



Banpu 2Q24 results

Opportunity Day

23rd August 2024



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01

Highlights & Focus Section

Banpu: 2Q24 highlights

Key Financial Metrics

\$363 M

EBITDA

Improved performance across Mining business from operational initiatives, supported by robust performance in Gas and Power businesses

\$26 M

NPAT

0.82 x

ND/E

Decreased from 0.87x in the previous quarter

ESG Excellence



A
Rating

Member of
Dow Jones
Sustainability Indices
Powered by the S&P Global CSA

Awarded
since 2014



AAA
Rating



Honor
since 2018



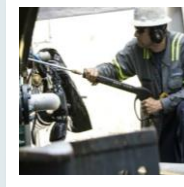
A Strategic Partner of S&P Global

A+
Credit Rating

with a '**stable**' outlook on the company and senior unsecured debentures reflecting the company's stable business growth.

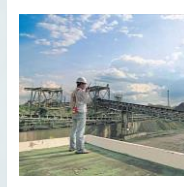
2Q24 key updates

Margin enhancement



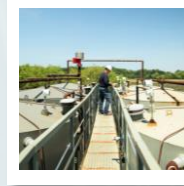
Continued focus on cost improvements across operations through implementation of decarbonization and digitalization initiatives across the Banpu group. Target cost savings of US\$ 1.5-3.0 per ton for Coal business and US\$ 0.06-0.07 per Mcf for Gas business.

Gas value chain enhancement



Acceleration of CCUS Activities

BKV aims to capture 185 ktpa of CO₂e through Barnett Zero, with ongoing pipeline projects forecasting a total volume of approximately 16.6 Mt to meet its target of achieving 30 Mtpa of CO₂e injection by the 2030s.



Carbon Sequestered Gas

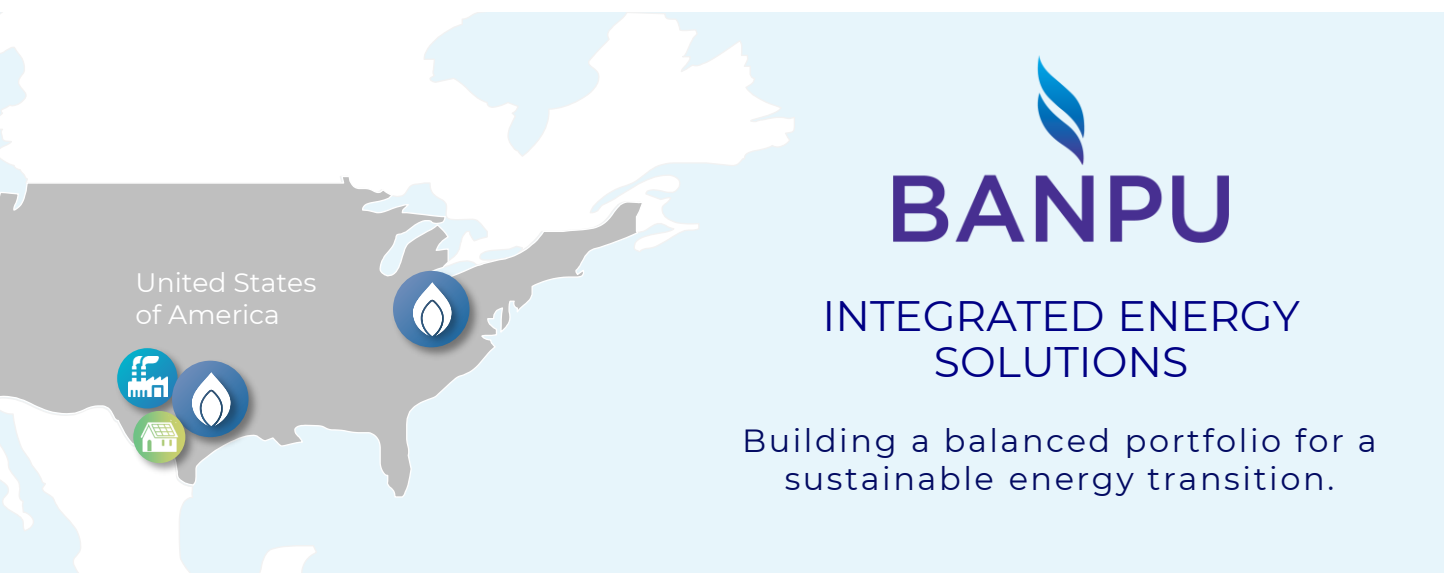
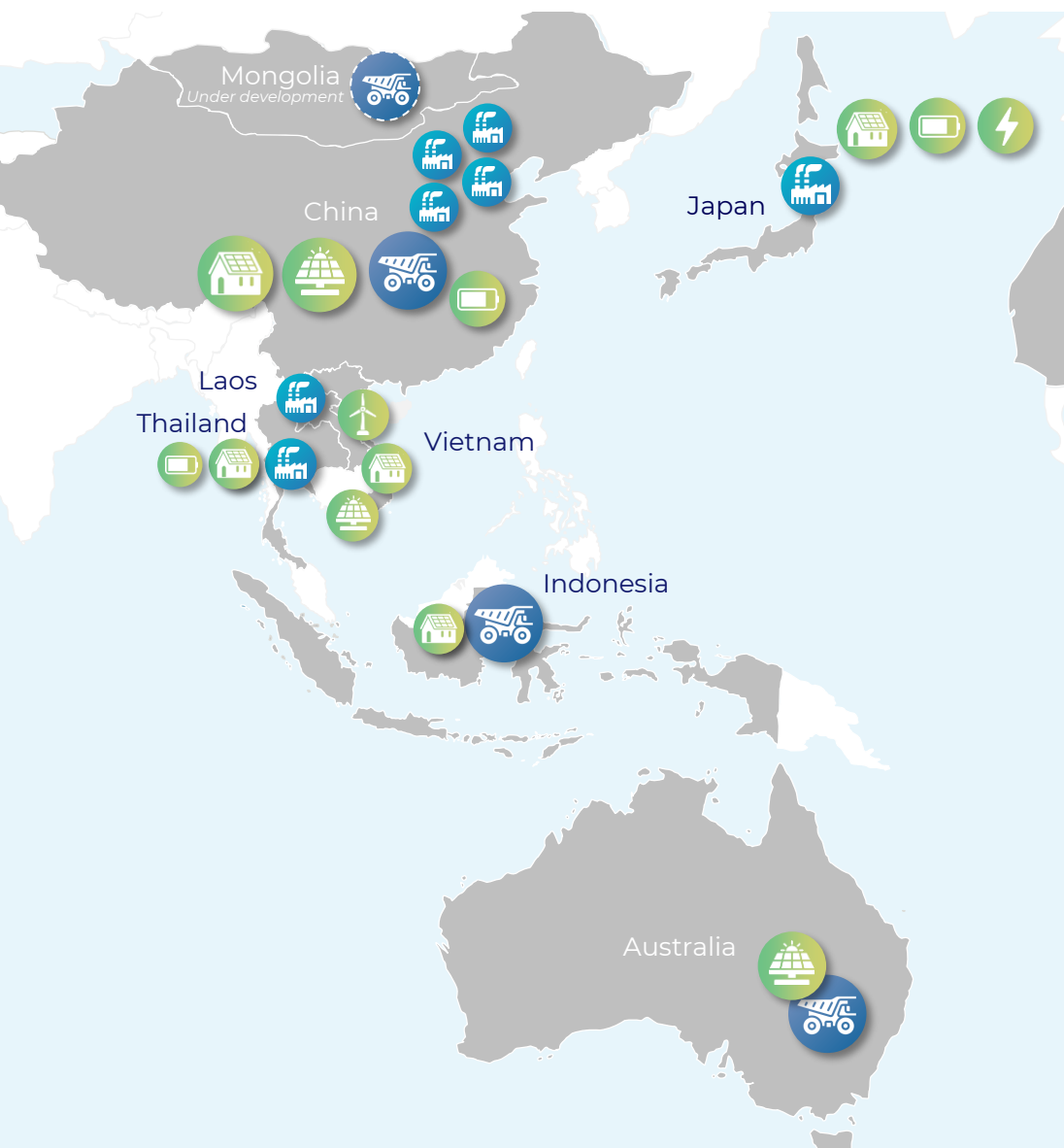
BKV has partnered with Kiewit Infrastructure and ENGIE to deliver carbon sequestered gas from the Barnett Zero project



BKV Chaffee Corners and BKV Chelsea Sales Transactions

To optimize its portfolio, BKV sold its non-operated interests in Chaffee and Chelsea for a combined transaction value of approximately US\$132 million in June 2024. The sale proceeds are expected to be used to scale up high-return core operations.

Banpu group: diversified asset portfolio across the energy value chain



INTEGRATED ENERGY SOLUTIONS

Building a balanced portfolio for a sustainable energy transition.

ENERGY RESOURCES	ENERGY GENERATION	ENERGY TECHNOLOGY
Mining Robust and Responsible Miner	Thermal Power Unique Baseload Power Portfolio	New S-Curve in Energy & Beyond E-mobility, EMS, Energy Trading, etc.
Natural gas Integrated Gas Producer	Renewable Quality Green Megawatts Solar Wind	Vertically-integrated Battery Player Battery Production, BESS Deployment, Battery Recycling

CVC Empowering Innovation, Fueling the Future

Banpu Energy Resources: 3Ds strategy in Indonesia and the US



Banpu's businesses aims to provide affordable and reliable energy supply, ensuring a sustainable transition



DECENTRALIZATION

Driving decentralized energy solutions and businesses across key geographies to leverage on accelerating growth opportunities



DIGITALIZATION

Optimizing Banpu's portfolio by utilizing cutting-edge technology and smart energy systems



DECARBONIZATION

Growing and investing in frontier decarbonization businesses including renewable energy, CCUS, strategic minerals and NbS

STRATEGIC GROWTH PLATFORMS

INDONESIA: COAL & BEYOND

Optimizing coal operations and investing into clean tech sectors such as strategic minerals, renewables, smart infra, and BESS

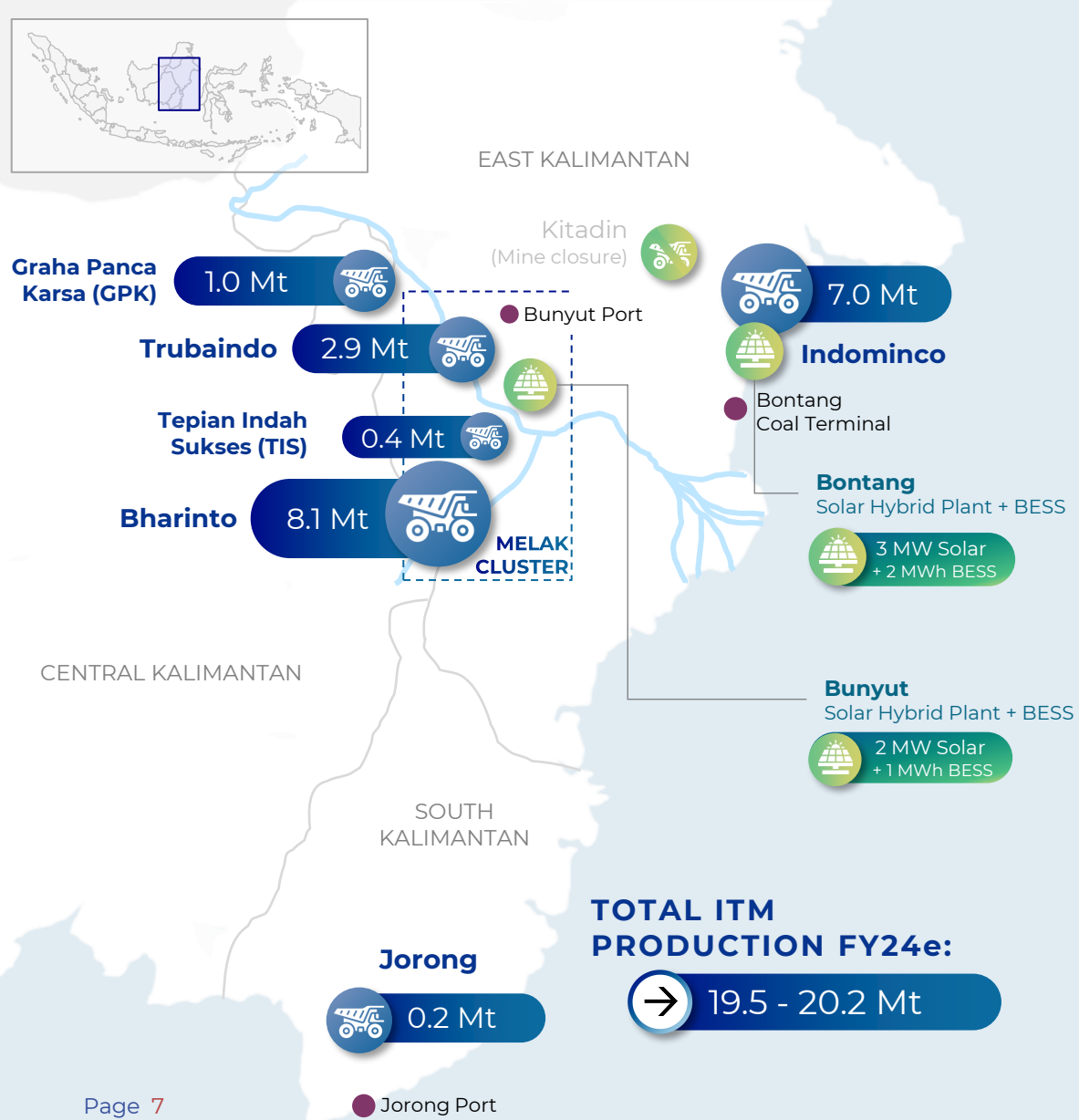


US: CAPTURING THE ENERGY VALUE CHAIN

Vertically integrating across natural gas production, gas midstream, and carbon capture businesses to reduce costs and optimize the value chain



Banpu in Indonesia: Robust and responsible mining operator



VALUE CREATION AT MELAK CLUSTER



Bunyut port expansion and other energy infra.



Coal sourcing and blending



Solar power plant

OPERATIONAL INITIATIVES

RESERVE MAXIMIZATION

Increase existing reserves through innovative mining technologies

PRODUCTION IMPROVEMENT

Improve mining process and managing fuel consumption

SUPPLY CHAIN OPTIMIZATION

Enhance logistics efficiency and improve equipment management

MARKETING INITIATIVES

Optimize product-market strategy for maximum value



2024 COST REDUCTION TARGET
US\$1.5 – 3.0 per ton

COST IMPROVEMENT INITIATIVES

- 1 | Improve mine process by reducing overburden (OB) distance and managing dumping activity
- 2 | Improve energy management by reduce reliance on diesel generation
- 3 | Optimize Floating and Loading Facility (FLF) usage to enhance productivity

Banpu in Indonesia: Digitalization and Decarbonization

DECARBONIZATION



Exploring and evaluating revenue stream diversification through potential growth areas such as renewable energy sources, strategic minerals, nature-based solutions, and energy services.

Renewable-based Energy

Total Solar Capacity

Utility	Solar	5 MW	ONGOING
	BESS	3 MWh	
Rooftop	Installed	8.0 MW	
	Committed	32.3 MW	

Solar Expansion at BEK ⁽¹⁾

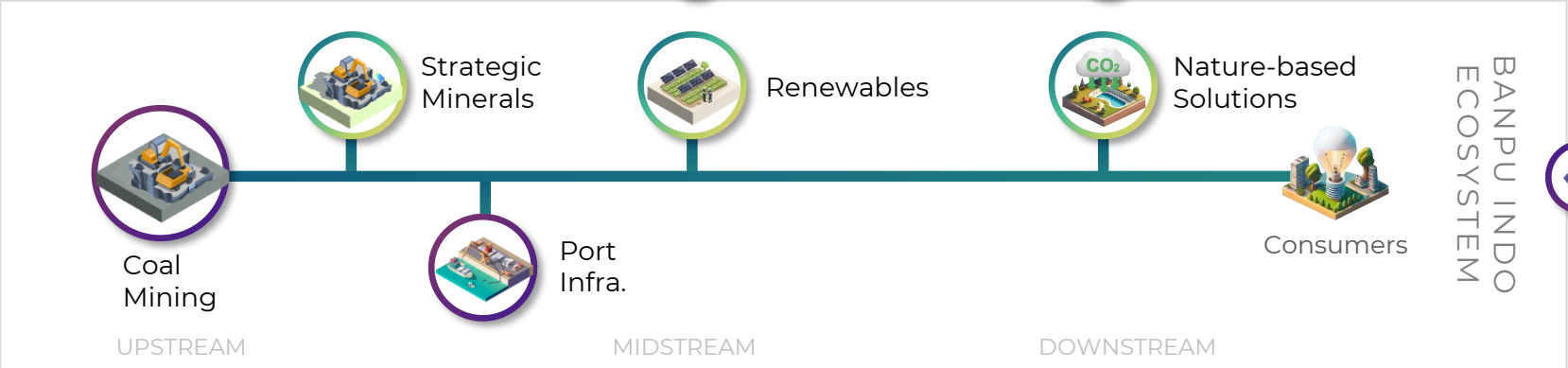
Utility	Solar	1.4 MW	PLANNED
	BESS	2.5 MWh	

NBS ⁽²⁾

Carbon Sequestration Initial And Feasibility Study

PLANNED

Studies to calculate the carbon sequestration potential in the Kitadin Tandung Mayang area.



DIGITALIZATION

BANPU Digital & Innovation

Leveraging digital technology to enhance efficiency, reduce costs, and create long-term sustainability across the Indonesian portfolio

Operational efficiency improvements

- Operations management
- Fleet management
- Energy consumption

Infrastructure & logistics management

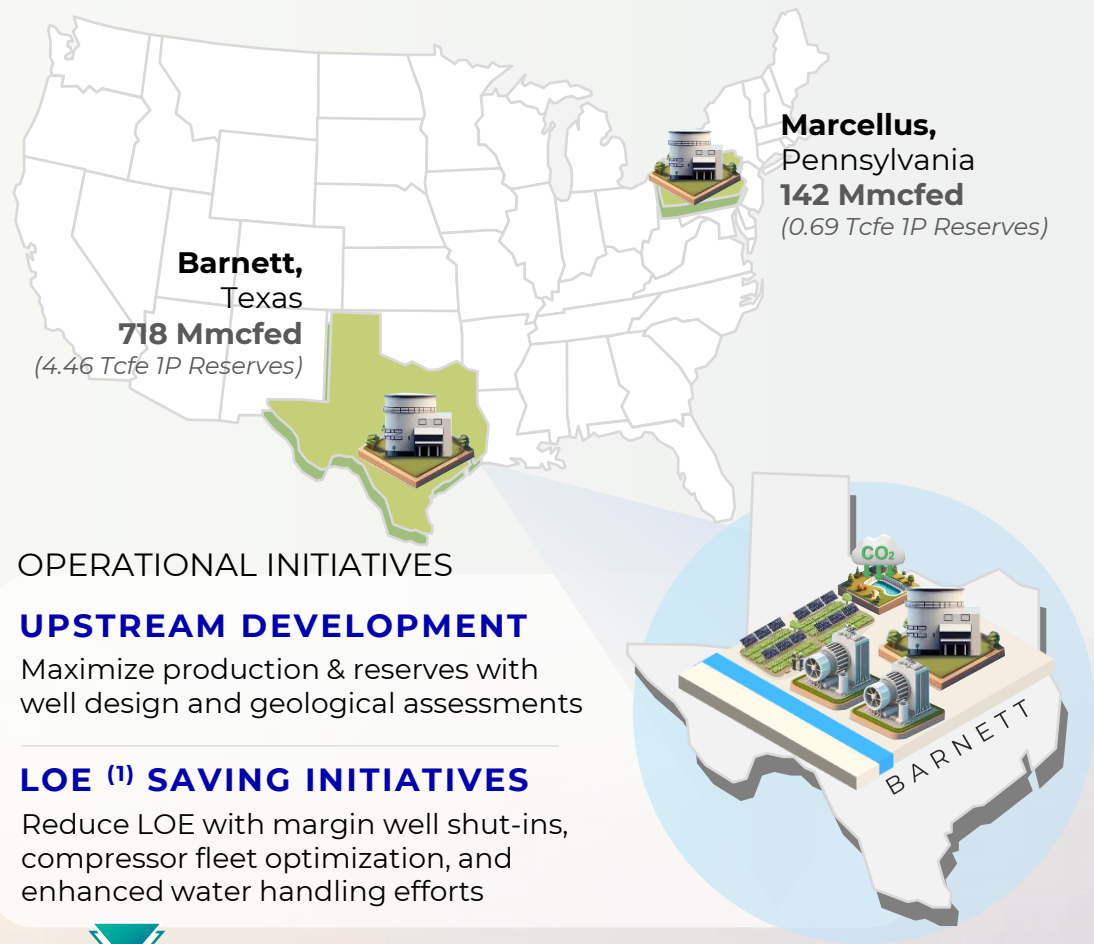
- Supply chain management
- Port business

Sales & marketing improvements

- Inventory management
- Product quality management

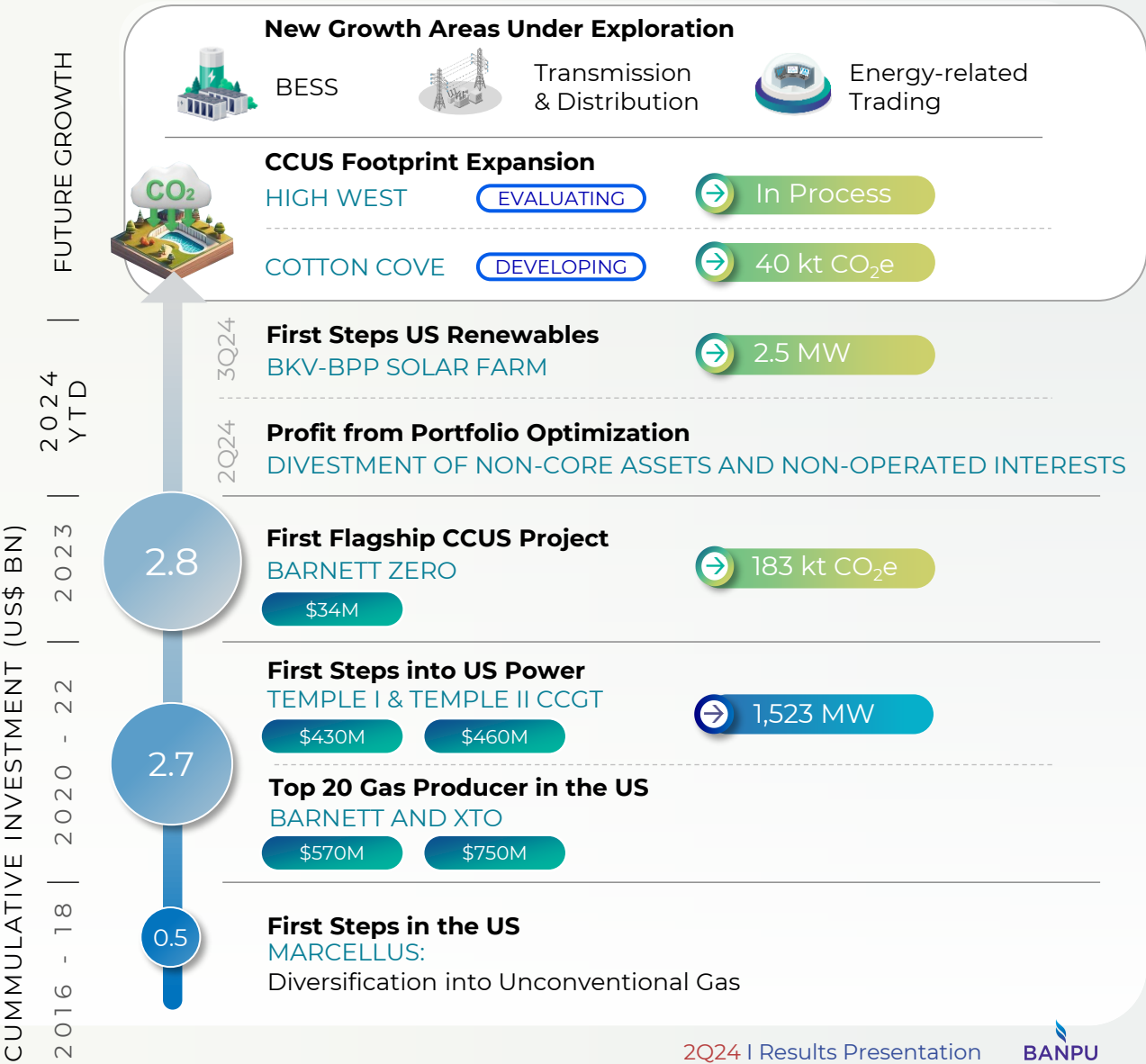
Banpu in the US: Diversification and portfolio transition to lower carbon energy

BANPU US GAS ASSETS



2024 COST REDUCTION TARGET
\$ 0.06 - 0.07 per Mcf

TARGETING FOR AN ENERGY TRANSITION



Banpu in the US: Digitalization and Decarbonization

DECARBONIZATION



Banpu, through BKV's 'Pad of the Future' program and operational improvements, is on track to achieve Net Zero Scope 1 and Scope 2 emissions by the early 2030s.

Carbon Sequestered Gas ⁽¹⁾ and Associated Credits



JUN 2024

BKV Corp. agrees to deliver carbon sequestered gas to Kiewit Infrastructure South's Fort Worth Maintenance Facility from by pipeline.



DEC 2023

BKV Corp. agrees to deliver **10,000 MMBtu/d** of physical natural gas and sequestered tokens to ENGIE.

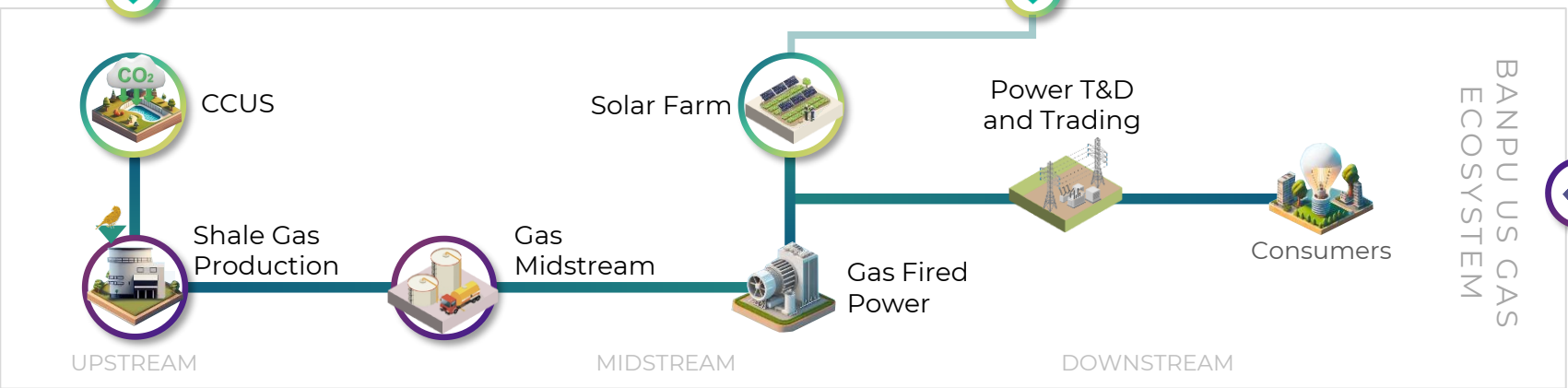
Renewable-based Energy



COD AUG'24

2.5 MW Solar Farm located in Texas that will generate Solar Renewable Energy Certificate (SRECs) that can be used to offset Scope 2 emissions.

*Based on BKV 2023 usage



DIGITALIZATION

Cost Reduction Initiatives



Digital and satellite monitoring, reporting and verification



AI hybrid refracturing solution



Forward-Looking Infrared (FLIR) camera – leak detection and repair

Efficiency Improvements



CT model update for increased generation capacity



Software development facilitating data analysis for energy trading



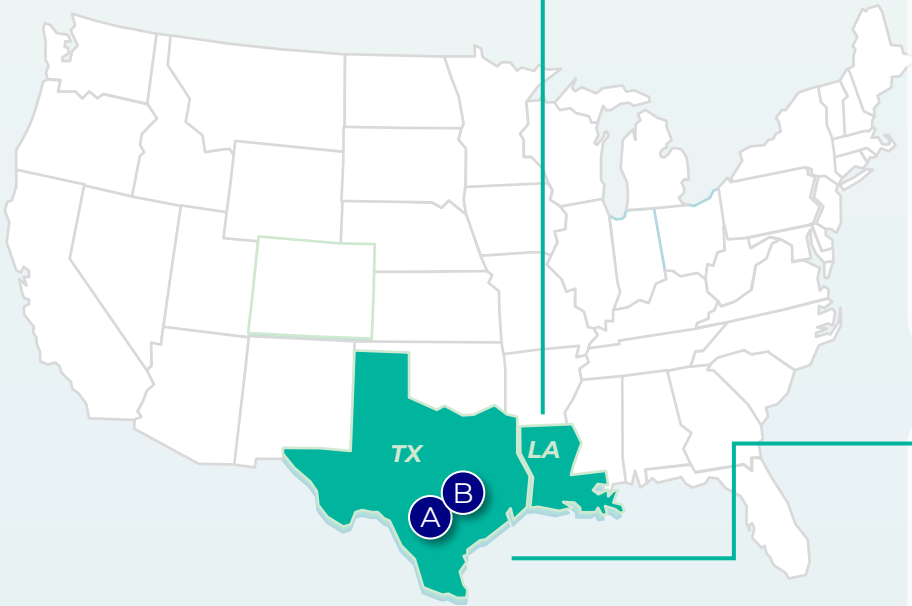
AI used to analyze customers' power consumption behaviors

Note: (1) "Carbon Sequestered Gas" is expected to be achieved by bundling BKV's responsibly sourced gas with carbon credits sufficient to offset the estimated associated with the production, gathering and boosting of such responsibly sourced gas, as well as the estimated emissions from its transmission, distribution (if applicable) and ultimate combustion, with the quantified emissions and the requisite volume of CCUS offsets being third-party certified. In addition, BKV expects to utilize the blockchain ledger and tokens with the American Carbon Registry, once that registry has been established.

Banpu in the US: CCUS pipeline progress updates

UNITED STATES OF AMERICA

Existing Projects



LOUISIANA



HIGH WEST PROJECT

EVALUATING

TARGET FID: 2024
TARGET COD: 2026-27

Partnered with NuQuest Energy and entered into carbon sequestration agreement with State of Louisiana to develop CCUS facilities.

The project is expected to **dispose CO₂e from local third-party emissions from industrial users.**

TEXAS

Decarbonizing Our Gas Operations

Capture CO₂e from internal sources such as compressor exhaust flues and utilize compressor waste heat to reduce energy requirements and cost.

RECENT INITIATIVES

SENSE CCUS Platform

ONGOING

Real-time emissions monitoring & reporting

BKV Corp partnered with Project Canary, to assess, monitor, and report carbon emissions for the Barnett Zero Project for compliance with voluntary carbon market regulations.



CCUS TARGET AND OPPORTUNITY PIPELINE



30 Mtpa

CO₂e injection

TARGET

by 2030s

PIPELINE PROJECTS UNDER EVALUATION

Forecasted volume
c.17 Mt

Pre-FID

4	Ethanol projects (2027-2029)	17%
3	Industrial projects (2026-2027)	67%
8	NGP ⁽¹⁾ projects (2025-2029)	15%

B COTTON COVE (1Q26) 40 kt FID

A BARNETT ZERO (4Q23) 183 kt OPERATING

15 ADDITIONAL PROJECTS

The background of the slide is a complex, futuristic financial dashboard. It features multiple glowing charts, including candlestick and line graphs, in various colors like blue, green, and orange. The interface has a grid-like structure with various data points and lines, giving it a high-tech, digital feel. The overall color palette is dominated by blues and purples, with bright highlights from the glowing elements.

02

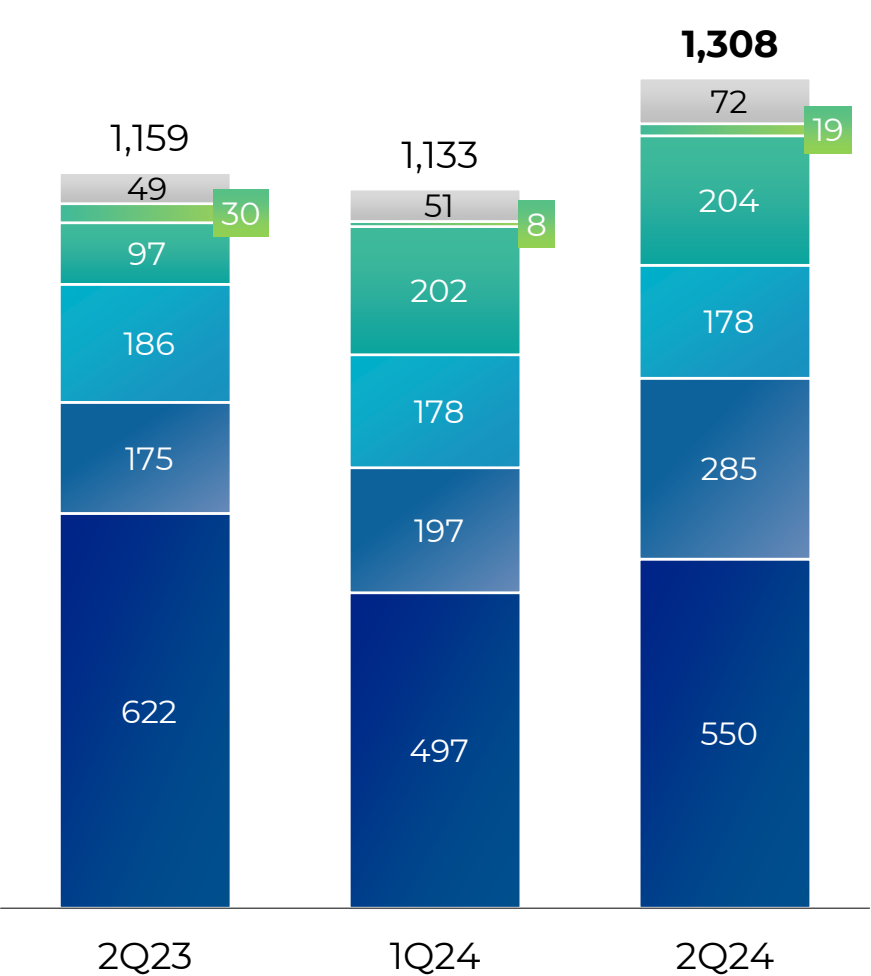
Financial Summary

Banpu consolidated financials:

Sales revenue – 2Q24

TOTAL SALES REVENUE

Unit: US\$ M



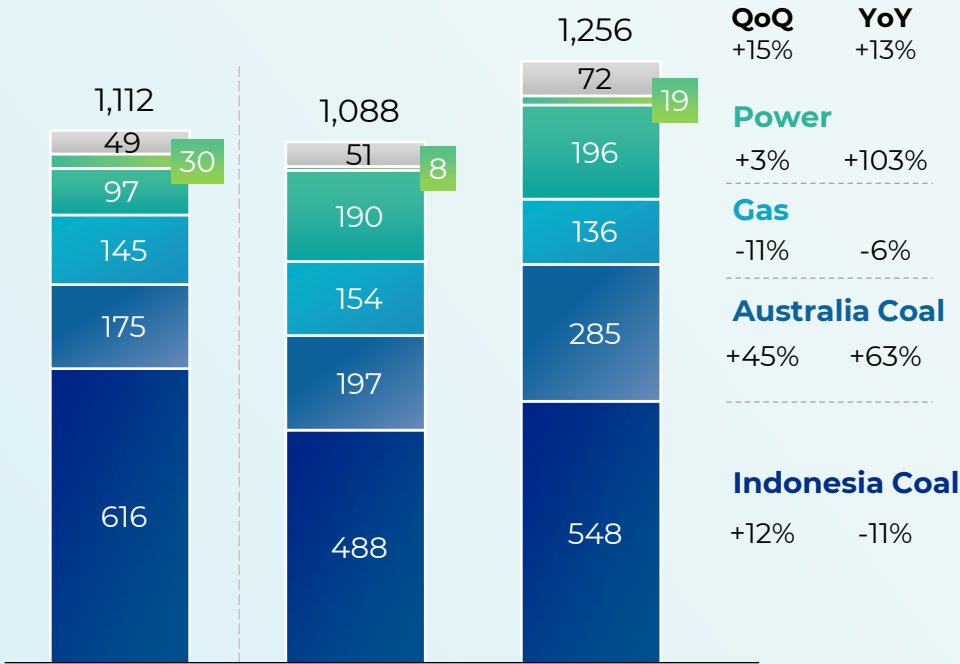
Note: *Revenue from others includes coal trading, and other businesses

% CHANGE	
QoQ	YoY
+15%	+13%
Others*	
+41%	+47%
Energy technology	
+121%	-37%
Power	
+1%	+111%
Gas	
0%	-4%
Australia Coal	
+45%	+63%
Indonesia Coal	
+11%	-11%

FINANCIALS

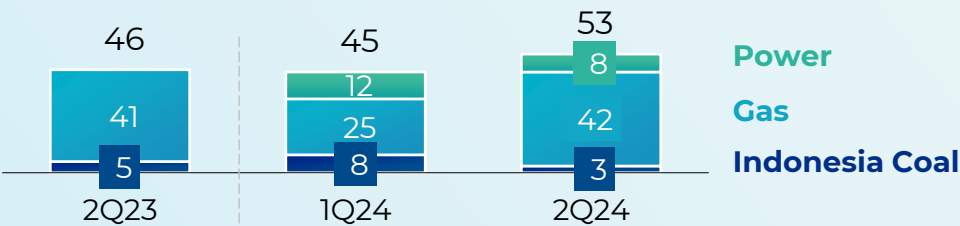
SALES REVENUE FROM OPERATIONS

Unit: US\$ M



REALIZED GAIN/(LOSS) FROM COMMODITY HEDGING

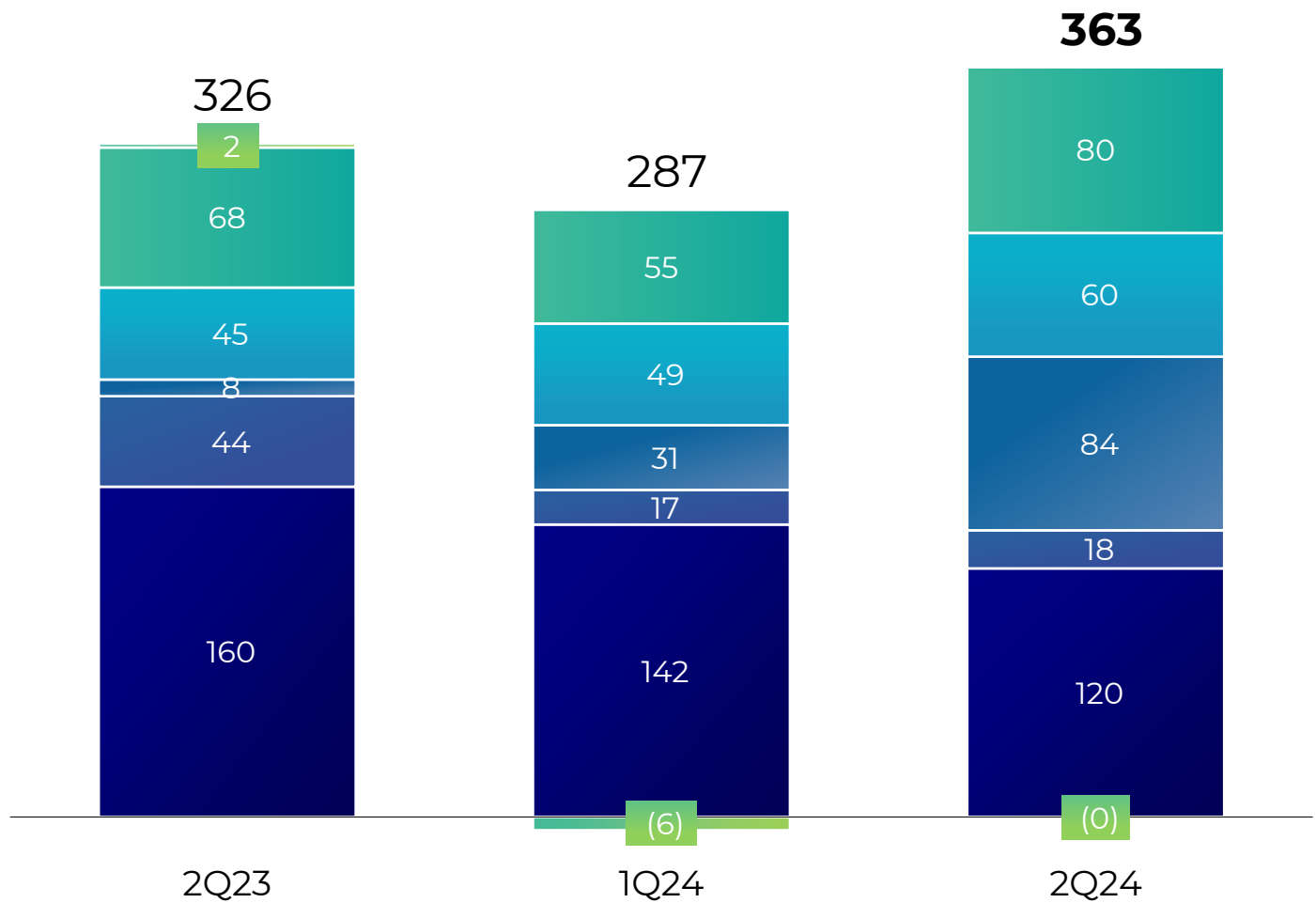
Unit: US\$ M



Banpu consolidated financials:

Consolidated EBITDA – 2Q24

Unit: US\$ M



FINANCIALS

+26% QoQ **+11% YoY**

Energy technology

n.a. n.a.

Power

+46% QoQ +18% YoY

Gas

+22% QoQ +34% YoY

Australia Coal

+168% QoQ +945% YoY

China Coal

+10% QoQ -58% YoY

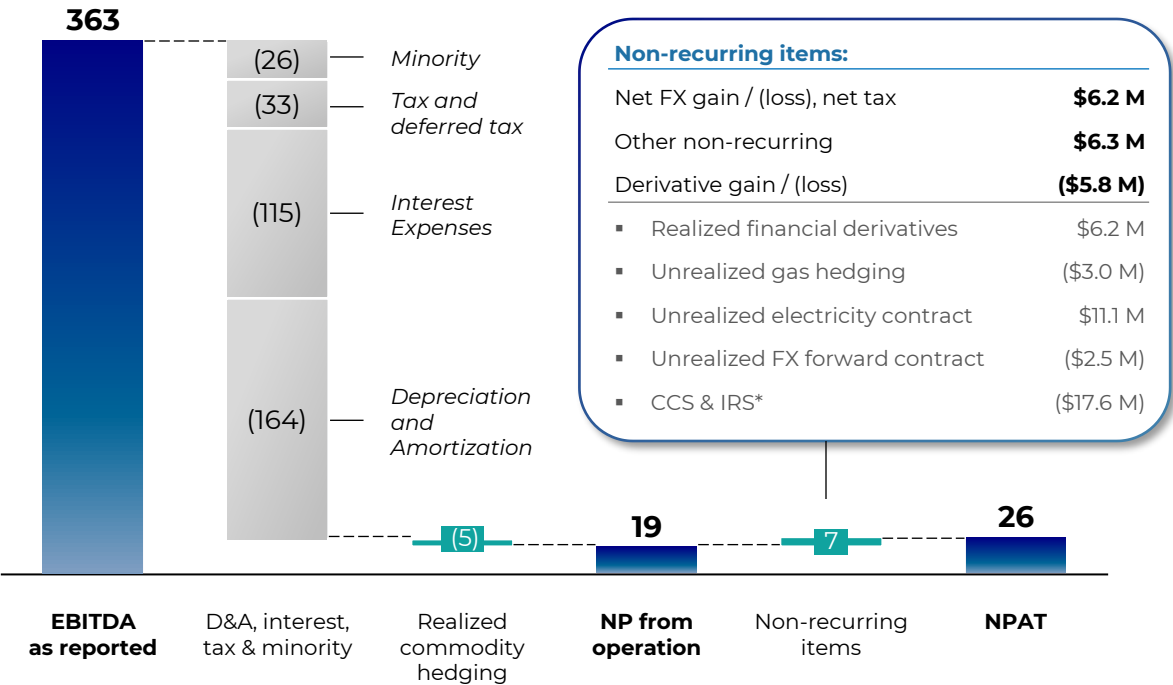
Indonesia Coal

-15% QoQ -25% YoY

Banpu consolidated financials:
NPAT- 2Q24

2Q24 NET PROFIT AFTER TAX

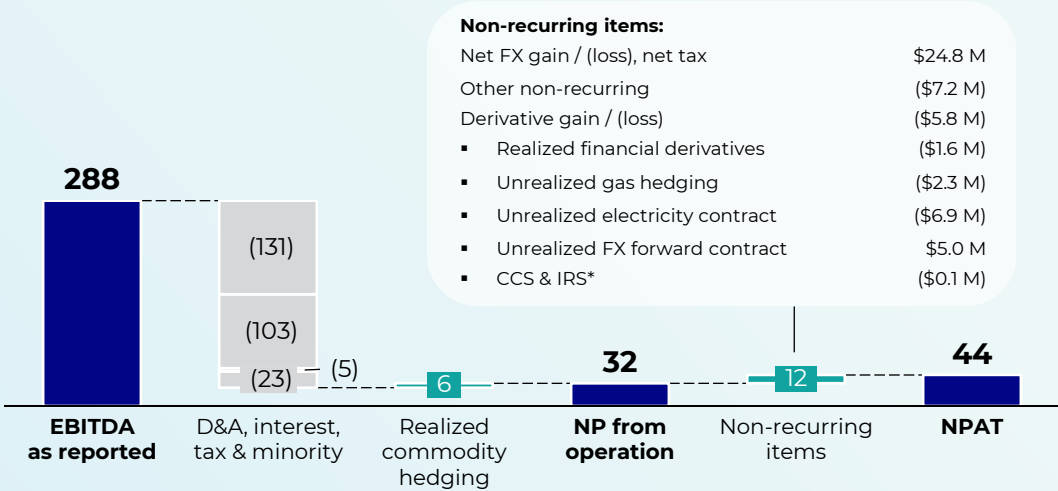
Unit: US\$ M



FINANCIALS

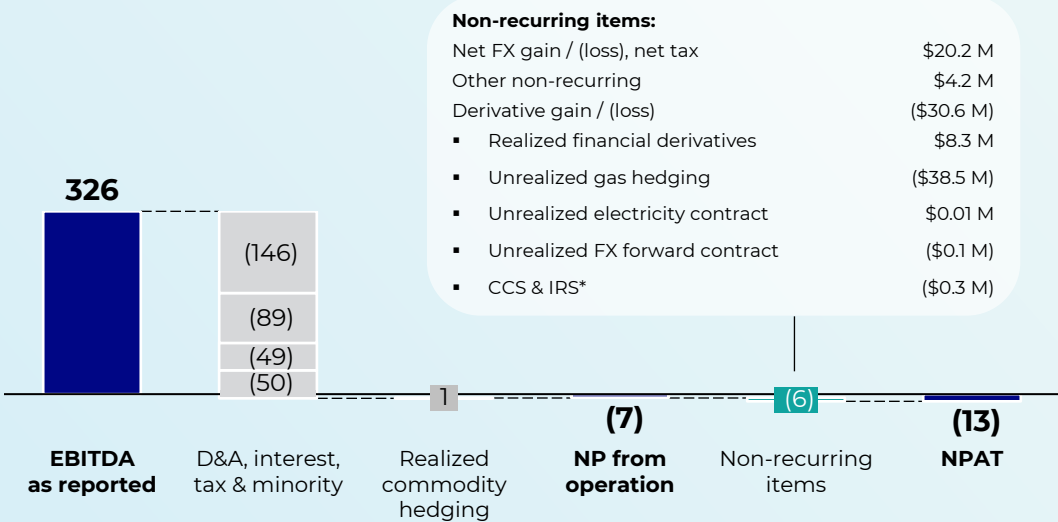
1Q24 NET PROFIT AFTER TAX

Unit: US\$ M



2Q23 NET PROFIT AFTER TAX

Unit: US\$ M



03

Energy Resources

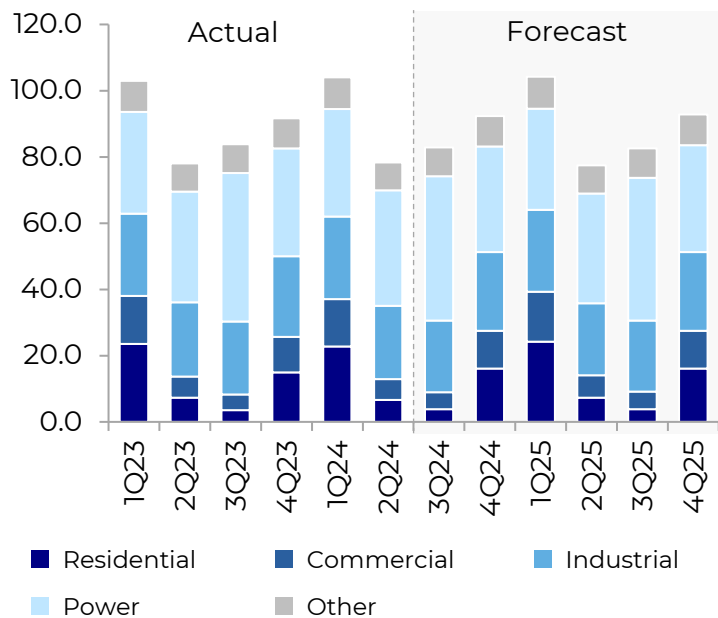


Banpu Gas: US gas market update

NATURAL GAS

US Consumption & Projection

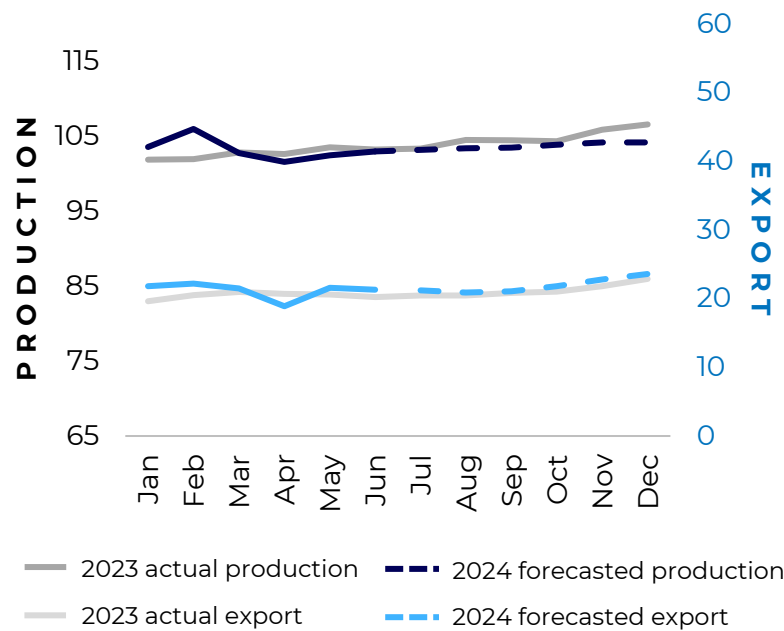
Unit: Bcf/d



- US consumption averaged 78 Bcf/d in 2Q24, consistent with last year. This quarter usually experiences demand led by the Power and Industrial sectors.
- Consumption for 2024 is expected to average about 90 Bcf/d, showing modest growth from 2023.

US Natural Gas Production

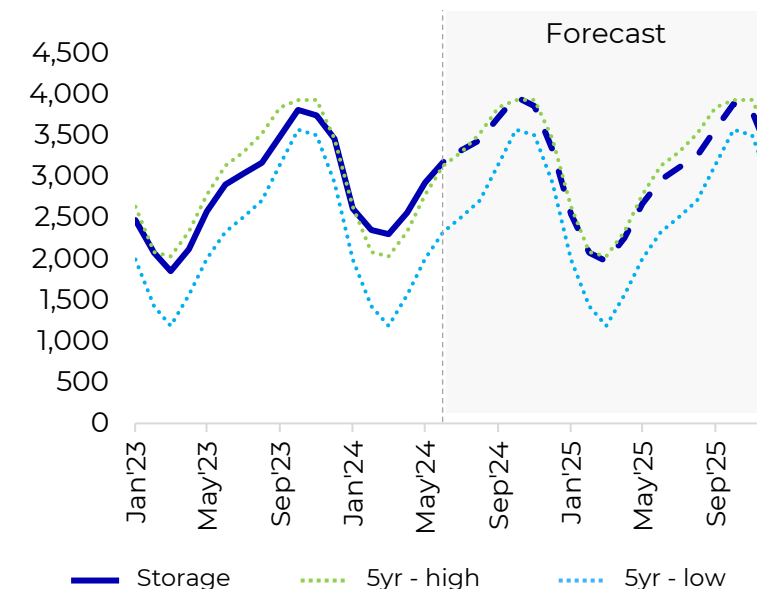
Unit: Bcf/d



- US natural gas production reduced to 102 Bcf/d in 2Q24, declining by 2% QoQ and 1% YoY. This decline is mainly due to continued production cuts by producers, especially in Appalachia, though it is partially offset by increased associated gas output.
- US LNG exports averaged 11.5 Bcf/d in 2Q24, a 7% QoQ and 2% YoY decrease, due to planned maintenance and minor outages at LNG plants during the quarter.

US Storage Level

Unit: Bcf



- In June 2024, natural gas inventories hit 3.2 Tcf, 18% above the 5-year average and about 0.3 Tcf higher than last year.
- The EIA expects below-average natural gas injections from April to October 2024 due to reduced production, which should help reduce surplus issues, though storage will still be slightly above the 5-year average for the year.

Expected gas prices to recover by 2H24

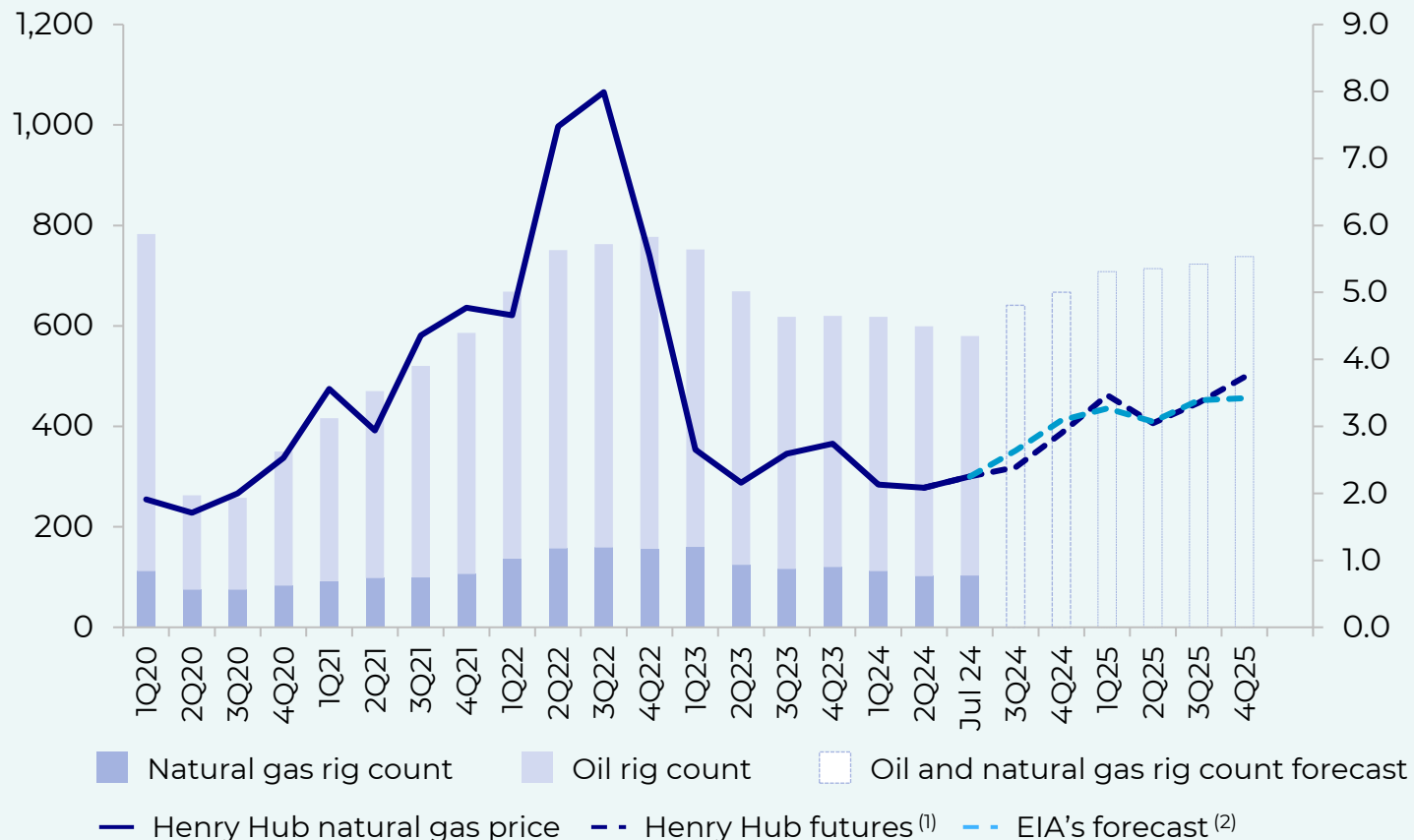
US Rig Count vs Henry Hub Price

US oil and natural gas rig count

Unit: rigs

Henry hub spot price

Unit: \$/MMBtu



Note: (1) As of July 25th, 2024; (2) Short-Term Energy Outlook (July 2024)

Source: EIA Short-Term Energy Outlook (July 2024), Baker Hughes US natural gas rotary rig count (July 2024)

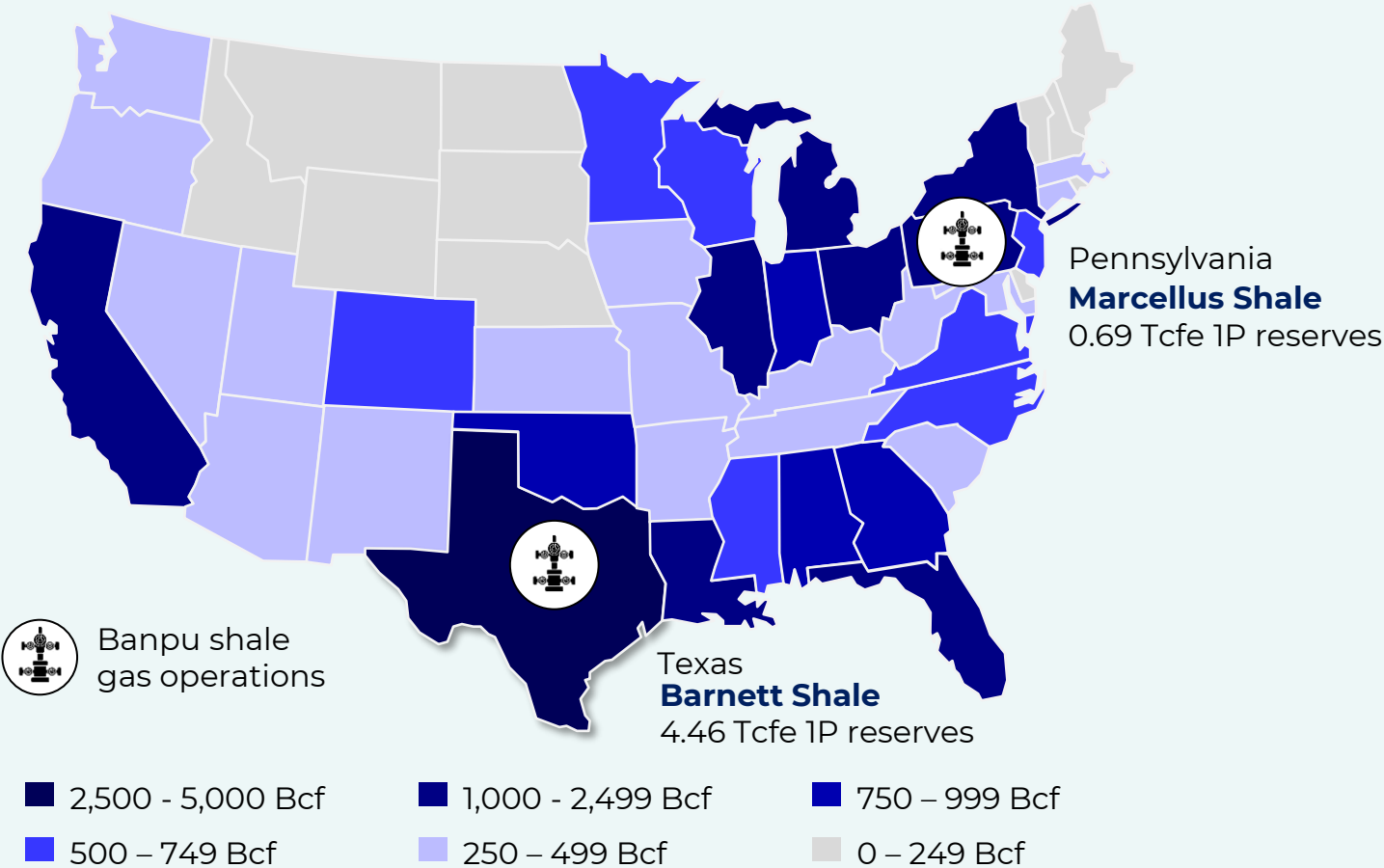
Comments

- ➔ Oil and gas rigs in 2Q24 remained low and is expected to rebound with high demand towards end of 2024.
- ➔ Storm Beryl's impact on the US Gulf Coast in early July appeared to be a short-term disruption to demand and LNG operations.
- ➔ Price recovery in 2H24 will be affected by weather conditions, however improving supply-demand dynamics and a rise in export demand from new LNG projects is expected to drive price recovery in late 2024 and into 2025.
- ➔ Forecasts indicate that Henry Hub futures will rebound towards \$3.0/MMBtu by 2H24.



Banpu Gas:
2Q24 highlights

US Dry Gas Consumption 2023 by State ⁽¹⁾



Notes:
(1) As of (or, as applicable, for year end) December 31, 2023;
(2) Average local price = Henry Hub - basis differential while Realized price 2Q24 equivalent to \$2.47/Mcfe;
Realized price = Average local price+ realized hedge gains/losses;
(3) IFRS EBITDA. Significant differences between IFRS and BKV US GAAP EBITDAX include treatment of derivative gains and losses, depletion expense, accretion expense, stock compensation expense, BNAC expenses, equity income, and contingent consideration gains and losses for asset acquisitions

NATURAL GAS

Average local price ⁽²⁾
\$1.89/Mcfe
-8% QoQ

Gas Sales volume
72 Bcfe
-3% QoQ

CCUS Sequestered Carbon Volume
43,000
Tons of CO2e
+59% QoQ

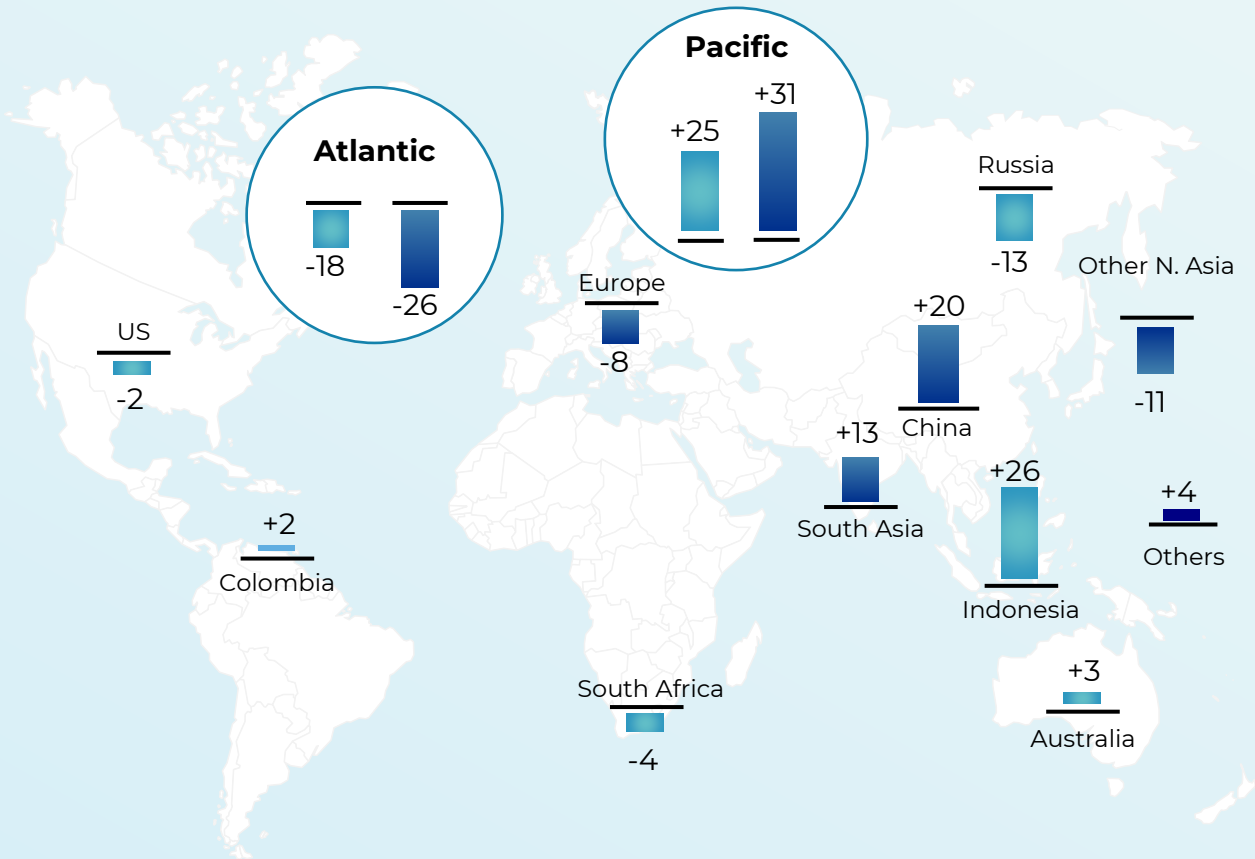
EBITDA ⁽³⁾
\$60 M
+22% QoQ



Global thermal coal market

COAL DEMAND AND SUPPLY CHANGE – 2024e VS 2023

Unit: Mt

■ Demand ■ Supply


Demand trends

Peak summer demand will support the HCV coal market in JKT ⁽¹⁾ amid ongoing sanctions on Russian coal. Strong hydropower in China and the monsoon in India will reduce imported coal demand for the lower-CV market.

- **China:** Strong hydro generation will reduce coal-fired output, but thermal coal imports should remain stable due to competitive pricing in coastal provinces in 2H24.
- **India:** Coal-fired generation is expected to ease slightly in 3Q24 due to the monsoon but will remain high. The government is extending import directives to utilities to normalize imports amid strong domestic production.
- **JKT:** Summer demand could support power demand in 3Q24, but firm nuclear and stronger renewables will curb coal demand growth.
- **Europe:** Uneconomic coal-fired generation, high stockpiles, and strong nuclear and renewable generation continue to limit coal burn.

Supply trends

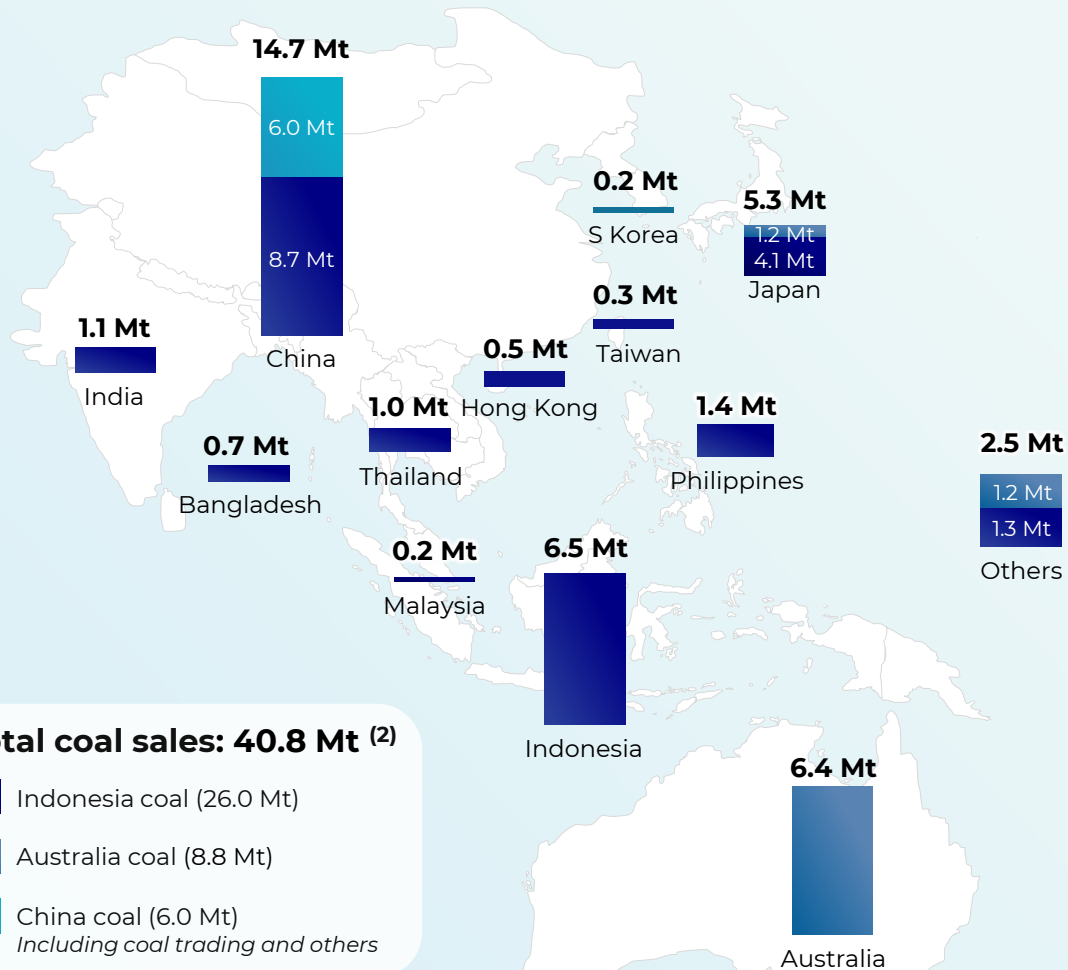
Global exports from most regions have performed well this year. Short-term risks center around weather in key producing countries, while Indonesian suppliers may struggle to maintain outflows due to limited demand growth from key importing countries.

- **Indonesia:** Coal production remains strong despite high rainfall in some key regions.
- **Australia:** Steady exports with slightly tightening HCV supply as producers increase high-ash shipments to China, reducing pressure on HCV market.
- **Others:** Russia continues to face logistical constraints to far eastern ports and increased competition from other origins. Logistical challenges in South Africa persist, while wet weather in Colombia could slow production in 2H24.

Note: (1) JKT stands for Japan, South Korea and Taiwan

Group coal sales and pricing status

Coal Sales Source ⁽¹⁾ : Destination Analysis, 2024e



Notes:

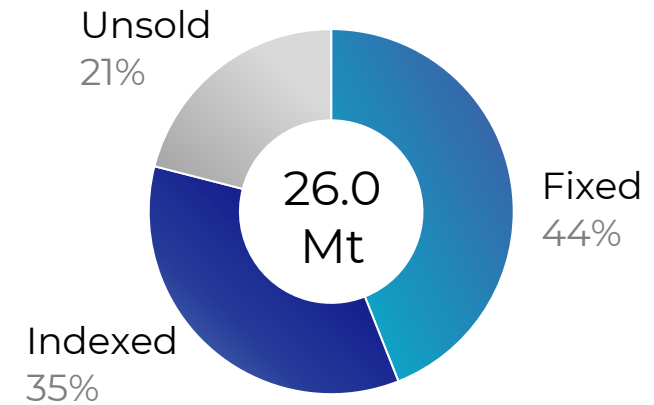
(1) Sales from Indonesia are included on 100% basis, sales from Australia and China are included on equity basis. Excluding Mongolia coal;

(2) Illustrative target; Includes coal sales from domestic production in China;

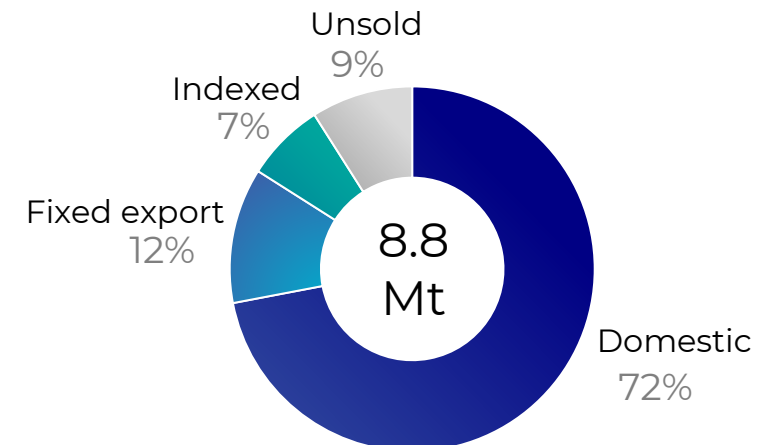
(3) Target sales; Coal sales includes third-party sourced coal

Coal Sales ⁽³⁾ Pricing Status, 2024e

Indonesia



Australia



Banpu Mining: 2Q24 highlights

MINING

MAP OF MINING OPERATIONS⁽¹⁾



Production volume

9.1 Mt

+7% QoQ

Sales volume

10.9 Mt

+24% QoQ

EBITDA

\$223 M

+17% QoQ

Operational summary

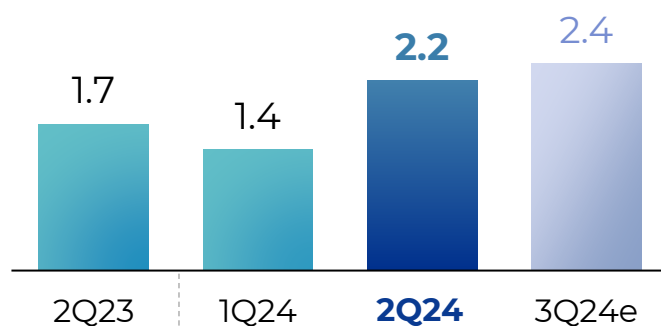
ROM Production and Key Updates

Australia Coal

2024 target: 8.0 Mt

+35% **+58%**

YoY QoQ



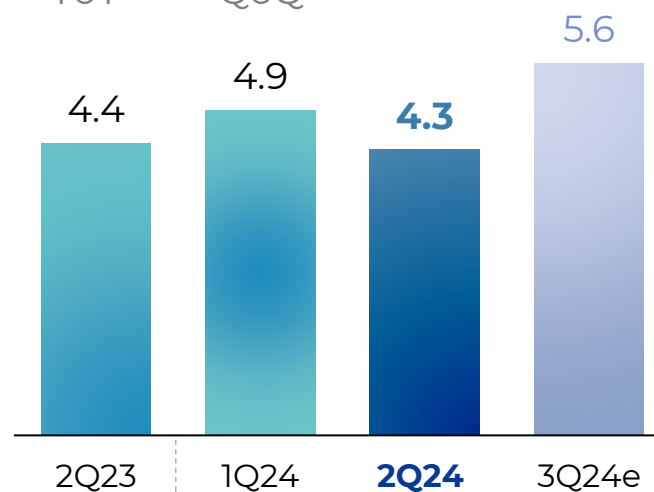
- Centennial achieved a 58% QOQ increase in ROM production for 2Q24.
- Springvale exceeded production targets with record coal deliveries to Energy Australia.
- Mandalong, despite longwall relocation for majority of the quarter, set daily and shift development records.

Indonesia coal

2024 target: 19.5-20.2 Mt

-1% **-12%**

YoY QoQ



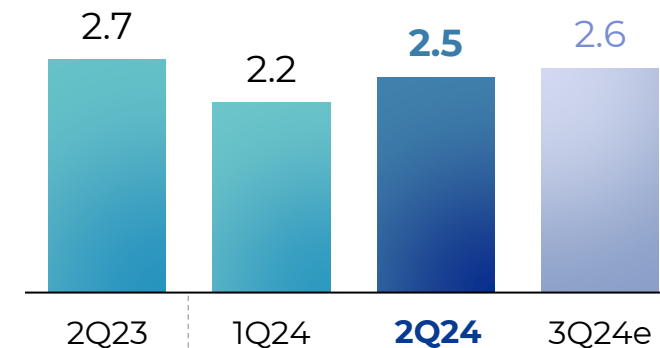
- 2Q24 production was at 4.3 Mt as we optimize the inventory level in the Melak area while have high in-pit inventory that are ready for 2H24 production.
- 3Q24 production is targeted at 5.6 Mt supported by higher production in Bharinto while prudently maintaining the production level of all mine site.

China Coal

2024 target: 8.7 Mt

-7% **+14%**

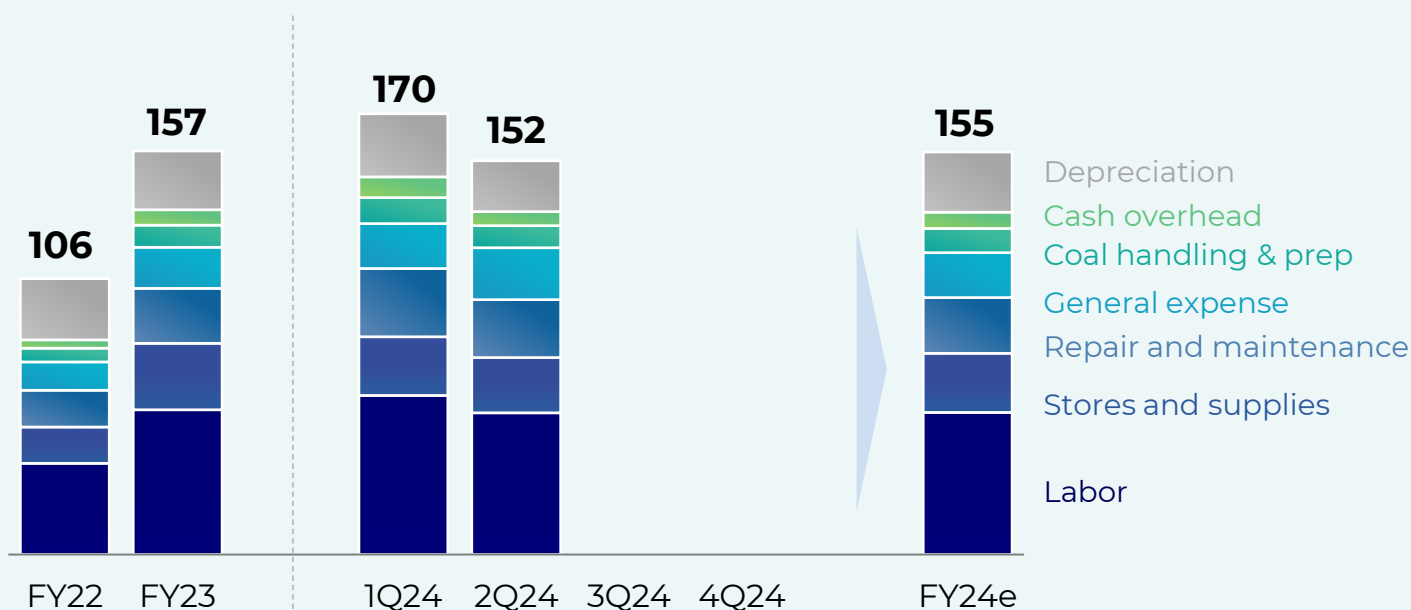
YoY QoQ



- Gaohe:** Annual production target in 2024 decreased from 9.6 Mt to 8.7 Mt due to the adjusted Shanxi gov't policy. Guaranteed coal order from government increased to 5.2 Mt from 3.8 Mt in 2023.
- Hebi:** Continued effort on operational cost control and work efficiency improvements including UG roadway development, pre-degas hole building, and longwall panel operation optimization.

Average total cost breakdown

Unit: A\$/t



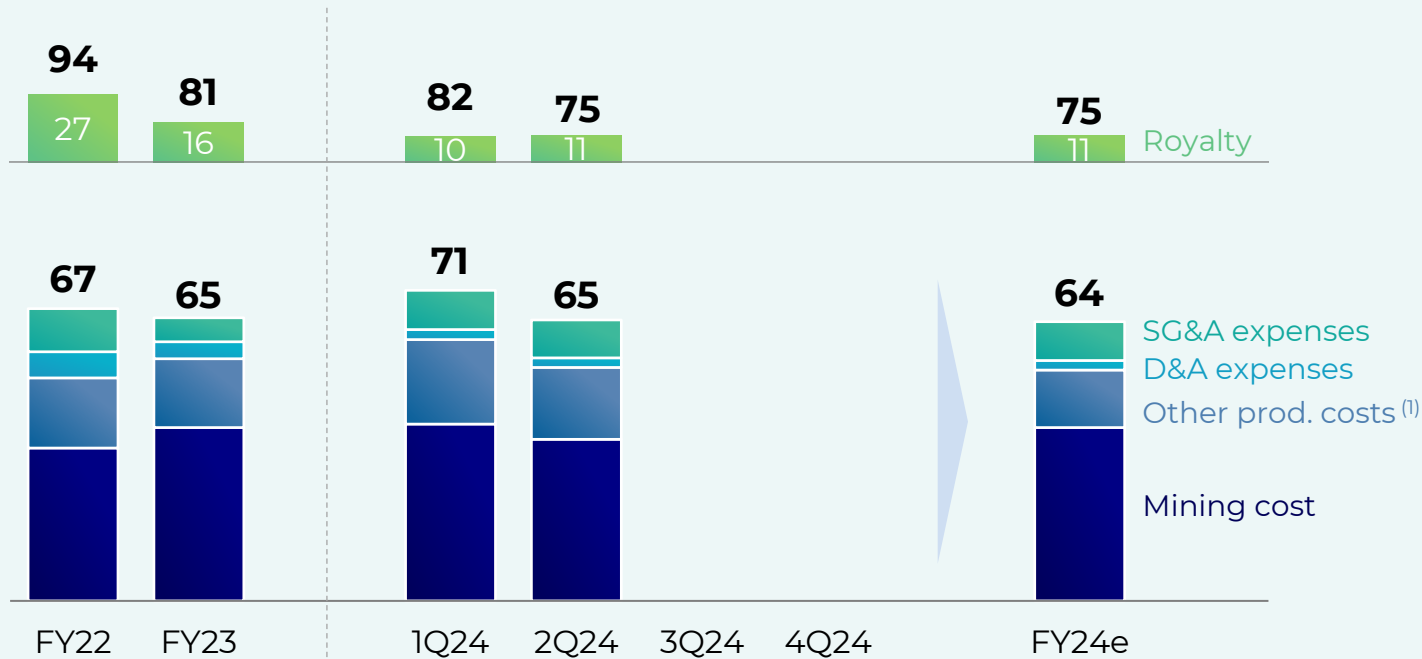
Comments

- Unit costs for 2Q24 decreased by A\$18/t from 1Q24, primarily due to increased production.
- Restructuring of corporate and regional offices in 1Q24 supports an ongoing 23% saving in corporate labor costs.
- A balanced approach to capital allocation remains a key focus with YTD capex spend running A\$48 M below budget.
- The strategic procurement project is well advanced with key major suppliers, initially focusing on cost reductions in strata products.

Note: These figures do not include selling, distribution and royalty costs; based on 'sold' production

Average total cost breakdown

Unit: US\$/t



Note: (1) Including repair and maintenance, salaries and allowances, inventory adjustment, others etc.

Comments

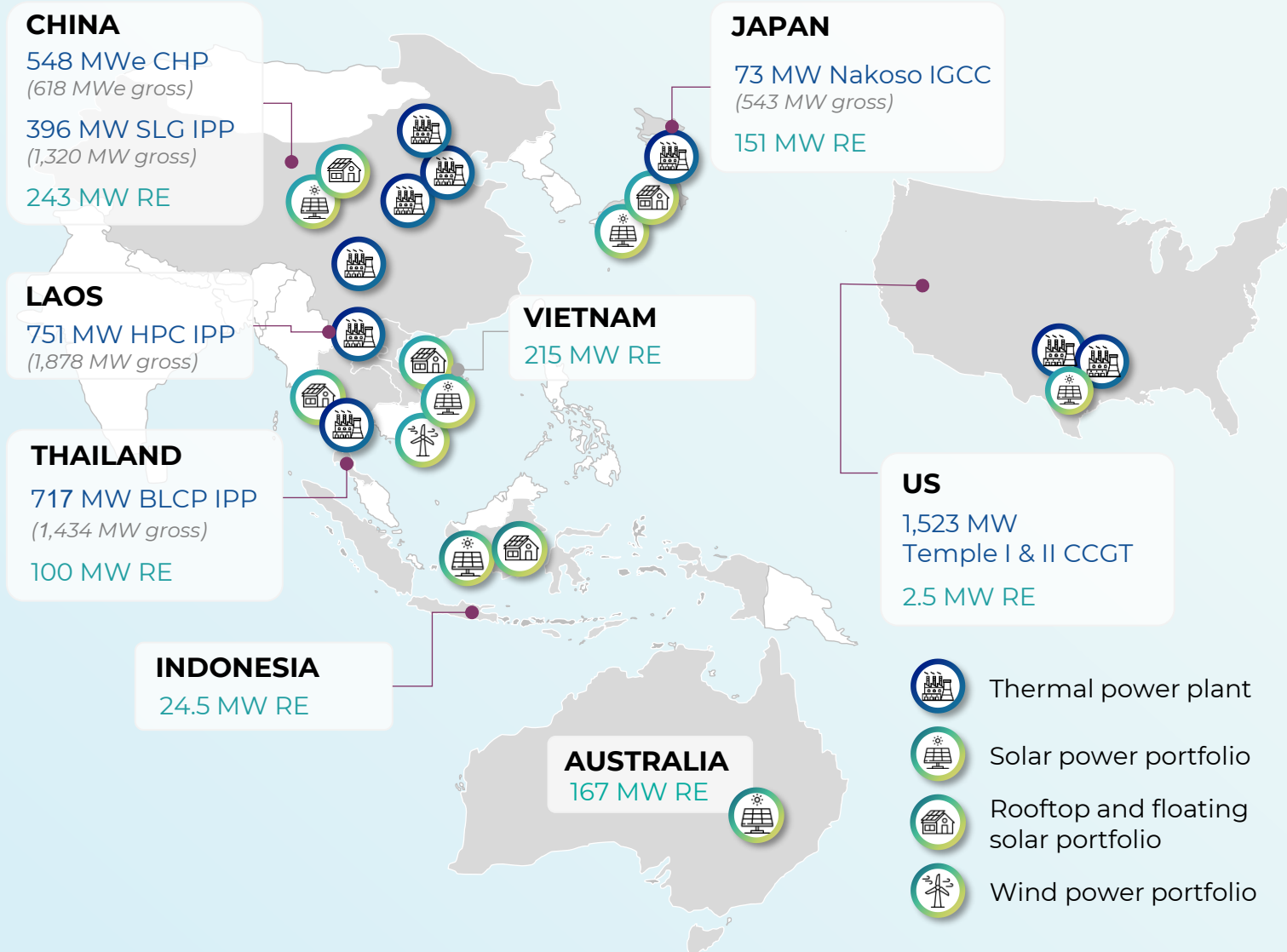
- The average total cost excluding royalty in 2Q24 is \$65/t, a 9% decrease compared to the 1Q24 cost at \$71/t, which is attributable to higher sales volumes and improving cost efficiency.
- The average total cost for FY24 excluding royalty is expected to be around \$64/t, slightly lower than FY23 (-1% YoY).
- Royalty for FY24 is expected to decrease to \$11/t from \$16/t in FY23 (-32% YoY), aligning with coal price normalization.

The background of the slide is a photograph of a wind farm at sunset. Two large wind turbines are visible against a sky with soft orange and blue hues. The turbines are white with three blades each. The overall scene is peaceful and represents renewable energy.

04

Energy Generation

Banpu Energy Generation: 4,911 MW committed capacity



ENERGY GENERATION

4,008 MW

committed thermal equity capacity

903 MW

committed renewables capacity

527 MW solar power

258 MW rooftop and floating solar

118 MW wind power

Banpu Thermal Power: 2Q24 updates

ENERGY GENERATION



HPC

Operations are proceeding smoothly as planned, achieving high EAF⁽¹⁾ and net generation, resulting in profit sharing increase.

94%	EAF (+4% YoY)
THB 6.4 bn	Revenue
THB 3.9 bn	EBITDA
THB 1.1 bn	Share of profit



BLCP

BLCP has achieved high EAF while managing operation without planned maintenance, and achieved impressive profits, resulting from higher revenue and cost control.

98%	EAF (-2% YoY)
THB 4.8 bn	Revenue
THB 1.1 bn	EBITDA
THB 0.3 bn	Share of profit



SLG

Lower power sales due to the reserve shutdown of Unit 2 resulted in decreased revenue and reduced profit sharing.

940 GWh	Net power sold (-6% YoY)
RMB 1.0 M	Share of profit



China CHP

Lower YoY electricity sales due to reduced steam demand at Zouping and Zhengding. Higher QoQ Time-of-Use (ToU) mode at Zhengding and lower coal prices led to improved profits.

RMB 224 M	Revenue
RMB 30 M	EBITDA
RMB 5 M	Share of profit



Temple I & II ⁽³⁾

Higher power sold led to increased EBITDA, but net profit was impacted by finance cost related to business expansion.

94%	EAF (+17% YoY)
2,107 GWh	Net generation
US\$ 125 M	Revenue
(US\$ 13.6 M)	Share of loss ⁽²⁾



Nakoso IGCC

Completed yearly maintenance on 6th June 2024 .

27%	EAF
284 GWh	Net generation
THB 45 M	Share of profit

Note: (1) 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

(2) Includes US\$ 12.8 M of loss on derivatives; (3) Recognized Temple II since July 2023

Banpu Renewable Power: 2Q24 updates

ENERGY GENERATION



China Solar

Higher power sold from improved irradiation.

17% Avg. capacity factor

64 GWh Power sold
(+5% YoY)

RMB 43 M EBITDA

RMB 18 M Profit contribution



Japan Solar

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

16% Avg. capacity factor

69 GWh Power sold
(+10% YoY)

JPY 0.2 bn Cash distribution



Australia Solar

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

15% Avg. capacity factor

40 GWh Power sold
(+5% YoY)

A\$ 5.0 M Share of profit ⁽¹⁾



Vietnam Solar

Nhon Hai Solar demonstrated consistent capacity factor and power sold.

20% Avg. capacity factor

15 GWh Power sold
(+0% YoY)

US\$ 0.5 M Share of profit



Vietnam Wind

El Wind Mui Dinh

15% Avg. capacity factor

13 GWh Power sold
(-13% YoY)

(US\$ 1.5 M) Share of loss

Vietnam Wind

Vin Chau project

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

Note: Banpu has 100% shareholding in Banpu NEXT; (1) Includes A\$ 7.0 M of gain on derivatives



Energy Technology

Energy Technology:
Current position and future targets



**Solar:
rooftop & floating**

2Q24

258 MW
Committed capacity

2025 target

500 MW



Battery & ESS solutions

Battery production capacity

3.0 GWh

6.0 GWh

Battery farm

In progress

58 MWh



**Smart cities &
energy management**

27 projects

Energy management,
smart infra, etc.

60 projects



**Energy
trading**

831 GWh

Electricity sales (1H24)

2,400 GWh

Annual sales



E-Mobility

337 MWh

Electricity sales
(MuvMi battery & charger)

MaaS

Mobility-as-a-service

794 Units

EVs (Battery + 2-Wheeler)

2030 target

**INTEGRATED
CLEAN ENERGY
ECOSYSTEM**



2Q24 battery and ESS solutions updates

SVOLT ENERGY (THAILAND)'S BATTERY PACK FACTORY

2.0 GWh

Production capacity

2,269 Units

2Q24 production output

STRATEGIC FOCUS SEGMENTS:



E-mobility

DP NEXT PRODUCTION PLANT (AMATA CITY, CHONBURI)

1.0 GWh

Production capacity

4Q24

Expected COD

90%

Construction progress
(Pending machine installation)

PROJECT UPDATES

Plant renovation and factory acceptance tests are completed.
Machine installation is on track to finish by September 2024.

IWATE TONO PROJECT

58 MWh

Capacity

2Q25

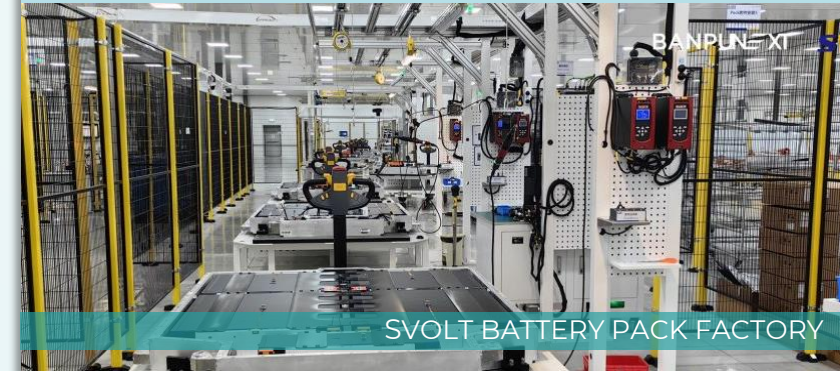
Expected COD

97%

Construction progress

PROJECT UPDATES

Phase 2 of the construction of extra high-voltage electric equipment and the substation is ongoing without any delay of the planned construction schedule, which is due at the end of October 2024.



SVOLT BATTERY PACK FACTORY



DP NEXT PRODUCTION PLANT

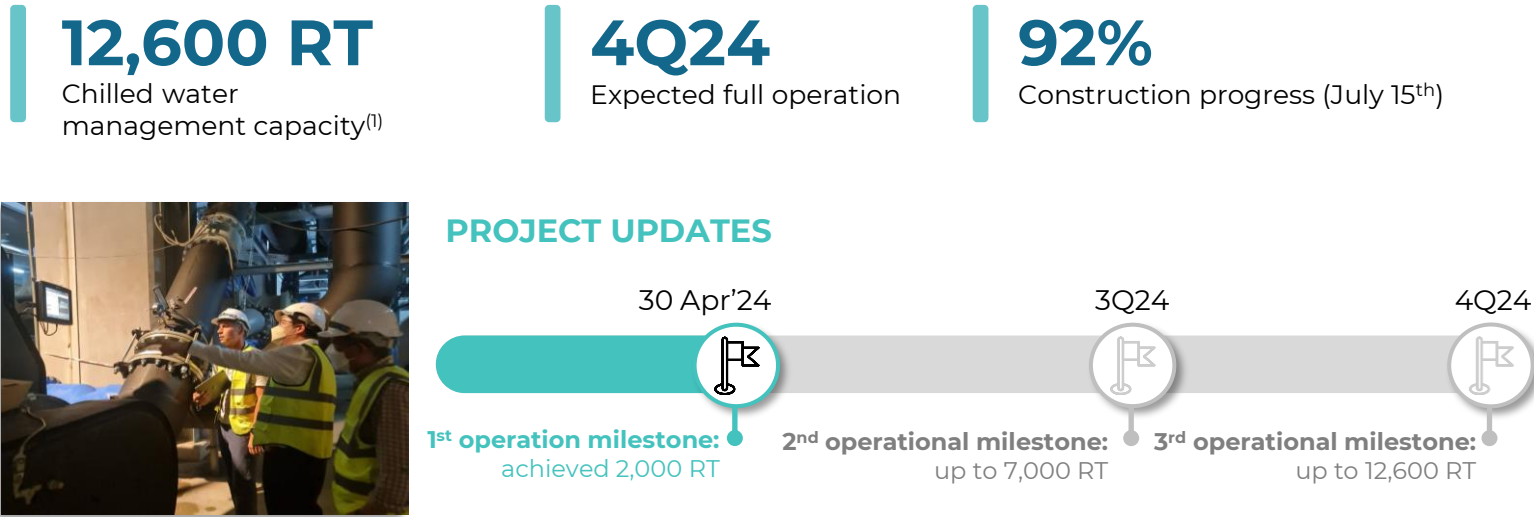


IWATE TONO PROJECT

Energy Technology:

2Q24 energy management updates

DISTRICT COOLING SYSTEM (DCS) AT GOVERNMENT CENTER ZONE C (BANGKOK) THROUGH BANPU NEXT AND SP GROUP'S JV



ENERGY EFFICIENCY IMPROVEMENT THROUGH BANPU NEXT ECOSERVE



KEY UPDATES Banpu NEXT EcoServe has been awarded the contracts to manage chiller plants for SB Design Square Phuket and SB Design Square CDC - Bangkok

ENERGY TECHNOLOGY

Government Center Zone C, DCS Project



SB Design Square CDC & SB Design Square Phuket



2Q24 e-mobility & energy trading updates

MUVMi'S E-TUKTUKS JOIN THE GOVERNMENT'S ELECTRIC PUBLIC VEHICLE SUPPORT PROGRAM

PROGRAM DETAILS

NEX 2 e-tuktuks

Registered vehicle models

103 e-tuktuks

Registered vehicles, out of 582 in the government's program

Safety measures

Quality manufacturing and safety equipment installed

MUVMi'S JOURNEY SO FAR

Over 13 million

Trips serviced

Over 1,000 jobs

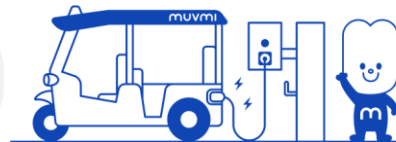
Created for drivers of diverse ages and genders

Over 2,700 tCO₂e

GHG emissions reduction

New service routes

- Expand to the west side of Bangkok in Q4'2024
- Extend from Wongwian Yai to Icon Siam



IMPLEMENTED AN ADVANCED MARKETING & SALES STRATEGY WITH MARKET-DRIVEN PRICING AND SECURED SUPPLY AGREEMENTS VIA A COMPETITIVE TENDERING

831 GWh

1H24 accumulative sales

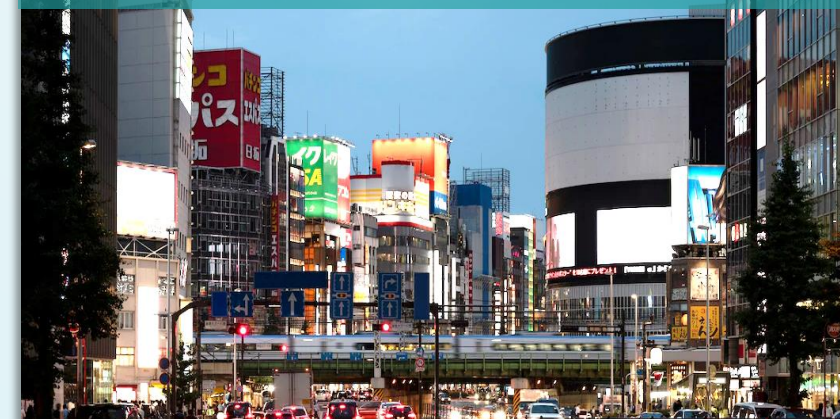
1,286 clients

Increasing from 707 clients in 1Q24

8 utility areas

From both private and public sectors

45% of total sales are market-linked price products, while the remaining sales are fixed-price contracts secured through tendering and hedged to minimize potential risks.



Energy Technology:
2Q24 CVC updates

EXPANSION INTO TRADING-AS-A-SERVICE WITH INVESTMENT INTO ENSPIRED

Enspired provides real-time information on energy assets and fully-automated trading-as-a-service to utilities, asset developers, VPP operators, and energy funds.

EUR 3 M

Investment amount

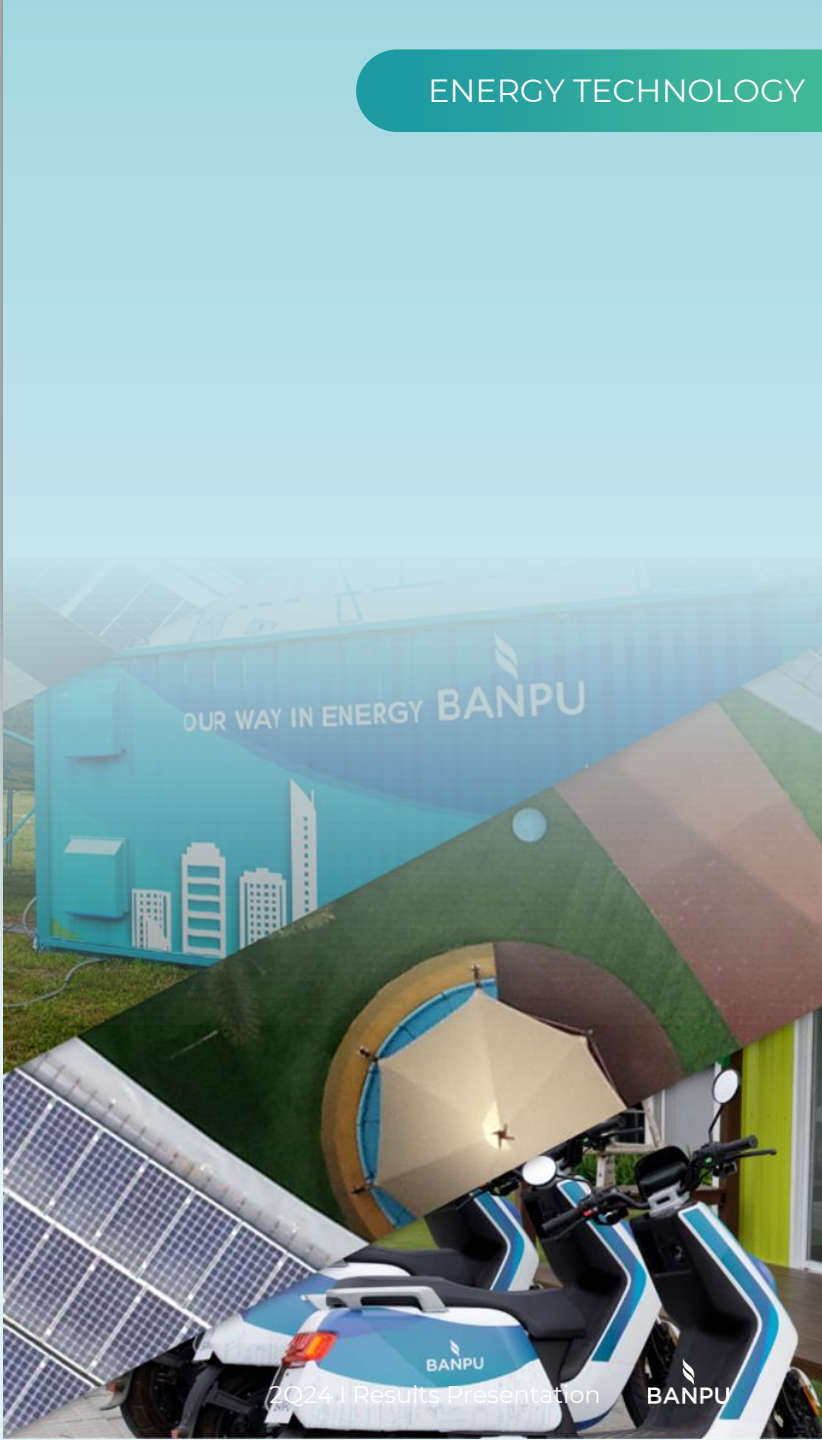
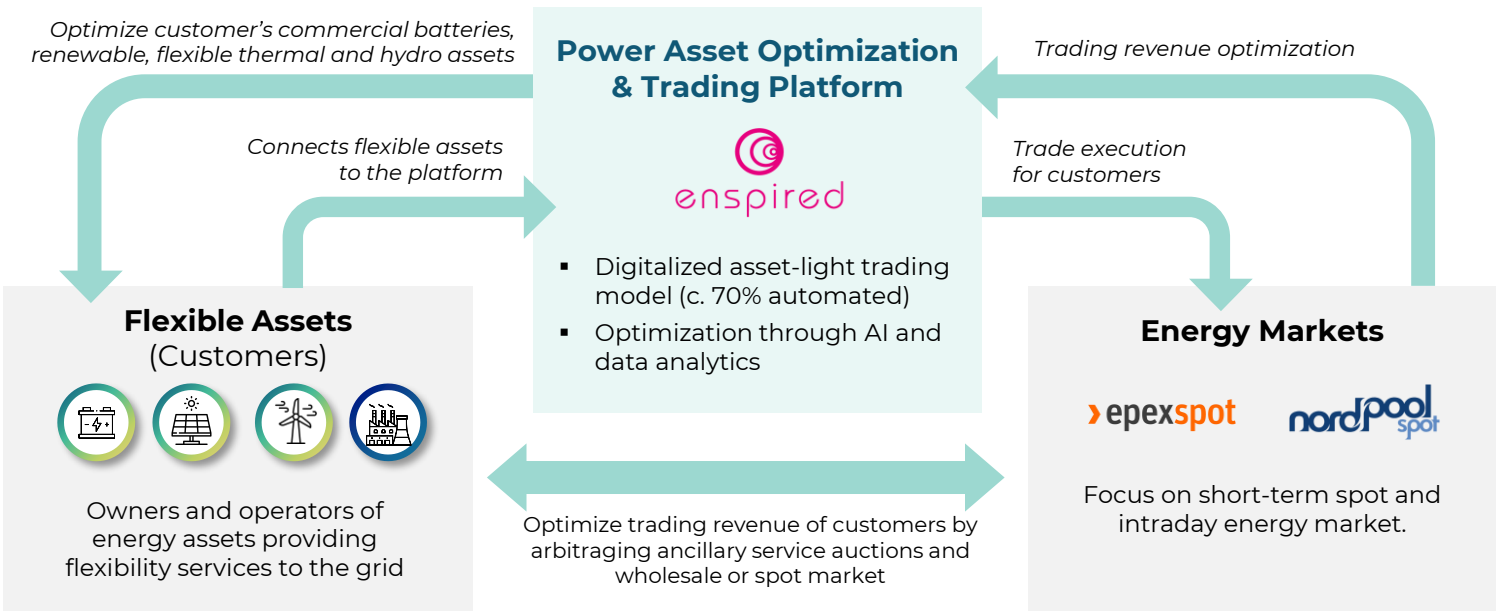
c.4%

Ownership

INVESTMENT RATIONALE

This investment gives access to high quality AI and technology from Europe to enhance Banpu NEXT's battery and energy trading operations

TRADING-AS-A-SERVICE PLATFORM



Appendix

ESG leadership and credit rating recognition

BANPU ESG RATINGS



A

rating for three consecutive years for demonstrating resiliency towards long-term ESG risks and excellent risk management and mitigation relative to peers.



AAA

rating awarded by the SET ESG Ratings for strong ESG disclosures, including environmental management practices and interactions with key stakeholders.

Member of
Dow Jones Sustainability Indices
Powered by the S&P Global CSA

Awarded since 2014

Recognized as a constituent of DJSI for conducting business with the highest ESG standards.



Awarded since 2015

Recognized in THSI for sustainable operations and responsible investment principles.



Honor since 2018

Highest distinction in SET's Sustainability Excellence Award for at least 4 consecutive years.



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.



Sustainability Disclosure Award 2022

from Thaipat Institute for consistent and excellent conduct of ESG principles.



ASEAN Asset Class

Awarded in 2021 ASEAN Corporate Governance Scorecard for excellent corporate governance.

CREDIT RATINGS



Best Public Company of the Year 2023 in the SET & Best Company of the Year 2023 in the Resources Industry

Awarded by Money & Banking Magazine for Banpu's exceptional ability to effectively manage business and organization.



A+ Credit rating

with a **'stable'** outlook on the company and senior unsecured debentures reflecting the company's stable business growth.

Banpu: ESG recognition across the subsidiaries



Responsibly Sourced Gas (RSG) Gold Rating Certification

BKV's NEPA wells and facilities were awarded with TrustWell Gold accreditation for operational excellence, safety, and environmental stewardship, allowing BKV to market and sell certified RSG to the market.

Gold accreditation is awarded to top 25% most responsible gas operators by Project Canary, a leading and widely regarded 3rd party certification company.

The certification was awarded to 100% of BKV's NEPA production and a portion of BKV's Barnet production in 2022.



Best Non-Financial Sector Award

Awarded at the 14th IICD Award in 2023 for the continued commitment and performance towards corporate governance.



Platinum Plus & Green Elite Awards

Awarded at the 2023 Corporate Emission Transparency Awards for transparency and consistency in emission reporting.



Golden Trophy

Awarded at the TOP CSR Awards 2023 after maintaining the 5-Star Trophy for three consecutive years, along with a TOP Leader on CSR Commitment awarded to Mr. Mulianto, President Director at ITM.



ESG EXCELLENCE

Established ESG Committee in March 2023 to supervise ESG targets and performance



5th Year
Listed on THSI



Commended Sustainability Award
Awarded by SET in 2023



AAA rating
Awarded by SET ESG Ratings



5 Stars & 5 Coins
Awarded by IOD and TIA



ASEAN Asset Class
from 2021 ASEAN Corporate Governance Scorecard

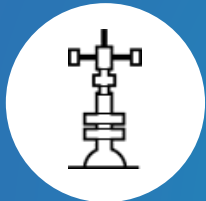
Environmental stewardship and commitment to the SDGs



'Integrated energy solutions' 2024

ENERGY RESOURCES

Shale Gas



830 MMcfed*
Net production

ENERGY GENERATION

Renewable Power



645 MW
Committed capacity

ENERGY TECHNOLOGY

Rooftop & Floating Solar



258 MW
Committed capacity

Mining



40.8 Mt
Coal sales

Thermal Power



4,008 MW
Committed capacity

Clean Energy Tech



3.0 GWh (100% basis)
Li-ion batteries



E-mobility services
E-mobility solutions



Smart Cities &
Energy Management



831 GWh*
Electricity trading

Note: *As of June 30, 2024

Banpu Gas: 2Q24 performance

NATURAL GAS

The 2Q24 financial performance demonstrates Banpu's resilience and ability to generate sustainable and positive cash flow at the beginning of the commodity price recovery.

Gas Sales Volumes

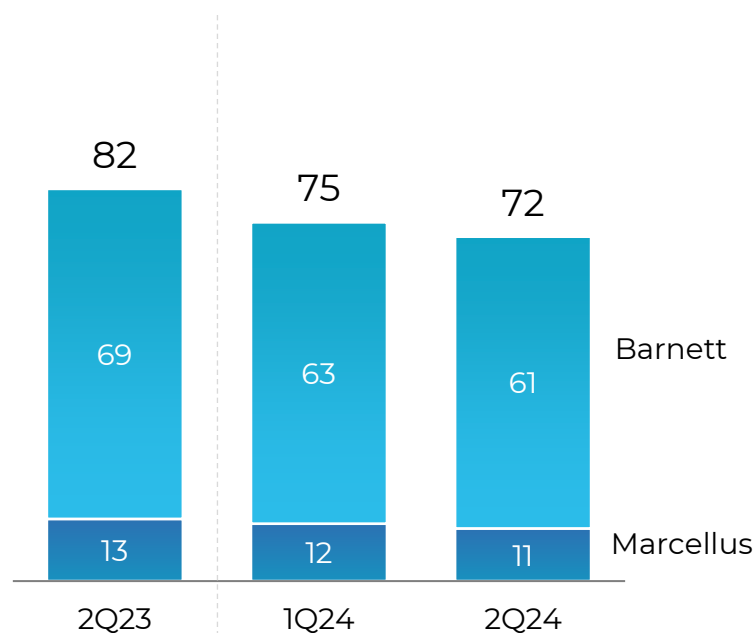
Unit: Bcfe⁽¹⁾

-10%

YoY

-3%

QoQ



CCUS Sequestered Carbon Volume

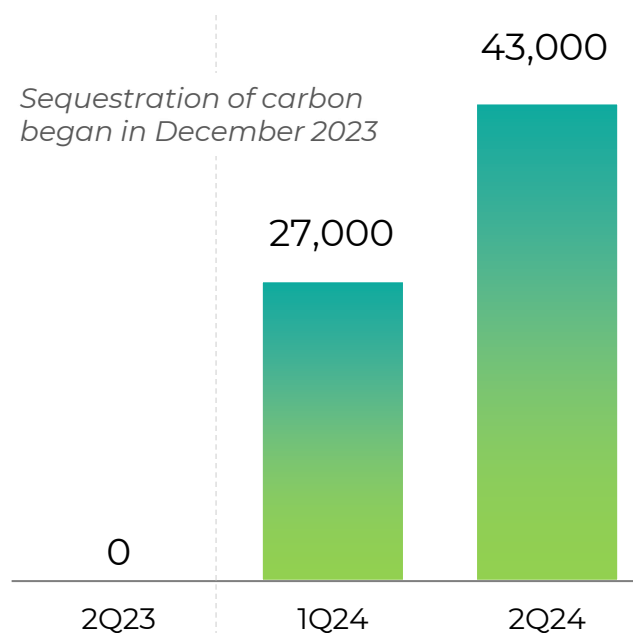
Unit: Tons of CO₂e

n.a.

YoY

+59%

QoQ



Total Realized Revenue⁽²⁾

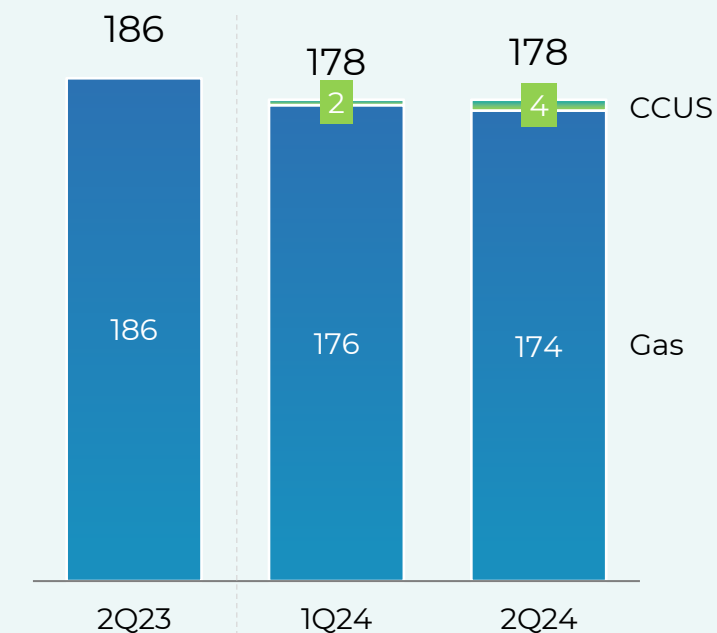
Unit: \$M

-4%

YoY

0%

QoQ



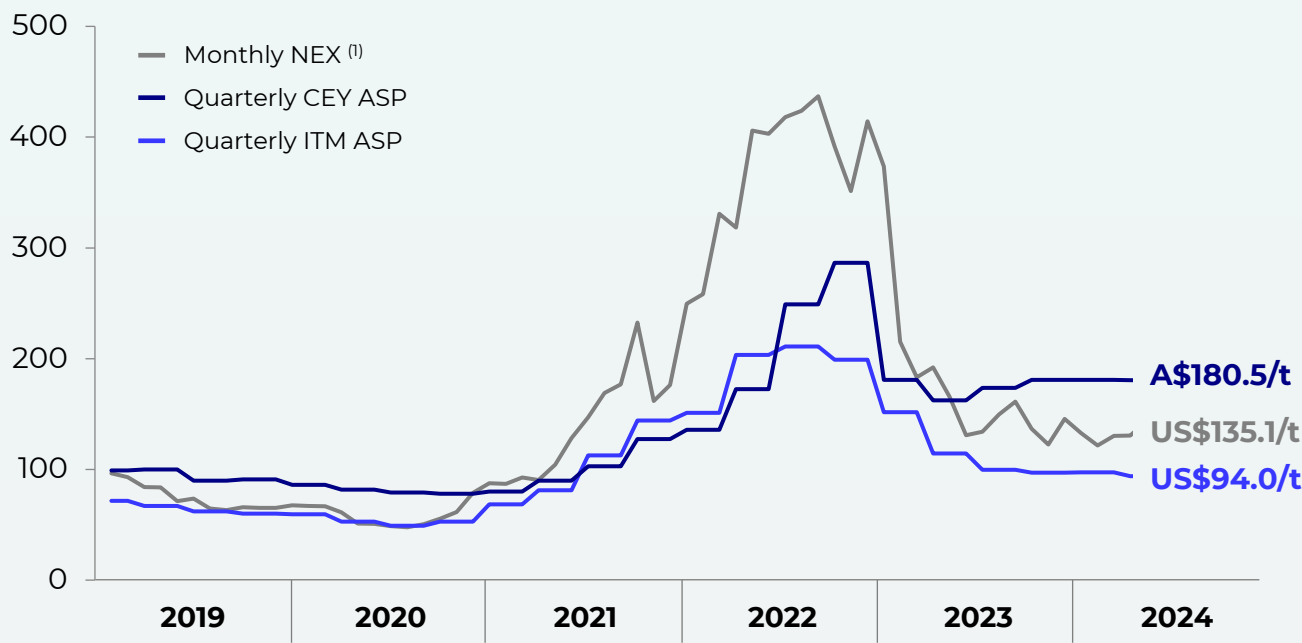
Note: (1) Bcfe = Billion cubic feet equivalent; (2) IFRS total realized revenue. Significant differences between IFRS and BKV total revenues and other operating income include net derivative gains and losses, marketing, non-operated midstream revenues, and others

Banpu Mining:

Banpu coal sales price

Banpu coal ASPs vs. thermal coal benchmark prices

Unit: US\$/t; A\$/t for CEY



ITM ASP ⁽²⁾ (2Q24)	CEY ASP (2Q24)	ASP domestic (2Q24)	ASP export (2Q24)
US\$94.0/t	A\$180.5/t	A\$177.0/t	A\$199.0/t
-3% QoQ	+0% QoQ	+1% QoQ	-2% QoQ

Note:

(1) The Newcastle Export Index (NEX)

(2) Includes post shipment price adjustments as well as traded coal. CEY sales volume 2Q24 : 84% domestic & 16% export, 1Q24 : 80% domestic & 20% export

Comments

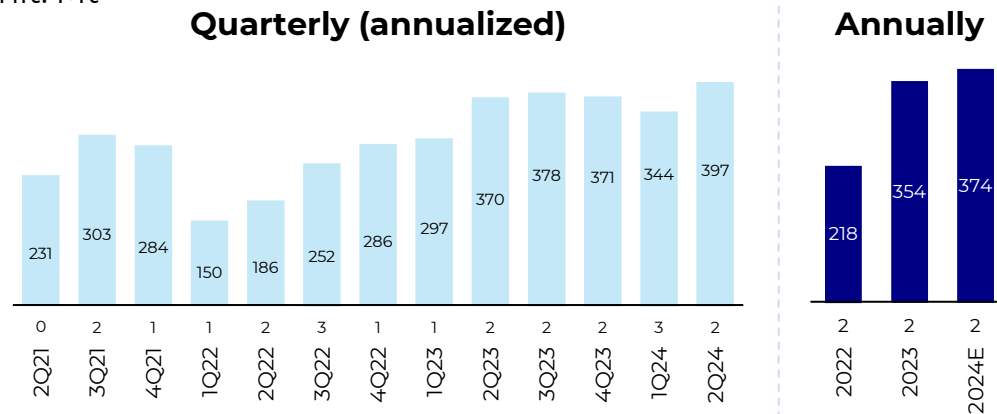
- The seaborne premium thermal coal market remained stable throughout 2Q24, with the weekly GCNewc fluctuating between \$125-145 per ton.
- The market for lower-quality thermal coal remained relatively stable, slightly weakening from the previous quarter due to increased supply from Indonesia.
- Throughout 2Q24, ICI2 hovered between \$89.8-96.8 per ton, ICI3 within \$72-74.5 per ton, and ICI4 maintained a narrow range of \$53-56 per ton.
- We anticipate that the global seaborne thermal market will continue to remain stable through 2024, with overall supply and demand dynamics expected to be well balanced. The production increase from Indonesia will be mostly absorbed by strong demand from China, South Asia, and Southeast Asia.



Price competitiveness supports import despite weak economy

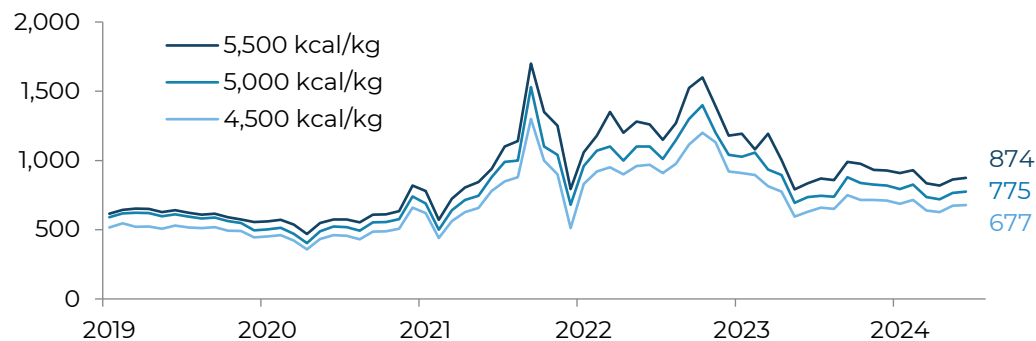
CHINA THERMAL COAL IMPORTS/EXPORTS*

Unit: Mt



CHINA DOMESTIC COAL PRICES

Unit: RMB/t



Note: *Includes lignite but excludes anthracite imports/exports

Source: www.sxcoal.com/cn (19th July 2024), Banpu MS&L

2Q24

- China's GDP grew 4.7% YoY in 2Q24, down from 5.3% in the previous quarter and below the 5.0% annual target.
- QHD prices fell further in 2Q24 due to economic slowdown, increased hydro power generation, improved domestic coal production, and high imports.
- Heavy rainfall in June boosted hydro generation, reducing coal-fired output.
- Thermal power output increased 1.7% YoY to 3,005 TWh in 1H24, while hydropower rose 21.4% YoY to 552 TWh.
- China mined 2.27 bn tons of coal in 1H24, down 1.7% YoY due to safety inspections.
- Thermal coal imports were 185 Mt in 1H24, increasing by 11.2% YoY, supplementing the decline in domestic output.
- High imports and lower coal consumption led to elevated coastal stockpiles, which will take time to destock and help prevent summer price rises.

OUTLOOK

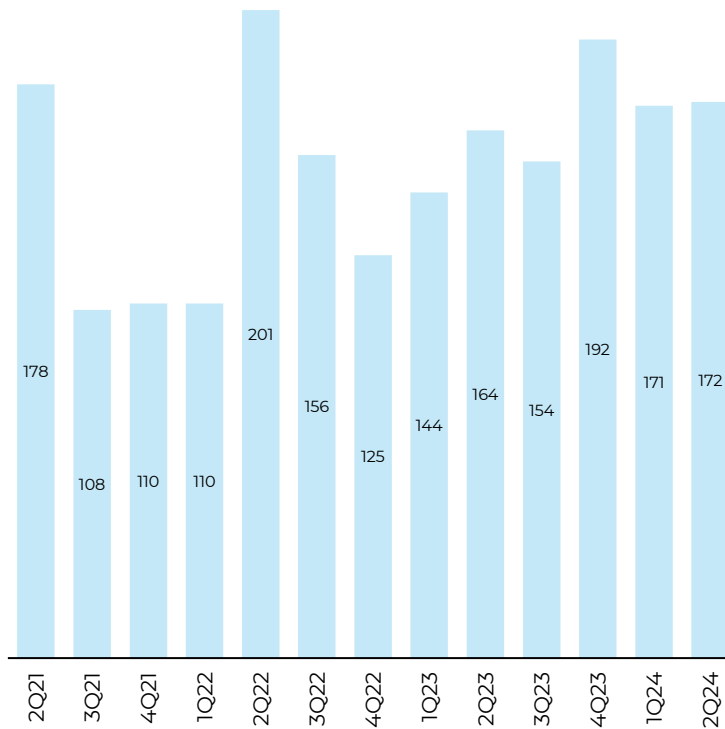
- GDP growth is expected to recover in 2H24 as central and local governments assist real estate developers in repaying and deferring maturing loans to boost the economy. More stimulus packages are anticipated.
- Power generation is expected to be strong in 3Q24 due to peak summer demand, but coal burn will be limited by strong hydro generation and slow economic recovery.
- Coal production shows signs of recovery due to government directives, but safety inspections following frequent accidents in June will impact 3Q24 production.
- Seaborne thermal coal imports are expected to remain stable, with competitive prices against domestic coal in coastal areas.

Heat waves drove a record power demand in Q2

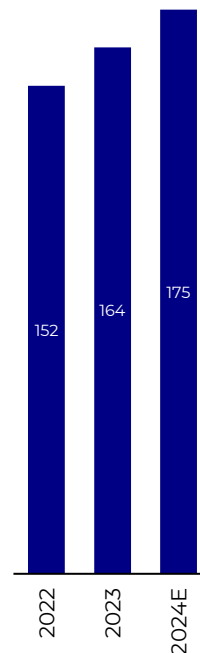
INDIA THERMAL COAL IMPORTS*

Unit: Mt

Quarterly (annualized)



Annually



Note: *Includes lignite grade imports

Source: Commodity Insights, Banpu MS&L

2Q24

- India's electricity demand surged in 2Q24 due to a hot summer across the country, boosting cooling needs.
- Total electricity generation hit a record 418.7 TWh, up by 10.9% YoY and 11.4% from 1Q24. Power output for 1H24 reached 794.6 TWh, increasing by 8.6% YoY.
- Imported coal-fired generation rose 15.8% YoY to 365 TWh in 2Q24 due to high power demand and low hydro output. Non-power sectors also saw solid coal demand due to robust industrial activity.
- Domestic thermal coal production strongly grew by 11.1% YoY reaching 232 Mt but reduced from 294 Mt in 1Q24 due to the monsoon.
- Thermal coal imports in 2Q24 were 43.1 Mt, increasing 5.4% YoY and 0.7% from 1Q24. Imports for 1H24 rose to 85.9 Mt, growing 11.6% from the same period in 2023.

OUTLOOK

- Indian electricity demand is expected to ease slightly in 3Q24 due to the monsoon but will remain high overall.
- Above-average monsoon rainfall could boost hydropower generation and limit coal-fired generation.
- Heavy monsoon rains might disrupt domestic coal production and hinder mining and transportation in 3Q24.
- The Power Ministry has extended the mandate for all Gencos to raise imports and boost generation until Oct 15, while reducing the imported coal blend requirement from 6% to 4% due to declining domestic coal supply during the monsoon.
- Coal demand is expected to accelerate after the monsoon and as government infrastructure spending increases post-elections. However, significant growth in thermal coal imports is not expected, though imports will help stabilize demand.

Quarterly output summary

AUSTRALIA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON EQUITY BASIS					
Mines	CV (kcal/kg)	4Q23	1Q24	2Q24	3Q24e
Western operations		1.1	0.6	1.5	1.5
Springvale	6,700	0.6	0.2	1.1	0.8
Clarence	6,700	0.3	0.2	0.3	0.4
Airly	6,700	0.2	0.2	0.1	0.3
Northern operations		0.8	0.8	0.7	0.9
Mandalong	6,700	0.5	0.6	0.5	0.6
Myuna	6,700	0.3	0.2	0.2	0.3
Total Australia Coal		1.9	1.4	2.2	2.4

INDONESIA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON 100% BASIS									
Mines	CV (kcal/kg)	4Q23		1Q24		2Q24		3Q24e	
		Output (Mt)	Strip ratios (bcm/t)	Output (Mt)	Strip ratios (bcm/t)	Output (Mt)	Strip ratios (bcm/t)	Output (Mt)	Strip ratios (bcm/t)
Indominco	5,950 – 6,250	1.5	14.3	1.8	13.8	1.7	11.9	1.9	13.1
Trubaindo	6,550 – 6,700	0.4	23.1	0.8	13.3	0.6	17.2	0.7	12.0
Bharinto		1.3	13.4	2.2	7.3	1.8	7.1	2.5	7.6
Jorong*	5,300	0.1	11.0	0.1	4.2	0.1	3.9	--	--
Graha Panca Karsa**	3,600 – 3,800	--	--	0.0	16.3	0.2	5.0	0.5	3.1
Tepian Indah Sukses**	6,550 – 6,700	--	--	--	--	0.0	43.5	0.1	18.8
Total Indonesia Coal		3.4	15.0	4.9	10.6	4.3	10.5	5.6	9.9

CHINA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON 100% BASIS					
Mines	CV (kcal/kg)	4Q23	1Q24	2Q24	3Q24e
Gaohe	4,500 – 6,800	2.3	1.9	2.2	2.3
Hebi	5,050 – 6,800	0.2	0.3	0.3	0.3
Total China Coal		2.5	2.2	2.5	2.6

Note: CV figures are air-dried basis

Remark: *In the process of preparing new coal mining area for operation by early 2025

**First coal operation in 2024

2Q24 rooftop and floating solar updates

ACCELERATING DEVELOPMENTS ACROSS BANPU GEOGRAPHIES

THAILAND

100 MW

Total committed capacity

- New contract signing with C.N.I. Engineering Supply Phase 2 and Impact Challenger Phase 2 Production for a total capacity of 0.6 MW in 2Q24.
- New commercial operations with NSL Food, TTB Industry, S.C.S. Shoes, Apex-Smart Place, Rugby School Phase 5 and T.A.C. Consumer for a total capacity of 2.9 MW.

CHINA

66 MW

Total committed capacity

- Committed capacity of solar rooftop project at Zhengding. CHP, with a current operating capacity is 15.4 MW.

VIETNAM

62 MW

Total committed capacity

- Committed capacity of solar rooftop project for Solar ESCO, with a current operating capacity of 30 MW.

INDONESIA

32.3 MW

Total committed capacity ⁽¹⁾

- IBP has signed additional solar rooftop PPA of 5 MW in 2Q24.
- Currently, the total installed capacity is approximately 8 MW.



Banpu:

FX impact analysis guidance on P&L

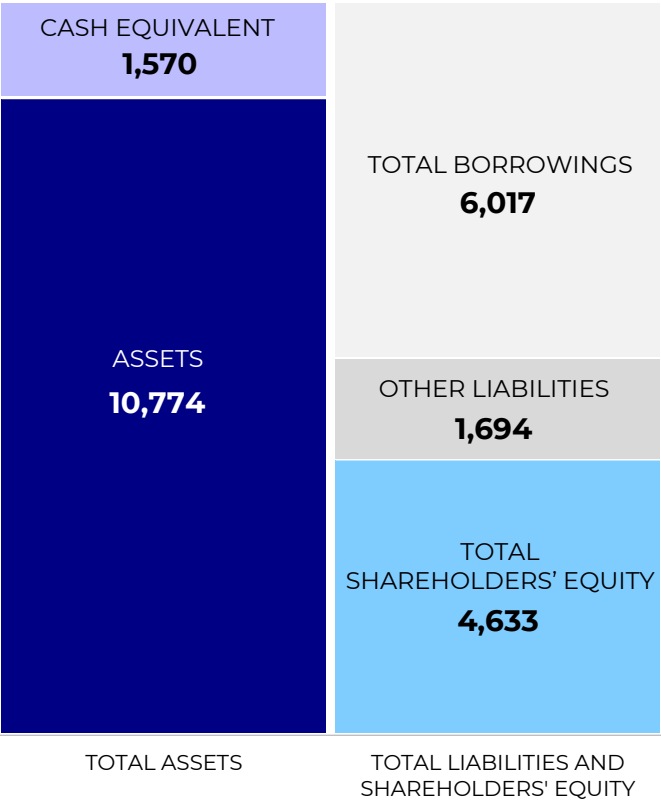
CURRENCY EXPOSURE	NPAT IMPACT 2Q24 (US\$M)	APPROXIMATE FX EXPOSURE (US\$M)		NPAT 5% SENSITIVITY 3Q24 (US\$M)
		Net liability	Net asset	Assuming 5% depreciation of local currencies against USD
Banpu: AUD asset, THB bond, and others	26.8	-1,800		THB 88
				▪ BOT forecast 2024 GDP at 2.6% and 2025 GDP at 3.0%
			400	AUD -18
ITMG: IDR asset and liabilities	-8.8		150	IDR -7
				▪ BI forecast 2024 GDP to 4.7-5.5%
BPA: USD asset	-0.2		5	AUD 0.3
				▪ RBA lower 2024 GDP at 1.3% and forecast 2025 at 2.55%
Net	17.8			Net 59

Banpu consolidated financials:

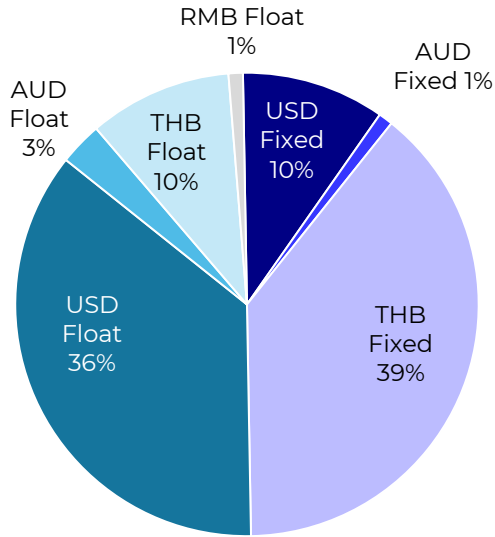
Balance sheet – 2Q24

2Q24 CONSOLIDATED FINANCIAL POSITION

US\$ M



DEBT FX STRUCTURE

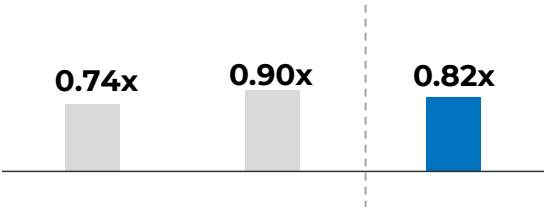


US\$6,017 bn

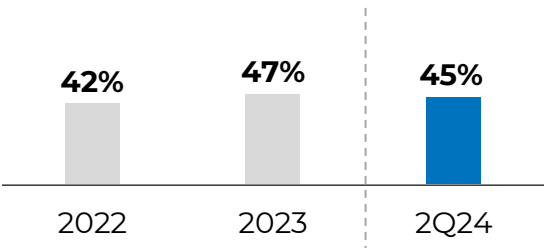
Total gross debt (30th June 2024)

GEARING RATIOS

Net debt / Equity* (x)



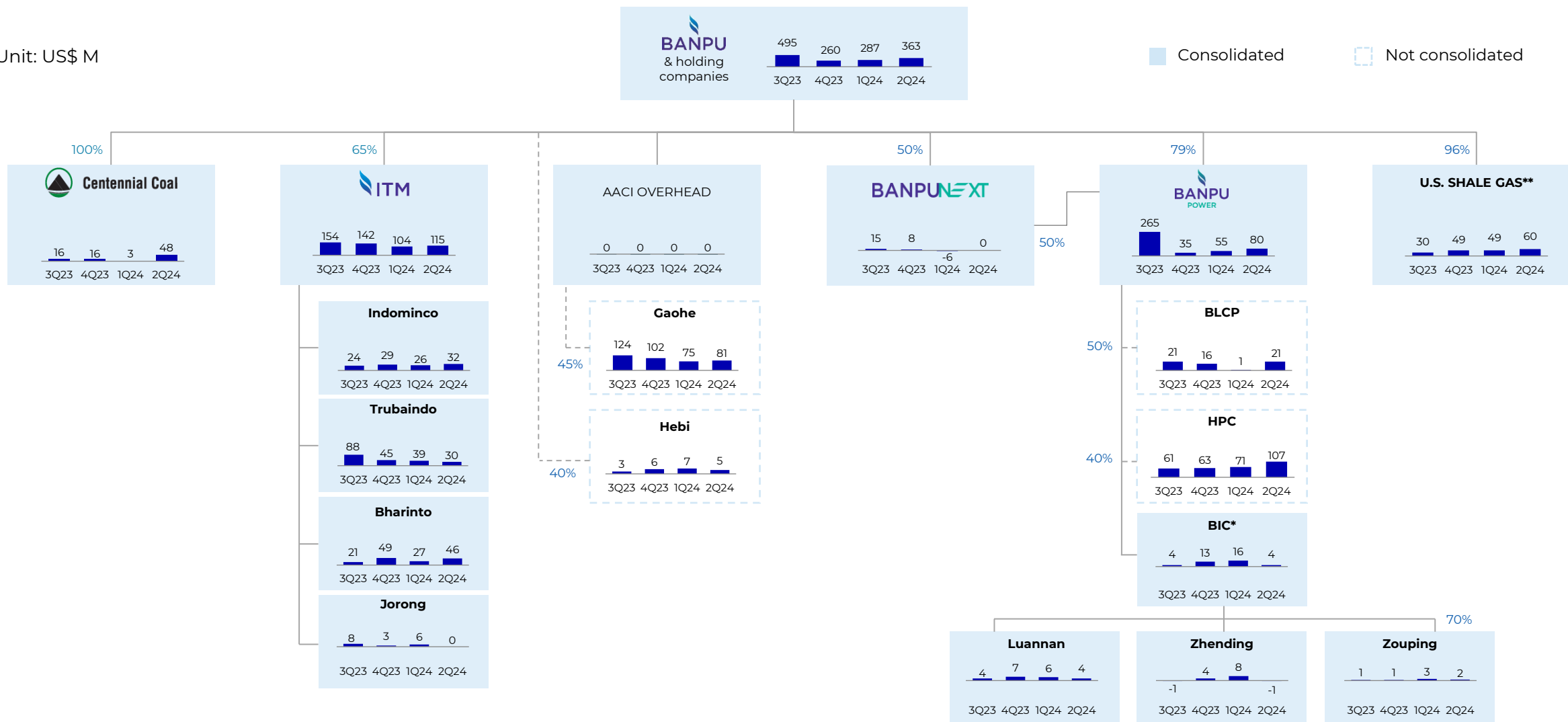
Net market gearing** (%)



Note: *Net debt to book value of shareholders' equity; **Net debt to enterprise value (enterprise value = net debt + book value of shareholders' equity)

Banpu group: EBITDA breakdown

Unit: US\$ M



Note: all ownership 100% unless otherwise shown

*Banpu Investment China

**IFRS EBITDA. Significant differences between IFRS and BKV US GAAP EBITDAX include treatment of derivative gains and losses, depletion expense, accretion expense, stock compensation expense, BNAC expenses, equity income, and contingent consideration gains and losses of asset acquisitions

Banpu group: Net debt breakdown

Unit: US\$ M



Note: All ownership 100% unless otherwise shown; *Banpu Investment China

Operating profit

US\$ M	2Q24	1Q24	2Q23	QoQ%	YoY%
Total sales revenues*	1,308	1,134	1,158	+15%	+13%
Sales revenue – Coal**	856	711	826	+21%	+4%
Sales revenue – Gas	178	178	186	0	-4%
Sales revenue – Power	204	202	97	+1%	+111%
Sales revenue – Energy Technology	19	8	30	+121%	-37%
Cost of sales	(981)	(898)	(863)		
Gross profit*	326	235	295	+39%	+11%
Gross profit – Coal**	254	189	258	+34%	-2%
Gross profit – Gas	31	16	8	94%	+276%
Gross profit – Power	29	30	20	-5%	+39%
Gross profit – Energy Technology	6	3	5	+120%	+9%
Gross profit margin (GPM)	25%	21%	26%		
<i>GPM – Coal</i>	<i>30%</i>	<i>27%</i>	<i>31%</i>		
<i>GPM – Gas</i>	<i>17%</i>	<i>9%</i>	<i>4%</i>		
<i>GPM – Power</i>	<i>14%</i>	<i>15%</i>	<i>21%</i>		
<i>GPM – Energy Technology</i>	<i>32%</i>	<i>32%</i>	<i>18%</i>		

Note: *Including other businesses; **Including coal trading

Operating profit

US\$ M	2Q24	1Q24	2Q23	QoQ%	YoY%
Gross profit	326	235	295	+39%	+11%
GPM	25%	21%	26%		
SG&A	(120)	(114)	(123)		
Royalty	(82)	(64)	(91)		
Income from associates	58	31	83		
Other income and Dividend	26	76	22		
Mining property	(10)	(7)	(6)		
EBIT	199	156	180	+27%	+11%
EBIT – Coal	123	126	137	-2%	-10%
EBIT – Gas	17	3	(11)	+490%	n.a.
EBIT – Power	63	40	56	+58%	+12%
EBIT – Energy Technology	(4)	(12)	(2)	-67%	+122%
EBITDA	363	287	326	+26%	+11%
EBITDA – Coal	223	190	212	+17%	+5%
EBITDA – Gas	60	49	45	+22%	+34%
EBITDA – Power	80	55	68	+46%	+18%
EBITDA – Energy Technology	(0)	(6)	2	n.a.	n.a.

Net profit

US\$ M	2Q24	1Q24	2Q23	QoQ%	YoY%
EBIT	199	156	180	+27%	+11%
Interest expenses	(110)	(101)	(86)		
Financial expenses	(6)	(2)	(3)		
Income tax (core business)	(22)	(19)	(37)		
Minorities	(26)	(23)	(50)		
Net profit before extra items	35	11	5	+215%	+612%
Non-recurring items*	6	(7)	4		
Gain (Loss) on Derivatives Transactions	(11)	0	(30)		
Income tax (non - core business)	(9)	(1)	(32)		
Deferred tax income (expenses)	(14)	(48)	(29)		
Net profit before FX	8	(44)	(82)	n.a.	n.a.
FX translation	18	87	69		
Net Profit	26	44	(13)	-41%	n.a.
EPS (US\$/share)	0.003	0.004	(0.002)		

Note: *Income from non-core assets and other non-operating expenses

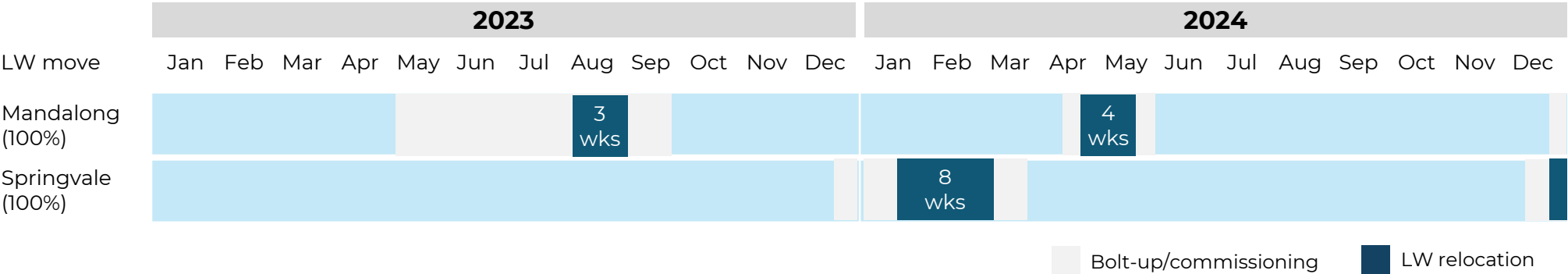
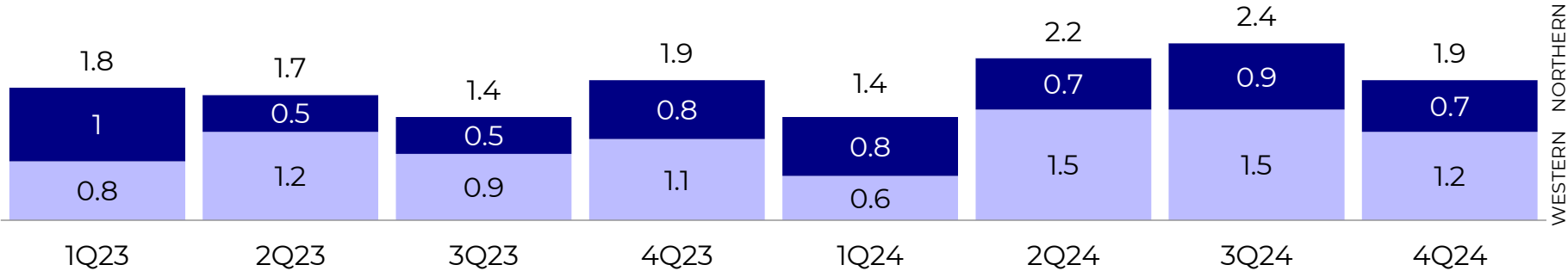
Income statement

US\$ M	2Q24	1Q24	2Q23	QoQ%	YoY%
Sales volume (Mt)	2.4	1.7	1.6	+44%	+48%
Sales revenue	284.9	196.9	175.3	+45%	+63%
Cost of Sales	(246.6)	(188.2)	(199.1)		
Gross profit	38.3	8.7	(23.8)	+341%	-261%
GPM	13%	4%	-14%		
SG&A	(21.7)	(15.8)	(21.6)		
Royalty	(18.1)	(12.3)	(10.5)		
Other income	6.5	1.7	10.7		
Other expenses	-	-	-		
EBIT	5.0	(17.7)	(45.3)	n.a.	n.a.
Interest expenses	(11.1)	(10.3)	(7.9)		
Financial expenses	(1.7)	(1.6)	(1.6)		
Gain (loss) on exchange rate	(0.2)	1.1	2.2		
Gain (loss) on derivative	(0.4)	(3.2)	(3.7)		
Corporate income tax	-	-	-		
Deferred tax income	2.6	9.5	19.6		
Net Profit	(5.9)	(22.1)	(36.7)	n.a.	n.a.

Australia coal:

Quarterly equity rom output

Total equity ROM (Mt)



Note: Production generally responds to the timing of longwall changeovers (i.e., lower production results during a longwall changeover period)



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