BANPU

1Q22 results

Investor and analyst update

18th May 2022

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1Q22 highlights

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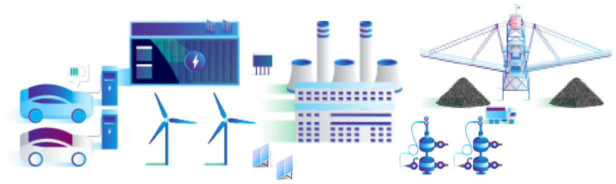
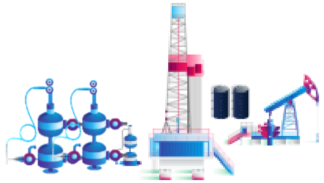


Accelerating Banpu's Sustainability Transformation

Significant progress in Greener, Smarter businesses through developments in:

Vietnam, Japan, Thailand, and Indonesia Renewables

+105 MW committed capacity from acquisitions of 2 solar assets and Solar ESCO rooftop platform in Vietnam; completion of 1 asset in Japan; rooftop and floating solar in Thailand; and 1 solar rooftop in Indonesia.

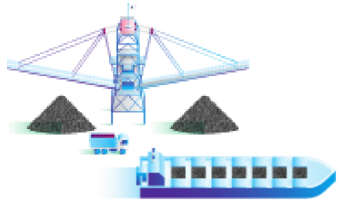


Robust Cash Flow Generation

EBITDA for the quarter was **$596M** with strong contribution from Coal and Gas businesses and significant incremental contribution from Greener assets

ESG Leadership Recognition

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



Energy Prices Strong

Gas price averages **$4.66/MMBtu** and coal price averages at **$275/t** in 1Q22, driven by increasing demand and supply tightness

Growing Vietnam Presence

Banpu has established a strong presence in Vietnam with a renewable portfolio of over **280 MW** committed capacity across various technologies

Banpu: international versatile energy provider

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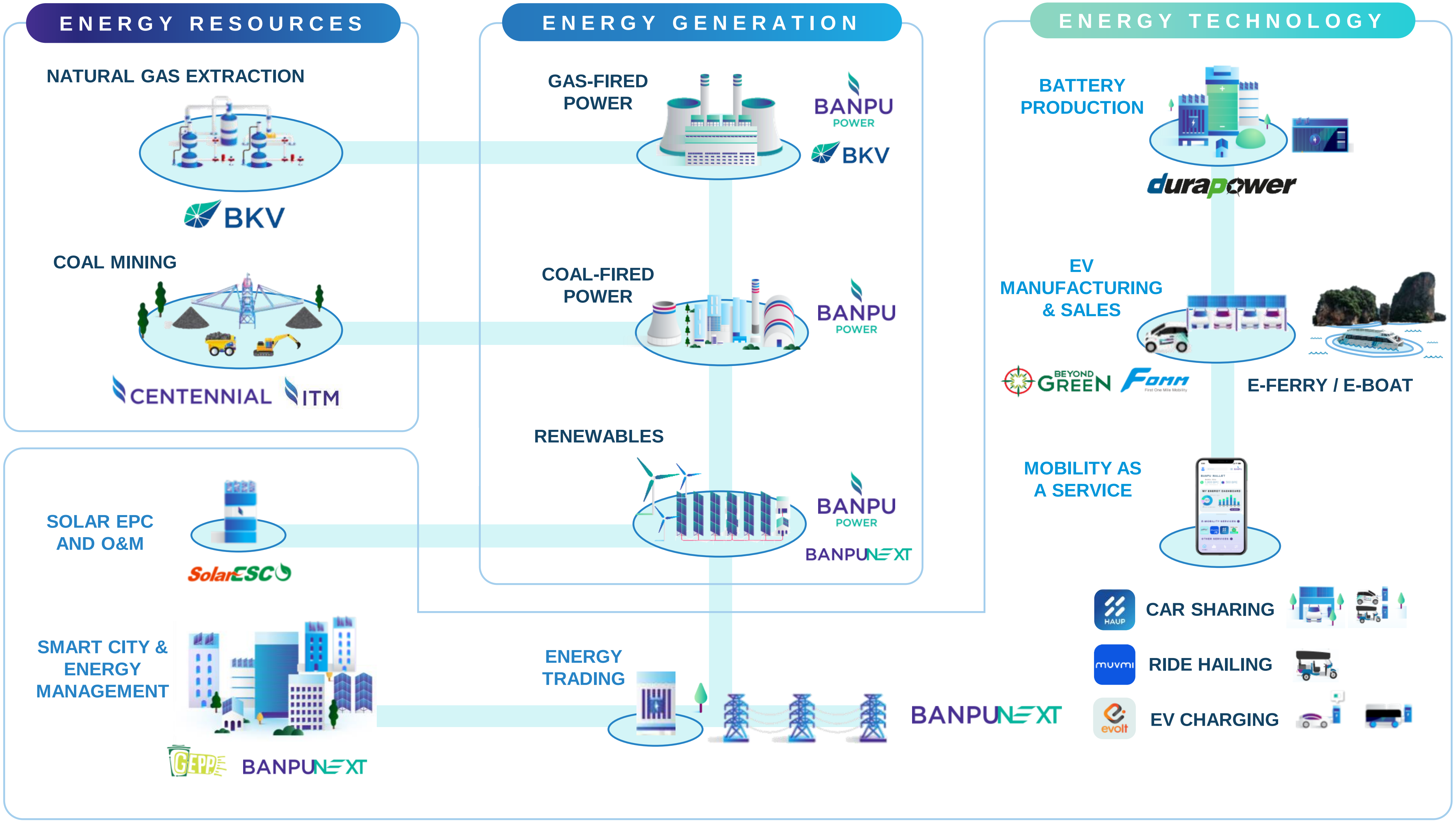

Banpu: ESG leadership and credit rating recognition

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BANPU ESG RATING

MSCI ESG RATINGS

CCC	B	BB	BBB	A	AA	AAA

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

V.E PART OF Moody's ESG Solutions

BEST EMERGING MARKET PERFORMERS

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

2021 GCSA Global Corporate Sustainability Awards

Sustainability Reporting

Silver

for Sustainability Reporting Award in 2021 for transparent disclosure of ESG information

THSI THAILAND SUSTAINABILITY INVESTMENT 2021

6th

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

HONOR Sustainability Excellence 2021

Honor

Highest distinction in SET's Sustainability Excellence Award for being awarded the Best Sustainability Award for at least 3 consecutive years

SUBSIDIARIES

ESG EXCELLENCE

BANPU POWER

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

Sustainability Yearbook Member 2022 S&P Global — S&P SUSTAINABILITY YEARBOOK MEMBER

SET AWARDS 2021 — RISING STAR SUSTAINABILITY AWARD

THSI THAILAND SUSTAINABILITY INVESTMENT 2021 — 4TH YEAR LISTED IN THSI

RESPONSIBLY SOURCED GAS

BKV

TRUSTWELL PROJECT CANARY 2022 GOLD — AWARDED RESPONSIBLY SOURCED GAS (RSG) CERTIFICATION WITH GOLD RATING *by Project Canary TrustWell, a 3rd party certification company*

CREDIT RATING

TRIS 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

01 Highlights 1Q22

02 Antifragile Transformation

03 Financial Summary

04 Energy Resources

05 Energy Generation

06 Energy Technology

Supply chain disruptions driving commodity prices higher into 2022

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GLOBAL MARKET UPDATES

Tension over Russia – Ukraine war

RELIANCE ON RUSSIA'S NATURAL RESOURCES

45% of Europe's coal and gas imports

17% of global coal production

10% of global oil production

Russia's invasion of Ukraine shocked global markets, causing **global supply chain disruptions**

Inflation, interest rate hikes, potential recession?

INFLATION RATE

US consumer price reached 40-year highs

6.8% *Nov' 2021* ▶ **8.5%** *Mar' 2022*

INTEREST RATE HIKES

The Fed approved a **0.25% rate hike** in March 2022. Fed policymakers expect interest rate to climb to around 1.9% by the end of the year to address the significant rise in inflation.

Resurgence of Covid-19

While the world has been readjusting to the 'New Normal', outbreaks continue to occur in **China's manufacturing hub** and several **European countries, leading to shut down.**

Rising commodity supply costs

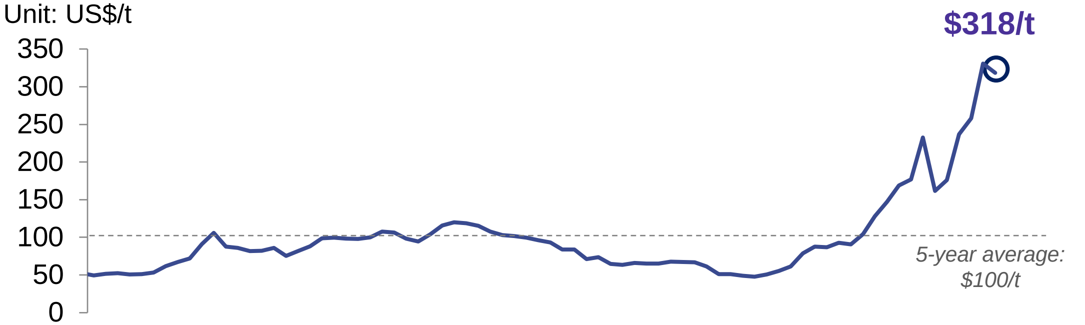
Commodity productions are impacted by labor shortages due to Covid-19 pandemic. Increasing oil prices are further affecting coal production costs mostly due to higher mining and transportation costs as well as higher royalty payment.

COMMODITY PRICES RALLY EXTENDS IN 1Q22

MONTHLY NEWCASTLE COAL INDEX

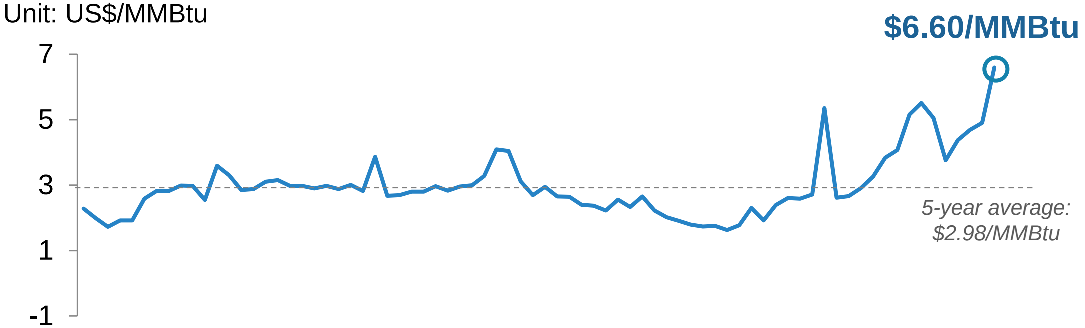
Prices as of April 2022

Unit: US$/t



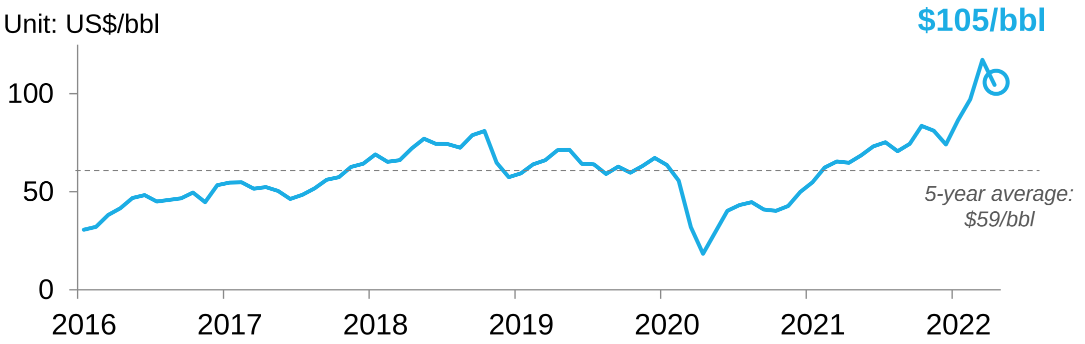
MONTHLY HENRY HUB PRICE

Unit: US$/MMBtu



MONTHLY BRENT PRICE

Unit: US$/bbl



Banpu: antifragile portfolio

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ENERGY RESOURCES

GROWTH CATALYST

Well-positioned through existing production and reserves to capture upside from the market

ENERGY GENERATION

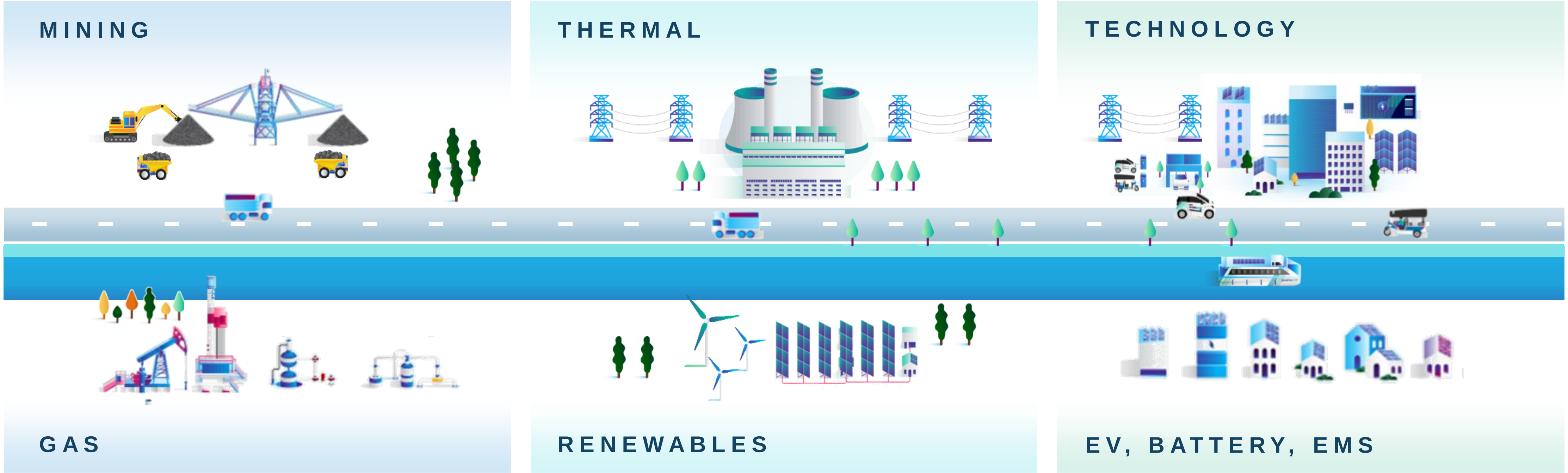
RESPONSIBLE BASE LOAD PROVIDER

Maintain operational excellence, cost controlling measures and expand HELE portfolio

ENERGY TECHNOLOGY

CAPTURING ENERGY TRENDS

Scale up portfolio by growing existing and investing into new disruptive businesses



CLEANER FUEL TRANSITION

Expand lower-carbon gas upstream and midstream portfolio in strategic locations

GREEN MEGAWATTS GROWTH

Expand renewables assets, focusing on geographies with favorable and stable conditions

ESTABLISH DIGITAL PLATFORM

Continued development of Banpu platform to consolidate services

Banpu portfolio strategy 2022-25

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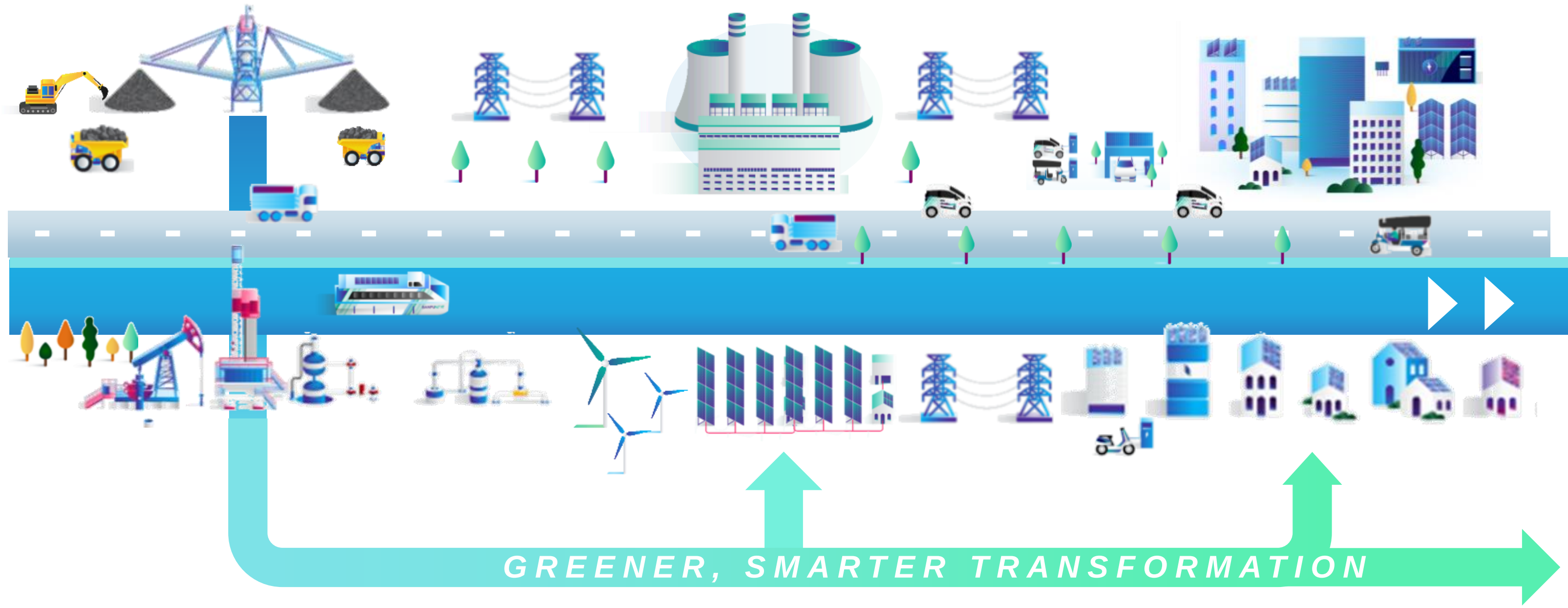
A NTIFRAGILE

Weathering impacts of volatile commodity markets and global disruptions, while **well-positioned to capture upside**

ENERGY RESOURCES

ENERGY GENERATION

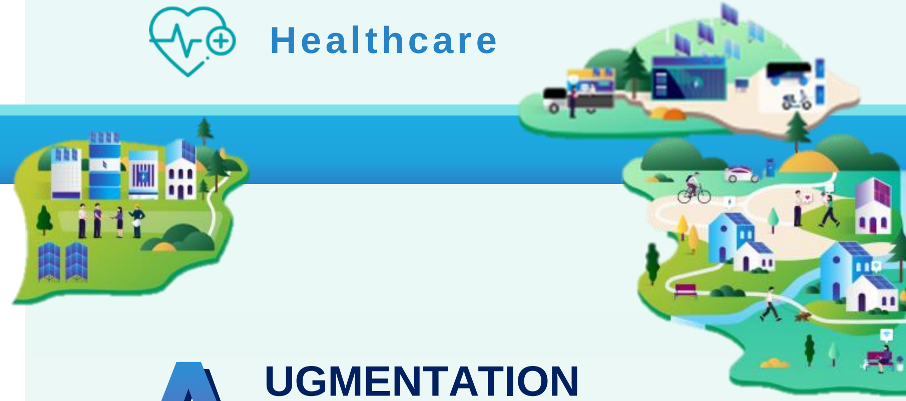
ENERGY TECHNOLOGY



NEW DISRUPTIVE GROWTH MARKETS

Explore antifragile growth opportunities in new S-curve disruptive industries to position Banpu for transformative and diversified growth

- 4.0 Technology
- Smart Agriculture
- Healthcare



A UGMENTATION

Utilizing expertise and core competencies to **capitalize on new business opportunities**

A CCELERATION

Leveraging high commodity price landscape to accelerate ***Greener, Smarter*** transformation and invest in new disruptive growth markets

01

Highlights
1Q22

02

Antifragile
Transformation

03

Financial
Summary

04

Energy
Resources

05

Energy
Generation

06

Energy
Technology

Banpu consolidated financial summary 1Q22

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KEY FIGURES

EBITDA **$596 M**

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

NPAT **$311 M**

Strong performance, with strong EBITDA generation and improved operational results

ND/E **1.10 x**

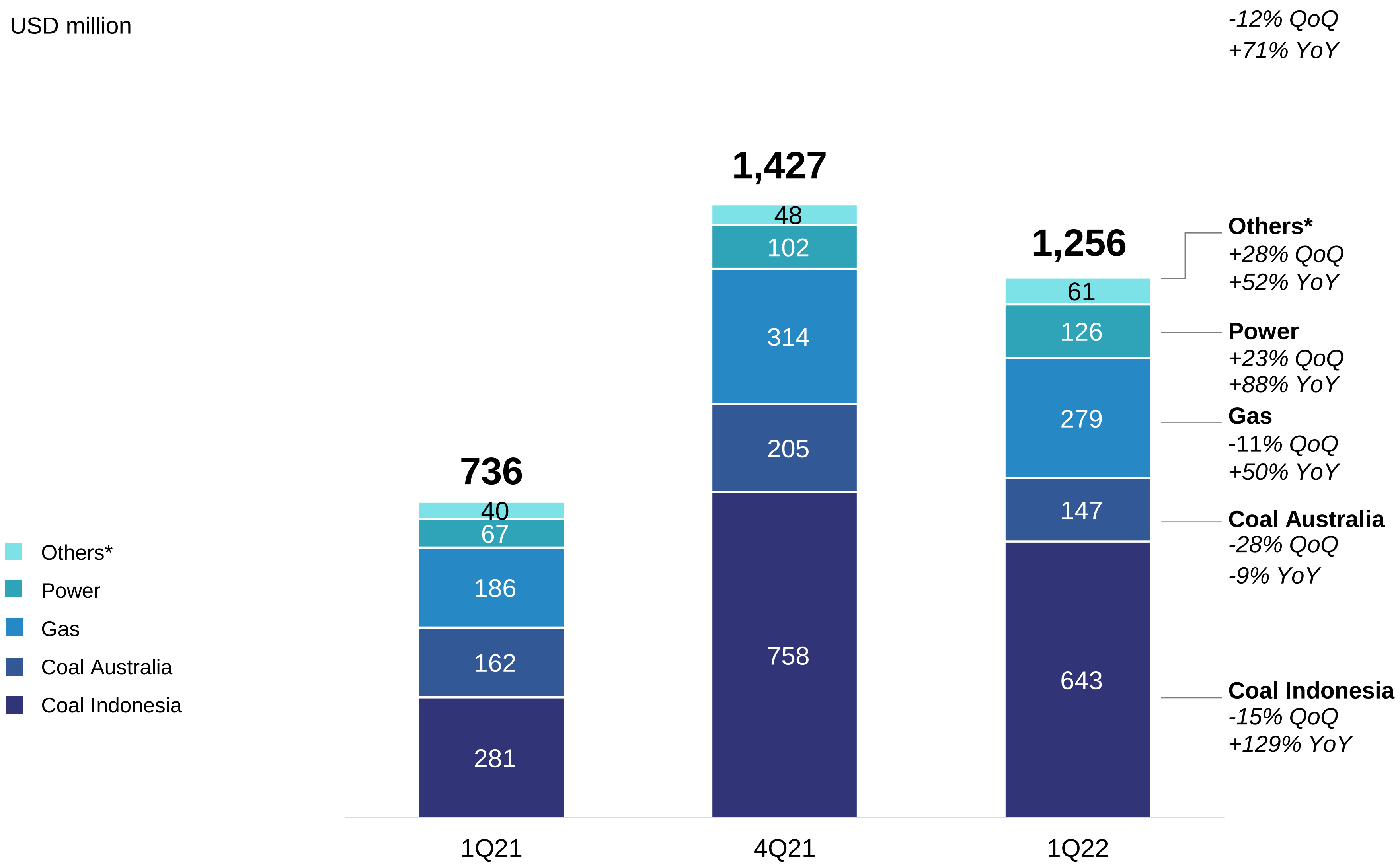
ND/E improved from 1.31x in the previous quarter

KEY TAKEAWAYS

1. **Strong Coal business performance:** from solid production volume and higher ASP, compared to relatively strong levels of 4Q21, driven by strong demand and supply tightness
2. **Robust Core Gas business contribution:** 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
4. **Greener, Smarter investments:** cashflow generation captured from Greener Investments including: Nakoso IGCC, Australia Solar, Temple I CCGT, Japan Solar, Vietnam Wind and Vietnam Solar in the near-term

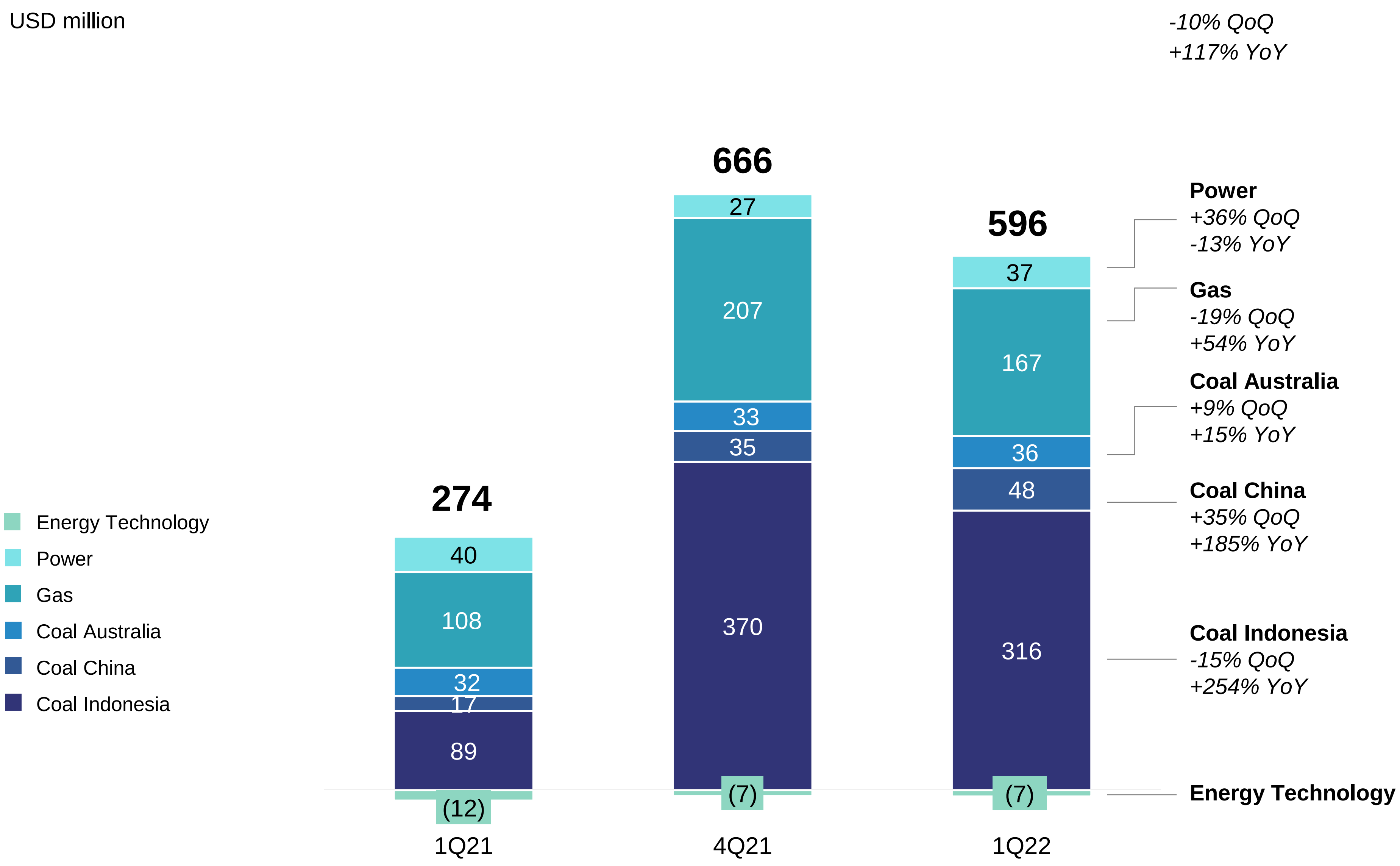
Note: *Average local price = Henry Hub - basis differential

Banpu consolidated sales revenues – 1Q22



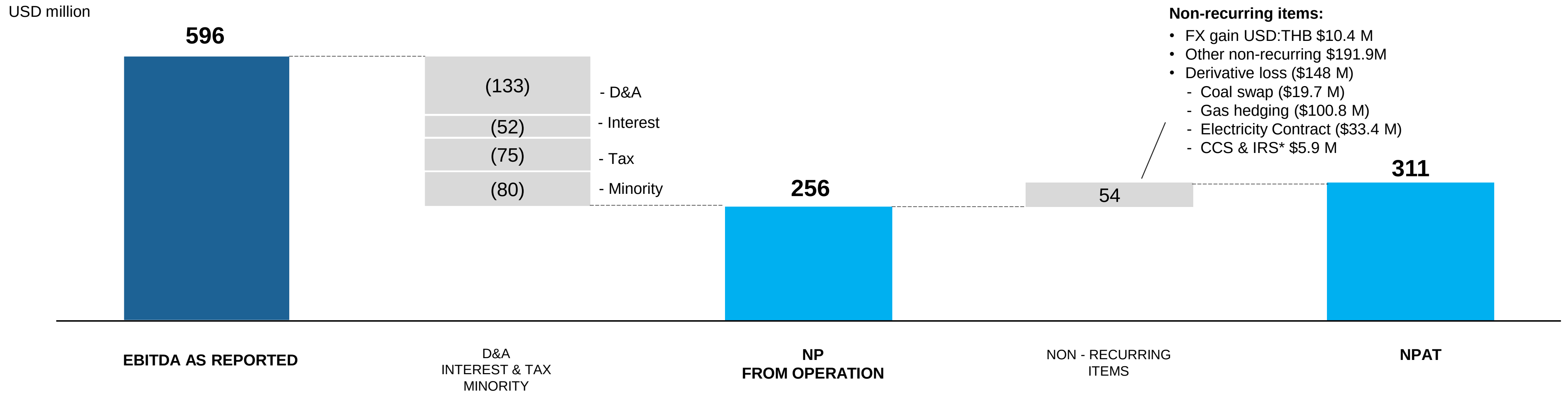
Note: *Revenue from others includes coal trading, fuel business and other businesses

Banpu consolidated EBITDA – 1Q22

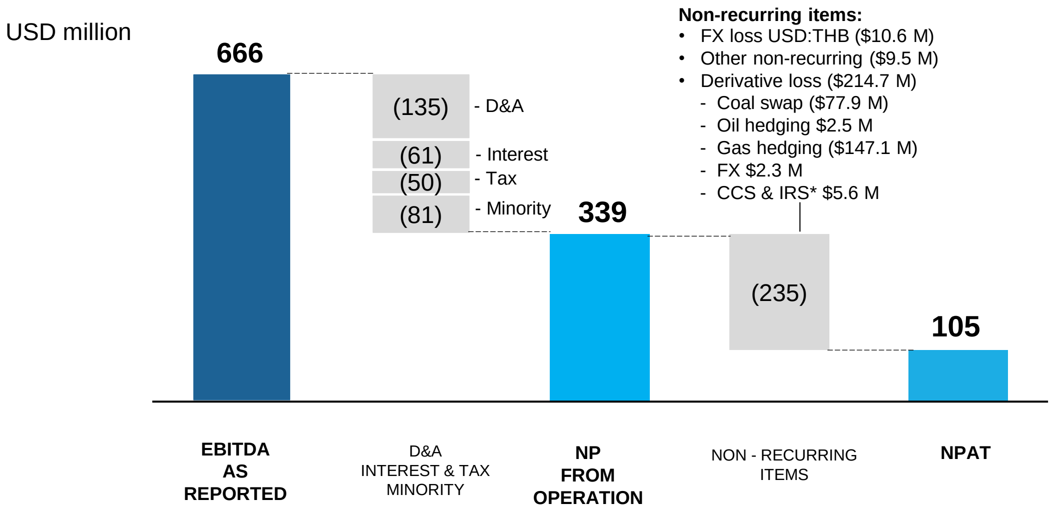


Banpu consolidated NPAT – 1Q22

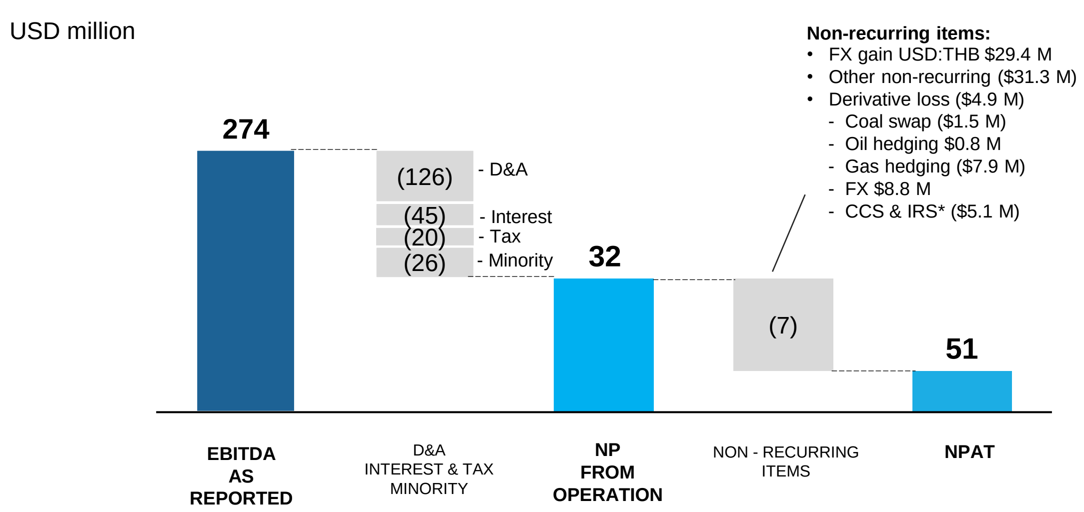
1Q22 NET PROFIT AFTER TAX



4Q21 NET PROFIT AFTER TAX



1Q21 NET PROFIT AFTER TAX



Note: *cross currency swap, interest rate swap

01	02	03	04	05	06
Highlights 1Q22	Antifragile Transformation	Financial Summary	**Energy Resources**	Energy Generation	Energy Technology

U.S. gas market update

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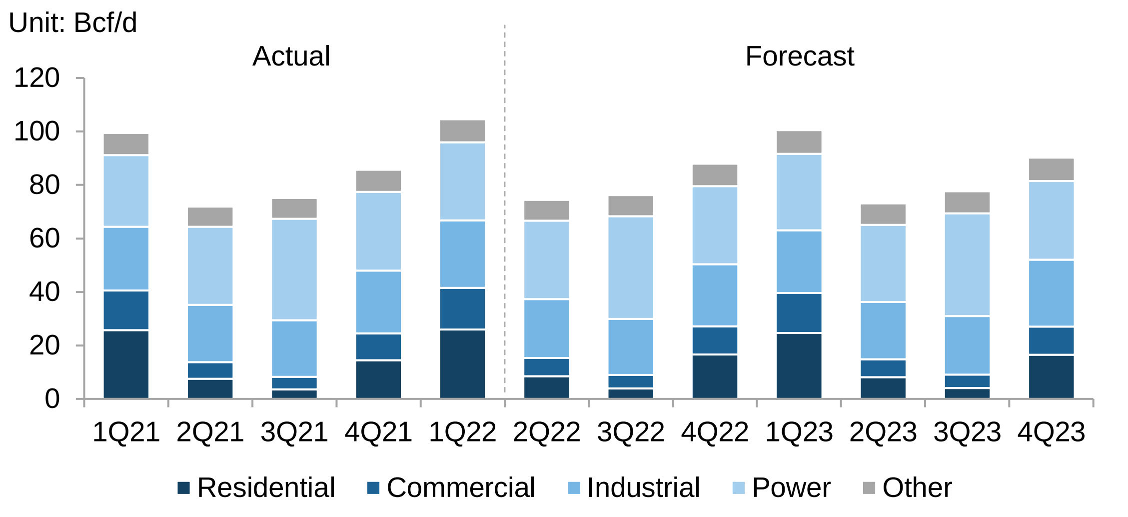
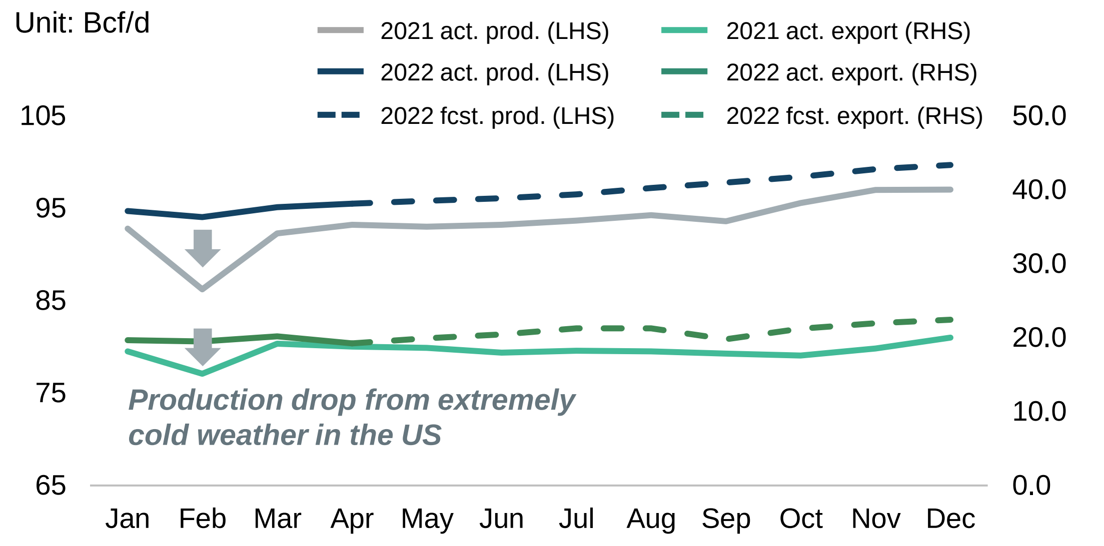
RESILIENT DEMAND PROJECTION

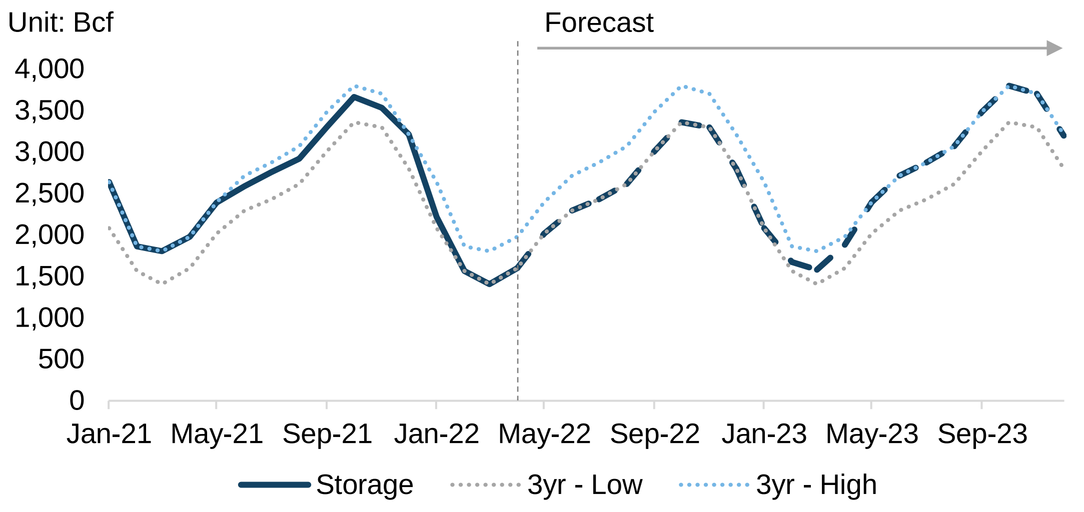


- Majority of US gas demand is domestic consumption. Price is largely determined by local demand and supply with indirect linkage to oil via associated gas production.
- U.S. gas production averaged at 95.5 Bcf/d in April, 1.5 Bcf/d lower than recent peak in December 2021 due to snow in some producing regions and seasonal maintenance on pipelines. Gas production is forecasted to average at 96.7 Bcf/d for 2022 up from 93.5 in 2021, driven by high natural gas and crude oil price levels supporting drilling activities.
- U.S. LNG exports averaged at 11.6 Bcf/d in April, slightly down from all-time peak of 12.0 Bcf/d in March. LNG exports are expected to continue at high levels into 2022 averaging at 12.0 Bcf/d, up 23% from 2021, supported by strong demand from Asia and Europe.
- Natural gas inventories in April 2022 ended at 1.6 Tcf, 17% below 5-year average due to higher demand for heating as a result of below-normal temperature. At the end of 2022 injecting season, the inventories are forecasted to end at 9% below the 5-year average.

US NATURAL GAS PRODUCTION



U.S. STORAGE LEVEL



Source: EIA Short-Term Energy Outlook (May 2022)

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

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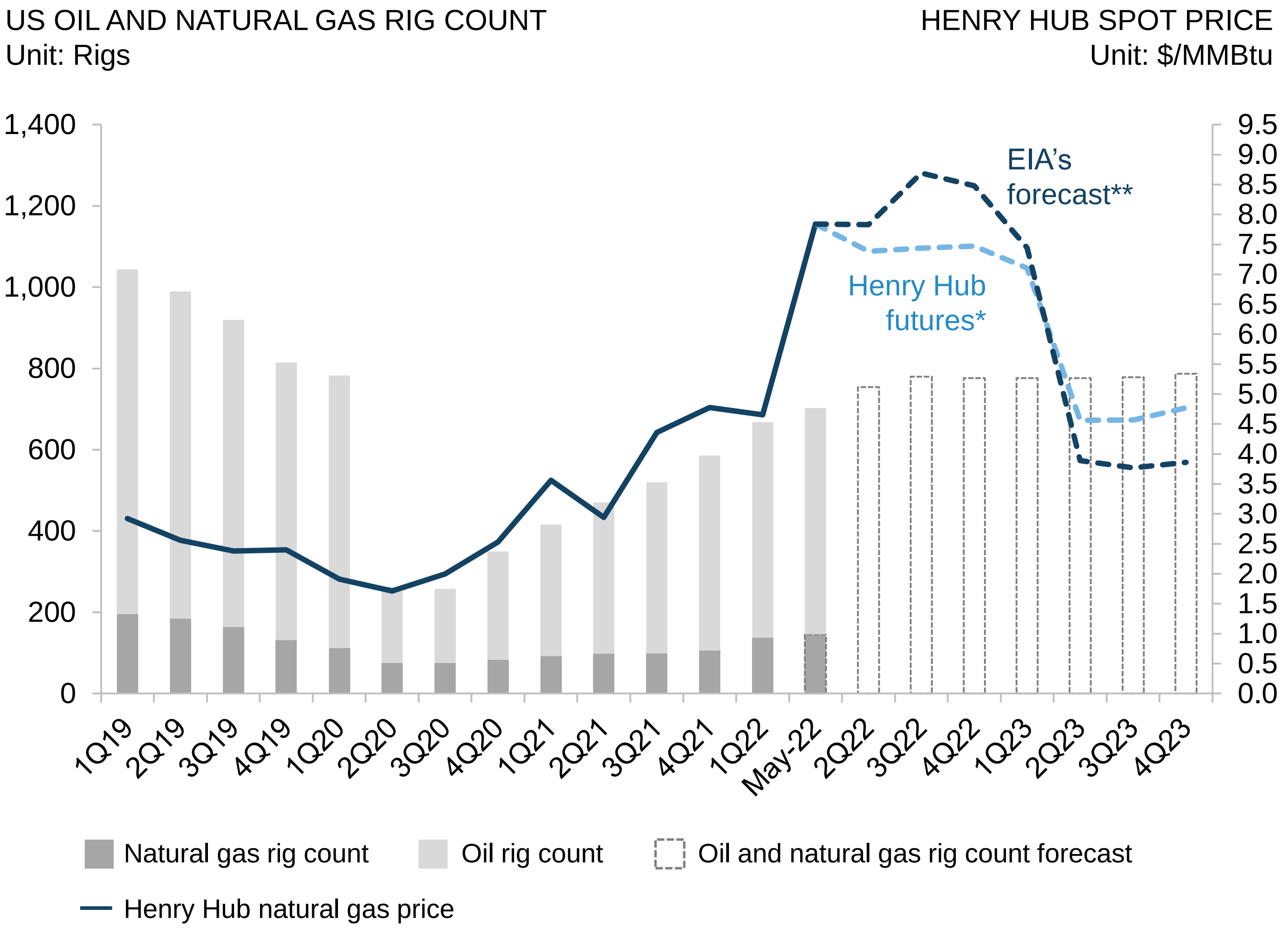
US RIG COUNT VS HENRY HUB PRICE



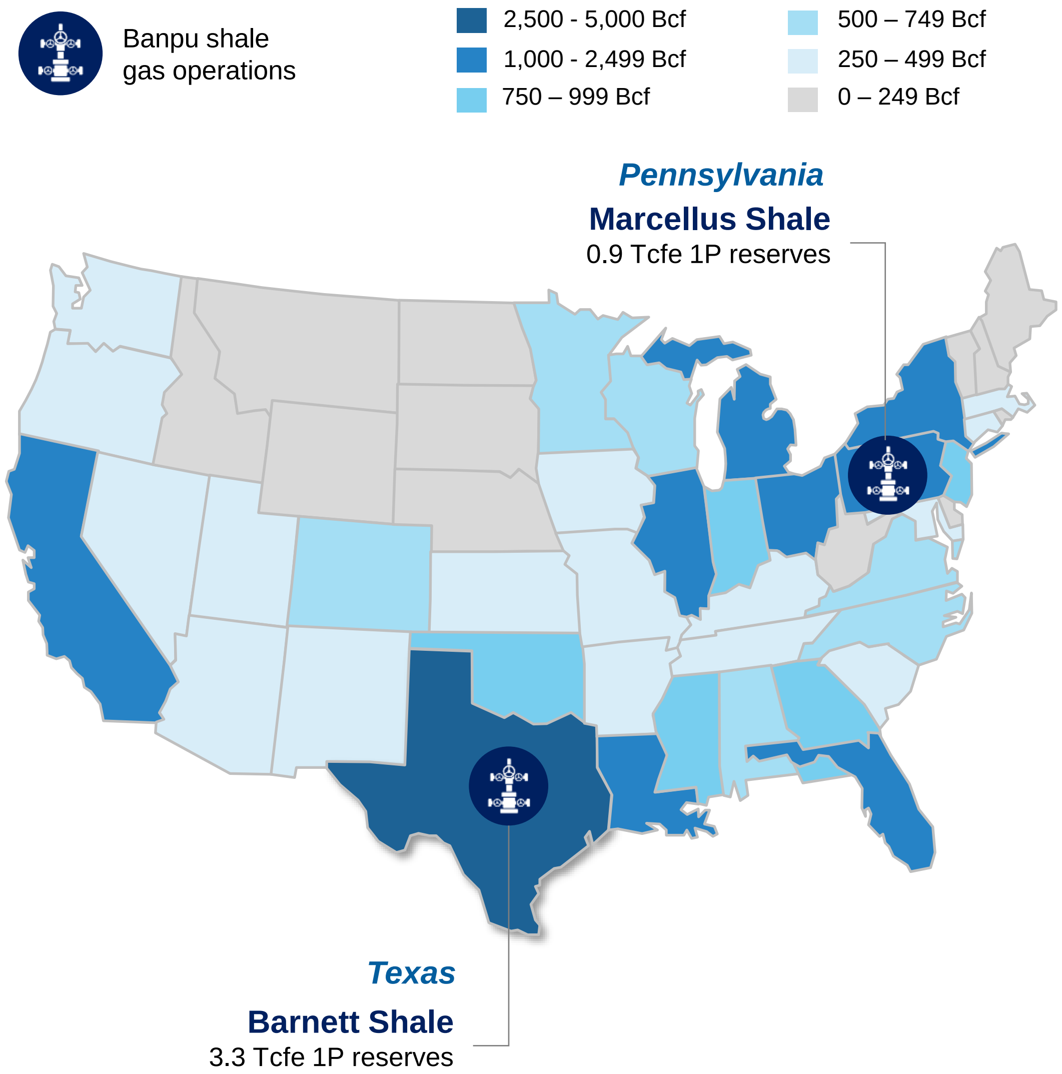
Note: *As of May 10th, 2022, **Short-Term Energy Outlook (May 2022)
Source: IHS Markit report (May 2022) and Baker Hughes US natural gas rotary rig count (May 2022)

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 increase significantly in 2022 relative to 2021 in response to higher crude oil and natural gas prices but remain low in total compared to 2015-2019 average as operators continue to prioritize on cash flow generation.
- With the increase in capital spending, oil and gas rigs are expected to continue to increase in 2Q22, up 13% from 1Q21 but remain at levels 28% lower than 1Q19.
- Henry Hub futures remain around $7.5-8.0/MMBtu levels in 2022 but signal a decline after 1Q23 to around $4.5-5.0/MMBtu levels.

Banpu Gas: 1Q22 highlights

US DRY GAS CONSUMPTION 2019 BY STATE* (Bcfe)



Average local price**

$4.80/Mcfe

-8% QoQ

Sales volume

60 Bcfe

-3% QoQ

EBITDA

$167 M

-19% QoQ

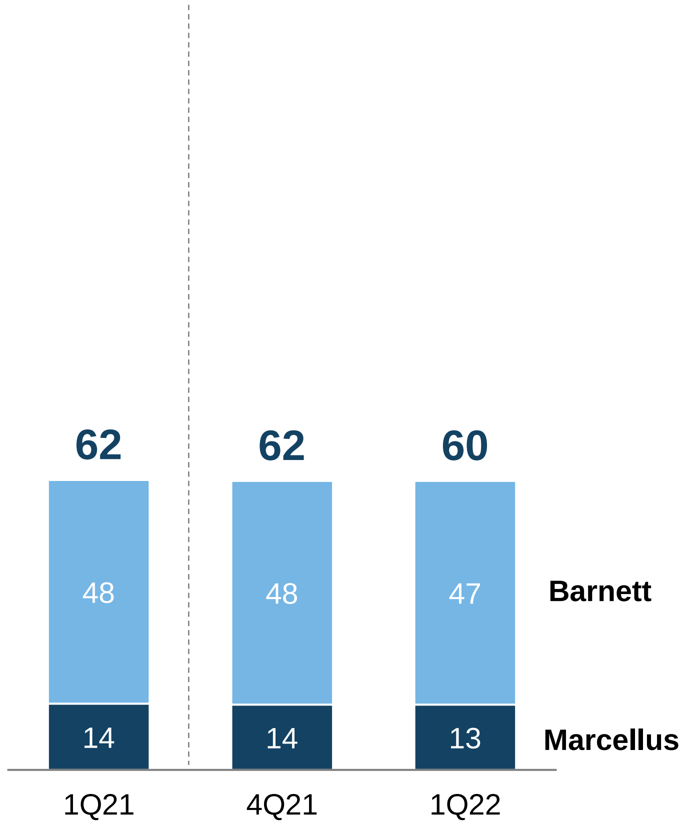
*Source: EIA
**Average local price = Henry Hub - basis differential

Banpu Gas: 1Q22 performance

1Q22 highlighted our ability to capture pricing and deliver strong production despite some winter freezes and inflationary price environment. EBITDA of $167 M in 1Q22.

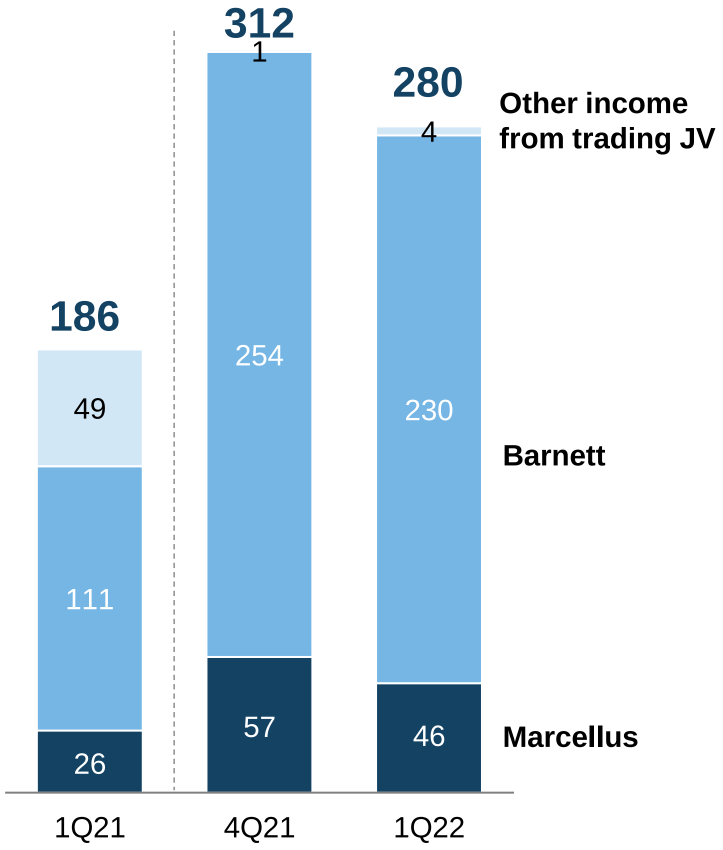
SALES VOLUMES

Unit: Bcf*



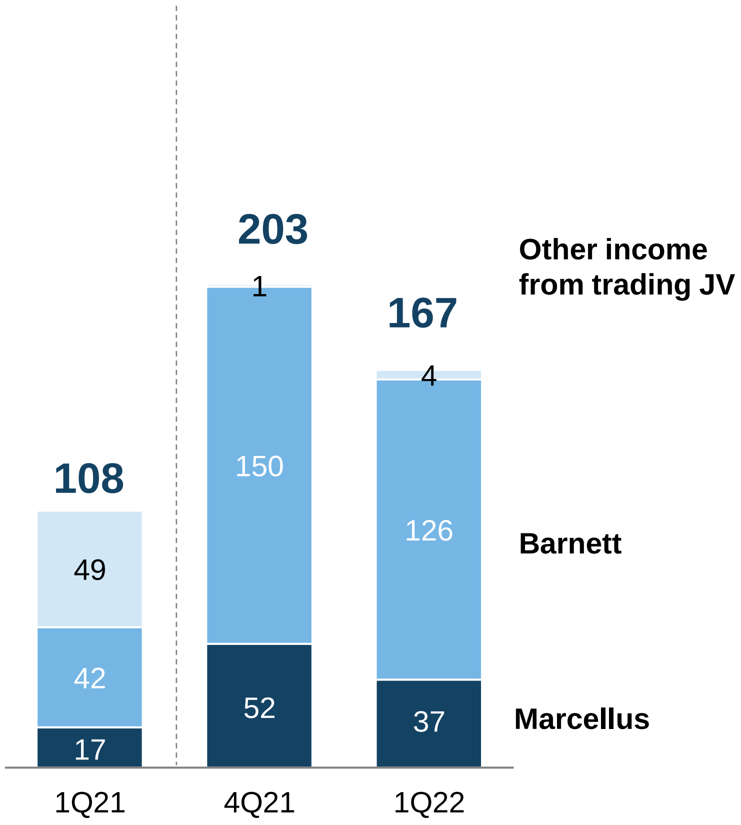
TOTAL REALIZED REVENUE

Unit: US$M



EBITDA

Unit: US$M



Note: *Bcf = Billion cubic feet

Global thermal coal market

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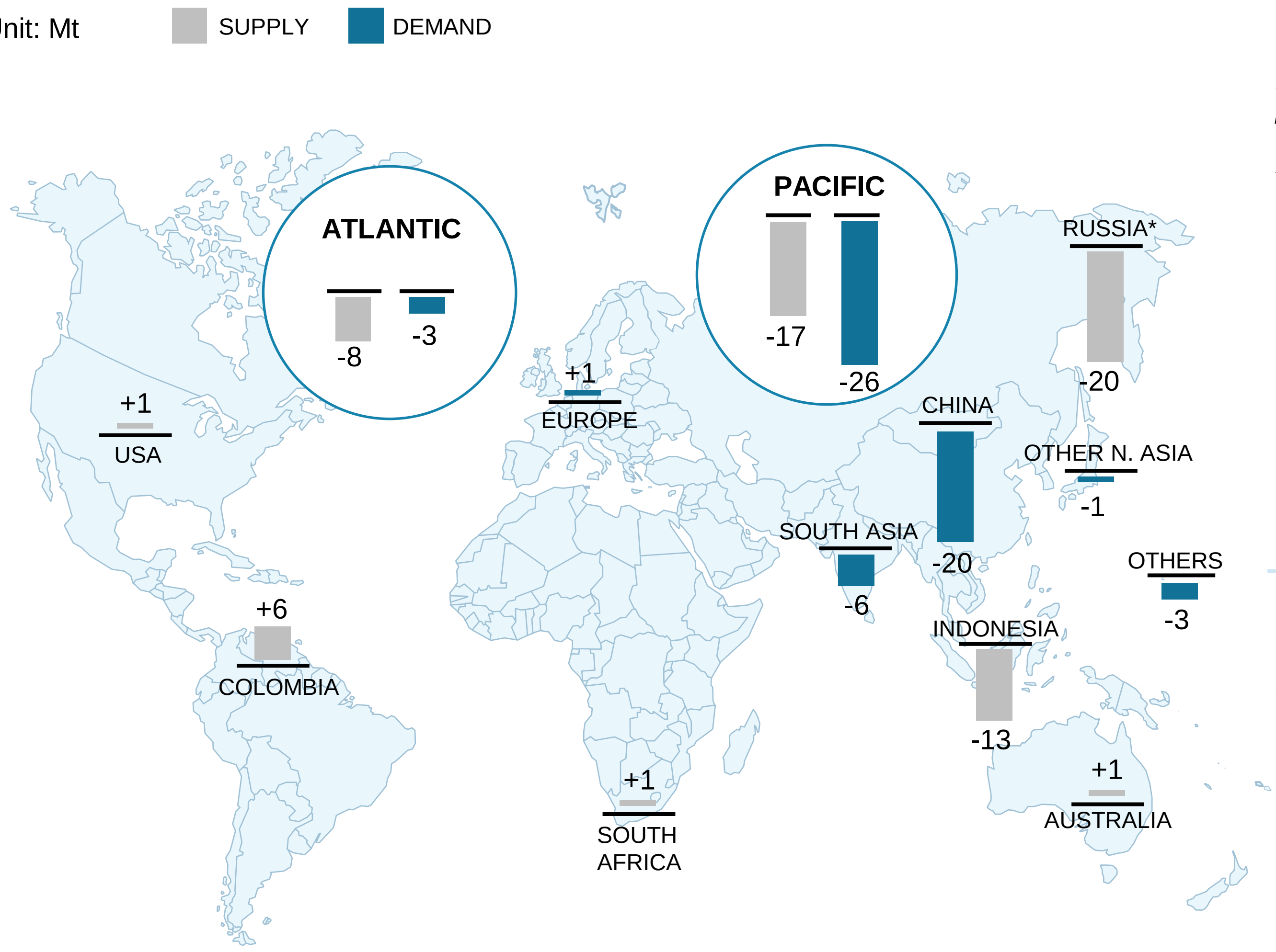
COAL DEMAND AND SUPPLY CHANGE – 2022E VS 2021



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

TRENDS

DEMAND

High CV coal demand remains strong due to high natural gas prices and efforts by European buyers to diversify away from Russian coal. Lower demand from price-sensitive buyers who are mostly lower CV coal consumers. Buyers in countries with domestic supply could start diverting some demand to domestic supply.

- **China:** Slower economic growth from Covid-19 lockdowns will dent coal demand. Government's intervention to stabilize coal prices and unofficial ban on Australian coal are expected to continue.
- **India:** Sustained rally in seaborne coal prices will keep thermal coal imports subdued although government urged power producers to ramp up imports.
- **JKT:** High natural gas prices continue to keep coal competitive against gas. Japan's announcement of ban on Russian coal imports although no detailed plan yet is likely to increase demand for Australian coal.
- **Europe:** EU announced plans to ban all forms of Russian coal imports starting from 10th August, while UK's ban will be effective at the end of 2022. EU is expected to increase coal-fired generation by postponing coal plant closures amid high natural gas prices.

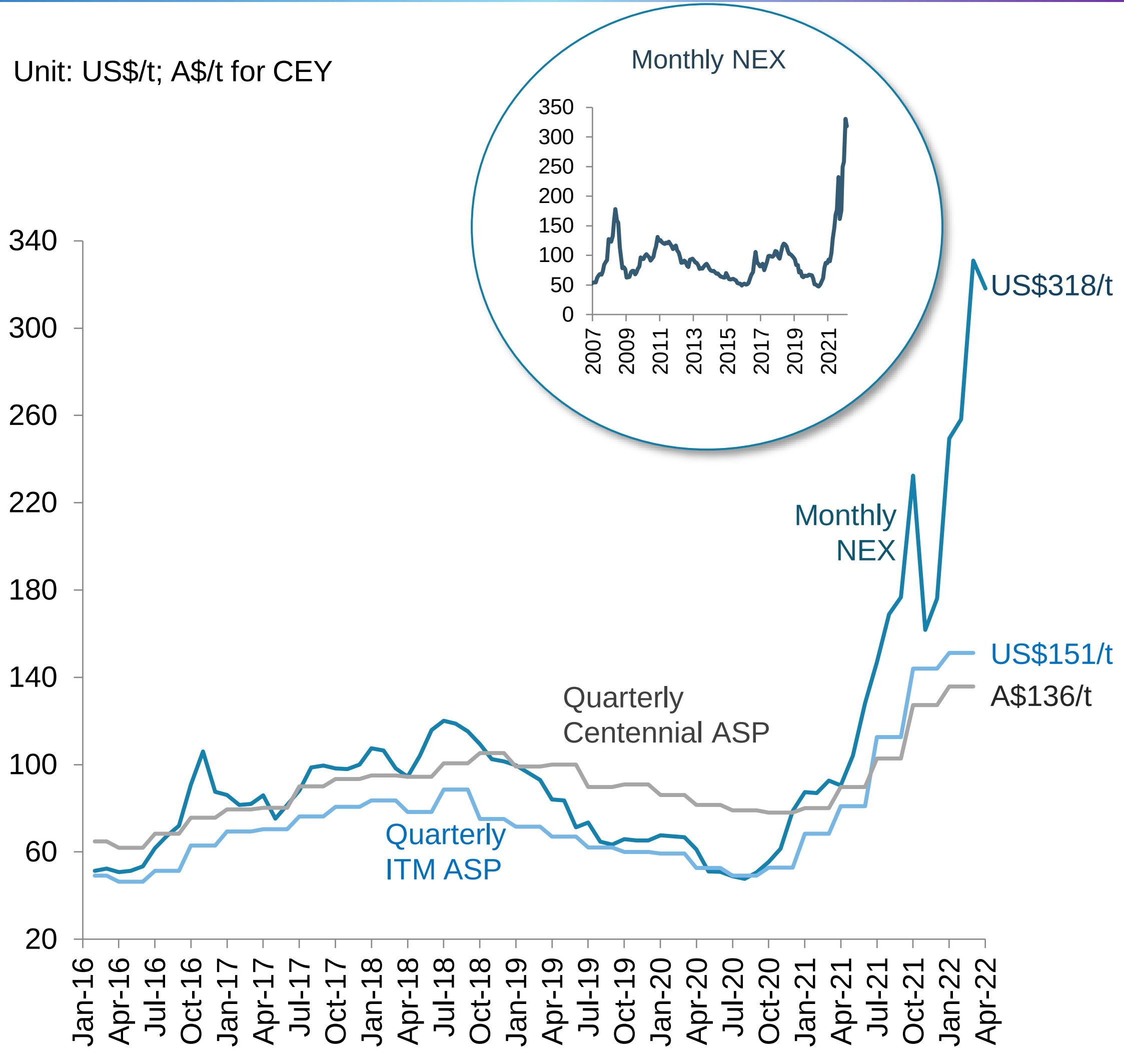
SUPPLY

Geopolitical tensions are going to change global coal trade flows into more inefficient markets, keeping coal prices elevated. Supply tightness is expected to persist throughout the year especially on high CV products.

- **Indonesia:** wet weather impeded the ability to ramp up exports to recoup the losses incurred during the export ban coupled with weak low CV demand.
- **Australia:** wet weather and labour shortage from Covid-19 pandemic curbed output. Supply is expected to improve from April but export to Europe will be limited.
- **Others:** Russian coal export is expected to perform well before the enforced ban on 10th August and will fall after that. Rail issues in South Africa persist. In Colombia, Prodeco production could restart in 4Q22. Growth of thermal coal export from US seems to be limited due to high domestic demand and logistic constraints.

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 thermal coal market has been extremely volatile during 1Q22, mainly due to the sudden policy changes in Indonesia, Ukraine crisis, strong gas price, coupled with the supply tightness in major coal export countries.
- On 26 January 2022, GCNewc hit US$263/t, due to the Indonesian coal export ban and the wet weather in NSW Australia. After Indonesia restarted exports from the end of January 2022, the coal market started softening, on the 18th of February, GCNewc dropped to US$226.t level,
- Since end of February 2022, the market surged significantly, mainly due to the panic caused by Ukraine crisis, GCNewc hit US$427/t on 7 March 2022, which became the historical record so far.
- After the panic buying, the coal market started stabilizing through to mid March, dropping to about US$200/t within 2 weeks, hitting US$230/t level on 22 March 2022, which is the lowest price level in March.
- Supported by the supply shortages in major coal export countries, particularly due to the wet weather conditions in NSW, Australia and Kalimantan, Indonesia and the prolonged Ukraine crisis, the tight market situation is expected to continue for the foreseeable future.
- Group ASPs in 1Q22 continue to increase, particularly for export portions.
- Key price metrics:
  - ITM ASP 1Q22 : US$151.1/t* (+5% QoQ)
  - CEY ASP 1Q22 : A$135.8/t* (+7% QoQ)
    ASP Domestic A$78.3/t (+5% QoQ), ASP Export A$258.6/t (+28% QoQ)
  - NEX (May 13, 2022)**: US$397.82t

Banpu Mining: group coal sales and pricing status 2022e

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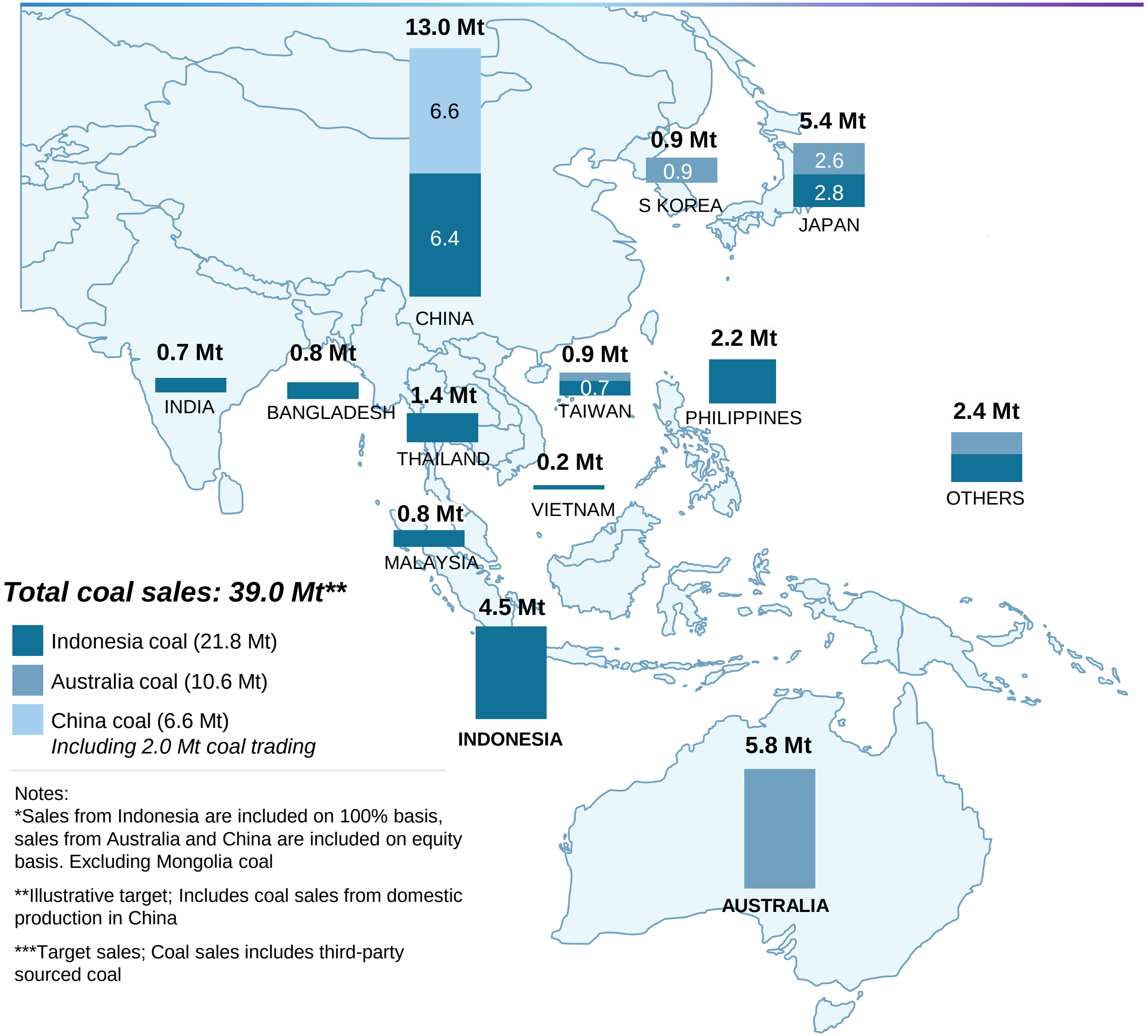
2022e COAL SALES* SOURCE – DESTINATION ANALYSIS



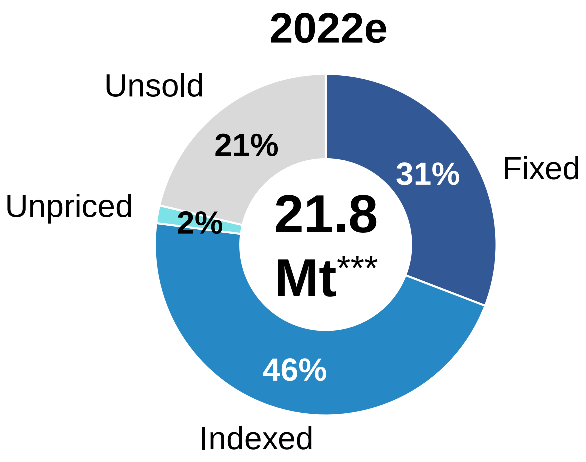
Notes:
*Sales from Indonesia are included on 100% basis, sales from Australia and China are included on equity basis. Excluding Mongolia coal

**Illustrative target; Includes coal sales from domestic production in China

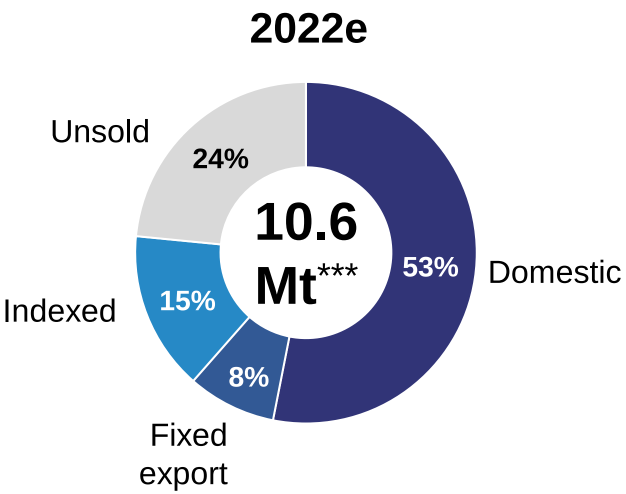
***Target sales; Coal sales includes third-party sourced coal

COAL SALES PRICING STATUS

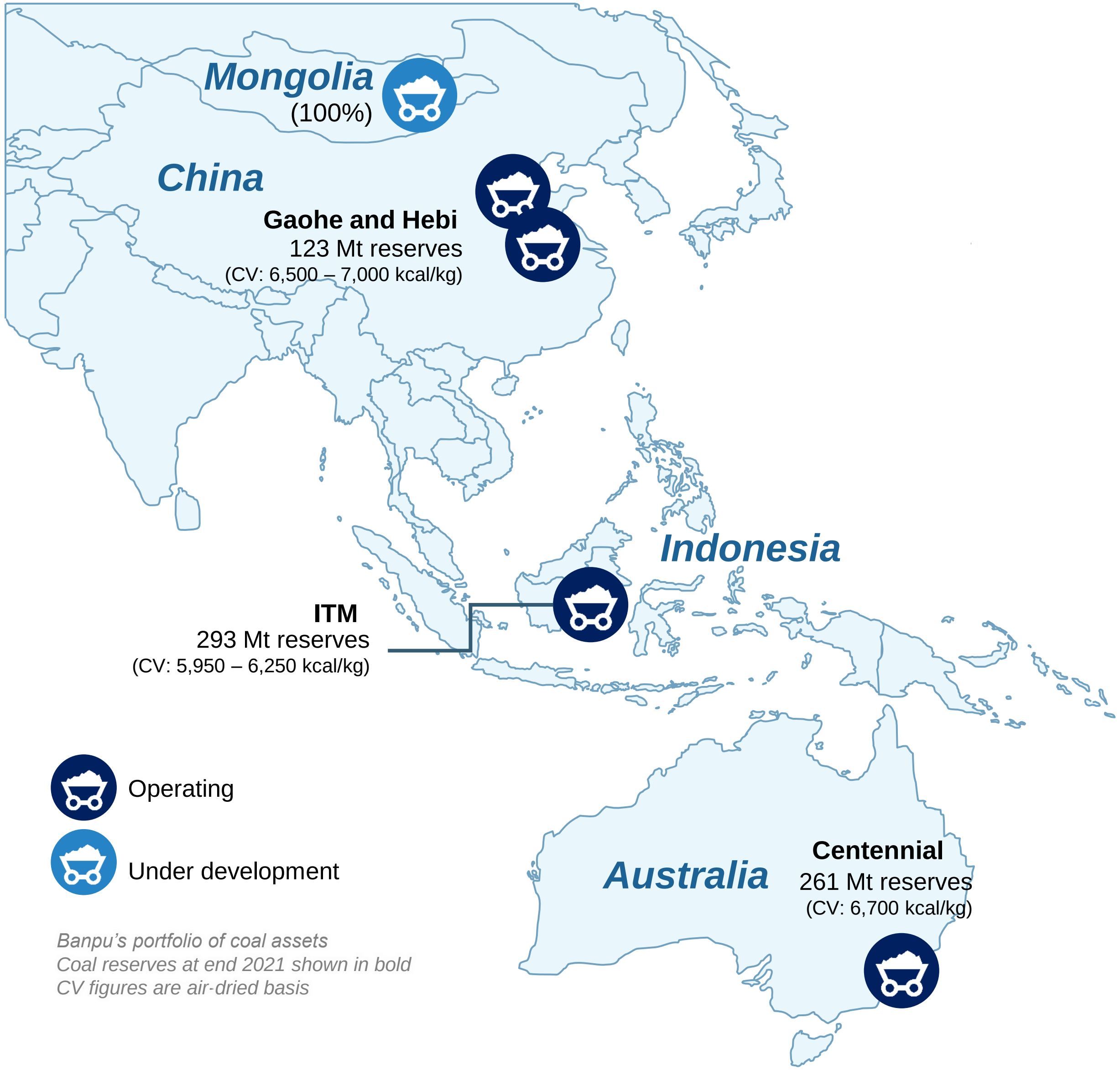
INDONESIA



AUSTRALIA



Banpu Mining: 1Q22 highlights



Banpu's portfolio of coal assets
Coal reserves at end 2021 shown in bold
CV figures are air-dried basis

Production volume*

8.0 Mt

-15% QoQ

Sales volume*

8.7 Mt

-17% QoQ

EBITDA

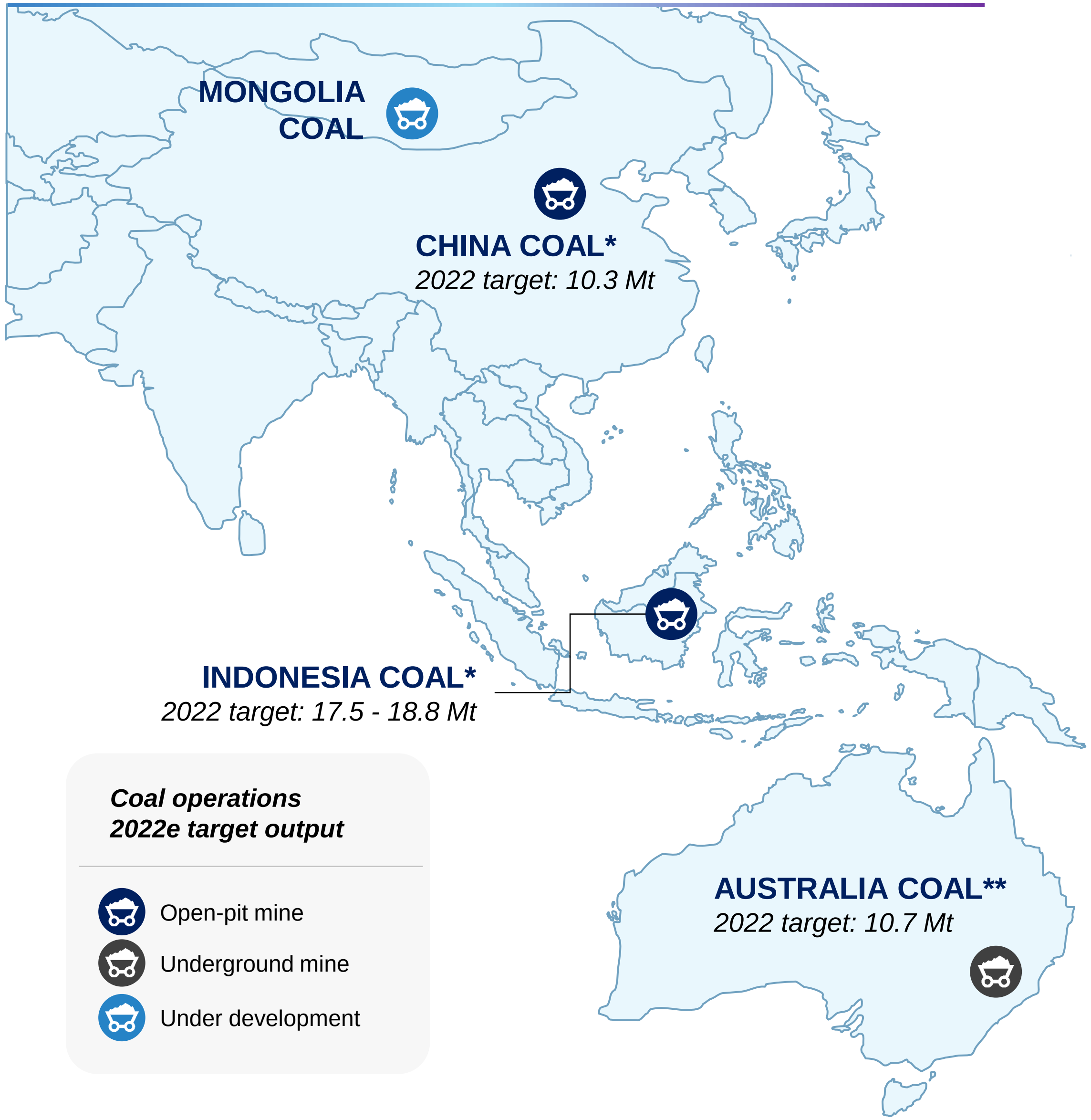
$400 M

-9% QoQ

Note: *Based on 100% basis

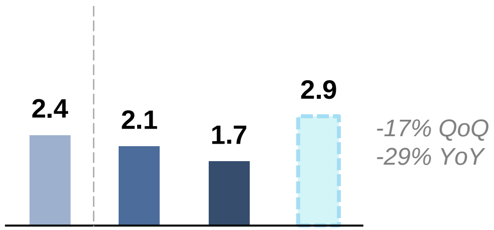
Banpu Mining: operational summary

2022E COAL OUTPUT



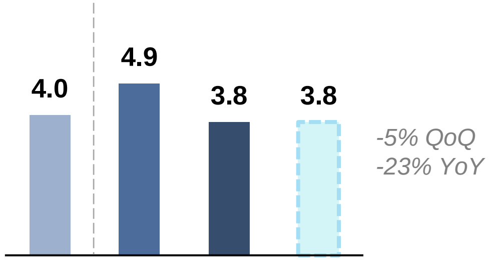
ROM PRODUCTION AND KEY UPDATES

AUSTRALIA COAL**



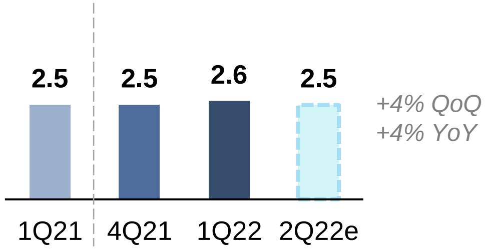
- Delayed Longwall relocations impacted 1Q22 production.
- Reduced production is associated to domestic sales.
- 2Q22 – Longwall mines are operating above plan.
- All mines continue to incur Covid-19 related absenteeism.

INDONESIA COAL*



- Production 1Q22 achieved according to the target at 3.8 Mt despite the export ban ruling in Indonesia during January 2022.
- Additional mining equipment capacity from mining contractor to support production output in this year.

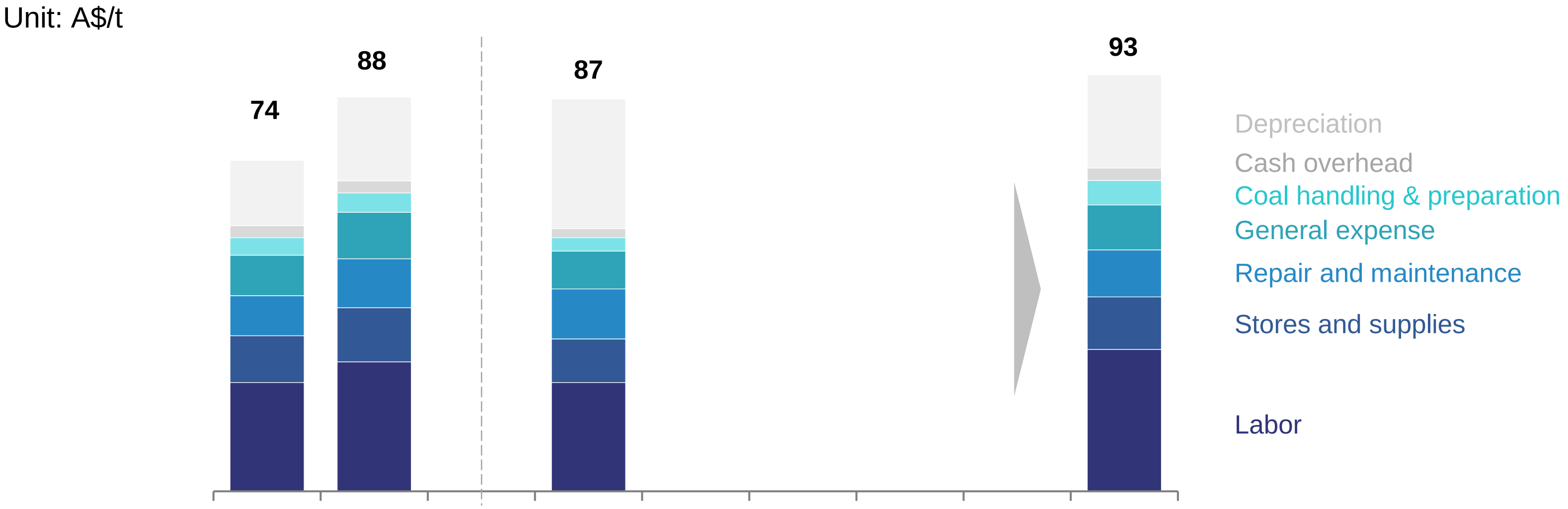
CHINA & MONGOLIA COAL*



- Gaohe: Production and sales in 1Q22 remained stable amid high coal prices from strong demand.
- Hebi: Lower production and sales in 1Q22. A new longwall panel is expected to start test run in 2Q22 and improve production for the quarter.

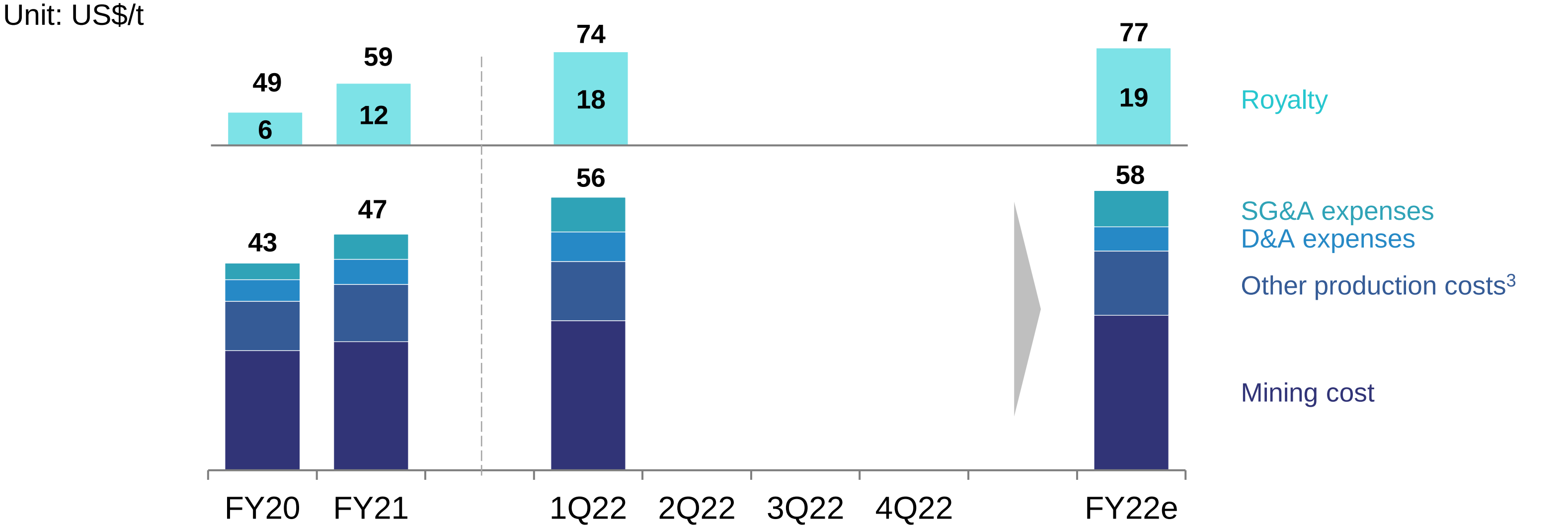
Banpu Mining: average production cost breakdown

AUSTRALIA COAL – AVERAGE PRODUCTION COST[1]



- Global environment continues to drive costs up (i.e. steel and fuel) in addition to supply cost pressure.
- 1Q22 – Lower production volumes impacting cost per ton.
- Mine site teams are focusing on strict cost control measures.

INDONESIA COAL – AVERAGE TOTAL COST[2]

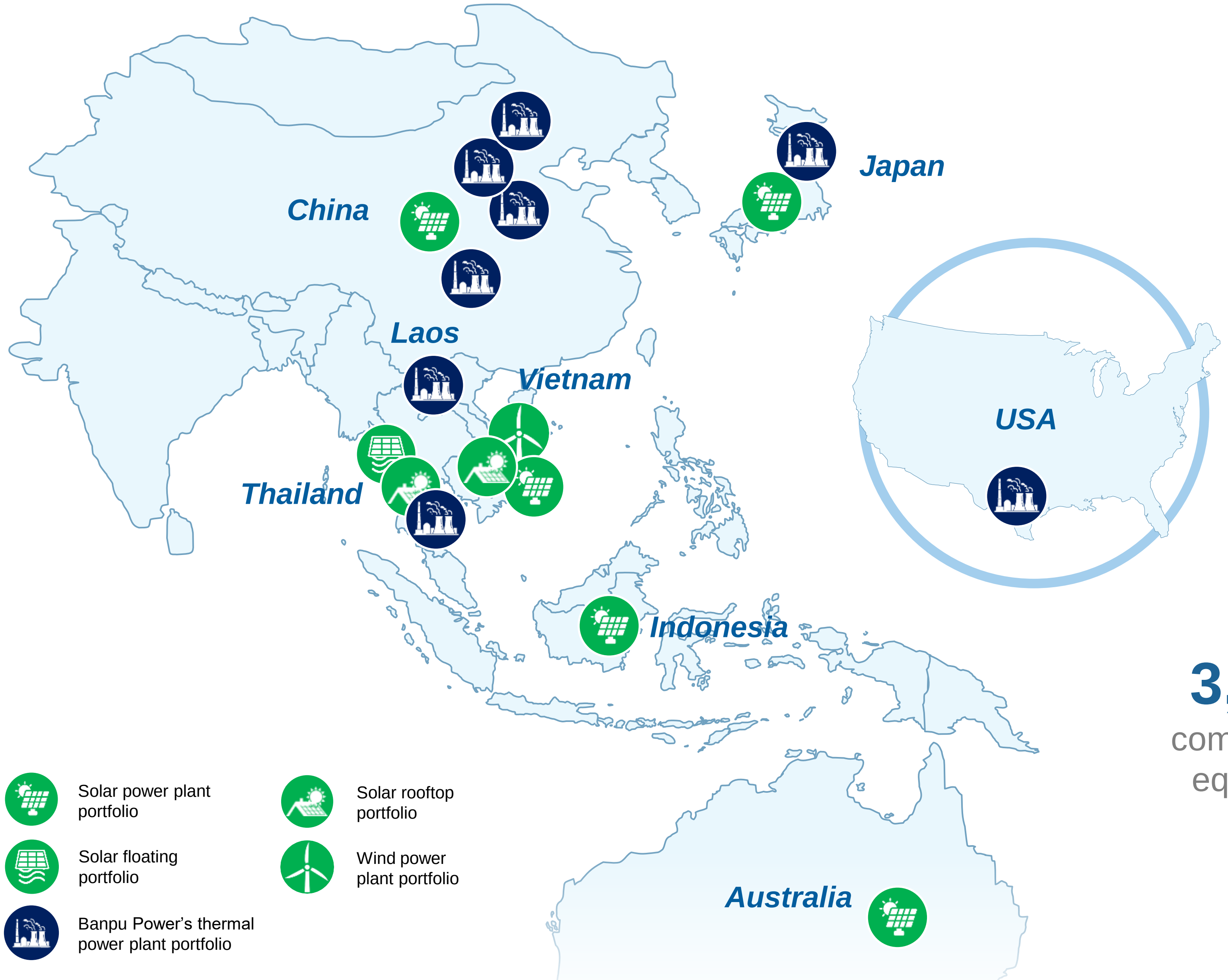


- Average total cost per ton (excl. royalty) rose to $56/t in 1Q22 due to increase in fuel price which significantly impacted mining and coal transportation costs. FY22e cost is also expected to increase from the effect of high fuel price.
- Higher ASP due to high coal prices which increase the royalty cost significantly compared to the FY21.

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.


BANPU

Banpu Energy Generation: 4,187 MW committed capacity



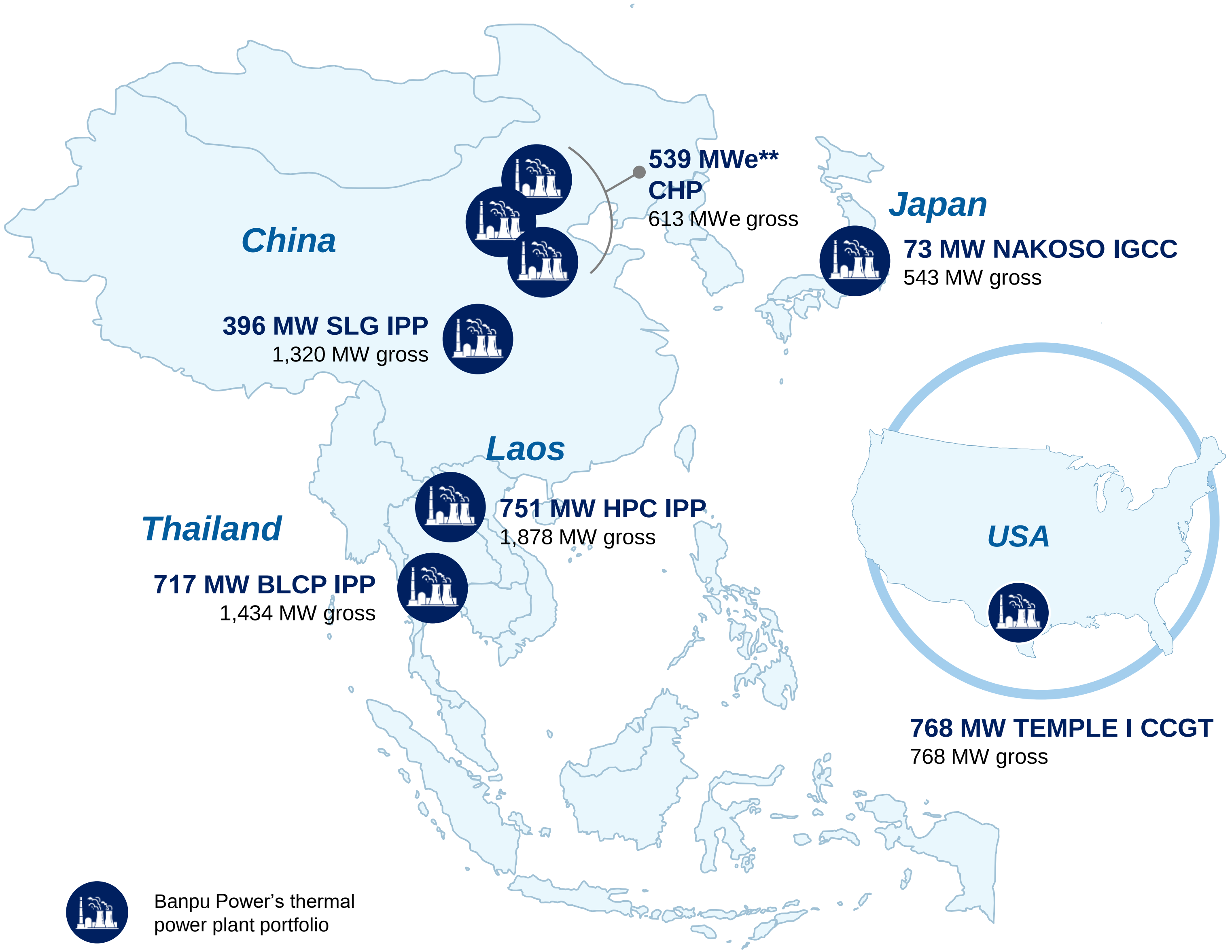
8 countries
operations across the Pacific Rim

3,244 MW
committed thermal equity capacity*

943 MW
committed renewables equity capacity**

*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: 1Q22 highlights



EBITDA

$37 M

+36% QoQ

Achieved EAF

77% at HPC	**78%** at BLCP
76% at Nakoso	**85%** at Temple I

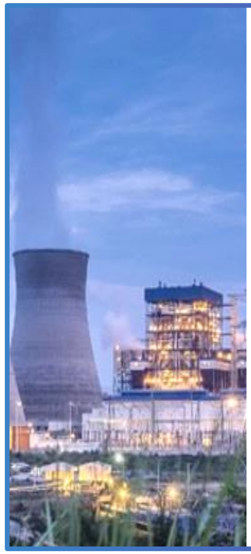
Note: *Based on Banpu Power's equity capacity, **MW equivalent

Banpu Thermal Power: 1Q22 updates

BLCP

Plant improvement plan in 1Q22 to improve plant reliability to serve demand from EGAT.

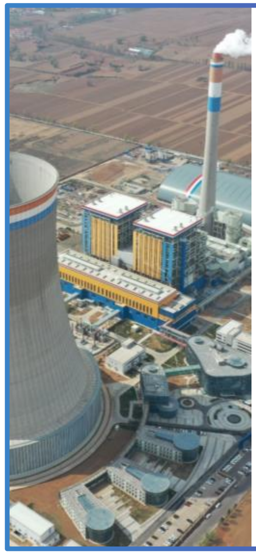
- Reported EAF of 77.7% due to planned major overhaul for Unit 1
- Total revenue reported at THB 3,341 M, EBITDA at THB 150 M
- Reported share of loss at THB 83 M



HPC

Completed yearly maintenance of unit 2 for 44 days as planned, to improve efficiency and plant reliability

- Reported EAF of 76.7% due to planned major overhaul for Unit 2
- Total revenue reported at THB 4,583 M, EBITDA at THB 2,557 M
- Reported share of profit at THB 642 M



SLG

Fully operational and entering the wholesale electricity market to raise the selling price of electricity, as well as a policy of securing coal supply contracts with SOE to mitigate the fluctuation of coal costs.

- Report net power sold of 876 GWh
- Impact from high coal cost result in a reported share of loss at RMB 49 M

China CHP

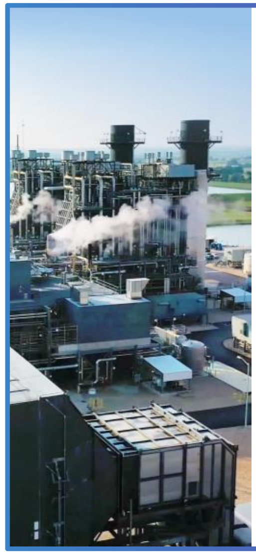
Continued to improve financial performance by entering wholesale electricity market and centralized coal procurement system to lessen impact from high coal cost.

- Reported revenue of RMB 493 M
- Total EBITDA of RMB 48 M
- Reported share of profit at RMB 18 M

Nakoso IGCC

Higher power sold after completed its plant improvement plan in 4Q21 with additional contribution and cash flow stream.

- Reported EAF of 76%
- Reported net generation of 789 GWh
- Reported share of profit at THB 238 M



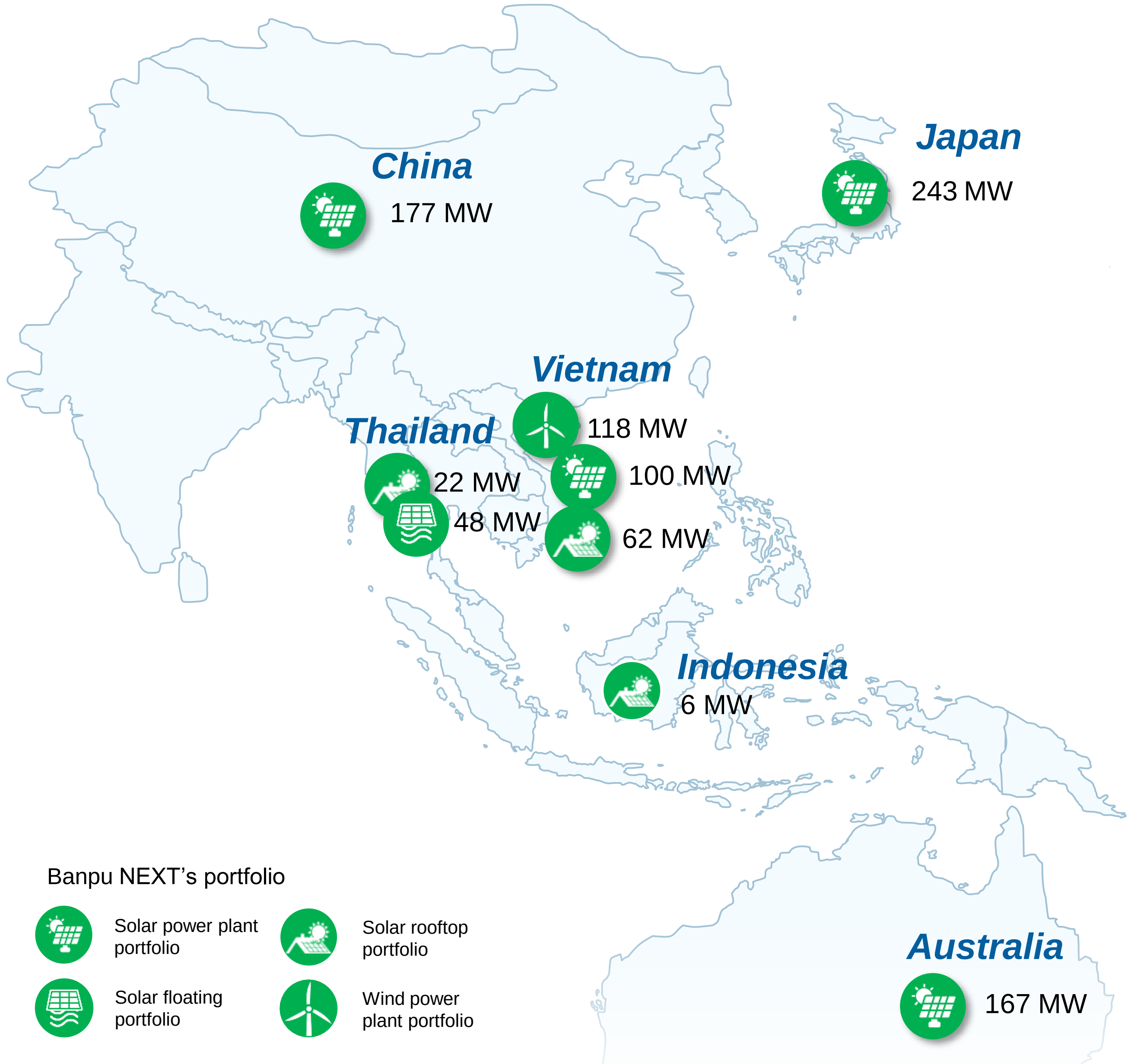
Temple I

Fully recognized revenue in this quarter with better plant efficiency and higher power sold

- Report EAF of 85%
- Reported net generation of 754 GWh
- Total EBITDA of USD 5 M
- Reported share of loss at USD 27 M (Unrealized loss from derivative USD 23 M)

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

Banpu Renewable Power: diversified Asia-Pacific portfolio*



943 MW
committed renewables capacity across Asia-Pacific

687 MW
committed solar power capacity

138 MW
committed solar rooftop and floating solar capacity

118 MW
committed wind capacity

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

Banpu Renewable Power: 1Q22 updates

China Solar

Capacity factors slightly lowered due to unfavorable weather conditions with lower power sold YoY.

- Average capacity factor was 13.0%
- Power sold was 50 GWh, -8% YoY
- Reported revenue of RMB 45 M with profit contribution of RMB 12 M

Japan Solar

Higher power sold from COD of projects in pipeline, slightly lower capacity factor.

- Average capacity factor was 8.2%, -1% YoY
- Power sold was 35 GWh, +22% YoY
- Reported TK distribution of JPY 121 M

Australia Solar

Continued integration of plant operations and management. Optimization of generation and energy value through plant improvement initiatives.

- Average capacity factor was reported at 20.5%
- Power sold was 53 GWh

Vietnam Solar

Acquired 3 new operating solar farms (Ha Tinh Solar in 4Q21, Nhon Hai Solar and Chu Ngoc Solar in 1Q22) with a total capacity of 100 MW.

- 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 32.2%
- Power sold was 26.2 GWh
- Profit contribution of USD 0.5 M

Vinh Chau project

- Construction completion and under pre-commissioning activities

Note: Banpu Power has 50% shareholding in Banpu NEXT


EV

Banpu Energy Technology: growth targets 2025

BANPU

	SOLAR: ROOFTOP & FLOATING	ENERGY STORAGE SYSTEMS	E-MOBILITY	SMART CITIES & ENERGY MGMT.	ENERGY TRADING
	Including **49%** in Solar Esco	**47.7%** in Durapower	**39.3%** in UMT, **30%** Beyond Green, **21.5%** in FOMM, **20%** in EVolt, **17.54%** in Haupcar	**100%** ownership	**100%** ownership
1Q22	**138** **MW** committed capacity	**1.0** **GWh** (0.5 GWh on equity basis) Li-ion battery production capacity	**2,457** passengers/day ride hailing via Muvmi **252** electric vehicles under fleet management **116** Chargers **1** E-ferry sold	**21** **projects** Includes energy management, smart infrastructure, etc.	**440** **GWh** Electricity sales
2025 target	**500** **MW** *(under review)*	**3.0** **GWh** *(1.4 GWh on equity basis)*	**430,000** passengers/day **5,500+** electric vehicles **2,000** chargers **100** e-ferries sold	**30** **projects**	**2,000** **GWh**

Banpu Energy Technology: 1Q22 updates

SOLAR: ROOFTOP & FLOATING | **ENERGY STORAGE SYSTEMS** | **E-MOBILITY** | **SMART CITIES & ENERGY MGMT.** | **ENERGY TRADING**

SOLAR ROOFTOP

IBP'S NEW CONTRACT SIGNING
PT. CPI (Cahaya Power Indonesia), a subsidiary of IBP, in which IBP is a subsidiary of Banpu Next, has signed a solar rooftop PPA in Indonesia with a total capacity of 5.9 MW in 1Q22

NEW CONTRACT SIGNING IN THAILAND
Banpu NEXT has signed a contract with SUMMER LASALLE PHASE 3 and S.C.S. SPORTSWEAR Co., Ltd. for a solar rooftop installation with a total capacity of 982 kWp

COMPLETED DIVESTMENT FROM SUNSEAP
Divestment of 47.5% shareholding in Sunseap to EDPR, a listed renewables company incorporated in Spain, for US$347.8 M was completed in February 2022.

SOLAR FLOATING

BANPU NEXT ACCELERATES PLANS FOR THAILAND'S MEGA SOLAR INDUSTRIAL ESTATE PROJECTS

- Banpu NEXT expanded its solar portfolio in several Thai industrial estates by preparing to begin power distribution in the middle of 2022. The company demonstrated success of the solar floating projects in LK Rubber Industrial City Hub of 16 MW, currently 95% construction progress. Moreover, Banpu NEXT handled a major solar floating project for Apex Green Industrial Estate with a total production of 32 MW, the largest private solar floating project in Thailand.
- Banpu NEXT aims to install all types of solar systems in Thailand for all industry sectors by 2022, emphasizing on industrial estates and large sites.
- Banpu NEXT, through a digital platform and real-time system monitoring application assists businesses in creating sustainable value, lowering electricity costs, increasing energy efficiency and transitioning to an environmentally friendly green industry

Note: Banpu NEXT equity basis

Banpu Energy Technology: 1Q22 updates (Cont’d)

BANPU

SOLAR: ROOFTOP & FLOATING

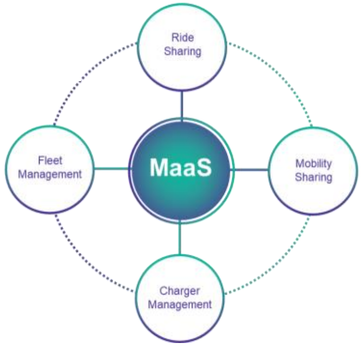
ENERGY STORAGE SYSTEMS

E-MOBILITY

SMART CITIES & ENERGY MGMT.

ENERGY TRADING

E-MOBILITY EXPANSION



muvmi

HAUP

evolt

BEYOND GREEN

MUVMI NEW AREA EXPANSION
MuvMi has expanded operating areas from 7 to 10 areas (including On-nut, Victory Monument, and Grand Bangsue Station). Moreover, MuvMi just celebrated 2 million trips since operated in 2018

BEYOND GREEN BRANCHES EXPANSION
Beyond Green has expanded to 16 branches covering all regions in Thailand, in order to serve customers and provide services regionally.

INCREASED SHAREHOLDING IN EVOLT AND HAUP CAR
Total investment of c. US$2.2 M. in Tranche 2 Series A funding in Evolt and Haup Car, resulting in increased shareholding to 20% and 17.54% in Evolt and Haup Car, respectively.

BANPU NEXT ECOSERVE

JOINT VENTURE WITH SP GROUP
Banpu NEXT EcoServe and SP Group, a leading utilities group in Singapore and Asia Pacific, signed a joint venture agreement on 5th April 2022. This joint venture will enhance capabilities to develop district cooling systems, cross-border renewable energy certificates (RECs) platform and smart city solutions businesses.

ELECTRICITY SALES

INCREASED LONG-TERM SALES TARGET WITH STRATEGIC ADJUSTMENTS
- Secure all electricity supply to deliver to clients for the next 12 months.
- Adjust strategy and risk management system in responding to current market conditions of Japan’s electricity market.

APPENDIX

Banpu: ‘integrated energy solutions’ 2022

BANPU

ENERGY RESOURCES

Shale Gas

~700 MMcfed
Net production

Mining

39.0 Mt
Coal sales

ENERGY GENERATION

Renewable Power

805 MW
Committed capacity

Thermal Power

3,244 MW
Committed capacity

ENERGY TECHNOLOGY

Solar: Rooftop & Floating

138 MW
Committed capacity

Clean Energy Tech

1.0 GWh (100% basis)
Li-ion batteries

E-mobility services
E-mobility solutions

Smart Cities &
Energy Management

440 GWh
electricity trading

Natural gas: reserve and production term

BANPU

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 Meters^3
  - 1 MCF = 1.0 Million BTU (MMBTU) or Decatherms (dry gas)
  - 1 BCF = 1.0 Trillion BTU
  - 1 Meter^3 = 35.3 MCF
  - 1 Billion Meters^3 = 35.3 BCF

2022 indicative guidance

BANPU

ILLUSTRATIVE AND INDICATIVE ONLY

NET BACK

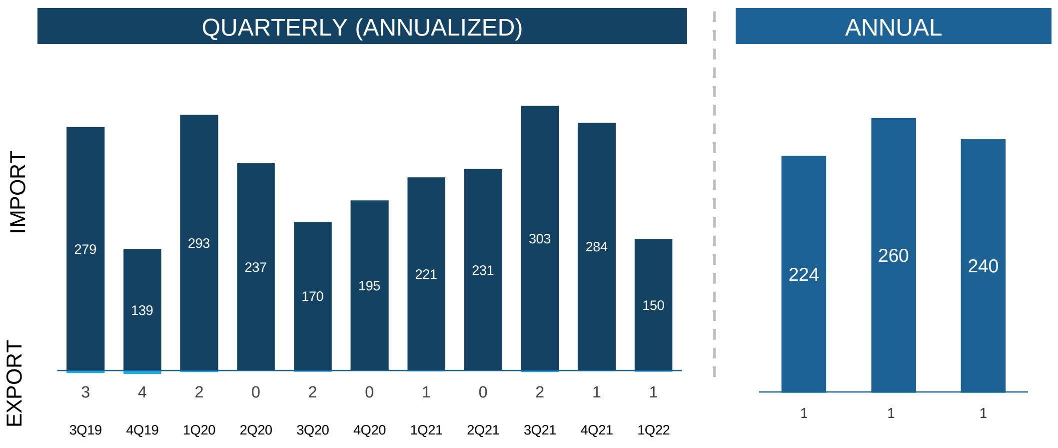
UNIT GUIDANCE (US$/MCF)		COMMENTS
REVENUE		
Reserves (Tcf)	*3 – 4*	
Production volume (Mmcfd)	*600 – 700*	
Average differential to Henry Hub	$0.20 - $0.50	Difference selling points and Henry Hub (NYMEX basis)
GCP&T costs	$0.90 - $1.10	Gathering, compression, fractionation and transportation costs
Pipeline 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: high coal prices curtail buying interest in the seaborne market

BANPU

CHINA THERMAL COAL IMPORTS/EXPORTS*

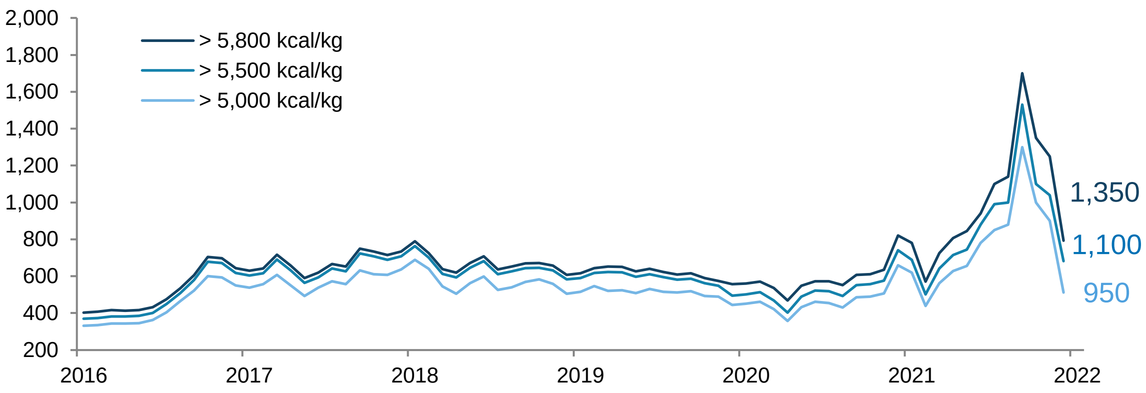
Unit: Mt



Sources: Banpu MS&L

CHINA DOMESTIC COAL PRICES

Unit: RMB/t



Note: *Includes lignite but excludes anthracite imports/exports
Source: www.sxcoal.com/cn 12 April 2022

1Q22

- GDP growth decelerated to 4.8% year-on-year in Q1 due to Covid-19 outbreaks.
- The QHD price rose to above RMB1,500/t in Q1 despite the government aim to stabilize it below RMB900/t.
- Strong demand in January and February due to colder than normal weather, low inventory at ports, various industries resuming operation in March and falling imports were the key drivers behind the soaring domestic coal prices.
- Strict travel restrictions to prevent further spreading of the pandemic impacted truck transport for coal.
- High import prices played a vital role in the tightness as cost of domestic coal lower than imported coal drove buyers to buy more domestic coal and tightened domestic supply.
- Indonesian export ban also contributed to weak thermal coal imports in Q1.
- Despite the weaker coal demand from power generation and industrial activities, China continues to boost its domestic coal supply to ensure energy security. Domestic raw coal output registered a 10.3% year-on-year growth in Q1.

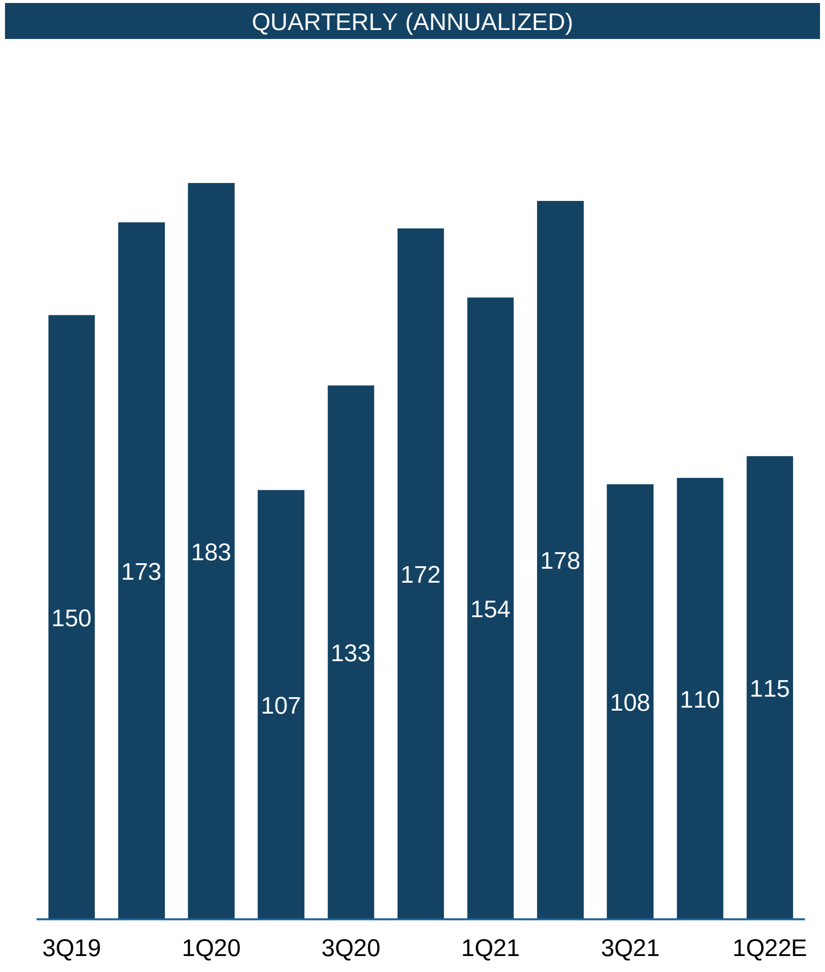
OUTLOOK

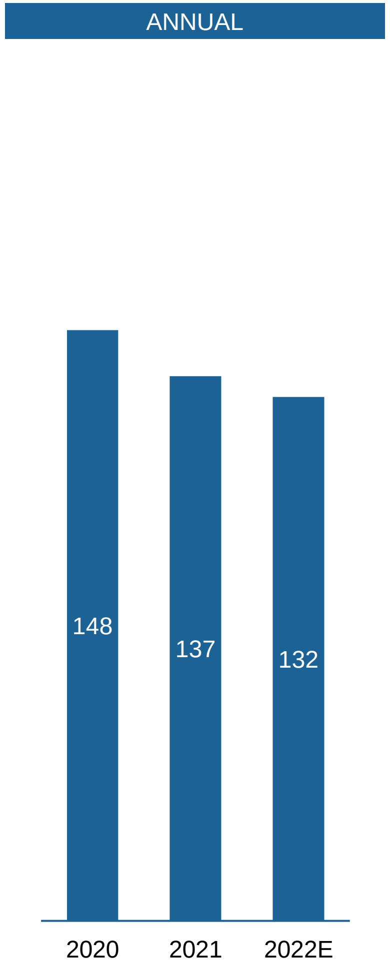
- China's GDP is expected to slow further to 4.4% in Q2 due to full and partial lockdowns across China in March and April which caused coal demand to fall.
- The government will cap term contract price at RMB570-770/t from 1 May, this discourages end-users from restocking until end of April.
- The government is helping Gencos to sign more contract volume with miners. So, Gencos will have little interest spot demand cargos in the shoulder season.
- Domestic coal production will remain strong.
- China has cut import tariffs for all coal to zero from 1 May 2022 to 31 March 2023 on concerns over supply stem from expectations of a strong rebound in power demand when the lockdowns end, and the warmer months roll round.
- More incentives are provided to accelerate the economic recovery. We expect power demand to recover from mid-May.
- However, soaring seaborne prices continued to curtail China's buying interest.

India: high seaborne coal prices depressed imports

INDIA THERMAL COAL IMPORTS*

Unit: Mt





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

1Q22

- Total electricity generation remained strong and grew by c. 3% year-on-year in Q1. Yearly growth in coal-based generation stood at 2%.
- Domestic coal production in Q1 was 263 Mt, up 8% year-on-year. Coal dispatches were 223 Mt, increased by 10% year-on-year but remained well below production level. This is mainly because of insufficient wagon's availability for coal transportation.
- However, domestic supply growth still failed to keep pace with demand growth, forcing producers to continue prioritizing supply to power sector.
- Non-power sectors have been forced to meet their coal requirements through costly imports and/or domestic spot supply.
- Limited availability in spot market increased competition and pushed domestic spot prices higher.
- Many imported coal-based plants continued to operate at low utilization rates in Q1 with the average plant load factor (PLF) standing at just 42% compared to 61% in Q1 last year.
- Cement makers largely remained out of the seaborne market, relying instead on domestic petcoke, only a few are understood to be seeking for imports.

Outlook

- As India enters summer, coal-based generation is expected to surge significantly. Hence coal supply, both domestic and imported, must be ramped up significantly to sustain summer demand and enter monsoon season with ample stocks.
- Government has urged power producers to ramp up imports substantially to avert any further supply shocks.
- Government also allows power producers to pass on the incremental fuel cost through pass-through in electricity tariffs.
- However, a surge in seaborne coal prices keep many buyers to continue scouting for domestic coal but logistical bottlenecks limit domestic supply and increase risk of power shortage.
- Upside coal imports require a correcting seaborne coal prices.

Coal quarterly output summary

BANPU

AUSTRALIA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON EQUITY BASIS					
Mines	**CV (kcal/kg)***	**3Q21**	**4Q21**	**1Q22**	**2Q22e**
Western operations		**1.2**	**1.3**	**0.8**	**1.5**
Springvale	6,700	0.4	0.7	0.1	1.0
Clarence	6,700	0.4	0.3	0.4	0.3
Airly	6,700	0.4	0.3	0.3	0.2
Northern operations		**1.5**	**0.8**	**0.9**	**1.4**
Mandalong	6,700	1.2	0.6	0.7	1.1
Myuna	6,700	0.3	0.2	0.2	0.3
Total Australia coal		**2.7**	**2.1**	**1.7**	**2.9**

INDONESIA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON 100% BASIS									
Mines	**CV (kcal/kg)***	**3Q21**		**4Q21**		**1Q22**		**2Q22e**	
		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	1.8	11.5	1.9	9.6	1.5	9.8	1.7	10.6
Trubaindo	6,550 – 6,700	1.0	11.6	1.2	9.0	0.7	15.5	0.7	14.8
Bharinto		1.4	6.3	1.2	6.6	1.1	8.8	1.2	7.9
Kitadin-Embalut**	5,800	0.3	24.4	0.4	15.5	0.2	17.9	-	-
Jorong	5,300	0.2	11.8	0.2	15.5	0.3	11.5	0.2	15.9
Total Indonesia coal		**4.6**	**10.7**	**4.9**	**9.6**	**3.8**	**11.1**	**3.8**	**10.8**

CHINA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON 100% BASIS					
Mines	**CV (kcal/kg)***	**3Q21**	**4Q21**	**1Q22**	**2Q22e**
Gaohe		2.3	2.3	2.5	2.3
Hebi		0.2	0.2	0.1	0.2
Total China coal		**2.5**	**2.5**	**2.6**	**2.5**

Note: *CV figures are air-dried basis ** Kitadin-Embalut has ceased its operation and entered mine closure period in February 2022

Key external and corporate events

BANPU

EXTERNAL EVENTS

INDIRECT

- US inflation exceeded 6%, highest level in 30 years
- BANK OF THAILAND: BoT maintained its policy rates at 0.50%
- Russia launches invasion in Ukraine
- Federal Reserve raised the policy rate by 0.25%
- US inflation records 41-year high inflation rate of 8.4%

DIRECT

- Henry Hub price hit \$6.3/MMBtu
- Newcastle coal price index surpasses \$250/t
- COP26: 46 countries pledged to stop development of unabated CFP and phase-out of unabated coal power by 2040-50
- Newcastle coal price index returns to \$200/t levels
- Newcastle coal price index surpasses to \$350/t
- Henry Hub price lowers to \$5.5/MMBtu

4Q21 | **1Q22**

CORPORATE EVENTS

4Q21

- Announcement of Sunseap divestment
- Engie Services (Thailand) Acquisition
- 3Q21 results presentation
- Kesennuma Solar started commercial operation
- Ha Tinh Solar acquisition

1Q22

- Achieved COD of Shirakawa solar in Japan
- Chu Ngoc and Nhon Hai solar acquisition
- Completion of Sunseap divestment
- Solar Esco JSC acquisition in Vietnam
- FY21 & 4Q21 results presentation

FX impact analysis guidance on P&L

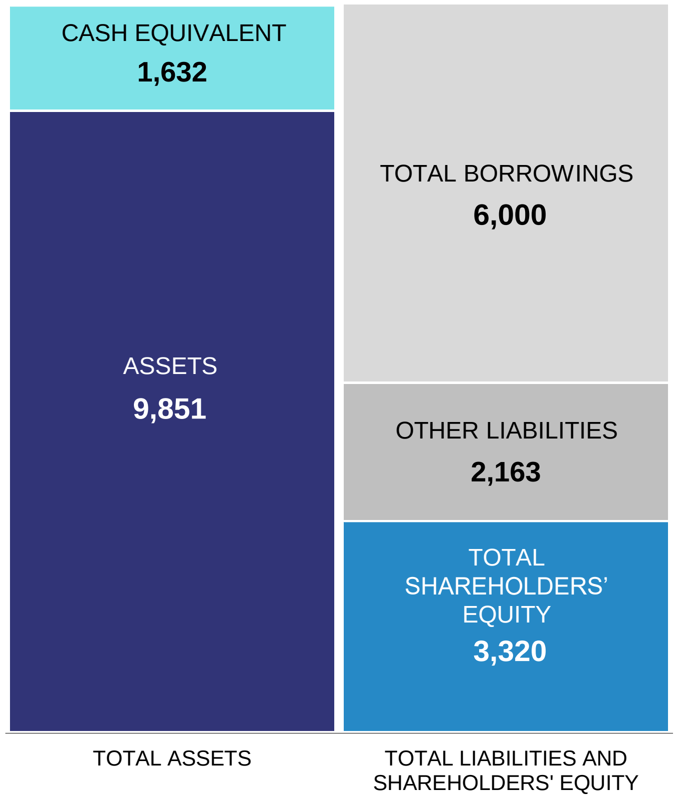
BANPU

CURRENCY EXPOSURE	NPAT IMPACT 1Q22 (US$M)	APPROXIMATE FX EXPOSURE (US$M) NET LIABILITY	APPROXIMATE FX EXPOSURE (US$M) NET ASSET	NPAT 5% SENSITIVITY 2Q22 (US$M) *Assuming 5% depreciation of local currencies against USD*	
Banpu: AUD asset, THB bond, and Other	7.0	-1700	300	THB 86 AUD -15	▪ *BOT cut forecast growth for 2022 to 3.2% and 2023 to 4.4%*
ITMG: IDR asset and liabilities	-1.6		290	IDR -9	▪ *BI cut forecast 2022 GDP to 4.5%-5.3%*
CEY: USD asset and liabilities	5.0	-160		AUD -8	▪ *RBA cut forecasted growth for 2022 to 4.25% and 2023 to 2%*
Net	10.4			NET 54	

Banpu consolidated balance sheet – 1Q22

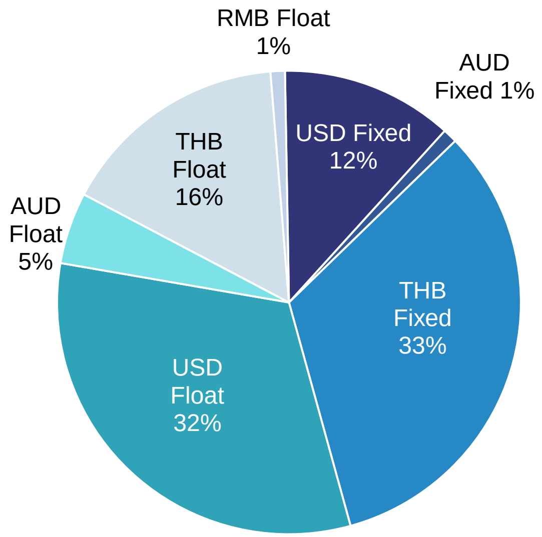
1Q22 CONSOLIDATED FINANCIAL POSITION

USD million



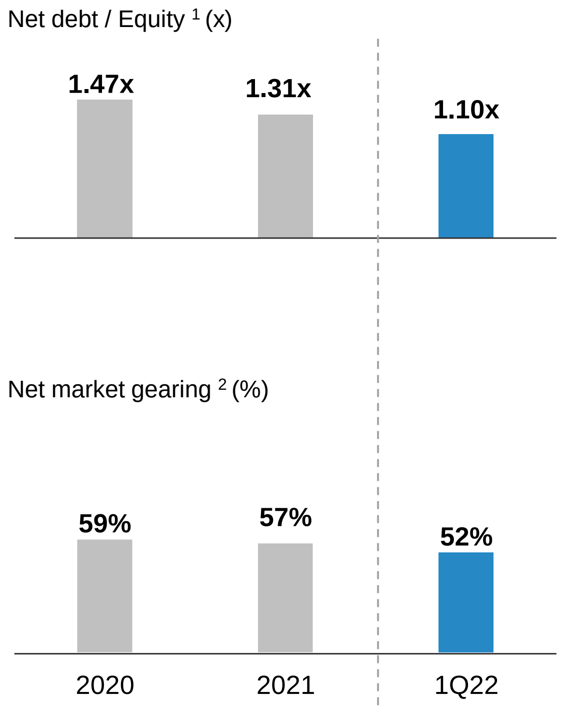
Note:
1 Net debt to book value of shareholders' equity
2 Net debt to enterprise value (enterprise value = net debt + book value of shareholders' equity)

DEBT FX STRUCTURE



Total gross debt: US$6 billion
As of 31 March 2022

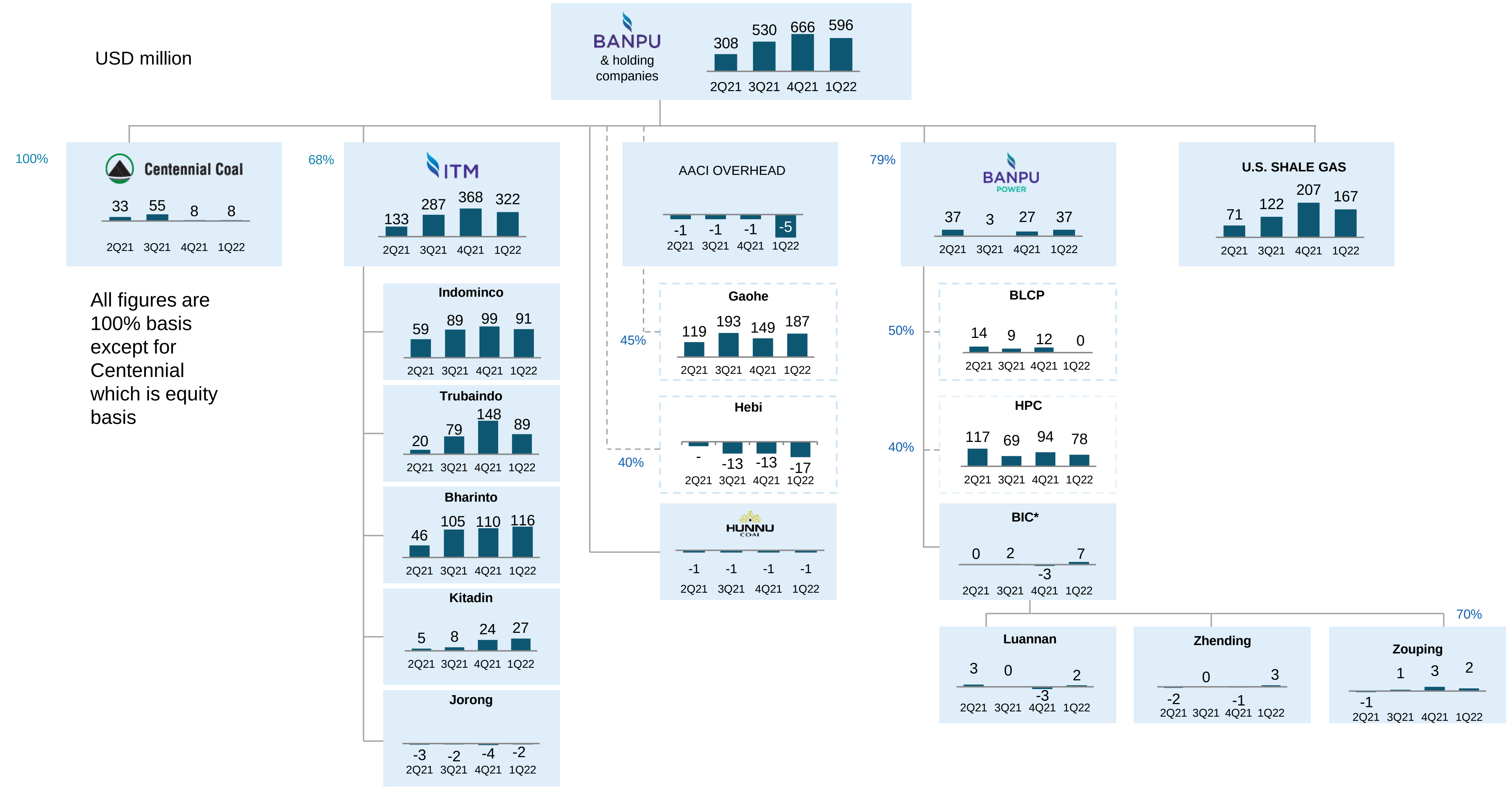
GEARING RATIOS



Banpu group EBITDA breakdown

USD million

All figures are 100% basis except for Centennial which is equity basis



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	**1Q22**	**4Q21**	**1Q21**	QoQ%	YoY%
Total sales revenues*	**1,256**	**1,427**	**736**	-12%	71%
Sales revenue – Coal**	828	991	461	-16%	80%
Sales revenue – Gas	279	314	186	-11%	50%
Sales revenue – Power	126	102	67	23%	88%
Cost of sales	(666)	(735)	(508)		
Gross Profit*	**590**	**692**	**227**	-15%	159%
Gross profit – Coal**	427	503	121	-15%	253%
Gross profit – Gas	153	199	105	-23%	46%
Gross profit – Power	9	-4	16	na	-45%
GPM	***47%***	***49%***	***31%***		
GPM – Coal	*52%*	*51%*	*26%*		
GPM – Gas	*55%*	*63%*	*56%*		
GPM – Power	*7%*	*-4%*	*23%*		

Note: * including other businesses ** including coal trading

Banpu consolidated: operating profit

USD million	1Q22	4Q21	1Q21	QoQ%	YoY%
Gross Profit	**590**	**692**	**227**	-15%	159%
GPM	***47%***	***49%***	***31%***		
SG&A	(112)	(124)	(81)		
Royalty	(85)	(106)	(44)		
Income from associates	62	57	43		
Other income and Dividend	12	19	11		
Mining property	(5)	(6)	(8)		
EBIT	**463**	**531**	**148**	-13%	213%
EBIT – Coal	320	344	44	-7%	623%
EBIT – Gas	130	179	82	-28%	59%
EBIT – Power	23	18	36	28%	-41%
EBIT – Energy Technology	(10)	(10)	(14)	n.a.	n.a.
EBITDA	**596**	**666**	**274**	-10%	117%
EBITDA – Coal	400	439	138	-9%	191%
EBITDA – Gas	167	207	108	-19%	54%
EBITDA – Power	37	27	40	36%	-13%
EBITDA – Energy Technology	(7)	(7)	(12)	n.a.	n.a.

Banpu consolidated: net profit

USD million	1Q22	4Q21	4Q20	QoQ%	YoY%
EBIT	**463**	**531**	**148**	-13%	213%
Interest expenses	(50)	(47)	(43)		
Financial expenses	(2)	(2)	(2)		
Income tax (core business)	(60)	(76)	(20)		
Minorities	(80)	(81)	(26)		
Net profit before extra items	**271**	**325**	**58**	-16%	367%
Non-recurring items*	192	(12)	(5)		
Gain (Loss) on Derivatives Transactions	(148)	(215)	(5)		
Income tax (non - core business)	(0)	(8)	(0)		
Deferred tax income (expenses)	(15)	26	(26)		
Net profit before FX	**300**	**115**	**21**	160%	1307%
FX translation	10	(11)	29		
Net Profit	**311**	**105**	**51**	197%	512%
EPS (US$/share)	0.046	0.017	0.01		

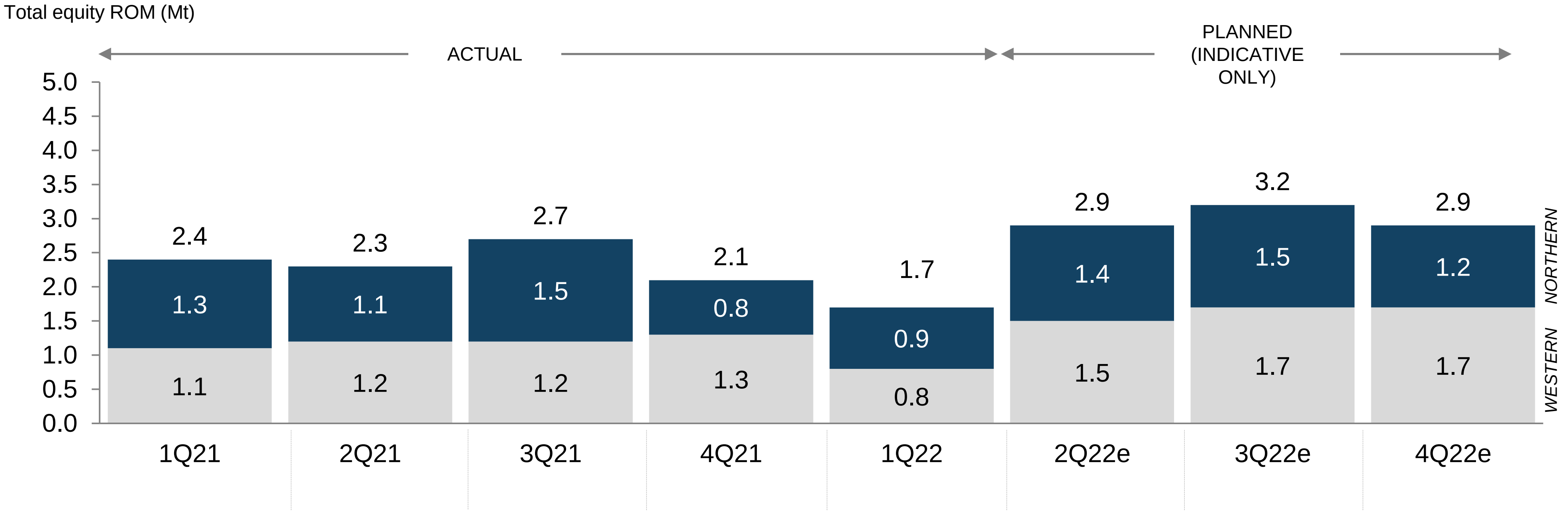
Note: * income from non-core assets and other non-operating expenses

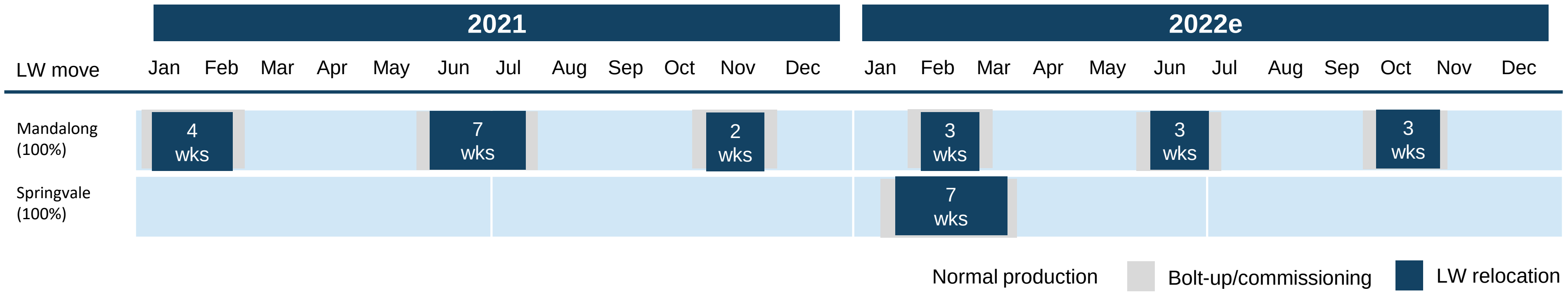
Centennial: income statement

BANPU

USD million	1Q22	4Q21	1Q21	QoQ%	YoY%
Sales volume (Mt)	**1.5**	**2.2**	**2.6**	-32%	-43%
Sales revenue	147.1	205.3	162.3	-28%	-9%
Cost of Sales	(136.4)	(194.4)	(164.7)		
Gross Profit	**10.7**	**10.9**	**(2.4)**	n.a.	n.a.
GPM	7%	5%	-1%		
SG&A	(19.3)	(25.0)	(20.3)		
Royalty	(8.4)	(12.6)	(10.6)		
Other income	1.6	2.1	1.4		
Other expenses	-	-	-		
EBIT	**(15.3)**	**(24.6)**	**(31.9)**	n.a.	n.a.
Interest expenses	(7.8)	(7.9)	(5.6)		
Financial expenses	(0.5)	(0.9)	(0.7)		
Gain (loss) on exchange rate	5.0	7.6	0.2		
Gain (loss) on derivative	0.3	(14.0)	(2.4)		
Corporate income tax	-	-	-		
Deferred tax income	6.2	15.2	12.1		
Net Profit	**(12.2)**	**(24.6)**	**(28.3)**	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%.

BANPU