



2Q22 results

Opportunity Day

23rd August 2022



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**Highlights
2Q22**

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US Gas
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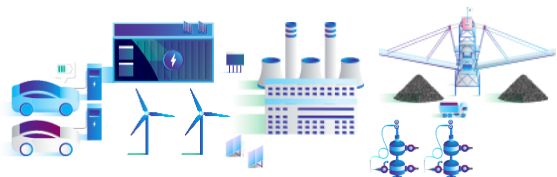
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Accelerating Banpu's Sustainability Transformation

Significant progress in Greener, Smarter businesses through developments in:

XTO Barnett completion



Completed **\$750 M** acquisition of **XTO Barnett**, further strengthening Banpu's position as one of the leading natural gas producer in the US

JV in Thailand Battery Plant

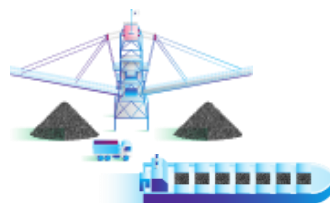


Banpu NEXT has signed an MoU with Cherdchai and Durapower to build a Li-on battery plant in Thailand, with **projected capacity expansion to 1 GWh** by 2026



Robust Cash Flow Generation

EBITDA for the quarter was **\$948 M** with strong contribution from Coal and Gas businesses and incremental contribution from Greener assets



Energy Prices Strong

Gas price averages at **\$7.48/MMBtu** and coal price averages at **\$376/t** in 2Q22, due to continued strong demand amidst tight supply levels



ESG Leadership Recognition

ESG leadership recognitions across the Banpu Group, with initiatives being implemented to further decarbonize the existing portfolio



First steps into non-energy

Invested **\$150 M** in **Healthcare fund** to invest into healthcare opportunities in the US, focusing on high growth areas such as biopharmaceutical

Banpu: ESG leadership and credit rating recognition

BANPU ESG RATING



A

rating for third consecutive year for demonstrating resiliency towards long-term ESG risks and excellent risk management and mitigation relative to peers

Sustainability Award
Gold Class 2022

S&P Global

Gold

class distinction, the only company in the industry out of 29 companies being assessed to achieve the award



Best Performer

Recognized as one of the top 100 Best Emerging Market Performers, out of a universe of 843 companies from 31 different countries

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

8th

consecutive year included as a constituent of DJSI for conducting business with the highest ESG standards



7th

consecutive year in the THSI for sustainable operations and responsible investment principles



Honor

Highest distinction in SET's Sustainability Excellence Award for being awarded the Best Sustainability Award for at least 4 consecutive years

SUBSIDIARIES

ESG EXCELLENCE



In 2021, BPP demonstrated high ESG standards through sustainable and responsible operations

Sustainability Yearbook
Member 2022
S&P Global

**S&P SUSTAINABILITY
YEARBOOK MEMBER**



**RISING STAR
SUSTAINABILITY AWARD**



4TH YEAR LISTED IN THSI

**RESPONSIBLY
SOURCED GAS**



**AWARDED RESPONSIBLY
SOURCED GAS (RSG)
CERTIFICATION
WITH GOLD RATING**
by Project Canary TrustWell, a
3rd party certification company

CREDIT RATING



A Strategic Partner of S&P Global

A+

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



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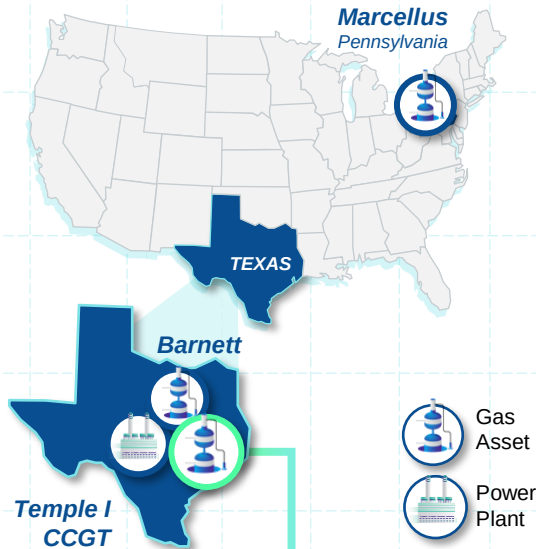
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Banpu Gas: acquisition of XTO Barnett Shale Asset in Texas

BANPU GAS : XTO BARNETT ACQUISITION

Texas, USA

BANPU GAS ASSETS



XTO BARNETT

ACQUISITION PRICE
US\$750 M

+ US\$50 M
CONTINGENCY
PAYMENT



XTO TOTAL

Avg. net production
+225 MMcfed

1P reserves
+1.4 Tcfe

Producing wells
>2,100 wells
(operated wells)

275 Mmcfed
Throughput
(incl. third party volume)
> 750 miles
of gathering pipelines
> 400 Mcfed
of peak compression



BANPU GAS TOTAL

Net production
approx. **900 MMcfed**

1P reserves
5.6 Tcfe

Producing wells
>7,000 wells



**VERTICAL INTEGRATION
ACROSS GAS VALUE CHAIN**
XTO Barnett Shale acquisition
further improves BKV's
margins and strengthen
Banpu's position in the US gas

UPSTREAM

MIDSTREAM

BANPU GAS IS AMONG THE
LARGEST US GAS
WEIGHTED PRODUCERS

**TOP
20**
in the US

**STRENGTHENING
BANPU'S POSITION**
as a leading natural gas
producer in the basin

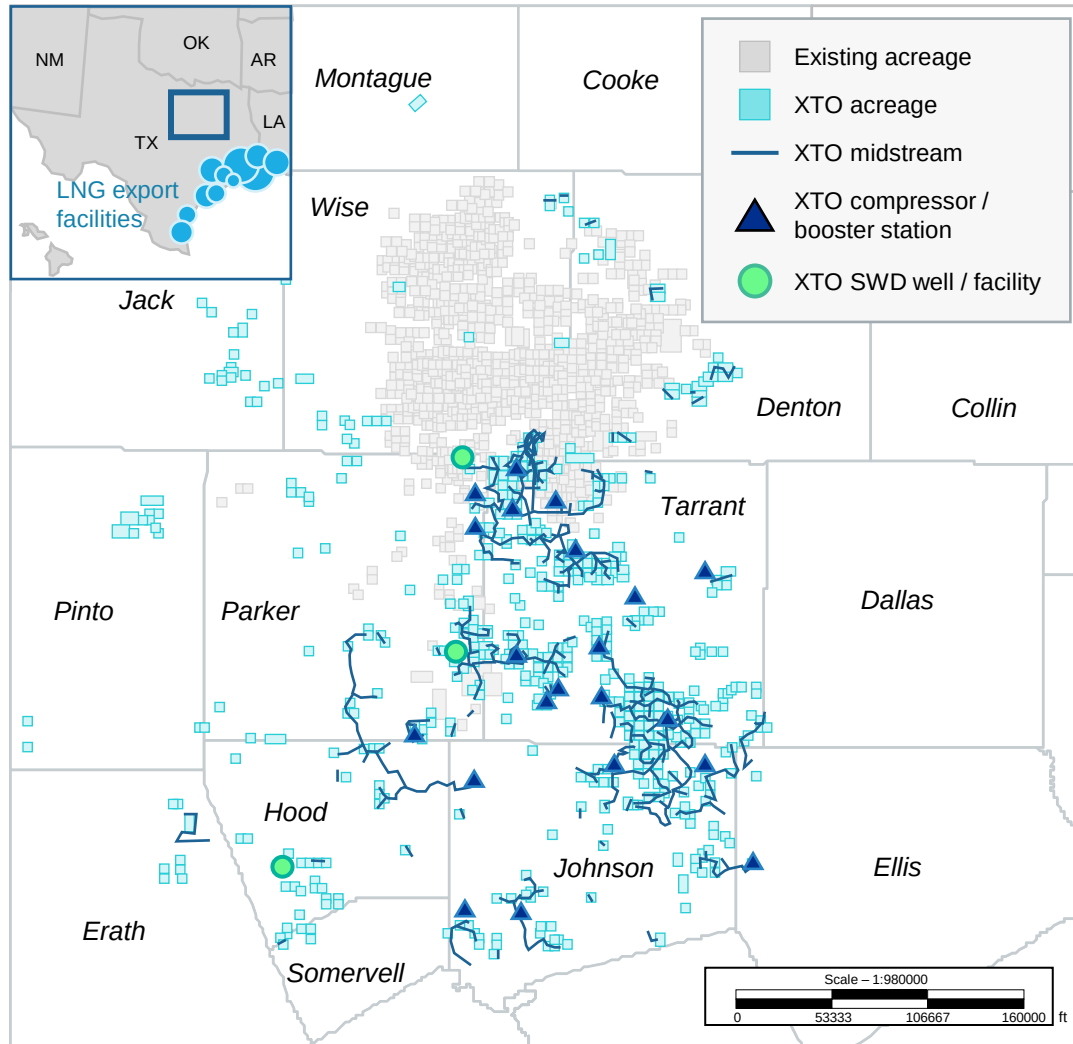
**LEADING
PRODUCER**

of natural gas in Barnett

**INCREASING BANPU GAS
TOTAL PRODUCTION**
to approx. 0.9 Bcfed

Banpu Gas: XTO Barnett overview and synergies across assets

XTO BARNETT ASSET – PROXIMITY TO EXISTING BARNETT ASSET AND LNG EXPORT FACILITIES



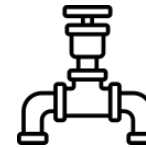
ACCESS TO GULF COAST MARKETS AND LNG EXPORT OPPORTUNITIES

Close proximity to existing Barnett assets in Texas, about 300 miles (480 km) from LNG export facilities along the gulf coast



HIGH QUALITY, LOW DECLINE PRODUCTION ASSETS

Sustainable free cash flow generation from production, low capex and low operating expenses with opportunity to expand inventory



DIRECT MARKET ACCESS WITH MIDSTREAM INFRASTRUCTURE

Integrated midstream system (pipelines and compressors) with capacity for additional third party volumes



SYNERGISTIC VALUE CREATION FROM ASSETS CONSOLIDATION

Strengthening market position with larger production volume with higher savings for G&A costs and lease operating expenses (LOE)

Banpu Gas: growth strategy

UPSTREAM – MIDSTREAM



OPERATIONAL INTEGRATION

Implement operational technology already being used in Barnett to improve efficiencies at the new XTO assets



PRODUCTION RAMP UP

Through effective production development program and evaluation of developable reserves at the new XTO assets



MARGIN ENHANCEMENT

Consolidation of marketing operations to create savings for G&A costs and lease operating expenses



UPSTREAM – DOWNSTREAM

BASIN FOCUSED

Well positioned to expand further in upstream in Barnett and Marcellus shale



DOWNSTREAM ACQUISITIONS

Explore synergistic acquisition opportunities in downstream gas and infrastructure



NET ZERO PURSUIT

Target net zero scope 1 and 2 emissions in owned and operated upstream business through development of CCUS projects and carbon negative initiatives



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KEY FIGURES

EBITDA **\$948 M**

Strong result driven by Coal and Gas business contribution, supported by commodity price levels. Stable contribution from Power and other businesses.

NPAT **\$372 M**

Strong performance, with strong EBITDA generation and improved operational results

ND/E **1.13 x**

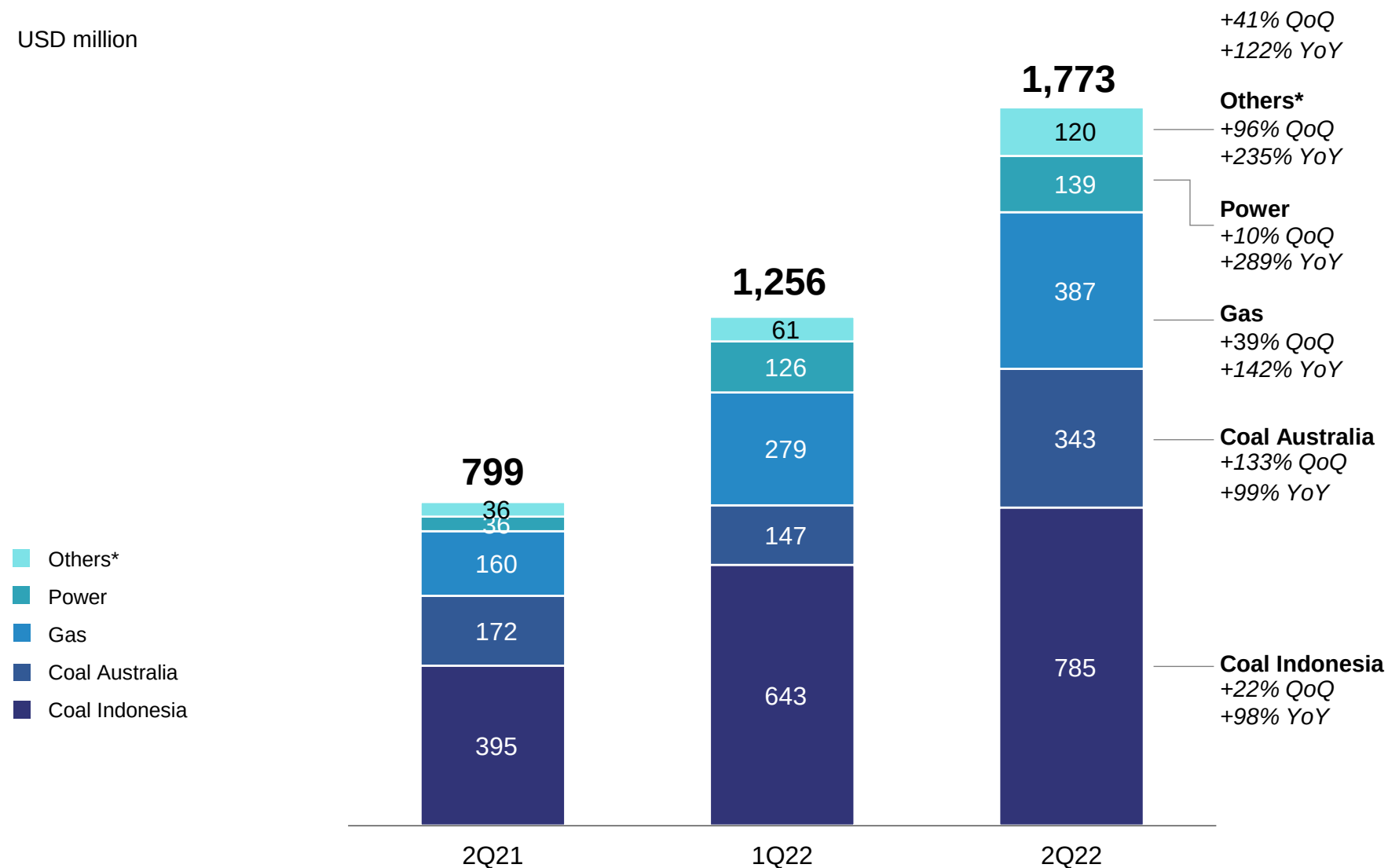
ND/E remained at similar levels compared to 1.10x in the previous quarter

KEY TAKEAWAYS

- 1 Continuous strong Coal business performance:** from solid production volume and higher ASP, compared to relatively strong levels of 1Q22, driven by strong coal prices, demand and supply tightness
- 2 Strong contributions from Gas business:** supported by high average local price* levels and stable production volumes
- 3 Strategic positioning:** Coal and Gas businesses well-positioned to benefit from current commodity price levels and demand upside
- 4 Greener, Smarter investments:** cashflow generation captured from Greener Investments including: Nakoso IGCC, Australia Solar, Temple I CCGT, Japan Solar, Vietnam Wind, Vietnam Solar and XTO Barnett in the near-term future

Banpu consolidated sales revenues – 2Q22

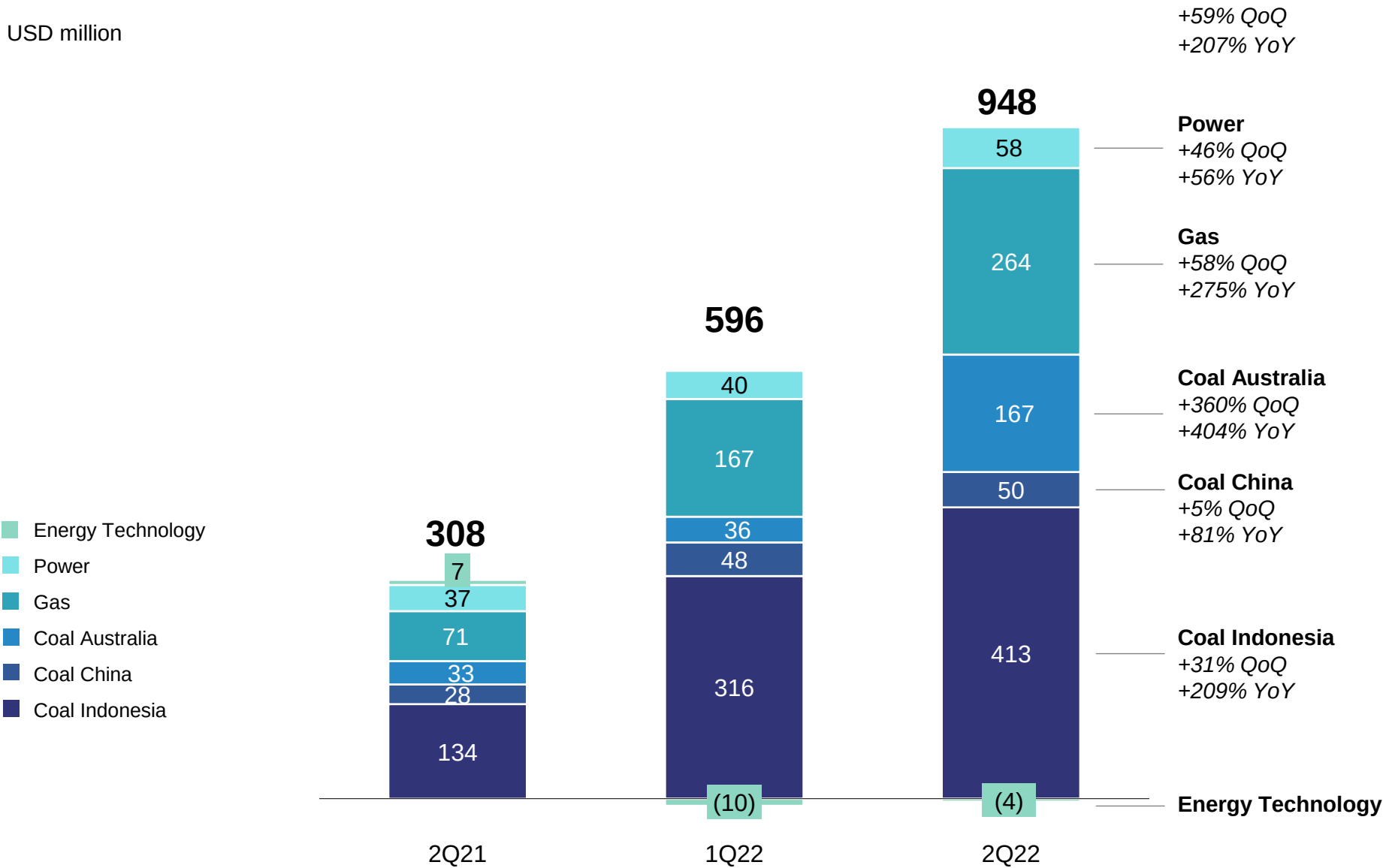
USD million



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

Banpu consolidated EBITDA – 2Q22

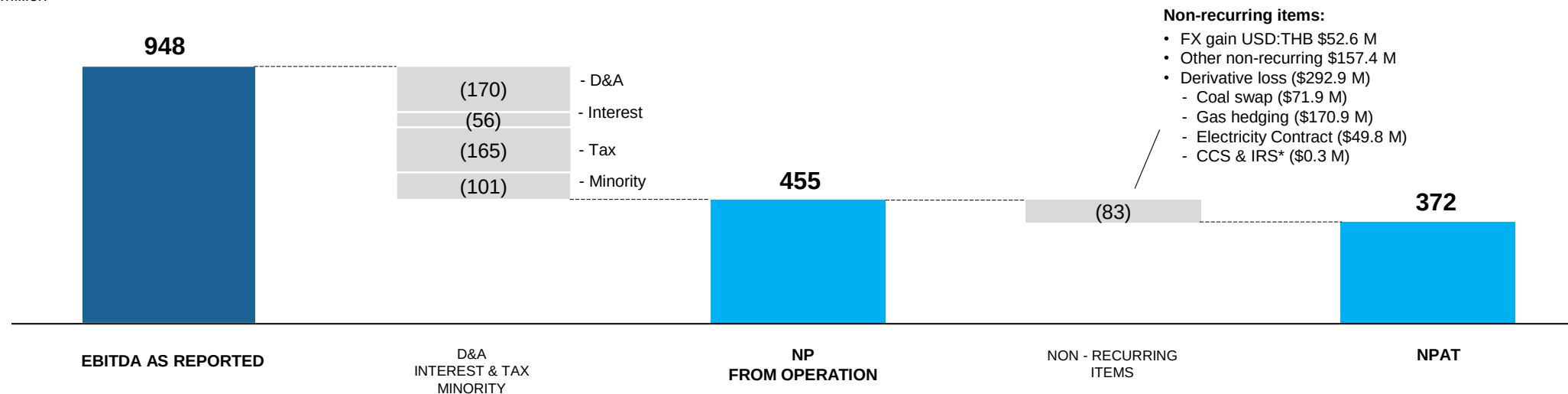
USD million



Banpu consolidated NPAT – 2Q22

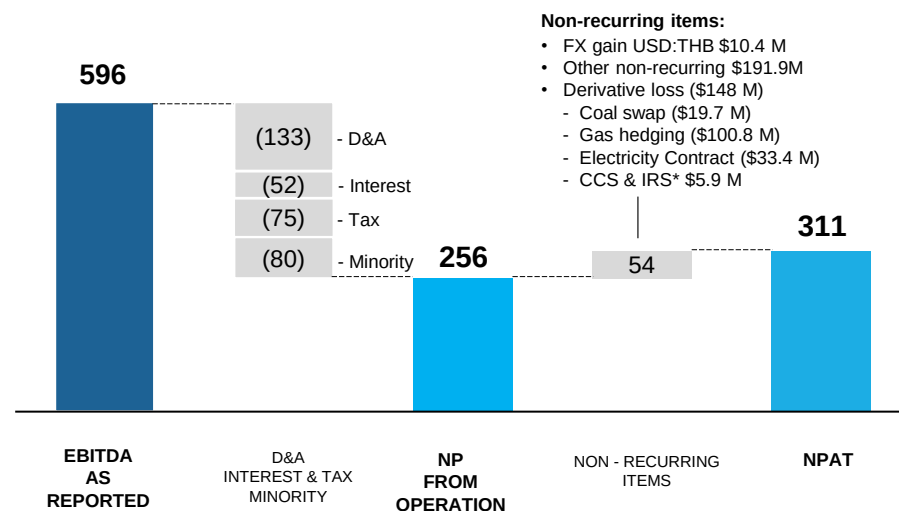
2Q22 NET PROFIT AFTER TAX

USD million



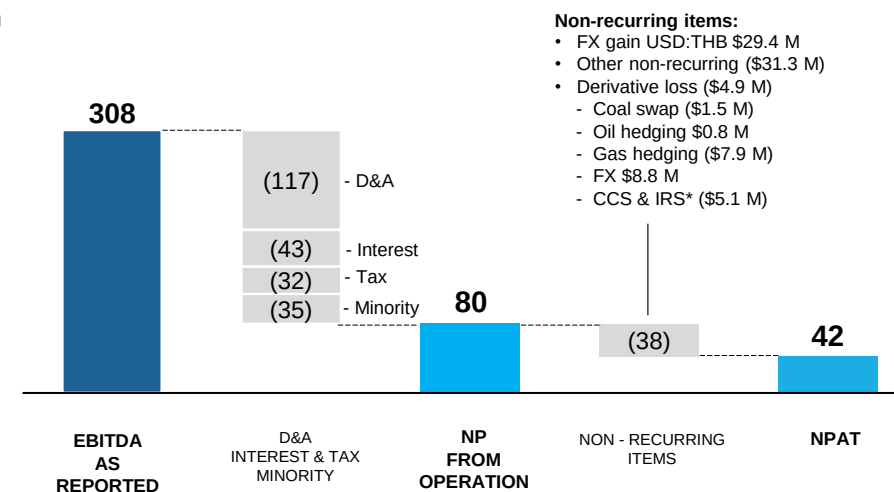
1Q22 NET PROFIT AFTER TAX

USD million



2Q21 NET PROFIT AFTER TAX

USD million



Note: *cross currency swap, interest rate swap



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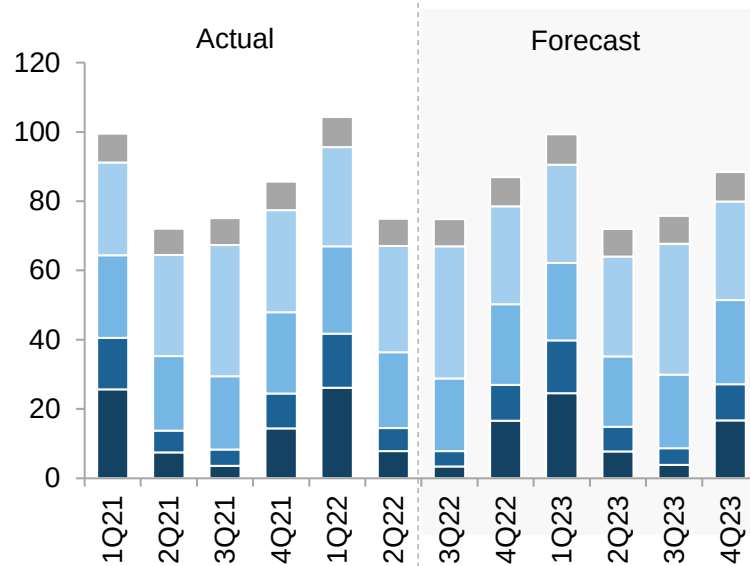
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U.S. gas market update

US CONSUMPTION & PROJECTION

Unit: Bcf/d

- Residential
- Commercial
- Industrial
- Power
- Other

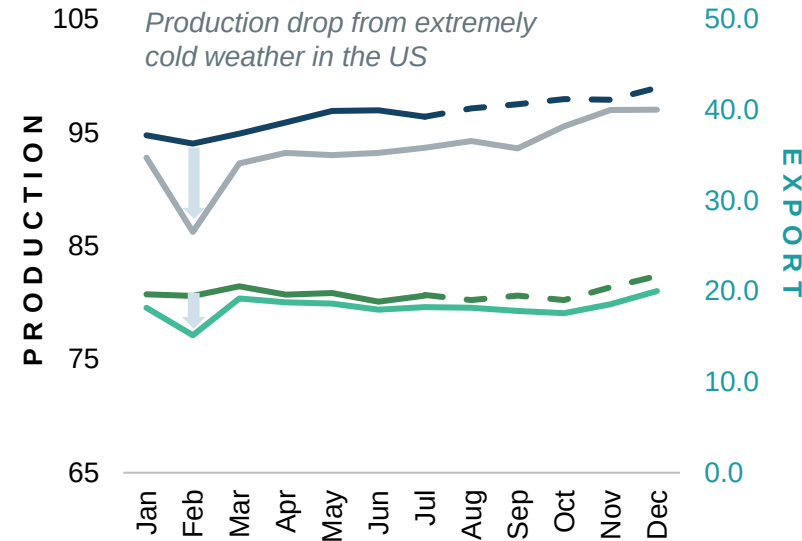


- Majority of US gas demand is domestic consumption. Price is largely determined by local demand and supply with indirect linkage to oil via associated gas production.
- Consumption in the US is forecasted to average at around 85.2 Bcf/d in 2022, up 3% from 2021.
- Gas consumption is expected to remain strong due to limited switching from gas generation to coal generation despite high gas prices and increasing residential and commercial consumption due to colder temperatures.

US NATURAL GAS PRODUCTION

Unit: Bcf/d

- 2021 act. prod.
- 2022 act. prod.
- 2022 fcst. prod.
- 2021 act. export
- 2022 act. export
- 2022 fcst. export

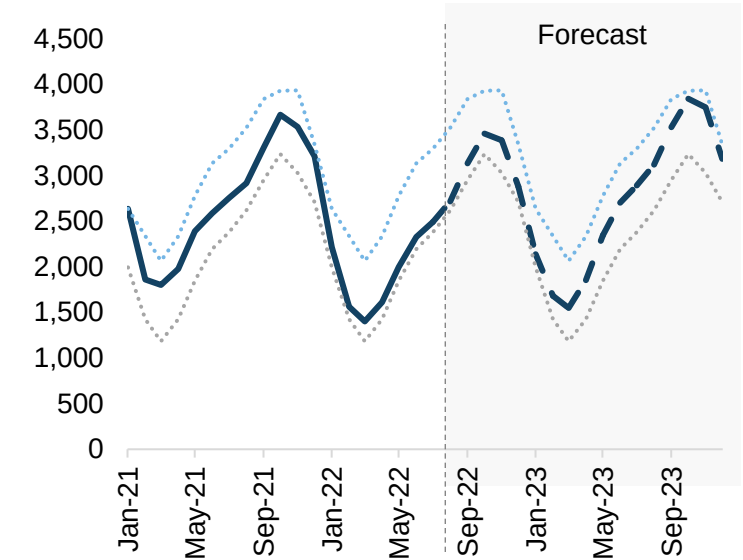


- U.S. gas production is forecasted to average at 97.1 Bcf/d in August and 96.6 Bcf/d during 2022, 3.0 Bcf/d (3%) higher than 2021.
- U.S. LNG exports are expected to remain at high levels, averaging at 10.0 Bcf/d in 3Q22, and 11.9 Bcf/d through 2022, up 14% compared to 2021. The increase is mainly due additional LNG export capacity coming online and Freeport LNG resuming operations sooner than expected, making the US the largest LNG exporter in 1H22.

U.S. STORAGE LEVEL

Unit: Bcf

- Storage
- 3yr - Low
- 3yr - High



- Natural gas inventories in July 2022 ended at 2.5 Tcf, 12% below 5-year average. Stocks were 0.3 Tcf less than last year at the same period and 0.3 Tcf below the 5Y average of 2.8 Tcf.
- At the end of 2022 injecting season (end of October), inventories are forecasted to close at around 3.5 Tcf.

U.S. gas: gas prices expected to remain high amid low storage level

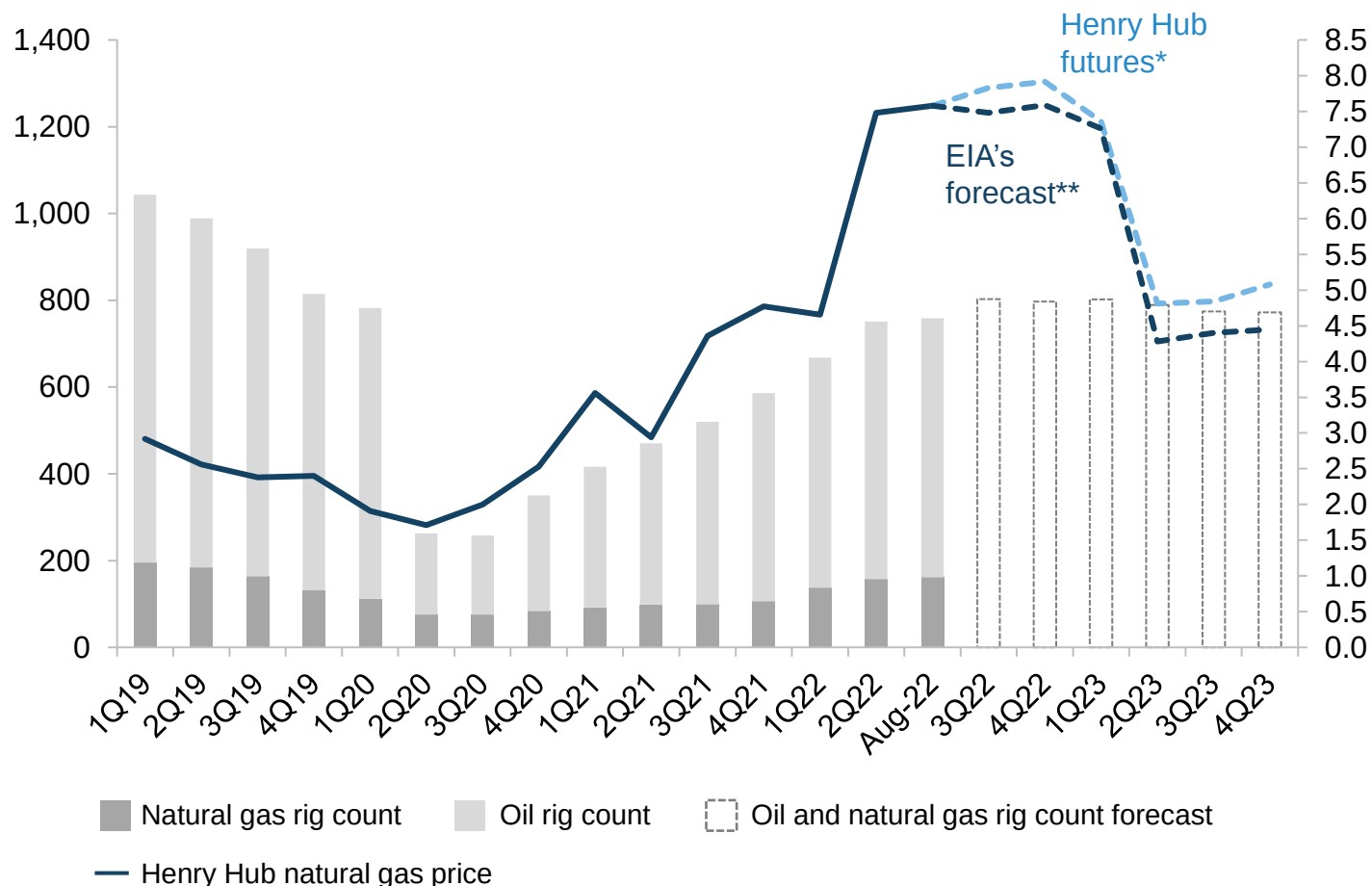
US RIG COUNT VS HENRY HUB PRICE

US OIL AND NATURAL GAS RIG COUNT

Unit: Rigs

HENRY HUB SPOT PRICE

Unit: \$/MMBtu



COMMENT

- Natural gas prices in 2Q22 increased from the previous quarter driven by continued surge in gas demand in Europe and supply disruptions globally.
- Capital spending is expected to slow down towards the end of 2022 due to the lack of completion crews to bring wells to production and increasing dividend distribution by rig operators.
- Oil and gas rigs are expected to increase slightly in 3Q22, up 7% from 2Q22 but remain at levels 23% lower than 1Q19.
- Henry Hub futures increased from last quarter to around \$7.8-7.9/MMBtu levels in 2022 and signal to decline from 1Q23 to around \$4.8-5.0/MMBtu levels.

Note: *As of August 9th, 2022, **Short-Term Energy Outlook (August 2022)

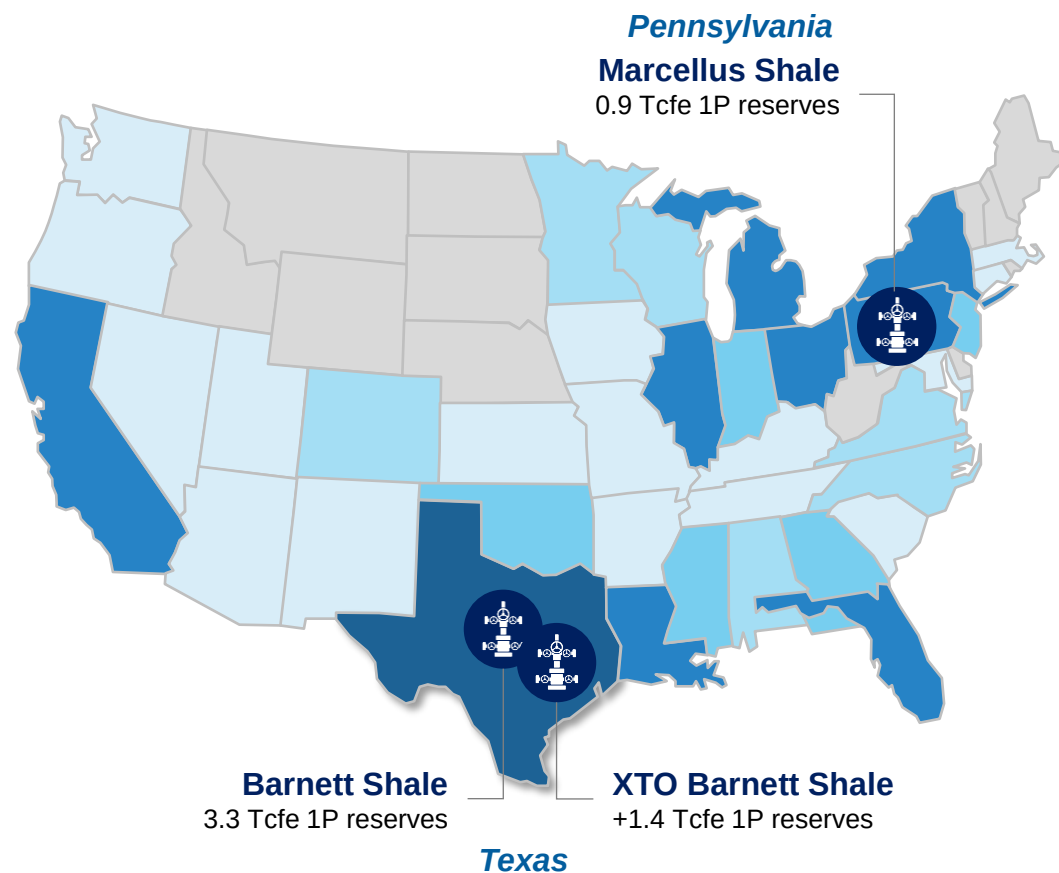
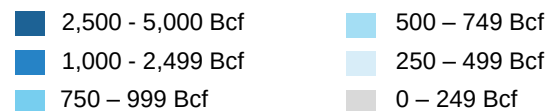
Source: IHS Markit report (July 2022) and Baker Hughes US natural gas rotary rig count (August 2022)

Banpu Gas: 2Q22 highlights

US DRY GAS CONSUMPTION 2019 BY STATE* (Bcfe)



Banpu shale
gas operations



Average local price**

\$6.64/Mcfe

+38% QoQ

Sales volume

59 Bcfe

-2% QoQ

EBITDA

\$264 M

+58% QoQ

*Source: EIA

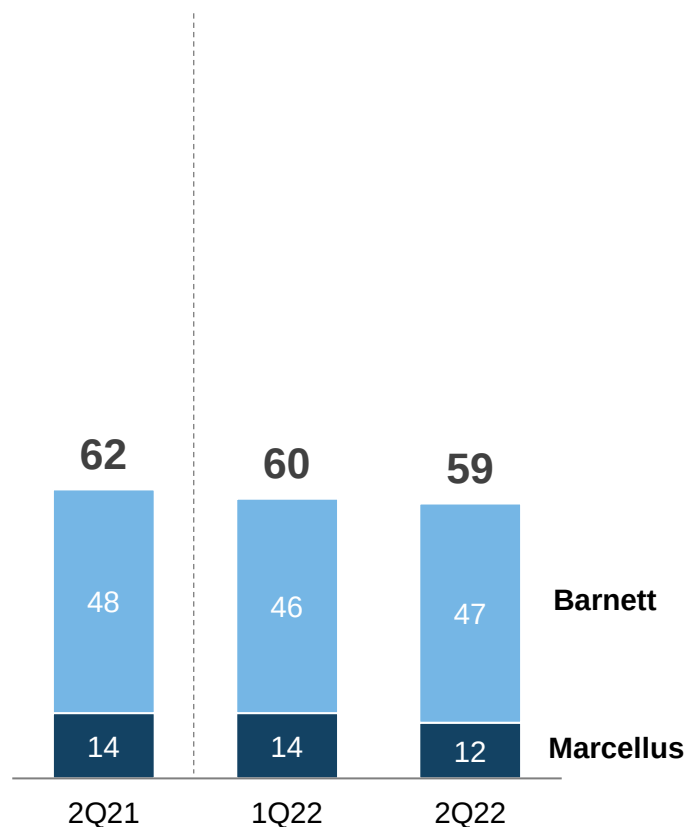
**Average local price = Henry Hub - basis differential

Banpu Gas: 2Q22 performance

2Q22 highlighted our ability to capture pricing and deliver strong production despite of inflationary price environment and the fire incident at Freeport LNG facility. EBITDA of \$264M in 2Q22.

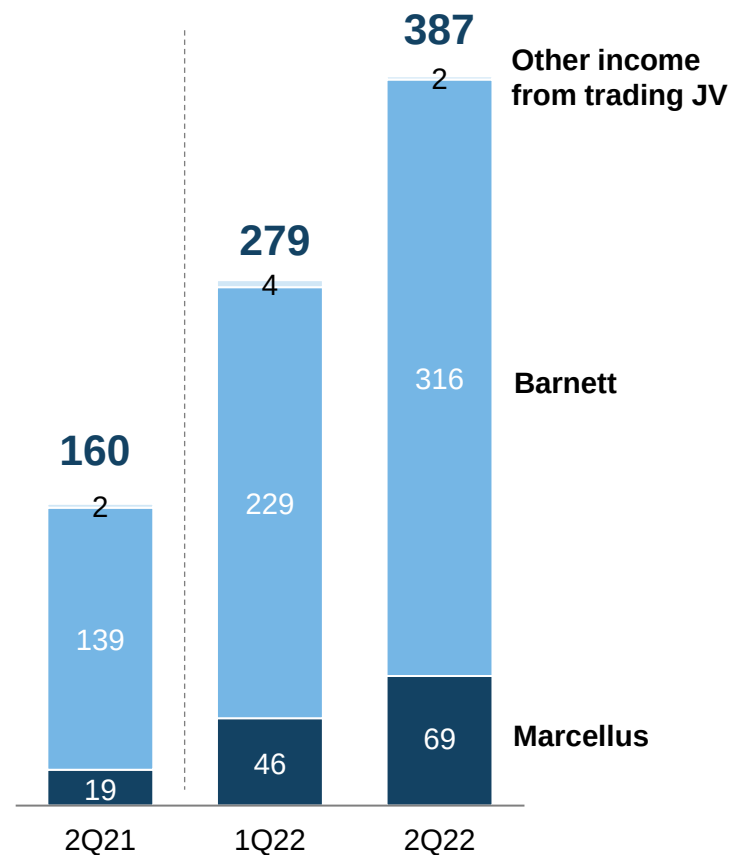
SALES VOLUMES

Unit: Bcf*



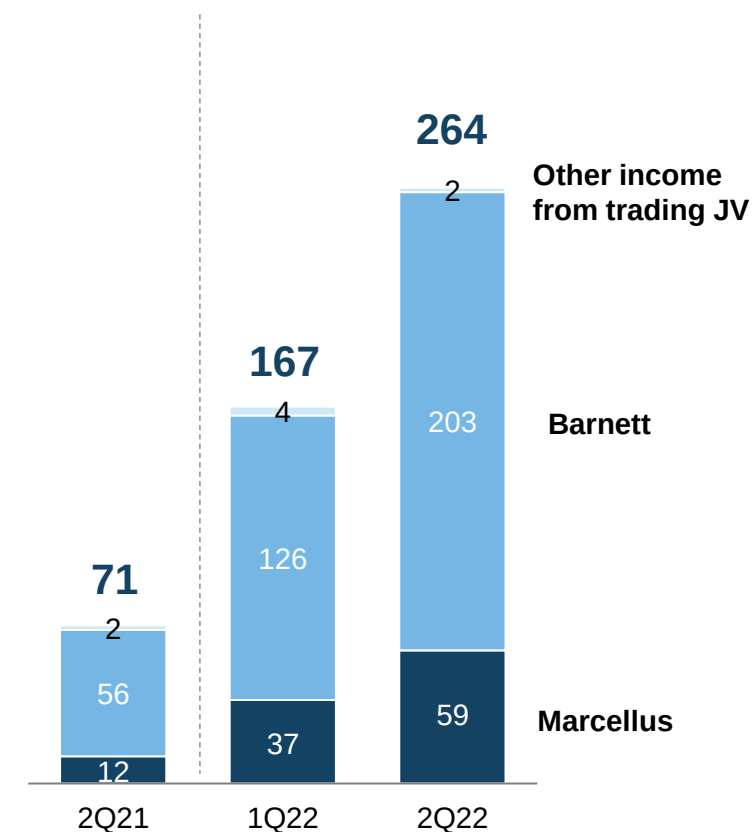
TOTAL REALIZED REVENUE

Unit: US\$M



EBITDA

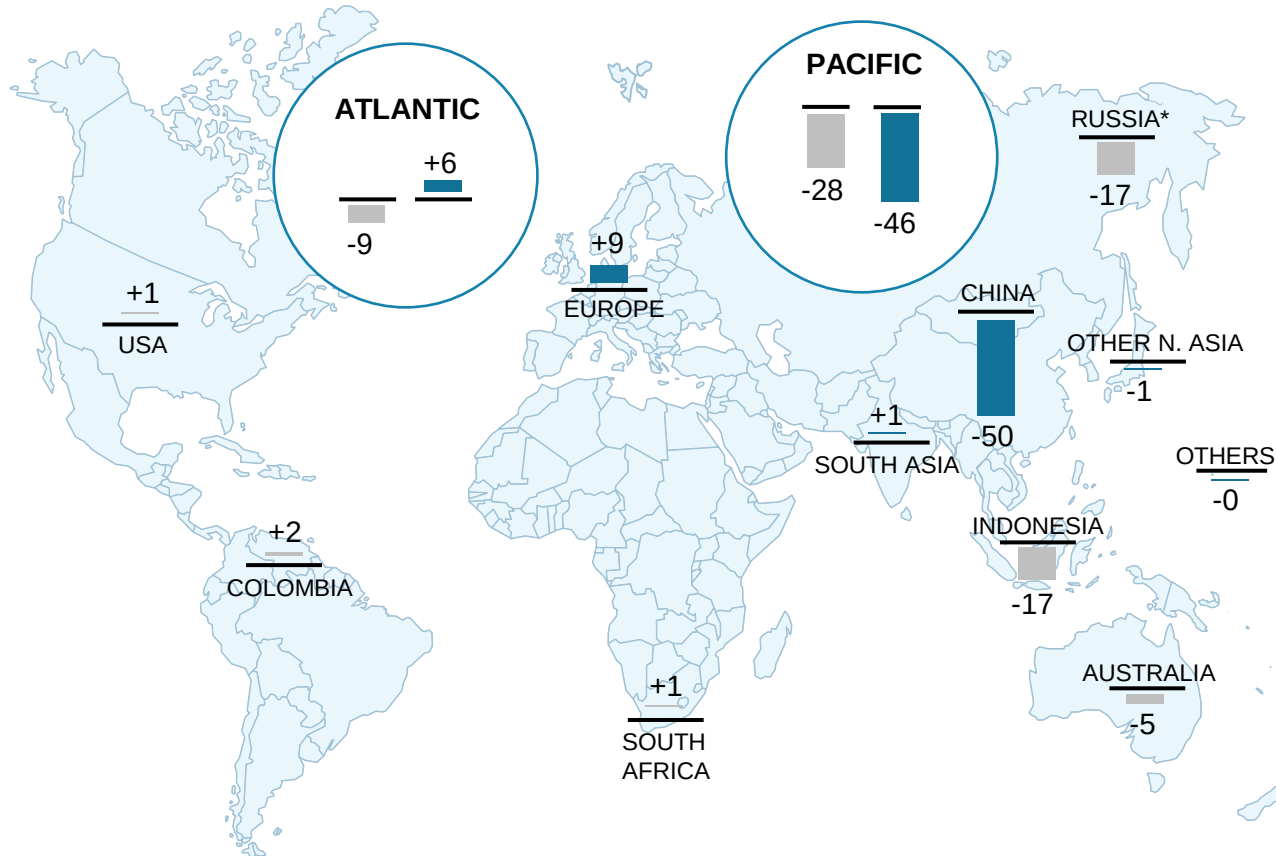
Unit: US\$M



Global thermal coal market

COAL DEMAND AND SUPPLY CHANGE – 2022E VS 2021

Unit: Mt ■ SUPPLY ■ DEMAND



Note: *Russia exports to non-CIS countries only, JKT = Japan, South Korea and Taiwan

TRENDS

DEMAND

Strong European demand and high gas prices keep Newcastle benchmark coal price at high level. Several Asian buyers could not afford at that price level, leading to some try to seek for lower CV coal while some others cut demand. China and India are ramping up domestic coal production to reduce dependency on import. Weak China and India demand pressures lower CV coal prices.

- **China:** slow economic recovery and high domestic coal production dents coal demand. An increase in seasonal hydropower output and continuing Covid-19 lockdowns in parts of the country have curtailed power consumption and coal burn. Government's intervention to stabilize coal prices will continue.
- **India:** strong demand on the increasing economic activity along with intense heatwaves. Government pushed utilities to import more coal to prevent power crisis.
- **JKT:** State-owned utilities excluding Russian coal are in their tenders while private companies continue to buy coal from Russia. South Korea's utilities shift to lower CV coal to decrease procurement costs.
- **Europe:** seasonal weak demand in Q2 but buyers race to secure supplies ahead of Russian coal sanctions deadline. Fear of gas supply cut elevated gas prices and boosted coal demand.

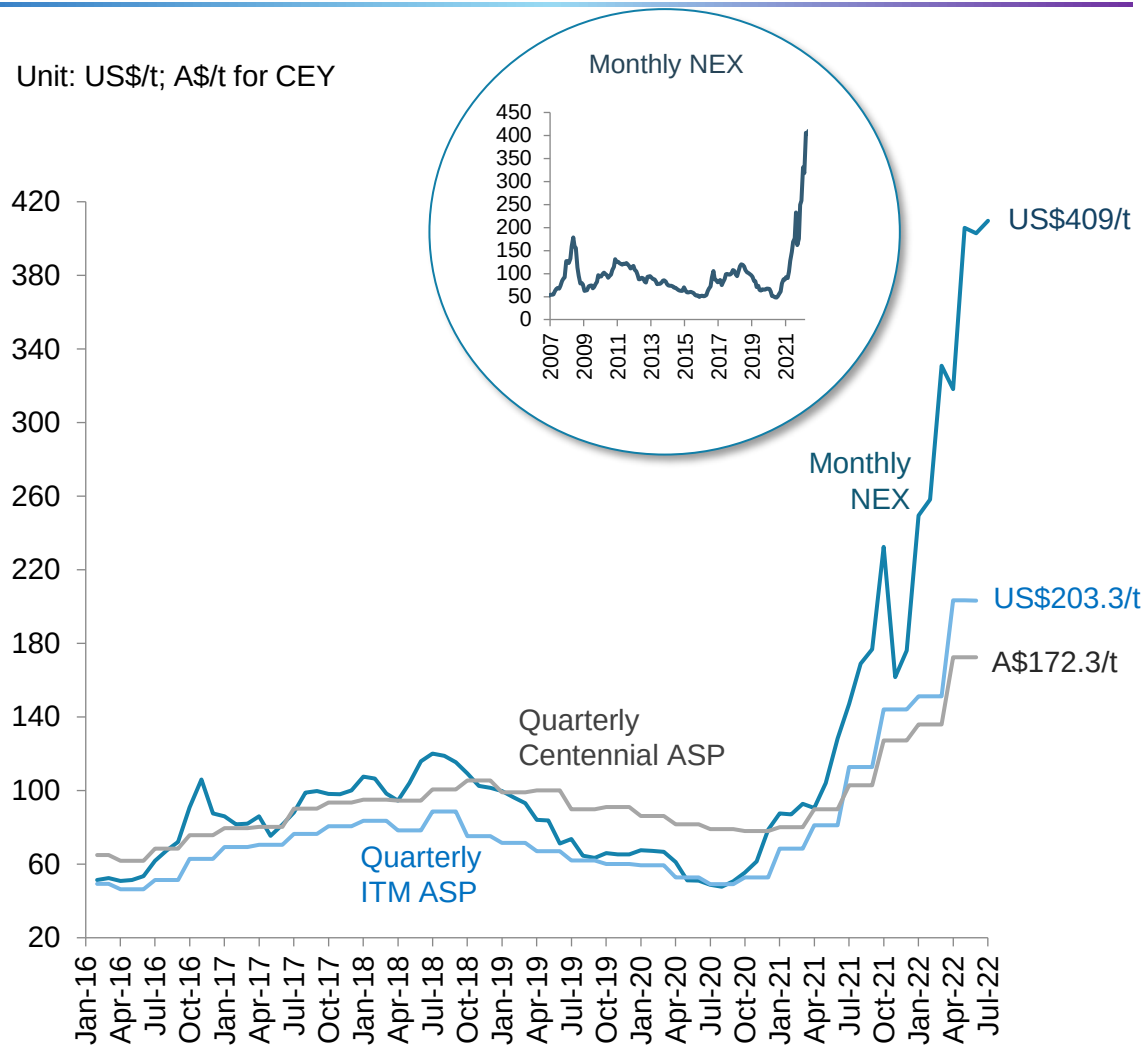
SUPPLY

HCV supply tightness continues caused by supply disruption and strong European demand amid Russia-Ukraine crisis. Ample supply of cheap Russian coal to Asia pressured mid-to-low CV coal prices.

- **Indonesia:** production improves amid high domestic demand and weak China demand.
- **Australia:** rainy season and labour shortage continue to curb output. We believe majority of HCV supply is in the term contracts, leaving limited volume for spot.
- **Others:** Russian exporters shipped as much as they can to Europe before the sanction deadline while exports to China and India rose. South African HCV coal exports to Europe rose sharply but rail issues persist. In Colombia, the Government has suspended the sale of Prodeco's mines.

Banpu ASPs vs thermal coal benchmark prices

BANPU ASP VS BENCHMARK PRICES



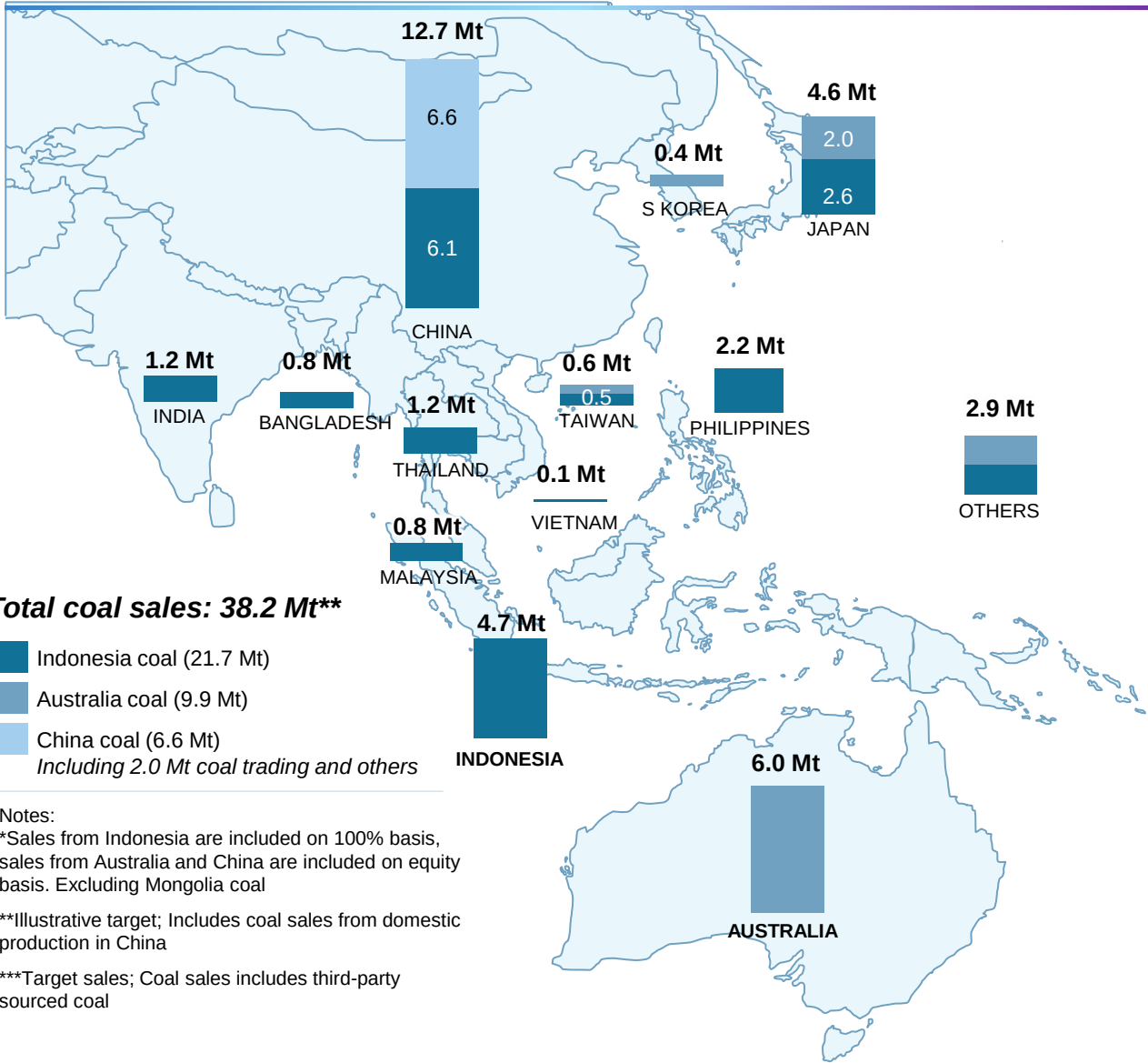
Note: *Includes post shipment price adjustments as well as traded coal
 **The Newcastle Export Index (NEX)

COMMENTS

- Seaborne premium thermal coal market remained strong throughout 2Q22 due to upward movement of gas prices as a result of the prolonged Ukraine crisis, the unexpected halving of Russian piped gas, and US LNG disruptions.
- On 23 May 2022, GCNewc reached historical record price at US\$463/t due to market concerns over uncertainties in Russian gas supply, as well as the extended outage at Freeport US LNG export facility, which led to accumulation of coal stock. The coal market began to stabilize throughout June, but coal price levels remained relatively high with monthly GCNewc prices at US\$406.52/t and US\$397.63/t in May and June, respectively.
- Compared to the strong performance of thermal coal market, the lower spec coal market has been weakening throughout 2Q22, as a result of lower import demand from China. Monthly prices of ICI3 in May and June has dropped to US\$143.36/t and US\$138.48/t, respectively.
- Market tightness for premium thermal coal is expected to continue in the upcoming quarter due to supply shortages in major coal exporting countries. Concurrently, the off-spec thermal coal market has been weakened due to lower import demand from China, while supply, mainly from Indonesia, remain robust.
- Group ASPs in 2Q22 continue to increase, particularly in export portions.
- Key price metrics:
 - ITM ASP 2Q22 : US\$203.3/t* (+35% QoQ)
 - CEY ASP 2Q22 : A\$172.3/t* (+27% QoQ)
 - ASP Domestic A\$80.2/t (+2% QoQ), ASP Export A\$353.1/t (+37% QoQ)
 - NEX (August 12, 2022)**: US\$412.32/t

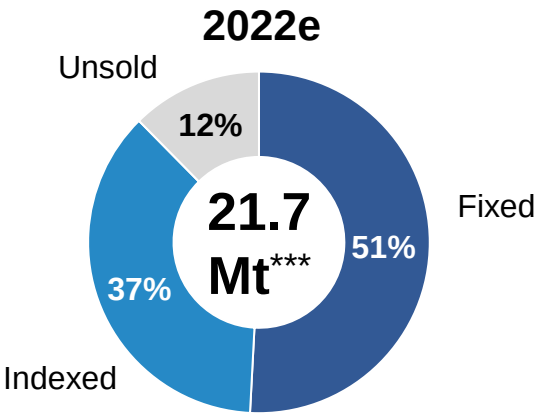
Banpu Mining: group coal sales and pricing status 2022e

2022e COAL SALES* SOURCE – DESTINATION ANALYSIS

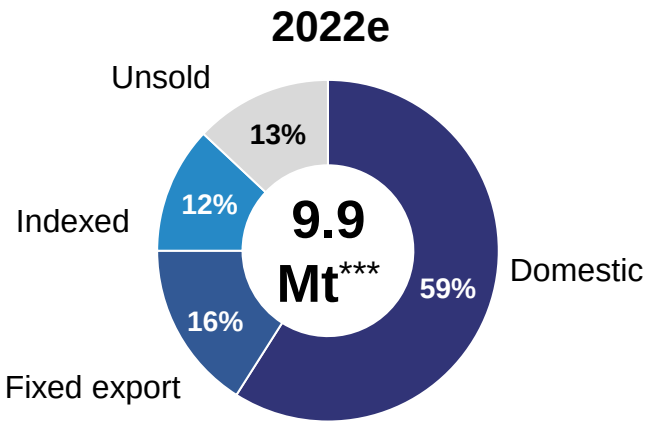


COAL SALES PRICING STATUS

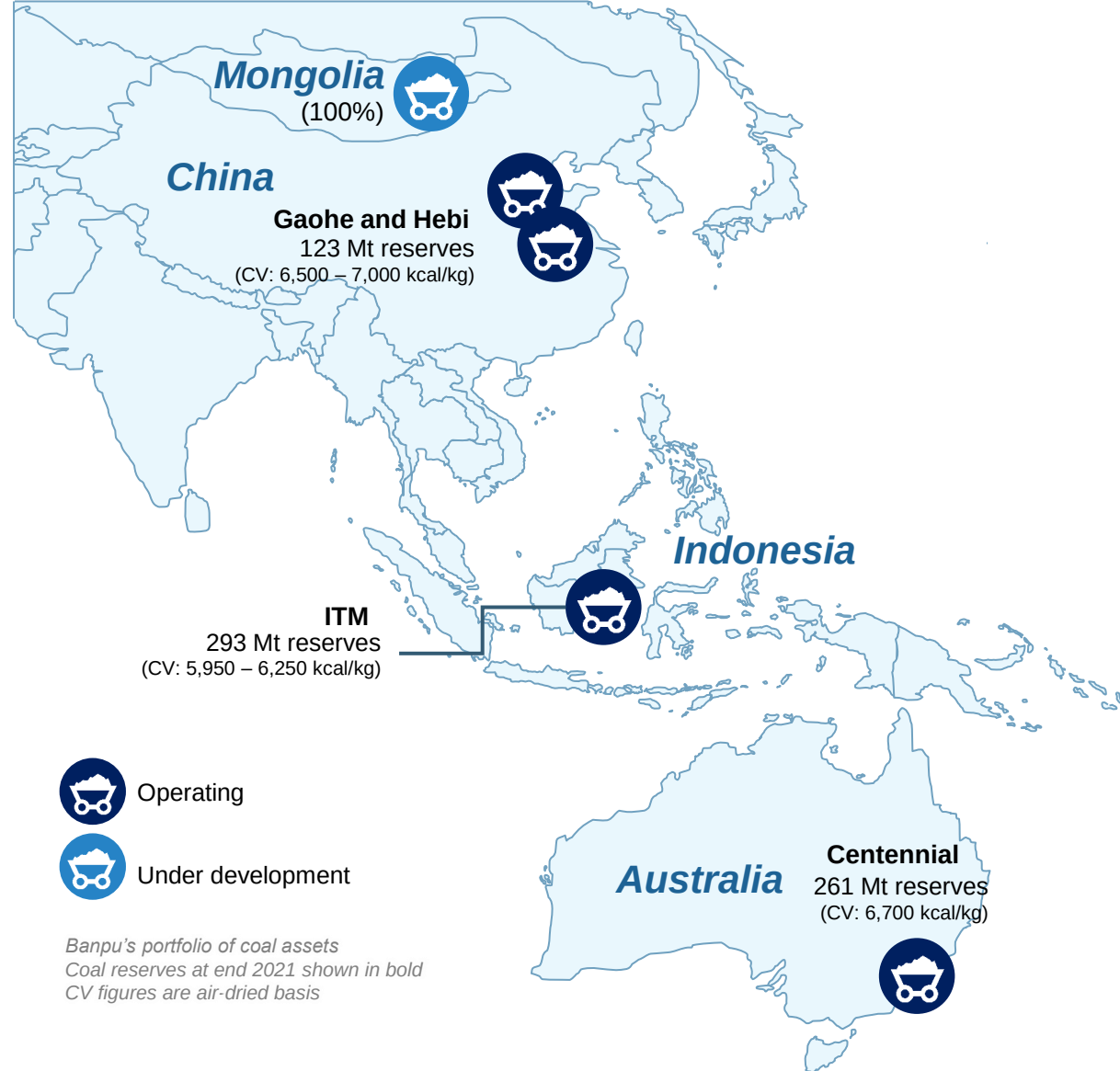
INDONESIA



AUSTRALIA



Banpu Mining: 2Q22 highlights



Production volume*

8.8 Mt

+9% QoQ

Sales volume*

10.1 Mt

+16% QoQ

EBITDA

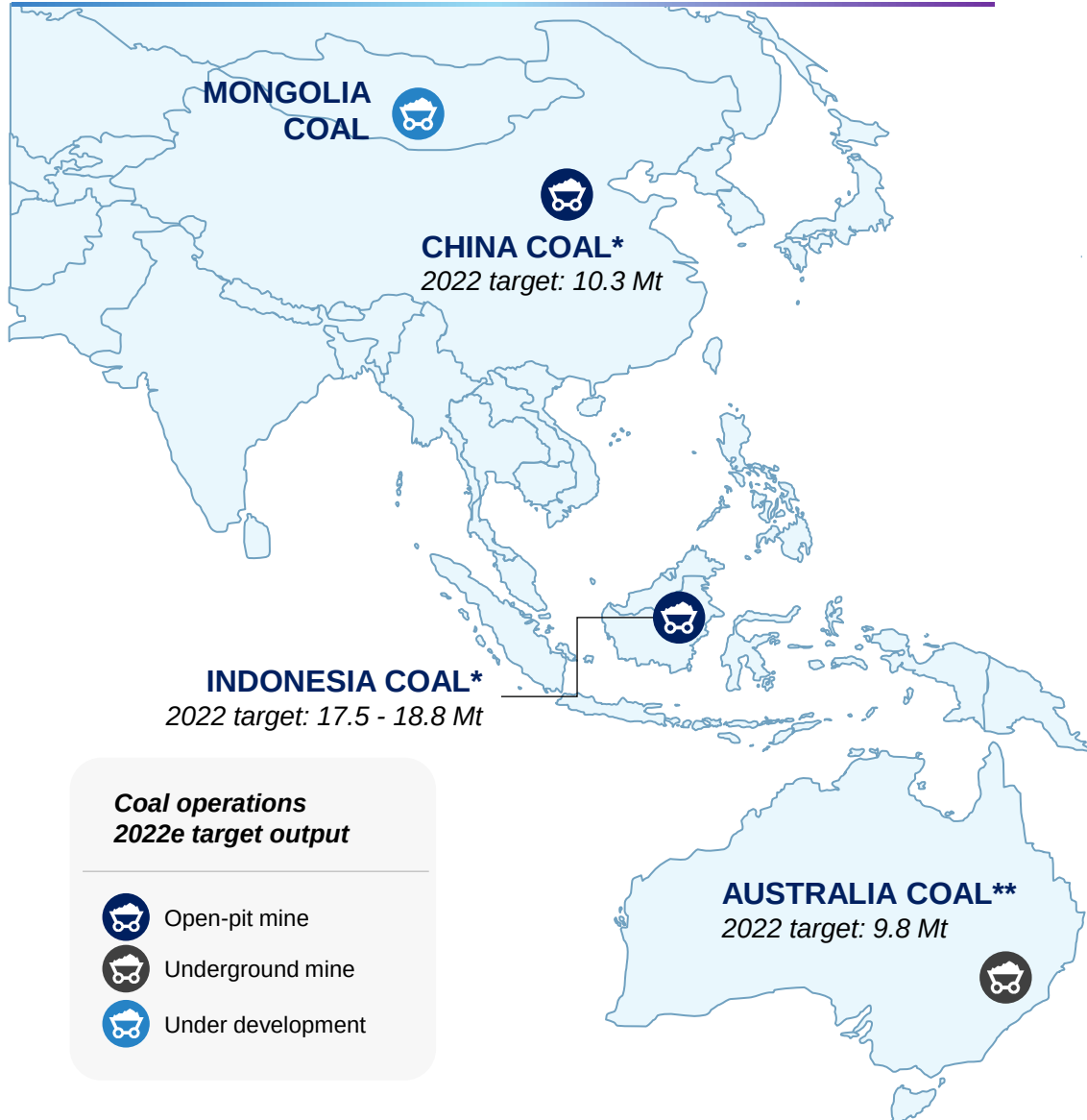
\$630 M

+58% QoQ

Note: *Based on 100% basis

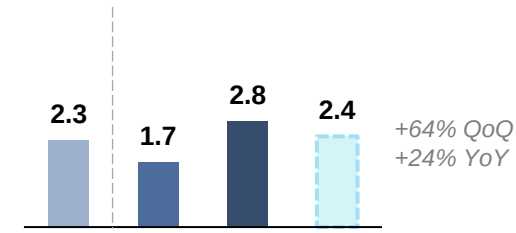
Banpu Mining: operational summary

2022E COAL OUTPUT

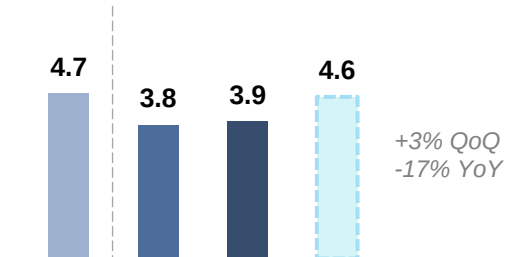


ROM PRODUCTION AND KEY UPDATES

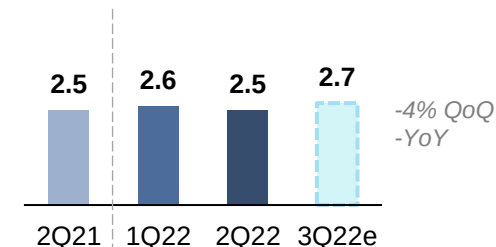
AUSTRALIA COAL**



INDONESIA COAL*



CHINA & MONGOLIA COAL*



- Strong 2Q22 ROM production in line with higher extraction at both longwall mines (Mandalong and Springvale).
- All mines continue to incur Covid-19 related absenteeism.
- Increased export volumes above plan and a higher spot price resulted in an increased EBITDA against plan for 2Q22.

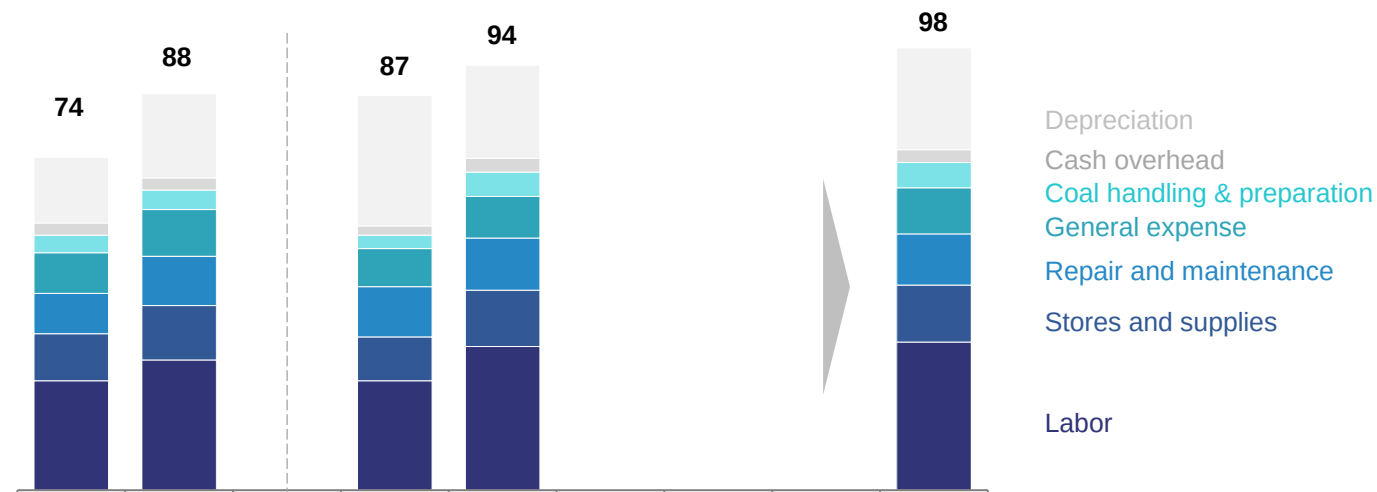
- Production in 2Q22 slightly above the target at 3.9 Mt despite some higher-than-expected rain in Trubaindo, Bharinto and Jorong mine.
- Good weather and realizing upside from Indominco production support higher output in 3Q22 which targeted at 4.6 Mt

- Gaohe: Lower production and sales in 2Q22 due to major overhaul to improve the reliability of mine system.
- Hebi: Higher production and sales in 2Q22 due to the new LW panel 3309 had finished test run and started regular production at the beginning of May.

Banpu Mining: average production cost breakdown

AUSTRALIA COAL – AVERAGE PRODUCTION COST¹

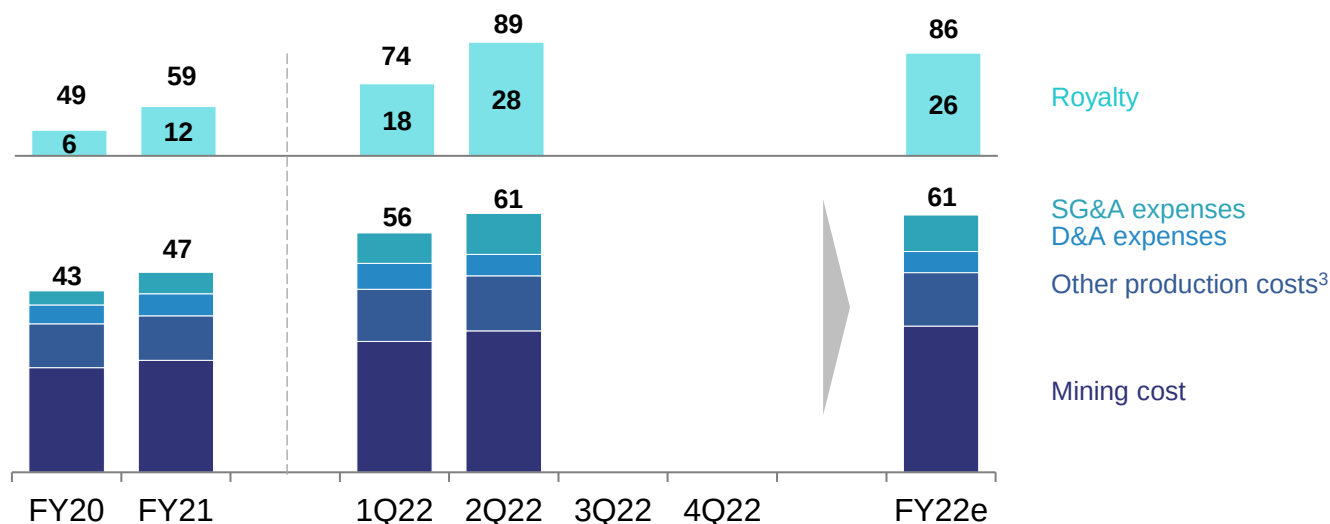
Unit: A\$/t



- Global environment continues to drive costs up (R&M, Stores and Supplies).
- Despite inflation, mine site teams maintaining strict cost control measures (opex and capex) to keep unit costs in line with plan.

INDONESIA COAL – AVERAGE TOTAL COST²

Unit: US\$/t



- Average total cost per ton (excl. royalty) rose to \$61/t in 2Q22 due to higher fuel price which affected production cost, especially mining and coal transportation costs.
- Total cost is impacted by higher royalty cost of \$10/t QoQ, which reflects stronger ASP and coal price during 2Q22.

Note: 1 These figures do not include selling, distribution and royalty costs; based on 'sold' production, 2 Coal business only, 3 including repair and maintenance, salaries and allowances, inventory adjustment, others etc.



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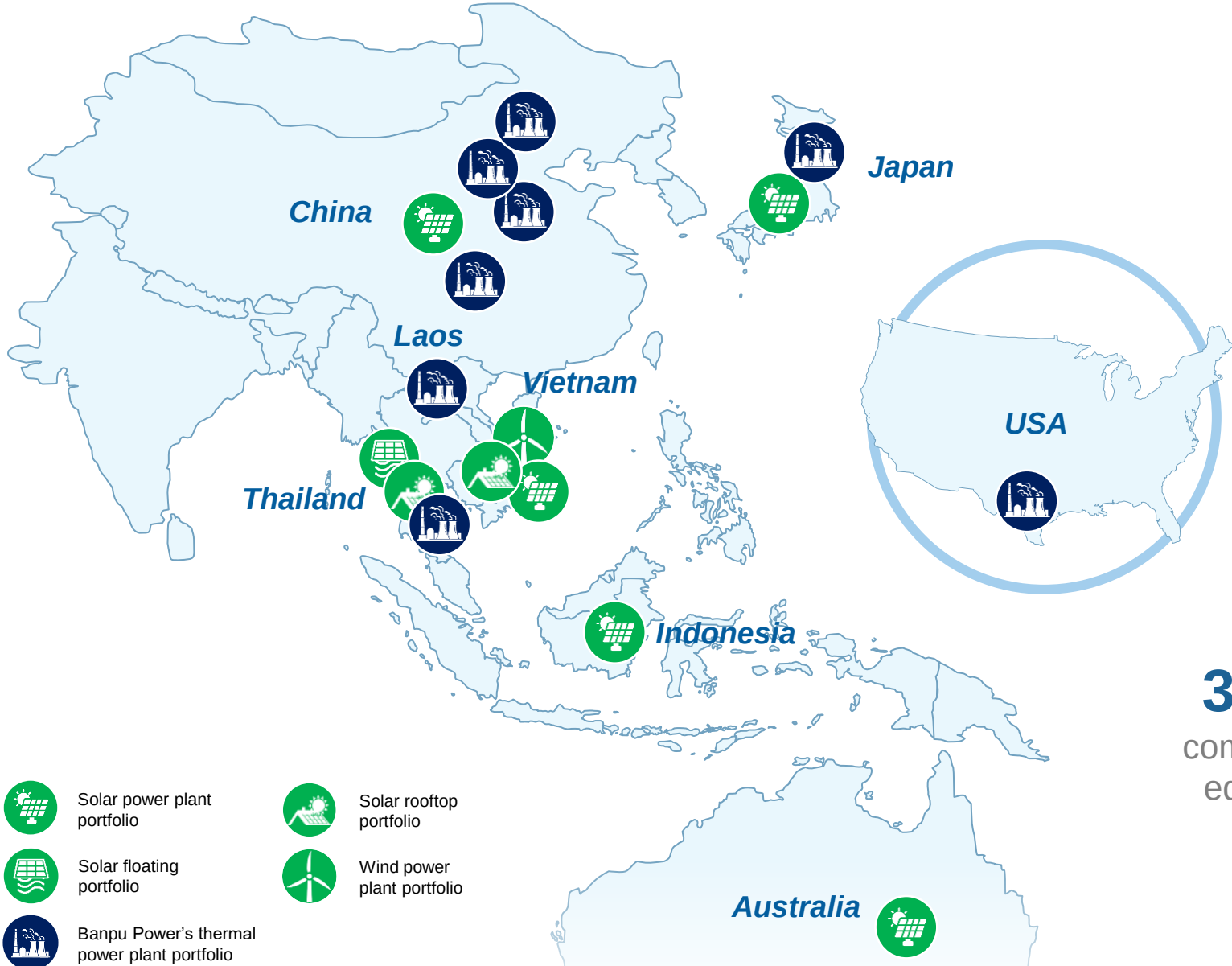
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**Energy
Generation**

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Energy
Technology

Banpu Energy Generation: 4,197 MW committed capacity



8 countries
operations across the
Pacific Rim



3,253 MW
committed thermal
equity capacity*

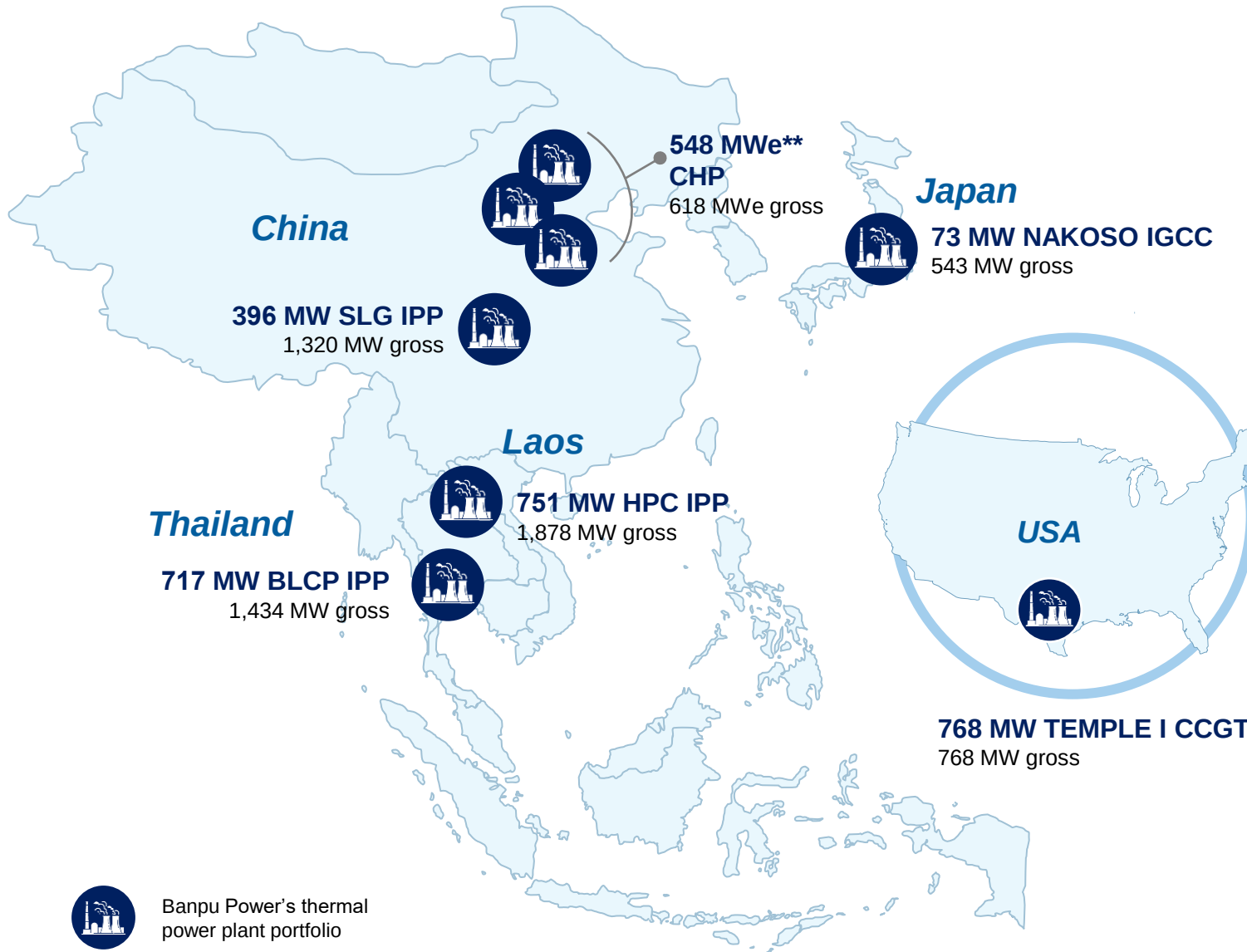


944 MW
committed renewables
equity capacity**

-  Solar power plant portfolio
-  Solar floating portfolio
-  Banpu Power's thermal power plant portfolio
-  Solar rooftop portfolio
-  Wind power plant portfolio

*Note: Based on Banpu Power's equity capacity, **Banpu Renewable Power businesses are owned by Banpu NEXT (50% Banpu PLC, 50% Banpu Power)

Banpu Thermal Power: 2Q22 highlights



EBITDA
\$58 M
+46% QoQ

Achieved EAF

91%
at HPC

95%
at BLCP

24%
at Nakoso

98%
at Temple I



Banpu Power's thermal power plant portfolio

Note: *Based on Banpu Power's equity capacity, **MW equivalent

Banpu Thermal Power: 2Q22 updates



BLCP

The plant ran as planned, with higher net generation both QoQ and YoY, resulting in a better financial performance in 2Q22.

- Reported EAF of 94.6%
- Total revenue reported at THB 4,266 M, EBITDA at THB 926 M
- Reported share of profit at THB 32 M



HPC

The plant continued to maintain a high EAF while running smoothly and achieving excellent financial results for this quarter.

- Reported EAF of 90.6%
- Total revenue reported at THB 6,015 M, EBITDA at THB 3,763 M
- Reported share of profit at THB 1,293 M



SLG

SLG joined the power trading market in order to raise the tariff and secure a coal supply contract to mitigate the impact of the high coal price. Lower demand in 2Q22 results in less electricity sold.

- Reported net power sold of 708 GWh
- Reported share of loss at RMB 41 M



China CHP

CHP has continued to improve its financial performance by entering the power trading market, and the rebound in demand for Xiwang steam contributes to the improvement of YoY financial performance.

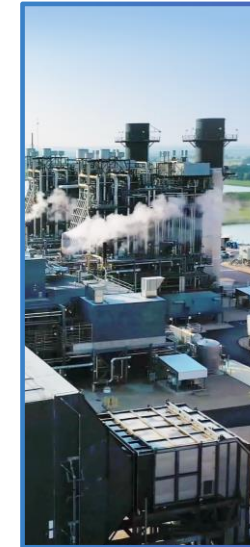
- Reported revenue of RMB 283 M
- Total EBITDA of RMB 11 M
- Reported share of loss at RMB 10 M



Nakoso IGCC

In order to modify the gasifier module and improve plant reliability, Plant maintenance shut down for 74 days in 2Q22

- Reported EAF of 24%
- Reported net generation of 127 GWh
- Reported share of profit at THB 76 M

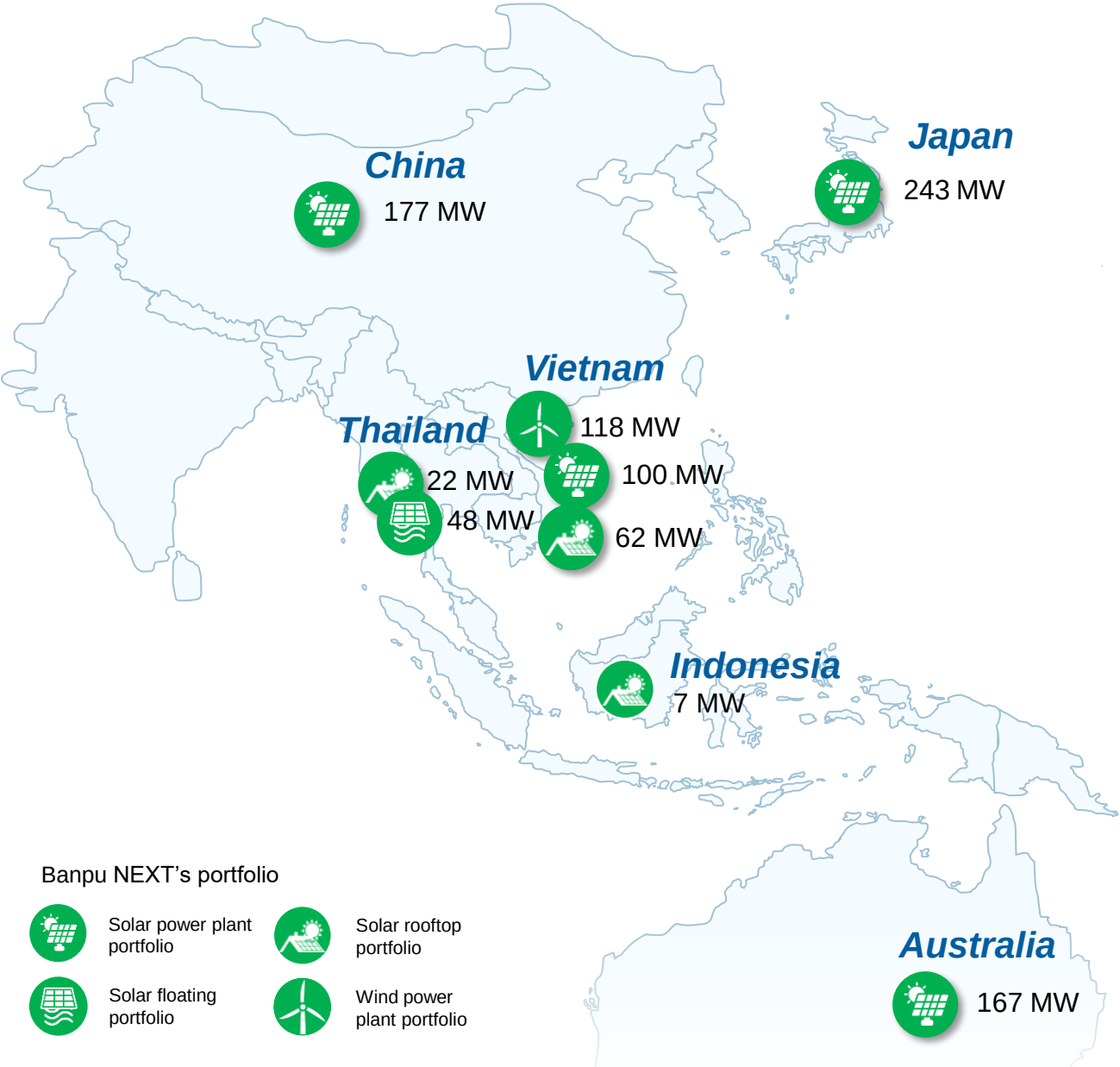


Temple I*

Smooth operation with a high EAF. Entering summer season in June results in increased net generation and solid operational outcomes.

- Report EAF of 98%
- Reported net generation of 1,109 GWh
- Total EBITDA of USD 18 M
- Reported share of loss at USD 21 M (Unrealized loss from derivative USD 28 M)

Banpu Renewable Power: diversified Asia-Pacific portfolio*



944 MW

committed renewables capacity across Asia-Pacific



687 MW

committed solar power capacity



139 MW

committed solar rooftop and floating solar capacity



118 MW

committed wind capacity

Banpu NEXT's portfolio



Solar power plant portfolio



Solar rooftop portfolio



Solar floating portfolio



Wind power plant portfolio

Note:*Banpu Renewable Power businesses are owned by Banpu NEXT (50% Banpu PLC, 50% Banpu Power), committed capacity

Banpu Renewable Power: 2Q22 updates



China Solar

Due to favorable weather conditions, the capacity factor increased, resulting in higher power sold YoY.

- Average capacity factor was 17.3%
- Power sold was 67 GWh, +35% QoQ
- Reported revenue of RMB 55 M with profit contribution of RMB 18 M



Japan Solar

Improved capacity factor YoY as a result of favorable weather. Power sold went up because more projects were COD in the last 12 months.

- Average capacity factor was 16.9%
- Power sold was 73 GWh, +104% QoQ
- Reported TK distribution of JPY 232 M



Australia Solar

Lower capacity factor QoQ as the winter season begins. Optimization through plant improvement initiatives.

- Average capacity factor was 14.0%
- Power sold was 37 GWh
- Reported share of loss at AUD 39 M (Unrealized loss from derivative AUD 34 M)



Vietnam Solar

Completed the acquisition of Nhon Hai Solar and started recognizing revenue in Jun'22. The transaction for Ha Tinh and Chu Ngoc Solar with a total capacity of 65 MW is expected to be completed in 3Q22.

- Feed in tariff (FIT) for US cents 9.35/kWh
- PPA with EVN for 20 years
- Capacity factor average c. 14-16%



Vietnam Wind

El Wind Mui Dinh

- Average capacity factor was 17.3%
- Power sold was 14.2 GWh
- Reported share of loss at USD 1.4 M

Vinh Chau project

- Construction completion and under pre-commissioning activities



01

Highlights
2Q22

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US Gas
Acquisition

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Summary

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Energy
Generation

06

**Energy
Technology**

Banpu Energy Technology: growth targets 2025



SOLAR: ROOFTOP & FLOATING

Including 49% in Solar ESCO

139
MW

committed capacity

500
MW
(under review)



ENERGY STORAGE SYSTEMS

47.7% in Durapower

30.0% in New JV

1.0
GWh

(0.5 GWh on equity basis)

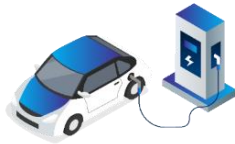
Li-ion battery production capacity

3.0
GWh

(Total 1.76 GWh on equity basis)

In progress

0.75
GWh*



E-MOBILITY

39.7% in UMT, 30% Beyond Green, 21.5% in FOMM, 20% in EVolt, 18.47% in Haupcar

4,707 passengers/day
ride hailing via Muvmi

327 electric vehicles
under fleet management

117 Chargers

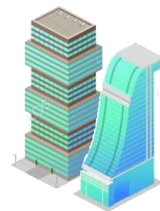
1 E-ferry sold

430,000 passengers/day

5,500+ electric vehicles

2,000 chargers

100 e-ferries sold



SMART CITIES & ENERGY MGMT.

100% ownership

21
projects

Includes energy management, smart infrastructure, etc.

30
projects



ENERGY TRADING

100% ownership

390
GWh

Electricity sales

2,000
GWh

2Q22

2025 target

Note: *Year 2026 full capacity 1 GWh

Banpu Energy Technology: 2Q22 updates



THAILAND BATTERY PLANT



BANPU NEXT PARTNERS WITH CHERDCHAI AND DURAPOWER TO SET UP LITHIUM-ION BATTERY PLANT IN THAILAND

Banpu NEXT signed MoU with two business leaders, Cherdchai Motor Sales and Durapower, to build a lithium-ion battery assembly plant in Thailand and launch a battery assembly line with a projected production capacity of 1 GWh by 2026.

The new battery assembly plant plans to begin commercial operations by early 2023 and will produce battery systems for Cherdchai's e-Buses, but also capture opportunities in growing EV markets across Asia-Pacific.

STRATEGIC RATIONALE:



Strengthen Banpu NEXT's energy storage system business



Capture high growth potential of EVs in Asia-Pacific region

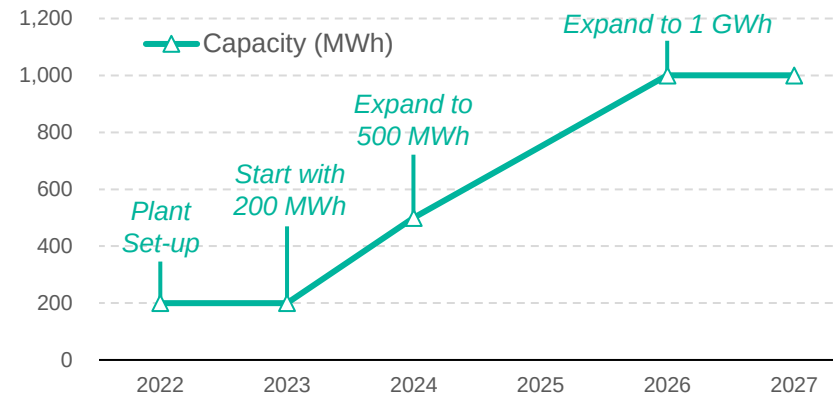
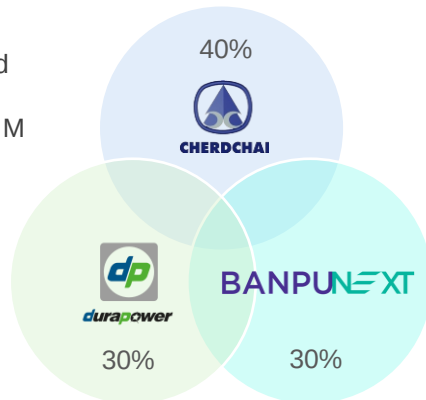


Competitive cost of battery production with scalability



Synergy of the 3-party collaboration and expertise

Initial registered capital: THB 327 M



Banpu Energy Technology: 2Q22 updates (Cont'd)



**SOLAR:
ROOFTOP &
FLOATING**

SOLAR ROOFTOP



IBP'S NEW CONTRACT SIGNING

IBP, an Indonesia subsidiary, has signed additional solar rooftop PPA in Indonesia of 1.39 MWp in 2Q22; bringing total agreement secured capacity to 7.27 MWp.

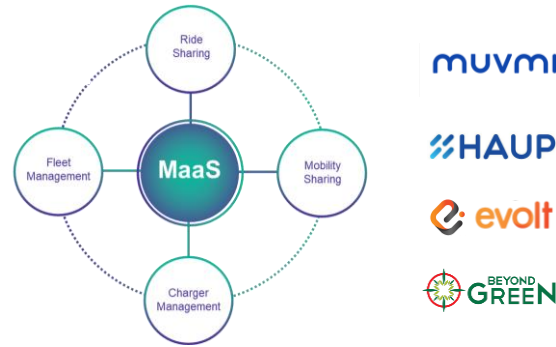
NEW COMMERCIAL OPERATIONS IN THAILAND

Banpu NEXT established new commercial operations with Impact Parking 2 & Challenger, NS-Siam United Steel – Rayong, and Aegistek Corporation Limited – Chiang Mai with a total capacity of 2.91 MWp.



**ENERGY
STORAGE
SYSTEMS**

E-MOBILITY EXPANSION



MUVMI NEW AREA EXPANSION

MuvMi has expanded its operating areas from 10 to 11 areas with the latest expansion to Chidlom – Lumpini.



E-MOBILITY



**SMART CITIES
& ENERGY MGMT.**

BANPU NEXT ECOSERVE



BANPU NEXT ECOSERVE SIGNED A LONG-TERM CONTRACT WITH CHAMCHURI SQUARE

- Banpu NEXT EcoServe (BPNE), a wholly owned subsidiary of Banpu NEXT, has signed a 12-year contract worth THB123 M with Chamchuri Square, Chulalongkorn university.
- BPNE will retrofit the chiller plants to improve the overall efficiency, operate and maintain the chiller plants under guaranteed efficiency scheme.



**ENERGY
TRADING**

ELECTRICITY SALES



MANAGE TO SECURE ELECTRICITY SUPPLY TO ALL COMMITTED CLIENTS UNTIL 1Q23

- Continue to monitor market and adjust trade & sales strategy especially in respond to KEPCO grid area with downtrend of electricity prices causing from resuming some of nuclear generations.
- Explore opportunity to supply to end-user clients with market-linked index proposal to lock in margin.



APPENDIX

Banpu: 'integrated energy solutions' 2022

ENERGY RESOURCES

Shale Gas



~900 MMcfed
Net production

ENERGY GENERATION

Renewable Power



805 MW
Committed capacity

ENERGY TECHNOLOGY

Solar: Rooftop & Floating



139 MW
Committed capacity

Mining



38.2 Mt
Coal sales

Thermal Power



3,253 MW
Committed capacity

Clean Energy Tech



1.0 GWh (100% basis)
Li-ion batteries



E-mobility services
E-mobility solutions



Smart Cities &
Energy Management



390 GWh
electricity trading

Natural gas: reserve and production term

Reserve



DEFINITION

- Natural Gas Reserve Definitions in the US are defined by the SEC and are the same as used for oil:
 - Proved Developed Producing (PDP)
 - Proved Developed Not Producing (PDNP)
 - Proved Undeveloped (adjacent to a producing well) (PUD)
 - Probable (in the same area as production but not adjacent) (PROB)
 - Possible (contingent on additional drilling) (POSS)
- Reserves have to be economically viable.

Production



PRODUCTION UNIT

- In the US, production is measured in 1000 cubic feet (MCF)
 - 1000 MCF = 1 MMCF
 - 1,000,000 MCF = 1 BCF
 - 1000 BCF = 1 TCF
 - 1 MCF = 28.3 Meters³
 - 1 MCF = 1.0 Million BTU (MMBTU) or Decatherms (dry gas)
 - 1 BCF = 1.0 Trillion BTU
 - 1 Meter³ = 35.3 MCF
 - 1 Billion Meters³ = 35.3 BCF

2022 indicative guidance

ILLUSTRATIVE AND INDICATIVE ONLY

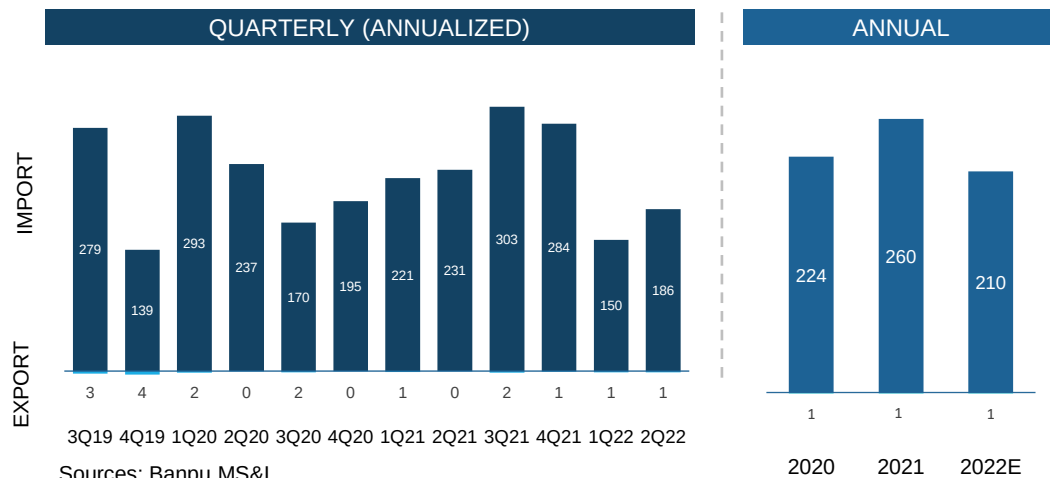
NET BACK

UNIT GUIDANCE (US\$/MCF)		COMMENTS
REVENUE		
<i>Reserves (Tcf)</i>	5.5 – 6.5	
<i>Production volume (Mmcfd)</i>	800 – 900	
Average differential to Henry Hub	\$0.20 - \$0.50	Difference selling points and Henry Hub (NYMEX basis)
GCP&T costs	\$0.90 - \$1.10	Gathering, compression, fractionation and transportation costs
Pipeline revenue	\$0.02 - \$0.05	Applicable to Chaffee Corners volume only
COSTS		
Lease operating expense and production tax	\$0.60 - \$0.80	Main component of operating costs
G&A	\$0.25 - \$0.45	Recurring general and administration costs
Taxes	21%	Currently benefit from tax shield due to NOL
DD&A	\$0.42 - \$0.48	Depreciation, depletion and amortization
Drilling and completion costs	\$0.22 - \$0.28	Costs incurred to drill and to make the well ready for production

China: lockdown dampened demand

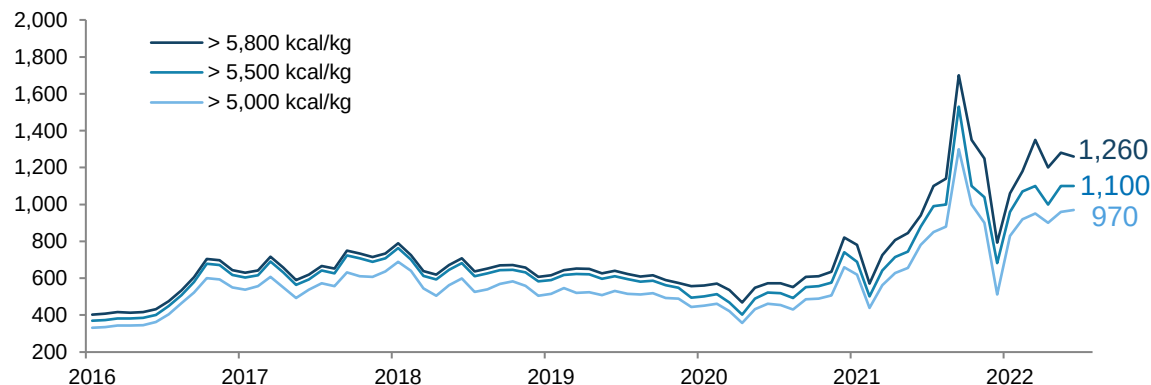
CHINA THERMAL COAL IMPORTS/EXPORTS*

Unit: Mt



CHINA DOMESTIC COAL PRICES

Unit: RMB/t



Note: *Includes lignite but excludes anthracite imports/exports
Source: www.sxcoal.com/cn 8 July 2022

2Q22

- In 2Q22 the economic growth slowed sharply to 0.4%, down from an expansion of 4.8% in the first quarter.
- The coronavirus wave in China caused lockdown in many areas and normal economic activities are suspended in Q2.
- The lockdowns cut coal demand along with reduced power consumption coupled with slower seasonal power usage during the spring season of March-May.
- Domestic coal production remained strong in Q2 despite of significant economic slowdown as Beijing is focusing on securing enough supplies for end-users ahead of the summer.
- However, the spot QHD prices were stabilized at high level as most tonnage was delivered under term-contracts, with limited spot tonnage available.
- Heavy rain across southern China has boosted hydropower generation and weigh on coal-fired output.
- High seaborne coal prices and a drop in the value of the yuan against the US dollar also weighed on seaborne coal demand while government capped term contract price for domestic coal at RMB570-770/t which discouraged coal imports.

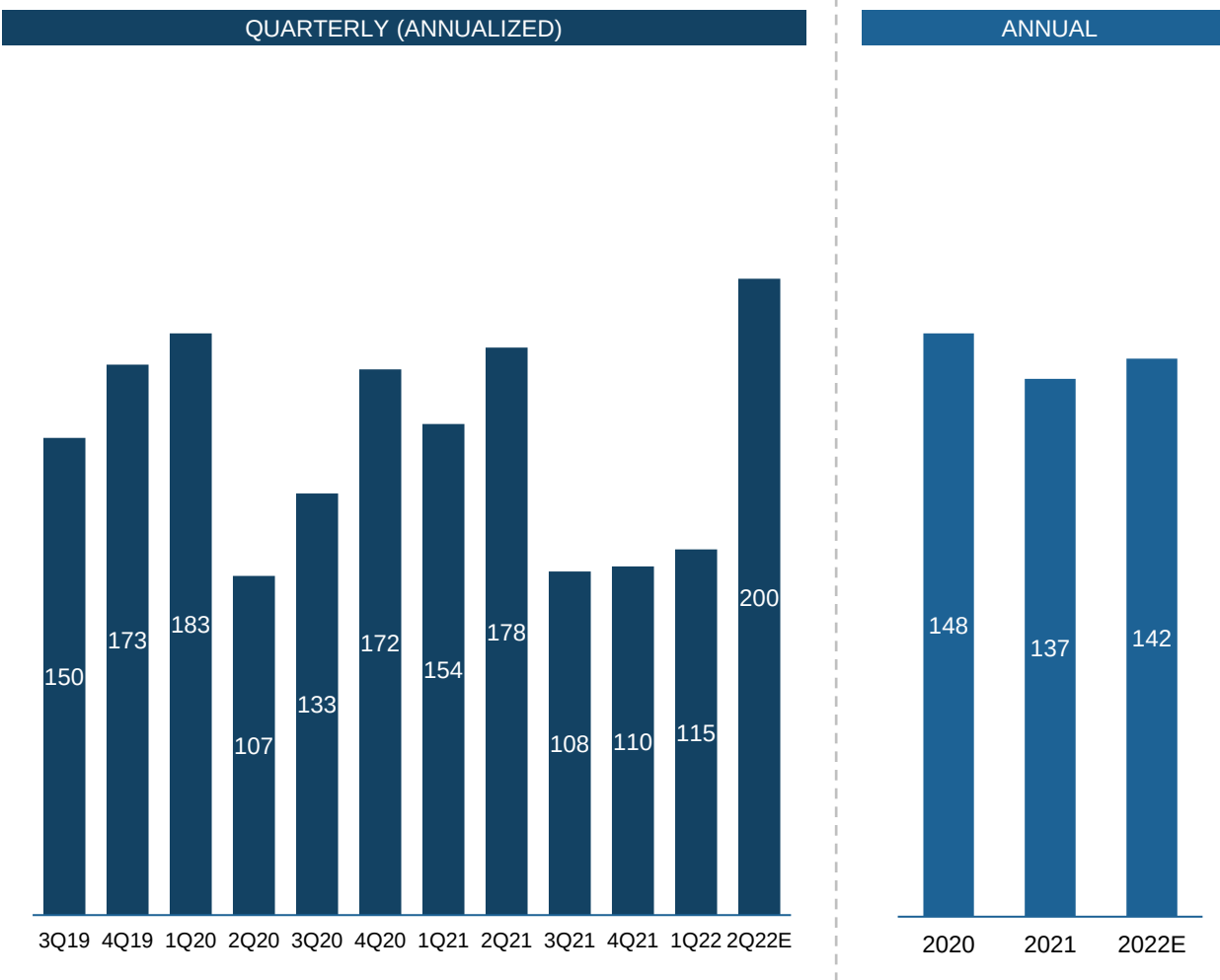
OUTLOOK

- Slow economic recovery and concerns over renewed Covid-19 restriction will curb power demand growth.
- China released stimulus packages to boost economy, however the impact is expected to take some time.
- Domestic coal production shows no sign of slowing down in 2H as Beijing launched a nationwide inspection on miners' performance on their term-contracts signed with power plants.
- Expect increasing term contract coal deliveries from July amid escalating government pressure on supply and pricing will continue to curb import demand.
- Seasonal strong hydropower generation will continue to hit coal-fired power generation in Q3, which will curtail demand for coal imports.

India: power crisis & domestic supply constraints support import growth

INDIA THERMAL COAL IMPORTS*

Unit: Mt



Note: *Includes lignite grade imports
Source: Commodity Insights, Banpu MS&L

2Q22

- Total electricity generation remained strong and grew 16% year-on-year in Q2 driven by the stronger economic activities along with the intense heatwaves.
- India is battling one of the most severe heatwaves in a century, which has exacerbated electricity consumption.
- Coal dominated power generation with yearly growth in coal-based generation stood at 20%.
- Domestic coal production in Q2 was 206 Mt, a staggering year-on-year growth of over 30%. Coal dispatches remained strong in Q2 and grew 15% compared to 2021. Supplies exceeded production in Q2 by 9%.
- Government continued to prioritize domestic coal supply allocations to the power sector to alleviate the coal crisis. Domestic coal supplies to the power sector increased by 23% year-on-year in Q2, while declined by c.19% in the non-power sector.
- Government is pushing coal-fired utilities to import more coal to prevent the risk of large-scale blackouts following a steep increase in power demand in summer.
- Industrial consumers continue to rely on seaborne markets, however due to extreme high prices the purchase has been slowed.
- Indian buyers have been taking heavily-discounted Russian cargoes over the past few months.

Outlook

- As the monsoon season this year is anticipated to remain above normal, domestic coal production and dispatches are expected to face significant challenges owing to flooding of mines and logistics constraints.
- Thermal coal imports are expected to continue increasing to counter any shortfall in domestic supplies. However, depreciation in local currency against the US dollar will curb import demand especially in the general industry.
- Demand for Russian coal is expected to increase after the central bank of India implemented measures in July, which importers easier to settle financial transactions in rupees, instead of dollars.
- We expect more buyers to step in, especially with the eased shipping and insurance process.

Coal quarterly output summary

AUSTRALIA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON EQUITY BASIS

Mines	CV (kcal/kg)*	4Q21	1Q22	2Q22	3Q22e
Western operations		1.3	0.8	1.6	1.3
Springvale	6,700	0.7	0.1	1.1	0.6
Clarence	6,700	0.3	0.4	0.3	0.4
Airly	6,700	0.3	0.3	0.2	0.3
Northern operations		0.8	0.9	1.2	1.1
Mandalong	6,700	0.6	0.7	1.0	0.8
Myuna	6,700	0.2	0.2	0.2	0.3
Total Australia coal		2.1	1.7	2.8	2.4

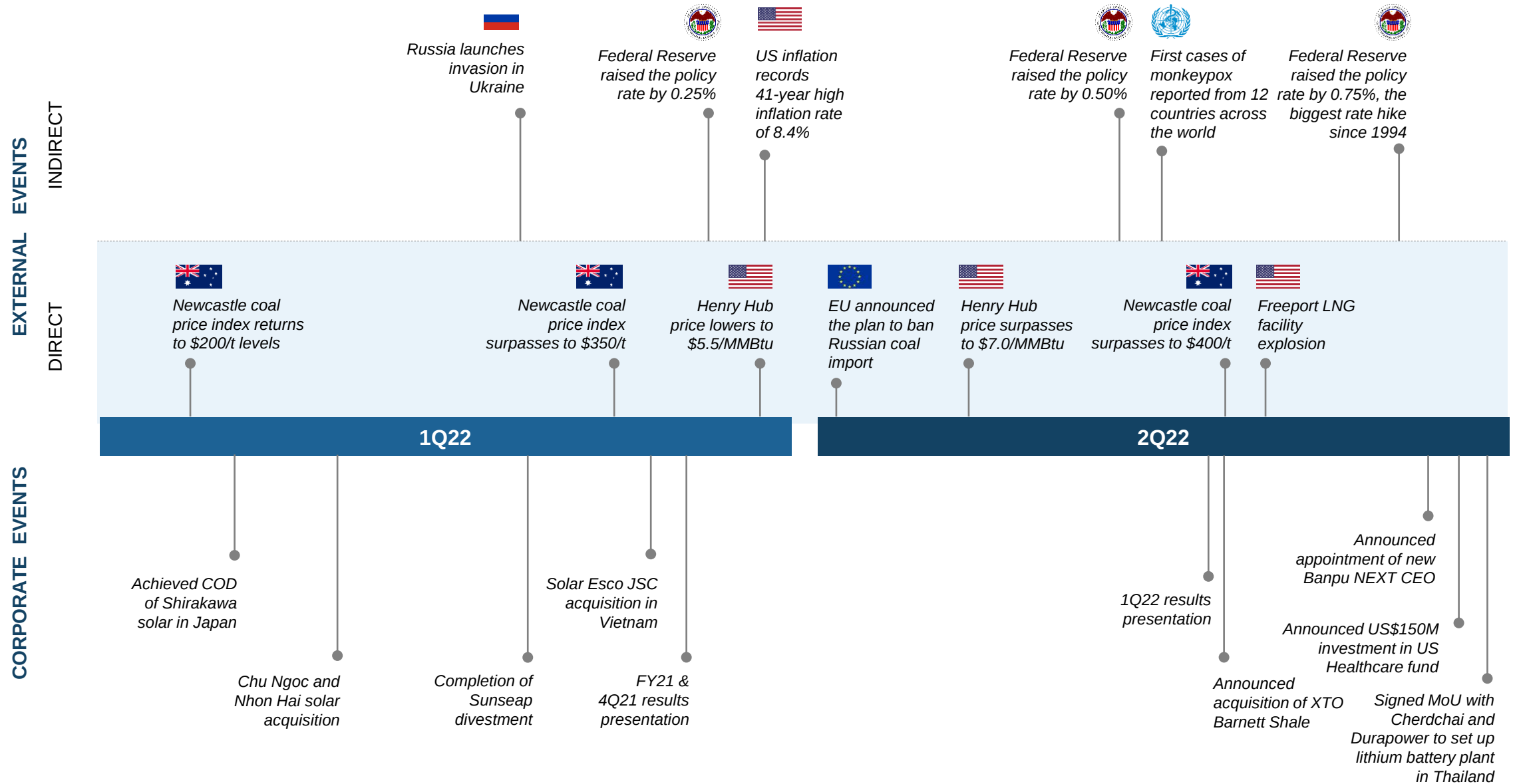
INDONESIA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON 100% BASIS

Mines	CV (kcal/kg)*	4Q21		1Q22		2Q22		3Q22e	
		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	1.9	9.6	1.5	9.8	1.7	10.3	2.0	10.8
Trubaindo	6,550 – 6,700	1.2	9.0	0.7	15.5	0.7	14.7	0.8	11.9
Bharinto		1.2	6.6	1.1	8.8	1.2	7.9	1.5	7.8
Kitadin-Embalut**	5,800	0.4	15.5	0.2	17.9	-	-	-	-
Jorong	5,300	0.2	15.5	0.3	11.5	0.2	16.2	0.2	10.6
Total Indonesia coal		4.9	9.6	3.8	11.1	3.9	10.6	4.6	9.9

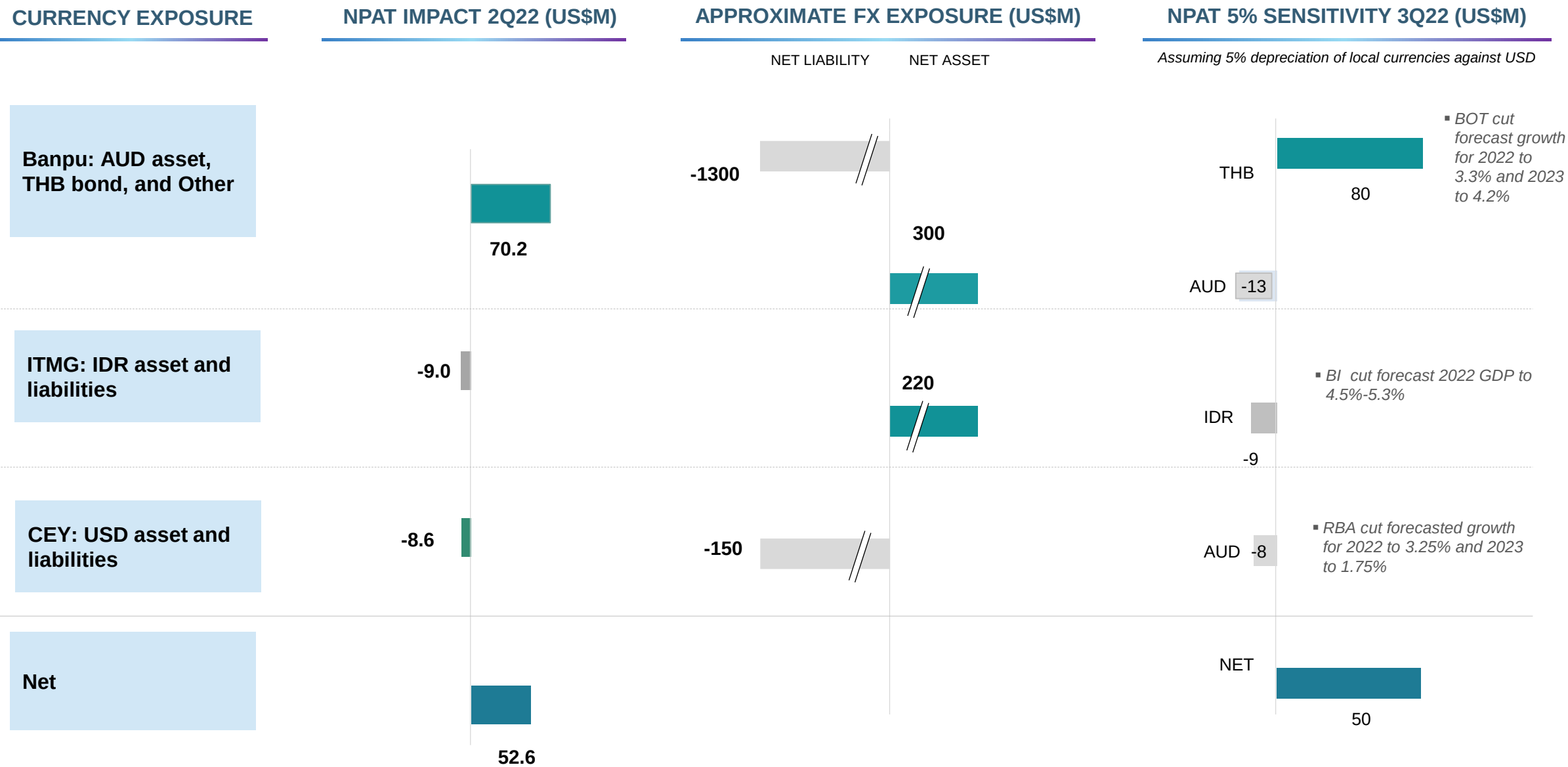
CHINA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON 100% BASIS

Mines	CV (kcal/kg)*	4Q21	1Q22	2Q22	3Q22e
Gaohe		2.3	2.5	2.3	2.4
Hebi		0.2	0.1	0.2	0.3
Total China coal		2.5	2.6	2.5	2.7

Key external and corporate events



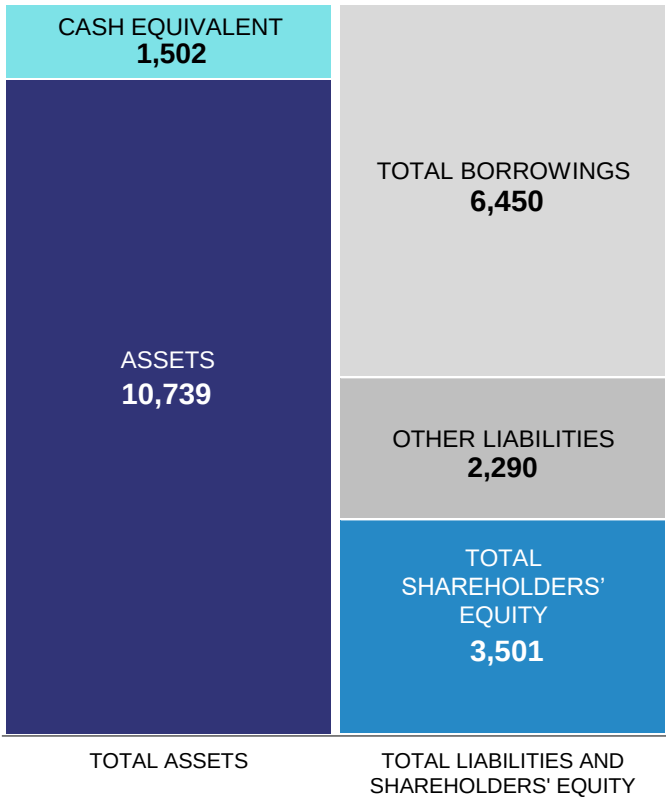
FX impact analysis guidance on P&L



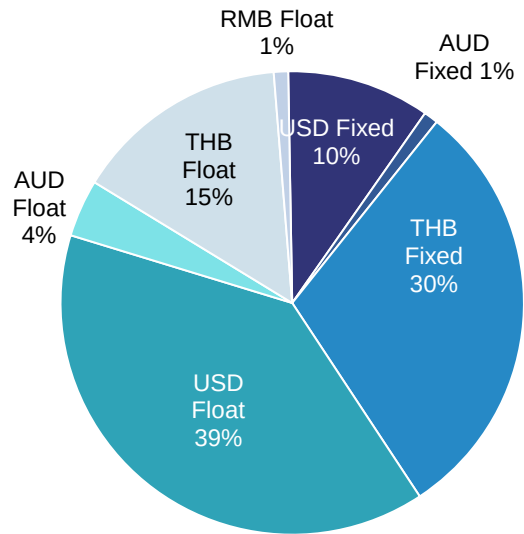
Banpu consolidated balance sheet – 2Q22

2Q22 CONSOLIDATED FINANCIAL POSITION

USD million

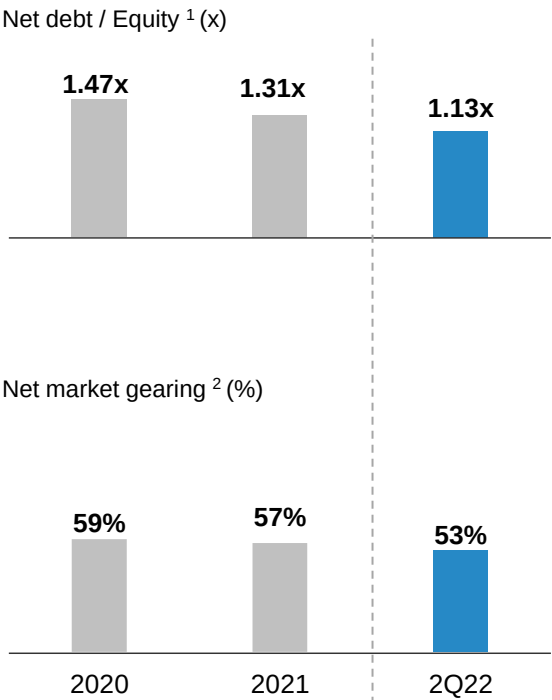


DEBT FX STRUCTURE



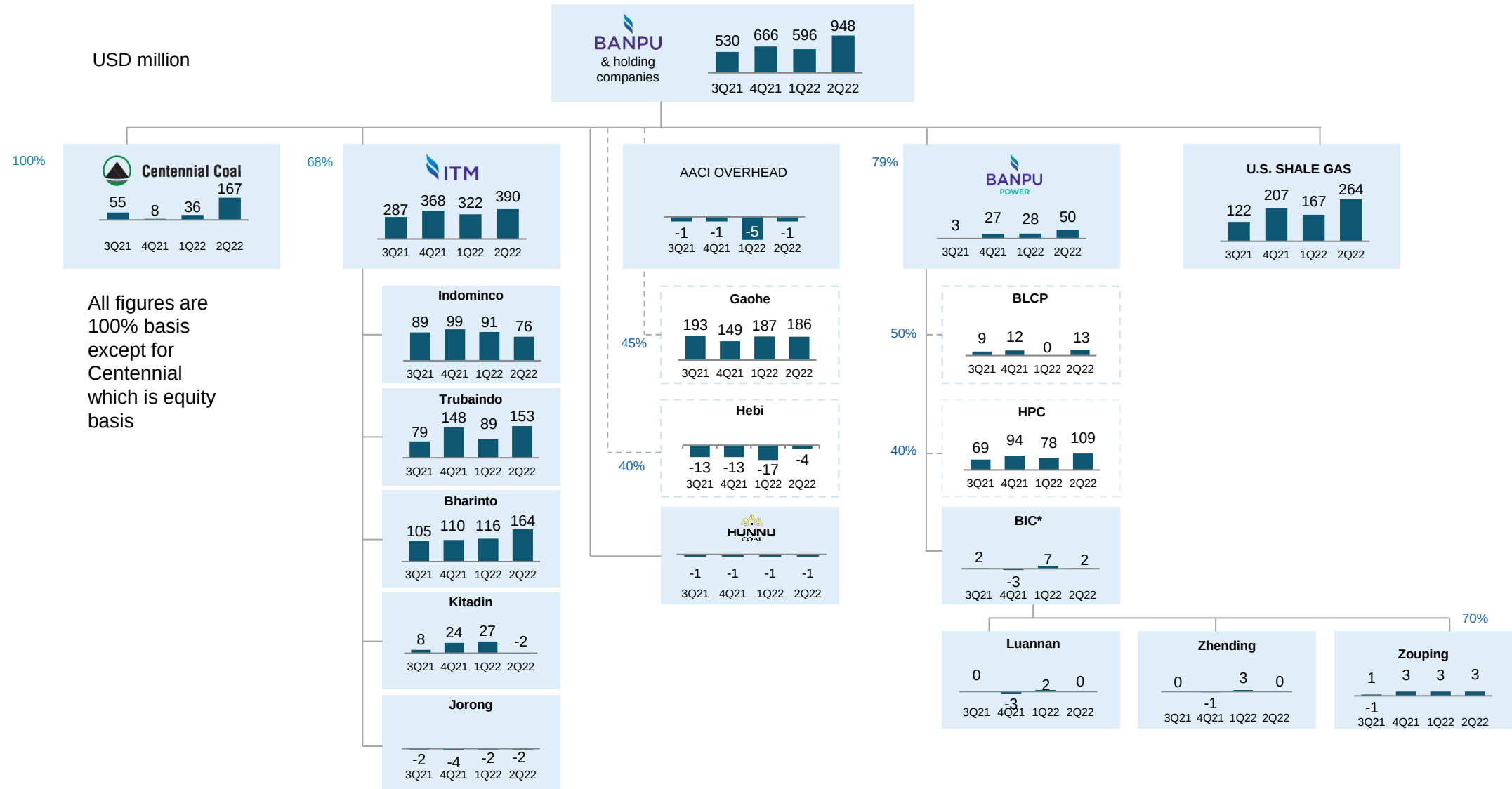
Total gross debt: US\$6.45 billion
As of 30 June 2022

GEARING RATIOS



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

Banpu group EBITDA breakdown



Note: all ownership 100% unless otherwise shown

*BIC = Banpu Investment China

Banpu group net debt breakdown



Note: all ownership 100% unless otherwise shown

*BIC = Banpu Investment China

Banpu consolidated: operating profit

USD million	2Q22	1Q22	2Q21	QoQ%	YoY%
Total sales revenues*	1,773	1,256	799	41%	122%
Sales revenue – Coal**	1238	828	587	49%	111%
Sales revenue – Gas	387	279	160	39%	142%
Sales revenue – Power	139	126	36	10%	285%
Cost of sales	(842)	(666)	(530)		
Gross Profit*	931	590	269	58%	246%
Gross profit – Coal**	661	427	210	55%	215%
Gross profit – Gas	254	153	55	66%	362%
Gross profit – Power	19	9	2	n.a.	845%
GPM	53%	47%	34%		
<i>GPM – Coal</i>	53%	52%	36%		
<i>GPM – Gas</i>	66%	55%	34%		
<i>GPM – Power</i>	14%	7%	7%		

Banpu consolidated: operating profit

USD million	2Q22	1Q22	2Q21	QoQ%	YoY%
Gross Profit	931	590	269	58%	246%
GPM	53%	47%	34%		
SG&A	(117)	(112)	(88)		
Royalty	(131)	(85)	(57)		
Income from associates	81	62	63		
Other income and Dividend	21	12	12		
Mining property	(9)	(5)	(8)		
EBIT	777	463	192	68%	306%
EBIT – Coal	509	320	112	59%	357%
EBIT – Gas	228	130	43	76%	427%
EBIT – Power	46	23	33	80%	40%
EBIT – Energy Technology	(7)	(10)	4	n.a.	n.a.
EBITDA	948	596	308	59%	207%
EBITDA – Coal	630	400	194	58%	224%
EBITDA – Gas	264	167	71	58%	275%
EBITDA – Power	58	37	37	46%	56%
EBITDA – Energy Technology	(4)	(7)	7	n.a.	n.a.

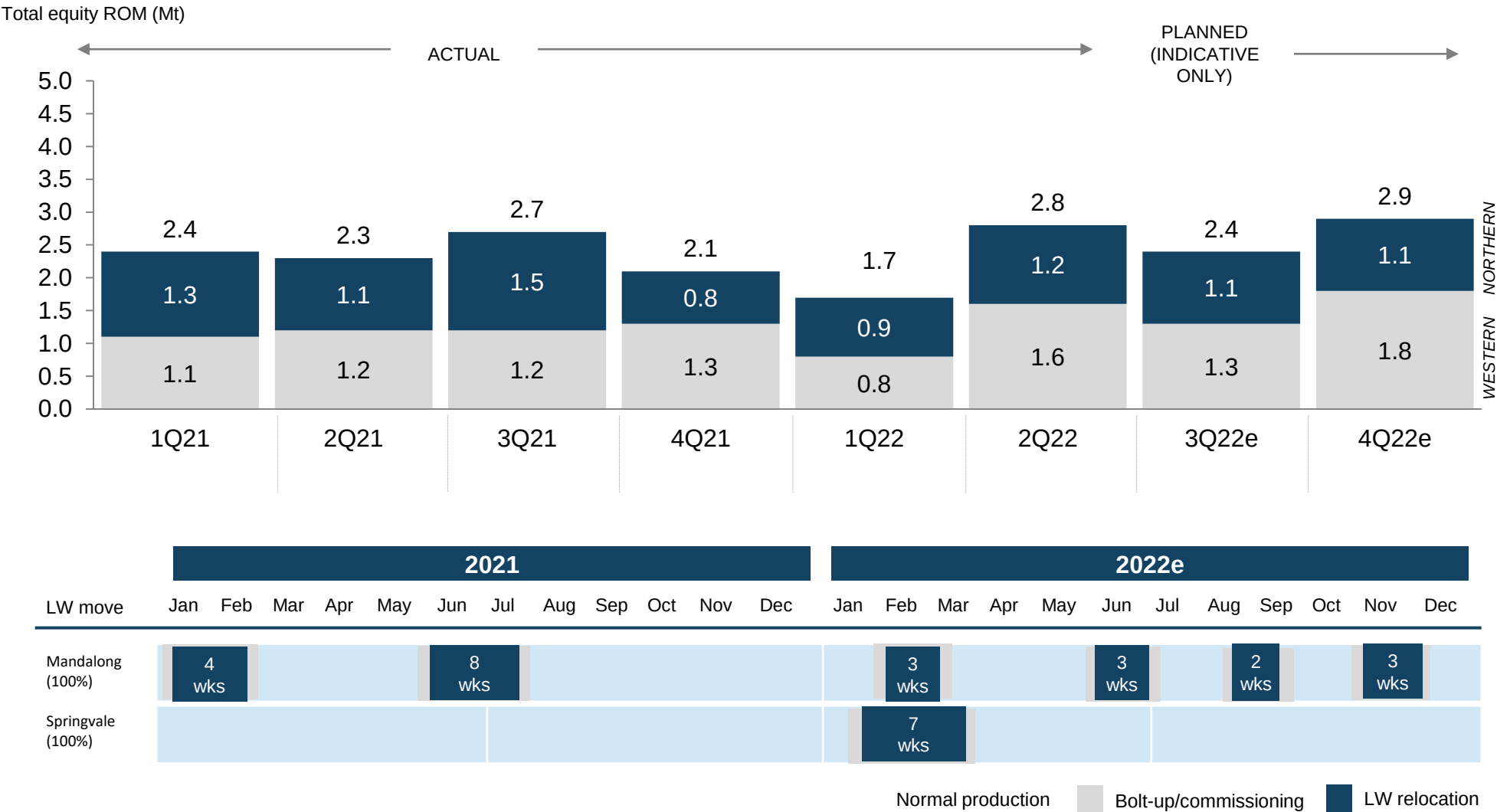
Banpu consolidated: net profit

USD million	2Q22	1Q22	2Q21	QoQ%	YoY%
EBIT	777	463	192	68%	306%
Interest expenses	(54)	(50)	(41)		
Financial expenses	(2)	(2)	(2)		
Income tax (core business)	(73)	(60)	(21)		
Minorities	(101)	(80)	(35)		
Net profit before extra items	547	271	92	102%	491%
Non-recurring items*	157	192	(3)		
Gain (Loss) on Derivatives Transactions	(293)	(148)	(48)		
Income tax (non - core business)	(16)	(0)	(1)		
Deferred tax income (expenses)	(76)	(15)	(11)		
Net profit before FX	319	300	29	6%	1004%
FX translation	53	10	13		
Net Profit	372	311	42	20%	780%
EPS (US\$/share)	0.055	0.046	0.008		

Centennial: income statement

USD million	2Q22	1Q22	2Q21	QoQ%	YoY%
Sales volume (Mt)	2.8	1.5	2.5	+87%	+12%
Sales revenue	342.8	147.1	172.4	+133%	+99%
Cost of Sales	(221.1)	(136.4)	(157.0)		
Gross Profit	121.8	10.7	15.4	+1038%	+691%
GPM	36%	7%	9%		
SG&A	(26.9)	(19.3)	(28.2)		
Royalty	(21.9)	(8.4)	(11.0)		
Other income	1.8	1.6	4.1		
Other expenses	-	-	-		
EBIT	74.7	(15.3)	(19.8)	n.a.	n.a.
Interest expenses	(9.2)	(7.8)	(5.4)		
Financial expenses	(0.6)	(0.5)	(0.8)		
Gain (loss) on exchange rate	(8.6)	5.0	(1.1)		
Gain (loss) on derivative	(35.7)	0.3	(6.8)		
Corporate income tax	-	-	-		
Deferred tax income	(6.4)	6.2	10.0		
Net Profit	14.1	(12.2)	(23.8)	n.a.	n.a.

Australia coal: quarterly equity rom output



Note: 1 Production generally responds to the timing of longwall changeovers (i.e., lower production results during a longwall changeover period)
2 As of 1 December 2019, Centennial's economic interest in each of Angus Place and Springvale became 100%.

