

1Q19 results

Opportunity Day

23rd May 2019



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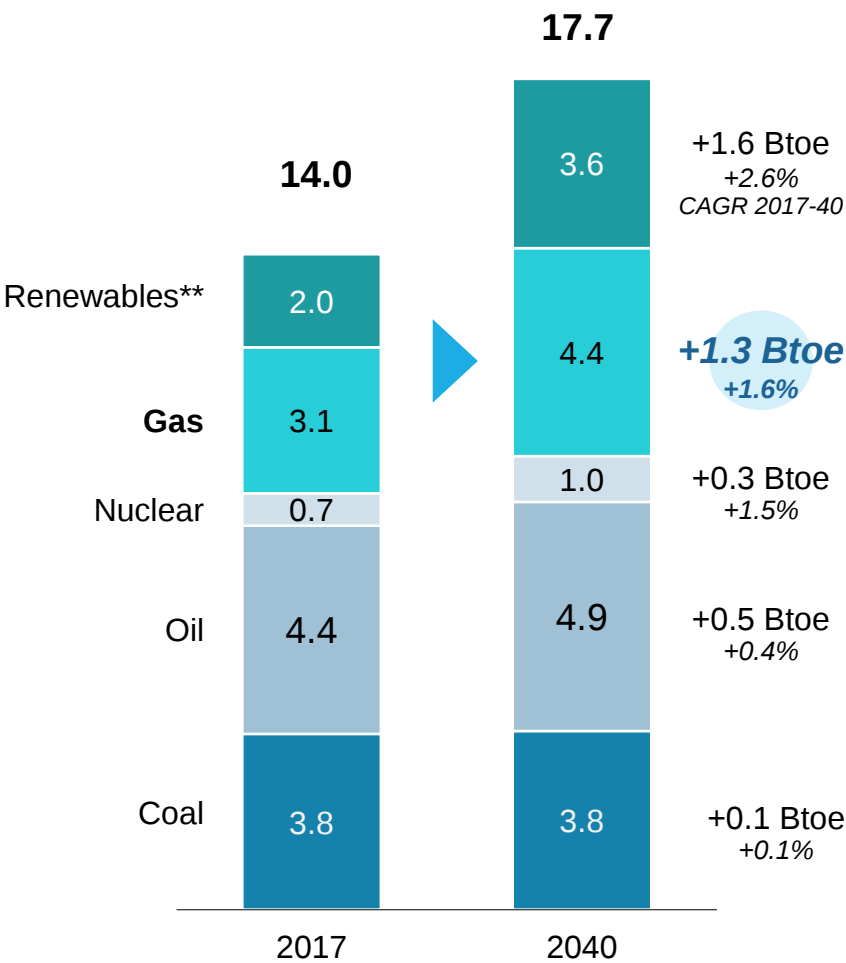
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- 1 **Focus: US Gas**
- 2 Financial Summary
- 3 Energy Resources
 - Coal
 - Gas
- 4 Energy Generation
- 5 Energy Technology
- 6 Key Takeaways

Gas – second-fastest growing primary energy

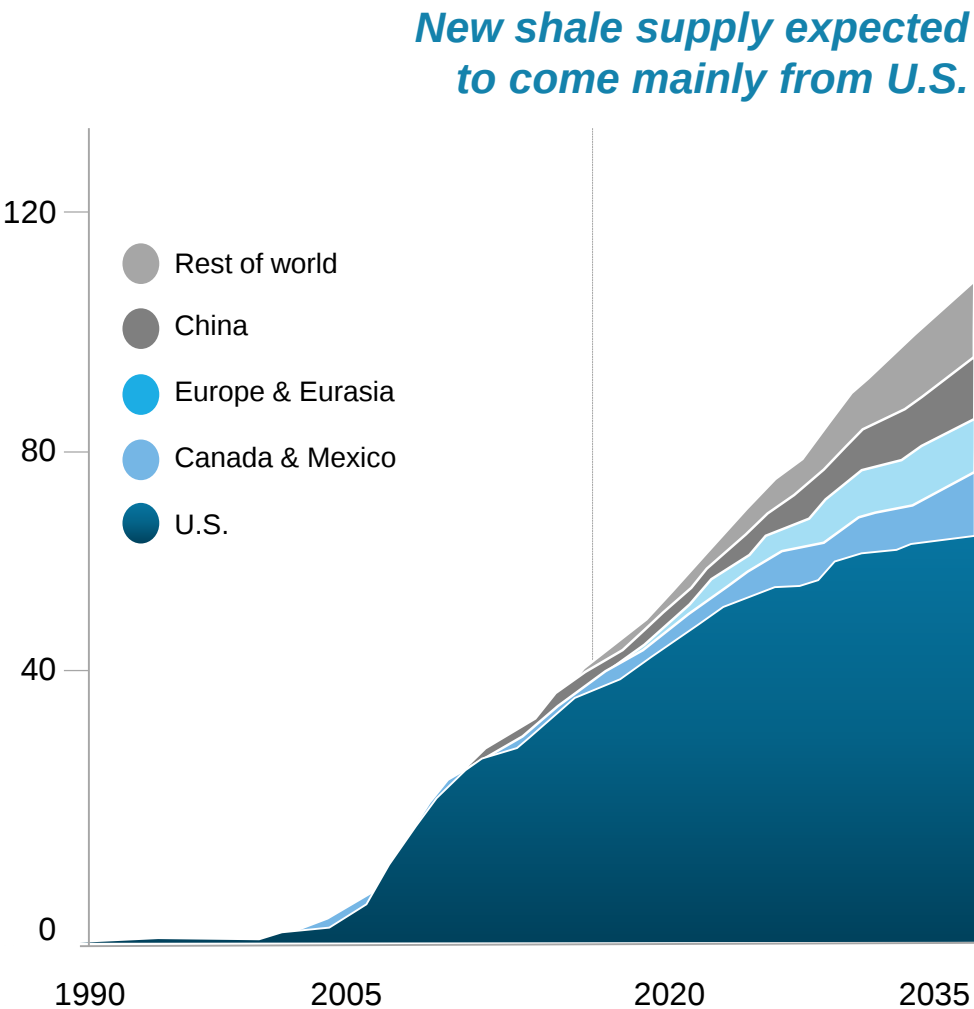
WORLD ENERGY DEMAND 2017 VS 2040*

Unit: Btoe



GLOBAL SHALE GAS PRODUCTION BY REGION

Unit: Bcf/d



OUR WAY IN ENERGY

Note: *Based on New Policies scenario, ** Renewables include hydro, modern bioenergy, solid biomass and other renewables
Source: EIA World Energy Outlook 2018, BP Energy Outlook 2035

Gas price outlook

LAST 6 MONTHS or 4Q18

Strong demand and tight supply continued to drive gas price

DEMAND DRIVERS

- Strong summer 2018 power burn
- Concern on lower than normal US gas storage
- Seasonality
- Increasing LNG demand and Mexico exports

SUPPLY DRIVERS

- Strong production as pipeline infrastructure came online
- Continued improvements in well productivity through better completion designs
- Associated gas increases from oil plays e.g. Permian

2019 OUTLOOK

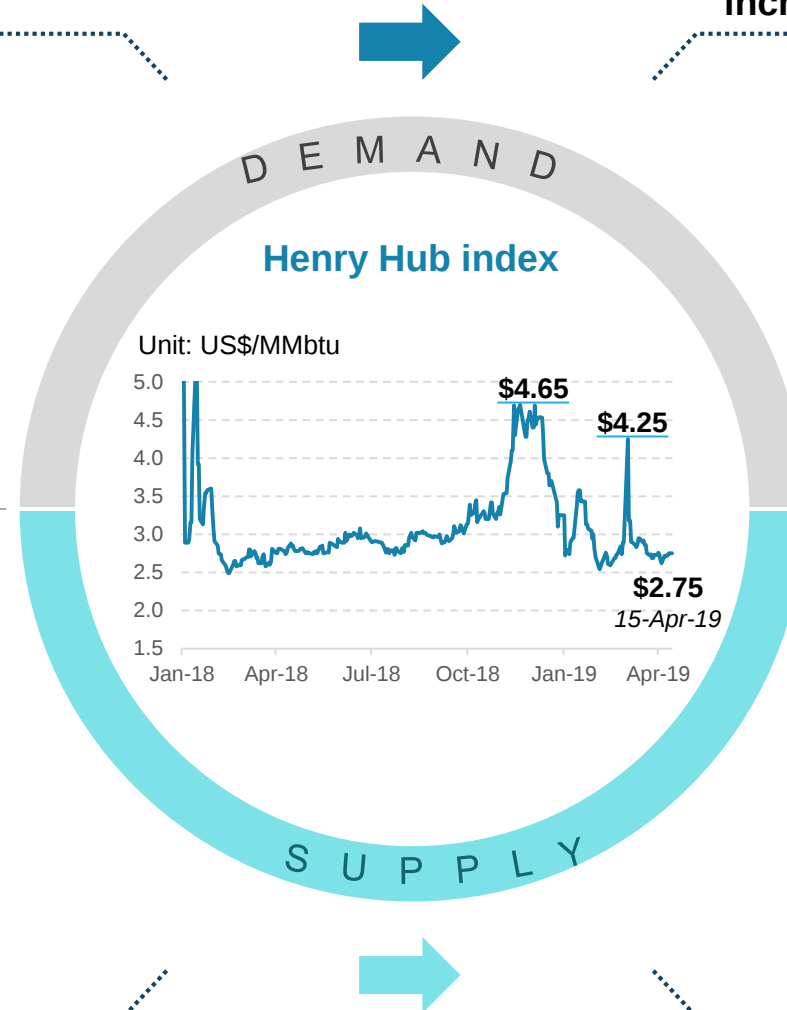
Strong production growth, despite increasing demand

DEMAND DRIVERS

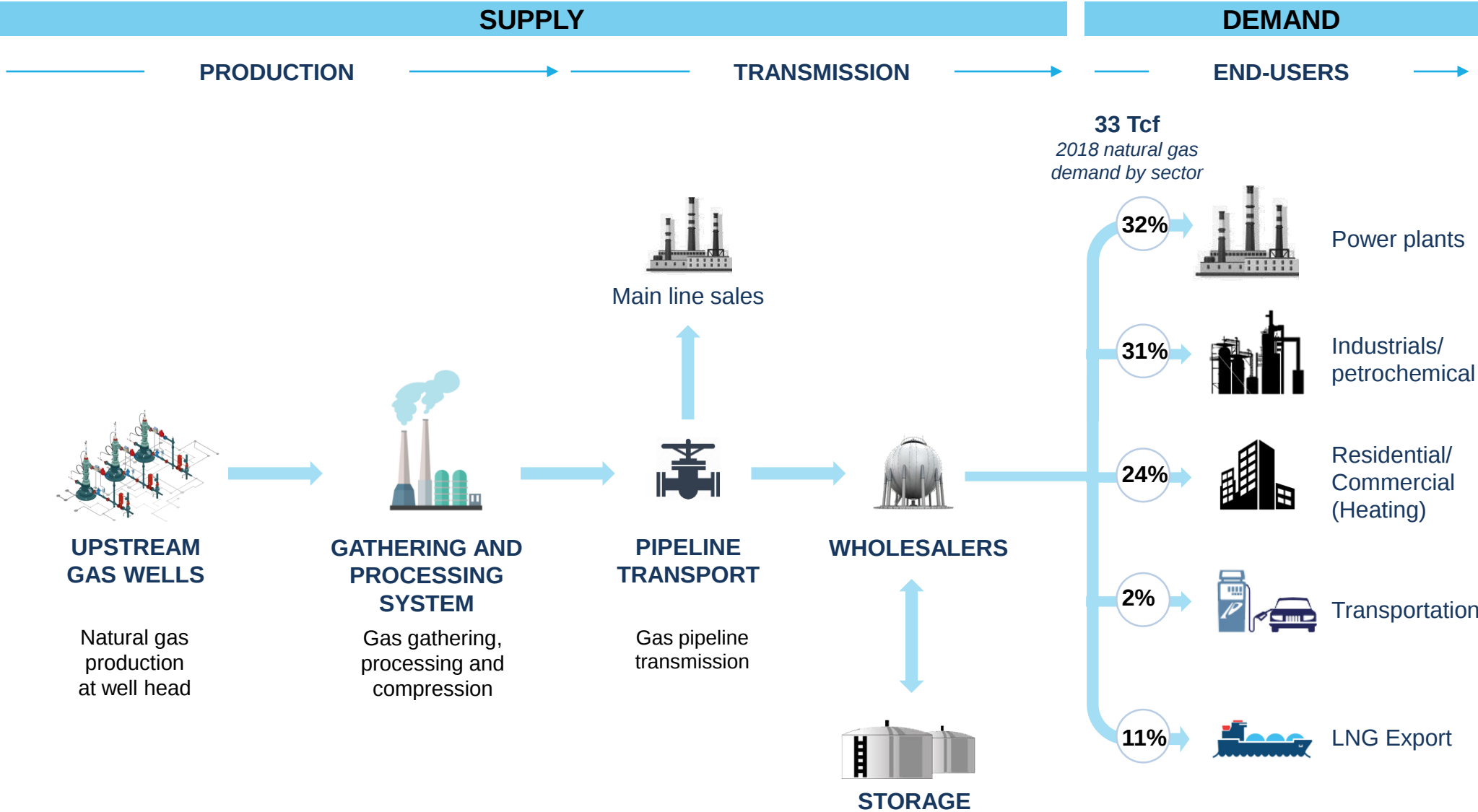
- Summer power burn from retirement of coal-fired and nuclear power plants
 - Summer and winter weather
- Continued growth in LNG and Mexico exports
- US-China trade negotiations

SUPPLY DRIVERS

- Pipeline expansions in Appalachia and Texas/Louisiana
- Strong associated gas production from the Permian
- Growing contributions from gulf coast plays e.g. Haynesville, East Texas



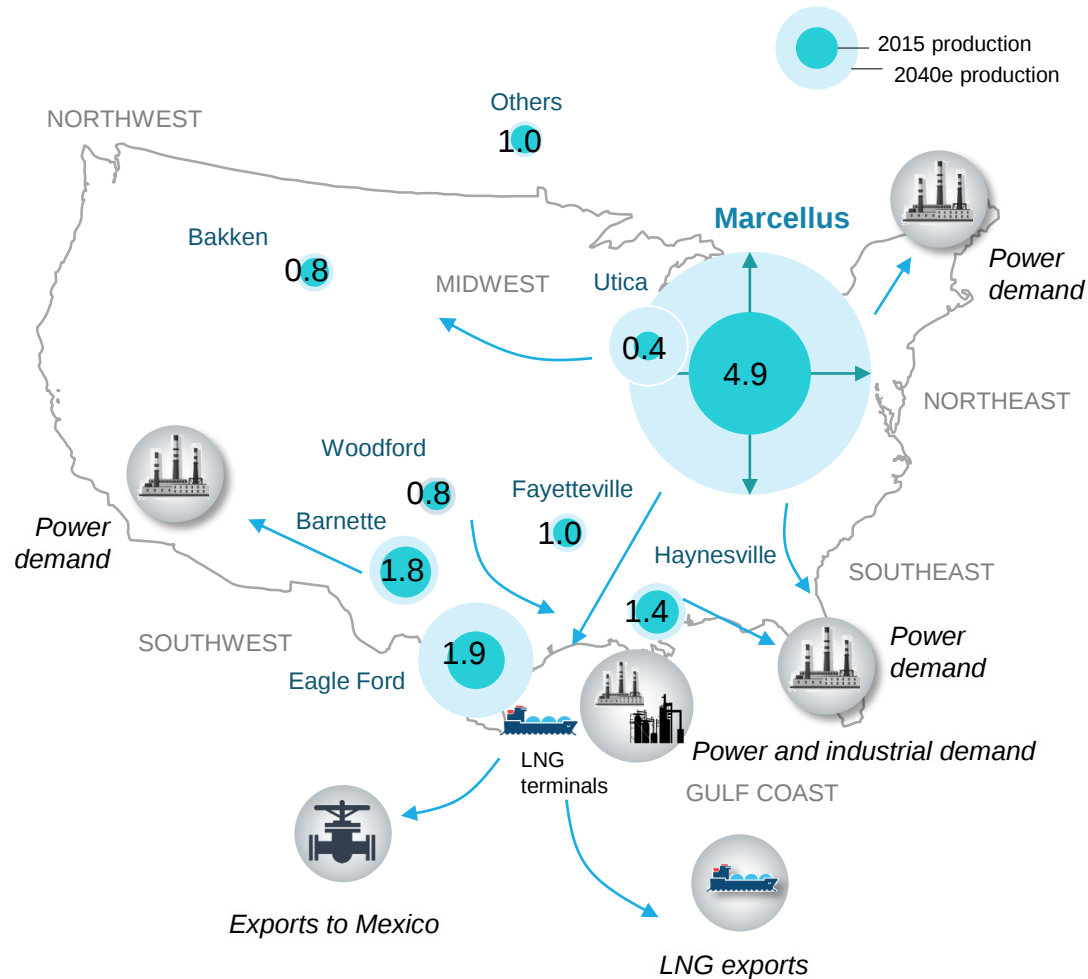
US natural gas value chain



US gas sector

US NATURAL GAS FLOWS AND PRODUCTION OUTLOOK

Unit: Tcf



Supply

- Natural gas production growth in the U.S. is largely driven by the Northeast; **c.75% of new supply coming from Marcellus**
- Marcellus net back continues to improve with added capacity and better differentials as more gas is sold in favorable market

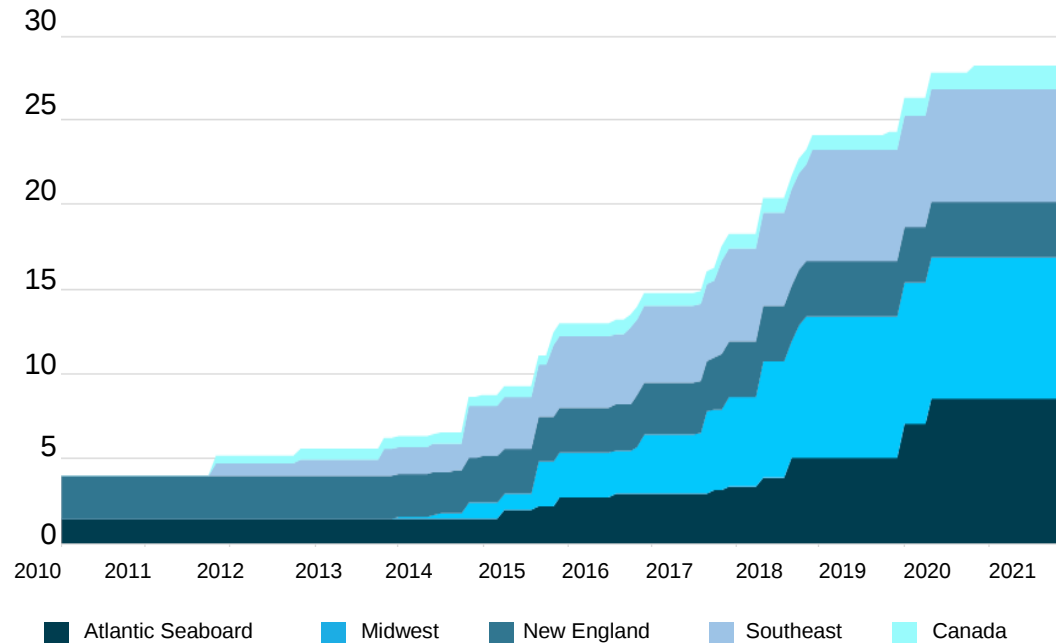
Demand

- Demand growth driven mainly by demand in power sector (35% of 2018 U.S. gas consumption) powered by inexpensive US natural gas
- Growing demand in the gulf coast for LNG exports globally and the growth of pipeline exports to Mexico

US: expanding infrastructure to support demand growth

GAS PIPELINE CAPACITY OUT OF NORTHEAST STATES

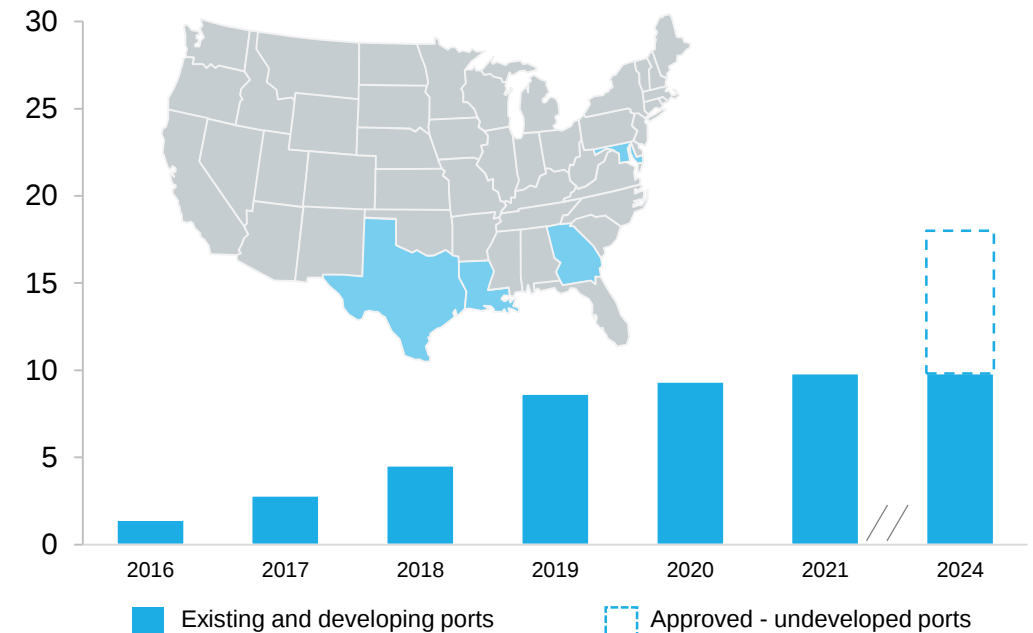
Unit: Bcf/d



- New pipelines come into service from 2019 – 2021 to match growing production and market demand
- Mountain Valley Pipeline, Atlantic Coast Pipeline, and Penn East are all expected to come on-line within the next year

US LNG EXPORT TERMINALS CAPACITY GROWTH

Unit: Bcf/d



- Export capacity to more than double by mid 2020 to 10 Bcf/d from projects under construction
 - Mainly driven by capacity expansion in Texas and Louisiana
- Second wave of U.S. LNG projects has started, with 4.3 Bcf/d already under construction and another 3 Bcf/d likely to be finalized in 2019-2020

Banpu Gas business – strengthening our portfolio

ENERGY RESOURCES



COAL



OIL & GAS

ENERGY GENERATION



CONVENTIONAL
POWER



RENEWABLE
POWER

ENERGY TECHNOLOGY



SMART
ENERGY

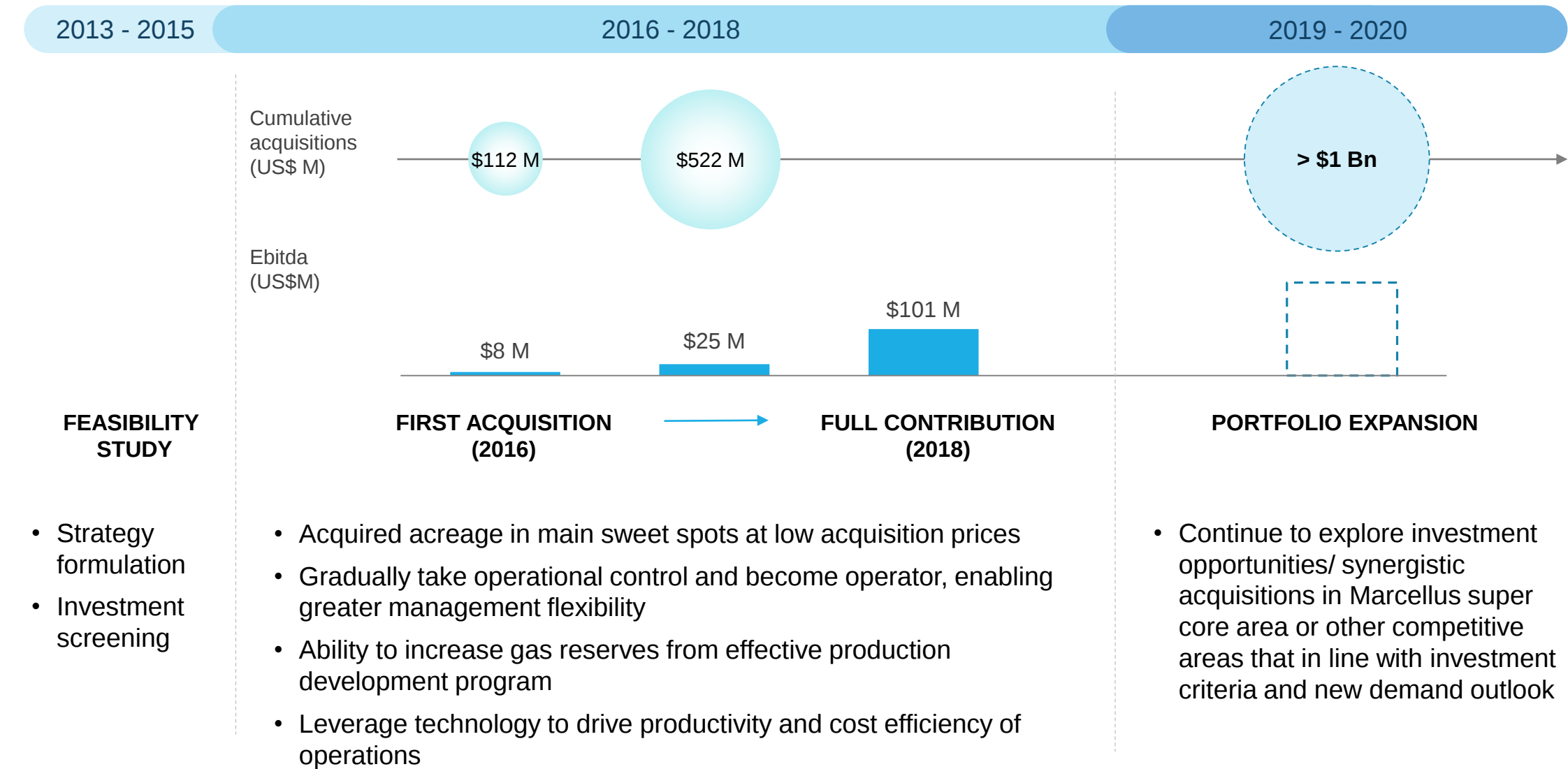


PROPRIETARY
TECHNOLOGY
DEVELOPMENT



Greener and smarter with stronger integration

Banpu Gas: continuous portfolio growth



Banpu Gas: value as an operator

KEY DEVELOPMENT



ESTABLISHED US FIELD OFFICE

Facilitate asset operations for sustainable growth



DRILLING AND FRACKING PROGRAM

Commenced 18 well drilling and fracking program



TEAM EXPANSION

Expand gas team including to cover all core functions across E&P business



TECHNOLOGY DEVELOPMENTS

Enhance asset management and operational efficiencies through technology enable projects

BENEFITS



Greater control and financial management

- Ability to manage pace of development and focus of capital deployment
- Focus on driving productivity and efficiency improvements



Reserves ramp up

- Increase reserves to build long-term production capacity e.g., +25% gas reserves to 1.25 TCF from 2017 to 2018



Pricing enhancement

- Negotiate direct pipeline agreements and sale agreements with end-users to optimize gas prices

Experienced Banpu Gas team

KalninVentures



**CHRISTOPHER
KALNIN**
CEO/ Co-Founder



**JOSEPH
DAVIS**
COO/ Partner



**KATHLEEN
NEUHEARDT**
VP Finance & Controller
/ Partner



**ETHAN
NGO**
SVP Engineering
/ Partner



**MATTHEW
JOHNSON**
VP Corporate
Development/ Partner



**THITI
MEKAVICHAI**
CEO of Banpu North
America Corporation



**TEERAPAT
WONGRAVEEKUL**
Head of Investment
& Strategy



**TACHATORN
PANYIM**
Senior Petroleum Engineer



**CHAIWAT
CHAROENPONG**
Senior Geologist



**DANIEL
ANDROPHY**
VP Marketing/
Partner

Banpu Gas: established system and infrastructure

Drilling operations



Drilling Operations – P&G Warehouse Pad

Wellhead



Natural gas well heads on well pad

Fracking operations



Fracking Operations – Mirabelli Pad

Compressor station



Edsell compression station in Chaffee Corners

Banpu Gas business strategy



RESERVES/ PRODUCTION

- Ramp up existing portfolio production volume and improve reserves life with effective production development program

MARGIN

- Enhance efficiencies and cost efficiencies through use of big data analytics
- Enhance margins from effective gas marketing program

NEW RESERVES ACQUISITIONS

- Focus on synergistic acquisitions around current operations and/or other competitive areas

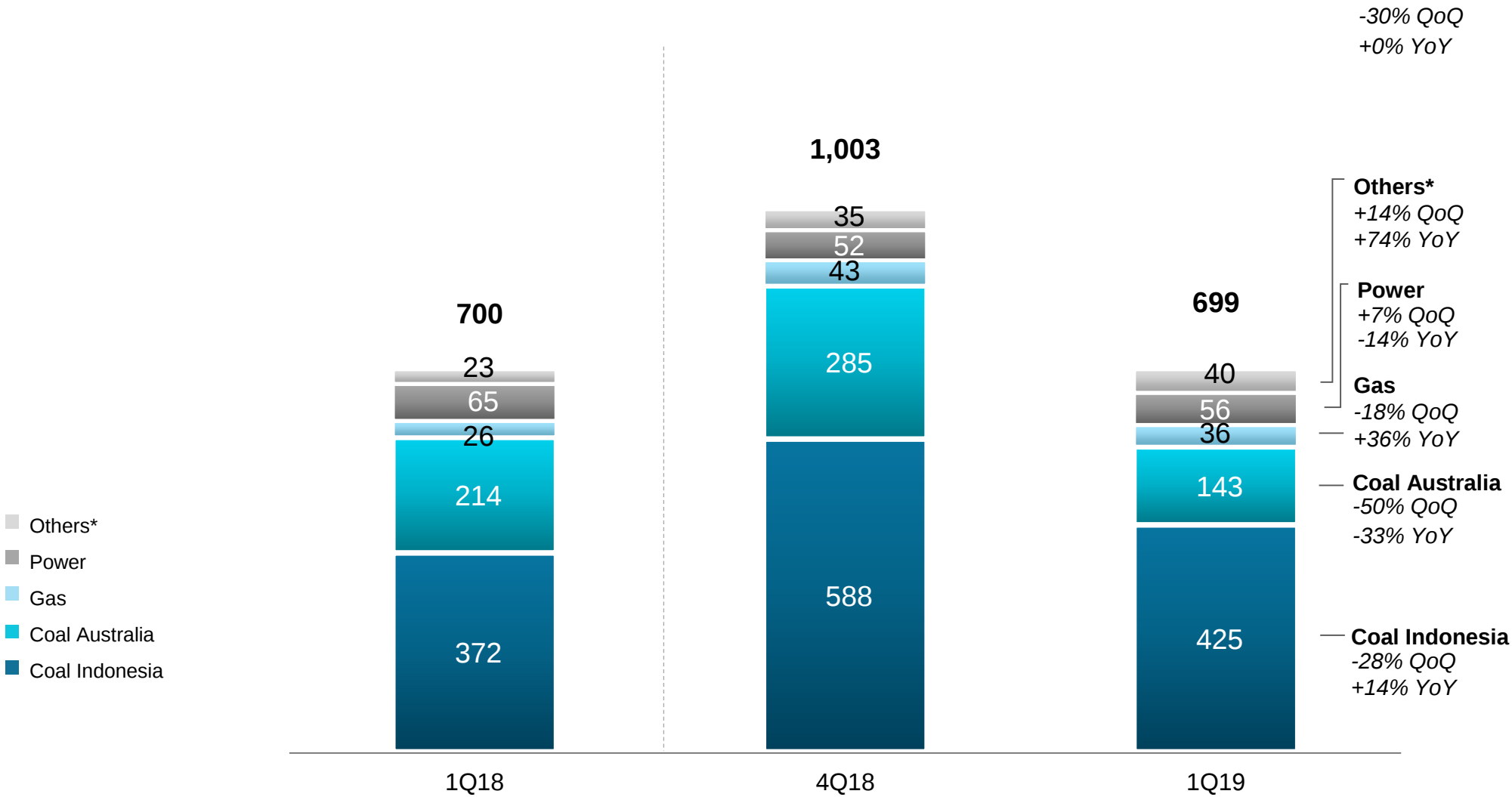
MIDSTREAM GAS

- Explore investment opportunities in midstream gas pipelines and infrastructure
- In process of study on potential to supply gas directly to gas-fired power plants

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Banpu consolidated sales revenues

USD million

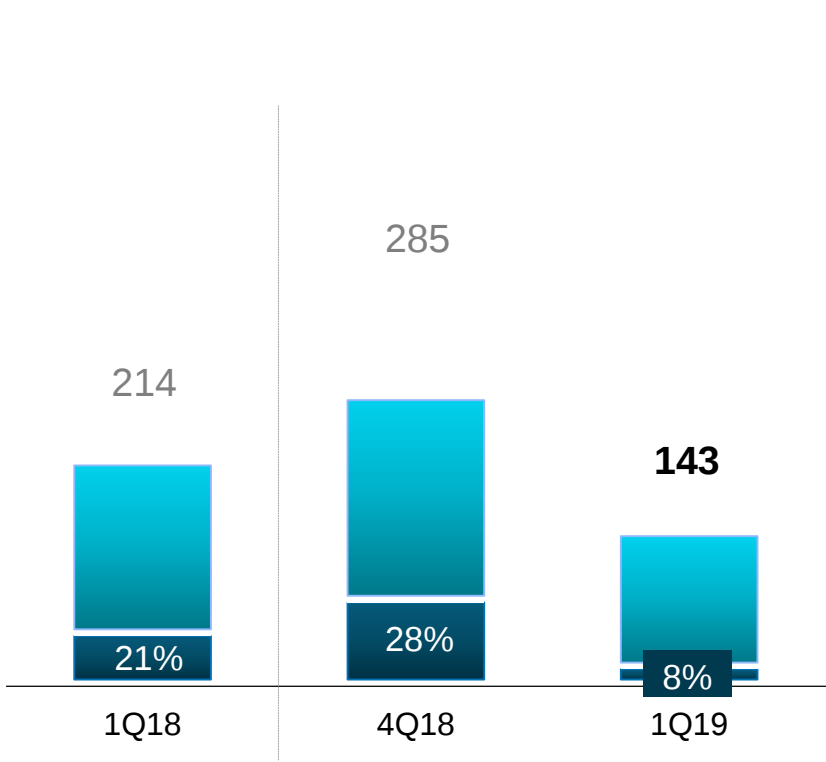


Banpu consolidated coal gross margin 1Q19: 27%

AUSTRALIA COAL

USD million

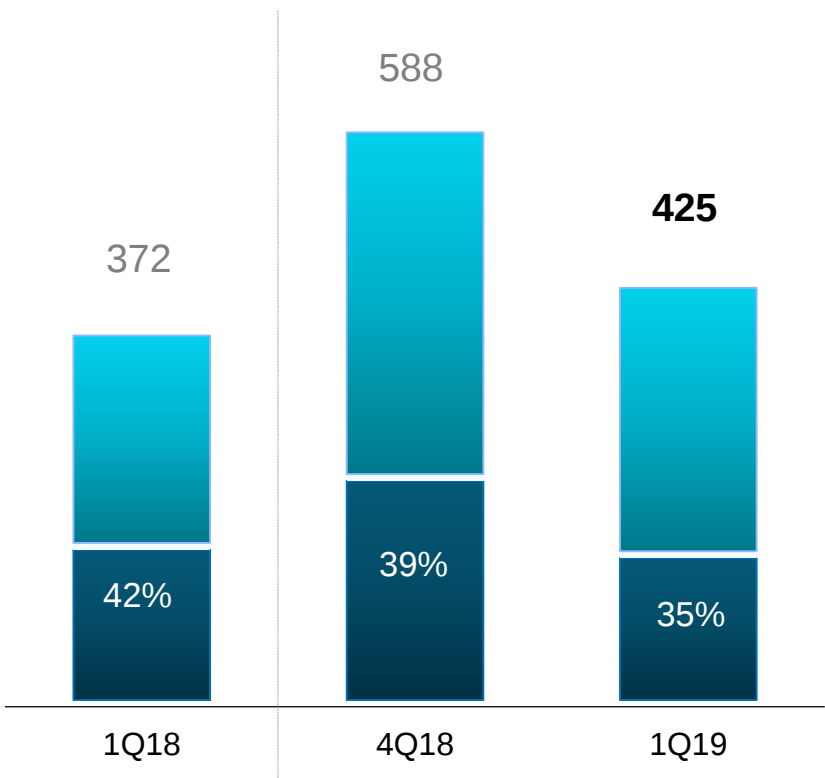
Australia coal
gross margin: 8%



INDONESIA COAL

USD million

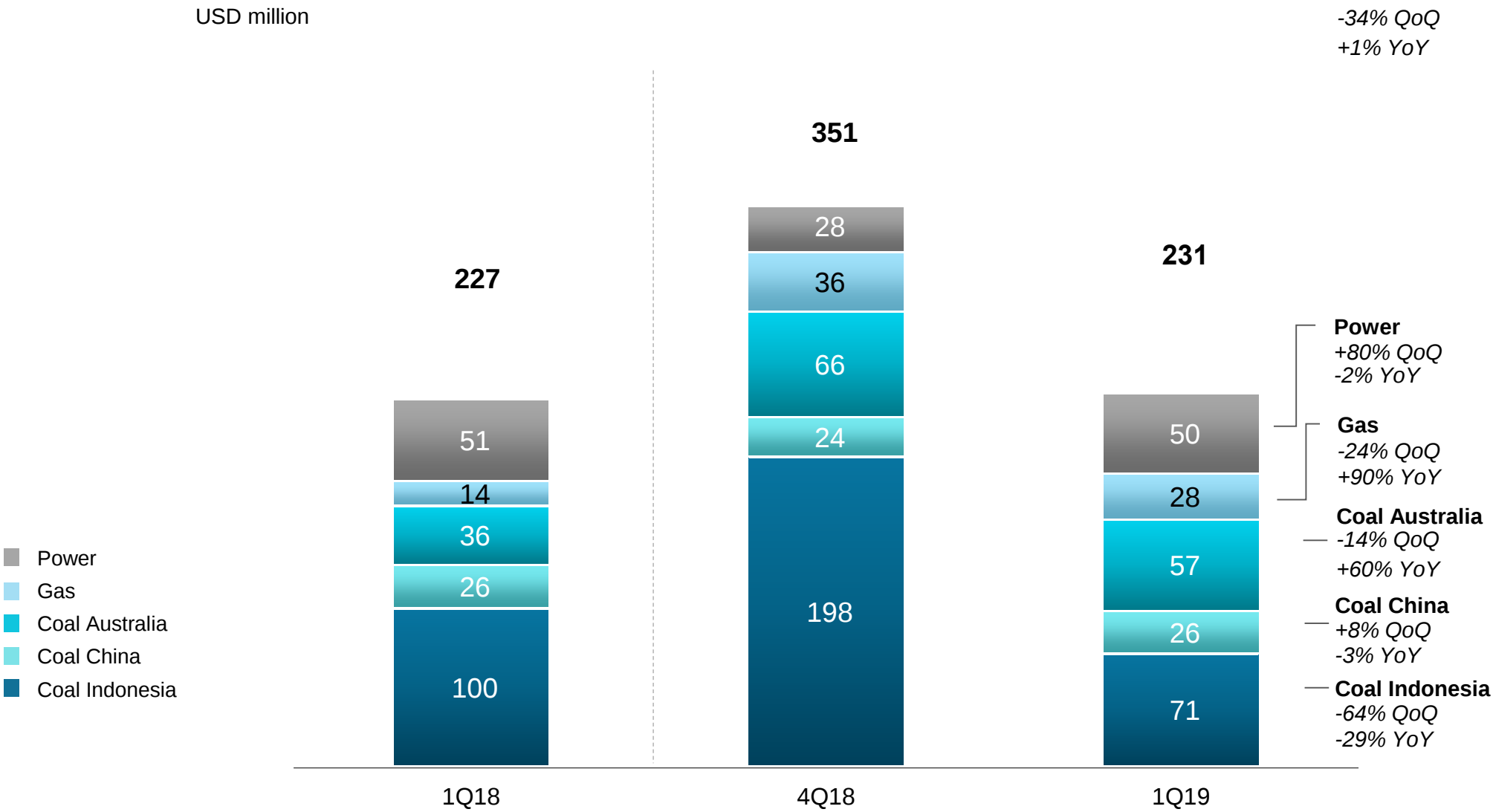
Indonesia coal
gross margin: 35%



Coal sales Gross margin

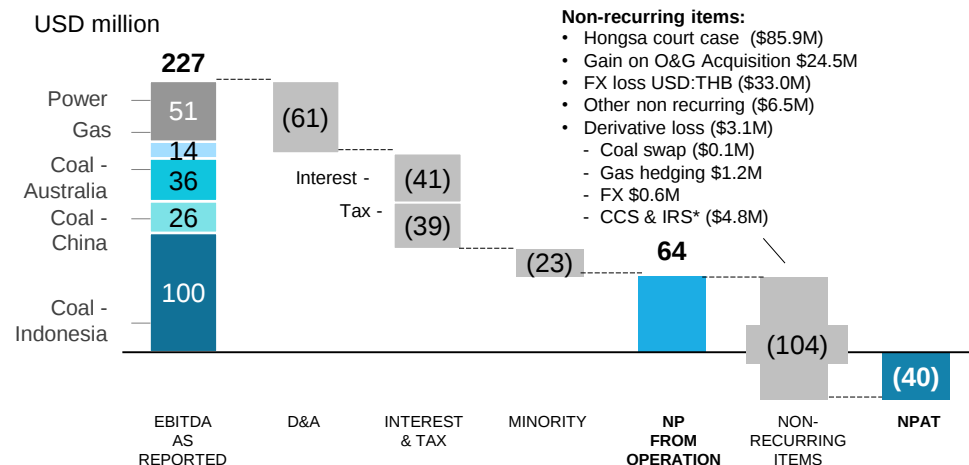
Banpu consolidated EBITDA

USD million

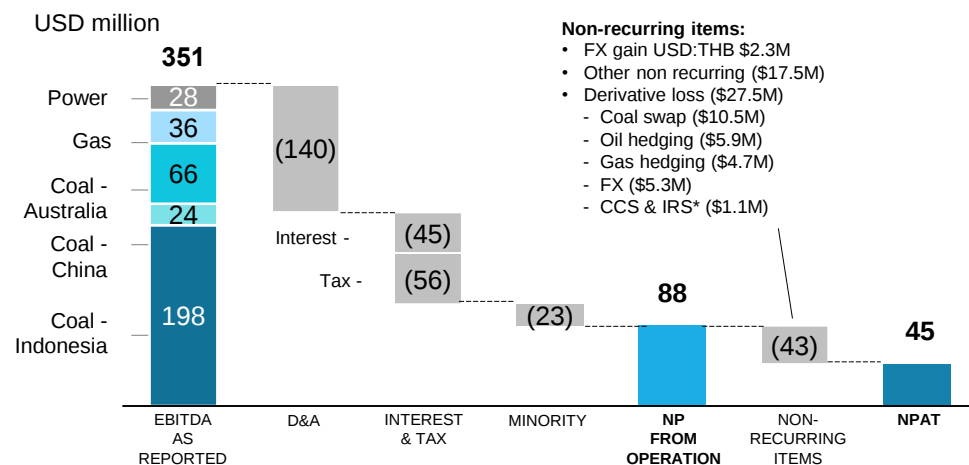


Banpu consolidated NPAT

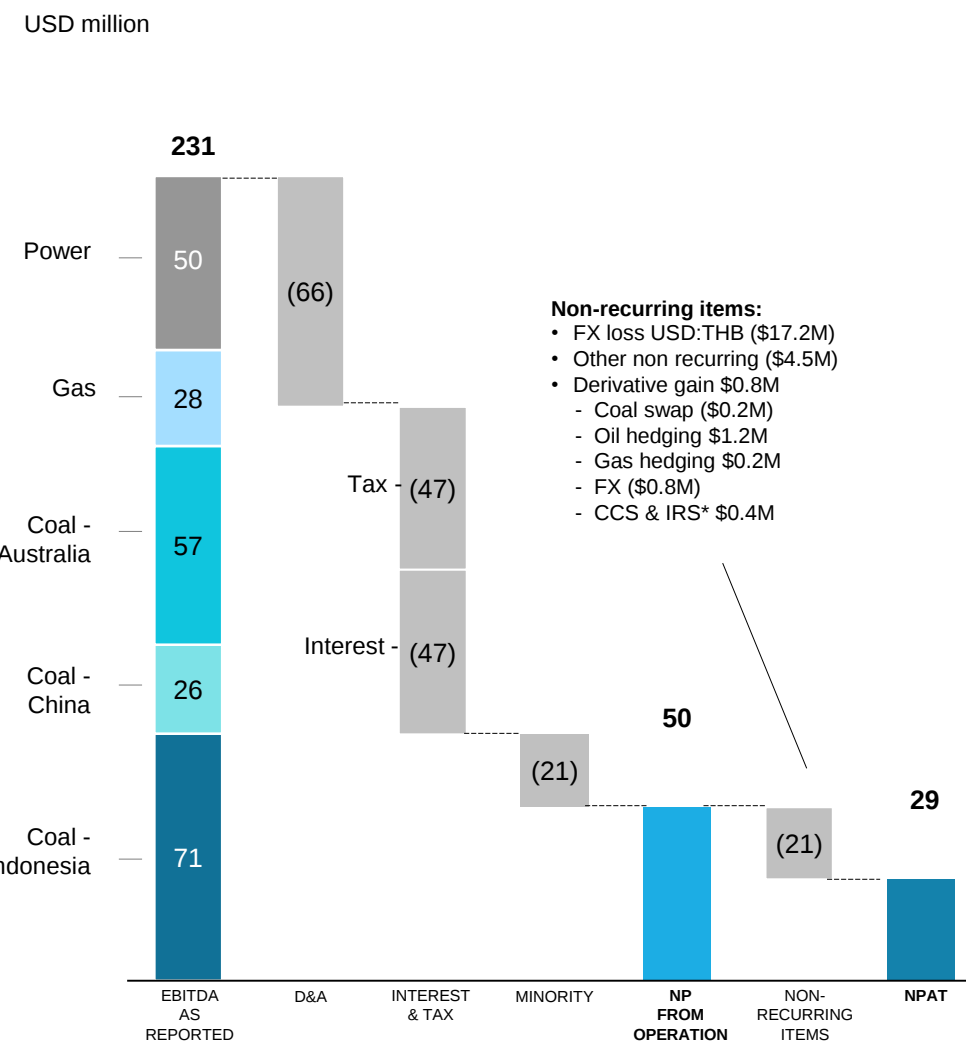
1Q18 NET PROFIT AFTER TAX



4Q18 NET PROFIT AFTER TAX



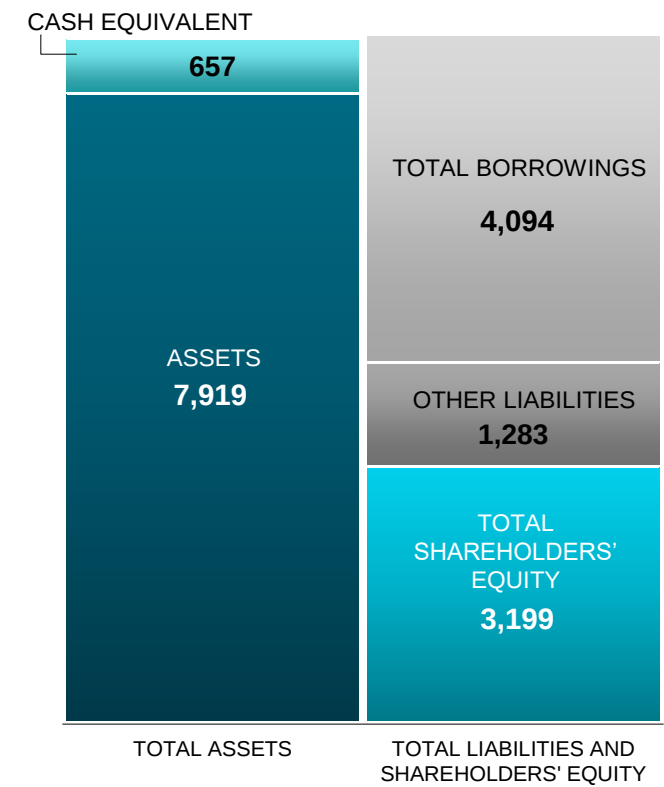
1Q19 NET PROFIT AFTER TAX



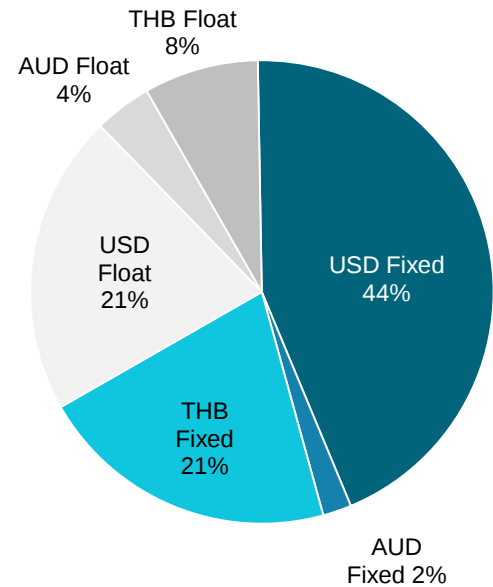
Banpu consolidated financial position

1Q19 CONSOLIDATED FINANCIAL POSITION

USD million

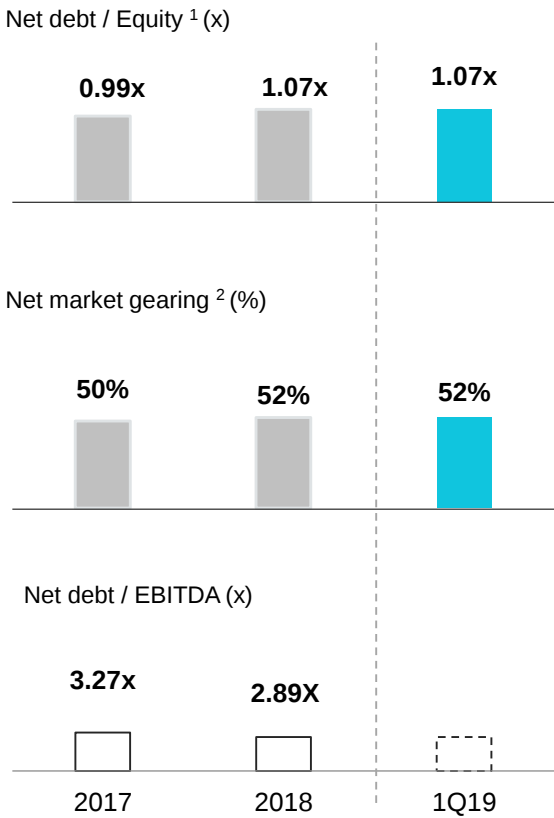


DEBT FX STRUCTURE



Total gross debt: US\$4.09 billion
As of 31 March 2019

GEARING RATIOS



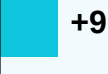
Note:
1 Net debt to book value of shareholders' equity
2 Net debt to enterprise value (enterprise value
= net debt + market capitalization as at 31 March 2019)

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 - **Coal**
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Global coal demand trends: 2019 vs 2018

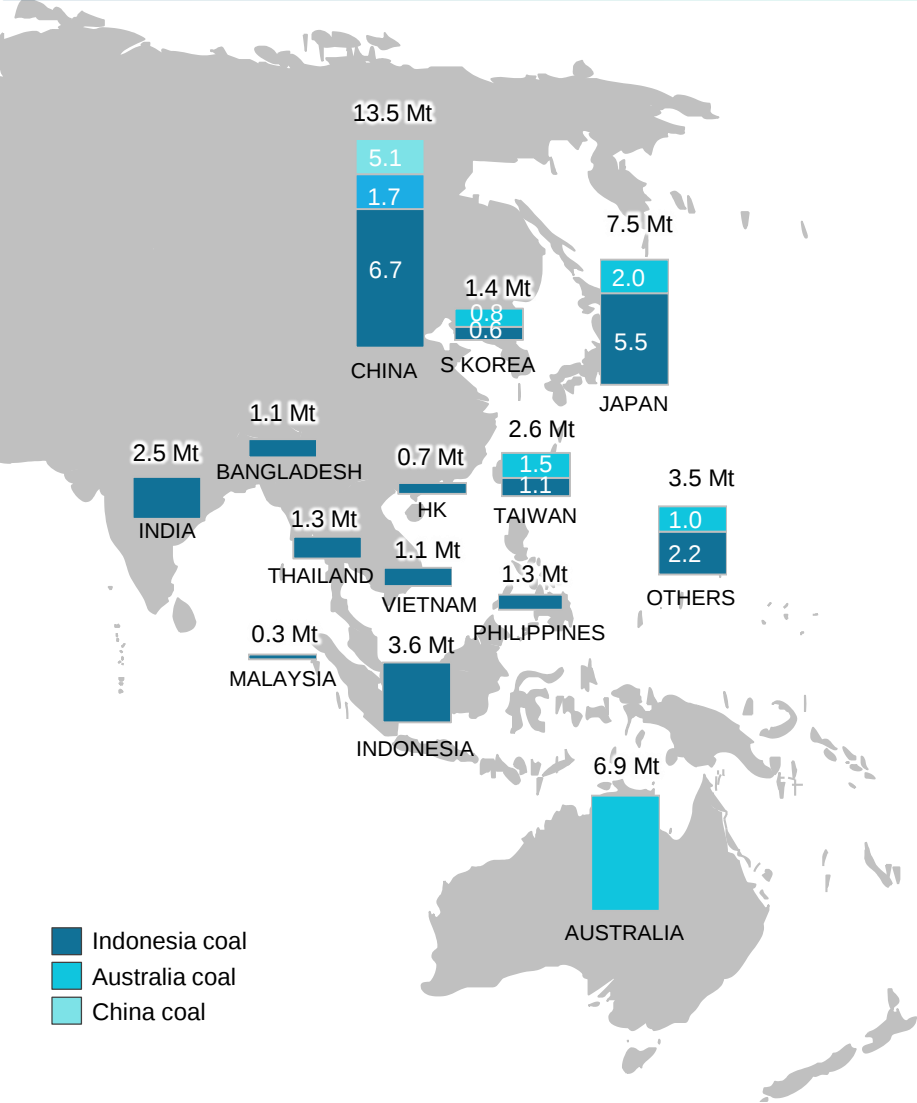
GEOGRAPHY	CHANGE 2018-17 (Mt)	COMMENTS
 CHINA	-15 	▪ Mild weather and slow economic growth damper demand ▪ Domestic coal production improves. ▪ Import restriction will persist to protect domestic coal industry
 INDIA	+7 	▪ Strong economic growth, electrification and insufficient domestic supply support imports.
 OTHER N.ASIA	-4 	▪ Mild temperatures and increased nuclear availability restrict coal-fired generation in Japan and South Korea ▪ Low gas prices create some coal-to-gas fuels switching in Japan. ▪ Air pollution curbs coal burn in north Asia ▪ Focus on high quality coal
 EUROPE	-9 	▪ Mild weather, rising renewable energy and low gas prices ▪ Coal phase-out plan continues in respond to climate changes.
 OTHERS	+21 	▪ South East Asia and other South Asia continue driving demand growth. ▪ Some growth from Morocco
 GLOBAL	0 	<i>Weak demand due to slow economy and mild weather while supply improves. Tighten environmental control continues curb coal burn in North Asia. Falling demand in China and Europe offset by growing demand in South and Southeast Asia. Chinese government policy is a key demand changing which will create uncertainty and volatility.</i>

Global coal supply trends: 2019 vs 2018

GEOGRAPHY	CHANGE 2018-17 (Mt)	COMMENTS
 INDONESIA	 +7	- Almost all producers plan to increase production but mostly LCV coal. - Government regulations such as DMO remain challenge - Export growth will be limited by weak global demand
 AUSTRALIA	 +2	- Potential increase from Mt.Pleasant but expected some delay. - High ash output has been impacted from China import control - Permitting risk and potential project delays tighten high CV outlook
 COLOMBIA	 -1	- Rain, labour negotiation, environmental permits are key risks 2019 - Weak European demand forced Colombia to increase export to Americas and Asia
 RUSSIA	 +6	- Divert more coal to Asia - Infrastructure improvement is a key
 S.AFRICA	 -1	- Increase domestic demand - Low export prices incentivize producers to sell LCV coal to domestic market - Continued shortage of high quality product due to limited capital spend in the past few years.
 USA	 -7	- Lower coal prices will limit US export. - More environmental concerns limit demand of high sulphur coal.
 OTHERS	 +3	Small improve from Mozambique, Chile and Canada
 GLOBAL	 +9	<i>Market turned to oversupply in Q1-2019 due to welled producers performance almost every where amid weak demand. Production outlook is positive. Indonesian government policy on production control remains challenges.</i>

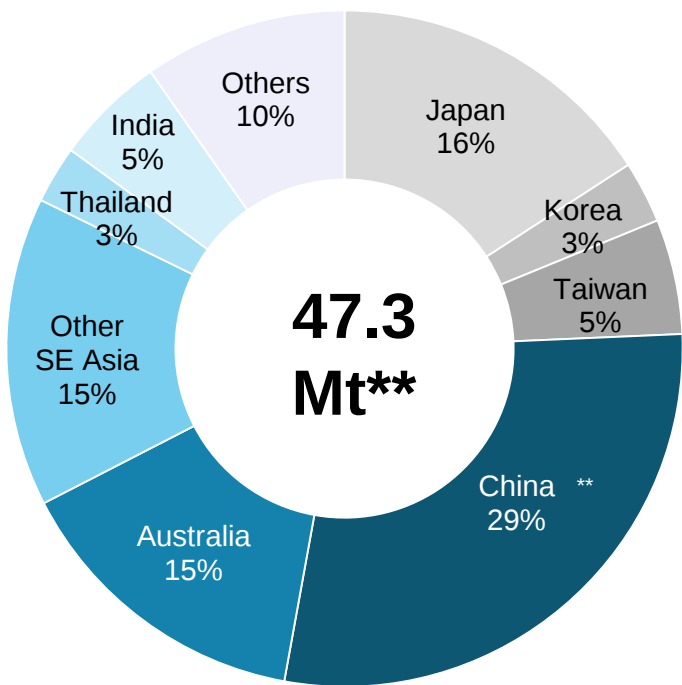
Banpu group coal sales 2019e

COAL SALES* SOURCE – DESTINATION ANALYSIS 2019e



■ Indonesia coal
■ Australia coal
■ China coal

GLOBAL COAL SALES* 2019e BY REGION

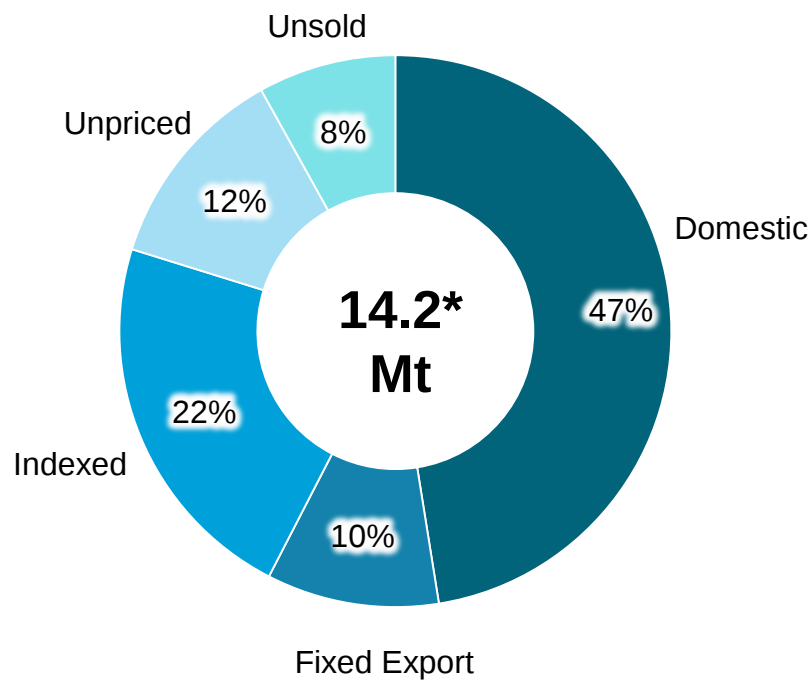


Notes:
 * Sales from Indonesia are included on 100% basis, sales from Australia and China are included on equity basis. Excluding Mongolia coal
 ** Illustrative target
 ** Includes coal sales from domestic production in China

Banpu coal sales pricing status

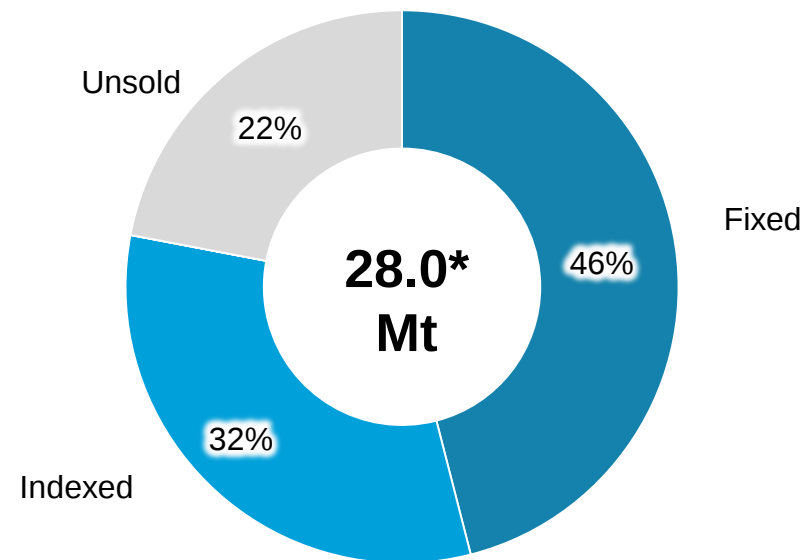
AUSTRALIA COAL

2019e



INDONESIA COAL

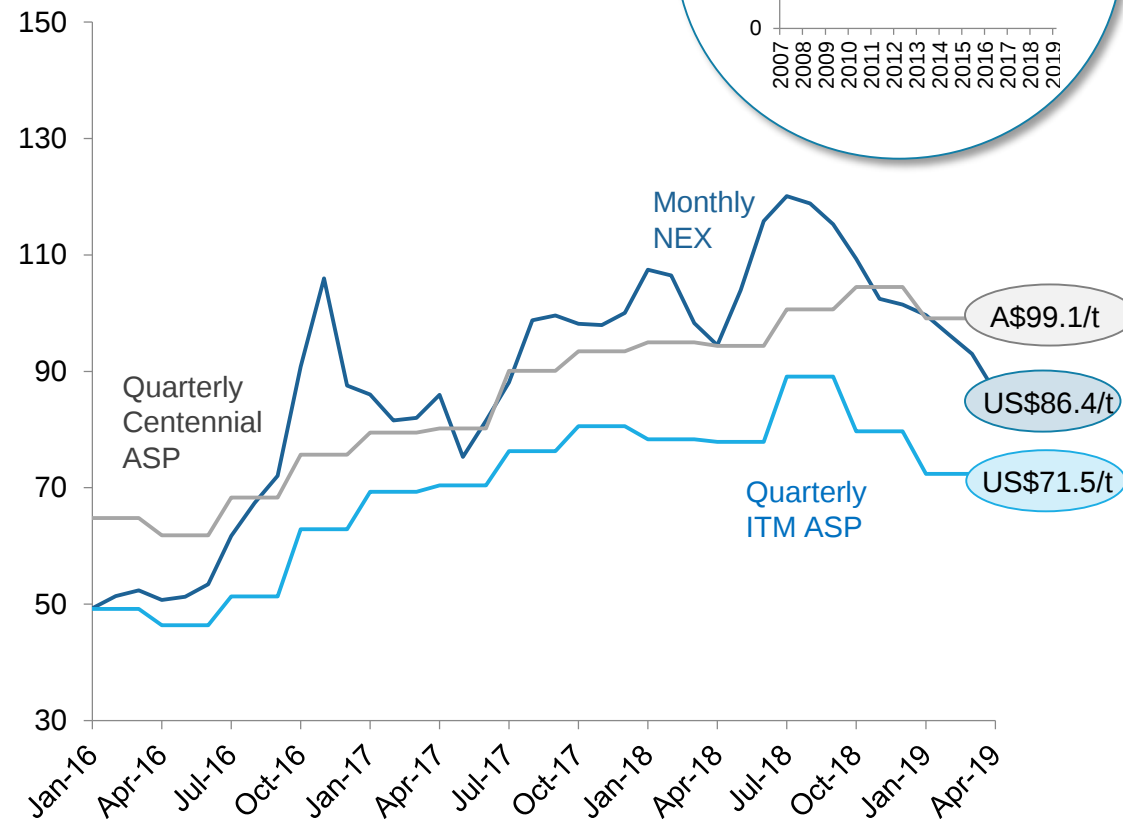
2019e



Banpu ASPs vs thermal coal benchmark prices

BANPU ASP VS BENCHMARK PRICES

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



COMMENTS

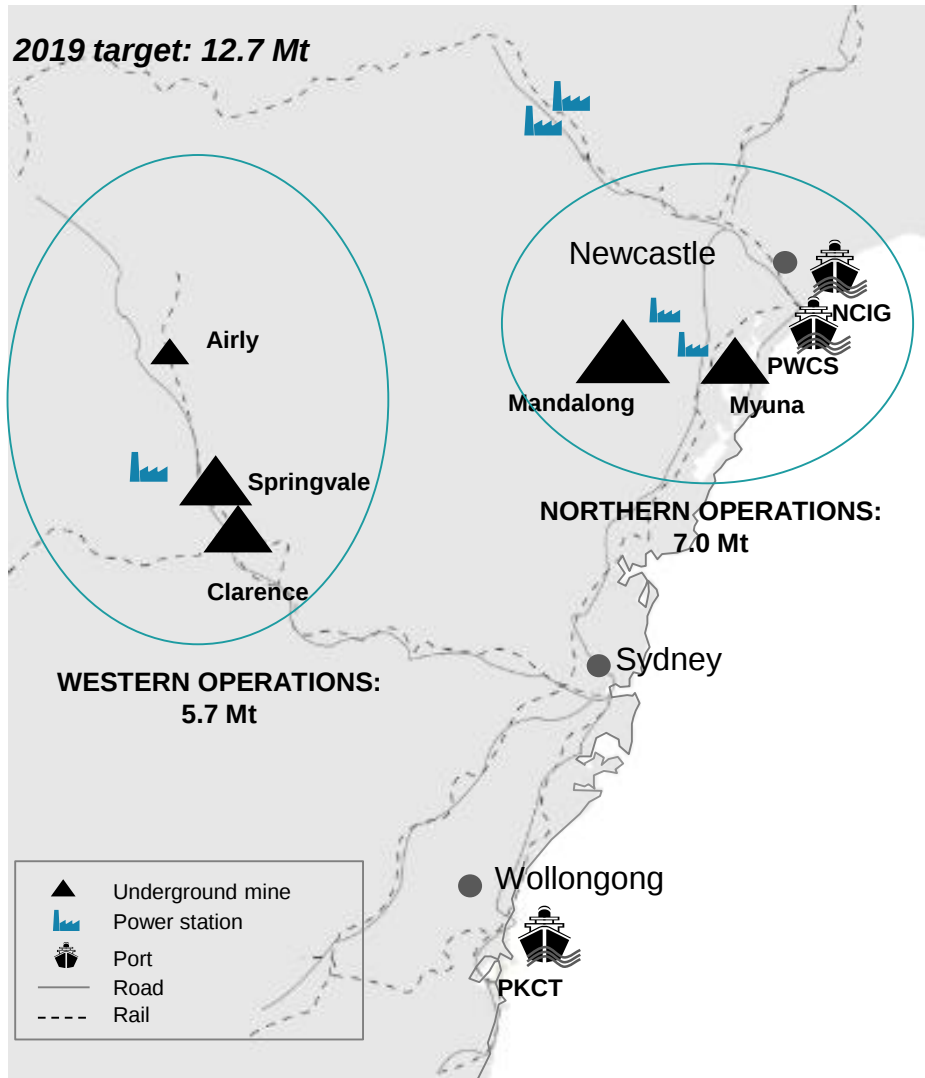
- 1Q19 ASP weaker for both ITM, and CEY shadow the global coal price movement
 - ITM ASP: US\$71.5/t* (-5% QoQ)
 - CEY ASP: A\$99.1/t* (-4% QoQ)
 - NEX (May 10, 2019)**: US\$86.4/t
- Mild winter and economic slowdown reduces energy demand
- High output in Indonesia due low rainfall intensity, though detect Chinese interest pick up after import quota reset for 2019
- Despite price drop, CEY export price cushioned by weaker AUD
- JPU annual term contract price set at \$94.75
- Divergence of ICI indices against Australian retracted as expected to much smaller gap

OUR WAY IN ENERGY

Note: * Included 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

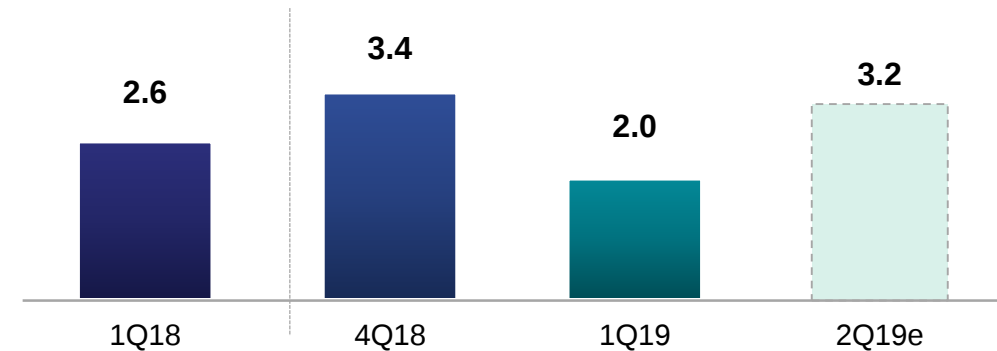
2019 OUTPUT (ROM EQUITY BASIS)



QUARTERLY OUTPUT (ROM EQUITY BASIS)

COAL OUTPUT (Mt)¹
CV: 6,700 kcal/kg²

-41% QoQ
-21% YoY



Key updates

- Equity ROM: 2.0 Mt (down 41% QoQ and 21% YoY)
- Airly – lower production due to more development mining over extraction mining due to the delay in approvals (now received).
- Clarence – new mining process is improving productivity, showing increased tonnes on previous and prior corresponding periods.
- Springvale – full longwall production in the quarter with the next scheduled longwall move in 3Q19.
- Mandalong – completed a scheduled longwall relocation moving to the first block in the Mandalong South area. Higher production planned in subsequent quarters.
- Myuna – improved productivity levels in one mining panel, however, poor localised mining conditions in the other two mining panels.

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, 2 CV figures are air-dried basis

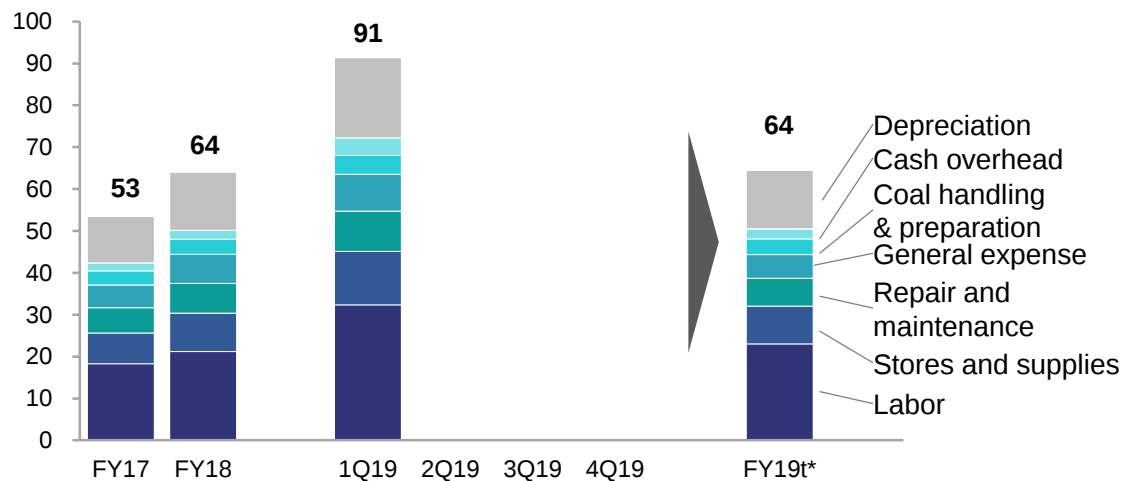
Australia coal: financial summary

FINANCIAL SUMMARY

Unit: A\$ M	1Q19	4Q18	QoQ	1Q18	YoY
Sales (Mt)	2.0	3.8	47% ▼	2.9	30% ▼
ASP (A\$/t)	99	103	4% ▼	95	4% ▲
Sales revenue	206	392	48% ▼	275	25% ▼
EBITDA	66	101	35% ▼	52	26% ▲
PBT	24	47	48% ▼	9	182% ▲
NPAT	17	33	49% ▼	6	182% ▲

AVERAGE PRODUCTION COST¹

Unit: A\$/t



Comments

- Continuing strong ASP with stable domestic prices and export prices benefiting from a lower A\$ exchange rate (approx 0.70)
- Lower production in the quarter has resulted in lower sales volumes and revenue
- Operating costs being well contained, however, costs per tonne were also impacted by the lower production volumes
- Looking forward:
 - Increased production volumes, commencement of Airly narrow extraction panel mining method in Q3
 - Higher longwall production at Mandalong
 - Optimize revenue by moving sales between domestic and export markets
 - Continue development of digital technology tools to facilitate operating excellence

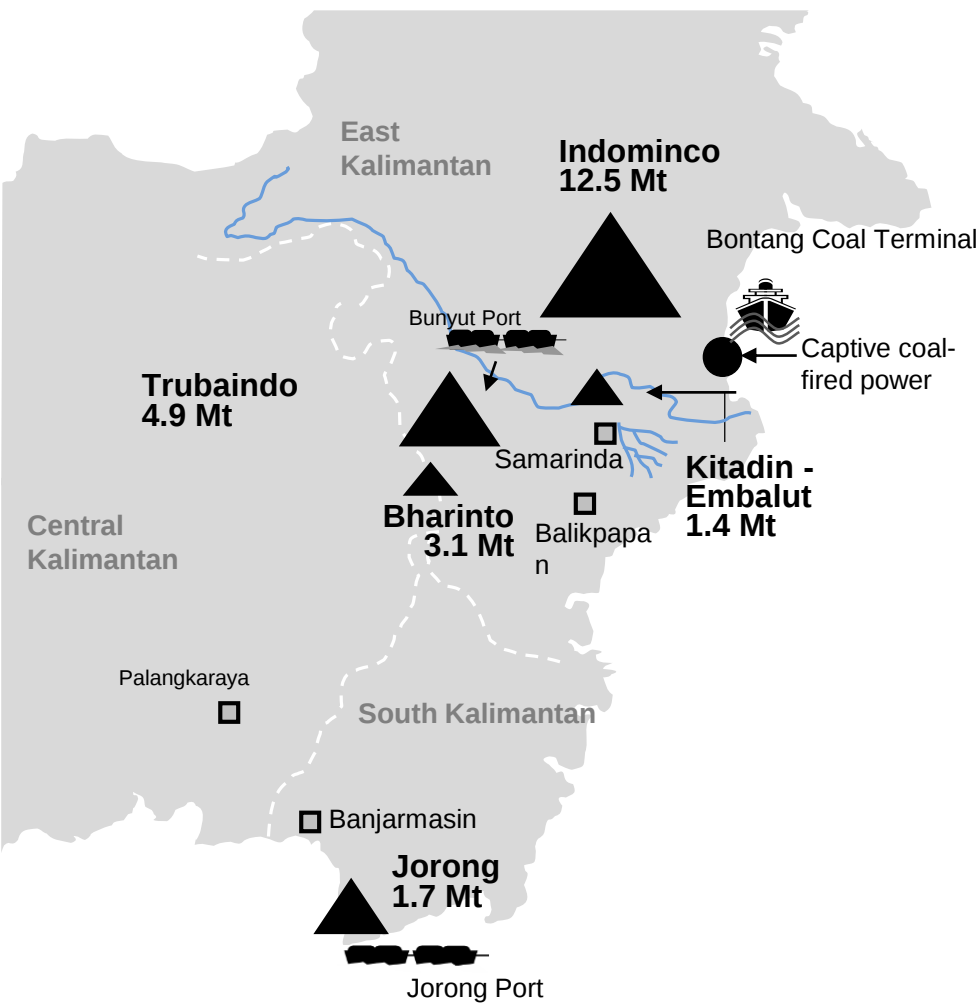
OUR WAY IN ENERGY

Note: ¹ These figures do not include selling, distribution and royalty costs; based on 'sold' production, ² Lithology: the composition or type of rock such as sandstone or limestone, * Indicative target

Indonesia coal: operational summary

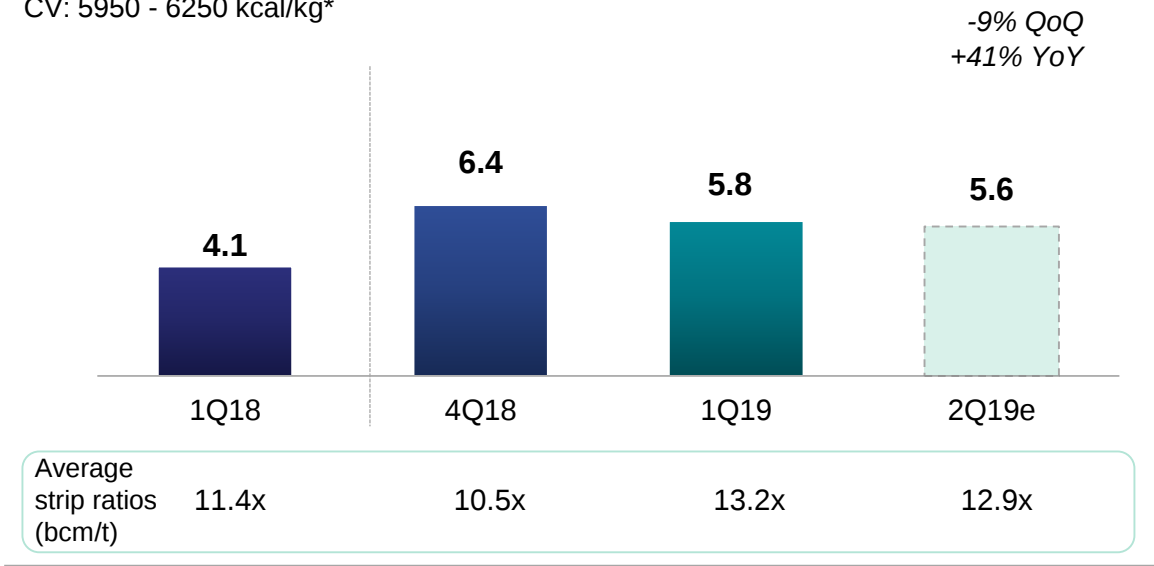
2019e OUTPUT (SALEABLE TONNE BASIS)

2019e target: 23.6 Mt



QUARTERLY OUTPUT (ROM 100% BASIS)

COAL OUTPUT (Mt)
CV: 5950 - 6250 kcal/kg*



Key updates

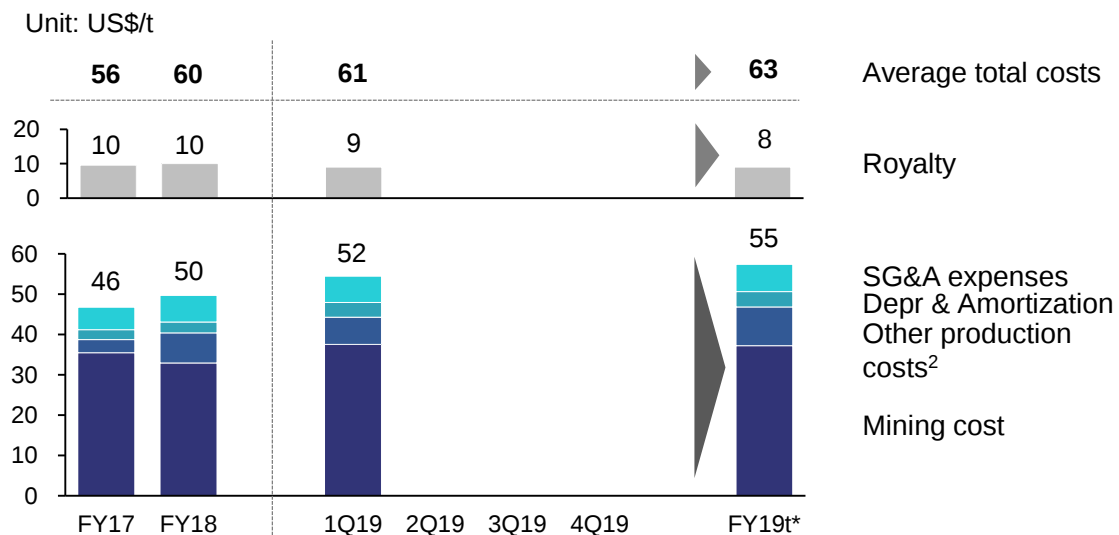
- Indominco: 1Q19 output was higher than target of 3.3Mt due to good weather condition
- Trubaindo: 1Q19 production output achieved target output of 1.0 Mt
- Bharinto: achieved target output of 0.7 Mt
- Embalut: achieved target output of 0.3 Mt
- Jorong: achieved target output of 0.3 Mt

Indonesia coal: financial summary

FINANCIAL SUMMARY

Unit: US\$ M	1Q19	4Q18	QoQ	1Q18	YoY
Sales (Mt)	6.0	7.4	19% ▼	4.4	36% ▲
ASP (US\$/t)	71	75	5% ▼	84	15% ▼
Sales revenue	453	592	23% ▼	378	20% ▲
EBITDA	68	132	48% ▼	99	31% ▼
PBT	58	86	32% ▼	83	30% ▼
NPAT	39	62	37% ▼	58	33% ▼

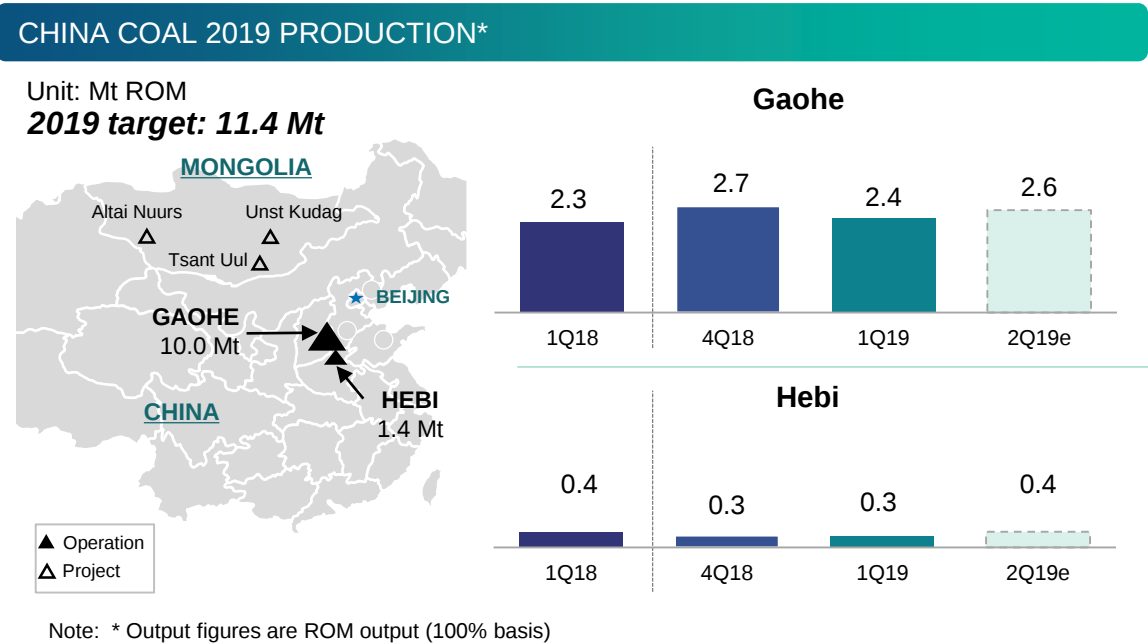
AVERAGE PRODUCTION COST¹



Comments

- In 1Q19 coal price continue lower than 4Q18 due to weak demand as a result of slowing economy in China
- ITM recorded decrease in EBITDA and net profit in 1Q19 due to lower ASP and volume
- 1Q19 average total cost higher than 4Q18 mainly due to pre-stripping activities during early quarter
- Higher strip ratio in 2019 due to optimized coal reserves

China and Mongolia coal summary



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U.S. gas market update

AVERAGE HENRY HUB PRICE AS OF 15 APR-19

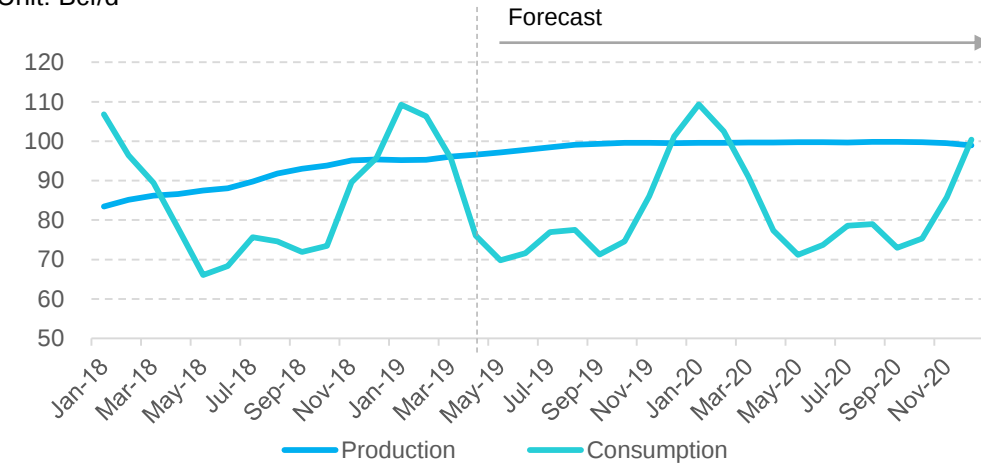
Unit: US\$/MMBTU



- **Gas Price :** Natural gas spot prices fell at most locations in April as temperatures across the Lower 48 states were warmer than normal. In addition, Gas production and injection are starting to seasonally recover
- **Outlook :** Currently strip prices are slightly weakened compared to previously. The market expects higher growth in U.S. natural gas production to put some downward pressure on prices in 2019

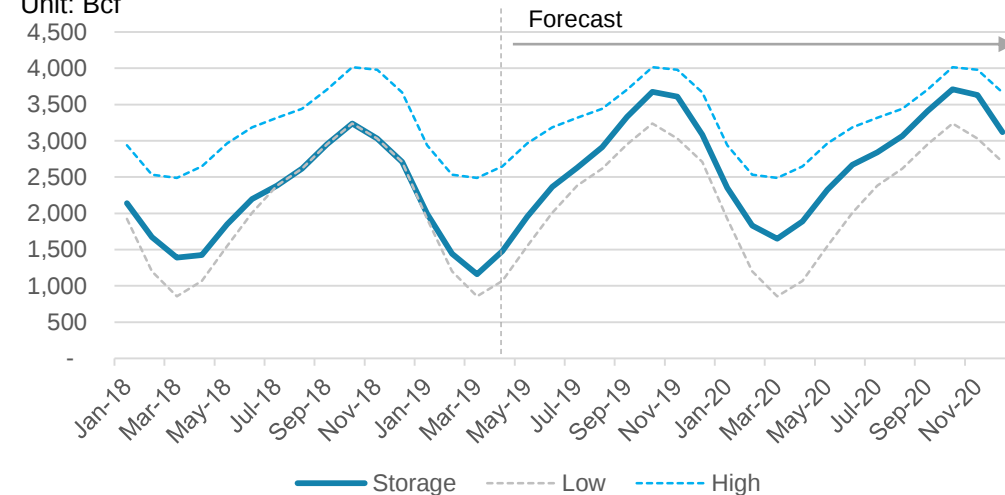
U.S. TOTAL NATURAL GAS PRODUCTION –CONSUMPTION

Unit: Bcf/d



U.S. STORAGE LEVEL

Unit: Bcf

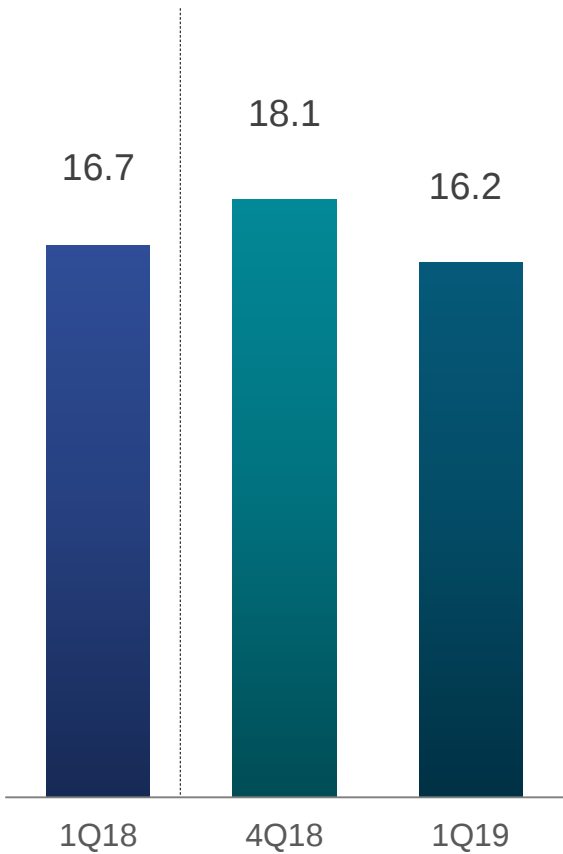


Gas business 1Q19 performance

Strong year-on-year improvement despite lower sale volume supported by attractive net price and higher midstream revenue

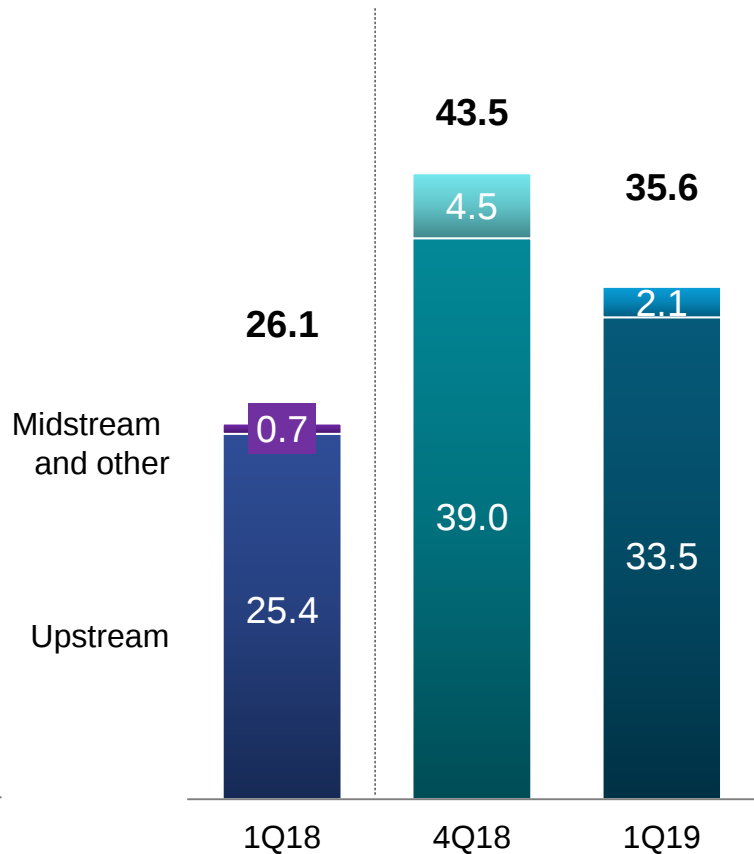
SALES VOLUMES

Unit: Bcf ¹



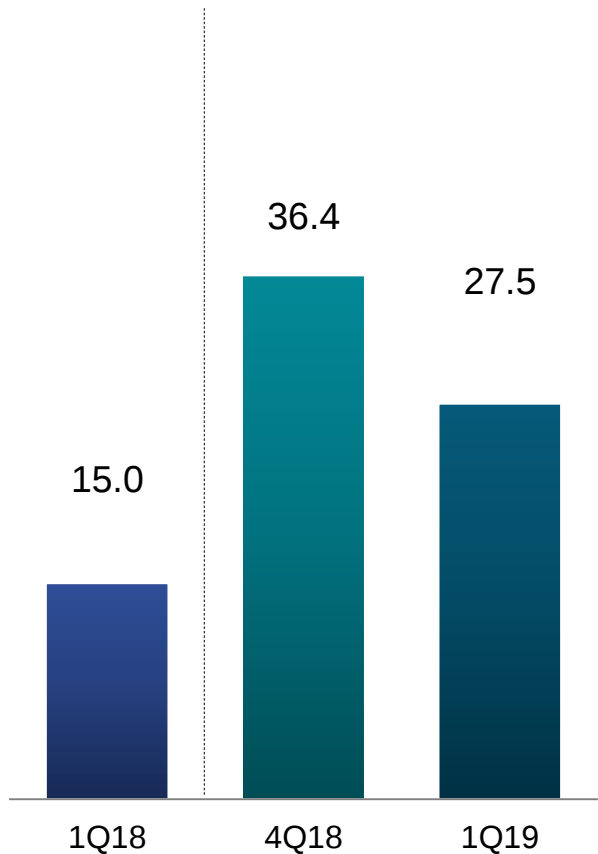
TOTAL REALIZED REVENUE

Unit: US\$M



EBITDA

Unit: US\$M



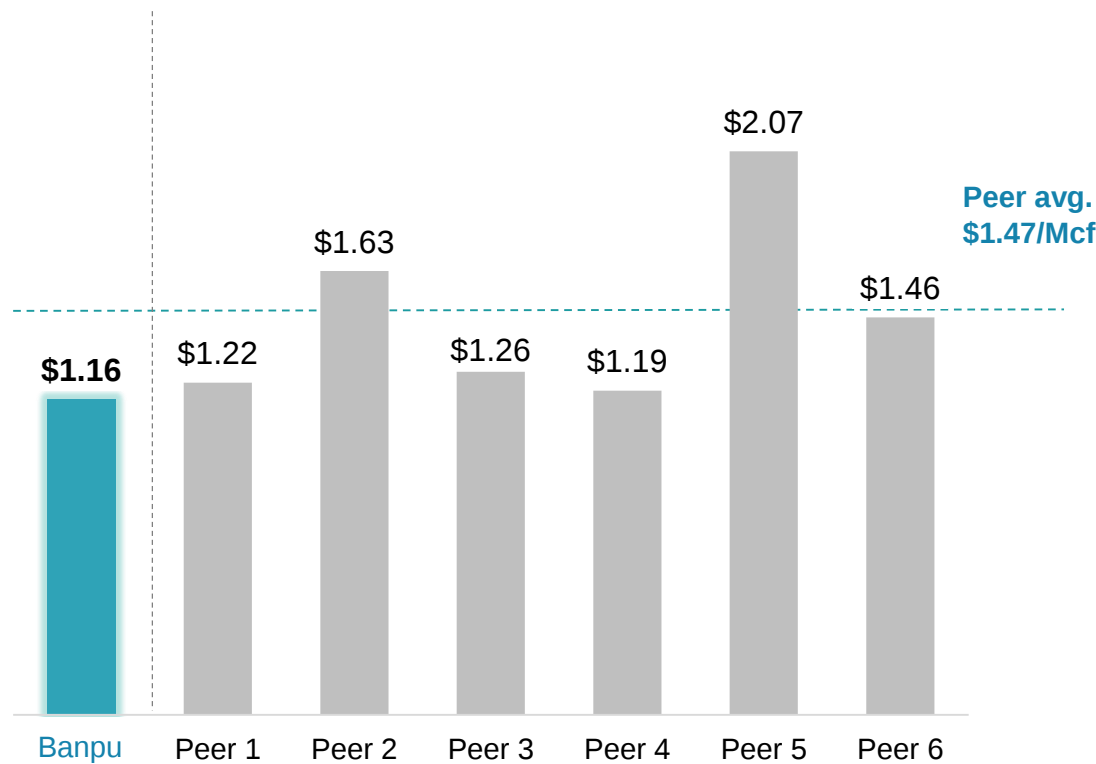
Banpu performance in-line with Marcellus top producers

Banpu’s operational performance and profitability are in-line with top 6 gas producers in Marcellus area despite smaller production volume

2018 CASH OPERATING COSTS¹

Unit: US\$/Mcf

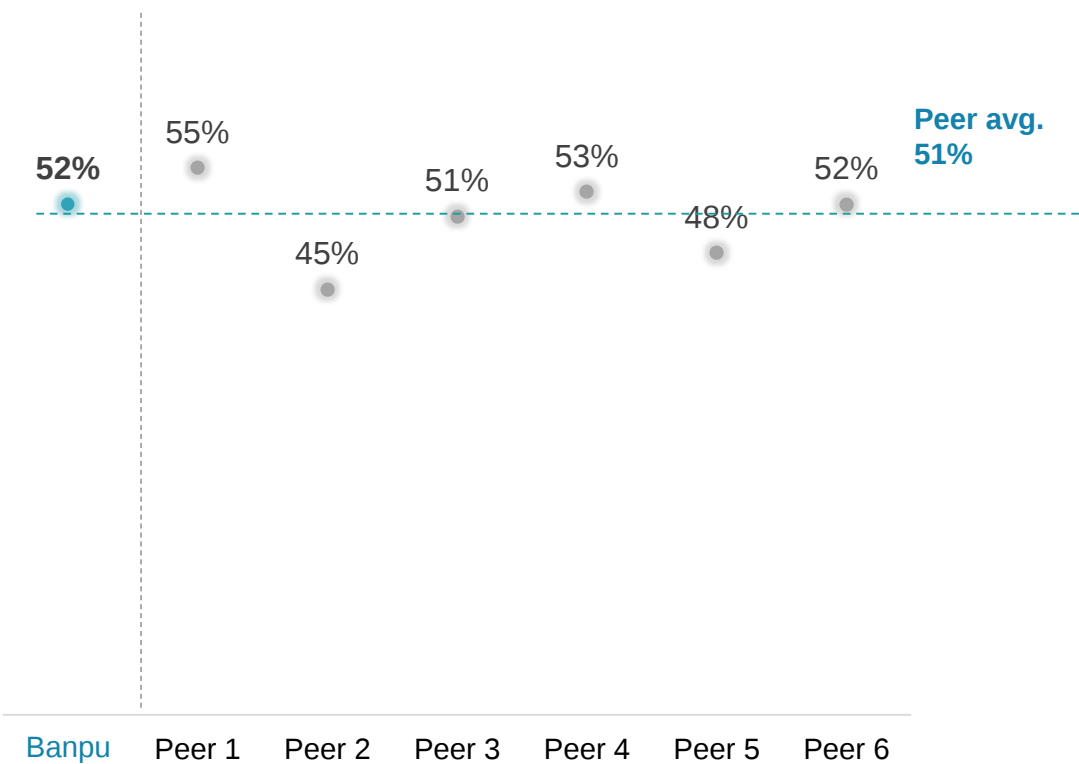
Banpu operates at lower cash opex. than peers average



2018 CASH MARGIN²

Unit: %

Margin in-line with top gas producers in the Marcellus area



* Peer companies include Antero Resources, Cabot, CNX Resources, EQT corporation, Gulfport Energy, Tourmaline

OUR WAY IN ENERGY

Note: 1 Cash operating costs includes transportation and gathering, direct operating costs (LOE, workover), taxes other than income, exploration, G&A, and interest expenses,

2 Cash margin = (avg. selling price – Cash opex)/avg. selling price

- 1 Focus: US Gas
- 2 Financial Summary
- 3 Energy Resources
 - Coal
 - Gas
- 4 **Energy Generation**
- 5 Energy Technology
- 6 Key Takeaways

Banpu Power 1Q19: conventional power



THAILAND

BLCP

Resume normal operation with strong and consistent reliability

- Resume normal operation with strong reliability reflected in EAF** of 1Q19 at 100%
- EBITDA of THB 1.3 Bn, +129% QoQ and -32% YoY
- Profit contribution of THB 0.4 Bn



LAOS

Hongsa

Completed its yearly maintenance of unit 1 for 18 days while excellent operation of unit 2 helps sustain the overall performance

- EAF reported at 81%
- EBITDA of THB 3.1 Bn, improve by 5%, mainly from saving on overhead cost
- Profit contribution of THB 0.7 Bn



CHINA

China CHP

Continue high demand during winter resulted in better performance QoQ, mainly driven by strong residential demand

- Revenue of THB 1.8 Bn, slightly increase by 3% QoQ from strong demand

SLG

- Construction progress continued, reaching at 51%
- Expected COD adjustment to match with transmission line construction completion

OUR WAY IN ENERGY

Note: *EMJ = Extended Major Overhaul, ** Equivalent Availability Factor (EAF) is a percentage and measures of the potential amount of energy that could be produced by the unit after all planned and unplanned losses are removed

Banpu Power 1Q19: renewable power



CHINA

China Solar

Better weather condition result in higher irradiation, reflect in higher power sold

- Average capacity factor reported at 13%, +0.8% QoQ
- Power sold up by 10% QoQ
- Reported revenue of RMB 34 M, up 10% QoQ



JAPAN

Japan Solar

Slightly increase in capacity factor from better weather conditions, reflect in higher electricity generation

- Higher power sold from additional contribution from Nari Aizu which COD last year
- Reported an average capacity factor of 9.9%, up by 0.7% QoQ



VIETNAM

Vietnam Wind

Completed Feasibility study of phase 1 of 30 MW out of total 80 MW

- Completed the public hearing with community within project area and transmission line area
- In process for technology selection and EPC selection

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BPIN partnership with Bhiraj Buri: sustainable office

BPIN to install 317 kWp solar rooftops in Summer Lasalle project, becoming a pioneer of the sustainable office concept



- Project aims to pioneer **sustainable office concept** by utilizing solar power to save electricity as well as promote clean energy and sustainability
- Solar rooftop installation can convert solar power into electricity with higher efficiency than before, and is estimated to help **save up to THB1.8 M in energy costs per year**
- Currently, Banpu Infinergy's solar rooftop and solar PV portfolio has total of **160 MW** across Asia-Pacific

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- 6 **Key Takeaways**

Key takeaways Q1 2019



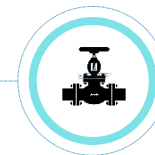
GROUP EBITDA STABLE AT US\$231 M

Consolidated EBITDA
+1% YoY; strong Gas EBITDA
improvement and solid Power
contribution offsets lower Coal Ebitda



COAL EBITDA -5% YOY

US\$153 M coal EBITDA,
slight decrease YoY; CEY's export
price cushioned by weaker AUD;
ITM exceeds target output and
records higher sales volume YoY



>\$1.0 BN CUMULATIVE GAS INVESTMENT

Continue to expand Gas portfolio
with cumulative Gas investment
budget of >\$1.0 Bn by 2020



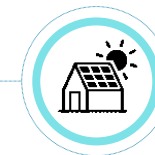
BLCP AND HONGSA: CONSISTENT PERFORMANCE

BLCP resumed normal operation
reflected in 100% EAF;
Hongsa's EAF >80% despite
planned maintenance;
SLG reached 51% completion



RENEWABLE ENERGY PERFORMANCE AND GROWTH

China and Japan solar achieved
higher capacity factor due to better
weather conditions; Vietnam wind
phase 1 (30MW) completed feasibility
study and EIA



SOLAR ROOFTOP: SUSTAINABLE OFFICE

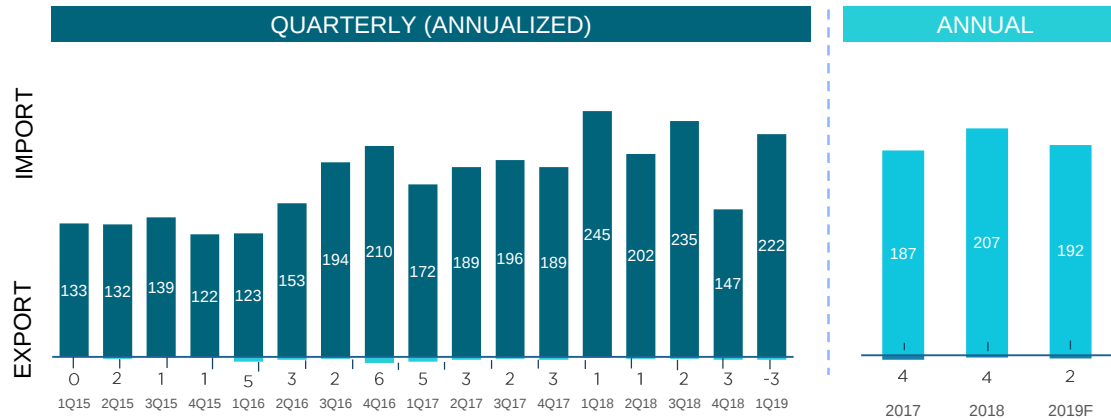
BPIN partnership with Bhira Buri to
install 317 kWp solar rooftop for
Summer Lassalle project,
BPIN becoming a pioneer of the
sustainable office concept

APPENDIX

China: import control driving market

CHINA THERMAL COAL IMPORTS/EXPORTS*

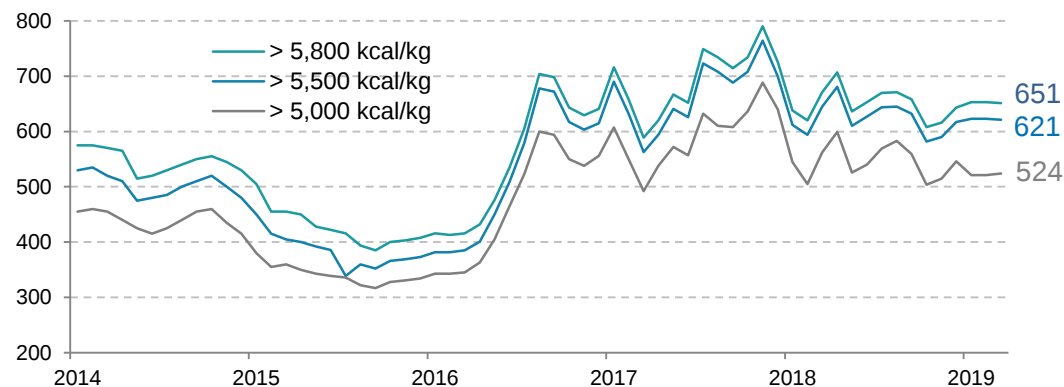
Unit: Mt



Sources: Banpu MS&L

CHINA DOMESTIC COAL PRICES

Unit: RMB/t



1Q19

- Weak demand due to mild winter and Chinese New Year holiday
- Coal demand in cement and general industry improved after holidays
- Mine accident caused tighter safety check slowed supply recovery
- Restriction on supply has boosted domestic thermal coal prices.
- Import restriction by prolonged custom clearance period impacted coal import particularly Australian coal
- Coal inventories at coastal power plants remain high
- Growing cross-region electricity transmission curtailed power coal demand in the coastal region

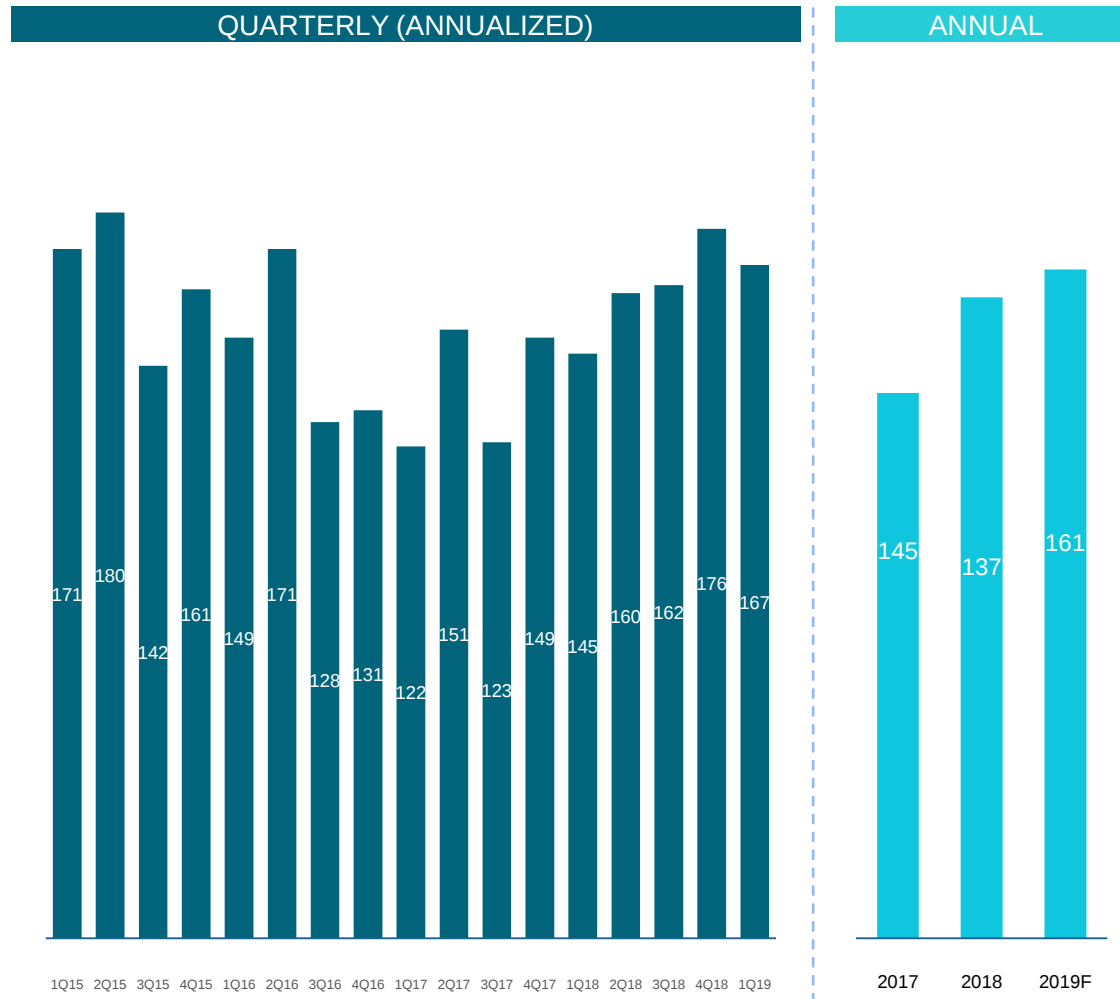
Outlook

- GDP growth was 6.4% in Q1 and expected to maintain stable in Q2 under various stimulus policies will support coal demand
- China cut VAT effective from 1 April but has not seen significant impact to domestic coal prices as market remain tight
- Domestic supply will continue improve although at a slow rate due to safety check
- Expected slow restocking in Q2 amid high inventory and low demand
- Port clearance delays will continue to affect Australian coal cargoes

India: reliance on imports grew

INDIA THERMAL COAL IMPORTS*

Unit: Mt



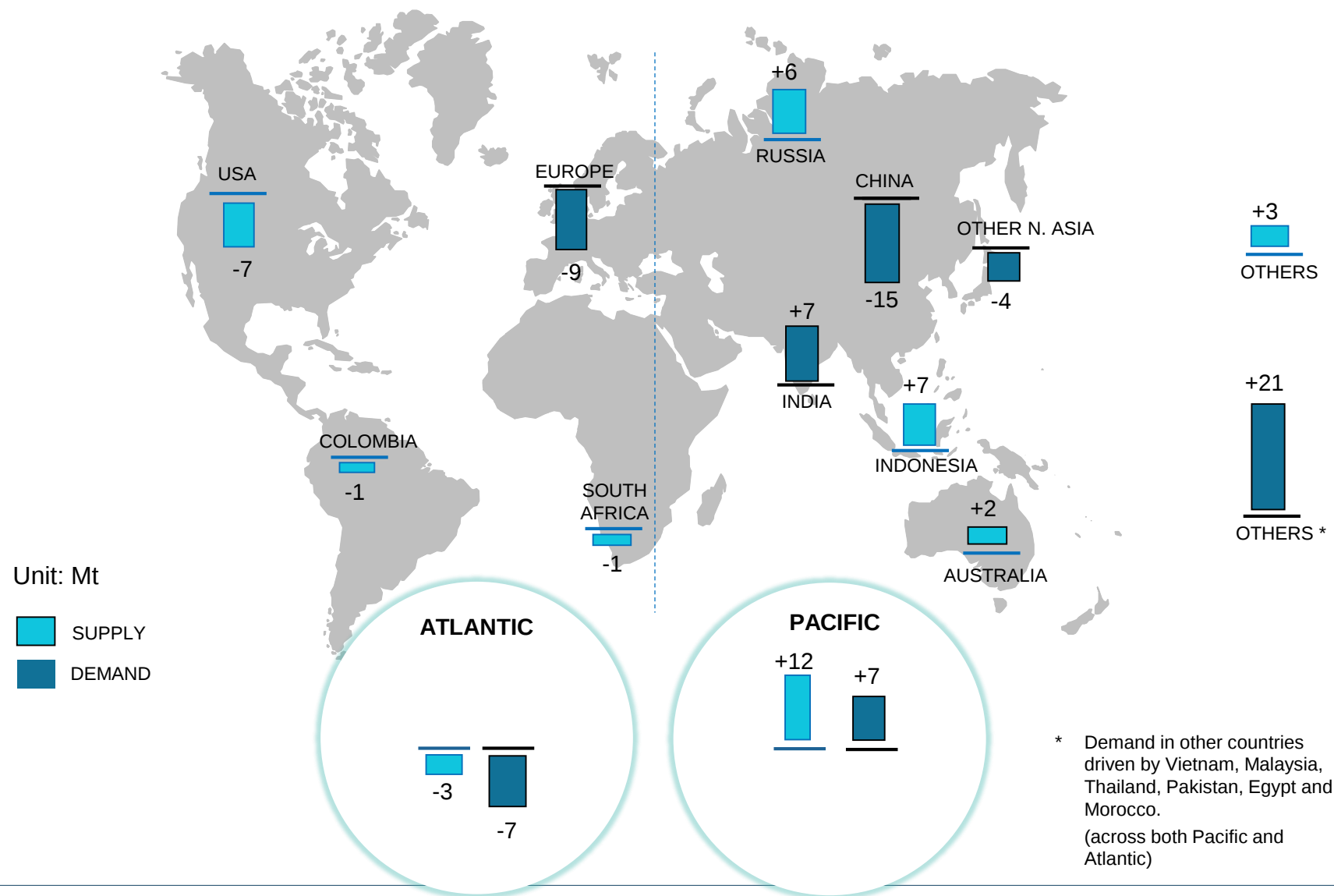
1Q19

- Seasonally slow demand growth and improved performance from hydro and renewables, demand for coal-based generation declined 1%
- Decline in coal demand from power generation more than offset by increase in non-power demand
- Improved domestic coal production and despatches, with coal production reached a record level of 91.7 Mt in March
- Coal stockpiles increased both mines and power plants
- Import remained strong despite domestic production improves

Outlook

- The growth in coal demand is expected to outpace the growth in domestic supply
- Coal-based power generation is expected to recover from April and into summer
- India commissioned 3.6 GW of coal-fired power plants in March.
- India is expected to lead import growth in 2019
 - The Mundra and Essar coal plants - two large importing facilities - are now back online.
 - Rail car availability has increased, reducing bottlenecks in the transportation system

Regional thermal coal market: 2019e vs 2018



Coal quarterly output summary

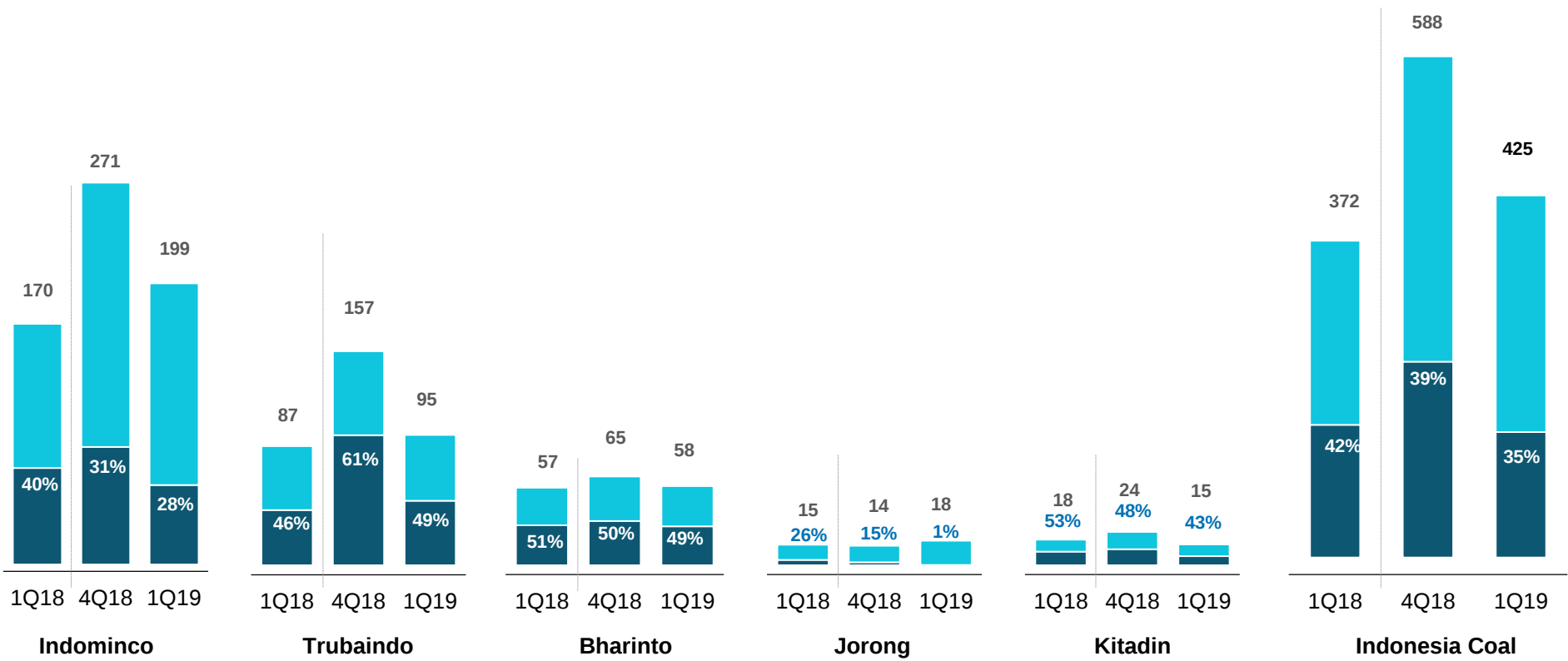
AUSTRALIA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON EQUITY BASIS					
Mines	CV (kcal/kg)*	1Q18	4Q18	1Q19	2Q19e
Western operations		1.2	1.0	1.1	1.3
Springvale	6,700	0.6	0.3	0.5	0.4
Clarence	6,700	0.4	0.4	0.4	0.5
Airly	6,700	0.2	0.3	0.2	0.4
Northern operations		1.4	2.4	0.9	1.9
Mandalong	6,700	0.9	1.9	0.5	1.3
Myuna	6,700	0.5	0.5	0.4	0.6
Total Australia coal		2.6	3.4	2.0	3.2

INDONESIA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON 100% BASIS									
Mines	CV (kcal/kg)*	1Q18		4Q18		1Q19		2Q19e	
		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	0.1	24.3x	0.5	17.1	0.5	14.9	0.5	26.5
Indominco – East block		2.1	12.2x	3.4	9.7	2.8	13.7	2.7	11.0
Trubaindo	6,550 – 6,700	0.9	13.5x	1.3	11.1	1.1	12.9	1.1	13.2
Bharinto		0.5	10.6x	0.7	10.2	0.6	12.2	0.7	10.3
Kitadin-Embalut	5,800	0.3	11.2x	0.2	12.8	0.4	11.9	0.3	11.1
Jorong	5,300	0.3	6.1x	0.3	6.5	0.3	10.5	0.3	8.1
Total Indonesia coal		4.1	12.0x	6.4	10.5	5.0	13.2	5.6	12.9

CHINA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON 100% BASIS					
Mines	CV (kcal/kg)*	1Q18	4Q18	1Q19	2Q19e
Gaohe		2.3	2.7	2.4	2.6
Hebi		0.4	0.3	0.3	0.4
Total China coal		2.7	3.0	2.7	3.0

Indonesia coal gross margin 1Q19 : 35%

USD million



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 MFC = 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

Gas business: 2019 indicative guidance

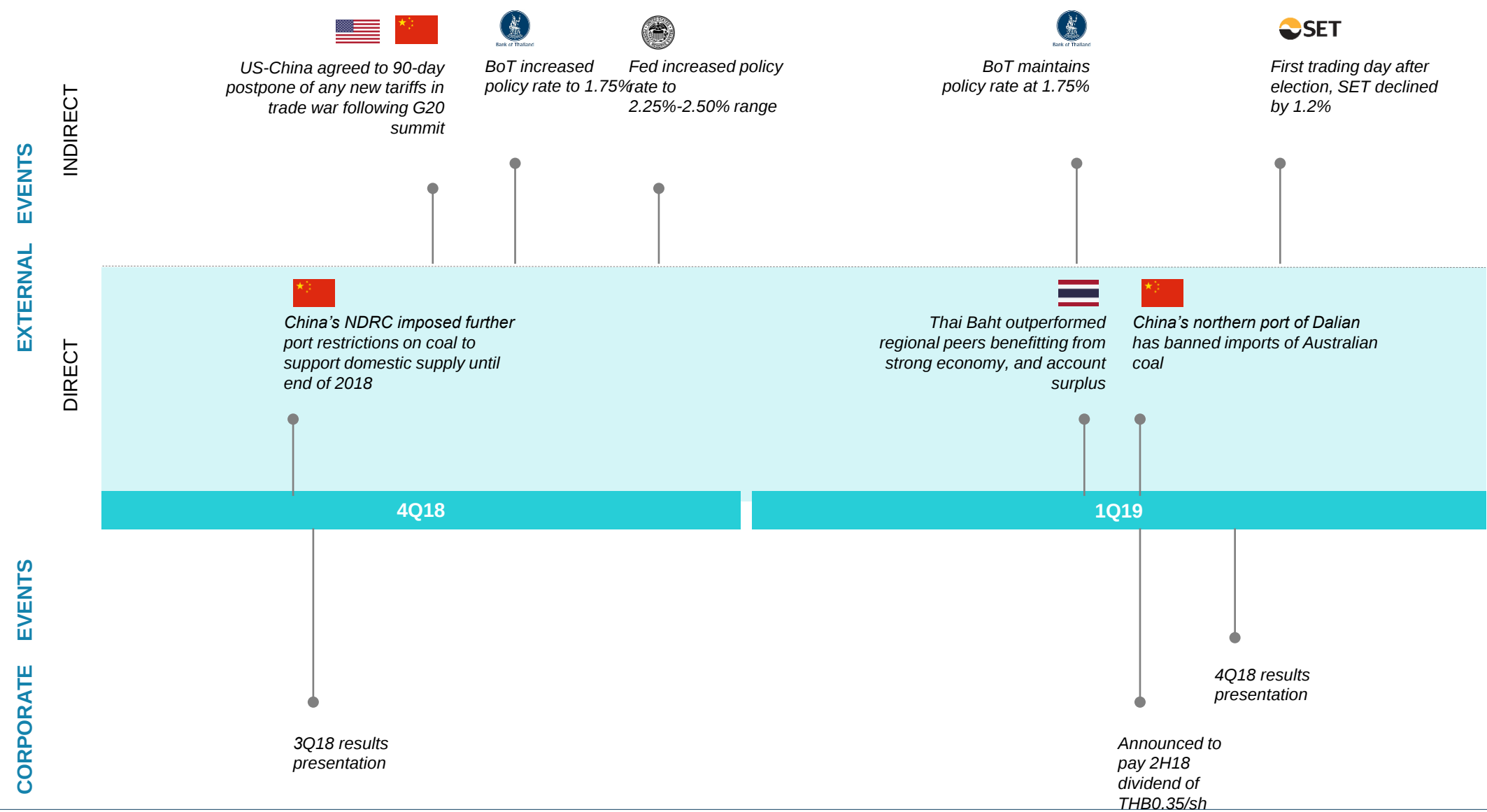
ILLUSTRATIVE AND INDICATIVE ONLY

UNIT GUIDANCE (US\$/ MCF)		COMMENTS
REVENUE		
Average differential to Henry Hub	\$0.5-\$0.8	Difference selling points and (NYMEX basis) and Henry Hub
Pipeline revenue	\$0.05-\$0.15	Applicable to Chaffee Corners volume only
COSTS		
G&C costs	\$0.4-0.5	Gathering and compression costs (to intrastate pipelines)
Lease operating costs	\$0.2-\$0.3	Main component of operating costs
G&A	\$0.25-\$0.35	General and administrative costs
DD&A	\$0.75-0.85	Depreciation, depletion and amortization
Taxes	21%	Currently benefit from tax shield due to accelerated DD&A

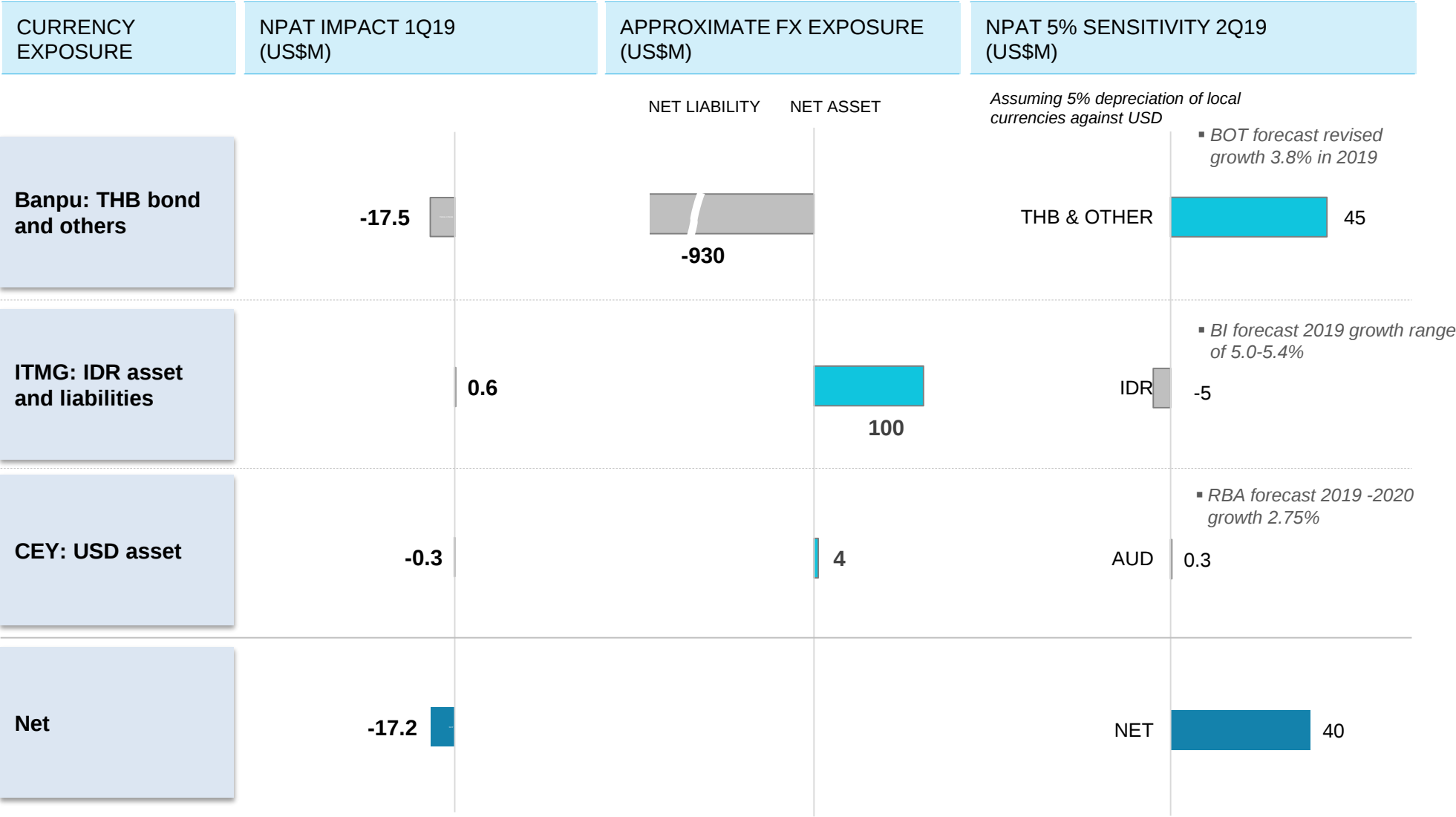
CURRENT PORTFOLIO (2018)

Reserves (Bcf)	1,250
Production (MMcfd)	200 - 230

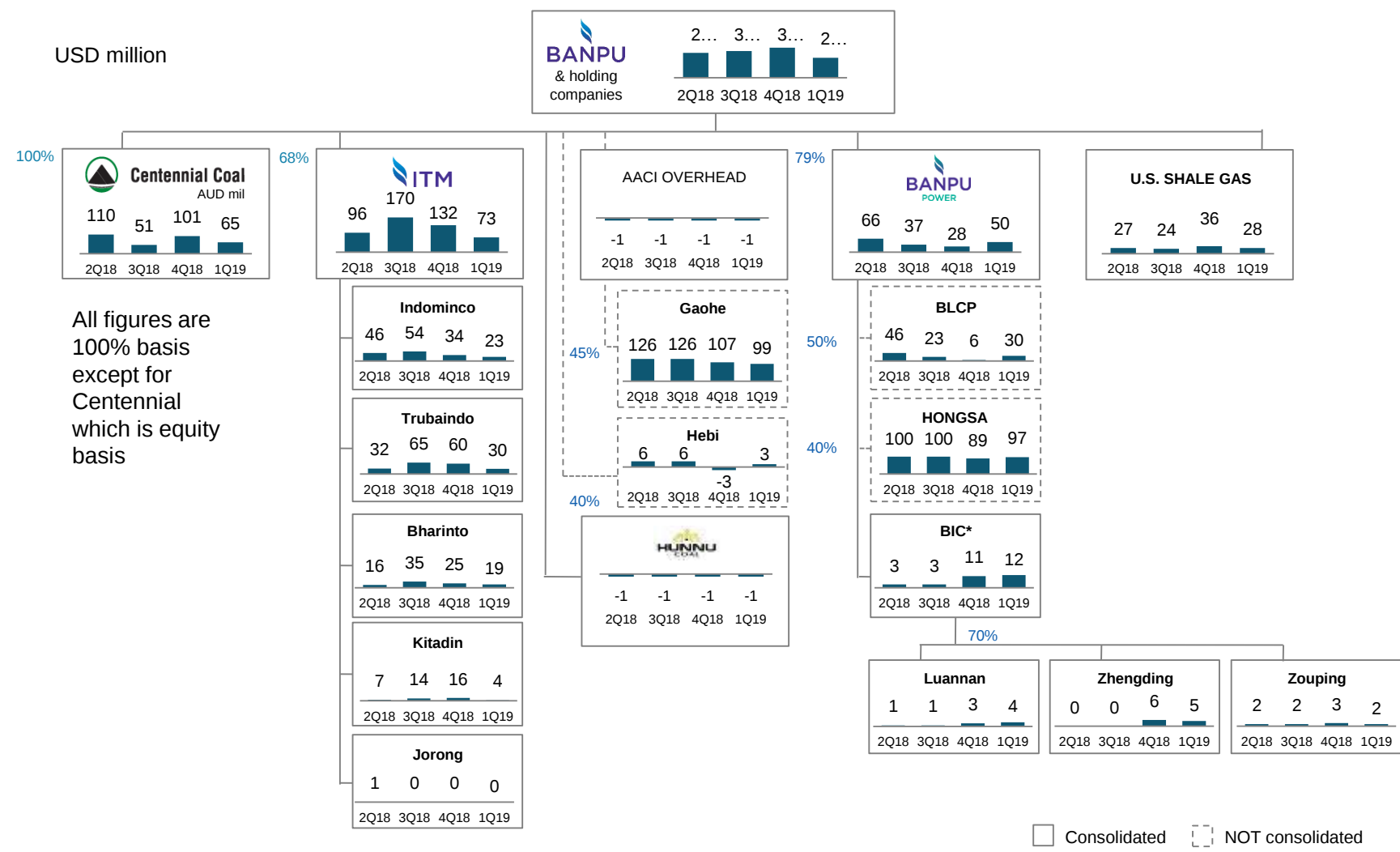
Key external and corporate events



Fx impact analysis guidance on P&L



Banpu group EBITDA breakdown



Banpu group net debt breakdown



Banpu consolidated : operating profit

USD million	1Q19	4Q18	1Q18	QoQ%	YoY%
Total sales revenues*	699	1,003	700	-30%	0%
Sales revenue – Coal	575	879	588	-35%	-2%
Sales revenue – Gas	36	43	26	-18%	37%
Sales revenue – Power	56	52	65	7%	-14%
Cost of sales	(506)	(655)	(468)		
Gross Profit*	193	348	232	-45%	-17%
Gross profit – Coal	158	311	204	-49%	-21%
Gross profit – Gas	18	23	9	-20%	114%
Gross profit – Power	13	12	17	14%	-21%
GPM	28%	35%	33%		
<i>GPM – Coal</i>	<i>27%</i>	<i>35%</i>	<i>34%</i>		
<i>GPM – Gas</i>	<i>51%</i>	<i>53%</i>	<i>34%</i>		
<i>GPM – Power</i>	<i>24%</i>	<i>23%</i>	<i>26%</i>		

Banpu consolidated : operating profit

USD million	1Q19	4Q18	1Q18	QoQ%	YoY%
Gross Profit	193	348	232	-45%	-17%
GPM	28%	35%	33%		
SG&A	(83)	(99)	(67)		
Royalty	(61)	(85)	(58)		
Income from associates	62	43	62		
Other income and Dividend	52	16	7		
Mining property	1	(12)	(9)		
EBIT	164	212	167	-22%	-1%
EBIT – Coal	105	166	118	-37%	-11%
EBIT – Gas	14	22	1	-37%	950%
EBIT – Power	46	24	48	95%	-4%
EBITDA	231	351	227	-34%	1%
EBITDA – Coal	153	287	162	-47%	-5%
EBITDA – Gas	28	36	14	-24%	90%
EBITDA – Power	50	28	51	80%	-2%

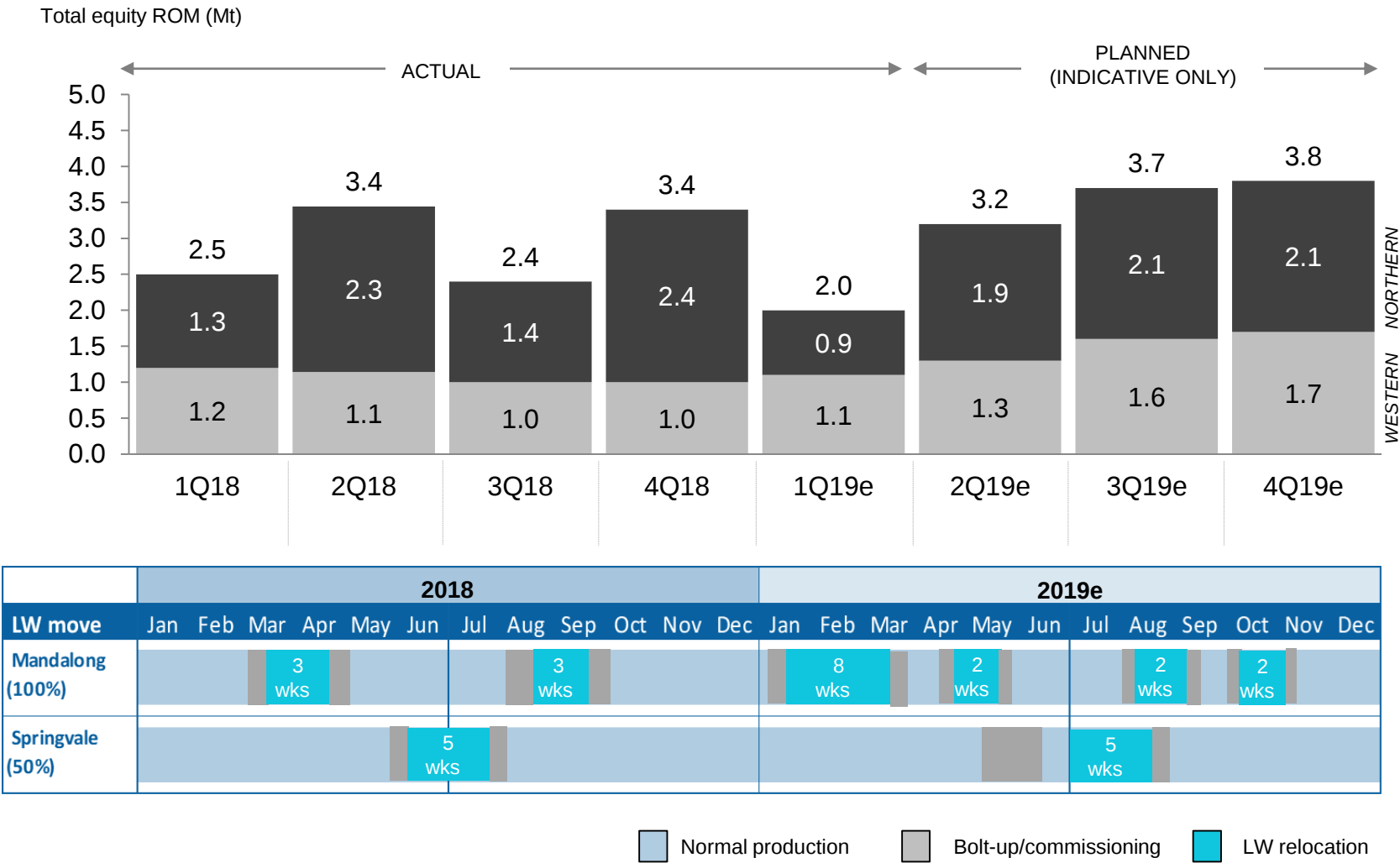
Banpu consolidated : net profit

USD million	1Q19	4Q18	1Q18	QoQ%	YoY%
EBIT	164	212	167	-22%	-1%
Interest expenses	(45)	(44)	(40)		
Financial expenses	(1)	(0)	(1)		
Income tax (core business)	(32)	(30)	(27)		
Minorities	(21)	(23)	(23)		
Net profit before extra items	65	114	76	-43%	-12%
Non-recurring items*	(4)	(17)	(68)		
Gain (Loss) on Derivatives Transactions	1	(28)	(3)		
Income tax (non - core business)	(11)	(7)	(16)		
Deferred tax income (expenses)	(4)	(19)	5		
Net profit before FX	46	43	(7)	7%	na.
FX translation	(17)	2	(33)		
Net Profit	29	45	(40)	-36%	na.
EPS (US\$/share)	0.006	0.009	(0.008)		

Centennial : Income statement

USD million	1Q19	4Q18	1Q18	QoQ%	YoY%
Sales volume (Mt)	2.0	3.8	2.9	-47%	-30%
Sales revenue	146.7	286.4	216.5	-49%	-32%
Cost of Sales	(135.4)	(209.1)	(171.4)		
Gross Profit	11.2	77.3	45.2	-85%	-75%
GPM	8%	28%	21%		
SG&A	(23.6)	(24.7)	(22.8)		
Royalty	(8.7)	(15.6)	(11.7)		
Other income	44.1	6.2	2.4		
Other expenses	-	-	-		
EBIT	23.2	43.1	13.1	-49%	77%
Interest expenses	(5.2)	(5.2)	(5.9)		
Financial expenses	(0.6)	1.2	(0.9)		
Gain (loss) on exchange rate	(0.3)	(0.1)	0.4		
Gain (loss) on derivative	0.2	(5.3)	0.2		
Corporate income tax	(5.2)	-	-		
Deferred tax income	-	(10.0)	(2.1)		
Net Profit	12.1	23.7	4.8	-48%	151%

Australia coal: quarterly equity rom output



Note: 1 Bar width is indicative of the equity production contributions to Centennial
2 Production generally responds to the timing of longwall changeovers (i.e. lower production results during a longwall changeover period)
3 Angus Place was put on care and maintenance from February 2015.

