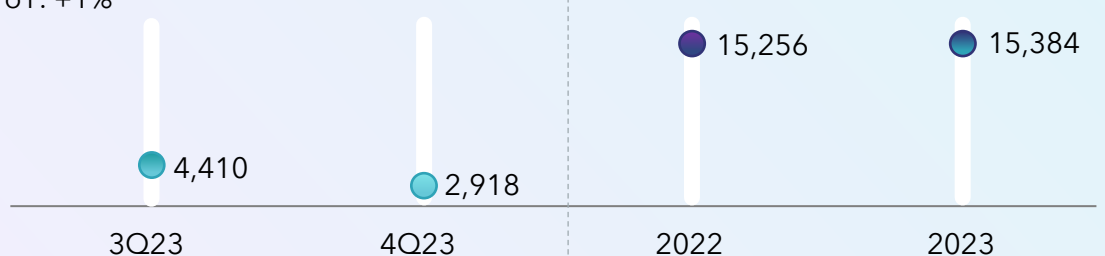
Equivalent availability factor (%)

QoQ: -34%
YoY: +1%



Contracted availability hour (hrs)

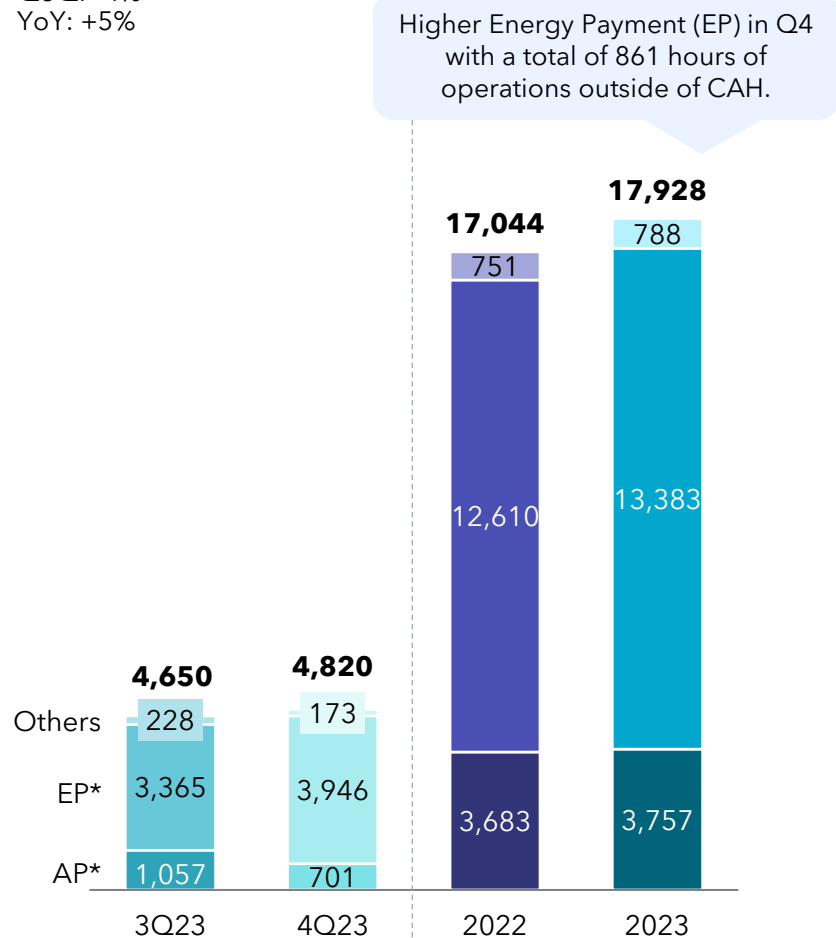
QoQ: -34%
YoY: +1%



BLCP: financial performance

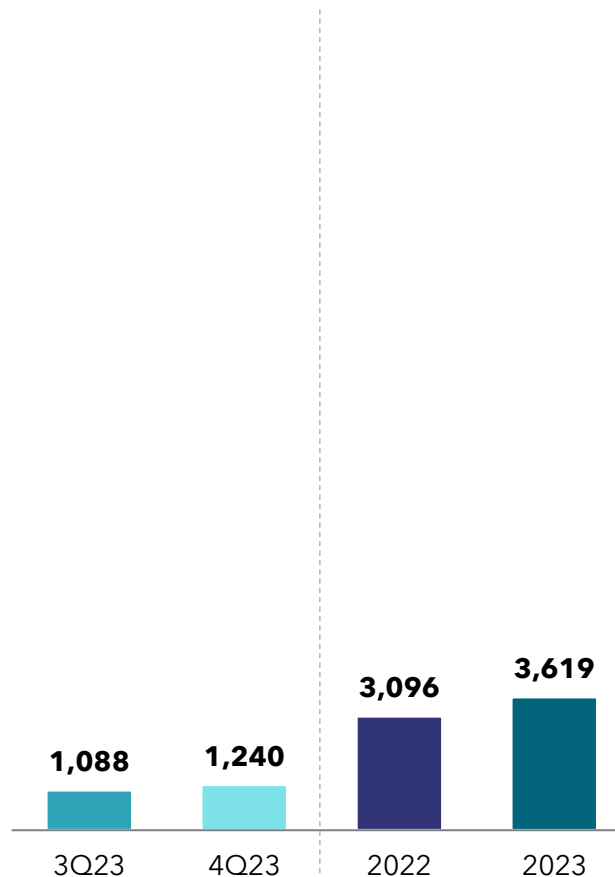
Total revenue (THB M)

QoQ: +4%
YoY: +5%



EBITDA (THB M)

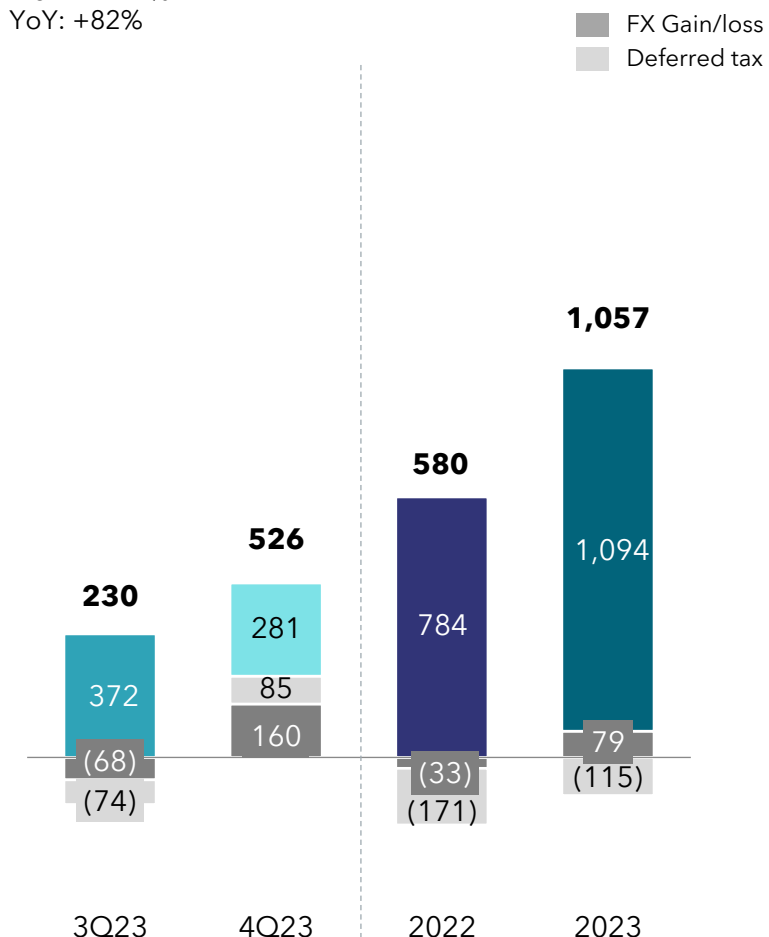
QoQ: +14%
YoY: +17%



Profit contribution to BPP (THB M)

QoQ: +129%
YoY: +82%

Based on Banpu Power's 50% interest



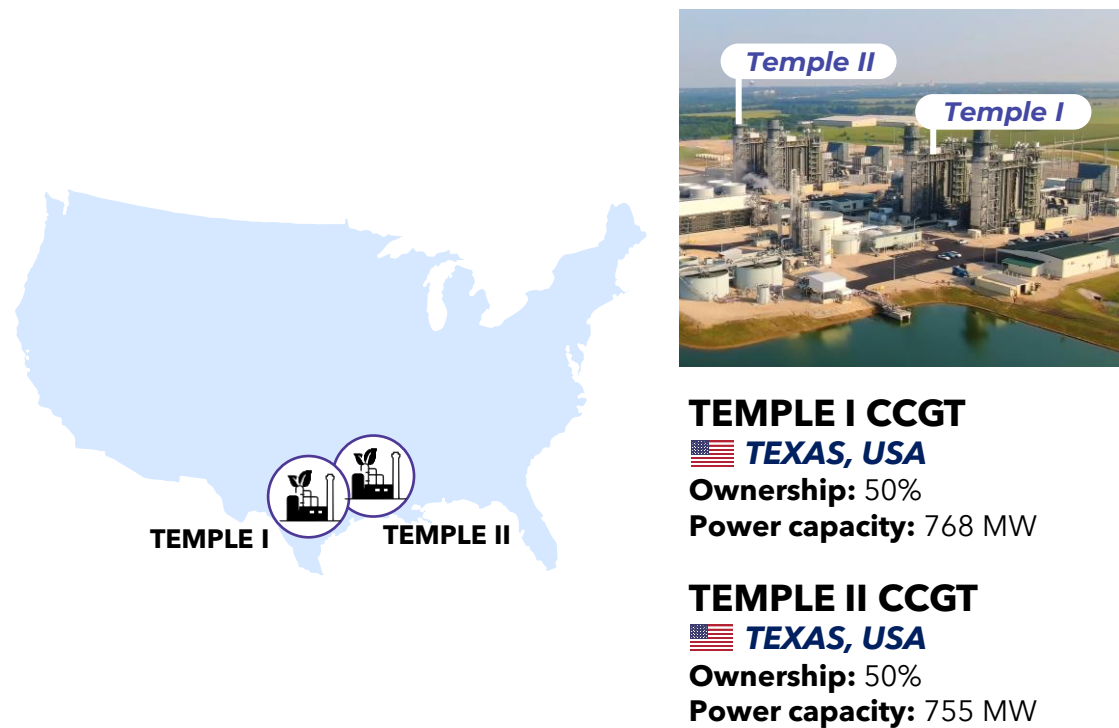
Financial performance provided are based on IFRS accounting standard
Note: *100% basis for availability payment (AP)

Temple I & II: operational performance

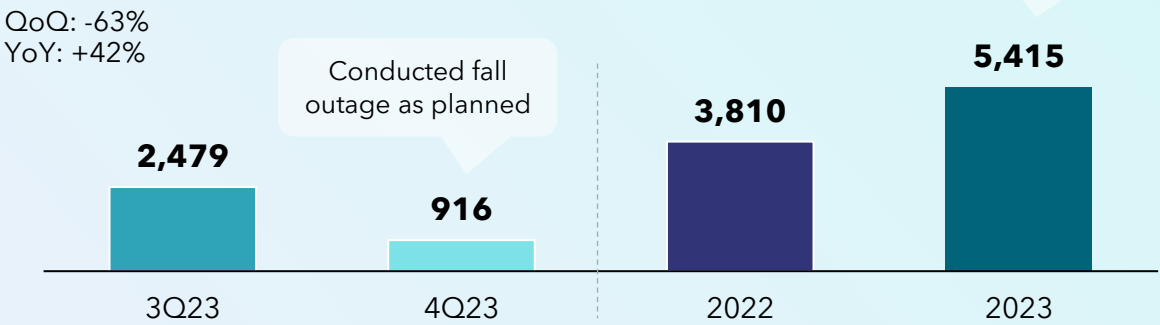
Temple I & II CCGT

Temple I & II are combined cycle gas-fired power plants located next to each other, supplying base load power to the ERCOT market, COD in 2014 and 2015, respectively. Both assets have recognized revenue since November 2021 and July 2023, respectively.

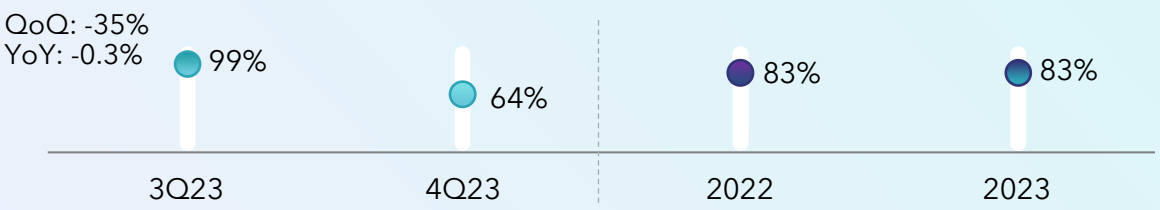
Quarter update: Conducted fall outage as planned.



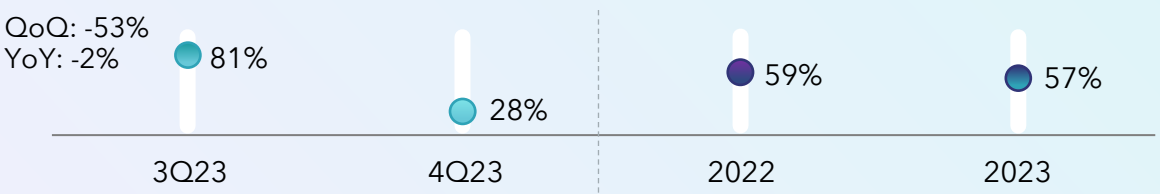
Net generation (GWh)



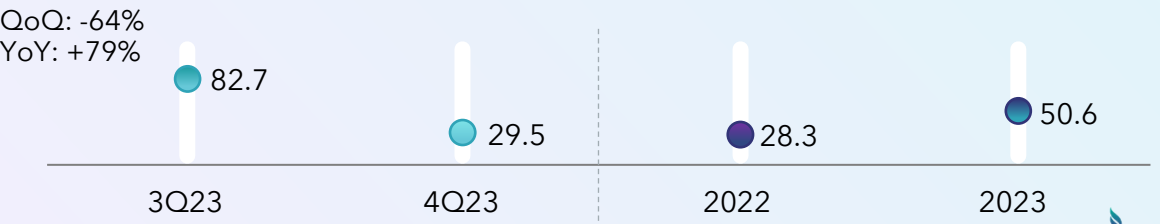
Equivalent availability factor (%)



Capacity factor (%)



Spark spread (\$/MWh)



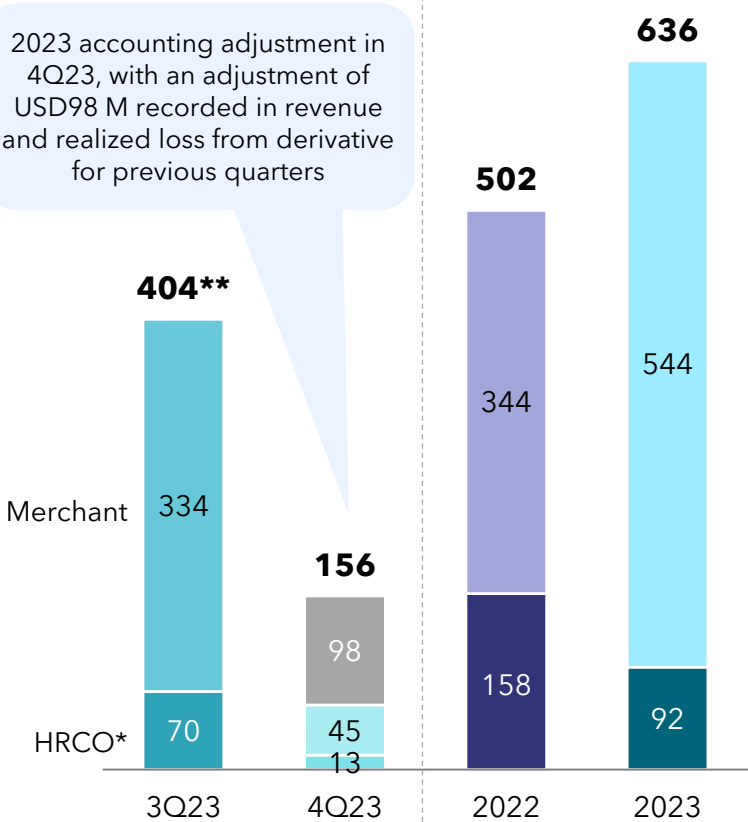
Temple I & II: financial performance

Total revenue (USD M)

QoQ: -61%
YoY: +27%

Based on
100% interest

2023 accounting adjustment in 4Q23, with an adjustment of USD98 M recorded in revenue and realized loss from derivative for previous quarters



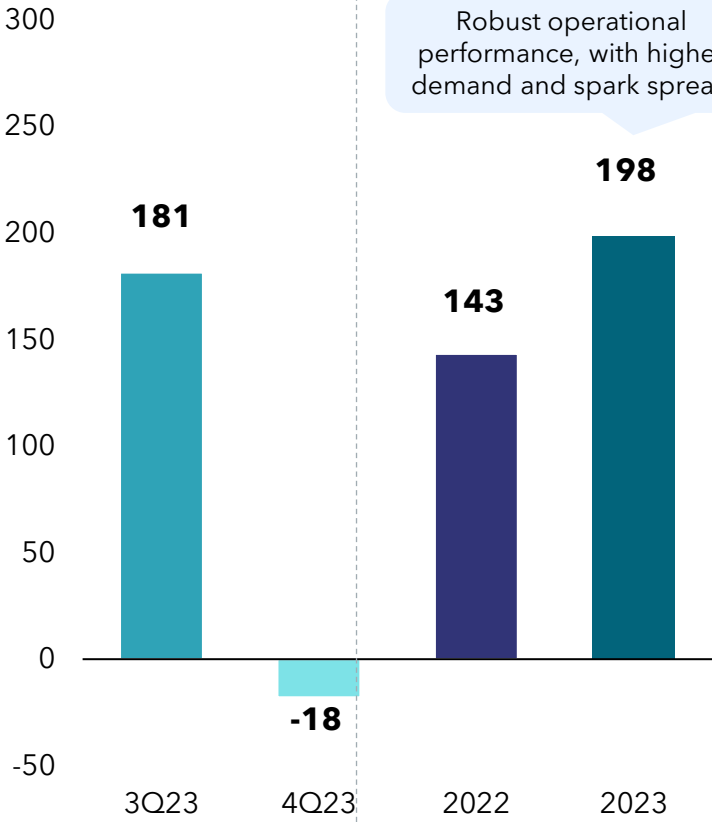
Note:
 * Heat Rate Call Option (HRCO) is a derivative used to secure monthly fixed revenue to ensure stable cash flow streams for both low and peak season
 ** With accounting adjustment, total revenue of 3Q23 would be USD 500 M.
 *** EBITDA includes realized gain / (loss) from derivative

EBITDA*** (USD M)

QoQ: n.a.
YoY: +38%

Based on
100% interest

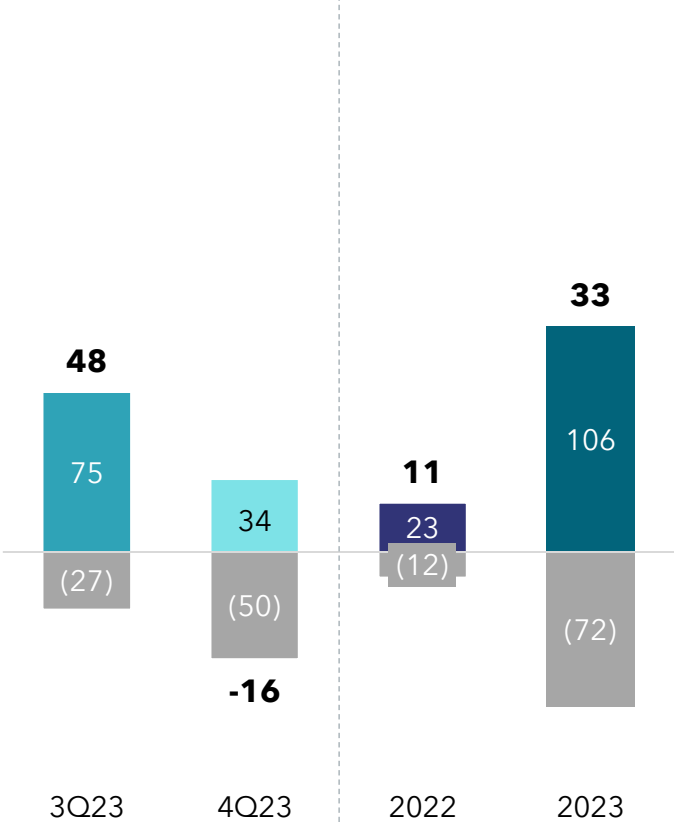
Robust operational performance, with higher demand and spark spread



Profit contribution to BPP (USD M)

QoQ: n.a.
YoY: +200%

Based on Banpu
Power's 50% interest
 ■ Gain (loss) on derivatives



Nakoso: operational & financial performance

Nakoso Power Plant

Nakoso is an integrated gasification combined cycle power plant that generates power at higher efficiencies with lower emissions and fuel consumption, COD in April 2021.

Quarter update: Nakoso IGCC’s shutdown for yearly maintenance.

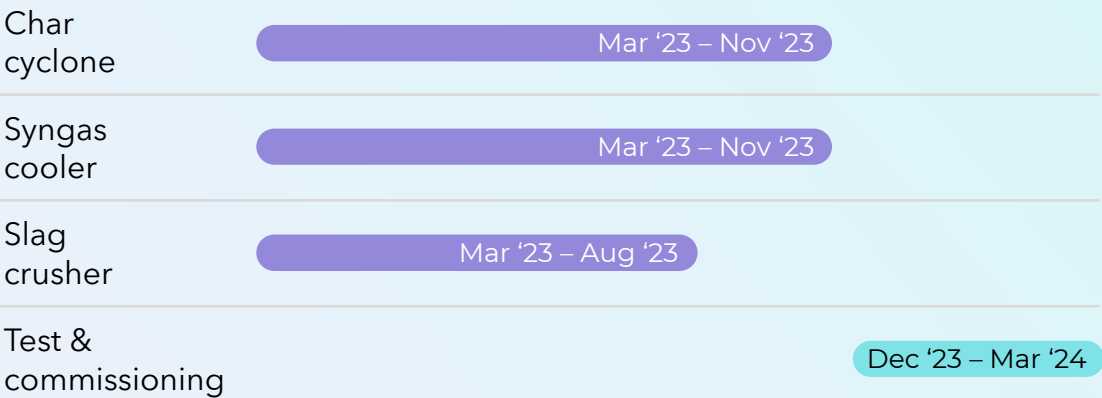


Nakoso
🇯🇵 **FUKUSHIMA, JAPAN**
Ownership: 13.4%*
Power capacity: 543 MW

Note:
* BPP owns 33.5% in NIMCO, which owns 40% of Nakoso IGCC
Page 25

Maintenance progress

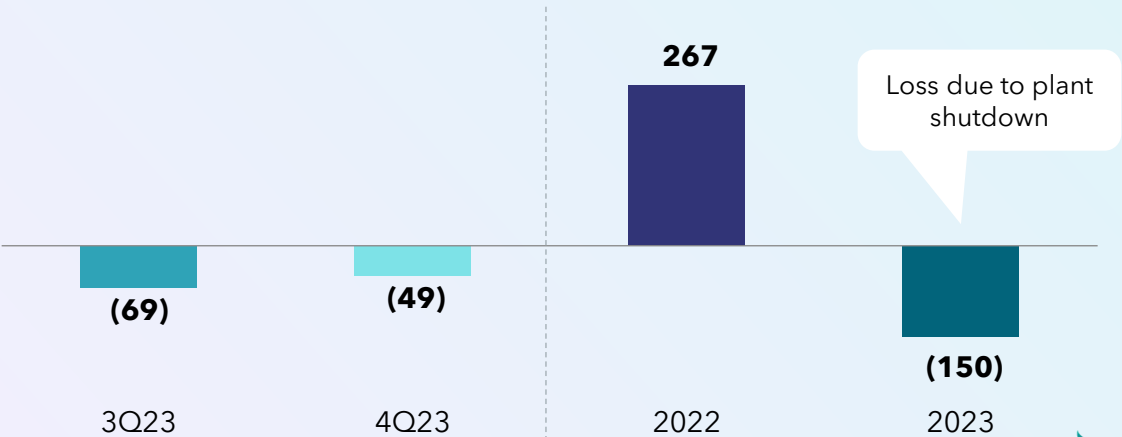
All maintenance works are on schedule with testing and commissioning expected to be completed by March 2024.

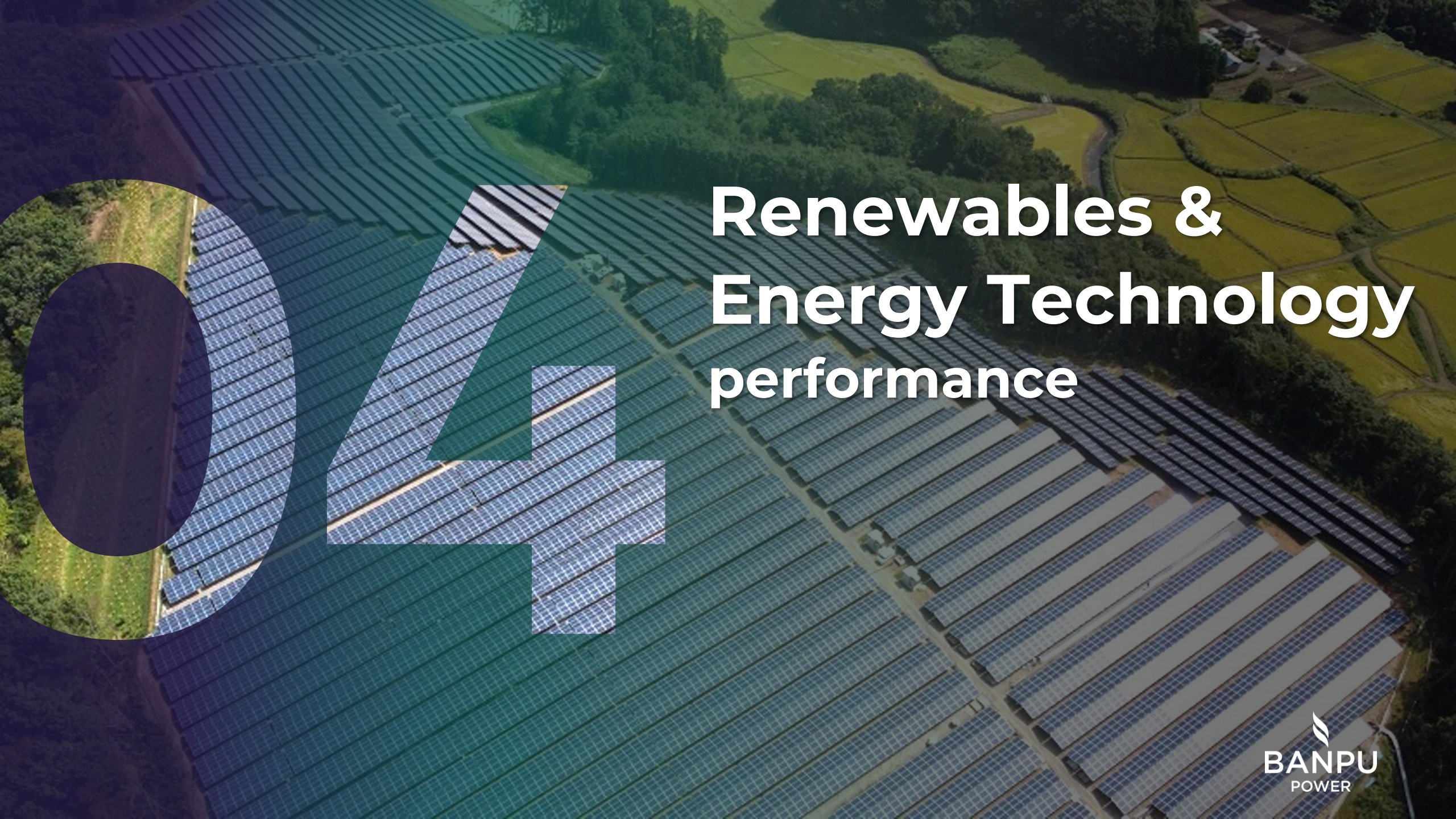


Profit Contribution to BPP (THB M)

QoQ: +29%
YoY: n.a.

Based on Banpu Power's 13.4% interest



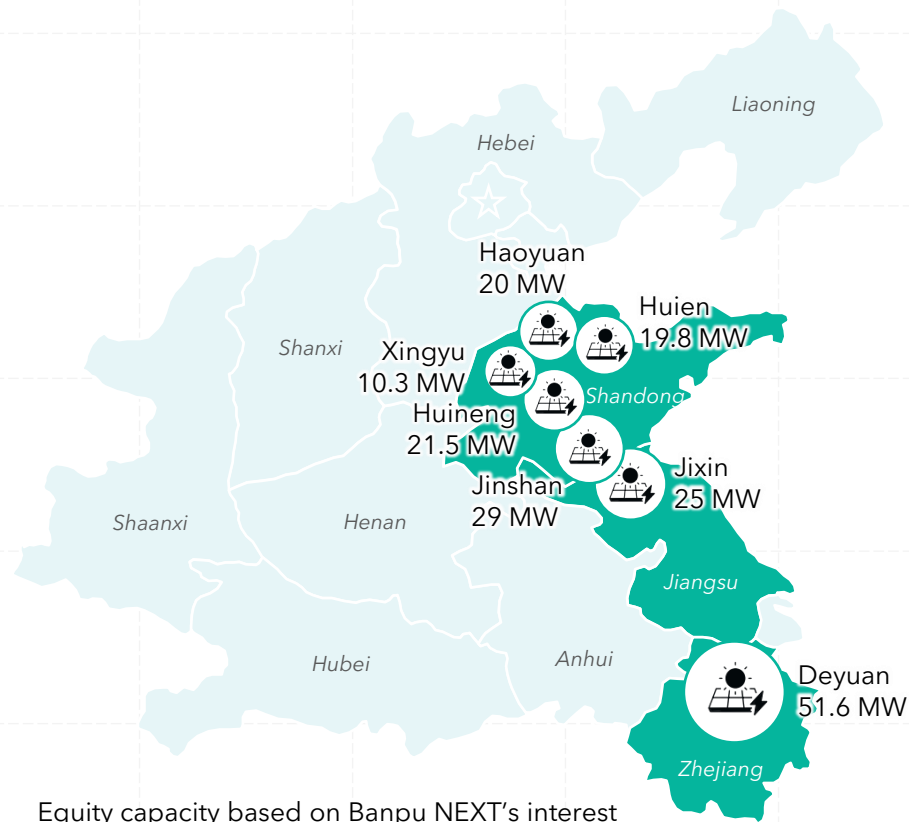


Renewables & Energy Technology performance

China solar: total equity capacity of 177 MW_{dc}

Banpu Power's solar portfolio in China

Banpu NEXT's effective ownership is 100%

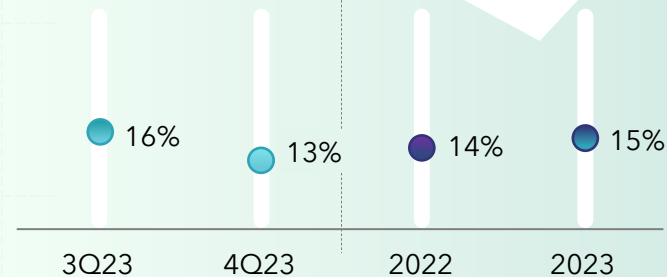


Note: RMB1.0/kWh of FiT and subsidies for Jinshan, Haoyuan and Huineng phase 1, RMB0.83/kWh for Huineng phase 2, RMB0.98/kWh for Hui'en and RMB0.87/kWh for Deyuan

Average capacity factor (%)

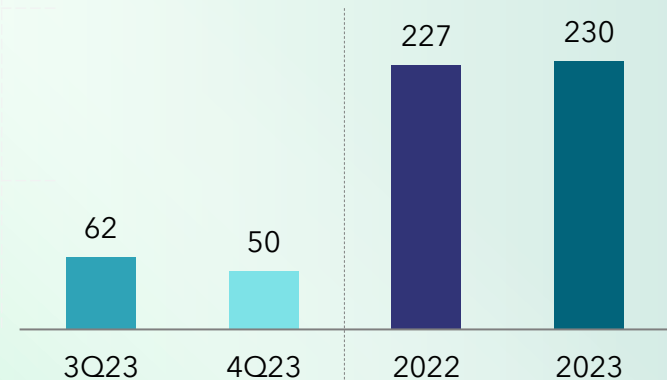
QoQ: -3%
YoY: +1%

Lower QoQ CF due to seasonal irradiation decline, but higher YoY CF from more favorable irradiation in 2023 and delayed maintenance shutdown of the Deyuan station to Q1 2024 as requested by the grid.



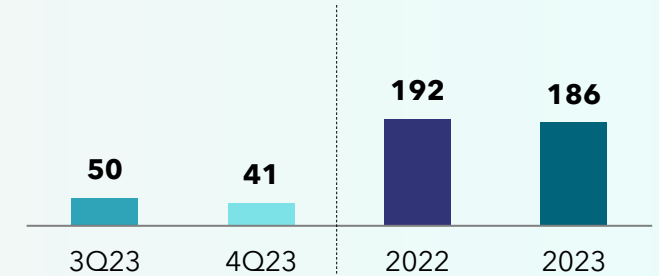
Power sold (GWh)

QoQ: -18%
YoY: +1%



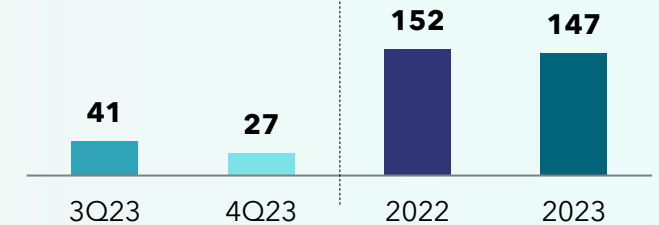
Revenue (RMB M)

QoQ: -18%
YoY: -3%



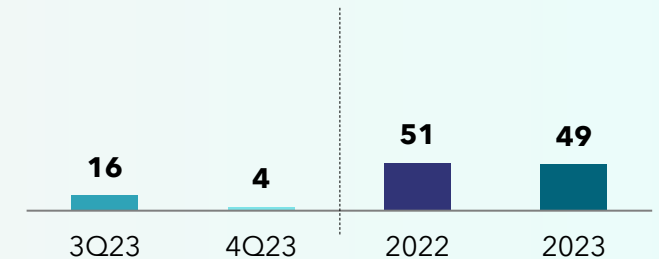
EBITDA (RMB M)

QoQ: -35%
YoY: -3%



Net profit (RMB M)

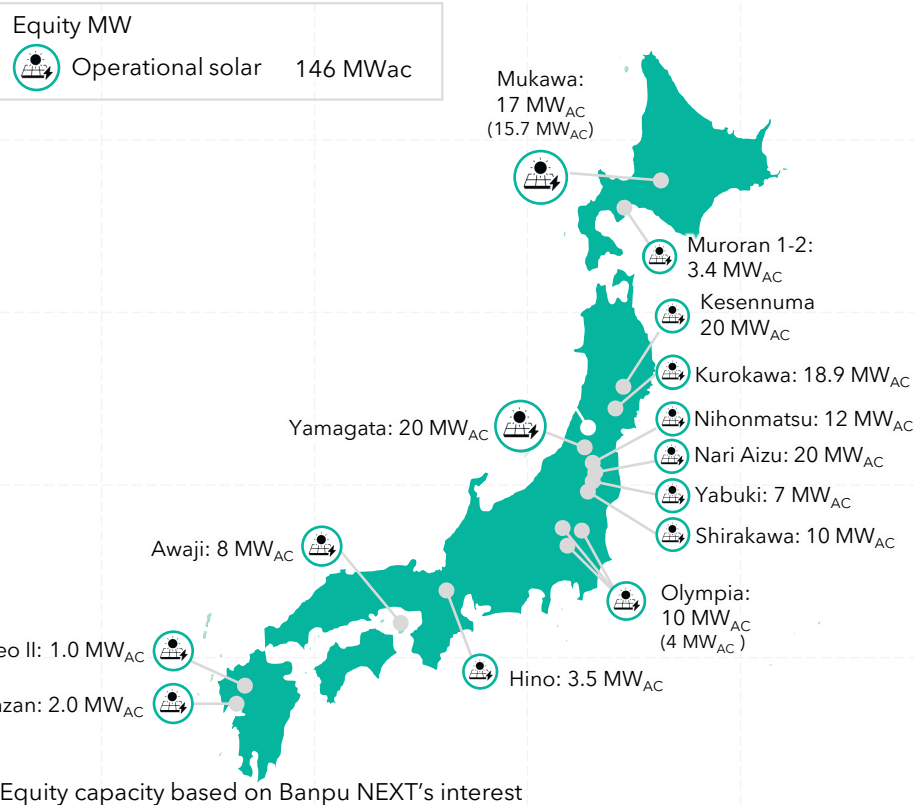
QoQ: -74%
YoY: -4%



Japan solar: total equity capacity of 146 MW_{ac}

Banpu Power's solar portfolio in Japan

Capacity presented on a 100% basis and Banpu NEXT's equity capacity in parentheses; figure not drawn to scale

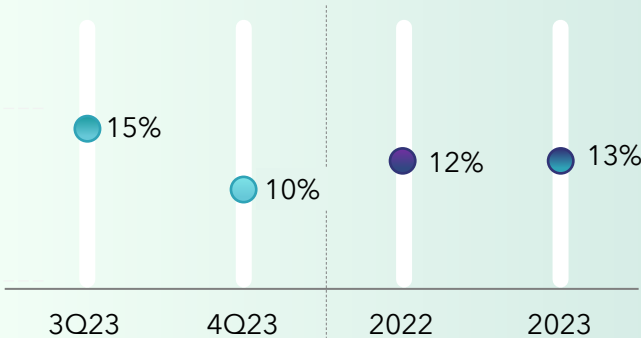


Equity capacity based on Banpu NEXT's interest

Note: *From TK investment **Has signed project settlement agreement with seller for Yamagata Iide (102 MW_{ac} Development solar) in 4Q23.

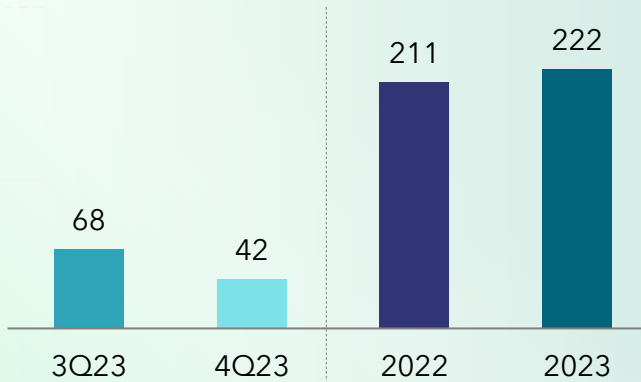
Average capacity factor (%)

QoQ: -5%
YoY: +1%



Power sold (GWh)

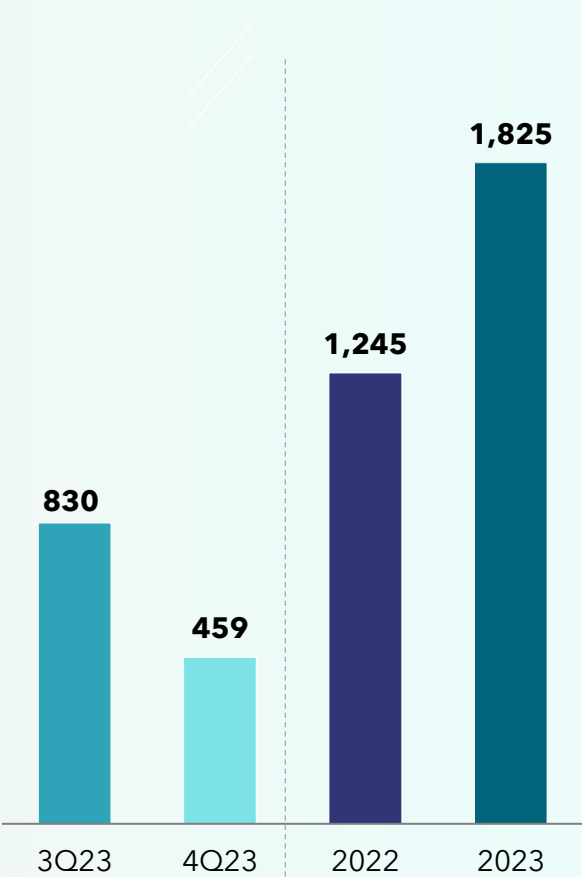
QoQ: -38%
YoY: +5%



Cash Distribution* (JPY M)

QoQ: -45%
YoY: +47%

Based on Banpu NEXT's
40-100% interest



Australia solar: Beryl and Manildra

Banpu Power's solar portfolio in Australia

Equity Capacity (MW)



Operational solar 33 MW



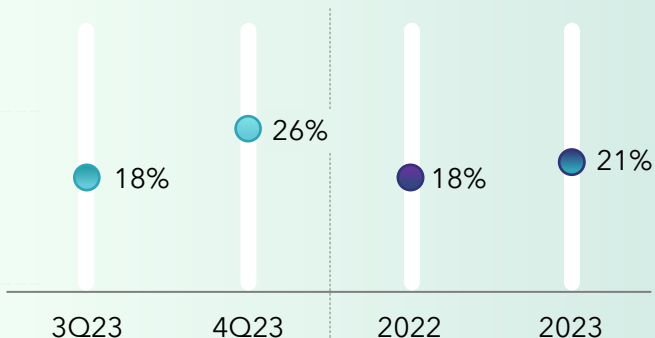
Beryl & Manildra

33 MW solar farm
(167 MW gross)

Equity capacity based on Banpu NEXT's interest

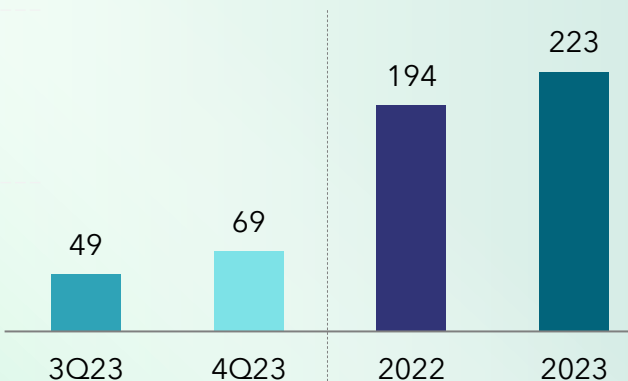
Average capacity factor (%)

QoQ: +8%
YoY: +3%



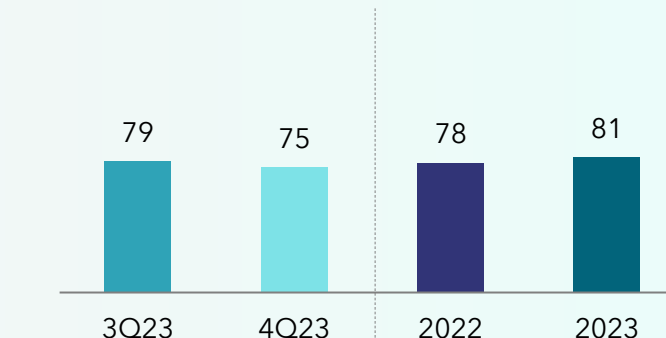
Power sold (GWh)

QoQ: +41%
YoY: +15%



Average power tariff (AUD/MWh)

QoQ: -5%
YoY: +4%

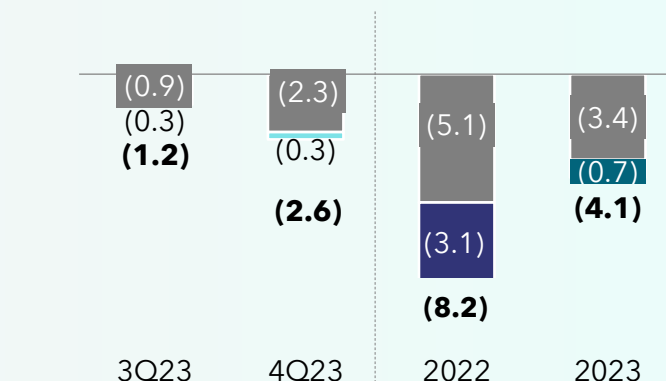


Net profit (AUD M)

QoQ: n.a.
YoY: n.a.

Based on Banpu NEXT's
20% interest

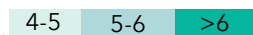
Gain (loss) on derivatives



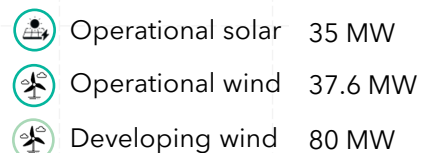
Vietnam renewables: solar and wind

Banpu Power's renewables portfolio in Vietnam

Average wind speed at
100 m height (m/s)



Equity Capacity (MW)



Vinh Chau (Soc Trang)

Phase 1 - 30 MW onshore wind
(Tariff & COD date under finalization)
Phase 2 & 3 - 50 MW onshore wind
(Feasibility study)

El Wind Mui Dinh

37.6 MW
Onshore Wind

Nhon Hai Solar

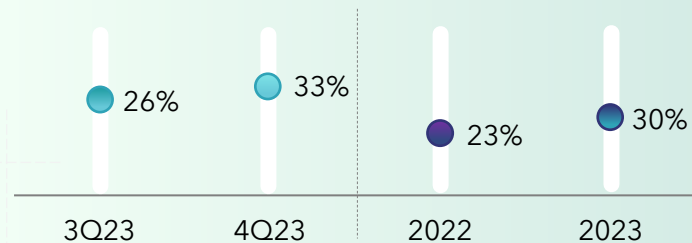
35 MW

Equity capacity based on Banpu NEXT's interest

Average capacity factor (%)

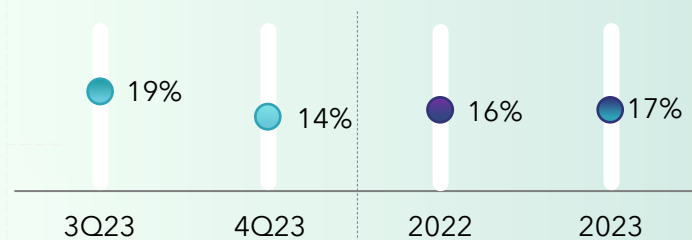
WIND

QoQ: +7%
YoY: +7%



SOLAR

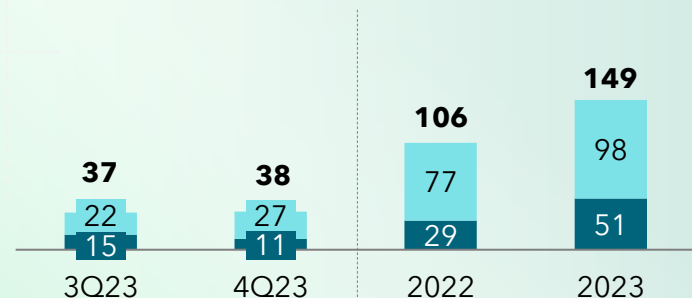
QoQ: -5%
YoY: +1%



Power sold (GWh)

Wind Solar

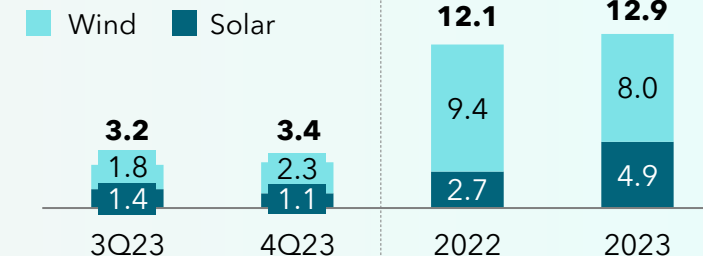
QoQ: +3%
YoY: +41%



Revenue (USD M)

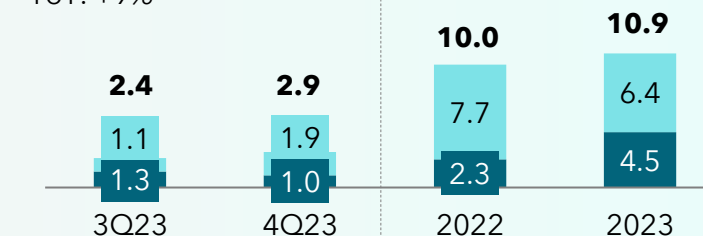
QoQ: +6%
YoY: +7%

Based on Banpu NEXT's
100% interest



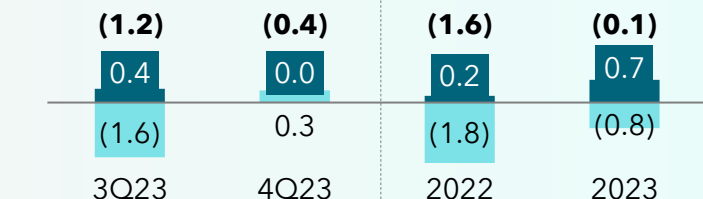
EBITDA (USD M)

QoQ: +21%
YoY: +9%



Net profit (USD M)

QoQ: n.a.
YoY: n.a.



Energy technology: current position and future targets

2023 portfolio

2025 target

2030 target

INTEGRATED
CLEAN ENERGY
ECOSYSTEM



Solar: rooftop & floating

225 MW

Committed capacity

500 MW



Battery & ESS solutions

■ Durapower

1.0 GWh

Li-ion battery
production capacity

■ Thailand battery
production

In progress

■ SVOLT (Thailand)

In progress

Battery farm

Iwate Tono project

In progress

3.0 GWh

1.0 GWh

2.0 GWh

58 MWh



**Smart cities &
energy management**

27 projects

Energy management,
smart infra, etc.

60 projects



Energy trading

760 GWh

Electricity sales

2,400 GWh
(annually)



E-Mobility

muvmi

Ridesharing

HAUP

Carsharing



EV

evolt

EV charging



E2W Battery
swapping

MaaS

Mobility-as-a-service



Energy technology: 4Q23 rooftop and floating solar updates



Solar: rooftop & floating

ACCELERATING DEVELOPMENTS ACROSS BANPU GEOGRAPHIES

THAILAND

98 MW

Total committed capacity

New contract signing with Betagen carport and rooftop and Karoon Farm Co., Ltd. for a total capacity of 2 MW in 4Q23.

CHINA

66 MW

Total committed capacity

Committed capacity of solar rooftop project at Zhengding CHP has the potential to increase to 167 MW by 2023. The current operating capacity is 12.9 MW.

VIETNAM

40 MW

Total committed capacity

Committed capacity of solar rooftop project for Solar ESCO, with a current operating capacity of 13.3 MW.

INDONESIA

25 MW*

Total committed capacity

IBP has signed additional solar rooftop PPA of 9 MWp in 4Q23. Currently, the total installed capacity is approximately 7 MW.

Energy technology: 4Q23 battery and ESS solutions updates



Battery & ESS solutions

COMMENCEMENT OF COMMERCIAL OPERATIONS OF BANPU NEXT AND SVOLT ENERGY (THAILAND)'S BATTERY PACK FACTORY



28th Feb. 2024

Factory COD

2.0 GWh

Committed production capacity

60,000 units

Annual production output

FACTORY PROGRESS

- Main factory renovation and energy facility have been completed, with pending office renovation.
- Trial production for BA14, BA17, BM13, BV48 C samples has completed, with a scheduled trial production of 240 packs for BM13 and BA14 in February, aligning with customer demand.

BANPU NEXT AND SVOLT ENERGY (THAILAND) SIGN A NEW STRATEGIC COOPERATION FOR THE DEVELOPMENT OF ENERGY STORAGE AND RELATED BATTERY BUSINESSES

The upgraded strategic partnership will extend across the battery value chain, from upstream cell production to downstream segments such as energy storage systems, while promoting circular economy through the exploration of battery recycling.

'Become a leading lithium-ion battery player in Thailand and Southeast Asia'



Battery cells



Energy storage systems



Battery recycling

Energy technology: 4Q23 battery and ESS solutions updates (cont'd)



Battery & ESS solutions



DP NEXT PRODUCTION PLANT



IWATE TONO PROJECT

DURAPOWER PHASE 2 EXPANSION OF 2 GWh



Two manufacturing lines are scheduled to commission by Dec'24, with the third to follow in 2025 to meet customer requirements.

\$102 M

Total investment

20 major projects

across the Asia Pacific and Europe

STRATEGIC FOCUS SEGMENTS:



Mobility



Marine



Specialty



Stationary

DP NEXT PRODUCTION PLANT (AMATA CITY, CHONBURI)



1.0 GWh

Production capacity

c.\$40 M (THB 1.4 bn)

Total investment

3Q24

Expected COD

70%

Banpu NEXT shareholding

60% completed

Steel construction progress, with remaining work for wall mounting, installations and decoration

3 customers

For battery supply and subsequent purchase orders

IWATE TONO PROJECT



c.\$17 M (JPY 2.6 bn)

Total investment

2Q25

Expected COD

PRJOECT UPDATES

Phase 2 of the construction of extra-high voltage electric equipment and the substation was halted during the snow season (Dec'23-Feb'24)

75%

BJP shareholding

87%

Construction progress (Jan. 31st)

Energy technology: 4Q23 e-mobility updates



E-mobility

CONTINUOUS DEVELOPMENTS IN EVOLT TECHNOLOGY WITH NEW PROJECTS AND CHARGING NETWORK EXPANSION



23.81%

Current shareholding position

711 units

Installed public chargers

RECENT PROJECTS



Awarded for GAC AION home chargers



Awarded from MQDC for Mulberry Groove Condo



Awarded for Honda home chargers



Won the bid for Tesla Supercharger installation of 14 units at Central Pattaya



Awarded from Shell to install DC Charger station

BEYOND GREEN RECENT DEPLOYMENTS



39.2%

Current shareholding position
(Increased from 30.0% in 2Q23)

22 branches

Growth from 6 branches at the end of 2021

NEW TEMPO 2 MODEL

- 30 carts delivered to the Burapaha Golf Course in Chonburi, with plans to ship another 120 units in Nov.
- 2 carts delivered to the Buddhachinnarat Hospital in Phitsanulok, with additional trailer seats
- 40 carts delivered to the Athitaya Golf Course in Kanchanaburi, along with 2 New Villager 8-seat carts

RECENT DEVELOPMENTS

- One cart of the New Tempo 4-seat model to Pro Bike Company Limited in Nakhon Ratchasima
- One cart of the New Villager 6-seat model to San Sai Luang Municipal Offices in Chiang Mai

Energy technology: 4Q23 e-mobility updates (cont'd)



ACCELERATING RIDESHARING NETWORK EXPANSION

muvmi

9 million+

Total number of passengers

600 e-tuktuks

In operation

154 chargers

Deployed in Bangkok

12 servicing locations

Across Bangkok

Over 45,000 pick ups

MuvThing deliveries, ranging from daily necessities to personal luggage

NEW PROJECT DEVELOPMENTS WITH HAUP CAR

HAUP

300k users

Total registered users

1,500+ Vehicles

In operation (ICE & EV)

600+ sharing locations

Across Bangkok

RECENT PROJECTS

- Expanded exclusive services including airport fast track & limousine to capture tourism market
- Collaboration with Bua Travel & Car Rental to provide car-sharing services in 4 key airports (Suvarnabhumi, Don Mueang, Phuket, Chiangmai)
- Partnership with Trip.com to attract higher customer base from increasing number of Chinese tourists

Energy technology: 4Q23 smart cities and energy trading updates



Energy management



ENERGY EFFICIENCY IMPROVEMENT THROUGH BANPU NEXT ECOSERVE

BANPUNEXT
EcoServe

BanpuNEXT EcoServe, a wholly-owned subsidiary of BanpuNEXT, specializes in Energy Efficiency Improvement solutions under the ESCO model, offering comprehensive investment and O&M packages with guaranteed energy efficiency for commercial and industrial clients.

25 Contracts

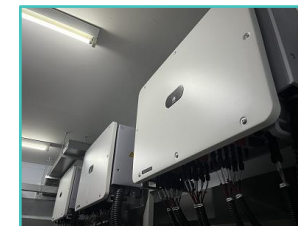
Including BOOT*, SOLAR PPA, and IFM** contracts

2,800 kW

Air compressor management

21,500 RT***

Chilled water management



Energy trading



IMPLEMENTED AN ADVANCED MARKETING AND SALES STRATEGY, INTEGRATING MARKET-DRIVEN PRICING STRUCTURES AND SECURING SUPPLY AGREEMENTS THROUGH A COMPETITIVE TENDERING PROCESS

760 GWh

2023 annual sales


- 61% of total sales are market-linked price products
- Remaining sales are fixed-price contracts obtained through tendering (hedged to minimize potential risks)

658 clients

From public and private sectors in 8 utility grid areas.

(increasing from 470 clients in 3Q23)

BPPTGK has also increased its involvement in short-term and transmission rights trading to mitigate the risk of sales imbalances between utility grid areas.

An aerial photograph of a wind farm. Several white wind turbines are visible, spaced out across a landscape of patchwork agricultural fields. The fields are in various shades of green and brown, indicating different crops or stages of growth. Long shadows are cast by the turbines and the field boundaries, suggesting it is either early morning or late afternoon. The overall scene is a mix of natural and man-made elements.

Q&A

Appendix

ESG recognition



Prepared by SET, shortlists Thai companies with business and sustainability excellence

for SET-listed companies with market cap. between THB 30-100 bn



Commended Sustainability Award

For outstanding sustainability practices, inclusive corporate governance, and dedication to minimizing negative impacts, while creating positive ones for society and the environment

Outstanding Company Performance Award

For outstanding performance, good corporate governance and adherence to regulations of the SET

Outstanding CEO Award

Presented to CEOs with moral values, visionary leadership, and a commitment to prioritizing sustainability practices

Credit rating



A Strategic Partner of S&P Global

As a strategic partner of S&P Global, Tris Rating has over 20-years of experience as a leading credit rating agency in Thailand



SET awarded for strong ESG disclosures, including environmental management practices and interactions with key stakeholders



5 stars
5 coins

for the CGR Checklist 2023 from the Thai Institute of Directors Association (IOD) and the AGM Checklist 2023 from the Thai Investors Association (TIA), respectively



5th
consecutive year

The THSI, prepared by SET, shortlists Thai companies following the highest ESG standards

A+

ratings with a '**stable**' outlook on the company, reflecting the company's stable cash flow, proven track record of strong operations and quality of power portfolio

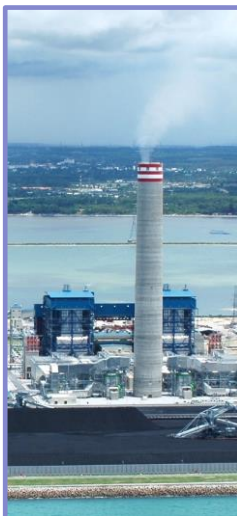
Thermal Power: 2023 updates



HPC

Completed contracted availability hours (CAH) through smooth and efficient operations, demonstrating high EAF performance in 2023

84.9%	EAF* (-1% YoY)
THB 21.5 bn	Revenue (-2% YoY)
THB 12.0 bn	EBITDA (-4% YoY)
THB 3.0 bn	share of profit (-18% YoY)



BLCP

Fulfilled CAH and capitalized on operations outside CAH, showcasing excellent operational management with no unplanned outages.

87.9%	EAF (+1% YoY)
THB 17.9 bn	Revenue (+5% YoY)
THB 3.6 bn	EBITDA (+17% YoY)
THB 1.1 bn	share of profit (+82% YoY)



SLG

Improved performance resulted from increased power sales driven by higher demand and lower coal prices. The replacement of the USD loan by domestic loan with lower interest rates in Sept.'23 led to lower interest expense.

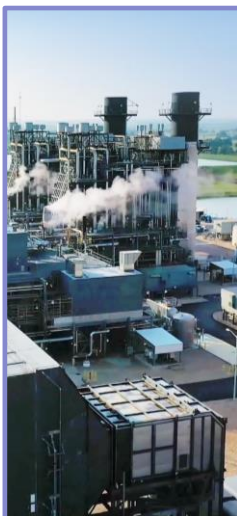
5,317 GWh	net power sold (+20% YoY)
RMB 21 M	share of profit (+93 M YoY)



China CHP

Lower coal costs together with efficient operation, contributed to a higher margin and subsequent profit improvements.

RMB 1.3 bn	Revenue (-3% YoY)
RMB 159 M	EBITDA (+RMB 158 M YoY)
RMB 45 M	share of profit (+RMB 110 M YoY)



Temple I & II***

Temple II acquisition supported with higher spark spread has led to successful operational results.

83%	EAF (+0% YoY)
5,415 GWh	net generation
USD 637 M	Revenue (+27% YoY)
USD 33 M	share of profit** (+200% YoY)



Nakoso IGCC

In 2023, the plant went through temporary closure for equipment adjustments during its early operations to ensure long-term reliability and sustainability. All maintenance works are on schedule.

n.a.	EAF
n.a. GWh	net generation
(THB 150 M)	share of profit

Note: : *Equivalent Availability Factor (EAF) is a percentage of a given operating period in which a generating unit is available without any planned and unplanned shutdown or deratings

** Includes USD 72 M of loss on derivatives

*** Recognized Temple II since July 2023

Renewable Power: 2023 updates



China Solar

Higher power sold from improved irradiation.

15%	avg. capacity factor (+1% YoY)
230 GWh	power sold (+1% YoY)
RMB 147 M	EBITDA (-3% YoY)
RMB 49 M	profit contribution (-4% YoY)



Japan Solar

Favorable irradiation has contributed to improved capacity factor and increased power sold YoY.

13%	avg. capacity factor (+1% YoY)
222 GWh	power sold (+5% YoY)
JPY 1.8 bn	cash distribution (+47% YoY)



Australia Solar

Favorable weather has led to an increase in both capacity factor and power sold.

21%	avg. capacity factor (+3% YoY)
223 GWh	power sold (+15% YoY)
(AUD 4.1 M)	share of loss* (+50% YoY)



Vietnam Solar

Nhon Hai Solar demonstrated a consistent capacity factor and power sold.

17%	avg. capacity factor (+1% YoY)
51 GWh	power sold (+76% YoY)
USD 0.7 M	share of profit (+USD 0.5 M YoY)



Vietnam Wind

El Wind Mui Dinh

30%	avg. capacity factor (+7% YoY)
98 GWh	power sold (+27% YoY)
(USD 0.8 M)	share of loss (+USD 1 M YoY)

Vietnam Wind

Vin Chau project

- Completed construction and commissioning activities
- On process of COD documentation with the relevant authorities

Note: Banpu Power has 50% shareholding in Banpu NEXT

*Includes AUD 3.4 M of loss on derivatives

Maintenance schedule for 2024

■ Major maintenance ■ Minor maintenance

POWER PLANT

BLCP

- Unit 1 on minor inspection for 18 days (1-18 Jan 2024)
- Unit 2 on minor inspection for 22 days (1-22 Jul 2024)

HPC

- Unit 1 on yearly maintenance for 22 days (21 Dec 2024 - 11 Jan 2025)
- Unit 2 on yearly maintenance for 22 days (3-24 Nov 2024)
- Unit 3 on extended major inspection for 55 days (24 Dec 2023 - 16 Feb 2024))

NAKOSO IGCC

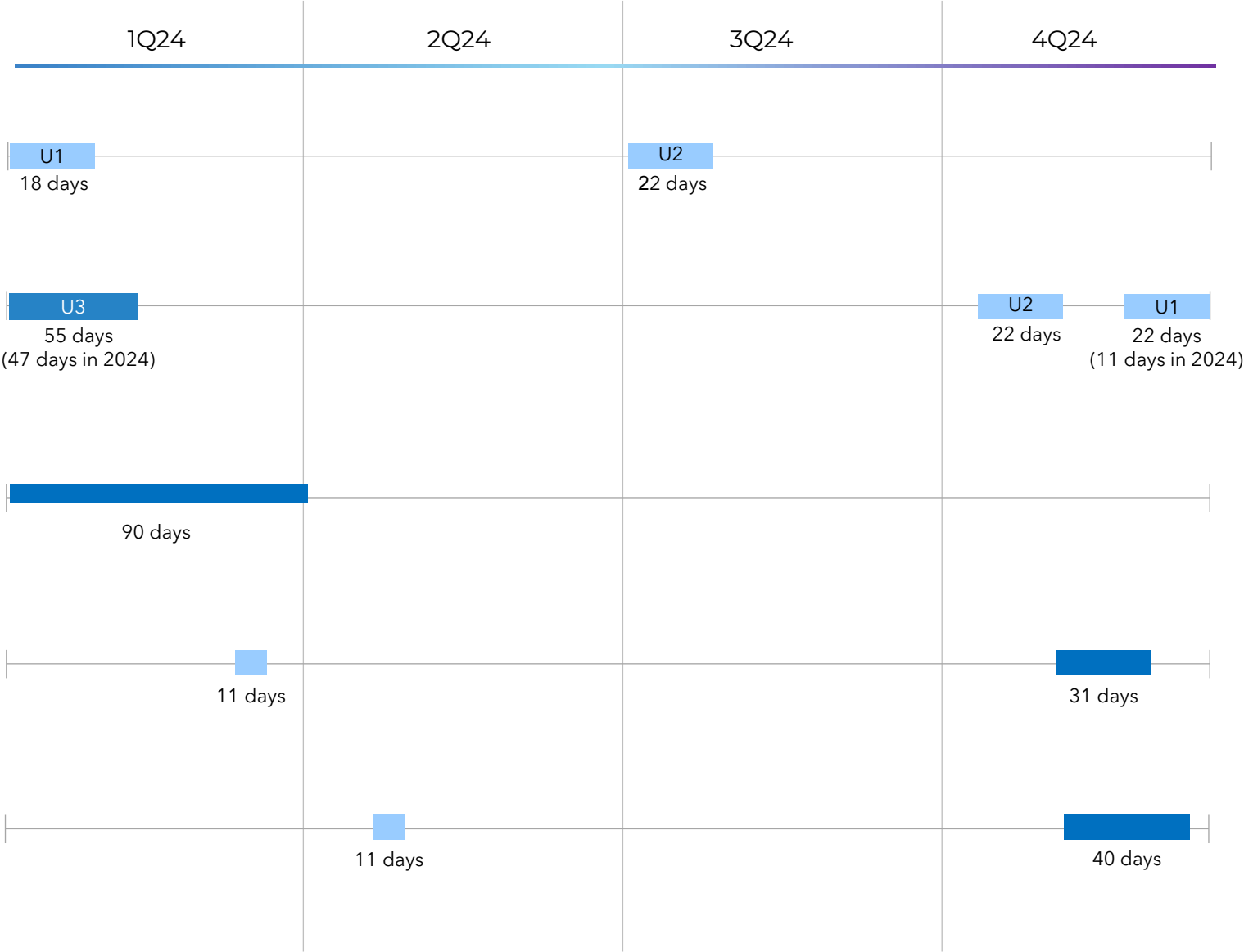
- 2024 planned maintenance outage for 90 days (1-31 Mar 2024)

TEMPLE I CCGT

- Spring outage for 11 days (8 - 18 Mar 2024)
- Fall outage for 31 days (5 Nov - 5 Dec 2024)

TEMPLE II CCGT

- Spring outage for 11 days (30 Apr - 10 May 2024)
- Fall outage for 40 days (8 Nov - 17 Dec 2024)



Maintenance schedule for 2024

■ Major maintenance ■ Minor maintenance

POWER PLANT

SLG

- Unit 1 on heat supply modification for 45 days (17 Apr - 31 May)
- Unit 2 on maintenance for 10 days (Sep / Oct)

CHP LUANNAN

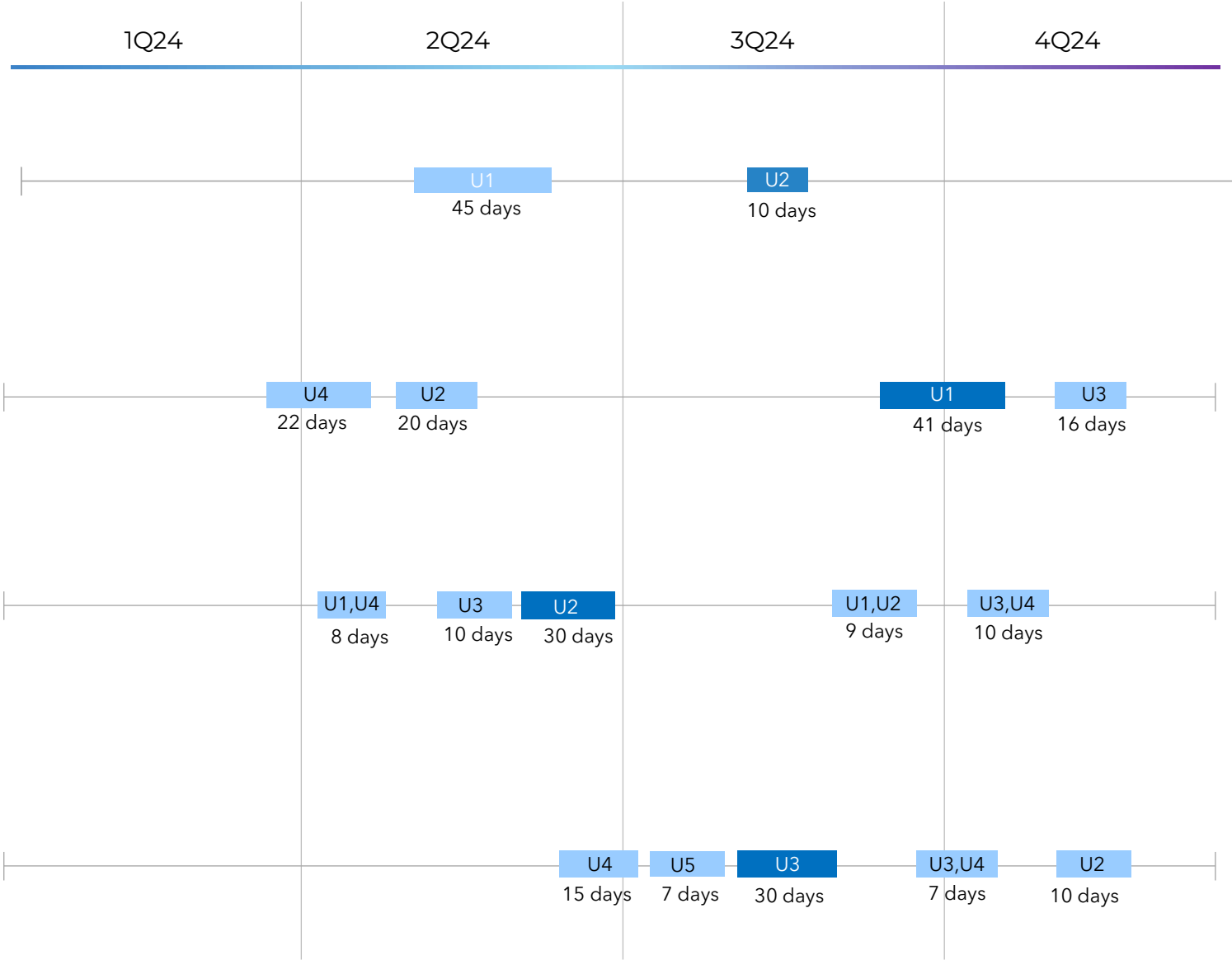
- Unit 4 & Unit 2 on C-Class maintenance in 1H
- Unit 1 on A-Class maintenance 41 days in 3Q
- Unit 3 on C-Class maintenance 16 days in 4Q

CHP ZHENDING

- Unit 1 & 4 on minor maintenance 8 days in 1H
- Unit 3 on minor maintenance 10 days in 2Q
- Unit 2 on A-Class maintenance 30 days in 2Q
- Unit 1 & 2 on minor maintenance 9 days in 3Q
- Unit 3 & 4 on minor maintenance 10 days in 4Q

CHP ZOUPING

- Unit 4 on maintenance for 15 days in 2Q-3Q
- Unit 5 on maintenance for 7 days in 3Q
- Unit 3 on maintenance for 30 days in 3Q
- Unit 3 & 4 on maintenance for 7 days in 2H
- Unit 2 on maintenance for 10 days in 4Q



Banpu Power: income statement

THB million	2023	2022	YoY%
Sales revenue	30,443.0	24,501.2	+24%
Cost of sales	(19,885.7)	(22,089.9)	
Gross Profit	10,557.4	2,411.3	+338%
<i>GPM</i>	35%	10%	
Administrative and selling expenses	(2,192.0)	(1,788.7)	
Equity income	5,009.3	6,349.7	
Other income	783.1	905.4	
EBIT	14,157.8	7,877.8	+80%
Interest expenses	(2,047.5)	(890.8)	
Financial expenses	(6.2)	(6.2)	
Income tax (core business)	(146.8)	(47.8)	
NCI / Minorities (core business)	(3,664.0)	(741.8)	
Net profit - Core business	8,293.3	6,191.3	+34%
Non-recurring items	(136.7)	(97.8)	
Income tax (non-core business)	(56.7)	(60.2)	
Deferred tax income (expenses)	(198.9)	63.1	
NCI / Minorities (non-core business)	2,545.5	330.9	
Gain (Loss) on Derivatives transactions	(5,091.0)	(661.8)	
FX translation	(36.3)	(26.8)	
Net Profit	5,319.2	5,738.6	-7%

Banpu Power: income statement

THB million	4Q23	3Q23	4Q22	QoQ%	YoY%
Sales revenue	7,926.4	16,148.5	11,308.1	-51%	-30%
Cost of sales	(4,675.2)	(9,218.5)	(10,227.9)		
Gross Profit	3,251.2	6,930.1	1,080.3	-53%	+201%
<i>GPM</i>	41%	43%	10%		
Administrative and selling expenses	(654.1)	(588.3)	(805.5)		
Equity income	762.9	537.3	1,170.8		
Other income	314.3	107.9	363.1		
EBIT	3,674.3	6,987.1	1,808.6	-47%	+103%
Interest expenses	(745.8)	(729.8)	(278.5)		
Financial expenses	(1.8)	(1.6)	(1.3)		
Income tax (core business)	(119.0)	(5.3)	157.7		
NCI / Minorities (core business)	(980.3)	(2,942.3)	(451.4)		
Net profit - Core business	1,827.4	3,308.1	1,235.1	-45%	+48%
Non-recurring items	(119.5)	(4.0)	(24.5)		
Income tax (non-core business)	(16.9)	(23.1)	(50.5)		
Deferred tax income (expenses)	224.9	(455.4)	155.9		
NCI / Minorities (non-core business)	1,758.4	963.0	676.8		
Gain (Loss) on Derivatives transactions	(3,516.8)	(1,925.9)	(1,353.6)		
FX translation	(388.9)	236.1	(819.3)		
Net Profit	(231.5)	2,098.7	(180.1)	n.a.	n.a.

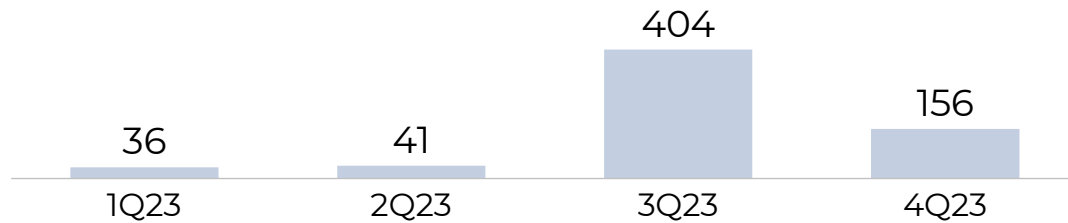
Temple I & II:

2023 revenue and gain / (loss) on derivatives

As reported

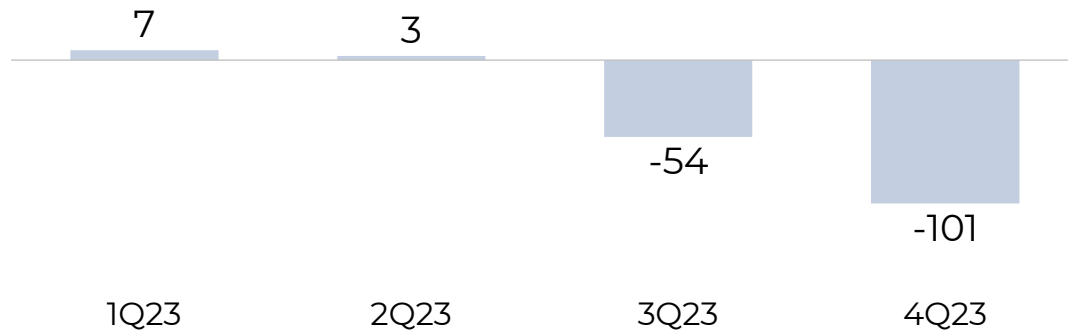
2023 REVENUE

USD million



2023 GAIN / (LOSS) ON DERIVATIVES

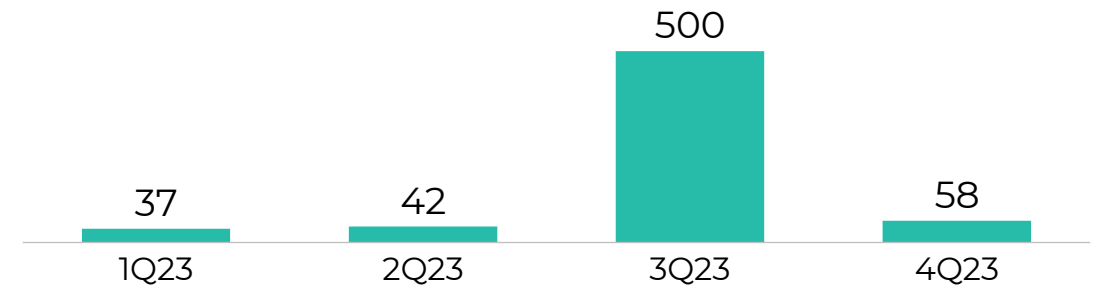
USD million



Restated financials

2023 REVENUE

USD million



2023 GAIN / (LOSS) ON DERIVATIVES

USD million

