



1Q20 results

Opportunity Day

25th May 2020



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 In Collaboration with RobecoSAM

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1	Highlights 1Q20
2	Financial Summary
3	Energy Resources ▪ Coal ▪ Gas
4	Energy Generation
5	Energy Technology
6	Key Takeaways

Covid-19 impact, but early signs of recovery

EUROPE – LOCKDOWNS PARTIALLY EASED

- EU Q1 GDP down by 3% YoY
- Germany: re-opened some non-essential shops
- Italy: resumed activity in factories, construction sites, wholesale supply businesses
- France: eases lockdown from May 11
- UK: lockdown easing plan announced

USA – LOCKDOWN STILL IN PLACE

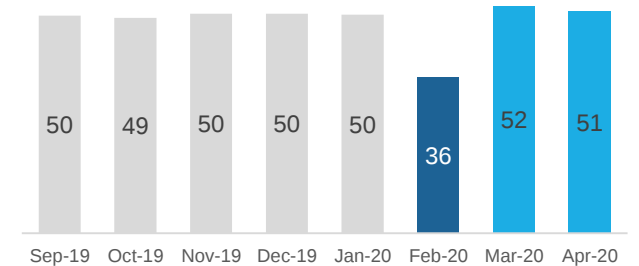
- Q1 GDP -5% YoY. Industrial production - 5% MoM, worst drop since 2009
- Unveiled guidelines but timeline is unclear
- FED rate unchanged

OTHER ASIA PACIFIC – LOCKDOWNS EASED FURTHER

- Thailand: further easing of lockdown is set in mid-May if no surge in infections
- Indonesia: target economy to completely reopened by Q3
- Australia: three-stage plan to ease restrictions is in place

CHINA – SIGNS OF RECOVERY

CHINA PMI INDEX



- PMI index rebounded from record low in Feb following successful outbreak prevention and control
- Further increase in economic activities is reliant on the recovery of service sector and domestic consumption as well as a rebound of overseas demand

NORTH ASIA – LOCKDOWNS EASED

- Japan: trade starting to improve with slower deterioration in imports
- South Korea: businesses reopen, including malls and restaurants
- Hong Kong: businesses reopen with social distancing rules

● Show sign of recovery ● Muted recovery

CSR programmes pivoted to covid-19 response

Thailand



Established a joint foundation with Mitr-Phol to provide **THB 500 M (US\$ 15 M)** in funding for medical equipment procurement



Donated **THB 88 M (US\$ 2.7 M)** to over 30 medical organizations and hospitals as well as to people adversely affected by the economic fallout



Provided **electric tuk tuks** to Chulalongkorn Hospital to support transportation of patients

China



Donated **50,000 pairs of sanitary gloves** and **10,000 surgical masks** to the Royal Thai Embassy in Beijing to support the Thai community in Wuhan and other cities



Donated **RMB 900 K (US\$ 128 K)** in total to support local governments and communities

Indonesia

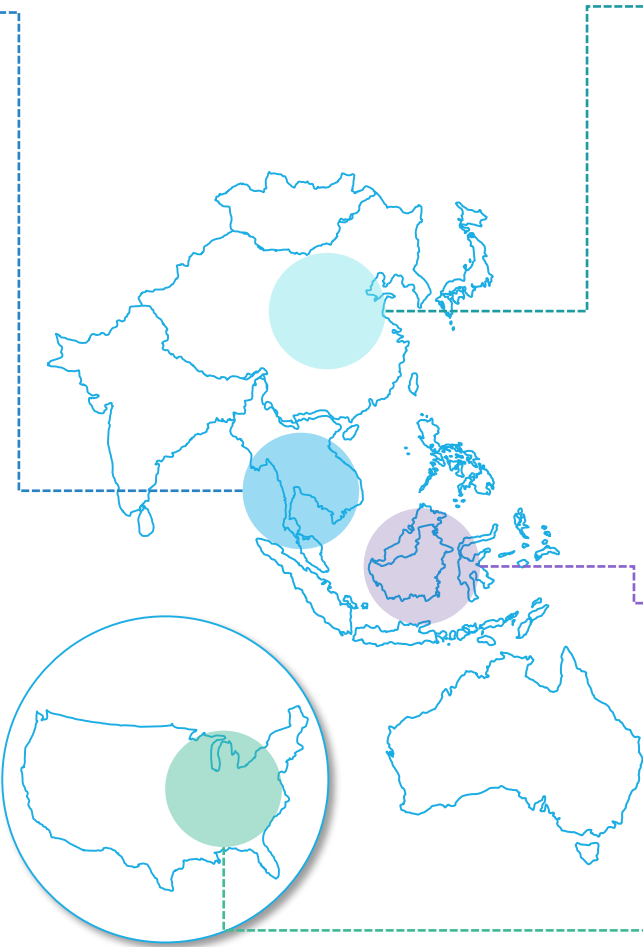


Supplied **sanitary equipment** e.g. thermometers and PPE to hospitals and local government. Also supported local communities with **food supplies and basic sanitation education**

USA



Donated **US\$ 30 K** to food banks in Denver and Tunkhannock area



Banpu operations running smoothly

Operational measures implemented to optimize safety and performance

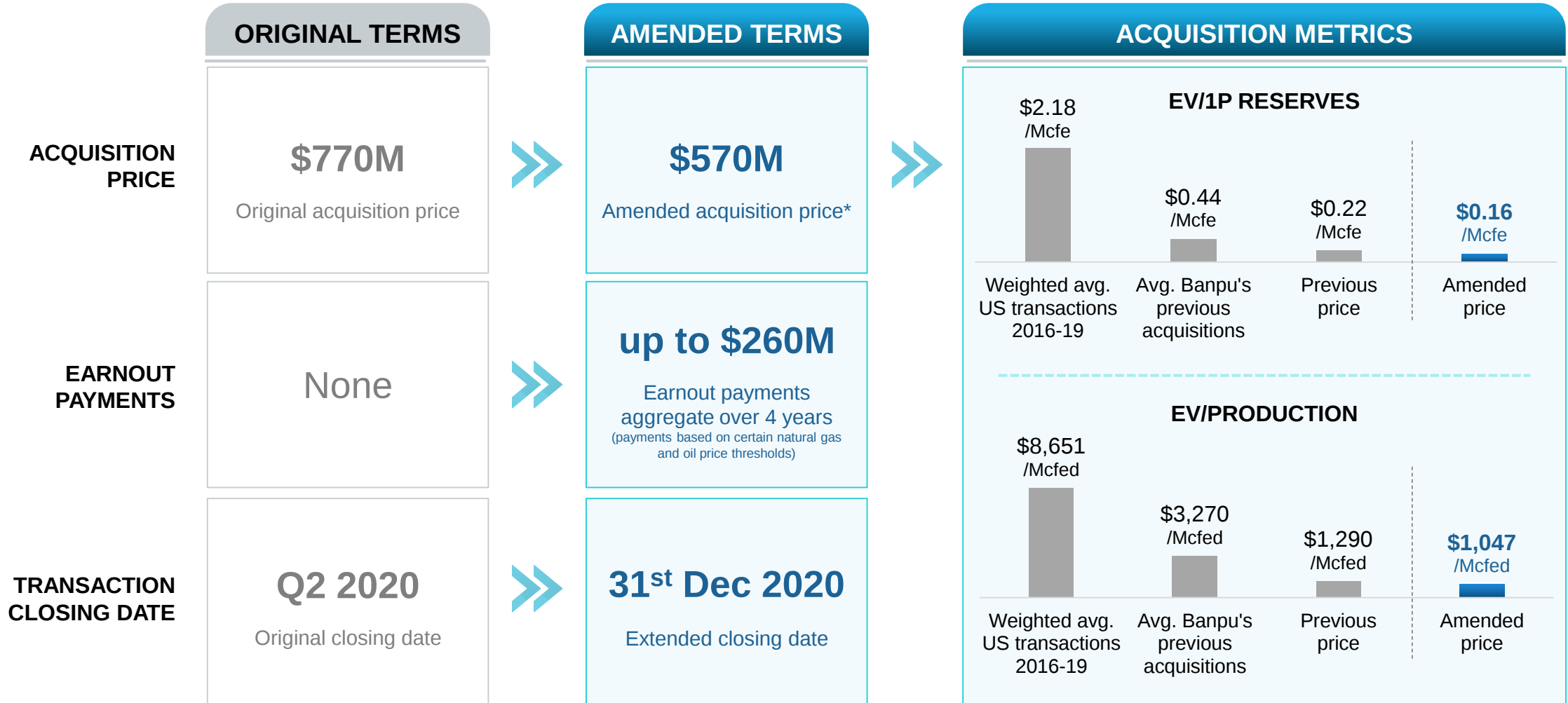


- Banpu had emergency contingency plans in place – which were mobilized in March
- Banpu's Digital Transformation initiatives and strong IT systems have ensured smooth remote-working capabilities
- Operations in remote areas have been much less impacted by lockdown restrictions
- Travel restrictions imposed between operations and internationally
- Work-from-home arrangements implemented at headquarters of Banpu businesses globally, in line with local government guidelines
- Social distancing and hygiene procedures strictly enforced at all operations
- All units report health conditions of staff on daily basis
- Work plans and progress reports submitted and reviewed weekly
- No impact on productivity



Barnett: revised deal structure provides better risk/return dynamics

This revised structure provides better downside protection while still leaving substantial upside potentials



Note: *Payments will be made in two portions: (a) a \$170 million initial cash deposit, of which \$70 million has been paid since December 2019, the remaining \$100 million will be paid on 30th April 2020 and (b) closing payment of \$400 million is subject to customary purchase price adjustments and the cash flow from operation of Barnett Shale since 1st September 2019, that belongs to Banpu, to be deducted from the closing payment on the closing date of the transaction.

1Q20 summary: resilience in challenging times

All operations are performing well

- Overall, coal mines achieved target output
- BLCP and Hongsa achieved >90% EAF

Stable financial results despite challenges

- Group EBITDA stable at US\$134 M
- Maintained stable ASPs for coal
- Strong efficiency achieved across all power plants

Disciplined cashflow management and contingency planning

- Deferred non-essential capital expenditure
- Received strong support from main banks, including the offer of additional facilities

Barnett purchase agreement amendment

- Revised deal structure provides better risk/return dynamics
- Downside protection while still leaving potential upsides

Cost rationalization

- Target of 15% cost reductions across all operations through mining contractor negotiations, optimizing gas compression, power plant efficiency improvements and cost cutbacks

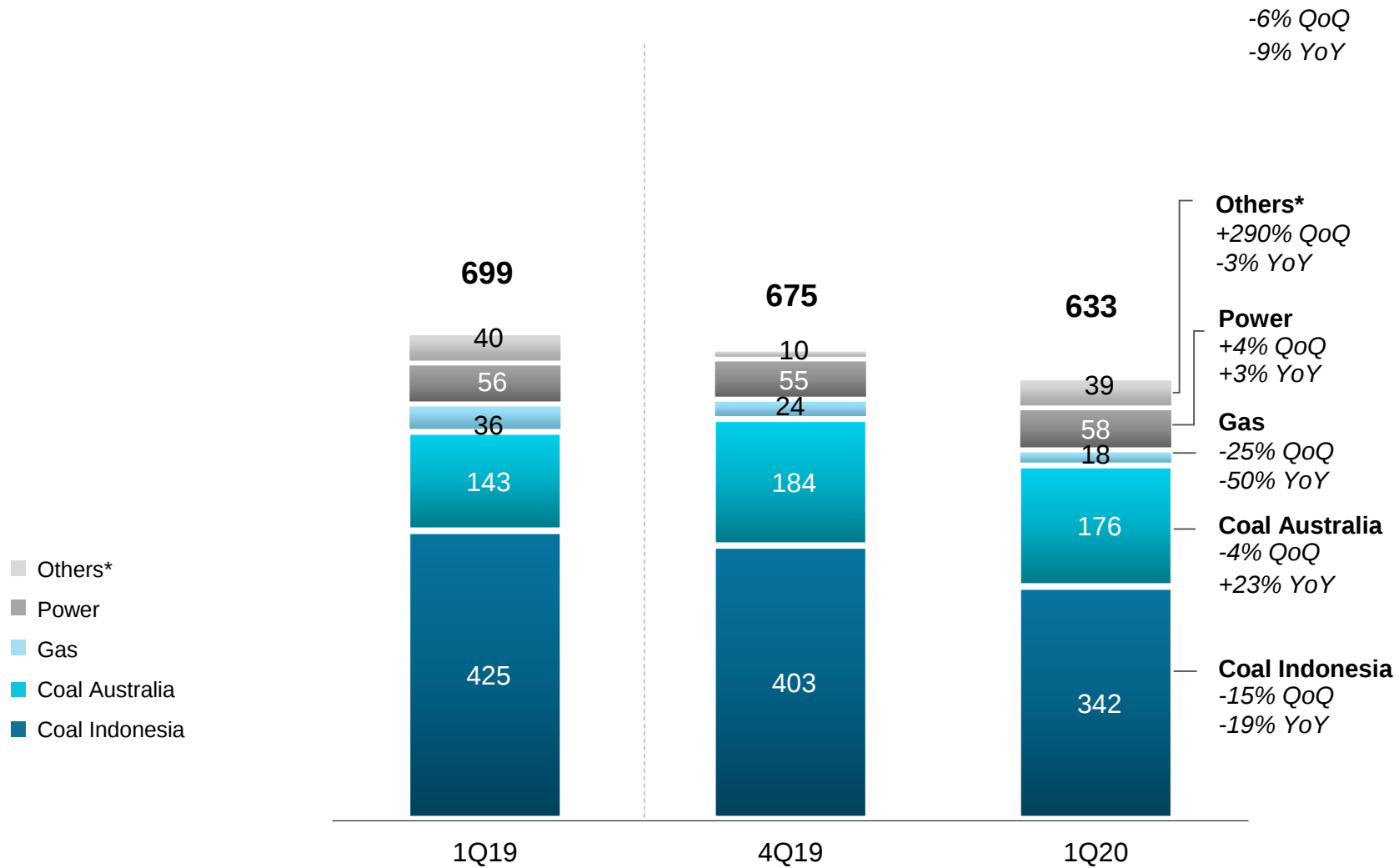
Digital transformation

- Digital transformation acceleration enhances operational efficiency
- Banpu team equipped to co-ordinate and work remotely

- 1 Highlights 1Q20
- 2 **Financial Summary**
- 3 Energy Resources
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- 5 Energy Technology
- 6 Key Takeaways

Banpu consolidated sales revenues

USD million

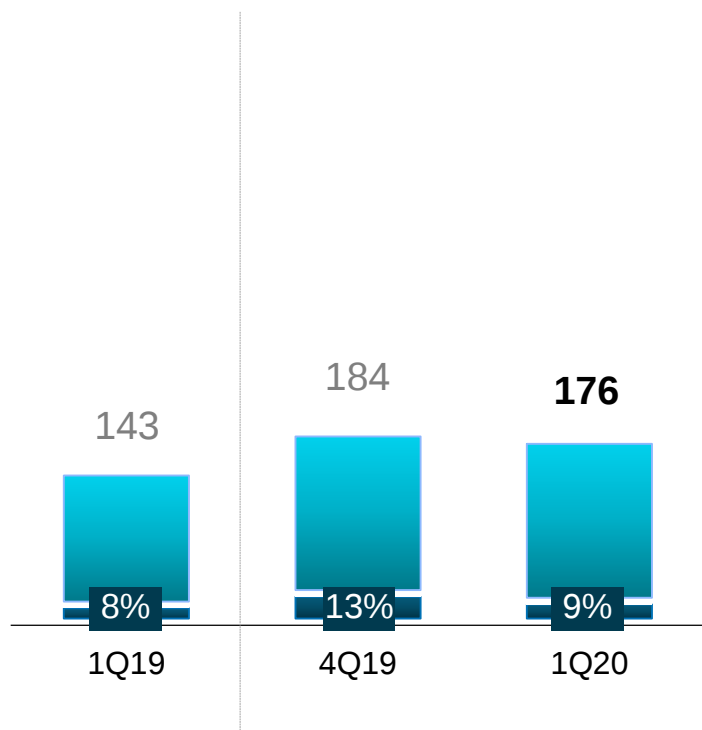


Banpu consolidated coal gross margin 1Q20: 24%

AUSTRALIA COAL

USD million

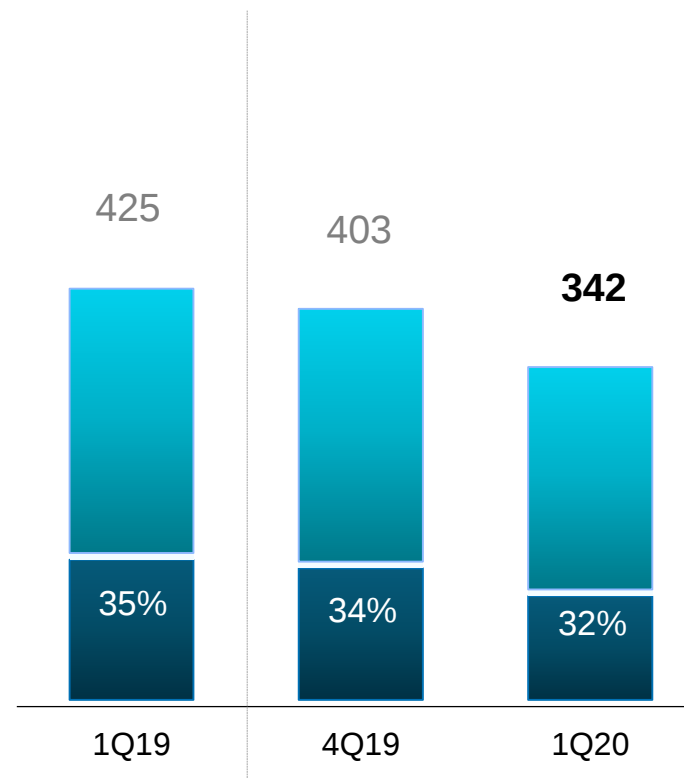
*Australia coal
gross margin: 9%*



INDONESIA COAL

USD million

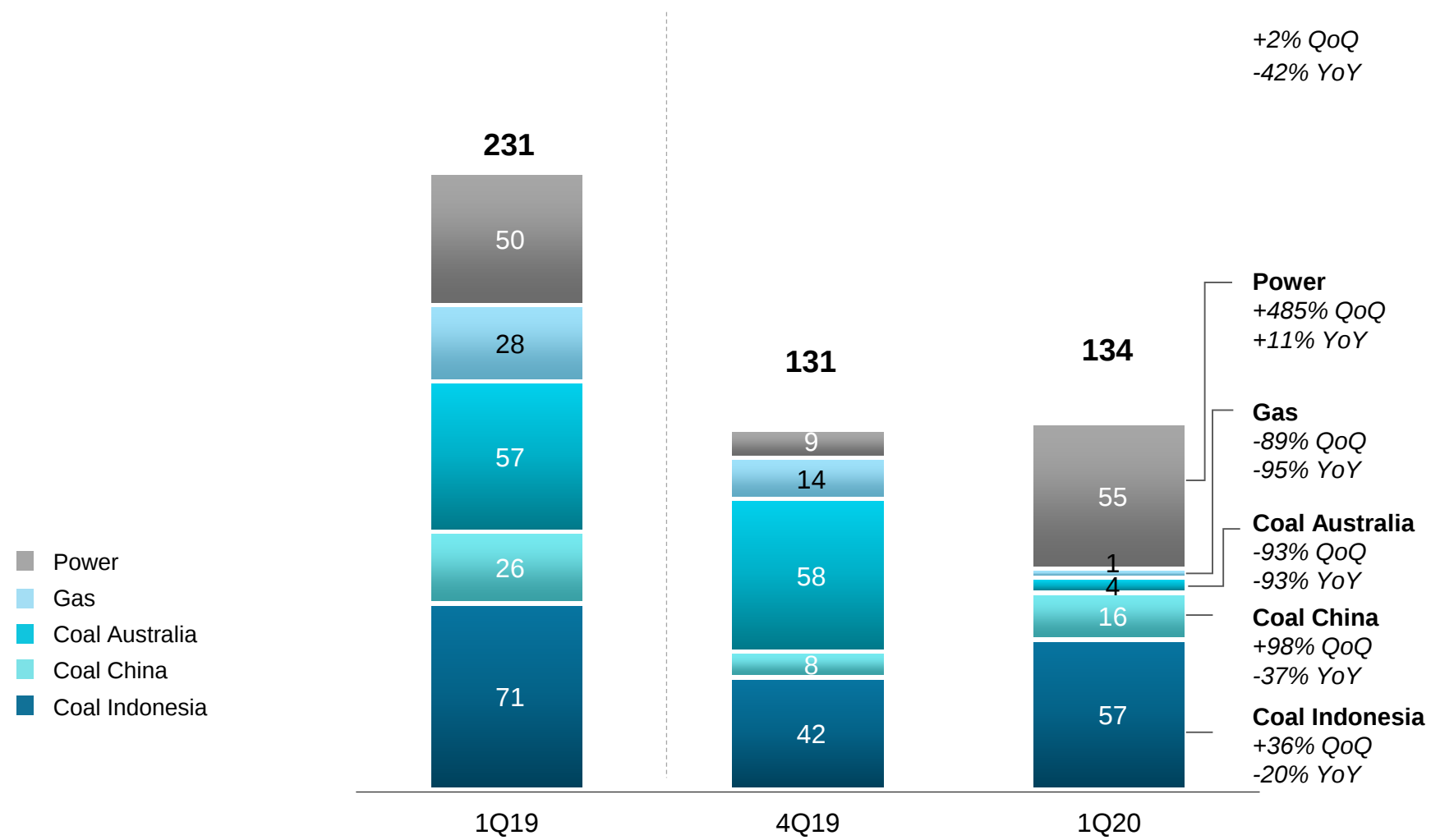
*Indonesia coal
gross margin: 32%*



■ Coal sales ■ Gross margin

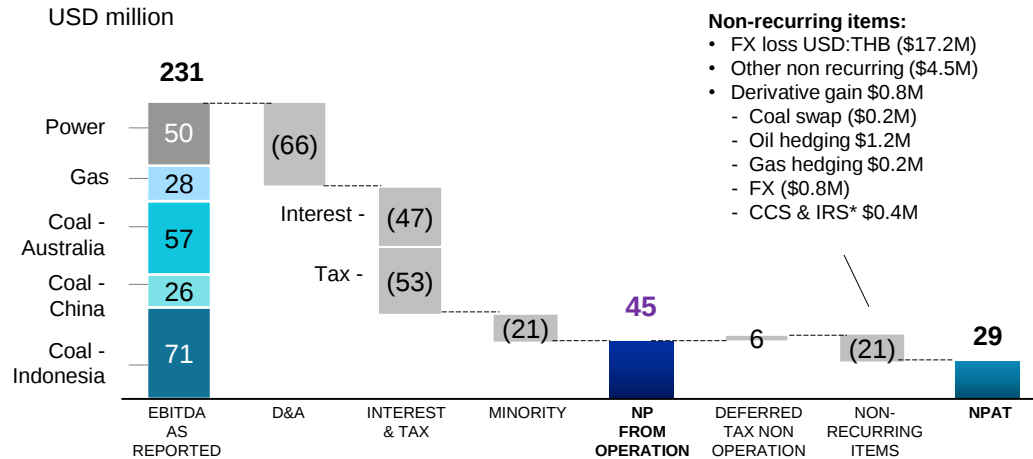
Banpu consolidated EBITDA

USD million

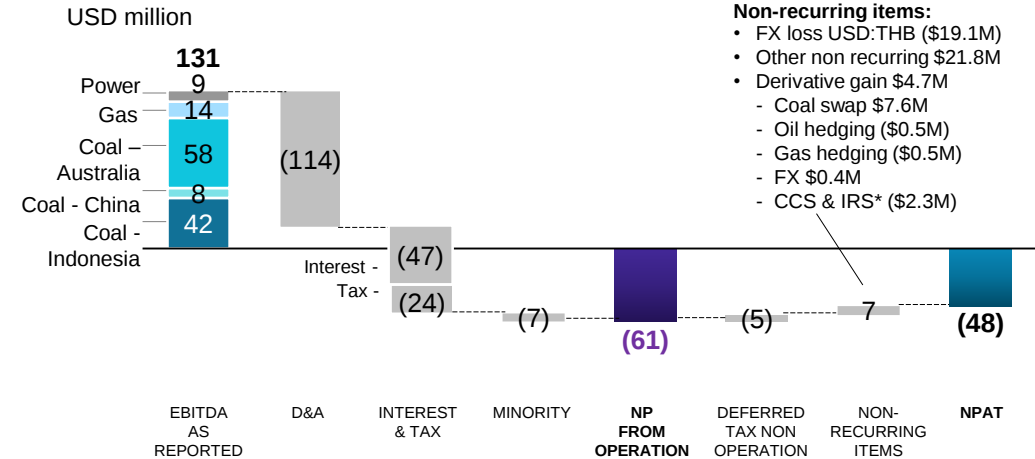


Banpu consolidated NPAT

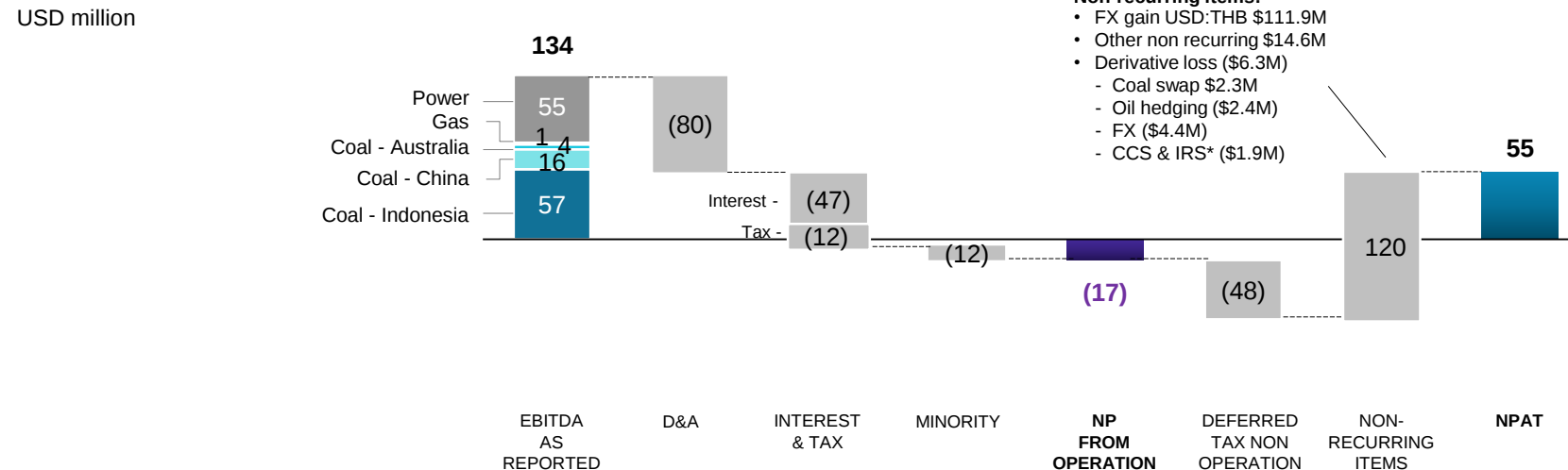
1Q19 NET PROFIT AFTER TAX



4Q19 NET PROFIT AFTER TAX



1Q20 NET PROFIT AFTER TAX



Banpu consolidated financial position

1Q20 CONSOLIDATED FINANCIAL POSITION

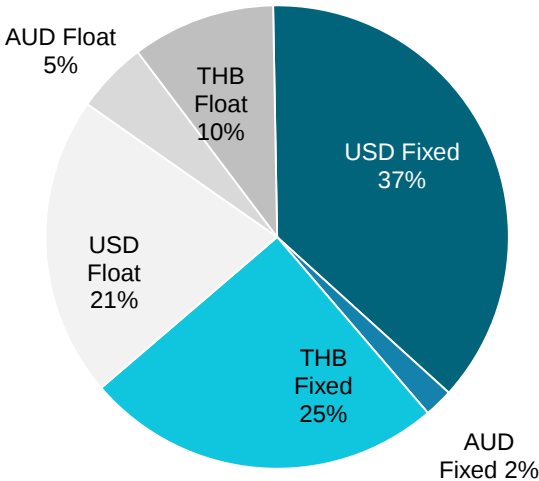
USD million



Note:

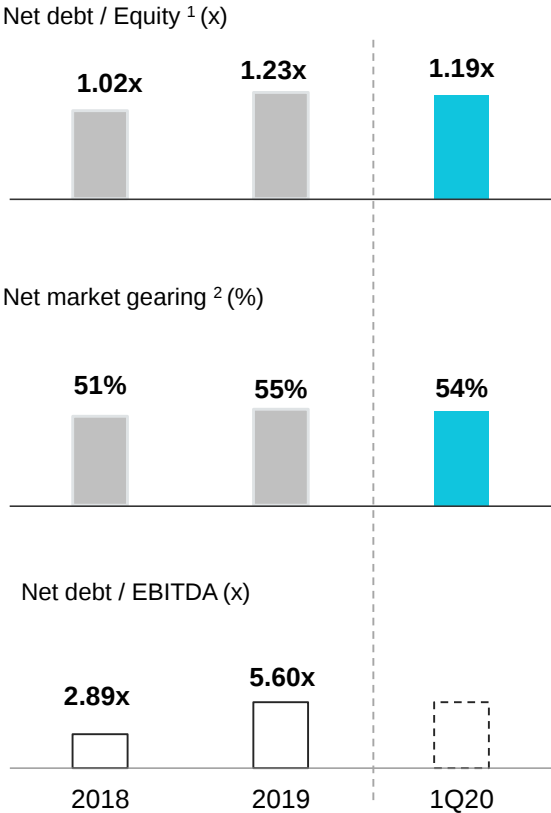
- 1 Net debt to book value of shareholders' equity
- 2 Net debt to enterprise value (enterprise value = net debt + market capitalization as at 31 March 2020)

DEBT FX STRUCTURE



Total gross debt: US\$4.4 billion
As of 31 March 2020

GEARING RATIOS



Financial summary 1Q20

KEY FIGURES

Unit: USD million

Consolidated EBITDA

\$134 M

Performance stable despite unfavorable market conditions

NPAT

\$55 M

Strong improvement QoQ and YoY driven by contribution from power business and foreign exchange gain

ND/E

1.19x

ND/E decreased from 1.23x in the previous quarter

KEY HIGHLIGHTS

- 1 Coal ASP remained firm QoQ** supported by partial fixing of contract price for coal Indonesia since last year and depreciation of AUD against USD
- 2 Strong contributions from power business** driven by higher electricity and steam demand in China and strong efficiency improvements at BLCP and Hongsa
- 3 Continued emphasis on cost reduction program and falling oil price** will help lower cost further
- 4 Substantial foreign exchange gain** from the rapid depreciation of THB against USD provides support to earnings for the group

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Coal: outlook determined by economic recovery

1Q20

Strong import demand despite covid-19 crisis coal market impact

2020 Outlook

Supply reductions necessary to mitigate fall in demand



DEMAND



Impact on demand in late Q1

China

- GDP contracted by 6.8%
- Measures to contain the spread of infection impacted demand
- Domestic supply back to normal, with boosted imports

Outside China

- Starting to feel the impact of covid-19 in late Q1



Demand determined by economic recovery

- COVID-19 induced global recession
- Global thermal coal markets were heavily driven by wide-ranging government policies to contain virus
- Seaborne market is stabilizing after sharp drop in April
- Q2 demand will be hit hard as more countries lock down
- Extended lockdown will prolong coal demand weakness
- Sustained low oil prices could limit the recovery of Newcastle price



SUPPLY



Less impact on supply; currency depreciation helps reduce producers' costs

Australia, Indonesia and Russia

- Minimal impacts from COVID-19

Colombia

- Diverted more coal to Asia due to low freight rate and weak local currency

S. Africa

- Weak domestic and global demand led to oversupply



Supply pressures from weak global demand, significant cutback needed to support price

- Nearly 45% of production would have a negative cash margin if sold at current spot prices
- A coal surplus suppresses prices
- Significant supply cutback to combat weak global demand is necessary but will take time
- Accelerated implementation of production cutback across the world since March 2020, particularly in Indonesia, USA and Colombia.

Banpu coal: action plans

Maintain smooth operations

- Stay up-to-date on development of local regulations
- Maintain health and safety measures implemented at all units

Reduce costs

- Target 15% reduction in operating costs
- Optimize existing mine plan
- Negotiate with contractors and suppliers for lower costs
- Reduced mining costs due to lower oil price environment
- Reduce demurrage expense



Enhance marketing

- Redirect coal sales – increase domestic sales in Australia and Indonesia to improve revenue stability
 - Increase fixed price portion
- Enhance relationship with customers
 - Maintain coal stock at low level
- Increase quality flexibility to match changing requests from buyers

Maintain liquidity

- Revise capex plan and defer non-essential spending
- Optimize risk management strategies e.g. FX management, hedging, and coal swaps
- Review customer credit rating

Global coal demand trends: 2020 vs 2019

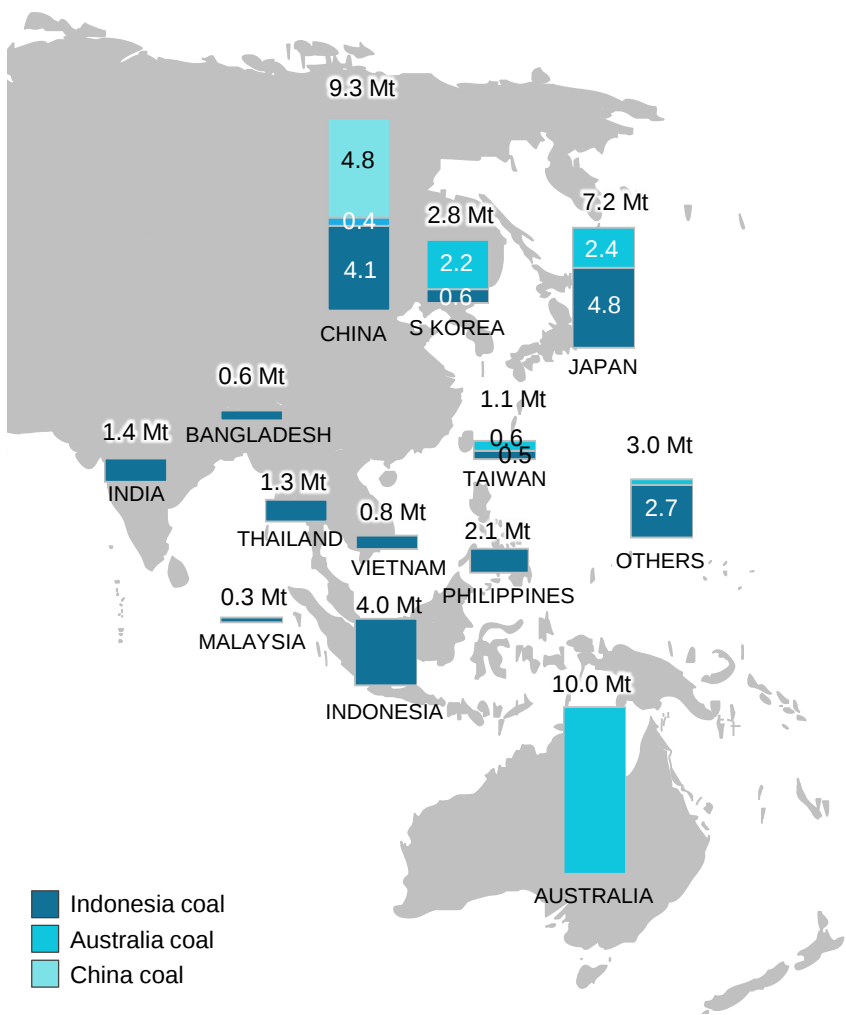
GEOGRAPHY	CHANGE 2020-19 (Mt)	COMMENTS
 CHINA	-30 	- Imports remained strong in Q1 as buyers feared domestic production disruption. - Domestic coal prices fell sharply and approached red zone due to oversupply. The government intervened to tighten import restrictions. - Weak demand outlook as economy is unlikely to fully resume.
 INDIA	-25 	- Indian economy faces severe challenges due to coronavirus outbreak and a potential global recession. - Huge inventory overhang and weak demand outlook will weigh down imports through 2020.
 OTHER N.ASIA	-9 	- Winter coal curtailment reduces coal burn in South Korea and Taiwan. - Outlook for coal burn remains weak amid lockdown and potential recession. - Sustained low oil prices could narrow cost gap between coal and gas generation in South Korea and Japan, raising coal to gas fuel switching risk.
 EUROPE	-13 	- Lockdowns across Europe have hit power demand, weakening coal generation despite carbon price decline. - Low gas prices keep natural gas generally more competitive than coal. - Downside risk to thermal coal imports into Turkey, as covid-19 cases rise rapidly.
 OTHERS	-3 	- Vietnam has positive coal demand outlook due to power shortage - Import demand expected to reduce in other SE countries due to reduced power demand and industrial activity from lockdowns.
 GLOBAL	-80 	<i>Global market looks set for a demand slump due to covid-19. Thermal coal markets have also been challenged by economic impacts of outbreak measures. Power demand has declined and industrial activity has slowed. Further downside risk if the outbreak is more severe and the containment efforts are prolonged.</i>

Global coal supply trends: 2020 vs 2019

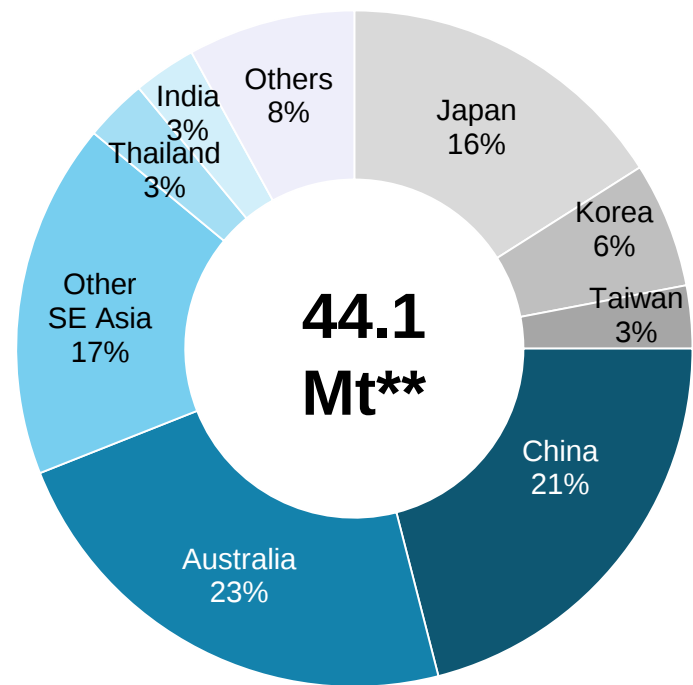
GEOGRAPHY		Needed for 2020 balance CHANGE 2020-19 (Mt)	COMMENTS
	INDONESIA	-40 	- Exports expected to slow down from April onward as weak Chinese and Indian demand seems to hit Indonesia the most. - Weak demand is pushing supply lower, but no significant supply cuts from major producers yet.
	AUSTRALIA	-7 	- Thermal coal export relatively stable in Q1 with no supply impacts. - Take or pay obligations weigh on cutback decisions
	COLOMBIA	-6 	Most producers reduced supply although coal mining exempted from lockdown as government steps in to lift local communities. However, strong Q1 exports due to low freight rates and depreciation of Peso opening doors in Asia.
	RUSSIA	-5 	- Supply impacts remain small. - Falling rail car rates and devalued Rouble improve Russian competitiveness. - Supply must fall to match demand, but decline in exports should be small.
	S.AFRICA	-10 	- National lockdown reduced power demand and coal burn significantly. - Coal market in oversupply due to domestic and international demand slump. - Some miners operate at reduced production levels.
	USA	-10 	- Supply impacts in the US due to Covid-19 are widespread but impact to thermal mines export is small. - Export trends to fall, due to market conditions, declining European demand
	OTHERS	-7 	Expected supply cut due to sharply declining demand and price.
	GLOBAL	-85 	<i>Covid-19 has less impact on the supply side as coal is considered essential business. A sharp drop in prices was caused by significant global oversupply, due to demand falling faster than supply cutbacks. More supply rationalization necessary to prevent prices from falling further.</i>

Banpu group coal sales 2020e

COAL SALES* SOURCE – DESTINATION ANALYSIS 2020



GLOBAL COAL SALES* 2020e BY REGION

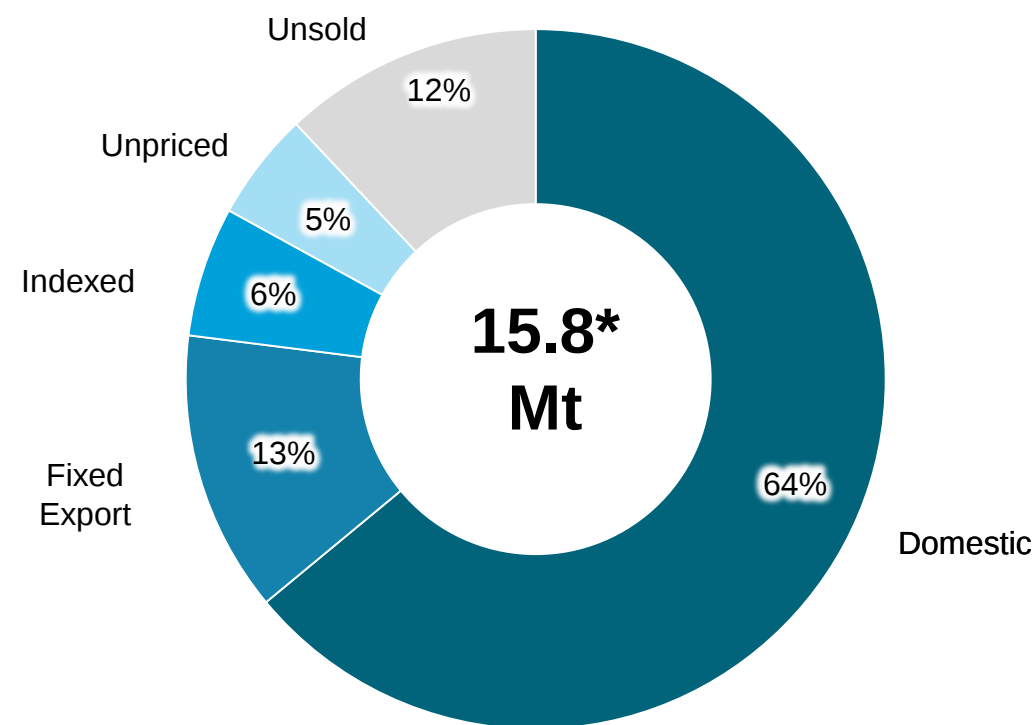


Notes:
* Sales from Indonesia are included on 100% basis, sales from Australia and China are included on equity basis. Excluding Mongolia coal
** Illustrative target
** Includes coal sales from domestic production in China

Banpu coal sales pricing status

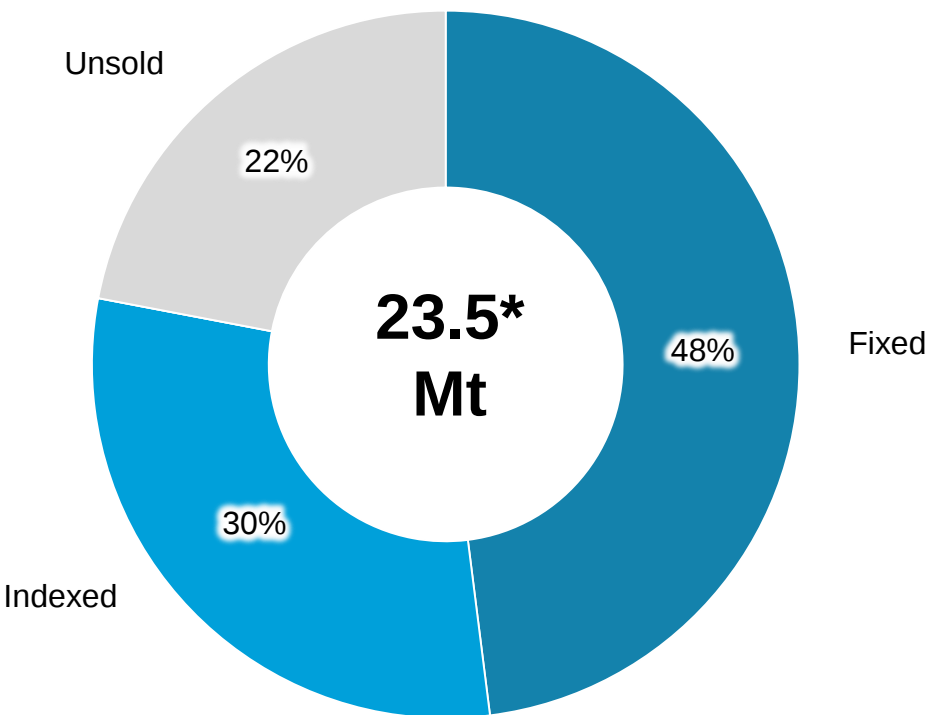
AUSTRALIA COAL

2020e



INDONESIA COAL

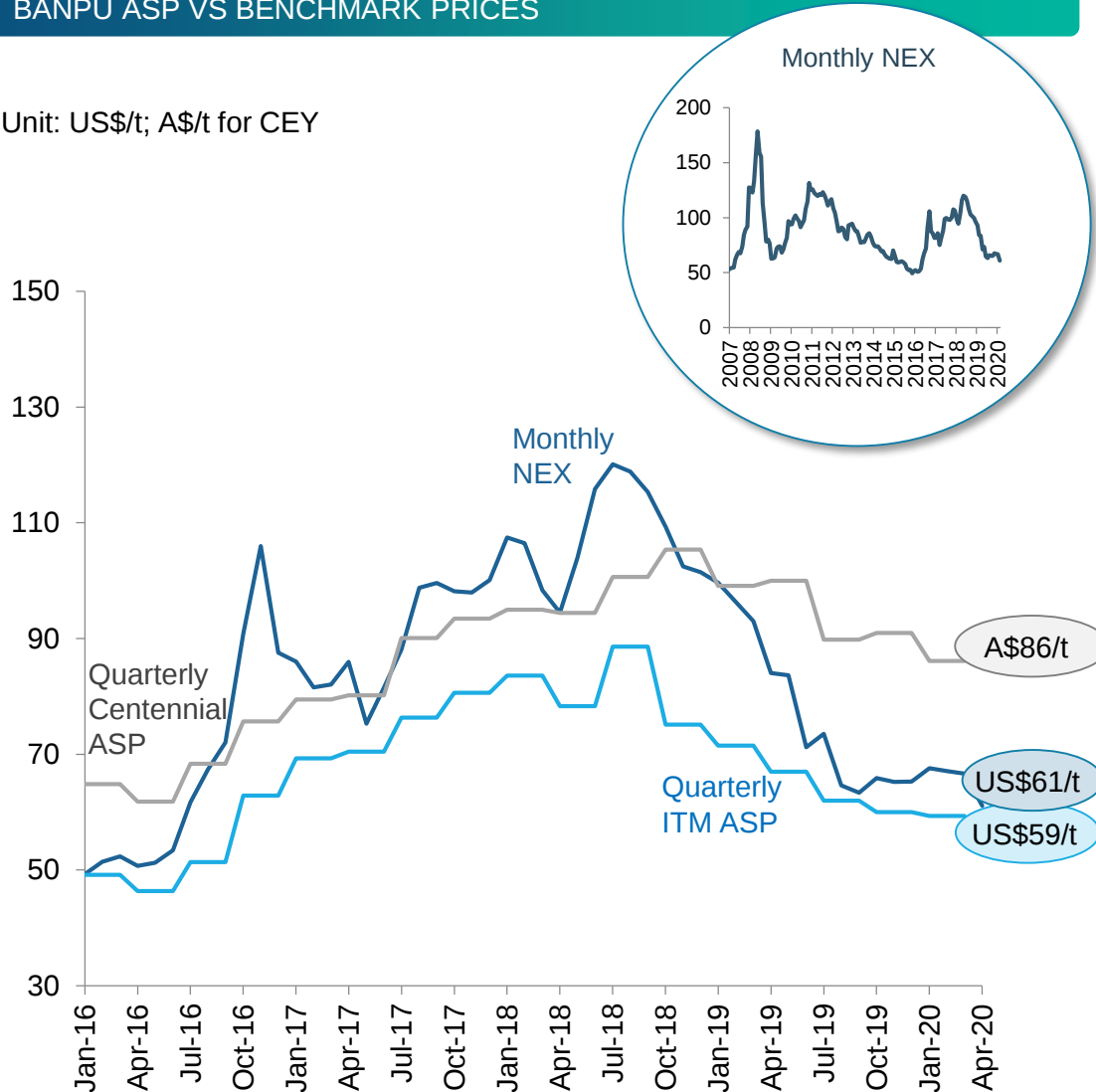
2020e



Banpu ASPs vs thermal coal benchmark prices

BANPU ASP VS BENCHMARK PRICES

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



COMMENTS

- Upper \$60s maintained through most of 1Q20.
- Covid-19 spread through China caused interruption in domestic coal production, hence increased demand for import coal, which helped support Indonesian coal prices during the first 2 months.
- Electricity demand continued to weaken globally through March with extended lockdowns, China production capacity recovered its strength.
 - ITM ASP: US\$59.3/t* (-1% QoQ)
 - CEY ASP: A\$86.1/t* (-5% QoQ)
 - NEX (May 1, 2020)**: US\$49.1/t
- Spread of covid-19 and extended lockdowns further press demand as 2Q commences.
- Global recession saw price drop as demand quickly evaporated. Coal price took a major drop through April touching lowest level seen since early 2016.

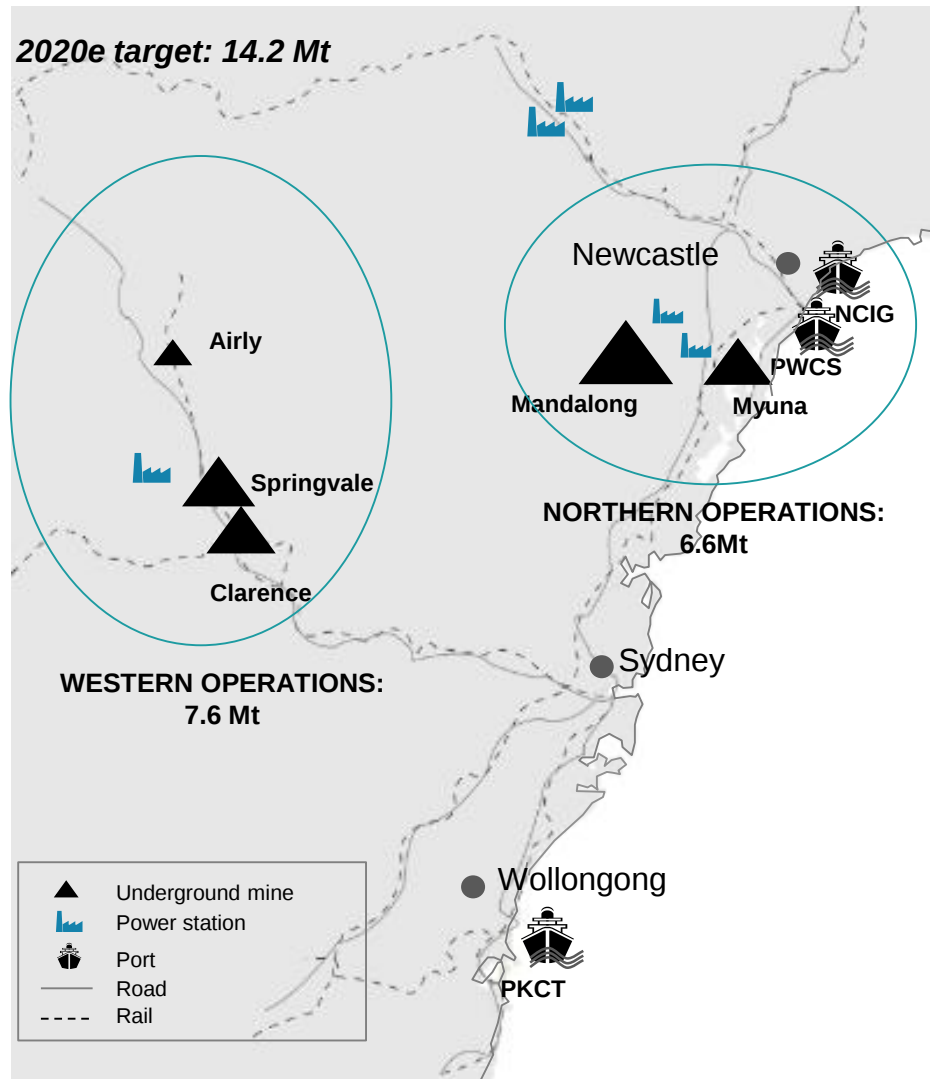
OUR WAY IN ENERGY

Note: * Includes post shipment price adjustments as well as traded coal

** The Newcastle Export Index (previously known as the Barlow Jonker Index – BJI)

Australia coal: operational summary

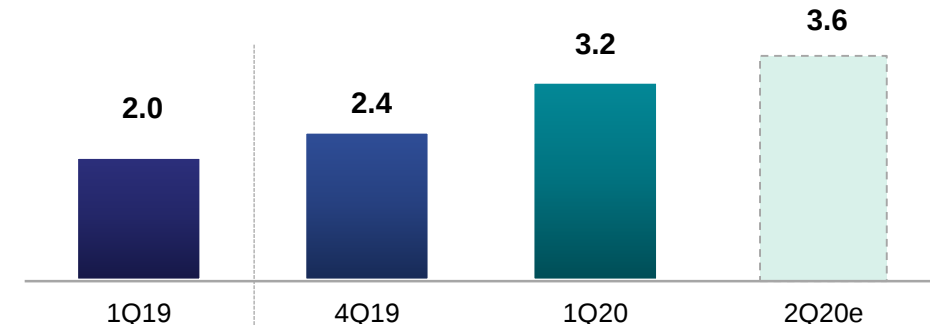
2020e OUTPUT (ROM EQUITY BASIS)



QUARTERLY OUTPUT (ROM EQUITY BASIS)

COAL OUTPUT (Mt)¹

+33% QoQ
+62% YoY



Key updates

- **Mandalong** – Production up 32% QoQ and 203% YoY, LW changeover completed during 1Q20, with LW27A commencing production 2 days ahead of plan.
- **Clarence** – Production up 39% QoQ and 1% YoY, with the mine successfully introducing a new Double-Sided Extraction (DSE) system, and with the overhauled second FCT performing well.
- **Springvale** – Production up 87% QoQ and 22% YoY, mining conditions improved in the early part of 1Q20, with lessons learnt through LW425 enabling favorable mining rates through the area of expected poor lithology compared to 2019.
- **Airly** – Production down 13% QoQ but up 97% YoY, with the quarter impacted by the third narrow panel extraction (“NPE”) relocation, completed in only 14 days. Business Improvement initiatives have been implemented to further increase efficiencies, with the mine achieving a new daily production record.
- **Myuna** – Myuna’s production performance continues to be significantly impacted by poor mining conditions and coal quality. Two production units were repositioned during the quarter, to improve coal quality and production.

OUR WAY IN ENERGY

Note: NCIG = Newcastle Coal Infrastructure Group; PWCS = Port Waratah Coal Services; PKCT = Port Kembla Coal Terminal.

1 ROM output on an equity basis

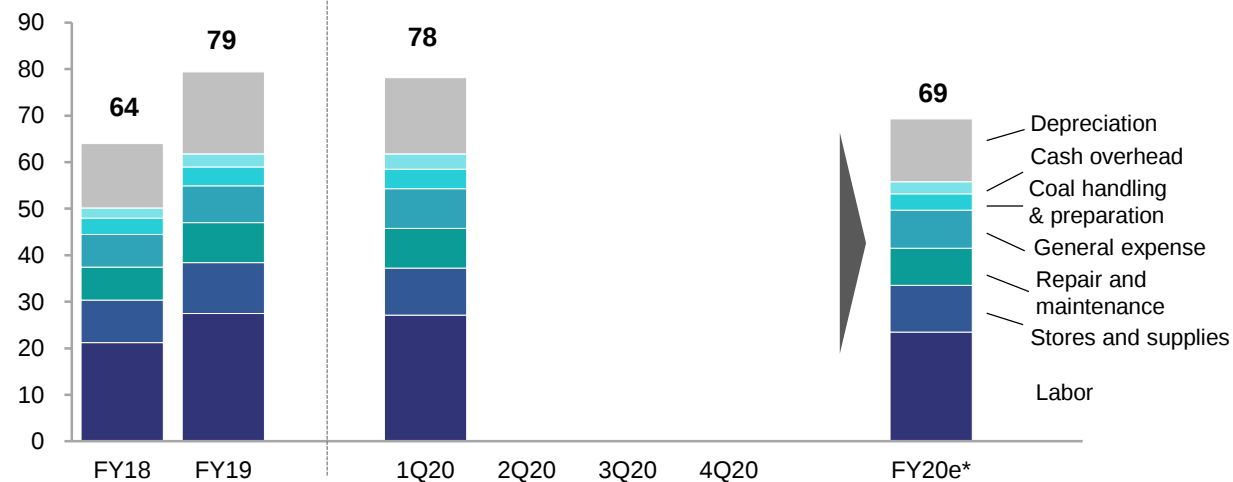
Australia coal: financial summary

FINANCIAL SUMMARY

Unit: A\$ M	1Q20	4Q19	QoQ	1Q19	YoY
Sales (Mt)	3.1	3.0	4%▲	2.0	55%▲
ASP (A\$/t)	85	91	6%▼	99	14%▼
Sales revenue	264	271	3%▼	206	28%▲
EBITDA¹	20	28	29%▼	66	70%▼

AVERAGE PRODUCTION COST²

Unit: A\$/t



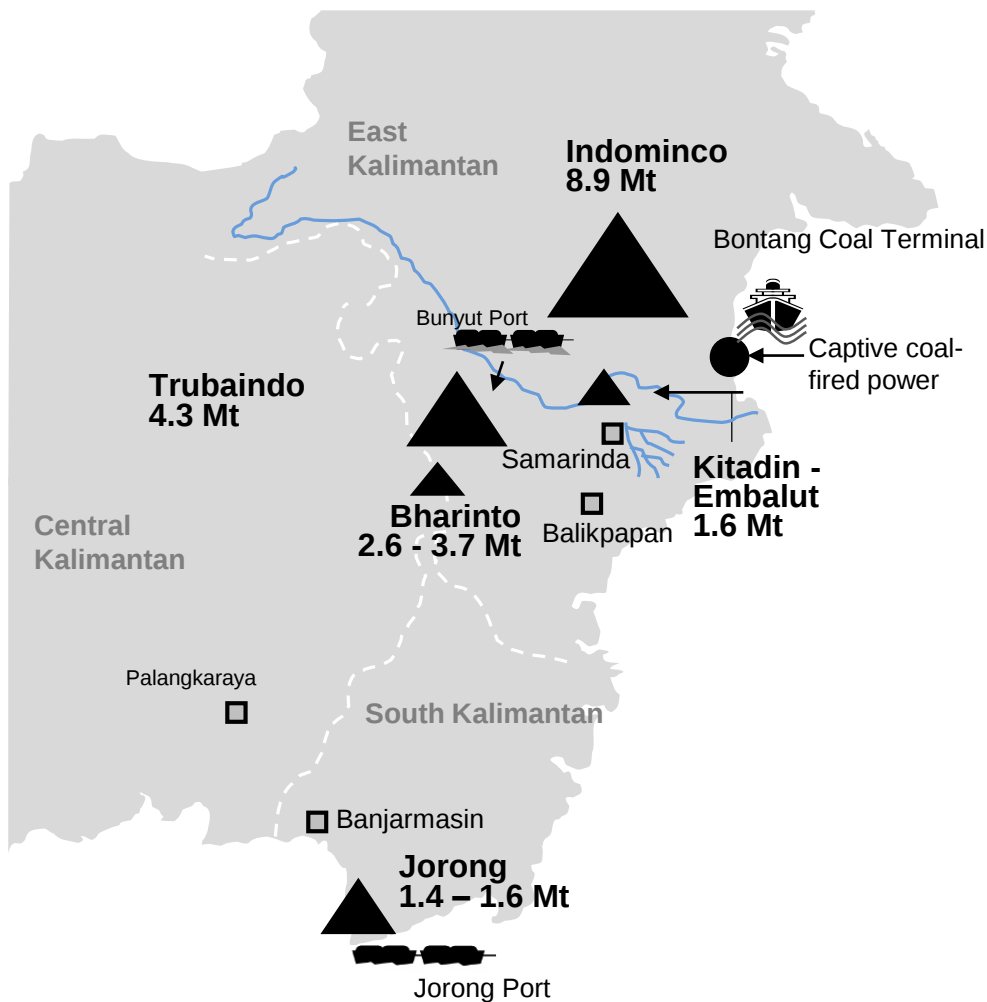
Comments

- Sales revenue slightly down with lower average prices, due to a higher proportion of domestic sales partially offset by higher volumes of domestic sales.
- Export ASP down in US\$ but partially offset by a lower A\$ FX rate
- Costs were impacted by mining conditions at Myuna and a higher proportion of development coal at Clarence in 1Q20
- Looking forward:
 - Continuing to implement cost reductions in contractor labor, overtime and overheads
 - Capex and equipment rationalization
 - In response to lower export prices, we are optimizing sales plans between exports and domestic markets to improve overall margins
 - Business improvement initiatives are being implemented across all mines
 - Clarence has successfully introduced a new Double-Sided Extraction (DSE) mining system increasing volumes of lower cost extraction coal for the remainder of 2020

Indonesia coal: operational summary

2020e OUTPUT (SALEABLE TONNE BASIS)

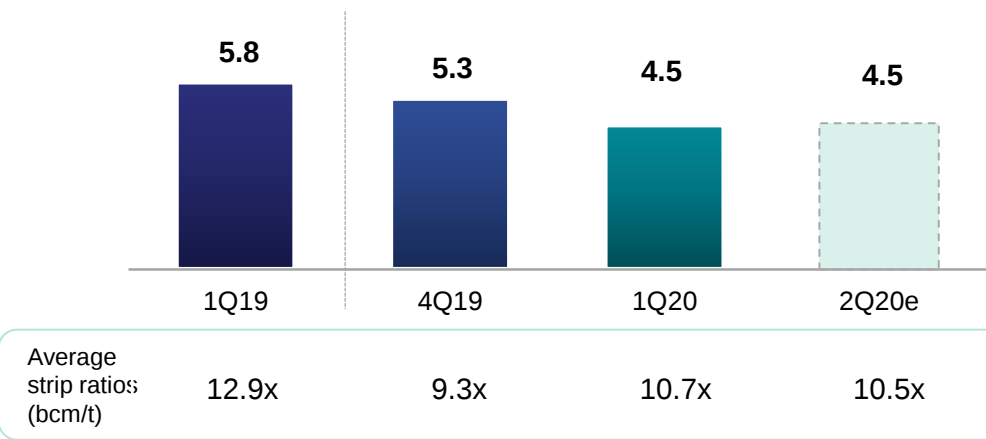
2020e target: 19.0-20.1 Mt



QUARTERLY OUTPUT (100% BASIS)

COAL OUTPUT (Mt)

-15% QoQ
-22% YoY



Key updates

- Indominco: 1Q20 above target output at 2.5 Mt.
- Trubaindo: 1Q20 achieved target output of 1.0 Mt.
- Bharinto: 1Q20 lower than target output at 0.5 Mt due to lower contractor capacity.
- Embalut: 1Q20 achieved target output of 0.2 Mt.
- Jorong: 1Q20 achieved target output of 0.3 Mt.

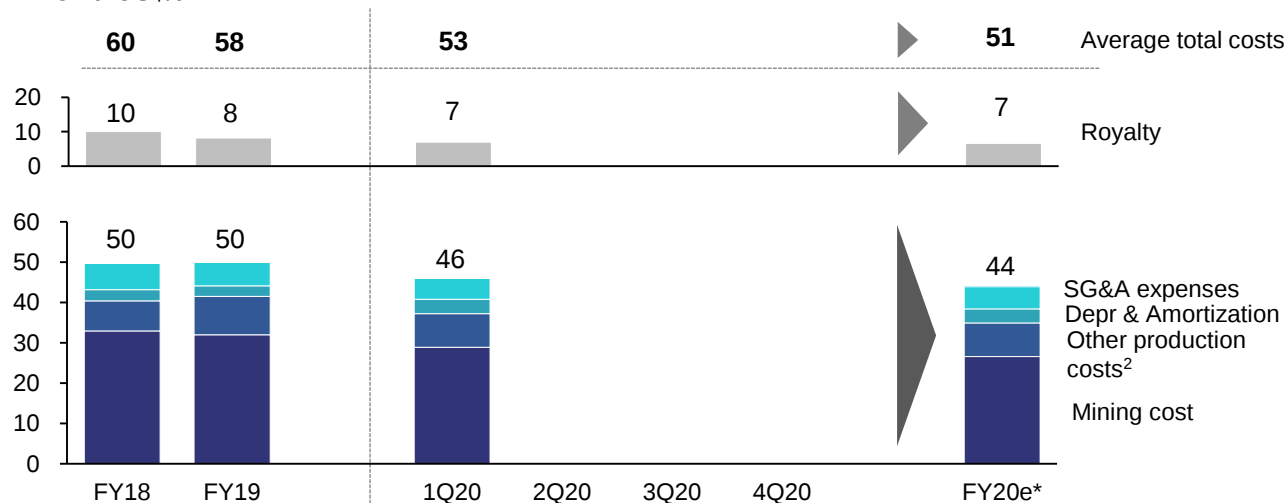
Indonesia coal: financial summary

FINANCIAL SUMMARY

Unit: US\$ M	1Q20	4Q19	QoQ	1Q19	YoY
Sales (Mt)	5.8	6.5	11% ▼	6.0	3% ▼
ASP (US\$/t)	59	60	2% ▼	71	17% ▼
Sales revenue	366	411	11% ▼	453	19% ▼
EBITDA	52	62	17% ▼	72	29% ▼

AVERAGE TOTAL COST¹

Unit: US\$/t



Comments

- Lower total sales volume in 1Q20, mainly due to market seasonality and decreasing demand as COVID-19 pandemic hit economies.
- ASP was slightly lower due to COVID-19 impact in 1Q20.
- Average total cost turned lower in 1Q20 supported by decreasing mining cost and lower oil price.

Indonesia coal: cost reduction plan



EXPLORATION & MINE PLANNING

- Optimize existing mine plan along with shorter overburden distance to match coal price environment.
- Optimize pre-production drilling cost.
- Capex rationalization.



COAL MINING & OPERATIONS

- Take advantage of current low oil price environment.
- Negotiate mining cost with mining contractors.
- Optimize overhaul schedule of heavy equipment.
- Reduce barging cost through negotiation with vendors and optimizing coal load capacity.



FINANCE & ADMIN

- Reap benefits from lower income tax incentives.
- Manage and reduce foreign exchange fluctuations.
- Minimize non-moving inventory to improve cash flow.
- Reduce overhead costs at all sites and Jakarta office.
- Continue to use digital technology to improve cost efficiency.

Target \$5-6/t cost reduction versus FY19

China and Mongolia coal summary

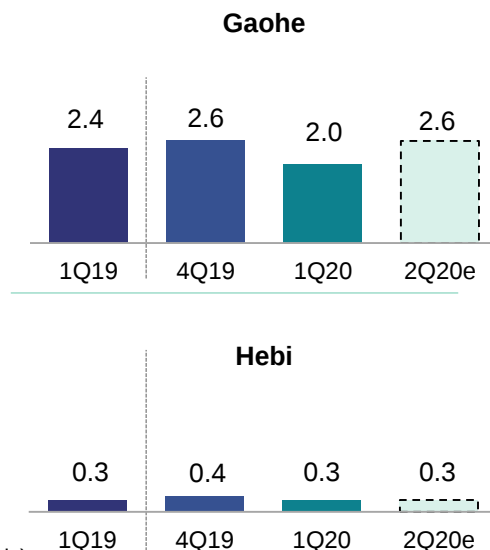
CHINA COAL 2020 PRODUCTION*

Unit: Mt ROM

2020 target: 10.8 Mt



Note: * Output figures are ROM output (100% basis)



GAOHE'S FINANCIAL SUMMARY

Unit: US\$ M	1Q20	4Q19	QoQ	1Q19	YoY
Sales (Mt)	1.7	2.7	37% ▼	2.1	19% ▼
ASP (US\$/t)	78	81	4% ▼	91	14% ▼
Sales revenue	134	216	38% ▼	196	32% ▼
COGS (US\$/t)	43	72	40% ▼	55	22% ▼
EBITDA	80	42	90% ▲	95	16% ▼

GAOHE OPERATIONAL UPDATES

- Lower production and sales in Q1 due to covid-19 impact
- COGS in Q1 went down due to plans implemented to minimize costs, such as lowering the safety fee from RMB 50/t to RMB 30/t
- Expected higher production and sales in Q2 as covid-19 is mitigated and production gradually goes back to normal

HEBI OPERATIONAL UPDATES

- Stable production in Q1 since the coal is directly sold to the washing plant by train
- Continued management of gas drainage and improved development rate
- Continued focus on safety and environment improvement measures to make sure production remains stable

MONGOLIA PROJECTS UPDATES

Tsant Uul

- Collaboration with pyrolysis vendors and oil upgrading vendors to add more value to tar oil and char

Unst Khudag and Altai Nuurs

- Preliminary feasibility study for UK coal conversion
- Received MRPAM¹ approval of Feasibility Study for AN Coal Fired Power Plant
- Received approval DEIA² report for AN Coal Fired Power Plant from MEGD³

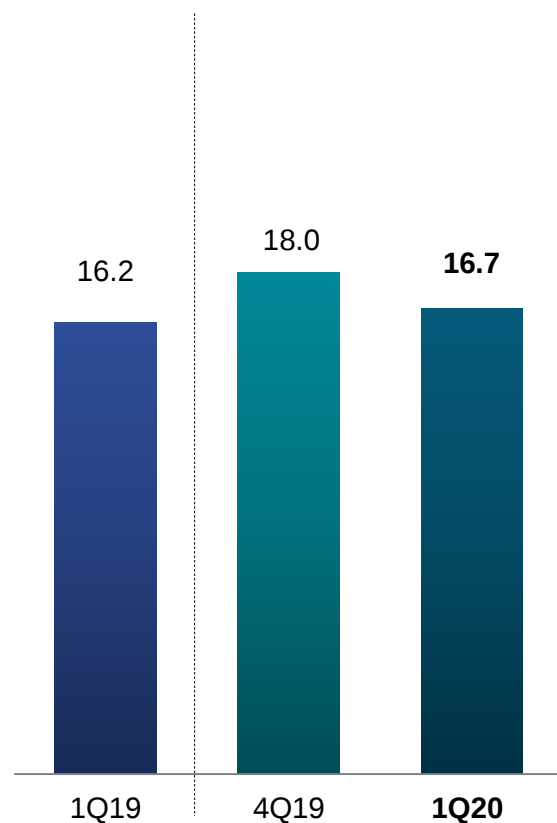
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Gas business 1Q20 performance (Marcellus)

*Strong production with plan in place to prioritize capital spending in response to pricing challenge.
QoQ revenues and EBITDA downward trend largely from distressed market pricing and one-time transaction costs.*

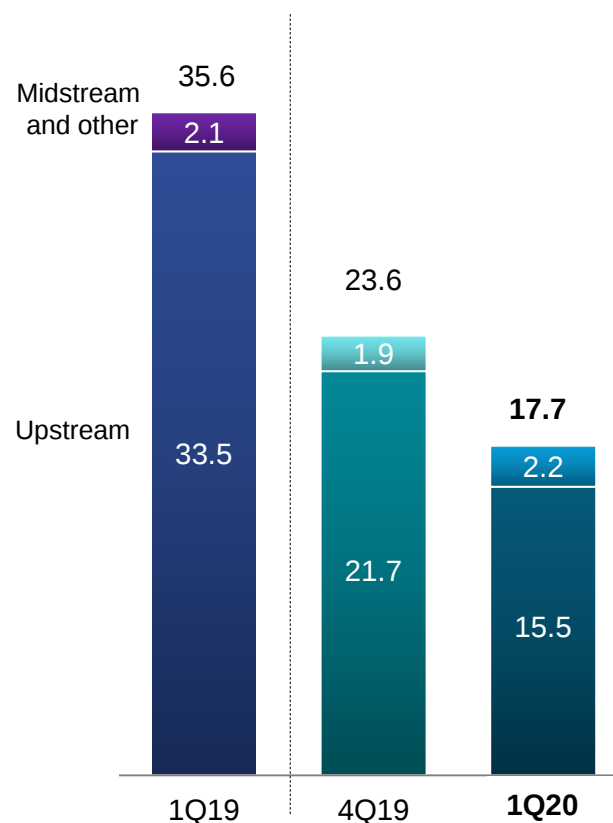
SALES VOLUMES

Unit: Bcf ¹



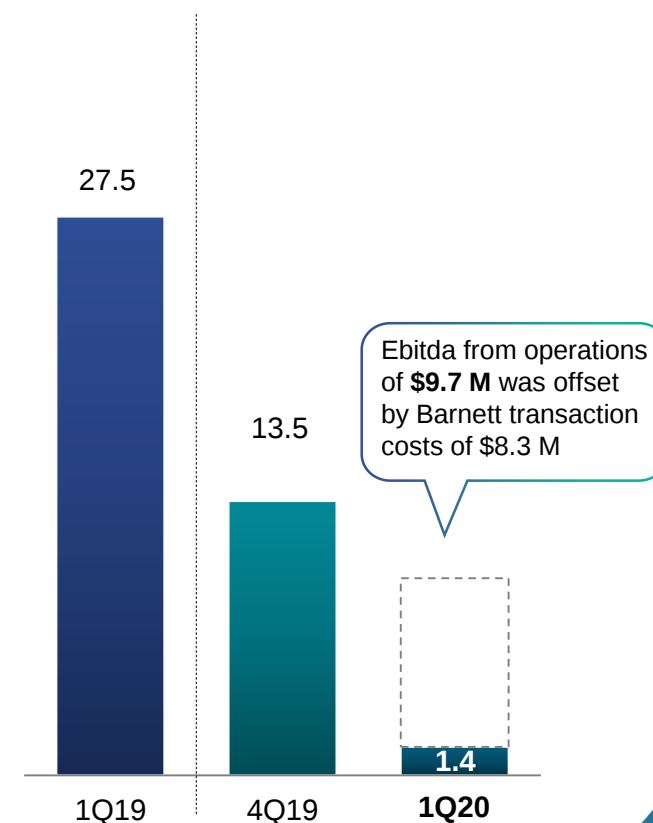
TOTAL REALIZED REVENUE

Unit: US\$M



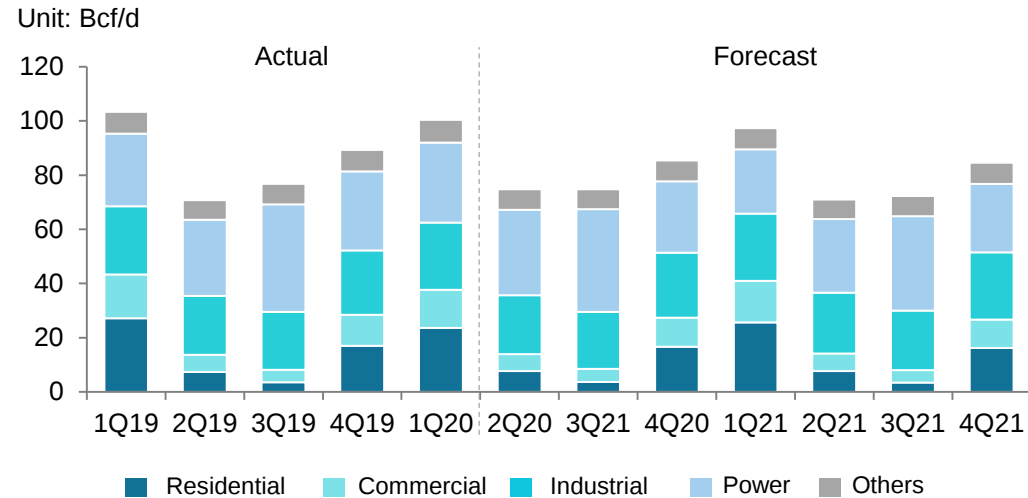
EBITDA

Unit: US\$M



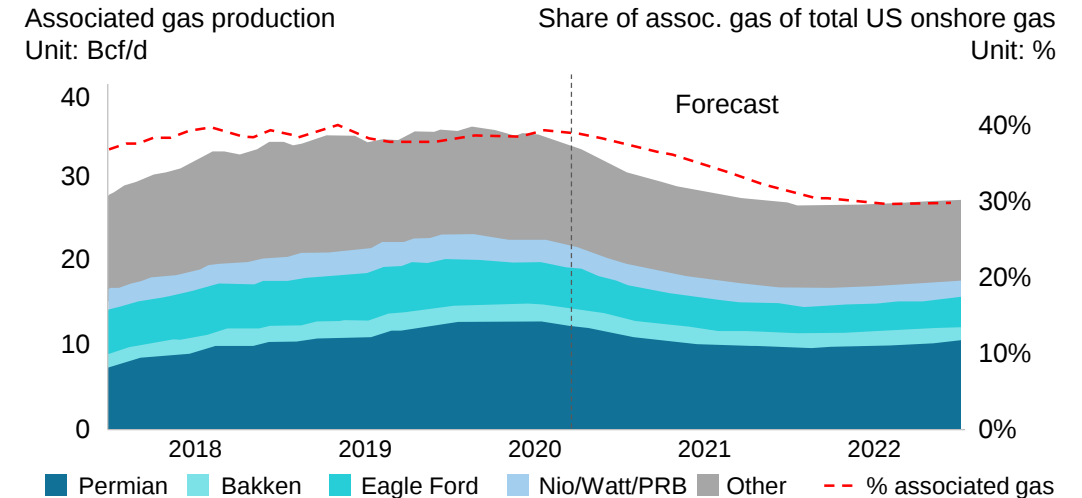
US gas market under low oil price and Covid-19

RESILIENT DEMAND PROJECTION

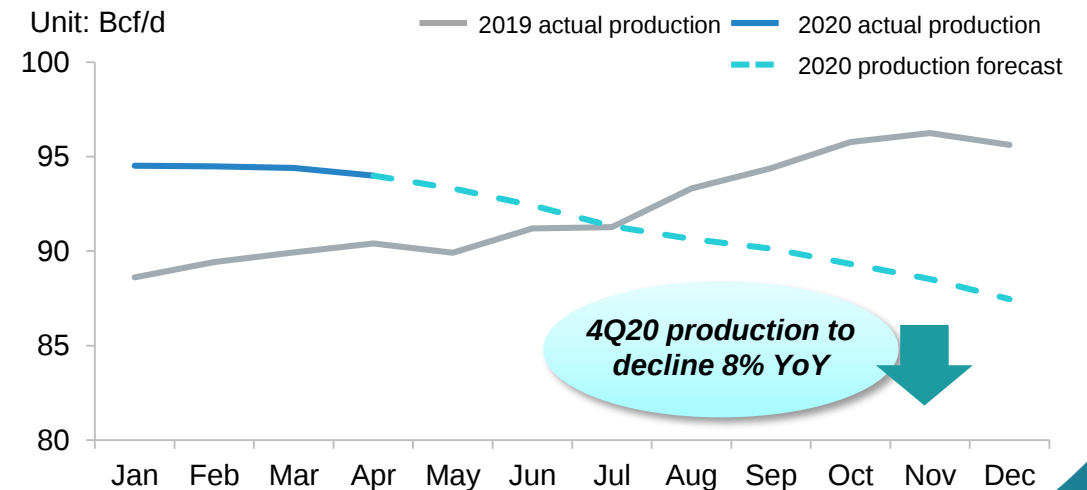


- Majority of US gas demand is domestic consumption, and its price is determined by domestic demand & supply with indirect linkage to oil via associated gas production.
- Gas supply declines to outweigh with limited potential demand loss. EIA projected 4Q20 production to decline by 8% YoY, while demand is expected to decline by 5% YoY.
- Gas supply reduction heightened significantly by around 5-7 Bcf/d in the near-term by an absence of associated gas (represents more than 30% of US onshore gas) due to oil well shut-ins
- Residential and power demand to be relatively immune or even slightly higher in near-term which will potentially offset commercial demand loss.
- Many dry gas producers must replenish their balance sheet positions before ramping up production in response to positive pricing signals

DECLINING ASSOCIATED GAS PRODUCTION OUTLOOK

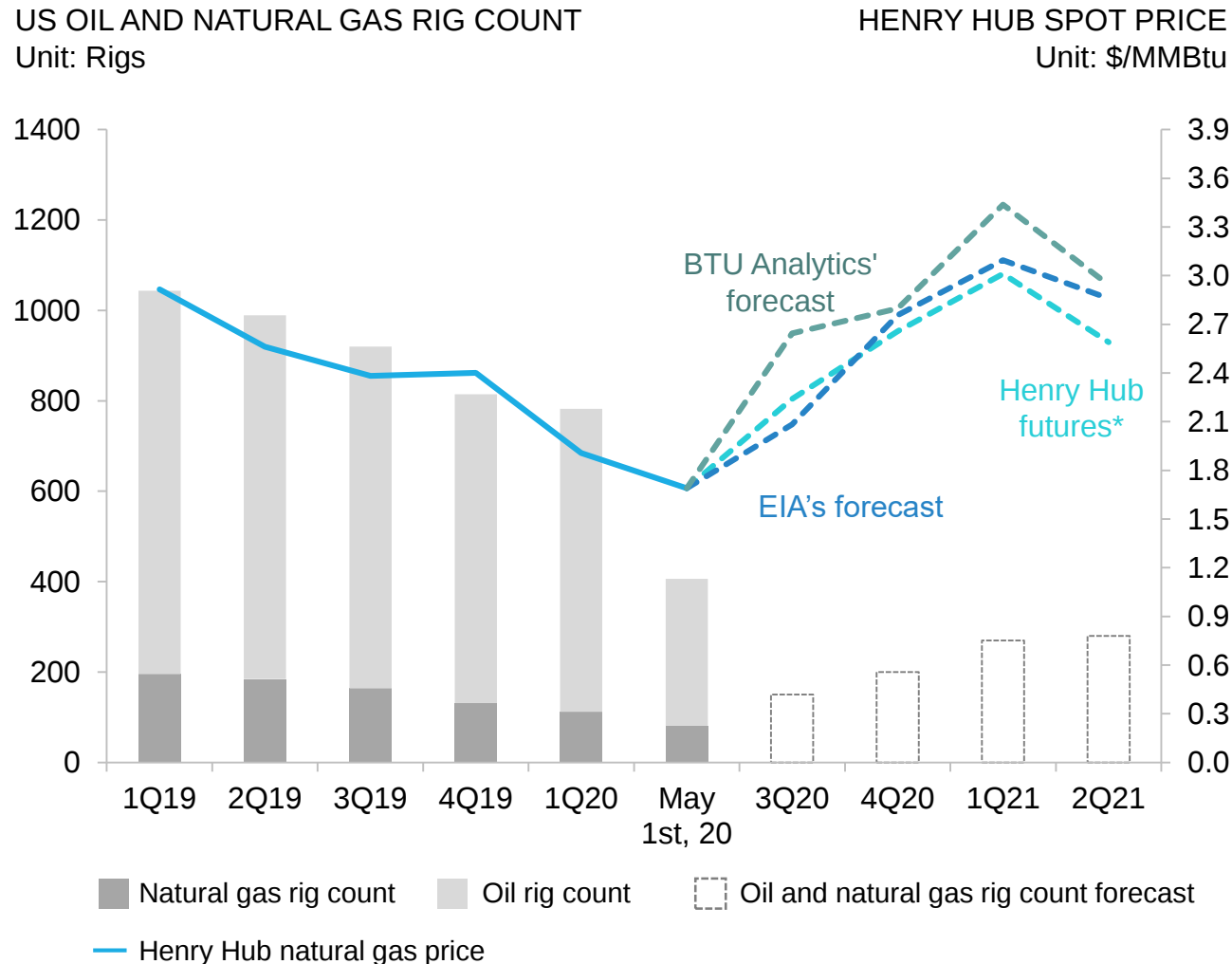


US NATURAL GAS PRODUCTION 2019 VS 2020 FORECAST



US gas: declining production to support gas price outlook

US RIG COUNT VS HENRY HUB PRICE



COMMENTS

- Major US gas producers have announced capital spending reduction of 15-30% in response to impact from COVID-19
- Oil and natural gas rigs (leading indicators) have declined to 325 rigs and 81 rigs, representing 51% and 34% YTD declines, the lowest since 2016
- If oil prices drop further, there is a possibility of seeing a momentary period of little to no drilling activity
- Henry Hub futures have increased as gas prices set to increase because the reduction in gas supply will outweigh the resilient domestic demand

Barnett: earnouts paid only at much higher prices (win-win)

INCREMENTAL EBITDA VS. EARNOUT PAYMENTS AT DIFFERENT PRICE THRESHOLDS

ILLUSTRATIVE

Unit: US\$ M

Annual incremental Ebitda after earnout payments

Annual earnout payments at different WTI price thresholds

Annual earnout payments at different Henry Hub price thresholds

Earnout payments at each threshold vs. incremental Ebitda

Henry Hub price thresholds (\$/MMbtu)

<\$2.75

\$2.75-\$2.99

\$3.00-\$3.24

\$3.25-\$3.49

≥\$3.50

WTI price thresholds (\$/bbl)

<\$50.00

\$50.00-\$54.99

\$55.00-\$59.99

\$60.00-\$64.99

≥\$65.00

Note: Price thresholds are based on annual average prices for natural gas and oil each year

Incremental Ebitda increase significantly outweighs earnout payments

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Banpu Power 1Q20: thermal power



THAILAND

BLCP

Smooth operation with strong and consistent reliability

- Continue its strong efficiency and reliability with EAF* at 100%
- EBITDA of THB 1.0 Bn, significant improvement QoQ and increased by 3% YoY
- Profit from operations of THB 0.2 Bn impacted by FX translation and deferred tax expense



LAOS

Hongsa

Maintain normal operation after earthquake incident in the 4th quarter last year

- Strong operational performance result with EAF at 91%
- EBITDA of THB 3.6 Bn, 106% QoQ and 18% YoY
- Profit contribution of THB 1.1 Bn, 429% QoQ and 53% YoY driven by higher sales and gain from FX translation



CHINA

China CHP

No impact from COVID-19 with higher power and steam demand mainly from industrial customers related to medical product

- Reported revenue of THB 1.6 Bn, improved 17% from higher power and steam sold

SLG

- Construction progress reached 76%
- Expected synchronize with transmission line after construction completion within end 2020

Banpu Power 1Q20: renewable power



CHINA

China Solar

Less power sold due to seasonality and some curtailment during covid-19 situation

- Average capacity factor reported at 12%, +1% YoY
- Power sold declined by 4% QoQ
- Reported revenue of RMB 40 M, -3% QoQ and +14% YoY



JAPAN

Japan Solar

Higher average capacity factor and more power sold due to better weather conditions

- Average capacity factor reported at 11%, +2% QoQ
- Power sold reported at 27 GWh, +60% QoQ with additional capacity from Kurokawa which COD in December 2019



VIETNAM

Vietnam Wind

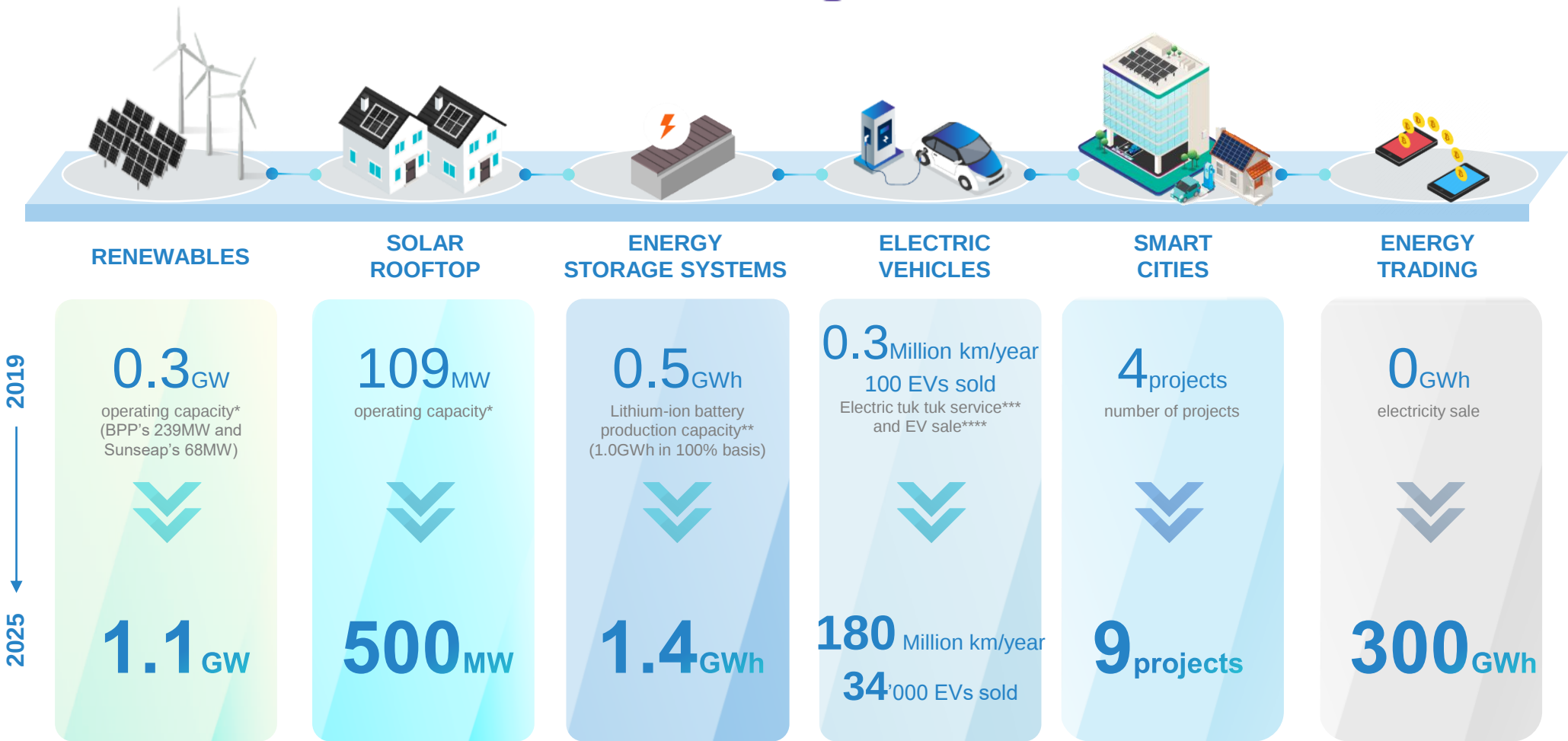
Construction of phase 1 of 30 MW, PPA has been executed with EVN. Continued pre-feasibility studies of phases 2 and 3

- Submitted pre-feasibility study of phase 2
- PPA agreement with EVN was finalized and signed first week of March 20
- Geological and topological survey completed in March 2020
- Small potential shift in COD due to covid-19

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Banpu NEXT: growth targets 2025

BANPU NEXT



Note: *Capacity based on Banpu Power's equity capacity and Banpu's 38.5% shareholding in Sunseap (as of end 2019), **Based on Banpu's 47.7% shareholding in Durapower, *** Based on Banpu's 30.7% shareholding in UMT, ****Based on Banpu's 21.5% shareholding in FOMM

Energy Technology 1Q20: update



Solar rooftop

- Banpu NEXT secured **1.1 MW** solar rooftop projects, adding to total of **18 MW** portfolio in Thailand
- Gained additional capacity through increase in **investment in Sunseap to 48.6%** from 38.5%

Investment:
48.6% stake in Sunseap



Energy storage system

- Continued expansion of Durapower's lithium-ion battery production capacity to 1GWh (100% basis)

Investment:
47.7% stake in Durapower



Electric vehicles

- Plan to launch **Electric Motorcycle program** with Thailand Post in mid of May 2020
- **MuvMi and FOMM:** provided EVs for Chulalongkorn hospital to transport patients
- Launched new initiative **'EV car-sharing'** with FOMM and Haup Car

Investments:
30.7% stake in UMT
21.5% stake in FOMM



Smart cities

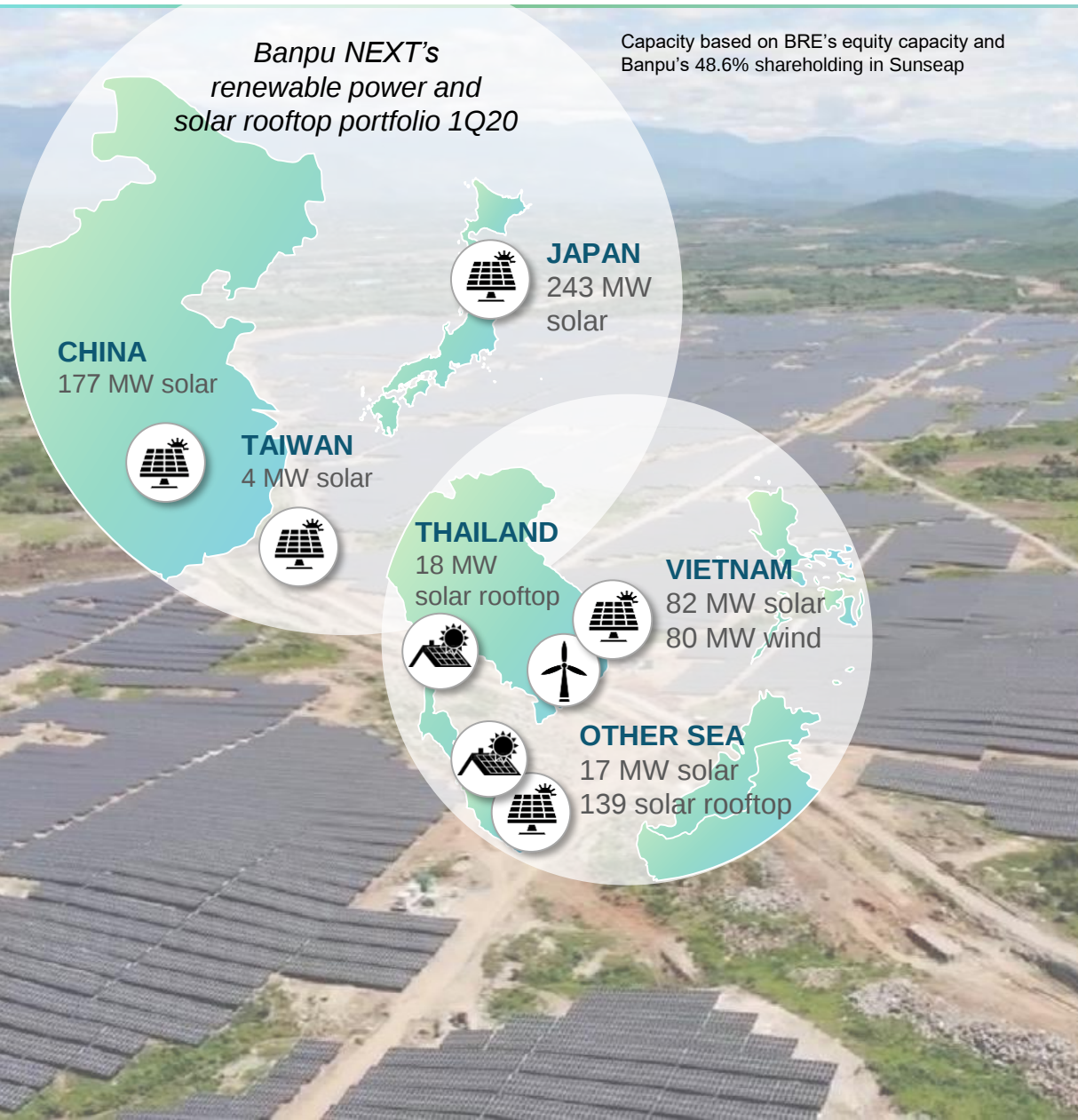
- Continued development of smart city projects in pipeline including Rugby school and Bansean smart city
- Introduced new energy technology accessories including Smart Pole and Smart meter to optimize energy efficiency



Digital platform technologies

- Evaluate potentials of digital technologies for development of Banpu NEXT clean energy platform
- Internet of Things (IoT) connects devices through internet. Banpu NEXT uses IoT to develop mobile app for real-time monitoring of solar panels performance

Sunseap: increased shareholding to 48.6% from 38.5%



- In February, Banpu NEXT exercised rights to purchase additional shares in Sunseap for S\$105 M, **increasing shareholding in Sunseap from 38.5% to 48.6%**
- In 1Q20, Sunseap also secured additional **48 MW* solar rooftop** projects in Singapore
- Banpu NEXT's total committed portfolio increased to **760 MW**, comprising of **602 MW**** renewable power portfolio and **158 MW***** solar rooftop portfolio across Asia Pacific

Note: *Based on Sunseap 100% basis, **Includes 105 MW from 48.6% shareholding in Sunseap and 497 MW from BNEXT, *** Includes 139 MW from 48.6% shareholding in Sunseap and 18 MW BNEXT's portfolio in Thailand

Electric Vehicles: partnership with Thailand Post and MuvMi update

	DECO Hannah	DECO Super Ace	SWAG X
จำนวนรถ	24	40	40
ราคาขายปลีก	4,729	3,992	4,729
ราคาขายปลีก	1,850	1,800	1,800
ราคาขายปลีก	0,235	4,312	1,500
ราคาขายปลีก	2,450	6,068	4,781
ราคาขายปลีก	3,300	1,800	

ข้อเสนอพิเศษ

บ้านบูเน็กซ์ จัดให้!

- ✓ ดอกเบี้ยต่ำ 3% ทั่วประเทศ
- ✓ ผ่อนชำระ 2 ปี 0 ดอกเบี้ย 0.9%
- ✓ ค่าเช่ารถ 4 ปี 0 ดอกเบี้ย 1.1%



- Partnership with Thailand Post under EV fleet management project
 - E-Motorcycle program** for postmen is going to start in mid of May 2020
 - The first five key centers of Thailand Post with over 1,000 employees in Bangkok have been targeted before extending to other areas

- Banpu NEXT in collaboration with MuvMi* **provided electric Tuk Tuks to Chulalongkorn Hospital and the Thai Red Cross Society** to support transportation of patients infected by COVID-19 from the hospital to the recovery facility during treatment
- MuvMi has **expanded electric Tuk Tuk fleet from 15 to 50 units** to serve current **6,000 active subscribers** in four areas including Chulalongkorn University, Aree, Paholyotin, and Rattanakosin Island
- In 2020, six areas will be covered with a total number of 100 electric Tuk Tuks. Over 100 drivers will also be hired with consistent monthly salaries to support higher living standards

Note: *Banpu NEXT ownership in UMT (developer of MuvMi) of 30.7%

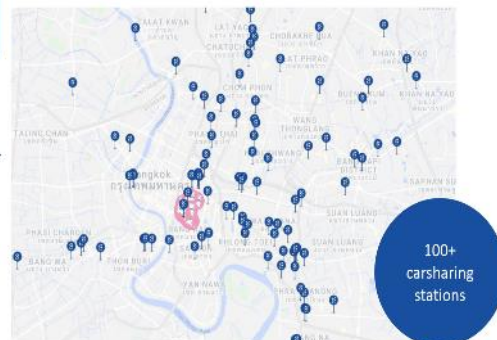
Electric Vehicles: launched 'EV Car sharing' with FOMM and Haup Car



- Banpu NEXT, in cooperation with FOMM and Haup Car (Thailand's first car sharing company), will provide **50 FOMMs for medical staff** to use during the Covid-19 pandemic from May – Aug
- The medical team of Chulalongkorn Hospital appreciated the FOMMs and will take the lead on the **Banpu Next 'EV Car Sharing for Caring'** project. Another six hospitals will follow.
- After project completion, these cars will be added to the car sharing business run by **Haup Car** who currently have **over 100 stations in Bangkok** together with **300 cars in service**.
- This is to welcome the new normal of public transportation with social distancing



More than 100 commercial carsharing stations around Bangkok can be utilized for EV carsharing project



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Key takeaways Q1 2020



GROUP EBITDA STABLE AT US\$134 M

Consolidated EBITDA +2% QoQ;
strong Power EBITDA improvement
offset lower Coal and Gas EBITDA



COAL EBITDA US\$77 M

ITM and Gaohe maintained
stable ASPs and reduced costs;
CEY's export price cushioned by
weaker AUD



GAS: BARNETT AMENDMENT

US\$10 M gas EBITDA excluding
one-time transaction costs;
Barnett terms amendment provides
better risk/return dynamics



ENERGY GENERATION: CONSISTENT PERFORMANCE

BLCP and Hongsa EAF >90%
reflected plant reliability;
China and Japan solar maintained
capacity factor despite some curtailment



BANPU NEXT: PORTFOLIO EXPANSION

Expanded clean energy capacity through
an increase in shareholding in Sunseap;
launched new initiatives for EV business
including e-motorcycles and car sharing



RESILIENCE IN A CHALLENGING MACRO

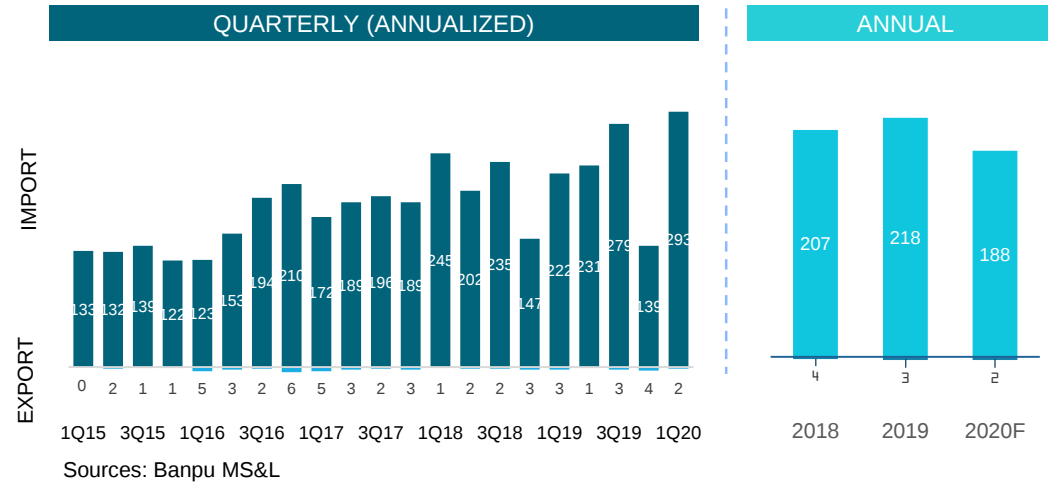
Continue pursuing a prudent policy
of cost-rationalization, disciplined
cashflow management and
contingency planning

APPENDIX

China: supply recovery outpacing demand

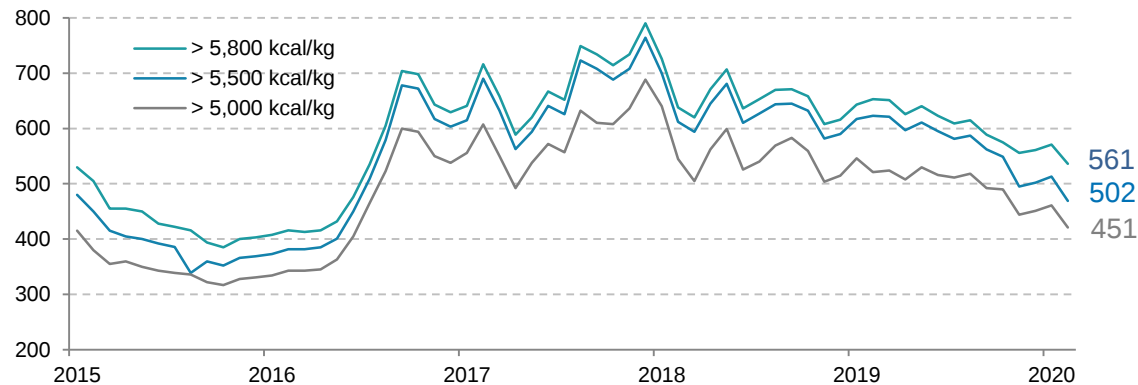
CHINA THERMAL COAL IMPORTS/EXPORTS*

Unit: Mt



CHINA DOMESTIC COAL PRICES

Unit: RMB/t



1Q20

- The COVID-19 outbreak had a huge impact on China's economic and industrial activity.
 - Many businesses were shut, people and cargo movement between cities and across provincial boundaries were severely restricted.
- The spread of coronavirus also curtailed the country's imports and exports in February and March.
- Coal import was strong as Chinese buyers rushed to buy coal from international markets on the fear of supply disruption from the government measures to contain the coronavirus outbreak.
- Economic activity started to recover in March as restrictions to control the viral outbreak began to ease but power demand continued to decline year-on-year.
- However, coal demand recovered slowly due to slow economic recovery while supply has returned to normal and outpaces demand, creating high stocks and driving down coal prices.
 - Chinese power utilities were delaying their purchases of both seaborne and domestic coal due to weak demand.
 - Buyers also retreated from market amid tightened import control.

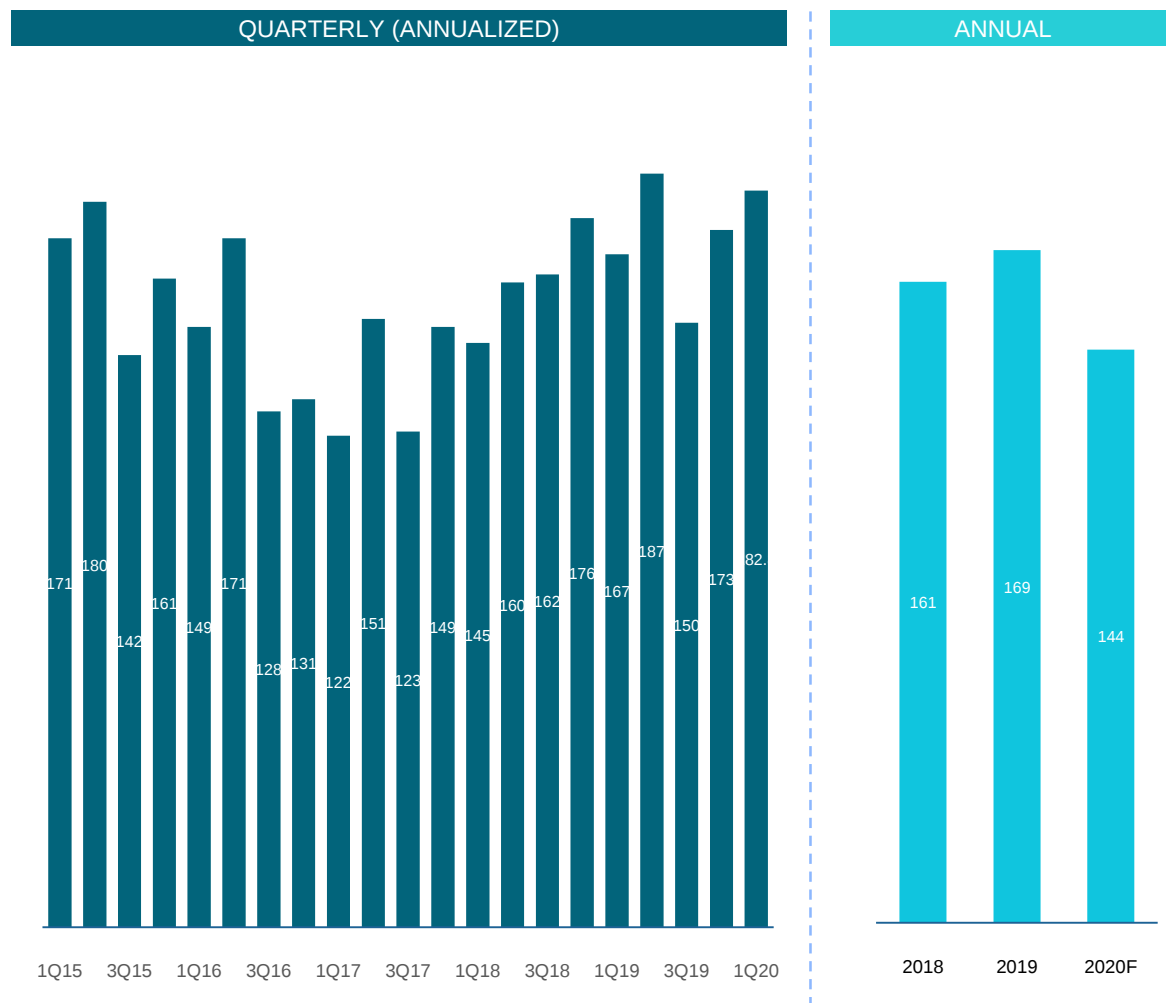
Outlook

- Economy and industrial activity are recovering but have not fully returned to normal.
- Weak import-export trade will continue to hinder the revival in China's economy and the situation is likely to continue into 2H as coronavirus cases continue to increase globally.
- Chinese domestic coal prices approach red zone which could trigger government intervention to halt further downward pressure including more import control tightening.

India: rising domestic production and weak demand suppresses imports

INDIA THERMAL COAL IMPORTS*

Unit: Mt



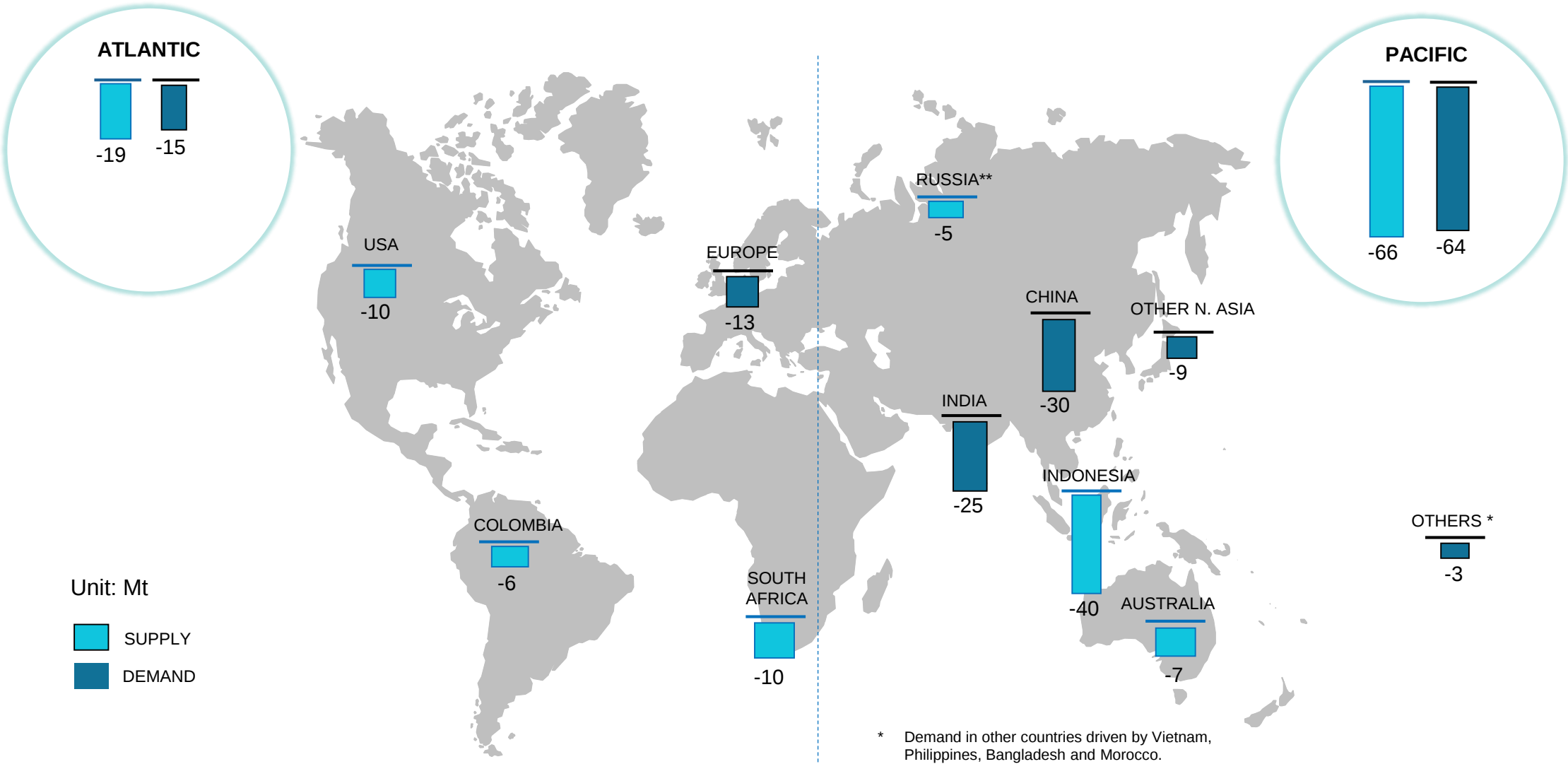
1Q20

- Power generation was up by 3% and 11.5% in January and February, respectively, but the impact of restrained economic activity started to surface in March.
 - Average power output was around 9GW higher on the year to 151GW on 1-18 March, but fell steeply during 19-31 March to 103 GW.
- India lockdown started on 25 March to contain the spread of the coronavirus outbreak. Power generation declined by 25-30% during the lockdown as intensive industries have almost completely stopped production during the national lockdown.
 - Power generation and coal are exempted from the lockdown.
- Coal India production increased about 20 Mt or 10% YoY in Q1, with the highest ever output of 84 Mt in March 2020.
 - Resulted in a sharp increase in stocks both at power plants and mines.
- Coal imports remained strong as imported coal-based power plants continued to generate more electricity.

Outlook

- Power output and coal burn are set to fall sharply in April following the government's lockdown.
- Extend lockdown will further reduce coal demand although there is some relaxation to allow some business activity to resume.
- Imports for the non-power sector is expected to decline due to lockdown.
- High coal stocks will put pressure on both domestic production and imports.
- Indian ministry encourages greater domestic coal uses.
- Weak economic outlook and devaluation of Indian Rupee will tend to lower import demand.

Regional thermal coal market: 2020e vs 2019



* Demand in other countries driven by Vietnam, Philippines, Bangladesh and Morocco. (across both Pacific and Atlantic)
** Russia exports to non-CIS countries only

Coal quarterly output summary

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

Mines	CV (kcal/kg)*	1Q19	4Q19	1Q20	2Q20e
Western operations		1.1	1.0	1.6	2.1
Springvale	6,700	0.5	0.3	0.8	1.2
Clarence	6,700	0.4	0.3	0.4	0.6
Airly	6,700	0.2	0.4	0.4	0.3
Northern operations		0.9	1.4	1.7	1.5
Mandalong	6,700	0.5	1.1	1.4	1.0
Myuna	6,700	0.4	0.3	0.3	0.5
Total Australia coal		2.0	2.4		

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

Mines	CV (kcal/kg)*	1Q19		4Q19		1Q20		2Q20e	
		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 – West block	5,950 – 6,250	0.5	14.9	0.5	12.8	0.5	12.8	0.6	13.3
Indominco – East block		2.8	13.7	2.1	9.6	2.0	9.4	1.4	10.1
Trubaindo	6,550 – 6,700	1.1	12.9	1.2	9.5	1.0	10.9	1.0	10.7
Bharinto		0.6	12.2	0.7	8.2	0.5	9.9	0.6	10.0
Kitadin-Embalut	5,800	0.4	11.9	0.3	8.1	0.2	16.4	0.4	11.2
Jorong	5,300	0.3	10.5	0.5	6.0	0.3	11.3	0.3	6.2
Total Indonesia coal		5.0	13.2	5.3	9.3	4.5	10.7	4.5	10.5

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

Mines	CV (kcal/kg)*	1Q19	4Q19	1Q20	2Q20e
Gaohe		2.4	2.6	2.0	2.6
Hebi		0.3	0.4	0.3	0.3
Total China coal		2.7	3.0	2.3	2.9

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

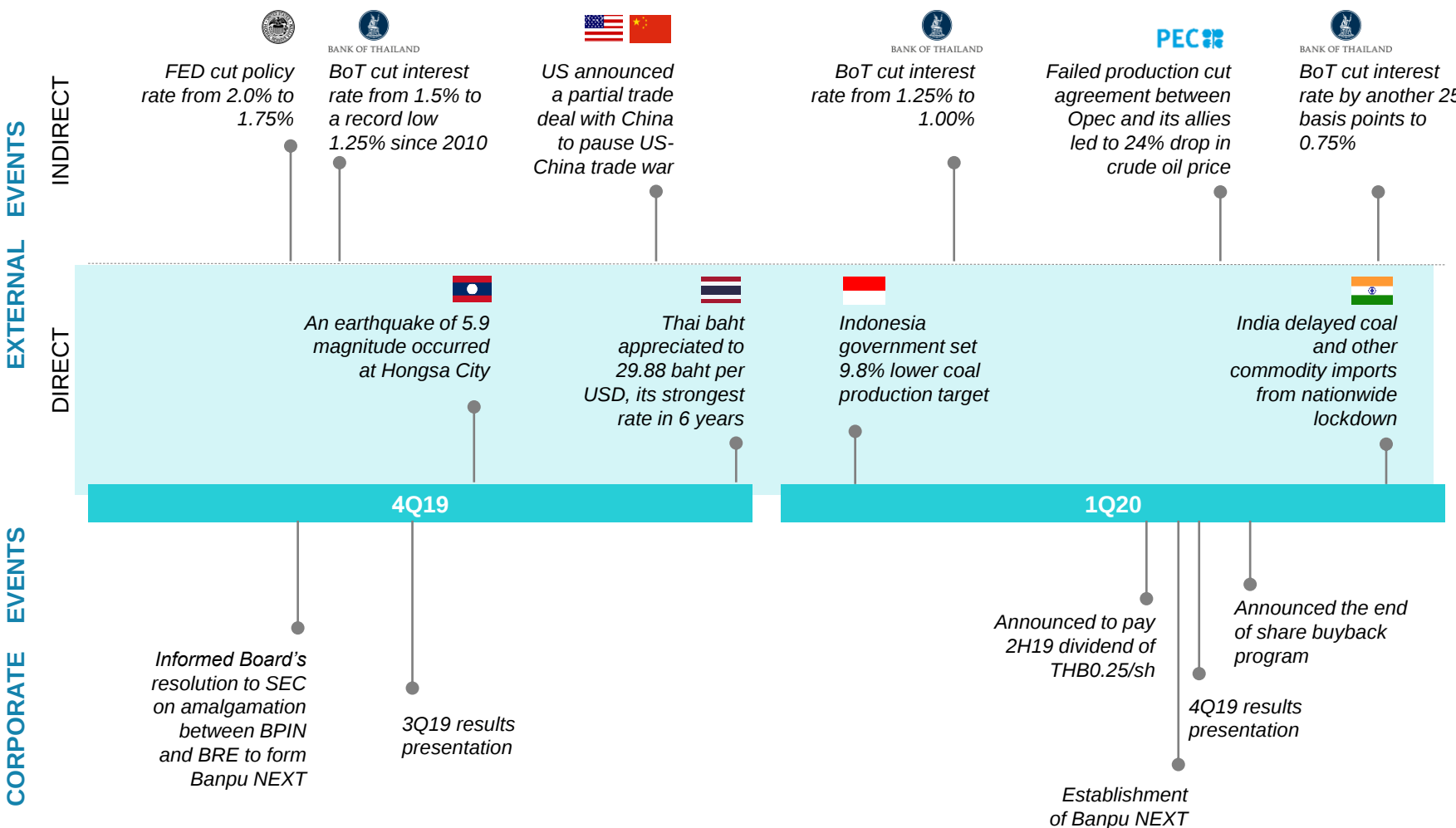
- In the US, production is measured in 1000 cubic feet (MCF)
 - 1000 MCF = 1 MMCF
 - 1,000,000 MCF = 1 BCF
 - 1000 BCF = 1 TCF
 - 1 MCF = 28.3 Meters³
 - 1 MCF = 1.0 Million BTU (MMBTU) or Decatherms (dry gas)
 - 1 BCF = 1.0 Trillion BTU
 - 1 Meter³ = 35.3 MCF
 - 1 Billion Meters³ = 35.3 BCF

2020 indicative guidance

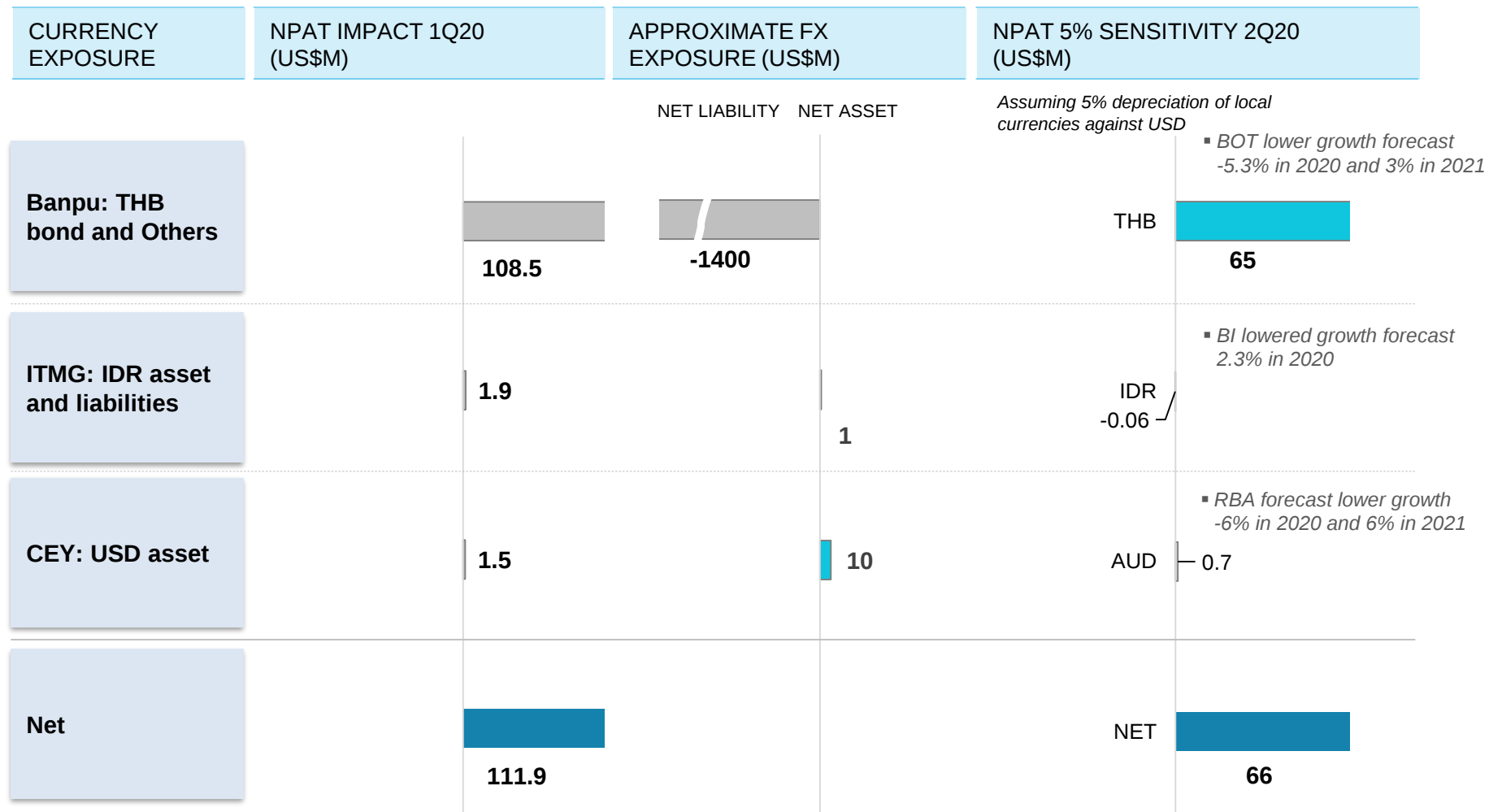
ILLUSTRATIVE AND INDICATIVE ONLY

UNIT GUIDANCE (US\$/MCF)			COMMENTS
REVENUE			
<i>Reserves (Bcf)</i>	<i>1,250</i>		
<i>Production volume (Mmcfd)</i>	<i>170-200</i>		
NET BACK	Average differential to Henry Hub	\$0.20 - \$0.45	Difference selling points and Henry Hub (NYMEX basis)
	G&C costs	\$0.45 - \$0.65	Gathering and compression costs (to intrastate pipelines)
	Transportation	\$0.20	
	Pipeline revenue	\$0.10 - \$0.15	Applicable to Chaffee Corners volume only
COSTS			
	Lease operating costs	\$0.20 - \$0.25	Main component of operating costs
	G&A	\$0.25 - \$0.35	General and administration costs
	Taxes	21%	Currently benefit from tax shield due to accelerated DD&A
	DD&A	\$0.80 - \$1.00	Depreciation, depletion and amortization
	Drilling and completion costs	\$0.80 - \$1.20	Costs incurred to drill and to make the well ready for production

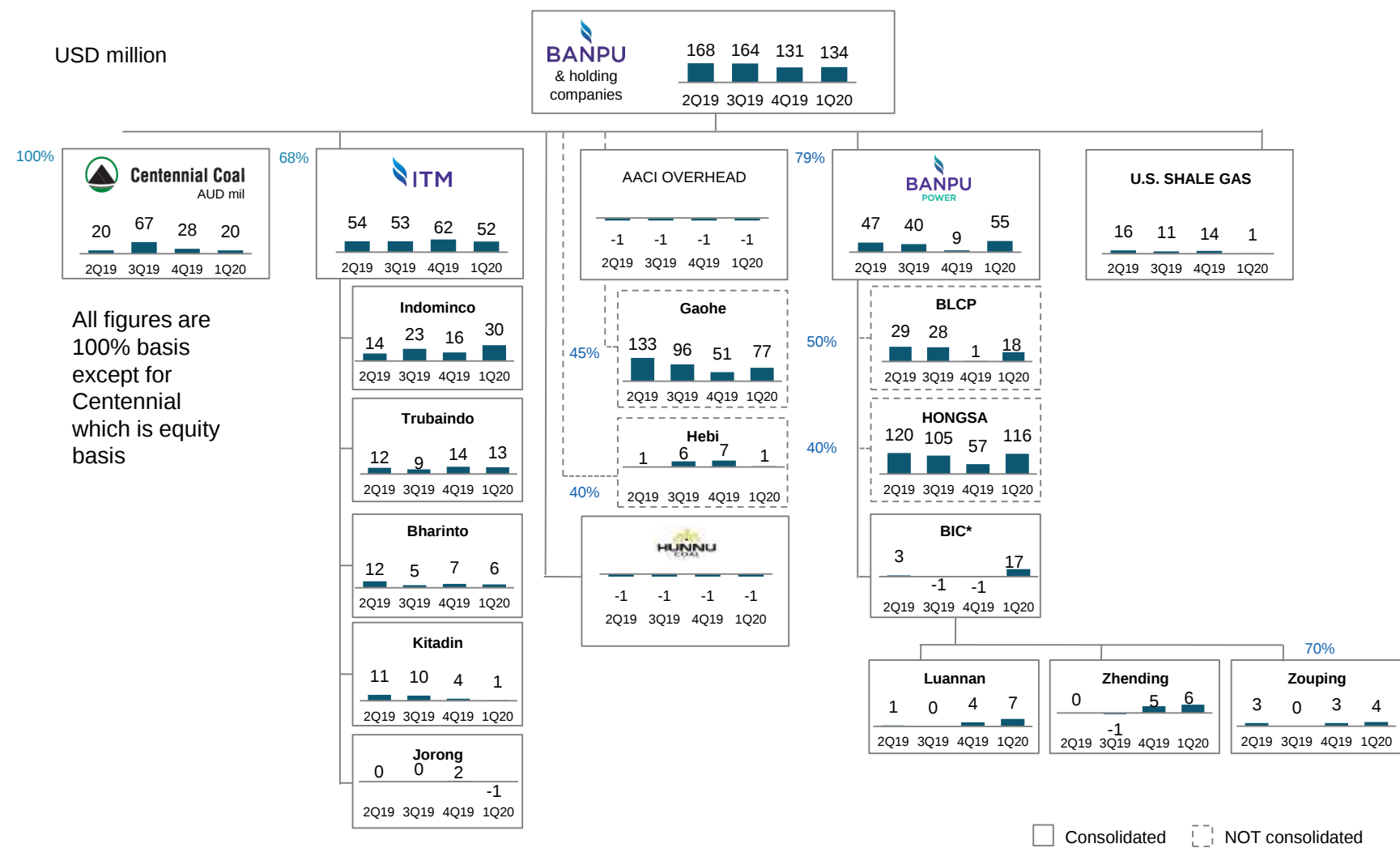
Key external and corporate events



Fx impact analysis guidance on P&L



Banpu group EBITDA breakdown



Banpu group net debt breakdown

USD million



Banpu consolidated : operating profit

USD million	1Q20	4Q19	1Q19	QoQ%	YoY%
Total sales revenues*	633	675	699	-6%	-9%
Sales revenue – Coal	525	575	575	-9%	-9%
Sales revenue – Gas	18	24	36	-25%	-50%
Sales revenue – Power	58	55	56	4%	3%
Cost of sales	(491)	(493)	(506)		
Gross Profit*	142	183	193	-22%	-26%
Gross profit – Coal	125	161	158	-23%	-21%
Gross profit – Gas	(3)	5	18	-153%	-116%
Gross profit – Power	18	12	13	57%	36%
GPM	22%	27%	28%		
<i>GPM – Coal</i>	<i>24%</i>	<i>28%</i>	<i>27%</i>		
<i>GPM – Gas</i>	<i>-16%</i>	<i>23%</i>	<i>51%</i>		
<i>GPM – Power</i>	<i>32%</i>	<i>21%</i>	<i>24%</i>		

Banpu consolidated : operating profit

USD million	1Q20	4Q19	1Q19	QoQ%	YoY%
Gross Profit	142	183	193	-22%	-26%
GPM	22%	27%	28%		
SG&A	(83)	(114)	(83)		
Royalty	(52)	(60)	(61)		
Income from associates	48	4	62		
Other income and Dividend	8	13	52		
Mining property	(9)	(9)	1		
EBIT	54	17	165	215%	-67%
EBIT – Coal	20	13	105	46%	-81%
EBIT – Gas	(15)	(1)	14	n.a.	-210%
EBIT – Power	49	4	46	1001%	8%
EBITDA	134	131	231	2%	-42%
EBITDA – Coal	77	108	153	-29%	-50%
EBITDA – Gas	1	14	28	-89%	-95%
EBITDA – Power	55	9	50	485%	11%

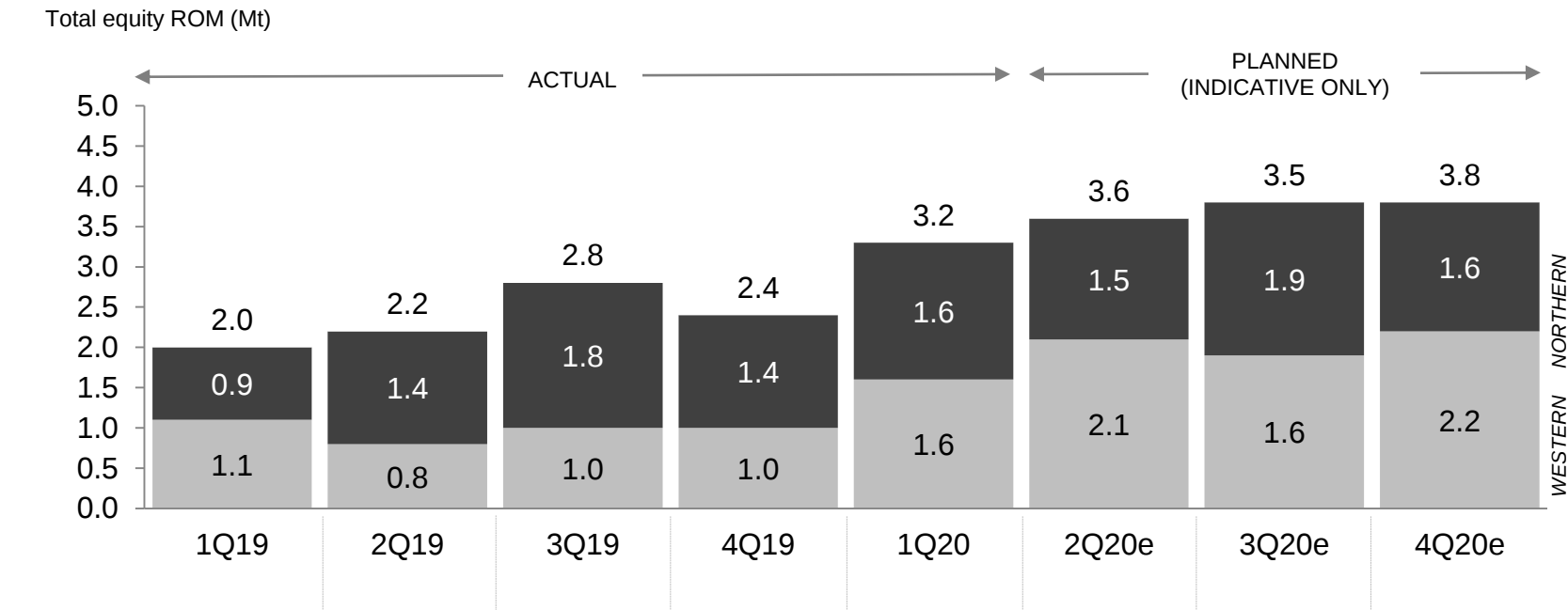
Banpu consolidated : net profit

USD million	1Q20	4Q19	1Q19	QoQ%	YoY%
EBIT	54	17	165	215%	-67%
Interest expenses	(47)	(47)	(47)		
Income tax (core business)	(20)	(22)	(32)		
Minorities	(12)	(7)	(21)		
Net profit before extra items	(25)	(59)	65	n.a.	-139%
Non-recurring items*	15	22	(4)		
Gain (Loss) on Derivatives Transactions	(6)	5	1		
Income tax (non - core business)	(0)	(6)	(11)		
Deferred tax income (expenses)	(40)	10	(4)		
Net profit before FX	(57)	(29)	46	n.a.	-224%
FX translation	112	(19)	(17)		
Net Profit	55	(48)	29	n.a.	89%
EPS (US\$/share)	0.011	(0.009)	0.006		

Centennial : Income statement

USD million	1Q20	4Q19	1Q19	QoQ%	YoY%
Sales volume (Mt)	3.1	2.9	2.1	6%	49%
Sales revenue	175.8	183.7	146.7	-4%	20%
Cost of Sales	(160.9)	(159.4)	(135.4)		
Gross Profit	15.0	24.3	11.2	-38%	34%
GPM	9%	13%	8%		
SG&A	(21.5)	(31.9)	(23.6)		
Royalty	(11.6)	(10.8)	(8.7)		
Other income	1.5	57.8	44.1		
Other expenses	-	-	-		
EBIT	(16.6)	39.3	23.2	-142%	-172%
Interest expenses	(5.7)	(5.2)	(5.1)		
Financial expenses	(0.5)	(0.4)	(0.6)		
Gain (loss) on exchange rate	1.5	(1.4)	(0.3)		
Gain (loss) on derivative	(2.8)	1.3	0.2		
Corporate income tax	-	-	(5.2)		
Deferred tax income	7.2	(12.7)	-		
Net Profit	(16.9)	20.9	12.1	n.a.	n.a.

Australia coal: quarterly equity rom output



	2019												2020e											
LW move	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Mandalong (100%)																								
Springvale (100%)																								

Normal production Bolt-up/commissioning LW relocation

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%.

