2Q19 results

Opportunity Day

26th August 2019

BANPU

SAM
Sustainability Award
Gold Class 2019

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Dow Jones
Sustainability Indices
In Collaboration with RobecoSAM

Banpu has been recognized as a member of
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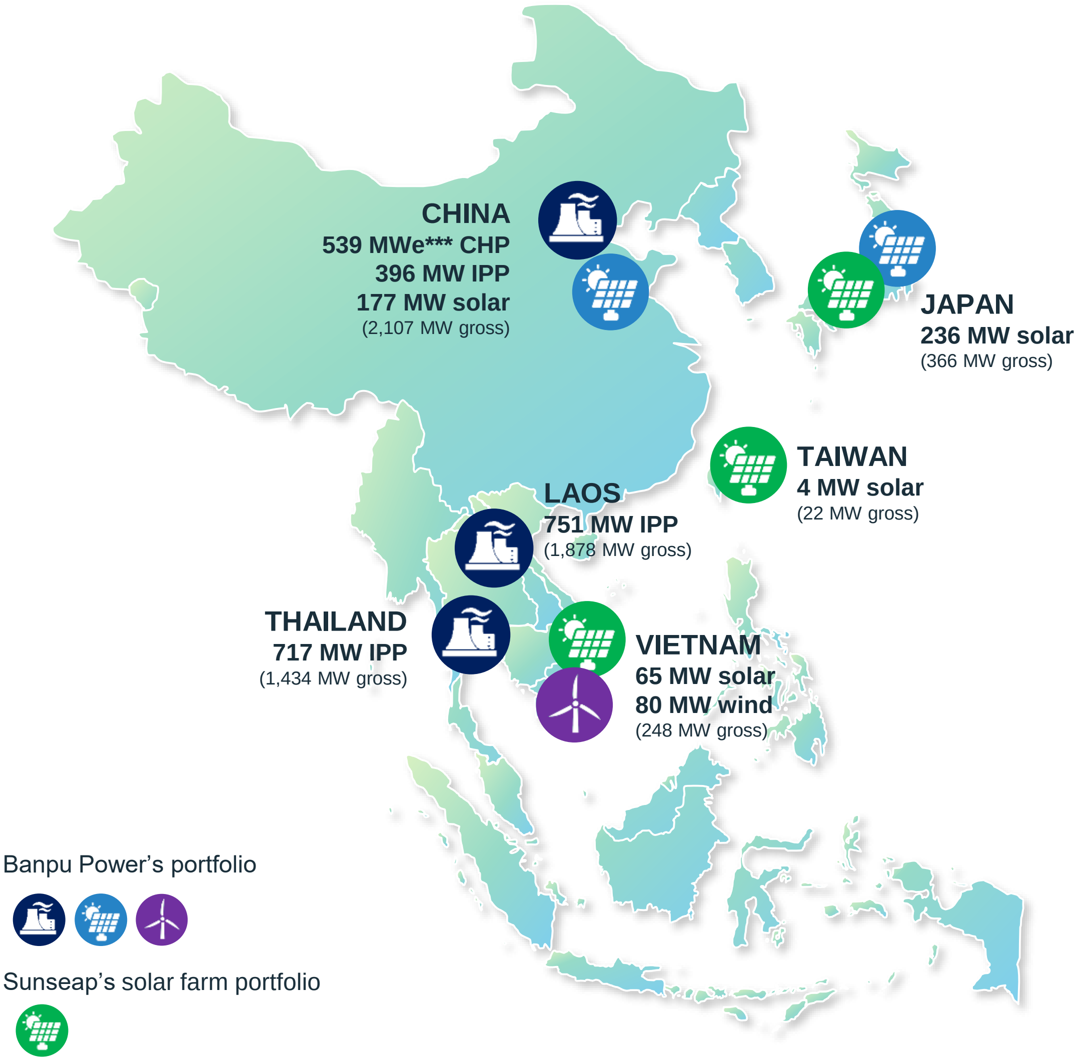
Banpu Energy Generation: unique pan-Asian portfolio

Banpu's portfolio of energy generation excluding solar rooftop
Total of Banpu Power's equity capacity and Banpu's equity in Sunseap shown in bold
Gross capacity shown in small font



>30 plants
committed across Asia

6.1 GW
Total gross committed capacity

3.0 GW
Total equity committed capacity*

562 MW
Renewables committed capacity**

Note: Based on 38.5% Banpu's ownership in Sunseap
*Based on Banpu Power's equity capacity (2,893 MW) and Banpu's equity in Sunseap (72 MW), **Based on Banpu Power's equity capacity (490 MW) and Banpu's equity in Sunseap (72 MW), *** MW equivalent

Banpu – Energy Generation

ENERGY RESOURCES

COAL

Synergies: supply sourcing, market insights

GAS

ENERGY GENERATION

BANPU POWER

THERMAL

SE Asia

Coal-fired power – IPPs
- BLCP, Thailand: 1,434 MW
- Hongsa, Laos: 1,878 MW
- New projects (Vietnam?)

Gas-fired power – IPPs: Potential

North Asia

Coal-fired power – IPPs
- SLG, China: 1,320 MW (2020)

Combined Heat & Power
- 3 CHP plants, China: 610 MWe*

Gas-fired power – IPPs: Potential

RENEWABLES

SE Asia

Solar
- Ninh Thuan, Vietnam:168 MW
- New projects (Vietnam?)

Wind
- Soc Trang, Vietnam: 80 MW
- New projects (Vietnam?)

Other: Potential

North Asia

Solar
- China: 177 MW
- Japan: 366 MW
- Taiwan:22 MW
- New projects (Japan?)

Wind: Potential

Other: Potential

ENERGY TECHNOLOGY

BANPU INFINERGY

SUNSEAP

Solar rooftop: 185 MW

SMART ENERGY

Synergies: technology, knowledge sharing

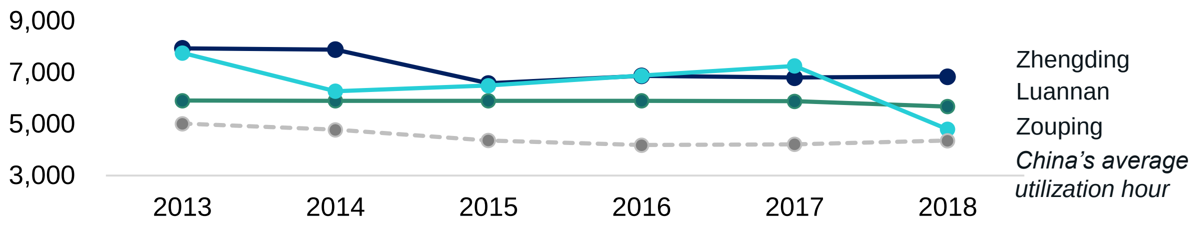
PROPRIETARY TECHNOLOGY DEVELOPMENT

Note: Based on gross capacity, * MW equivalent

Case study: value creation track-record (CHP, China)

CHINA CHP'S UTILIZATION VS INDUSTRY

Unit: Hours

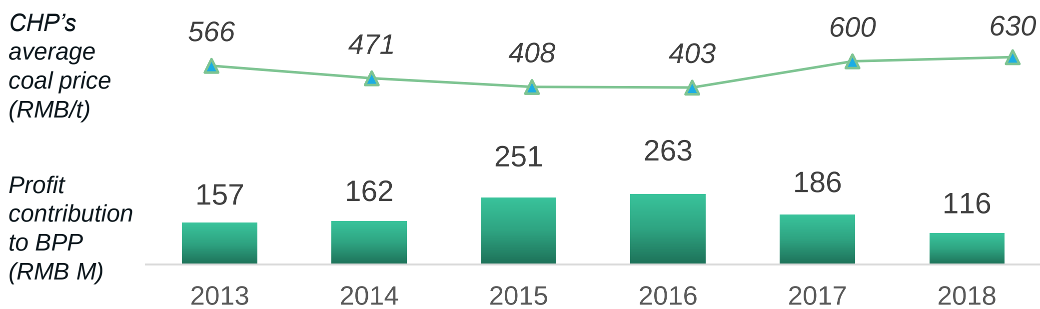


Source: China Electricity Council

GOOD OPERATIONAL PERFORMANCE

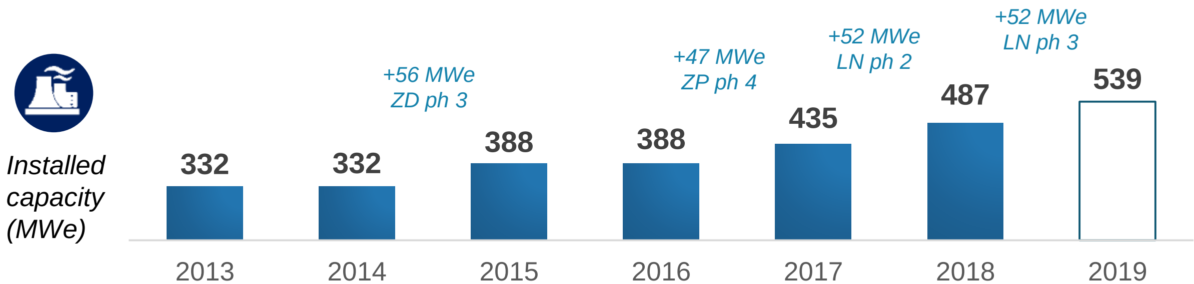
Better utilization than industry average driven by heat load

CHINA CHP'S PROFIT CONTRIBUTION TO BPP VS COAL PRICE



CONTRIBUTING CONSISTENT CASH FLOW

Maintaining profitability during high coal prices driven by good operational performance

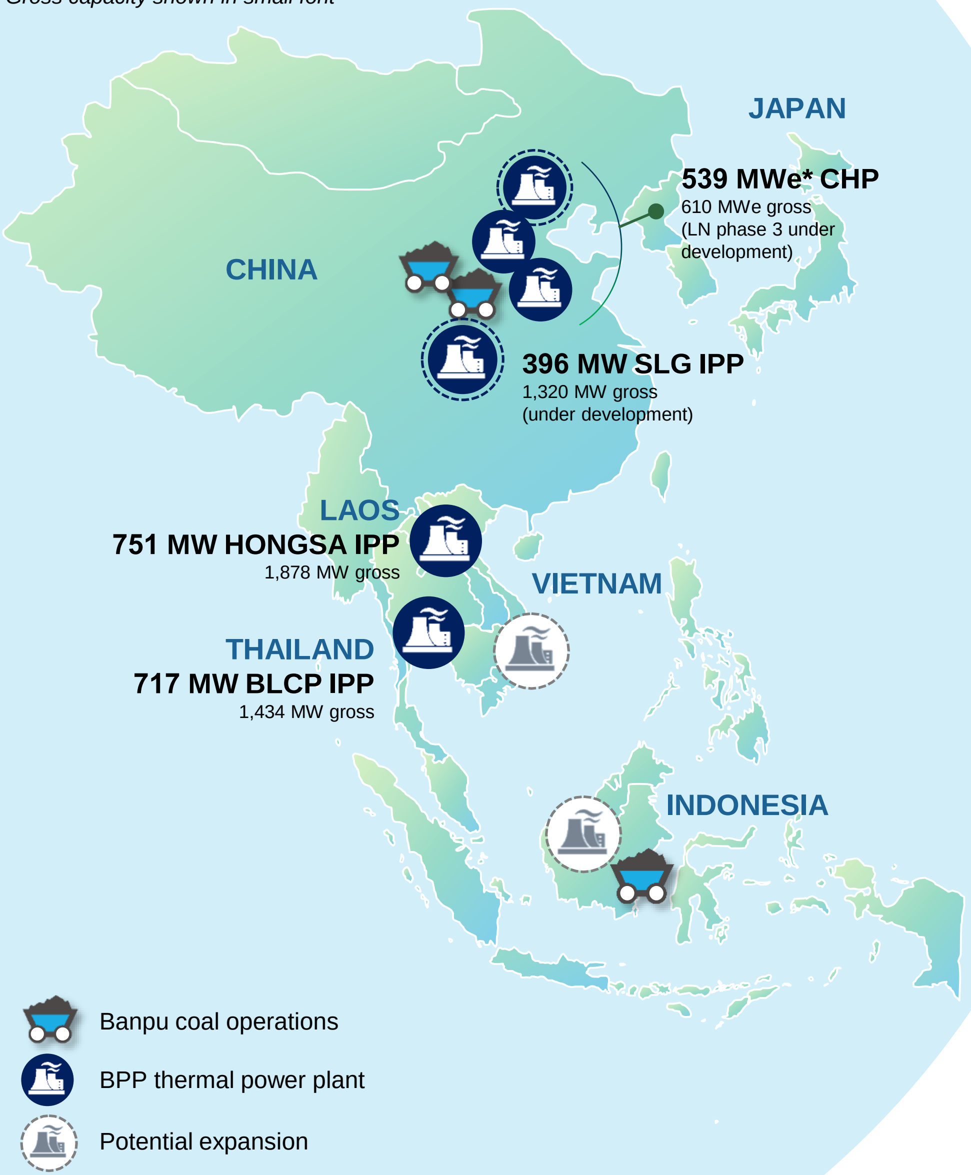


CONTINUOUS GROWTH

*Over 200 MWe expansion, **>60% increase** from 2013, with 52 MWe expansion to COD by 2019*

Energy Generation – Thermal

Banpu Power's equity capacity shown in bold
Gross capacity shown in small font



<u>SE Asia</u>

- ***BLCP***: platform model for project development; EAF 100% nearly all time
- ***Hongsa***: significant improvement in plant stability and reliability
- ***Potential***: evaluating thermal power opportunity in Vietnam and Indonesia
  - **Vietnam**: +40 GW CFP by 2030; potential synergies with coal trading business
  - **Indonesia**: +27 GW CFP by 2028; coal's share in energy mix >50%

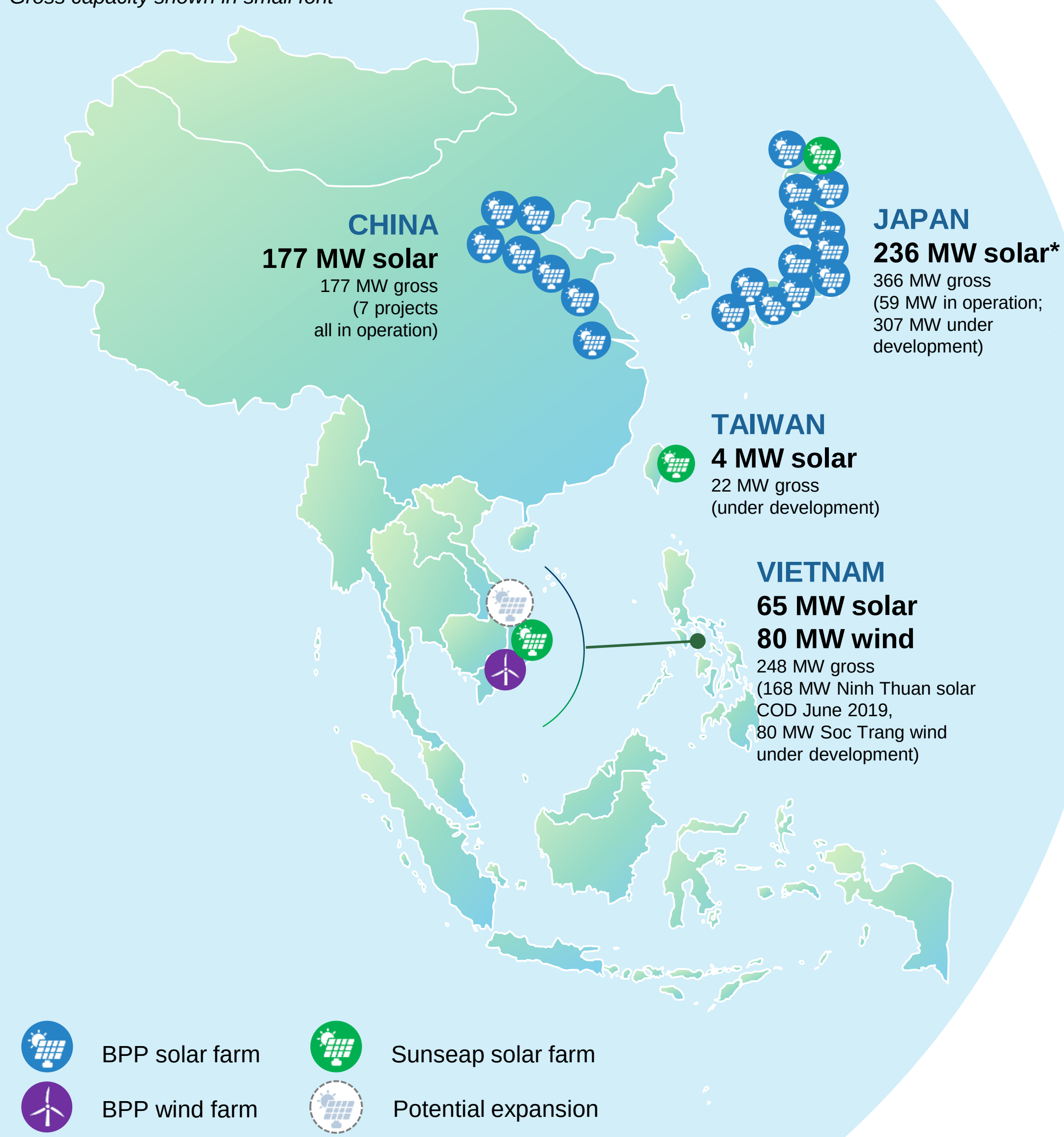
<u>North & East Asia</u>

- ***China CHP**:* +52 MWe expected COD by 4Q19, bringing to total capacity to 610 MWe
- ***SLG***: target COD by 4Q20

Note:* MW equivalent

Energy Generation – Renewables

Total of Banpu Power's equity capacity and Banpu's equity in Sunseap shown in bold
Gross capacity shown in small font



<u>SE Asia</u>

- ***Soc Trang wind*** : phase 1 to start construction end 2019 while continue pre-feasibility study for phase 2 & 3
- ***Ninh Thuan solar***: COD 168 MW in June 2019
- ***Potential****:* evaluating solar farm opportunity in Vietnam with potential aggregate of 310 MW

<u>North & East Asia</u>

- ***China solar****:* +25 MW new acquisition and already COD, bringing total portfolio to 177 MW
- ***Japan solar***: 5 projects under construction and development with one project target to COD in 4Q19, +19 MW
- ***Potential***: actively explore new opportunities in current footprints and beyond

Note:*Include 233 MW BPP solar farm and 3 MW Sunseap solar farm

Banpu Energy Generation: key strengths

Track record over 20 years in energy generation

- Two decades of value-creating experience
- Track record in learning new skills and technology fast
- Banpu people: aptitude, adaptability and versatility

Balanced, sustainable and synergistic

- Combination of core cash flow stability, upside potential and long-term growth
- Energy resources synergy: supply for thermal power plants
- Renewables synergy: sharing of knowledge and expertise

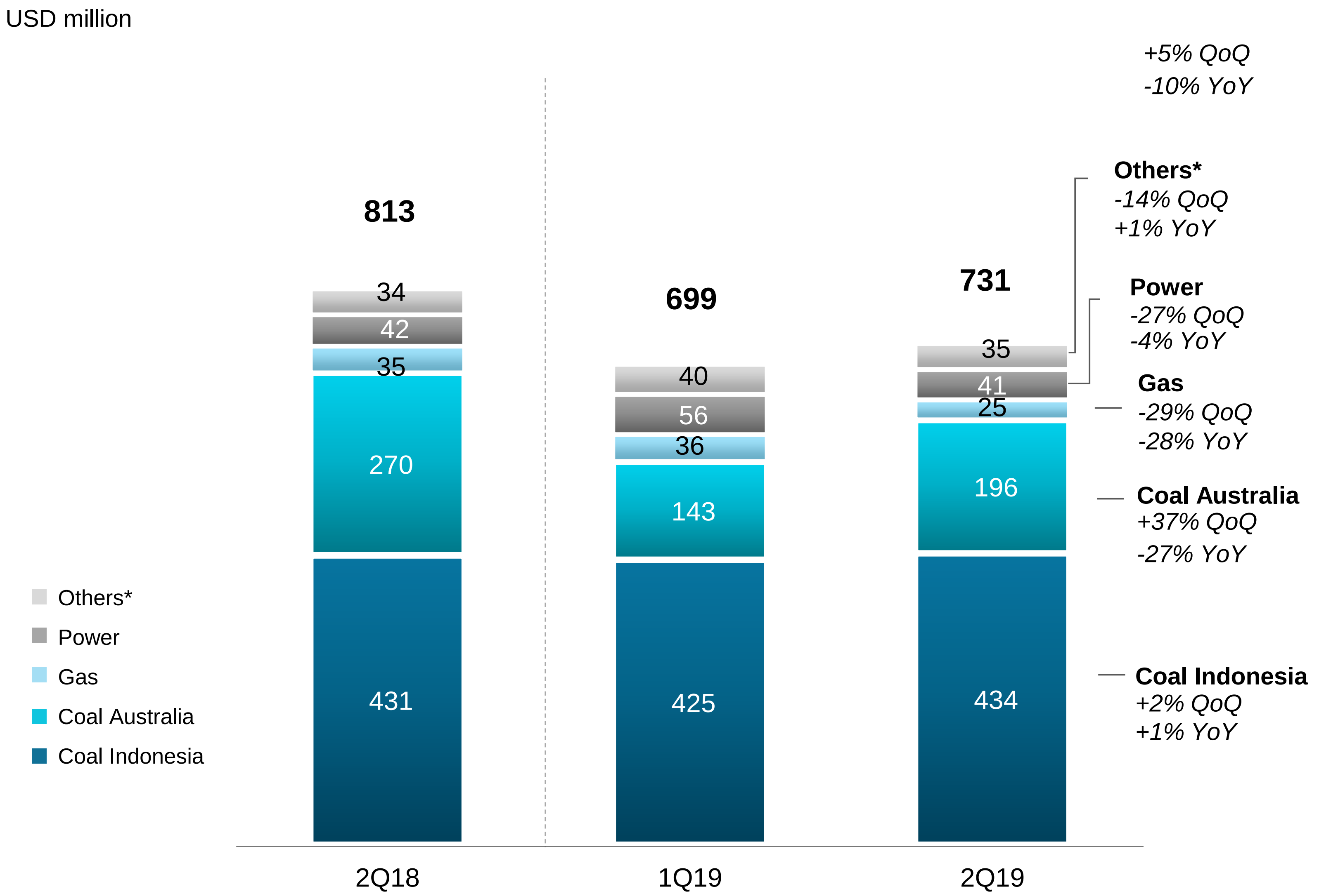
Focus on fast growing Asia

- Geographically diversified portfolio in some of the most attractive growth markets in Asia-Pacific
- Positioned to take advantage of the best growth deals across Asia and beyond

Delivering our growth promise

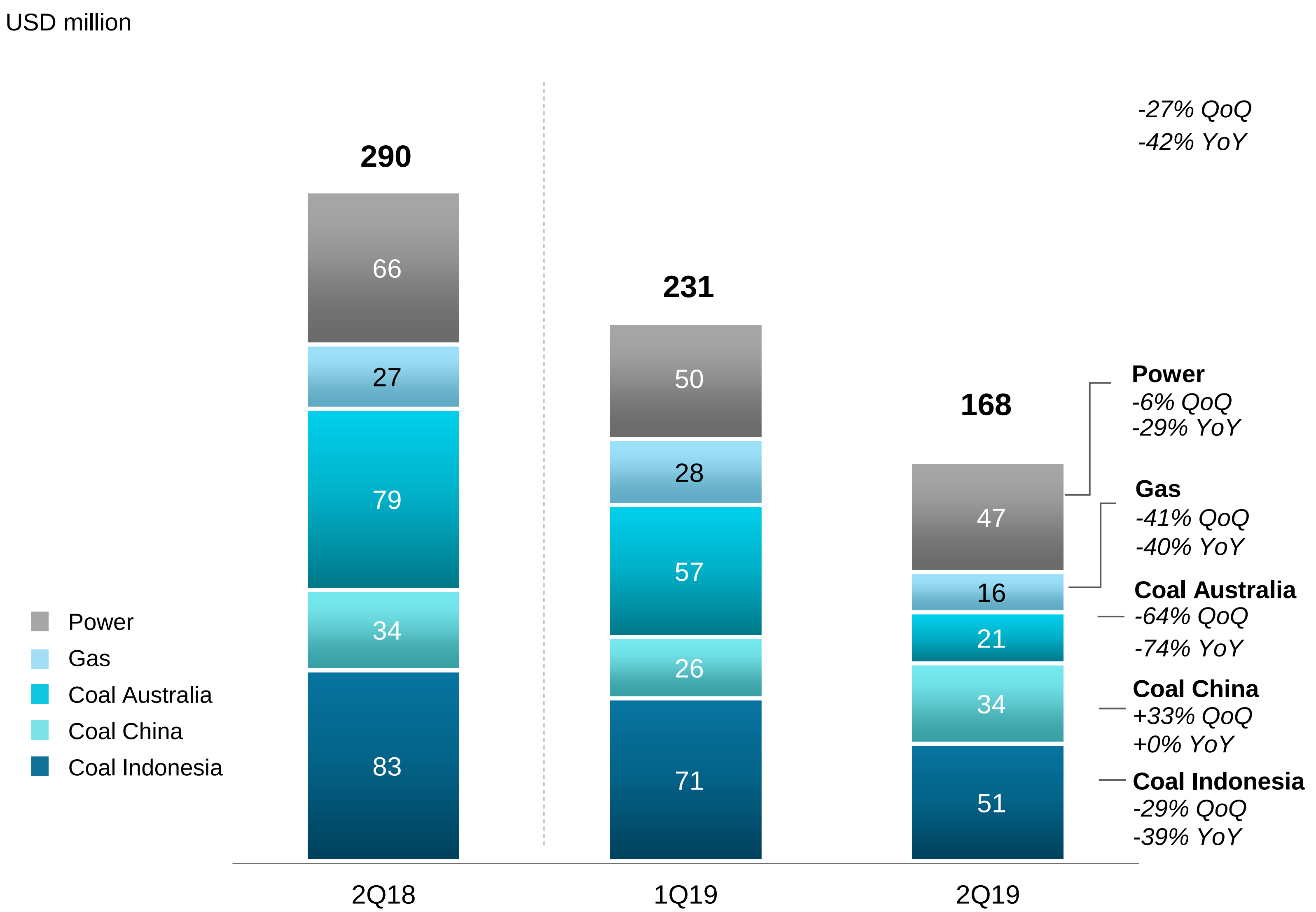
- On track with development of projects in pipeline
- Actively seeking new investment opportunities in current footprints and beyond

Banpu consolidated sales revenues



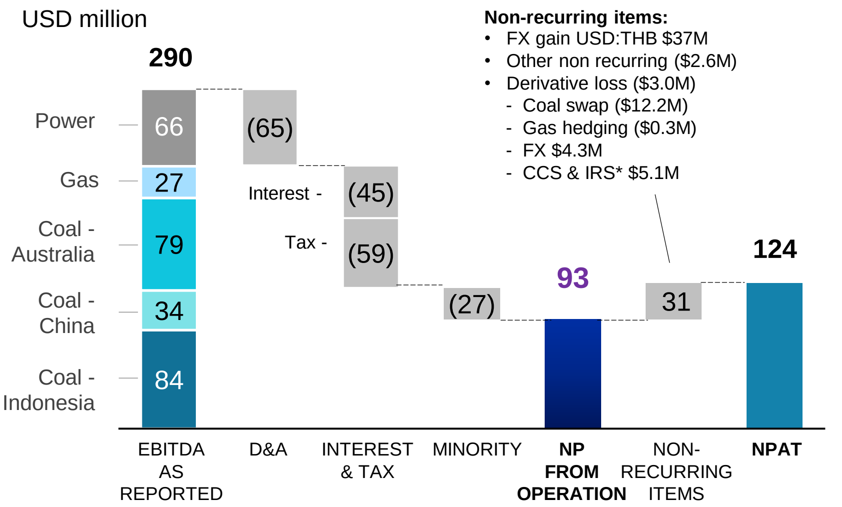
Note: *Revenue from others includes coal trading, fuel business and other businesses

Banpu consolidated EBITDA

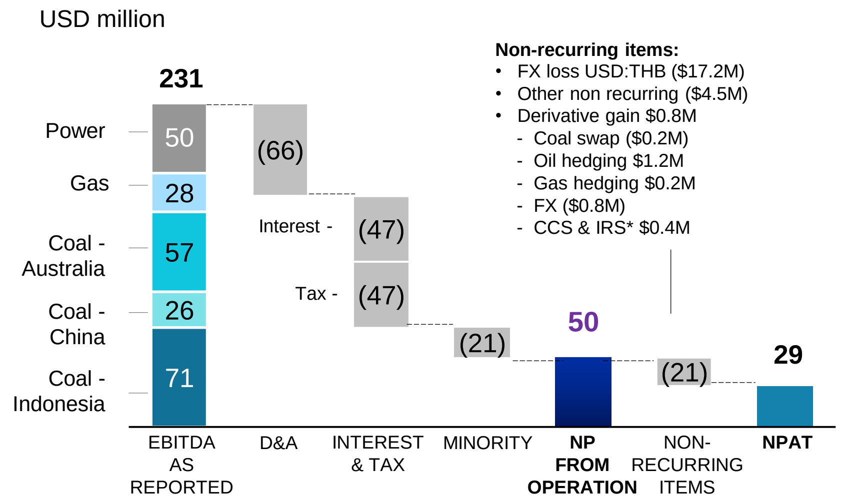


Banpu consolidated NPAT

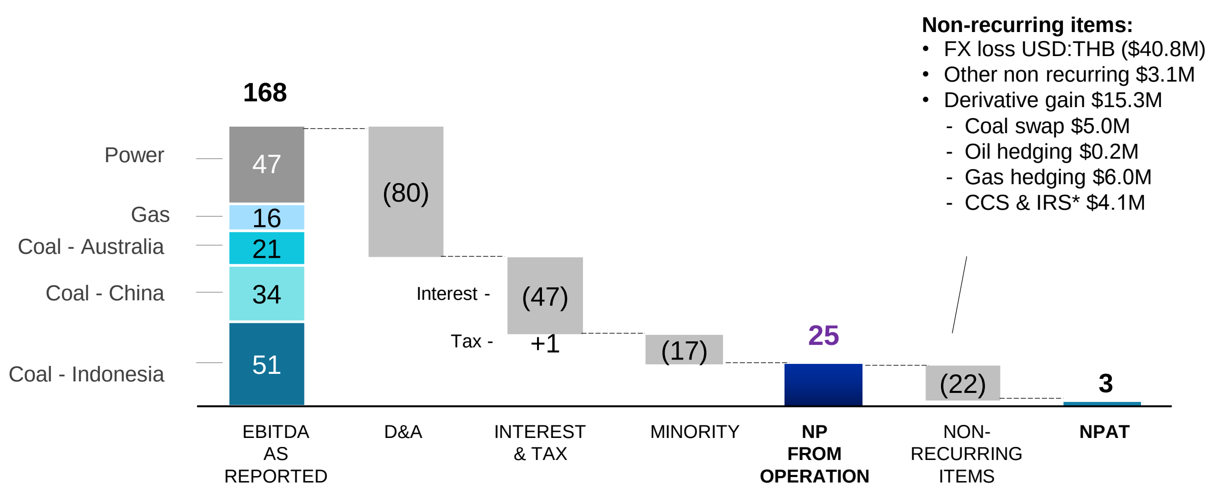
2Q18 NET PROFIT AFTER TAX



1Q19 NET PROFIT AFTER TAX



2Q19 NET PROFIT AFTER TAX



Note: *interest rate swap, cross currency swap

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

Global coal demand trends: 2019 vs 2018

GEOGRAPHY	CHANGE 2019-18 (Mt)	COMMENTS
INDIA	+17	▪ Strong import growth in 1H is likely to slow in 2H due to high stocks and high domestic coal supply ▪ Soft international coal prices and volatility in domestic supply is making import more attractive for non-power sector
OTHER S. & SE. ASIA	+27	▪ Demand growth driven by Vietnam and other countries in South and Southeast Asia
CHINA	-5	▪ Strong imports YoY in 1H with a significant swing from Australia to Indonesia ▪ Mild weather and strong hydro curtailed coal demand while domestic coal production continued improve ▪ Expect government to strengthen import restriction in 2H, aim to control import volume at the same level of last year
OTHER N.ASIA	-11	▪ Coal-fired capacity curtailments reduced coal burn significantly in Q2 ▪ Lifting curtailments on coal plants will boost coal burn in 2H ▪ Entering summer and nuclear maintenance should increase thermal power demand in 2H ▪ Economic coal-gas switching is limited
EUROPE	-17	▪ Low gas prices, warm weather, rising renewables output and high carbon prices continued pressure coal burn ▪ Increased coal-to-gas switching ▪ Prices collapsed due to heavy oversupply
GLOBAL	**+11**	*Low European coal prices and Chinese restrictions have impacted global trade flow. However, overall global demand still positive with growing demand from India, Vietnam and others South and Southeast Asia countries offset falling demand in Europe, China and other N.Asia. Government policy and weather is the key demand changing and create price volatility.*

Note: Includes lignite but excludes anthracite

Global coal supply trends: 2019 vs 2018

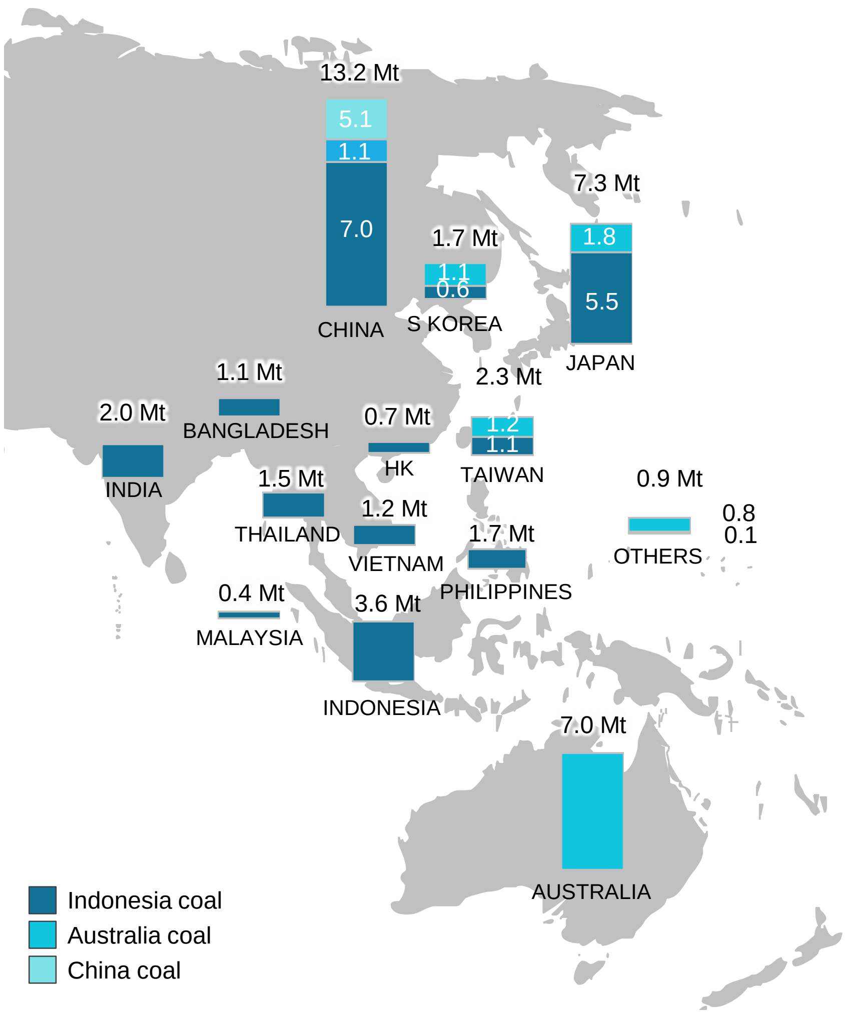
GEOGRAPHY	CHANGE 2019-18 (Mt)	COMMENTS
INDONESIA	+39	▪ Expect significant production growth ▪ Rain and weak global demand is the key risk for export growth ▪ Steep decline coal prices will make some producers running at loss ▪ Uncertainty on government regulations remains
AUSTRALIA	0	▪ Producers cannot easily undertake drastic changes to their production levels in response to market changes, as they are locked into long-term contracts for rail and port capacity
COLOMBIA	-8	▪ Low prices and weak European demand hampered export ▪ Try to increase export to Asia
RUSSIA	+4	▪ Low European price caused some Russian producers cut production ▪ Continued divert more coal to Asia as European demand declines ▪ Completion of Vostochny port expansion supports coal export to Asia
S.AFRICA	-1	▪ High domestic demand and low export prices keep LCV coal at home ▪ Take-or-pay contracts will pressure producers to maintain export levels.
USA	-12	▪ Exports hit by low coal prices and weak European demand.
OTHERS	+3	▪ Small increase from Mozambique, Chile and Philippines
GLOBAL	**+25**	*Global market remains oversupply driven by significant production growth from Indonesia and weak global demand. Coal prices dropped significantly and put several producers running at negative margins.*

OUR WAY IN ENERGY

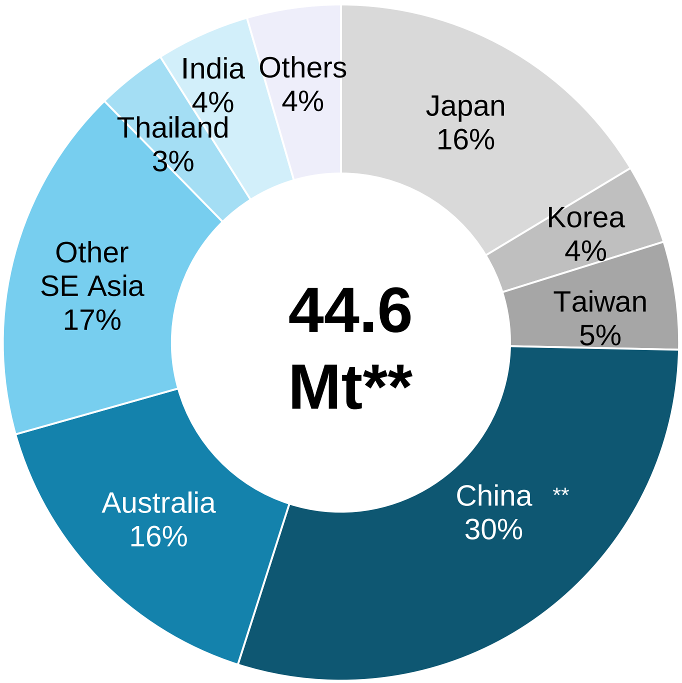
Note: Russia exports to non-CIS only

Banpu group coal sales 2019e

COAL SALES* SOURCE – DESTINATION ANALYSIS 2019e



GLOBAL COAL SALES* 2019e BY REGION

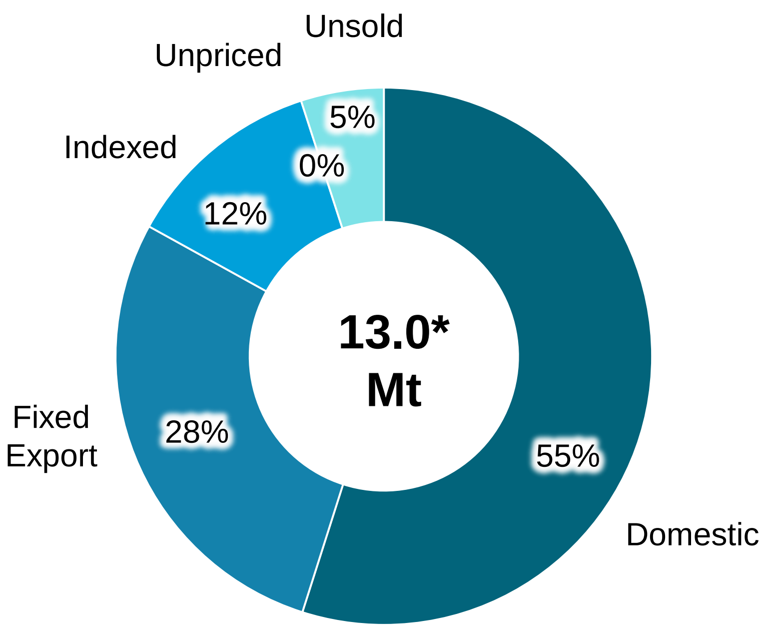


Notes:
* Sales from Indonesia are included on 100% basis, sales from Australia and China are included on equity basis. Excluding Mongolia coal
** Illustrative target
** Includes coal sales from domestic production in China

Banpu coal sales pricing status

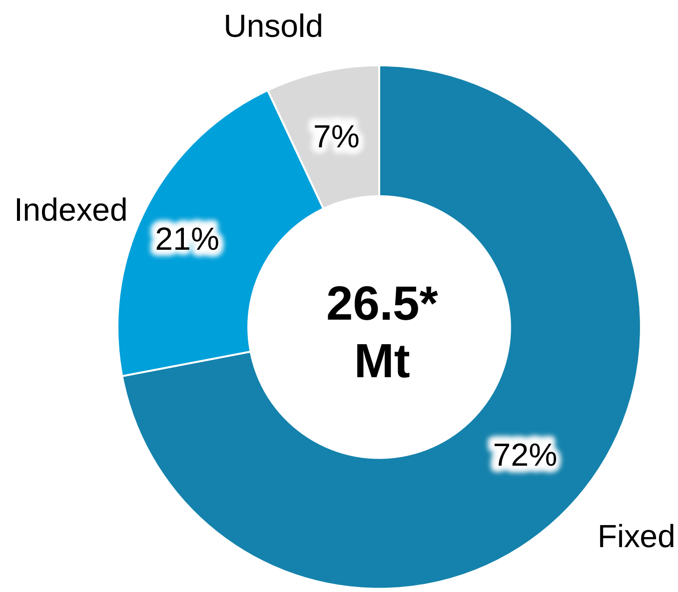
AUSTRALIA COAL

2019e



INDONESIA COAL

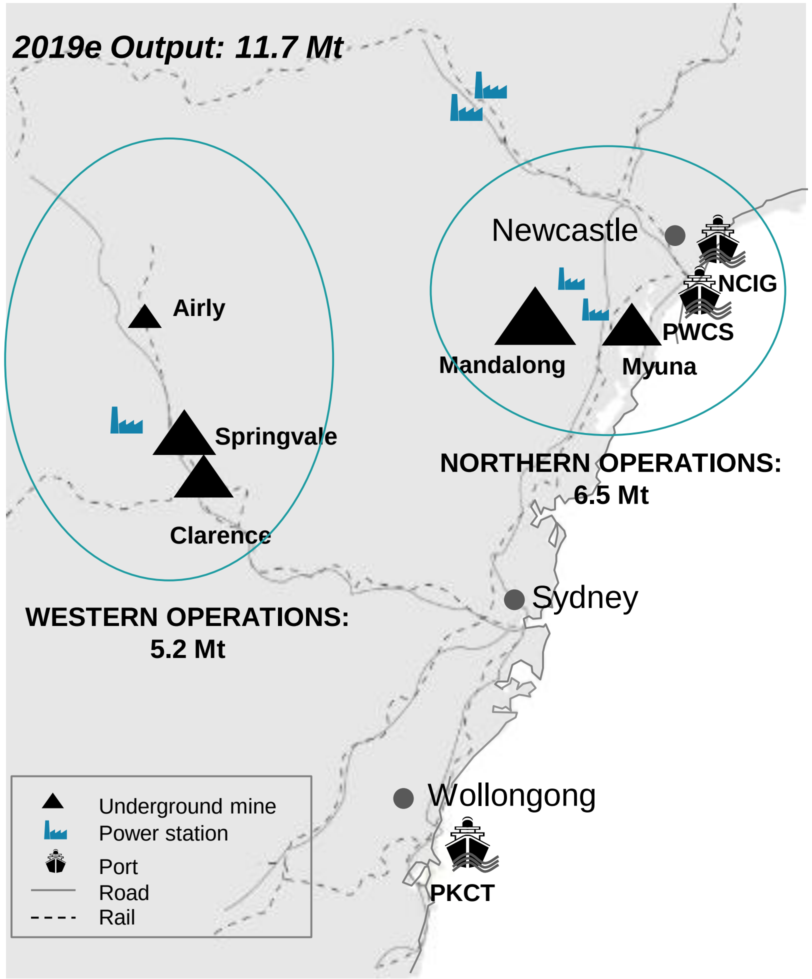
2019e



Note: * target sales; Indonesia coal sales includes third-party sourced coal

Australia coal: operational summary

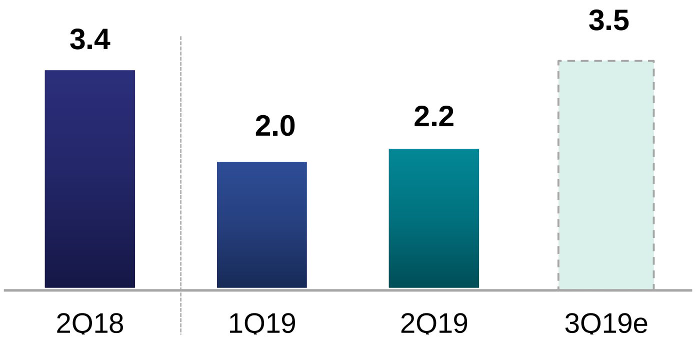
2019e OUTPUT (ROM EQUITY BASIS)



QUARTERLY OUTPUT (ROM EQUITY BASIS)

COAL OUTPUT (Mt)[1]
CV: 6,700 kcal/kg[2]

+11% QoQ
-34% YoY



Key updates

- ***Airly*** – successfully installed and commissioned Narrow Panel Extraction ("NPE") unit, with first NPE coal produced in late June. Lower output due to delays in approvals and equipment overhauls
- ***Clarence*** – focused on development activities in 1H19, ahead of a period of full extraction in 3Q-4Q19
- ***Springvale*** – mine experiencing difficult mining conditions, impacting equipment availability, production rates and coal quality
- ***Mandalong*** – more longwall operating time in 2Q19, increased production but slower rates due to elevated geological stress experienced in LW25 (first block in the new Mandalong South area). Strata conditions expected to improve in subsequent blocks in 2Q19.

  Development activities continue to deliver excellent results, with a June mine record of 2,980 metres.
- ***Myuna*** – poor localised mining conditions in two mining panels reduced production, despite some productivity improvement

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

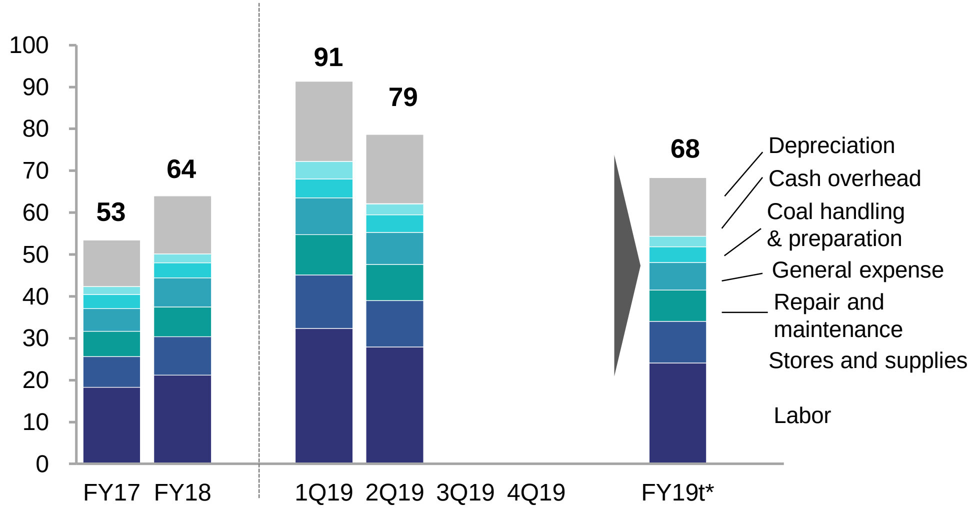
Australia coal: financial summary

FINANCIAL SUMMARY

Unit: A$ M	2Q19	1Q19	QoQ	2Q18	YoY
Sales (Mt)	**2.9**	2.0	39%▲	2.9	27%▼
ASP (A$/t)	**100**	99	2%▲	95	6%▲
Sales revenue	**290**	206	41%▲	378	23%▼
EBITDA	**20**	65	69%▼	110	82%▼

AVERAGE PRODUCTION COST[1]

Unit: A$/t



Comments

- Continuing stable ASP with good domestic prices, with export prices lower in US$ but benefiting from a lower A$ exchange rate.
- Increased production, stock draw-down and traded coal resulted in higher sales volumes and revenue.
- Poor mining conditions at Mandalong and Myuna, and approval delays at Airly, impacted operating cost per tonne.
- Looking forward:
  - Increased production volumes, with ***Airly*** Narrow Panel Extraction (NPE) mining having commenced in 2Q19.
  - ***Clarence*** returns to higher production levels – on full extraction over 3&4Q19.
  - Strata conditions improving as ***Mandalong*** moves from first of new-Mandalong South longwall blocks.
  - ***Myuna*** has successfully developed through a major fault zone, improving future mining conditions.
  - ***Springvale*** moving to next longwall panel in 3Q19 with improved equipment reliability and production rates expected.
  - Continue to optimise revenue by moving sales between domestic and export markets.
  - Continue development of digital technology tools to facilitate operating excellence.

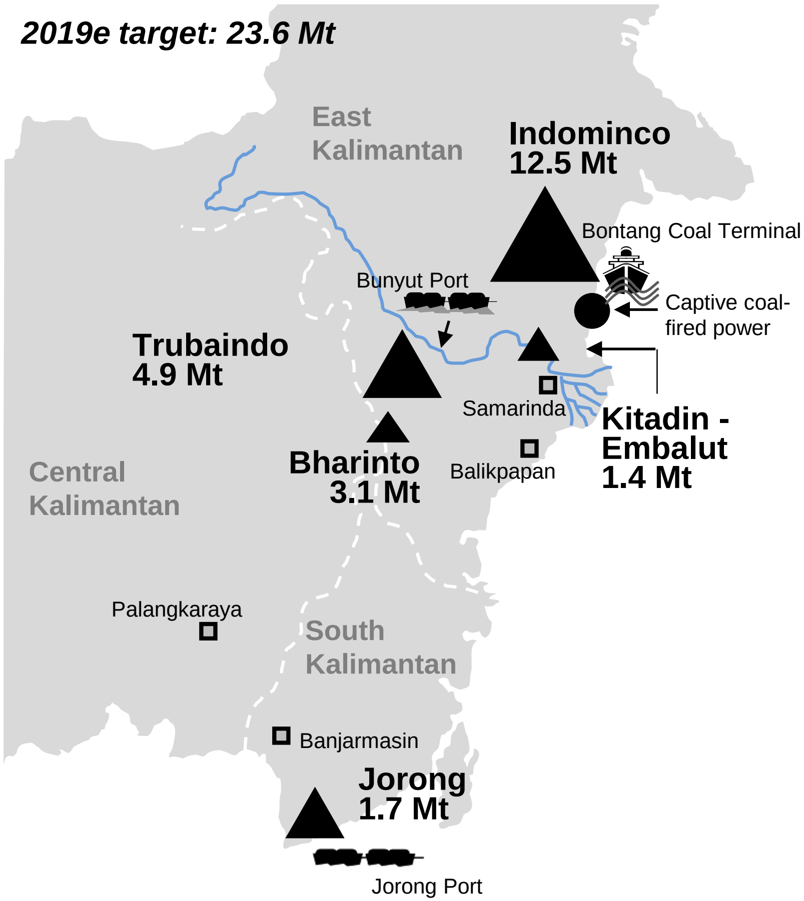
OUR WAY IN ENERGY

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)

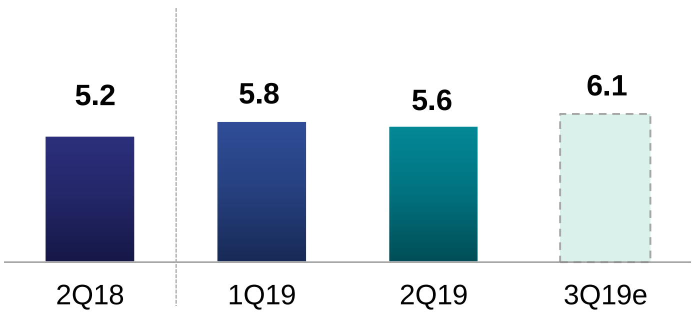
2019e target: 23.6 Mt



QUARTERLY OUTPUT (100% BASIS)

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

-3% QoQ
+8% YoY



	2Q18	1Q19	2Q19	3Q19e
Average strip ratios (bcm/t)	10.6x	13.2x	11.6x	11.1x

Key updates

- Indominco: 2Q19 output was slightly lower than target of 3.2 Mt due to weather condition at Indominco area
- Trubaindo: achieved target output of 1.1 Mt
- Bharinto: achieved target output of 0.7 Mt
- Embalut: achieved target output of 0.3 Mt
- Jorong: achieved target output of 0.4 Mt

Note: *CV figures are air-dried basis

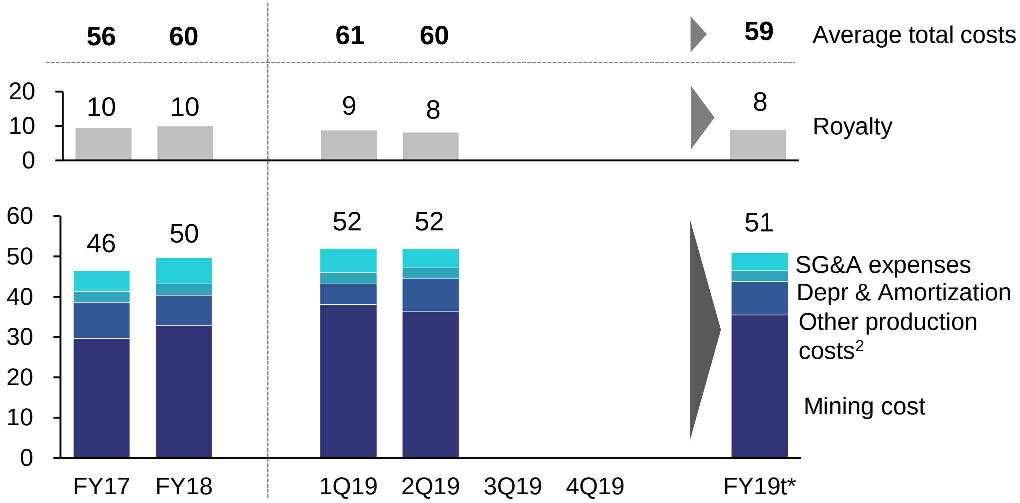
Indonesia coal: financial summary

FINANCIAL SUMMARY

Unit: US$ M	2Q19	1Q19	QoQ	2Q18	YoY
Sales (Mt)	**6.3**	6.0	6%▲	5.3	21%▲
ASP (US$/t)	**67**	71	6%▼	78	15%▼
Sales revenue	**440**	453	3%▼	431	2%▲
EBITDA	**54**	72	25%▼	93	42%▼

AVERAGE TOTAL COST[1]

Unit: US$/t



Comments

- Higher sales in 2Q19 across all mines
- ASP was impacted by softening coal market prices
- Average total cost slightly lower than 1Q19 mainly due to lower stripping ratio as a result of mine plan optimization to counter the effect of decline in global coal price

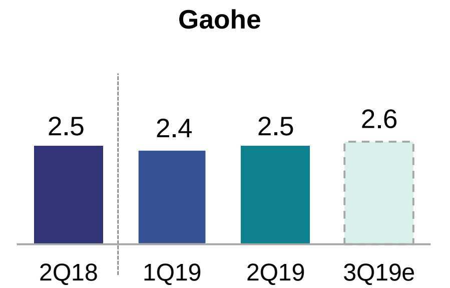
Note: 1 Coal business only, 2 Repair and maintenance, salaries and allowances, inventory adjustment, others etc.,* Indicative target

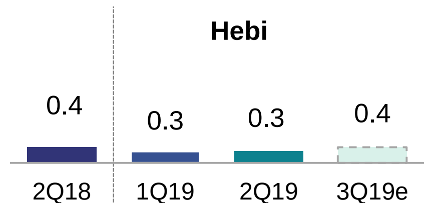
China and Mongolia coal summary

CHINA COAL 2019 PRODUCTION*

Unit: Mt ROM

2019 target: 11.4 Mt





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

GAOHE'S FINANCIAL SUMMARY

Unit: US$ M	2Q19	1Q19	QoQ	2Q18	YoY
Sales (Mt)	**2.3**	2.1	7%▲	2.4	6%▼
ASP (US$/t)	**94**	91	3%▲	96	2%▼
Sales revenue	**211**	196	8%▲	229	8%▼
COGS (US$t/)	**43**	55	22%▼	51	16%▼
EBITDA	**131**	95	38%▲	126	4%▲

GAOHE OPERATIONAL UPDATES

- Stable production with continued focus on safety
- Sales in Q2 goes up because of higher demand
- Expected production and sales in Q3 higher because of high demand and production resumption during hot season.

HEBI OPERATIONAL UPDATES

- Lower production due to panel 2509 hit fault zones, and produce rocks.
- Continue to focus on safety and environment improvement measures to make sure the production is stable

MONGOLIA PROJECTS UPDATES

<u>Tsant Uul</u>

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

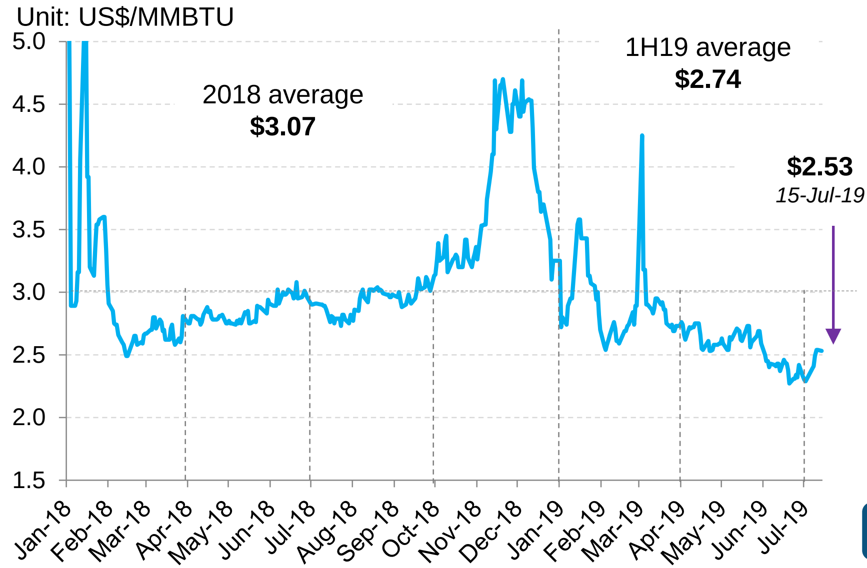
<u>Unst Khudag and Altai Nuurs</u>

- Preliminary feasibility study for UK coal conversion
- Received MRPAM[1] approval of Feasibility Study for AN Coal Fired Power Plant
- Received approval DEIA[2] report for AN Coal Fired Power Plant from MEGD[3]

Note: 1 Mineral Resources and Petroleum Authority of Mongolia, 2 Detail Environmental Impact Assessment, 3 Ministry of Environment and Green Development

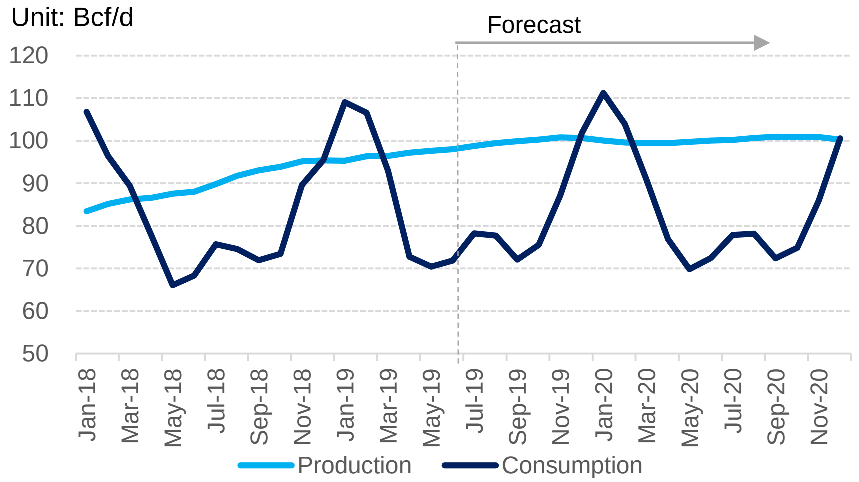
U.S. gas market update

AVERAGE HENRY HUB PRICE AS OF 15 Jul-19

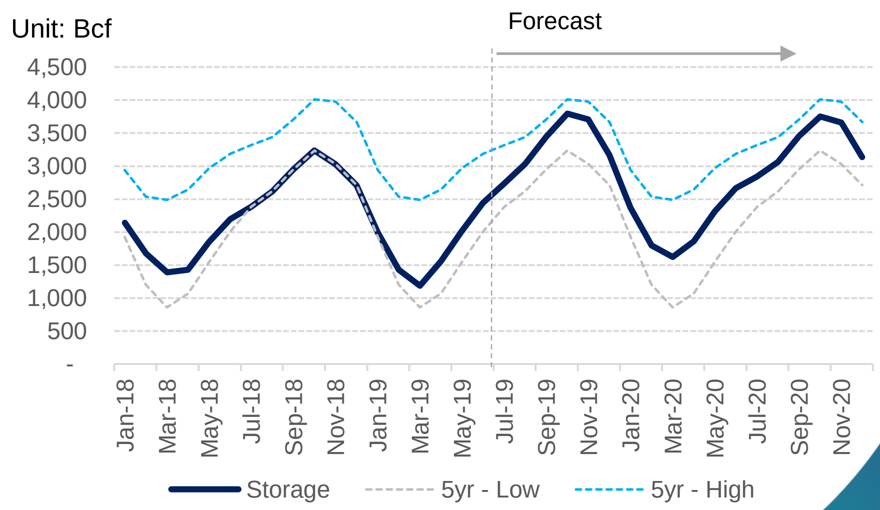


- **Gas Price:** Henry Hub price averaged around $2.74 per MMbtu in 1H19 which was lower than the LTM average of around $3.05 per Mmbtu
- Natural gas injections have outpaced the five-year average during 2Q19, bringing storage levels very close to the 5-year average. The high injection rate reflects relatively mild temperatures, moderated demand for heating in the US early in the quarter and for cooling during June.
- **Outlook:** Production growth is expected to decelerate in coming months reflecting lower forecast prices, and adjustment to supply-demand balance

U.S. TOTAL NATURAL GAS PRODUCTION – CONSUMPTION



U.S. STORAGE LEVEL



Source: EIA

Gas business 2Q19 performance

1H19 EBITDA increased YoY despite lower HH prices and sale volume supported by improving effective price and operational efficiency. Recorded gain from hedging protection of around US$6 M in 2Q19 reflected in the financial statement.

SALES VOLUMES

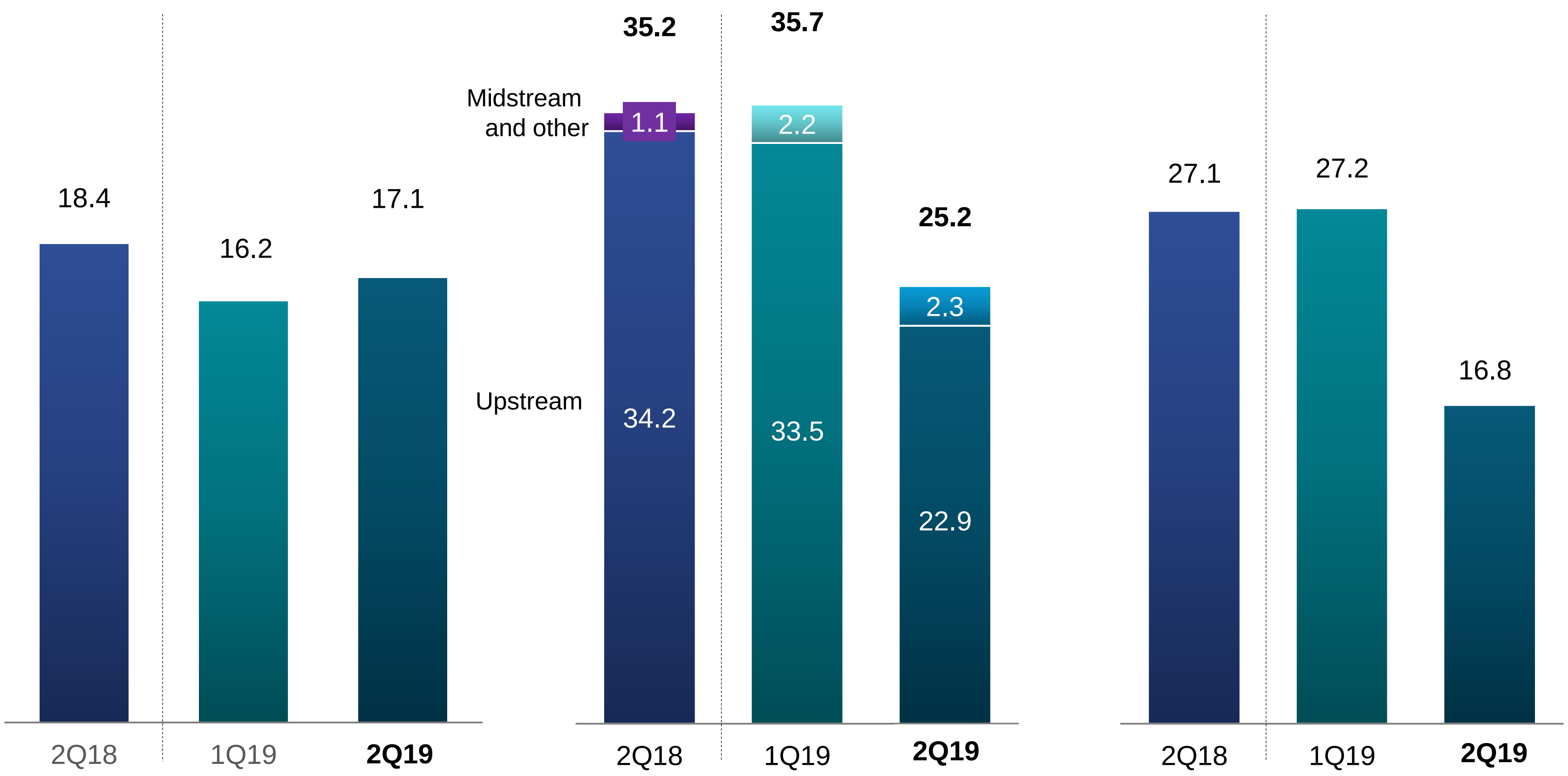
Unit: Bcf [1]

TOTAL REALIZED REVENUE

Unit: US$M

EBITDA

Unit: US$M



Note: 1 Bcf = Billion cubic feet

Banpu Power 2Q19: thermal power

THAILAND

BLCP

Consistent operational performance resulted in strong earnings contribution

- EAF* reported at 100%
- EBITDA of THB 1.0 Bn, +7% QoQ
- Profit contribution of THB 0.4 Bn, -10% QoQ

LAOS

Hongsa

Higher reliability with smooth operation among 3 units result in better earning contribution

- EAF reported at 86%
- EBITDA of THB 3.8 Bn, improve by 23% QoQ, mainly from saving on SG&A cost
- Profit contribution of THB 1.0 Bn

CHINA

China CHP

Performance reflect seasonal demand while overall sales volume increase from industrial growth

- Reported stable revenue of THB 1.3 Bn, while Gross profit slightly improved benefit from softer domestic coal price

SLG

- Construction progress reached 59%
- Expected COD in 2H20 to synchronize with transmission line construction completion

Note: *EMJ = Extended Major Overhual, ** 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 2Q19: renewable power

CHINA

China Solar

Better performance from high irradiation during summer supported by favorable weather condition.

- Average capacity factor reported at 18%, +5% QoQ
- Power sold up by 40% QoQ
- Reported revenue of RMB 49 M, up 45% QoQ

JAPAN

Japan Solar

Performance improved due to high capacity factor from high irradiation, reflect in higher electricity generation

- Average capacity factor reported at 19%, +9% QoQ
- Power sold both QoQ and YoY mainly supported by the performance of Mukawa and Nari Aizu which was COD last year.

VIETNAM

Vietnam Wind

Progressing well on development as plan. Continue to conduct Pre-feasibility study of phase 2 and 3 (remaining 50 MW)

- Phase 1 completed Feasibility study and under EPC selection process
- Preparing for project Financing
- Expected to start phase 1 construction by end of 2019

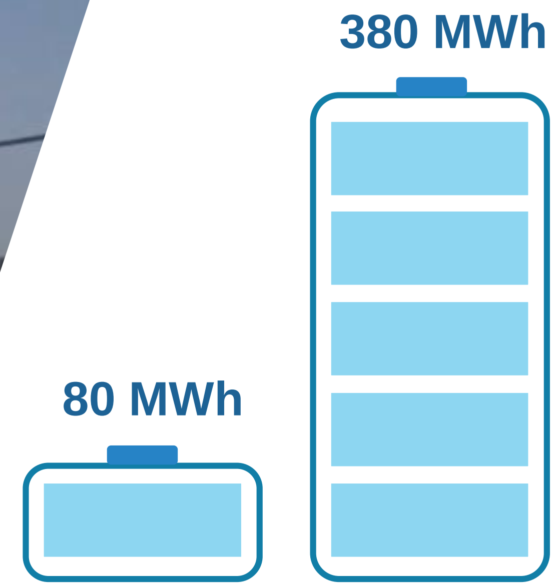
Sunseap: COD 168 MW solar farm in Ninh Thuan, Vietnam

- Sunseap has commissioned this project on June 2019
- This solar farm was jointly developed with InfraCo Asia, an infrastructure and investment company
- FiT of $9.35 cents/kWh with 20-year PPA contract
- Apart from this project, Sunseap is exploring another solar farm opportunity in Vietnam with potential aggregate of 310 MW

BPIN partnership with IMPACT Muangthong

- Banpu Infinergy has been awarded to install solar rooftop at IMPACT Muangthong's Challenger Hall parking with total of **1.06 MW**
- Expert sytem design and high-standard installation ensure best photovoltanic performance and cost efficiency
- Banpu Infinergy's solar rooftop portfolio in Thailand reached **9 MW**, with total aggregrated portfolio of over **160 MW** across Asia-Pacific

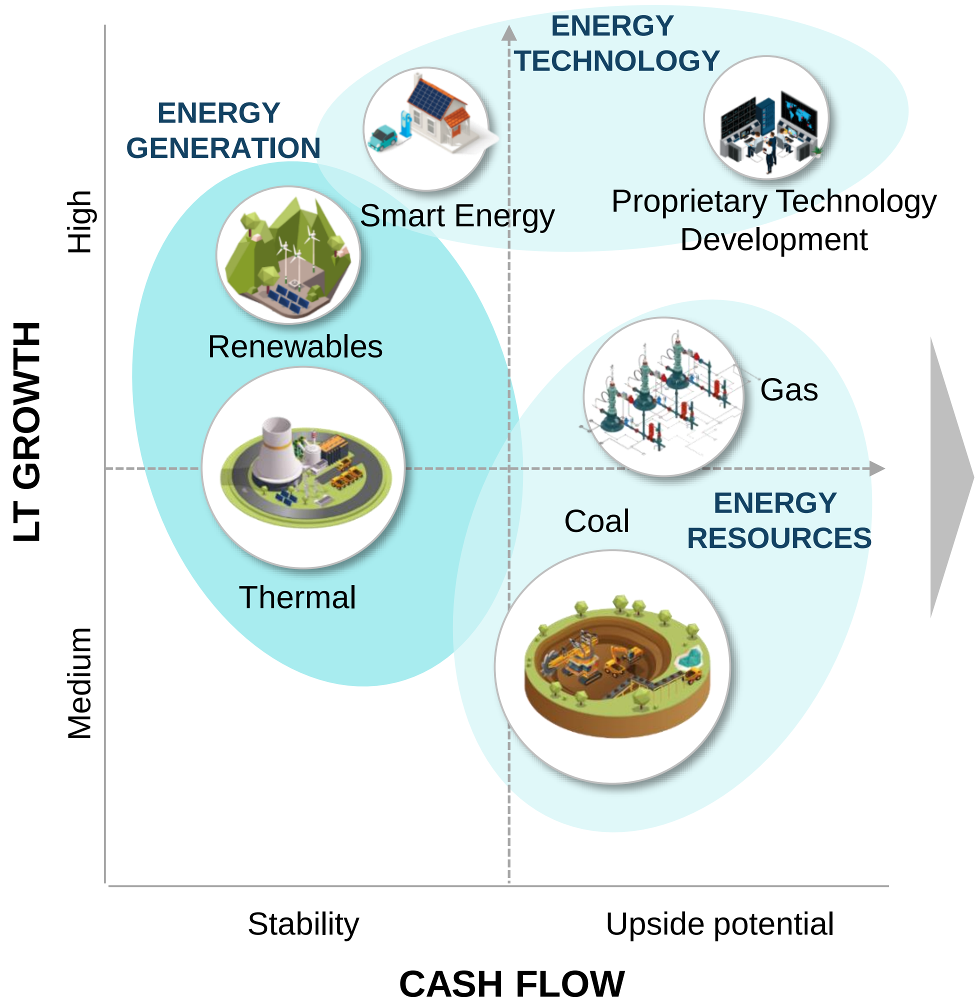
Durapower: increase production capacity to 380 MWh



- New assembly plant has increased production capacity from 80 MWh to 380 MWh
- Commenced first trial production in March, currently awaiting for final certification

Source: 5th DPH BoD Meeting on 28 May 2019

Key takeaway: unique Asia-Pacific 'energy transition' play



- Banpu offers investment community a unique *'energy transition'* play*
- Group value structure evolving from conventional energy base to rapidly growing focus on Greener Smarter growth businesses
- Financial returns provide blend of cash-cow businesses, upside potential and long term value growth
- Exceptional geographic reach with a foothold in 10 Asia and trans-Pacific countries
- Important energy value-chain and energy ecosystem synergy value-capture opportunities: from energy resources, through generation to energy technology businesses
- Takeaway: no other listed company offers this combo-story !

*Note: 'Rome was not built in a day !'

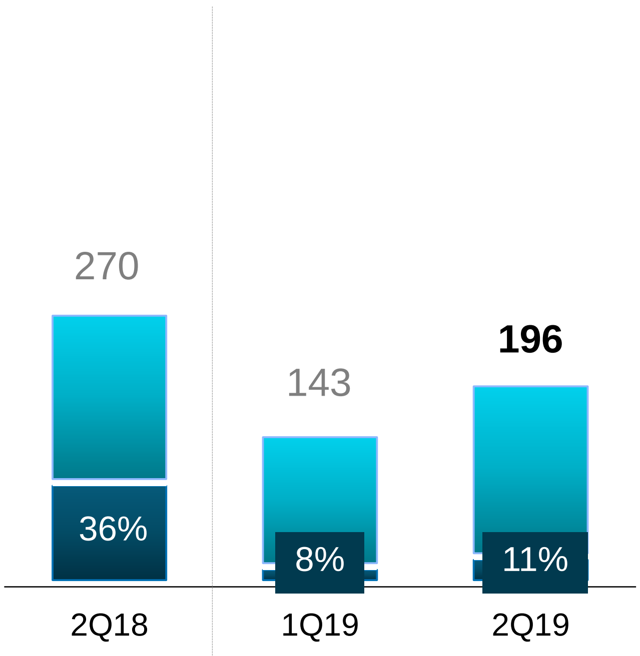
APPENDIX

Banpu consolidated coal gross margin 2Q19: 23%

AUSTRALIA COAL

USD million

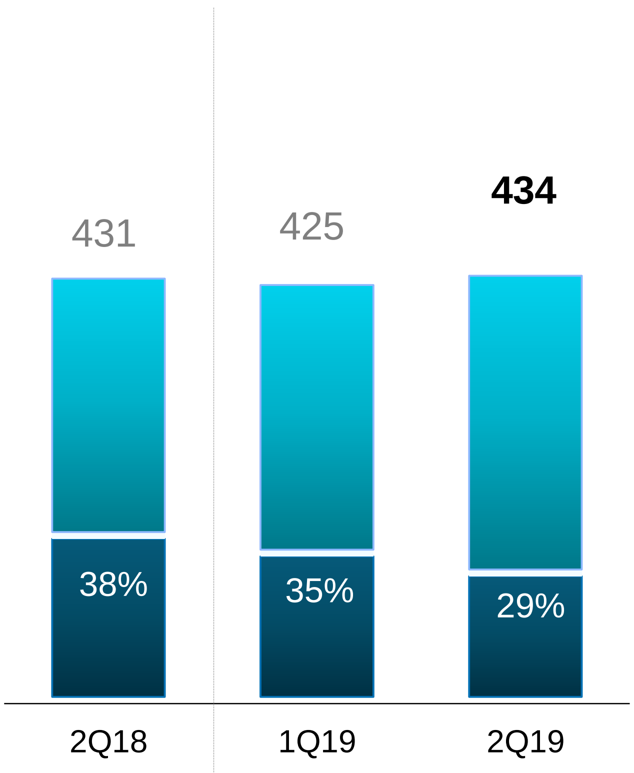
Australia coal gross margin: 11%



INDONESIA COAL

USD million

Indonesia coal gross margin: 29%

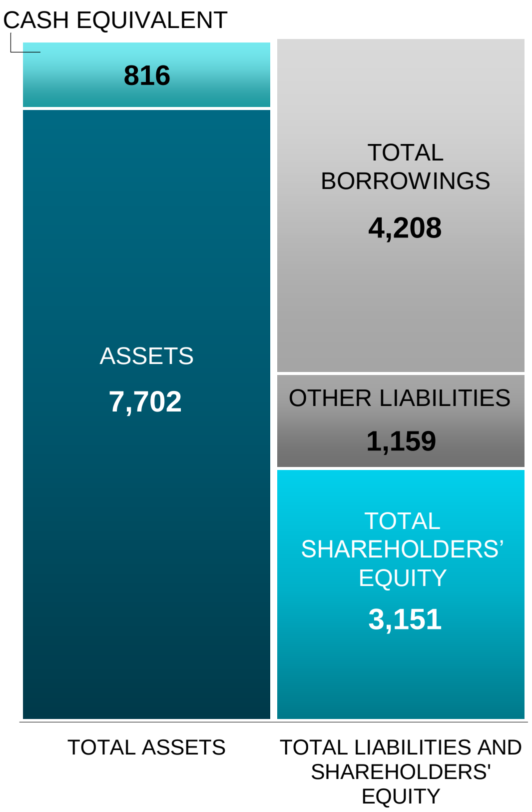


Coal sales Gross margin

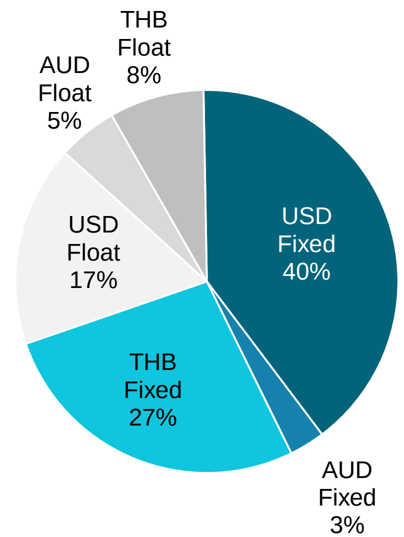
Banpu consolidated financial position

2Q19 CONSOLIDATED FINANCIAL POSITION

USD million

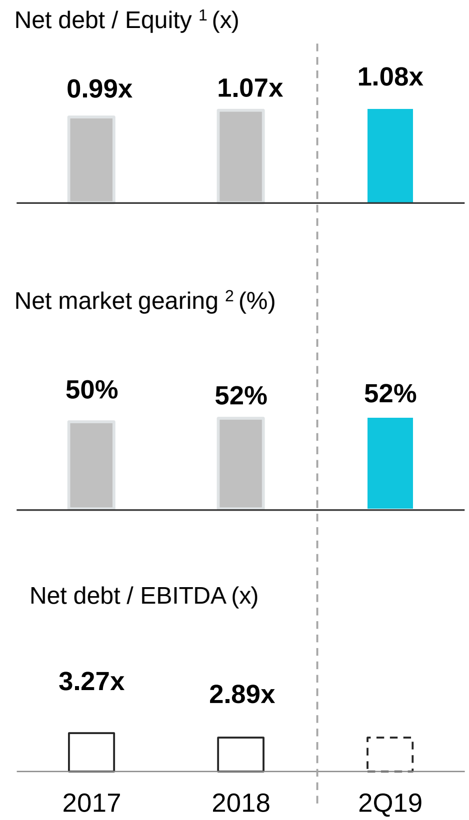


DEBT FX STRUCTURE



Total gross debt: US$4.2 billion
As of 30 June 2019

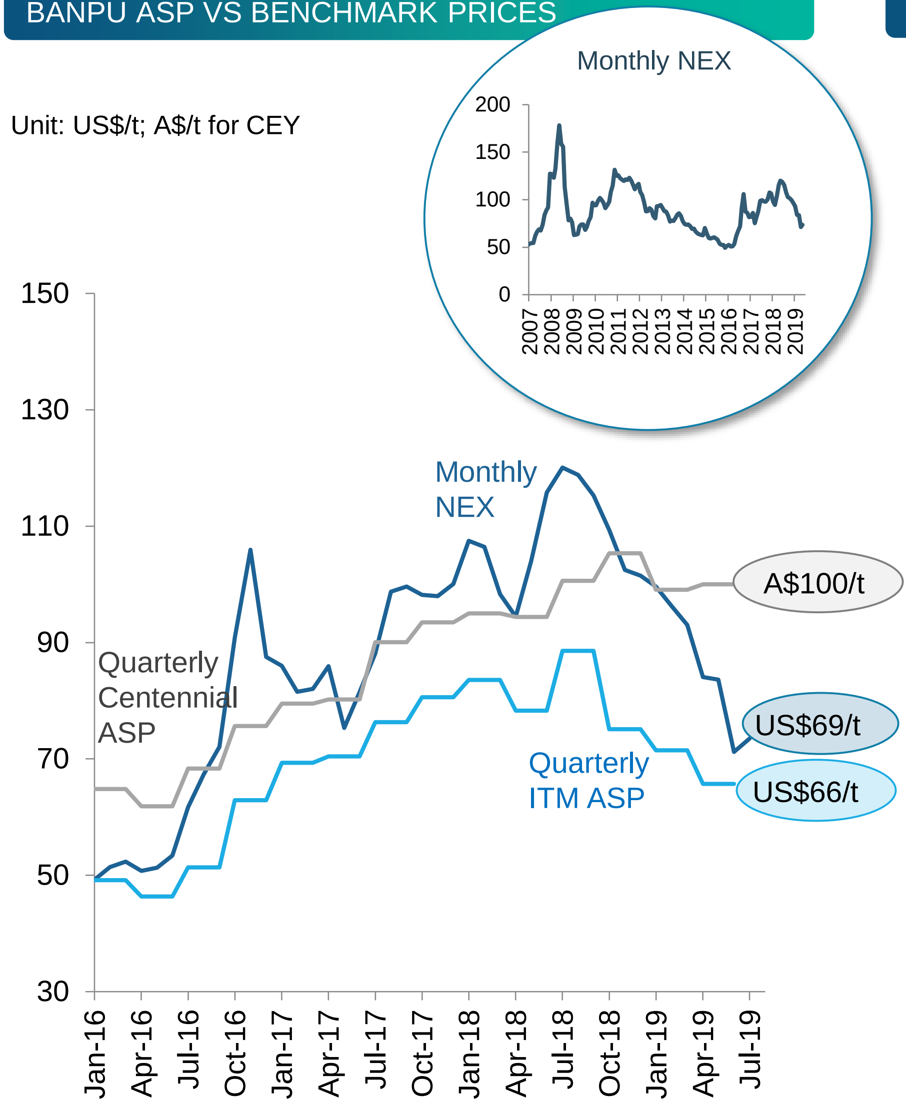
GEARING RATIOS



Note:
1 Net debt to book value of shareholders' equity
2 Net debt to enterprise value (enterprise value
= net debt + market capitalization as at 30 June 2019)

Banpu ASPs vs thermal coal benchmark prices

BANPU ASP VS BENCHMARK PRICES



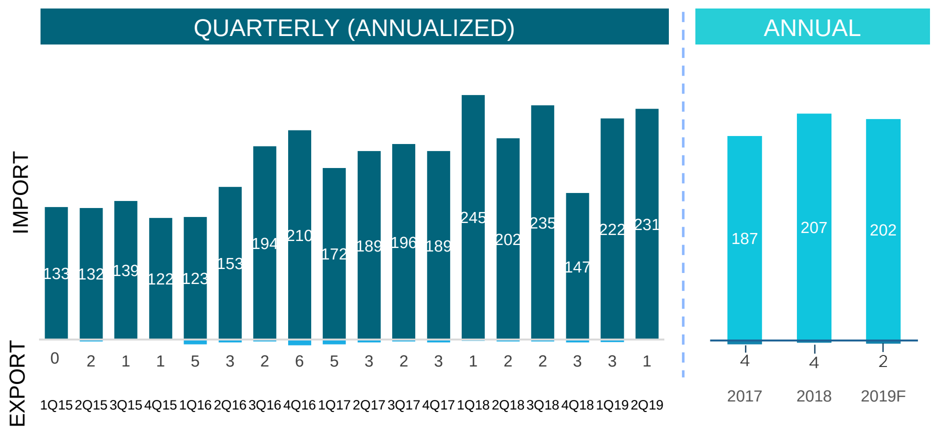
COMMENTS

- 2Q19 ASP improve at CEY, weak price compensate with weak AUD and good domestic spot demand. Weaker for ITM, shadow the global coal price movement
  - ITM ASP: US$66/t* (-7% QoQ)
  - CEY ASP: A$100/t* (+2% QoQ)
  - NEX (August 9, 2019)**: US$69/t
- Mild winter and seems Mild summer, & economics slowdown reduces energy demand
- Good output in Indonesia due low rainfall intensity, Indonesia encourage production for GDP and trade income.
- Divergence of ICI indices against Australian retracted as expected to much smaller gap

Note: * Included post shipment price adjustments as well as traded coal
** The Newcastle Export Index (previously known as the Barlow Jonker Index – BJI)

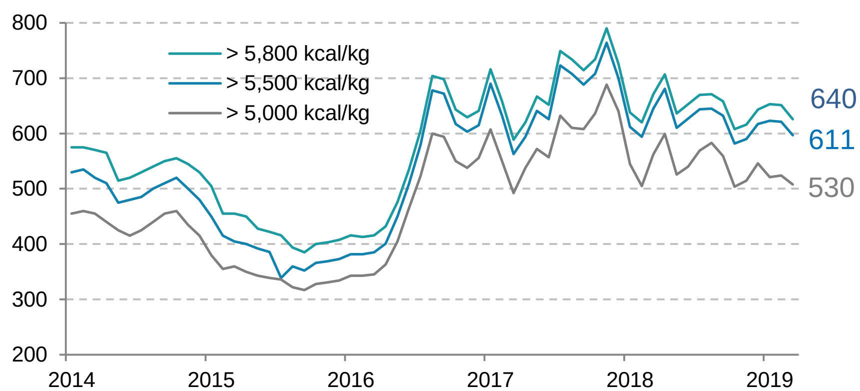
China: weather drives thermal coal demand in summer

CHINA THERMAL COAL IMPORTS/EXPORTS*
Unit: Mt



Sources: Banpu MS&L

CHINA DOMESTIC COAL PRICES
Unit: RMB/t



2Q19

- Power generation increased in Q2 due to stable economy.
- Mild weather and strong hydro curtails thermal coal demand especially in the coastal area.
- Domestic coal prices remained relatively high on tight supply from safety check.
- Strong Q2 coal import as buyers accelerated imports on growing worries that Chinese government will tighten import restrictions in 2H
- The main drivers of import strength is prices, which appeared to be cheaper than domestic coal, and less availability of local coal.
- Weak demand and high imports keep coal inventories at coastal power plants high, limited restocking.
- Imports restriction for Australian coal continued which open opportunity for Colombian coal

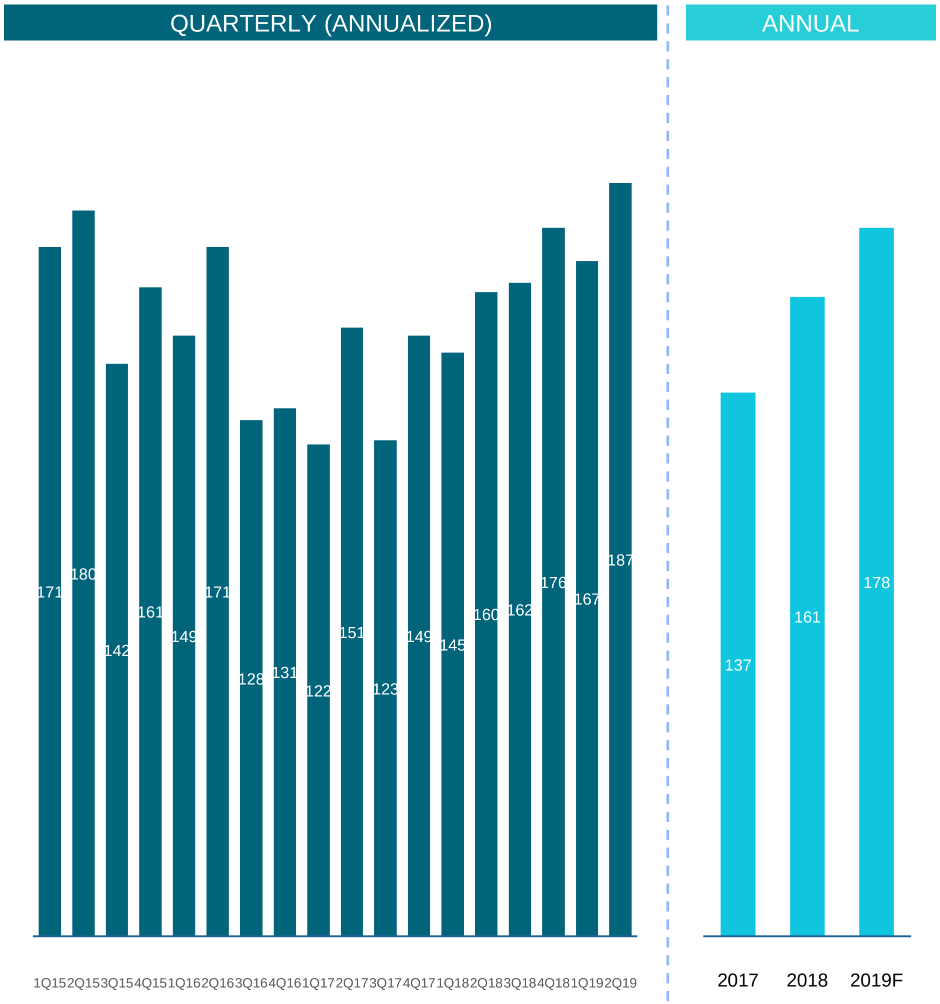
Outlook

- China registered GDP growth 6.2% in Q2 and likely to be stable into 2H which shouldn't have significant impact to coal demand. The weather will have a greater influence.
- Domestic supply improved significantly in June and likely to continue.
- China is expected to intensify its coal import controls from August, aim to maintain import volume the same level of last year.

Note: * includes lignite but excludes anthracite imports/exports
Source: www.sxcoal.com/cn 17 July 2019

India: continued reliance on imports

INDIA THERMAL COAL IMPORTS*
Unit: Mt



<u>2Q19</u>

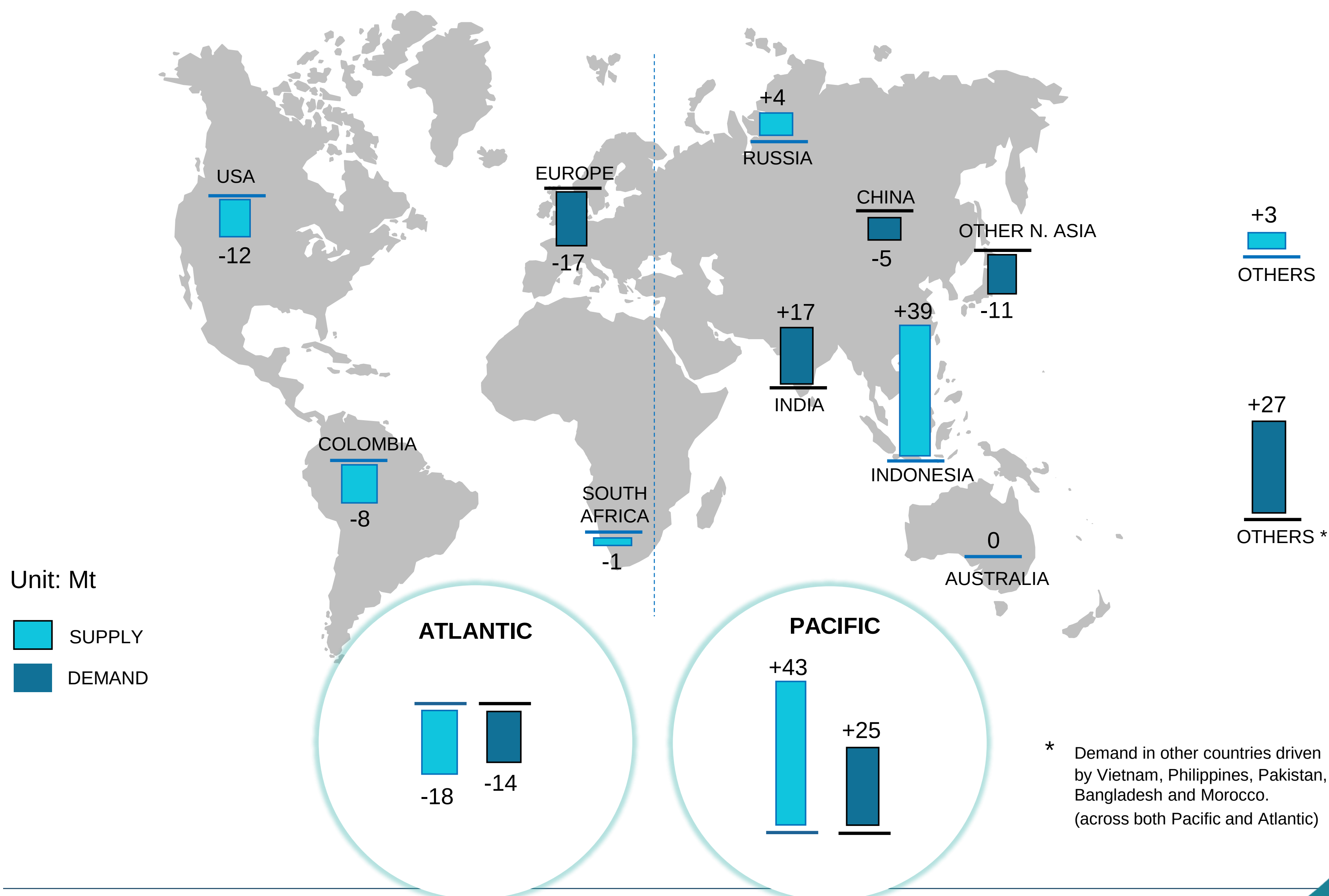
- Strong industrial activity boosted power output.
- Electricity generation increased by 7% year-on-year in Q2, which majority of it met by increased generation from hydro and renewables.
- Coal-based generation increased around 5% year-on-year.
- Thermal coal import hit record high in Q2 supported from the realization tenders, increased generation from imported coal-based power plants and strong non-power sector demand.
- High domestic coal production in Q1, weak demand and high coal imports resulted in a surged in coal stocks.
- Coal India's production slowed down in Q2 as it prioritized diluting stocks.

<u>Outlook</u>

- Coal India Limited and power plants are holding comfortable levels of stock which will lead to more supply in the spot market.
    - ☞ may reduce the non-power sector's reliance on imports but subject to prices.
- Coal import growth is likely to slow in 2H due to high stocks and no new tenders from state-owned power company.
- Potential low rainfall over Q3 could result in extra demand for coal.

Note: * includes lignite grade imports
Sources:: Commodity Insights, Banpu MS&L

Regional thermal coal market: 2019e vs 2018



* Demand in other countries driven by Vietnam, Philippines, Pakistan, Bangladesh and Morocco.
(across both Pacific and Atlantic)

Coal quarterly output summary

AUSTRALIA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON EQUITY BASIS					
Mines	**CV (kcal/kg)***	**4Q18**	**1Q19**	**2Q19**	**3Q19e**
Western operations		**1.0**	**1.1**	**0.8**	**1.4**
Springvale	6,700	0.3	0.5	0.3	0.2
Clarence	6,700	0.4	0.4	0.4	0.7
Airly	6,700	0.3	0.2	0.2	0.5
Northern operations		**2.4**	**0.9**	**1.4**	**2.1**
Mandalong	6,700	1.9	0.5	1.0	1.5
Myuna	6,700	0.5	0.4	0.4	0.6
Total Australia coal		**3.4**	**2.0**	**2.2**	**3.5**

INDONESIA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON 100% BASIS									
Mines	**CV (kcal/kg)***	**4Q18**		**1Q19**		**2Q19**		**3Q19e**	
		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	17.1	0.5	14.9	0.4	26.1	0.5	19.3
Indominco – East block		3.4	9.7	2.8	13.7	2.7	9.3	2.4	10.3
Trubaindo	6,550 – 6,700	1.3	11.1	1.1	12.9	1.1	13.5	1.5	11.8
Bharinto		0.7	10.2	0.6	12.2	0.7	10.2	0.9	9.9
Kitadin-Embalut	5,800	0.2	12.8	0.4	11.9	0.3	10.1	0.3	10.9
Jorong	5,300	0.3	6.5	0.3	10.5	0.4	8.1	0.5	5.9
Total Indonesia coal		**6.4**	**10.5**	**5.0**	**13.2**	**5.6**	**11.6**	**6.1**	**11.1**

CHINA OPERATIONS: COAL OUTPUT (MT) – ROM OUTPUT ON 100% BASIS					
Mines	**CV (kcal/kg)***	**4Q18**	**1Q19**	**2Q19**	**3Q19e**
Gaohe		2.7	2.4	2.5	2.6
Hebi		0.3	0.3	0.3	0.4
Total China coal		**3.0**	**2.7**	**2.8**	**3.0**

Note: *CV figures are air-dried basis

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 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

2019 indicative guidance

ILLUSTRATIVE AND INDICATIVE ONLY

UNIT GUIDANCE (US$/ MCF)		COMMENTS
REVENUE		
Reserves (Bcf)	*1,250*	
Production volume (Mmcfd)	*200-300*	
Average differential to Henry Hub	$0.5-$0.8	Difference selling points and (NYMEX basis) and Henry Hub
G&C costs	$0.40-0.65	Gathering and compression costs (to intrastate pipelines)
Transportation	$0.2	
Pipeline revenue	$0.05-$0.15	Applicable to Chaffee Corners volume only
COSTS		
Lease operating costs	$0.2-$0.3	Main component of operating costs
G&A	$0.25-$0.35	General and administrative costs
Taxes	21%	Currently benefit from tax shield due to accelerated DD&A
DD&A	$0.75-0.85	Depreciation, depletion and amortization
Drilling and completion costs	$0.8-$1.2	Drilling operation and costs incurred when making a well ready for production

NET BACK

Key external and corporate events

EXTERNAL EVENTS

INDIRECT

- BoT maintains policy rate at 1.75%
- First trading day after election, SET declined by 1.2%
- FED maintains policy rate at 2.25-2.5%
- BoT maintains policy rate at 1.75%

DIRECT

- Thai Baht outperformed regional peers benefitting from strong economy, and account surplus
- China's northern port of Dalian has banned imports of Australian coal
- Thai Baht continued to strengthen and achieved 6-year high against US dollar

1Q19 | **2Q19**

CORPORATE EVENTS

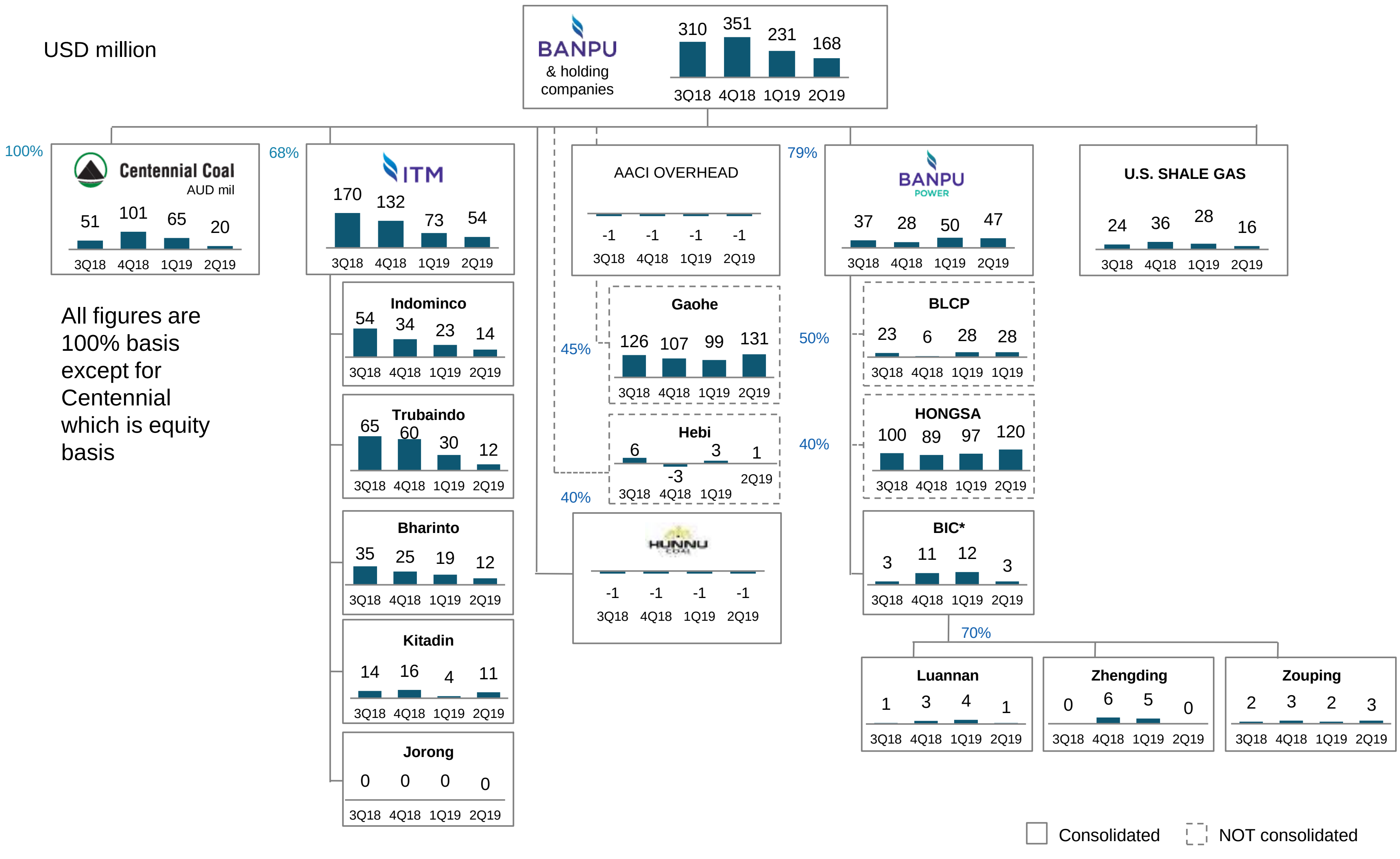
- Announced to pay 2H18 dividend of THB0.35/sh
- 4Q18 results presentation
- 1Q19 results presentation
- Issued debenture worth THB 10 Billion

Fx impact analysis guidance on P&L

CURRENCY EXPOSURE	NPAT IMPACT 2Q19 (US$M)	APPROXIMATE FX EXPOSURE (US$M) NET LIABILITY / NET ASSET	NPAT 5% SENSITIVITY 3Q19 (US$M) *Assuming 5% depreciation of local currencies against USD*
Banpu: THB bond and others	**-41.5**	**-1200**	THB & OTHER **60** *▪ BOT forecast lower growth 3.3% in 2019*
ITMG: IDR asset and liabilities	**0.1**	**-15**	IDR 1 *▪ BI forecast 2019 growth range of 5.0-5.4%*
CEY: USD asset	**0.6**	**4**	AUD 0.2 *▪ RBA forecast lower growth 2.5% in 2019 and maintain 2.75% in 2020*
Net	**-40.8**		NET **61**

Banpu group EBITDA breakdown

USD million

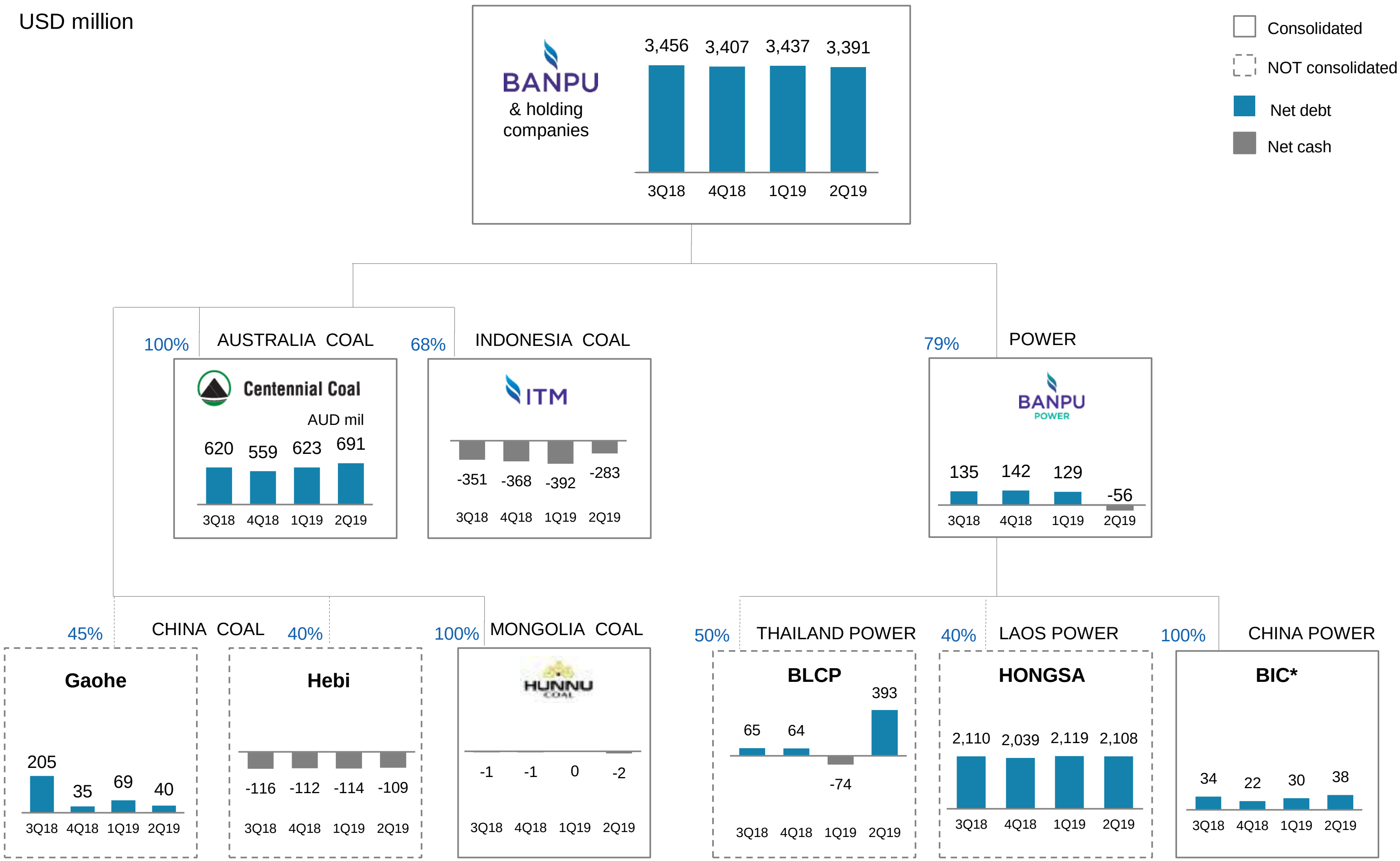


All figures are 100% basis except for Centennial which is equity basis

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	2Q19	1Q19	2Q18	QoQ%	YoY%
Total sales revenues*	**731**	**699**	**813**	+5%	-10%
Sales revenue – Coal	645	575	706	+12%	-9%
Sales revenue – Gas	25	36	35	-29%	-28%
Sales revenue – Power	41	56	43	-27%	-4%
Cost of sales	(569)	(506)	(521)		
Gross Profit*	**162**	**193**	**292**	**-16%**	**-45%**
Gross profit – Coal	148	158	263	-6%	-44%
Gross profit – Gas	8	18	16	-55%	-50%
Gross profit – Power	6	13	6	-52%	3%
GPM	*22%*	*28%*	**36%**		
GPM – Coal	*23%*	*27%*	37%		
GPM – Gas	*32%*	*51%*	47%		
GPM – Power	*16%*	*24%*	15%		

Note: * including other businesses

Banpu consolidated : operating profit

USD million	2Q19	1Q19	2Q18	QoQ%	YoY%
Gross Profit	**162**	**193**	**292**	-16%	-45%
GPM	***22%***	***28%***	***36%***		
SG&A	(88)	(83)	(92)		
Royalty	(63)	(61)	(63)		
Income from associates	77	62	93		
Other income and Dividend	10	52	5		
Mining property	(9)	1	(12)		
EBIT	**89**	**164**	**224**	-46%	-60%
EBIT – Coal	44	105	151	-59%	-71%
EBIT – Gas	3	14	13	-78%	-76%
EBIT – Power	42	46	61	-7%	-31%
EBITDA	**168**	**231**	**290**	-27%	-42%
EBITDA – Coal	105	153	197	-31%	-46%
EBITDA – Gas	16	28	27	-41%	-40%
EBITDA – Power	47	50	66	-6%	-29%

Banpu consolidated : net profit

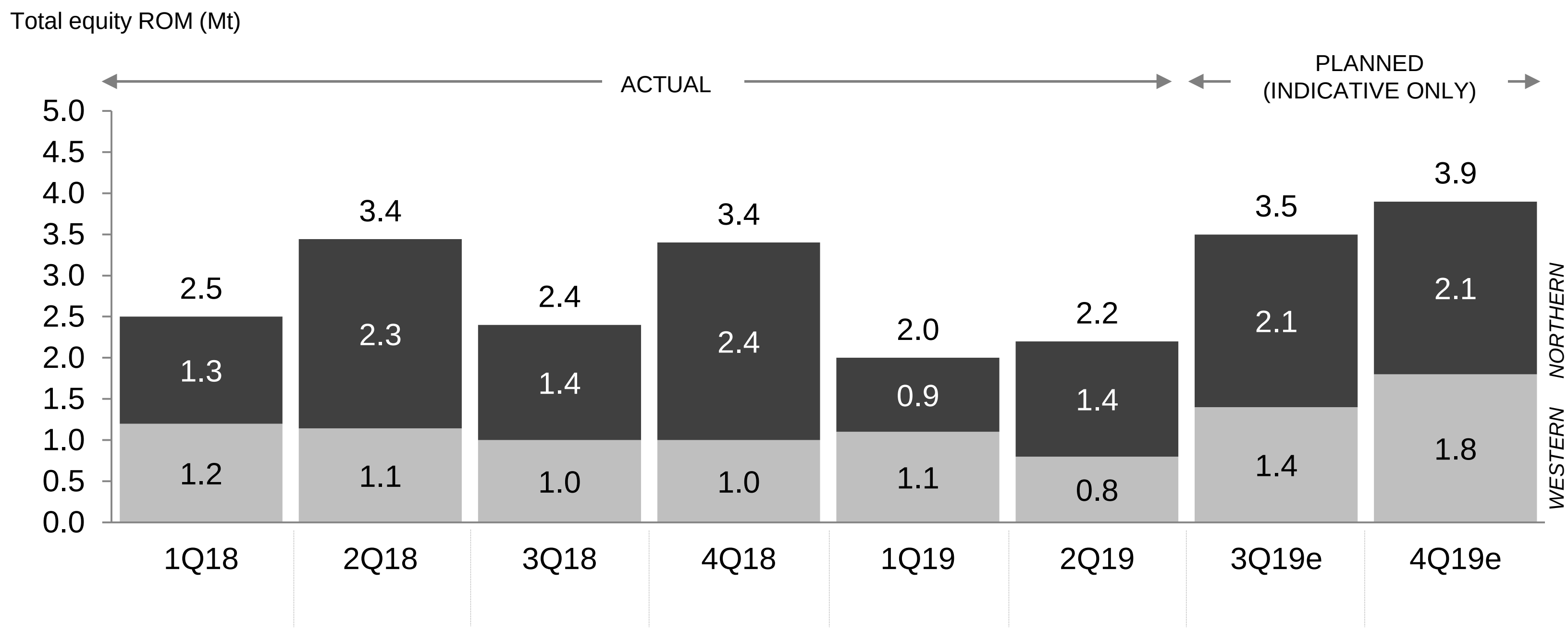
USD million	2Q19	1Q19	1Q18	QoQ%	YoY%
EBIT	**89**	**164**	**224**	-46%	-60%
Interest expenses	(46)	(45)	(43)		
Financial expenses	(1)	(1)	(2)		
Income tax (core business)	(15)	(32)	(20)		
Minorities	(17)	(21)	(27)		
Net profit before extra items	**9**	**65**	**132**	-86%	-93%
Non-recurring items*	3	(4)	(3)		
Gain (Loss) on Derivatives Transactions	15	1	(3)		
Income tax (non - core business)	(2)	(11)	(1)		
Deferred tax income (expenses)	18	(4)	(38)		
Net profit before FX	**44**	**46**	**88**	-6%	-50%
FX translation	(41)	(17)	37		
Net Profit	**3**	**29**	**124**	-91%	-98%
EPS (US$/share)	0.001	0.006	0.024		

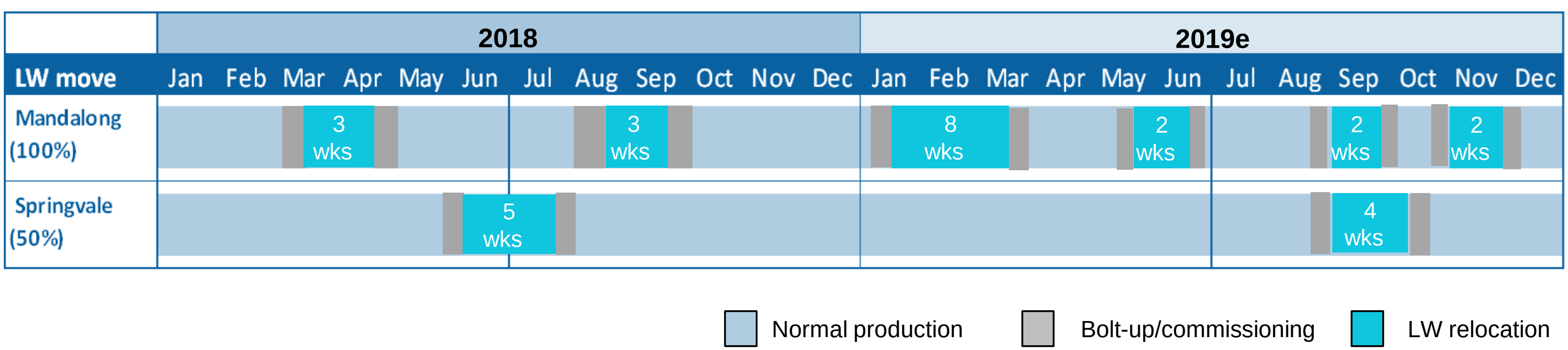
Note: * income from non-core assets and other non-operating expenses

Centennial : Income statement

USD million	2Q19	1Q19	2Q18	QoQ%	YoY%
Sales volume (Mt)	**2.9**	**2.1**	**4.0**	39%	-27%
Sales revenue	200.1	146.7	288.0	36%	-31%
Cost of Sales	(179.3)	(135.4)	(187.4)		
Gross Profit	**20.9**	**11.2**	**100.5**	86%	-79%
GPM	10%	8%	35%		
SG&A	(26.2)	(23.6)	(30.5)		
Royalty	(11.8)	(8.7)	(15.2)		
Other income	0.1	44.1	1.8		
Other expenses	-	-	-		
EBIT	**(17.1)**	**23.2**	**56.7**	na.	na.
Interest expenses	(5.6)	(5.2)	(6.4)		
Financial expenses	(0.5)	(0.6)	(1.6)		
Gain (loss) on exchange rate	0.6	(0.3)	0.9		
Gain (loss) on derivative	2.2	0.2	(2.9)		
Corporate income tax	6.2	(5.2)	-		
Deferred tax income	-	-	(14.4)		
Net Profit	**(14.3)**	**12.1**	**32.3**	na.	na.

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.

BANPU