

# **Vedanta Limited** Q2 FY2018 Results

2 November 2017





**Elements for a Sustainable Future** 

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# **Strategic Update Kuldip Kaura**

**Chief Executive Officer** 





**Value Creation** 

# Sustainable Development – Focused on Building a Zero Harm Culture



## Safety

- Regrettably 2 fatalities from 2 incidents during H1 FY18
- High Potential (HIPO) Incident reduced by 46% in H1
- Reinvigorated Leadership Action Program initiated towards vision of Zero Harm, Zero Waste and Zero Discharge

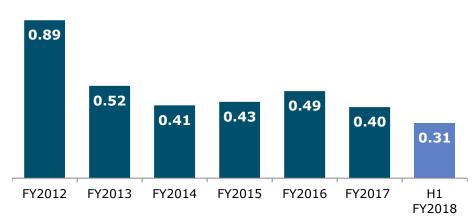
#### Environment

- Wall of ash dyke at Jharsuguda breached, spilling ash on adjacent land; most of the land belongs to the company
  - Third party assurance program to be launched on tailing/ ash management practices across the group
- Contaminated site management standard rolled out for the group

## Social Licence to Operate

- Improved position at #15 in ranking given by Dow Jones
   Sustainability Index from #17 last year while HZL secured rank #11
- 95 Nandghars constructed benefitting 2500 children and
   1500 women; pilot complete and now in process to scale up

### **LTIFR** – (per million man-hours worked)



Note: ICMM 2014 methodology adopted from FY2016 onwards



HZL's corporate office - Yashad Bhawan is Rajasthan's First CII-IGBC Certified Platinum Green Building

# **Q2 FY2018 Results Highlights**



### **Operations: Record volumes with ramp-up on track**

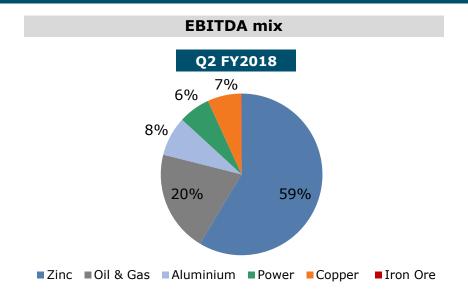
- High zinc-lead and record silver volume at Zinc India
- Highest quarterly production at BMM in last 4 years;
   Gamsberg on track for mid CY18 production
- Aluminium smelters continue ramp up, with record quarterly production and current run-rate of 1.6mtpa
- High PAF at TSPL of 87%, following the shutdown in Q1
- Record quarterly copper cathode production at Copper India

### Financial: Strong free cash flow

- EBITDA at Rs. 5,776 crore, up 24% y-o-y at 35% margin
- Attributable PAT<sup>2</sup> at Rs 2,036 crore, 41% higher y-o-y
- Gross debt reduced by Rs. 11,466 crore in H1 FY2018<sup>1</sup>
- Strong FCF of Rs. 3,280 Cr in Q2
- Contribution to exchequer of c. Rs. 13,000 cr in H1 FY2018

Notes: 1. Excluding repayment of temporary borrowing by Zinc India & preference shares issued pursuant to the Cairn India merger in April

- 2. Before exceptional items and DDT
- 3. Excludes custom smelting at Copper and Zinc India operations

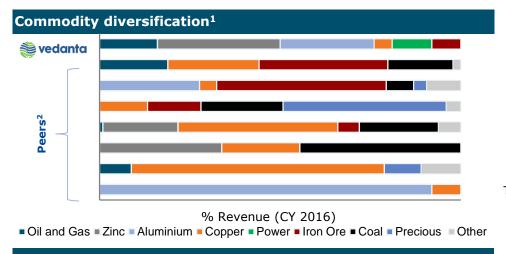


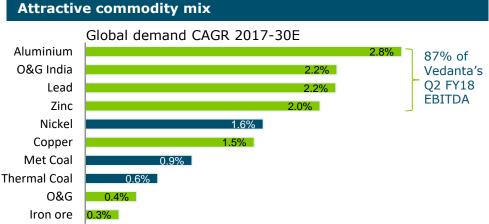
## **Key Financials**

In Rs. Crore	Q2 FY18	Q2 FY17	Q1 FY18
EBITDA	5,776	4647	4,965
Attributable PAT <sup>2</sup>	2,036	1,442	1,525
EBITDA Margin <sup>3</sup>	35%	39%	36%
Divisional EBITDA			
Zinc - India	3,001	1,977	2,369
Zinc - Intl.	389	339	321
Oil & Gas	1,176	1,047	1,385
Iron Ore	(4)	105	40
Copper - India	392	371	213
Aluminium	457	397	528
Power	366	403	110
Others	(1)	8	(1)

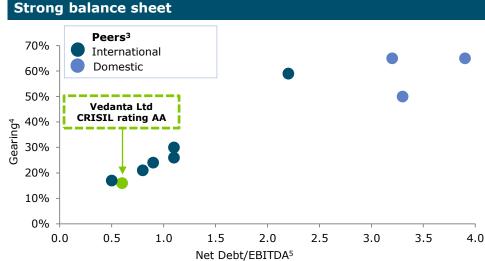
# A diversified resources company with an attractive commodity mix, market leading growth and strong balance sheet











Source: Consensus, Company filings, Bloomberg, Wood Mackenzie, US EIA, CRU, Company data for Vedanta

Notes: 1. All companies have been calenderised to a Dec YE; Glencore revenue split accounts only for their 'Industrial activities'; Revenues from copper smelting for Vedanta Ltd and Hindalco are based on benchmark Tc/Rc

- 2. Peers include BHP Billiton, Rio Tinto, Anglo American, Glencore, Teck Resources, Freeport and Hindalco
- 3. Peers include BHP Billiton, Rio Tinto, Anglo American, Glencore, Teck Resources, Freeport, Hindalco, Tata Steel and JSW Steel
- 4. Gearing is calculated as Net debt divided by the sum of Net debt and Equity (based on reported numbers)
- 5. Net Debt as per last reported, EBITDA as per CY 2017 consensus estimates

# **Capital Allocation: Focus on Shareholder Returns**



# World class assets and operational excellence to deliver strong and sustainable cash flows

# Production growth and asset optimization

#### **Strong Shareholder Returns**

- Announced dividend policy at Vedanta Ltd
- pass through of HZL's regular dividend, plus
- minimum 30% pay out of Attributable PAT (ex HZL PAT)
- HZL dividend policy minimum 30% pay out

#### **Maintain Strong Balance Sheet**

- Continued reduction of gross debt
- Target for AA+ rating from current AA rating (CRISIL)

## **Grow Existing Businesses**

- Focus on full capacity utilisation and production growth in existing businesses
- Any investment opportunities to clear hurdle rate of return

2 November 2017



# **Financial Update**

## **Arun Kumar**

Chief Financial Officer





**Empowering Growth** 

# **Q2 Financial Highlights**



- EBITDA higher 24% y-o-y and 16% q-o-q, driven by higher production volumes and higher commodity prices partially
  offset by input commodity inflation
- Gross Debt reduced by Rs. 11,466 crore<sup>1</sup> in H1 FY2018

Rs. crore or as stated	Q2 FY2018	Q2 FY2017	Change	Q1 FY2018	Change
EBITDA	5,776	4,647	24%	4,965	16%
EBITDA margin²	35%	39%	-	36%	-
Attributable PAT <sup>3</sup> (Before exceptional items & DDT)	2,036	1,442	41%	1,525	34%
EPS (Rs./share) (Before exceptional items & DDT)	5.49	4.86		4.37	
Gross Debt <sup>4</sup>	55,798	66,794		67,342	
Cash	40,206	54,833		48,318	
Net Debt <sup>5</sup>	15,592	11,961		19,024	
Net Debt/EBITDA (LTM)	0.6	0.8		0.8	
Net Gearing	16%	13%		20%	

Notes: 1. Excluding repayment of temporary borrowing by Zinc India & preference shares issued pursuant to the Cairn India merger in April

<sup>2.</sup> Excludes custom smelting at Copper India and Zinc-India operations

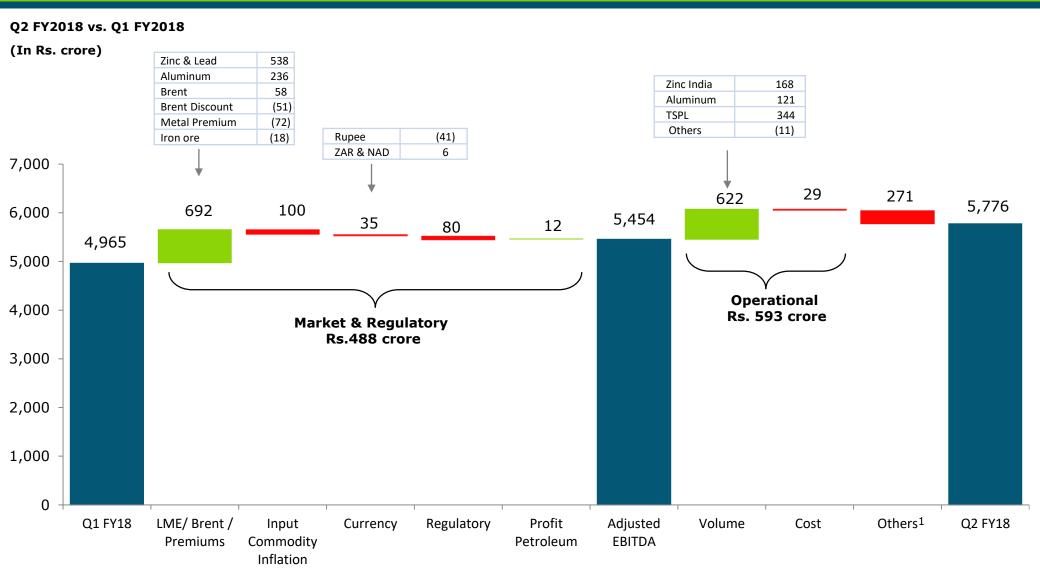
<sup>3.</sup> In view of clarification issued by Ind-AS Transition Facilitation Group, we have revised the accounting for dividend distribution tax (DDT) on profits of subsidiaries. Hence the previous periods have been restated to give effect of the same

<sup>4.</sup> Gross Debt of Q1 and Q2 FY 2018 includes preference shares of Rs 3,010 crore issued pursuant to the Cairn India Merger in April.

<sup>5.</sup> Pro-forma Net debt as on 31st Mar 2017 was Rs 15,322 Cr. (Pro-forma for HZL and Vedanta Ltd special dividends and temporary short-term borrowing at HZL)

# EBITDA Bridge (Q2 FY2018 vs. Q1 FY2018)





<sup>1.</sup> Others includes cost of power import due to temporary coal shortages and ash dyke incident, pot revival cost at Jharsuguda and lower profitability from ancillary business

## **Income Statement**



## Depreciation & Amortization

- Marginally higher q-o-q on account of higher production at Zinc India and capitalization of pots at Aluminium business
- Lower y-o-y due to change in depreciation method in Oil & Gas business from 2P to 1P reserve based on guidance under Ind-AS w.e.f. 1<sup>st</sup> April 17; partly offset by capitalization at Aluminium business and higher production at Zinc India

#### Finance cost

 Lower q-o-q and y-o-y driven by de-leveraging the balance sheet during H1 FY2018 and lower interest rates

#### Other income

 Lower q-o-q and y-o-y on account of lower investment corpus and lower MTM gain

### Exceptional Items

 Reversal of royalty (DMF) of Rs. 291 crore at Zinc India pursuant to a judicial pronouncement during the quarter. Partially offset by Rs. 109 crore of exploratory assets write-off at Oil & Gas business

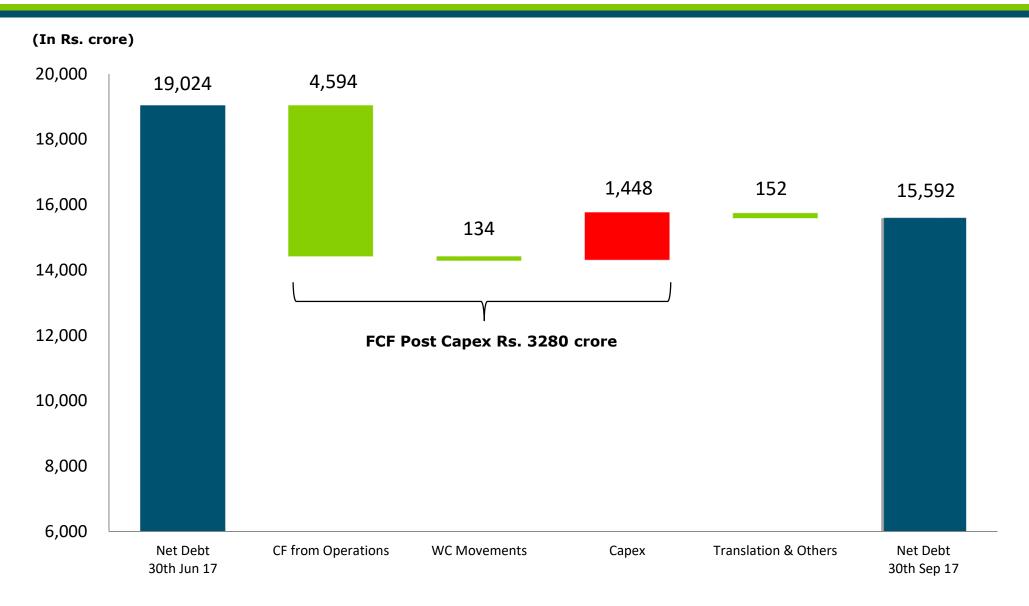
In Rs. crore	Q2 FY'18	Q2 FY'17	Q1 FY'18
Revenue	21,520	15,665	18,203
EBITDA	5,776	4,647	4,965
Depreciation & amortisation	(1,426)	(1,557)	(1,386)
Finance Cost	(1,384)	(1,451)	(1,592)
Other Income	876	1,375	1,055
Exceptional items - credit/(expense)	186	-	-
Taxes	(873)	(527)	(681)
Taxes - DDT	-	(18)	-
Taxes on exceptional items	(62)	-	-
Profit After Taxes (before exceptional items and DDT)	2,862	2,513	2,270
Profit After Taxes (before exceptional items)	2,862	2,495	2,270
Profit After Taxes	2,986	2,495	2,270
Attributable profit (before exceptional items and DDT) <sup>1</sup>	2,036	1,442	1,525
Attributable profit (before exceptional items) <sup>1</sup>	2,036	1,424	1,525
Attributable PAT	2,091	1,424	1,525
Minorities % (before exceptional items)	29%	43%	33%

Note 1. In view of clarification issued by Ind-AS Transition Facilitation Group, we have revised the accounting for dividend distribution tax (DDT) on profits of subsidiaries.

Hence the previous periods have been restated to give effect of the same

# **Net Debt for Q2 FY2018**



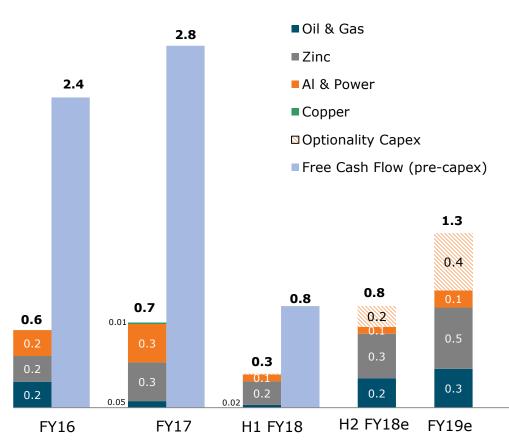


# **Optimising Capex to drive Cash Flow Generation**



- Prioritised capital to high-return, low-risk projects to maximize cash flows
- H1 Capex spent \$0.3bn, H2 FY 2017 expected at \$0.8bn
- Revised capex guidance to \$1.1bn for FY 2018
   (\$0.9bn+\$0.2bn optional capex) compared to original guidance of \$1.2bn (1bn+\$0.2bn optional capex)
  - \$0.3bn for Zinc India and \$0.2bn for Gamsberg
  - \$0.1bn for Aluminium and Power
  - \$0.3bn for O&G capex cycle to restart with full swing in H2
  - Optionality capex includes capex flexibility for Lanjigarh refinery expansion and 400ktpa
     Copper smelter expansion

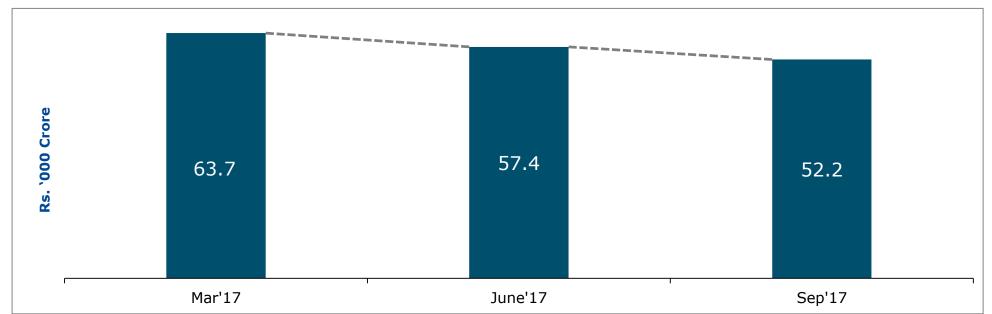
## **Growth Capex Profile and Free Cash Flow pre capex - \$bn**



# **Gross Debt Reduction of Rs. 11,466 Crore\* since March 2017**



## Consolidated Gross debt\* trend since March 2017



### **Continued focus on gross debt reduction**

- Reduced debt by Rs. 11,466 cr\* during H1 FY2018
- > HZL temporary borrowing paid down by Rs. 7,315 cr during H1 FY2018

## **Strong liquidity**

> Cash and liquid investments of Rs. 40,206 crore

<sup>\*</sup>Excluding short term temporary borrowings of HZL and preference shares issued pursuant to the Cairn India merger in April

# Financial Priorities: Strong shareholder returns while continuing to strengthen Balance Sheet



Disciplined Capital
Allocation;
focus on FCF

- Continued focus on generating cash flows from ramp up of assets
- Optimization of opex
- Further enhance credit rating to AA+

Deleveraging; Strong Liquidity Focus

- Continued reduction in gross debt
- Debt being refinanced at longer maturities and lower interest cost
- Strong Liquidity Focus

**Cost Savings** 

- Delivering on savings program
- Cost in 1<sup>st</sup>/2<sup>nd</sup> quartile of cost curve across all businesses

Long Term
Shareholder Value

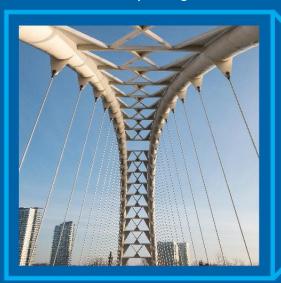
Dividend policy announced



# **Business Review**

Kuldip Kaura, Chief Executive Officer

**Sudhir Mathur**, Acting CEO – Cairn Oil & Gas





**Operational Excellence** 

## **Zinc India**



#### Q2 FY2018 Results

- MIC at 219kt; refined zinc-lead production at 230kt
- Refined silver production at a record high of 140 tonnes
- CoP at \$984/t; impacted by high input commodity prices

## **Projects – key highlights**

- Capacity expansion to 1.2mtpa MIC by FY2020 on track
- RAM U/G mine main shaft service winder commissioned, production winder installation completed; production from shaft to start in Q3 FY2019
- SK mine main shaft equipping commenced; production from shaft to start in Q3 FY2019
  - New mill of 1.5mtpa will take total milling capacity to 5.8mtpa, targeted commissioning in Q2 FY 2019
- Zawar mill de-bottlenecking completed to upgrade capacity to 2.7mtpa; order for second mill of 2mtpa capacity awarded, targeted commissioning by Q3 FY 2019
- Fumer project progressing as per schedule for completion by mid FY 2019

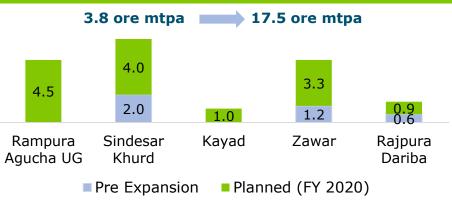
#### FY2018 Outlook

- FY2018 integrated Zn-Pb production c.950kt; silver 500t+
- FY 2018 CoP likely to be in the range of \$900-\$950/t due to significant increase in commodity prices as compared to last year



Long-haul drilling machine at work

Underground Mines Ore Capacity Expansion to facilitate MIC expansion to 1.2mtpa by FY 2020



## Zinc International



#### Q2 FY2018 Results

- Total production at 42kt:
  - Skorpion at 23kt: highest in last 3 quarters following full mobilization of mine outsourcing
  - BMM at 20kt: highest quarterly production in the last 4 years, driven by better grades and higher recoveries
- CoP at \$1,470/t, lower q-o-q, driven by higher production and efficiency improvements

## **Projects**

- Skorpion pit 112 extension
  - Waste mining fully ramped up in Q2; ore extraction from Q4 FY2018
  - Project to extend mine life by further 3 years and increase reserves by c.3mt (9.7% grade)
- Continued focus on exploration program across all the locations (>\$10mn)

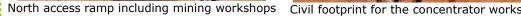
#### Outlook

FY18 Production of c.160kt; CoP at c. \$1500/t

## Significant progress at 250kt Gamsberg project

- On target for first production by mid CY2018, with ramp-up to its full mining capacity in the next 9-12 months
- On budget for a capex target of \$400mn
- First phase expected to have a mine life of 13 years
- CoP expected at \$1000-1150/t
- Excavation of 50% of waste rock of total pre-stripping requirement completed till date
- Construction works for infrastructure progressing well with all contractors (>1600 construction manpower) fully mobilised to site
- Site activities including water and power lines installation on schedule
- Manufacturing and supply of all equipment is on schedule with mills expected to be at site in November 2017







## Cairn Oil & Gas



#### Q2 FY 2018 Results

- Gross average production at 180,955 boepd
  - Rajasthan production at 153,238 boepd
  - Offshore production at 27,718 boepd
- Commenced 15 wells infill drilling campaign at Mangala with first well brought in Sept 2017; 4 wells online currently
- Operating cost
  - RJ waterflood operating cost at \$ 4.4/boe, in line with previous quarter
  - RJ blended cost including EOR at \$6.3/boe, in line with previous quarter

#### FY 2018 Outlook

- Rajasthan production expected at 165 kboepd; upside from growth projects to contribute from H2
- Net capex estimated at \$250mn
  - 90% for development including EOR, Tight oil and Tight gas projects
  - 10% for Exploration and Appraisal



Rajasthan: Mangala Processing Terminal

#### Cairn has one of the lowest operating costs globally



Source: For peer company Opex - Rystad Energy, Nov 2015

## Cairn Oil & Gas



# **Key Projects Exploration**

- Rajasthan: Studies contract awarded for Shallow Oil and Deep Gas prospects. Tendering underway for integrated exploration and appraisal drilling campaign
- **KG Offshore**: 2 wells exploration program to commence from Q4FY18; Contract award in place

### **RDG Gas project**

- Phase-1: 40-45 mmscfd from November 2017
- Phase-2: Gas production of 100mmscfd and condensate production of 5kboed by H1 CY2019

### **Key Oil projects**

- Aishwariya Barmer Hill: Production from appraisal wells commenced, Phase -2 FDP submitted to JV Partner
- Mangala Infill (15 well): Drilling progressing as per plan
- Mangala Infill (45 wells): Firmed up drilling program; Proposal under discussion with JV Partner
- Bhagyam EOR: FDP submitted to JV Partner
- Aishwariya EOR: FDP approved by Operating Committee
- Liquid handling: Upgrading infrastructure to support incremental oil volumes in phased manner
- Cambay Infill: 3 wells drilling program to commence from Q4FY18



Rajasthan: Central Polymer Facility

## Summary of key projects

Key Projects	EUR¹ (mmboe)	Estimated Gross Capex (US\$m)
RDG	105	460
Aishwariya Barmer Hill	32	180
Mangala Infill (15 wells)	4	40
Mangala Infill (45 wells)	18	100
Bhagyam Polymer EOR	25	95
Aishwariya Polymer EOR	15	60
Liquid Handling Upgrade	12	120
Cambay Infill (3 wells)	7	30

Note 1. Estimated Ultimate Recovery

## **Aluminium**



### Q2 FY2018 Results

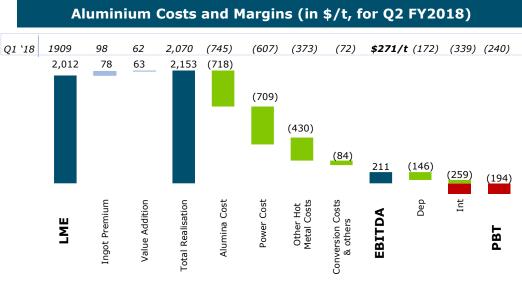
- Record Aluminium production of 401kt and Alumina 269kt
  - Aluminum CoP at \$1,857/t, higher q-o-q due to high power cost on account of coal shortages and ash dyke incident. High inflation on key inputs like caustic and carbon offset by lower imported Alumina cost
  - Alumina CoP at \$331/t vs. \$ 383/t for imported alumina

#### **Operations**

- 500kt Jharsuguda-I smelter: outage in April 2017 impacted 228 of the 608 pots; 121 pots re-started, full ramp-up by Q3 FY2018
- Ramp-up at 1.25mt Jharsuguda-II smelter:
  - 1st line: 301 pots operational, full ramp up by Q3 FY2018
  - 2<sup>nd</sup> line was fully capitalized in Q4 FY2017
  - 3<sup>rd</sup> line: 156 pots operational, full ramp up by Q4 FY2018
  - 4<sup>th</sup> line: Under evaluation
- Inspection by Pollution board of 2 closed power units in early November

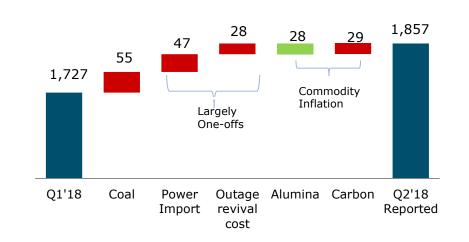
#### **FY2018 Outlook**

- Aluminium production 1.5 to 1.6mt (excl. trial run); Alumina production 1.3 to 1.4mt
- CoP estimated at \$1850-1900/t for Q3 FY2018 given higher input costs of coal and Alumina. Q4 CoP expected to be substantially lower with improvement in domestic coal situation and production ramp-up
- Working with Odisha State Government on bauxite allocation



Note: Q1 CoP numbers have been regrouped to make them comparable

#### Movements in Aluminium COP (in \$/t)





#### Talwandi Sabo Power Limited (TSPL)

- 1,980 MW Thermal Power Plant (3 units of 660 MW each)
- Plant availability of 87% in the quarter; Targeting availability of c. 75% for FY 2018
- 'Take or Pay' arrangement based on availability with EBITDA margin of c. Re.1/unit
  - Input coal cost is a pass through



#### **Other IPPs**

- BALCO 600MW: Q2 PLF of 27% on account of temporary coal shortage
- Jharsuguda 600MW: Low PLF of 7%. Impacted due to the shut down of the plant and temporary coal shortage.

#### **Coal Outlook - Aluminium CPPs**

- Coal linkage of 8 mtpa secured in Tranche 1 & 2
  - Curtailment of linkage due to coal unavailability
- We intend to deal with the current challenges in domestic coal supply by
  - Working towards better materialisation of linkages
  - Importing coal from international miners
  - Coal linkage Tranche III auction in progress
- We expect the challenges in domestic coal to be resolved by Q4

# **Iron Ore and Copper India**



## Q2 FY2018 Results

#### **Iron Ore**

#### Volumes:

- Sales of 0.7mt and production of 1.2mt (Goa and Karnataka)
- Lower production and sales on a q-o-q basis due to monsoons
- Karnataka to achieve full allocation production in Q3
- FY2018 production allocation: 5.5mtpa at Goa & 2.3mtpa at Karnataka
  - Engaged with respective state governments for additional allocation

#### Realizations:

- Beneficiation and blending to increase grades and realisations at Goa
  - Saleable ore at Goa in H2 to be c. 3mt post beneficiation
- Karnataka had steady realizations of \$24/t in Q2
  - Working towards better realizations in the domestic market

## **Copper India**

- Record production at 106kt on improved operational efficiencies
- Net cost of conversion lower q-o-q due to higher volumes
- FY2018 production estimated at 400kt
- 400ktpa smelter expansion under final evaluation



Iron Ore Mine in Goa



**Tuticorin Copper Smelter** 





**Production Growth and Asset optimisation** 



**Optimise Capital Allocation and Maintain Strong Balance Sheet** 



**Protect and preserve our License to Operate** 



**Identify next generation of Resources** 



2 November 2017

# **Appendix**

# **Guidance**



Segment	FY18e	Comments
Zinc India	Zinc-Lead Integrated: 950kt Silver volume: +500 tonnes CoP (\$/t): \$900-950/t	Earlier guidance on CoP for FY2018 was marginally higher than FY17 CoP. Revised guidance due to input commodity inflation
Zinc International	Zinc-Lead volume: c.160kt CoP: c.\$1,500/t	Gamsberg expected CoP: \$1000-1,150/t
Oil & Gas	RJ Gross Volume: 165kboepd Ravva Gross volume: 16kboepd Cambay Gross volume: 10kboepd	
Aluminium	Alumina: 1.3-1.4mt Aluminium: 1.5-1.6mt (excl. trial-run) Aluminium CoP: \$1,850-1,900/t for Q3 FY2018 We expect Q4 CoP will be substantially lower with improvement in domestic coal situation and production ramp-up	Earlier guidance on aluminium CoP for H2 FY2018 was \$1,575-1,600/t. Revised guidance due to higher input costs of coal and Alumina
Power	TSPL plant availability: c. 75%	Earlier guidance for FY2018 plant availability was 70%+
Iron Ore	5.5mtpa at Goa and 2.3mtpa at Karnataka	Engaged with respective State Governments for additional allocation
Copper - India	Production: 400kt	

# **Project Capex**



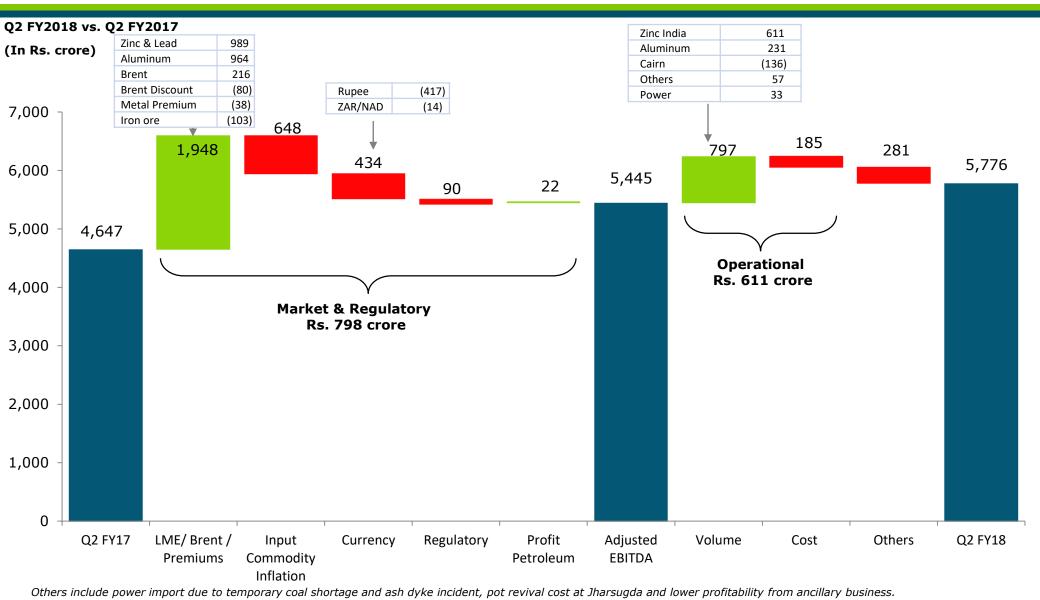
			Spent up		
Capex in Progress	Status	Capex (\$mn)	to Mar 2017	Spent in H1 FY2018	Unspent as at 30 Sept 17 <sup>1</sup>
Cairn India – Mangala Infill, Liquid handling, Bhagyam & Aishwariya EOR, Tight Oil & Gas etc		306	56	22	228
Aluminium Sector					
BALCO – Korba-II 325ktpa Smelter and 1200MW power plant(4x300MW) <sup>2</sup>	Smelter: fully operational	1,872	1965	(6) <sup>4</sup>	(86)
Jharsuguda 1.25mtpa smelter	Line 3: 2 Section capitalised Line 4: Fully Capitalised Line 5: 2 Section capitalised	2,920	2746	72	102
Zinc Sector					
Zinc India (Mines Expansion)	Phase-wise by FY2020	1,600	1015	111	474
Others		150	12	8	129
Zinc International					
Gamsberg Mining Project <sup>3</sup>	First production by mid CY 2018	400	68	62	270
Capex Flexibility					
Metals and Mining					
Lanjigarh Refinery (Phase II) – 5mtpa	Under evaluation, subject to Bauxite availability	1,570	822	1	748
Tuticorin Smelter 400ktpa	Under final evaluation	-	139	2	-
Skorpion Refinery Conversion	Currently deferred till Pit 112 extension	156	14	-	142

Unspent capex represents the difference between total projected capex and cumulative spend as on 30<sup>th</sup> Sep 2017
 Cost overrun on account of changes in exchange rates. Total overrun expected to be \$120mn upto FY2018-19

Capex approved is \$400mn excluding IDC
 Positive on account of sale of trial run production

# EBITDA Bridge (Q2 FY2018 vs. Q2 FY2017)





# **Entity Wise Cash and Debt**



(in Rs. crore)

	3	30 Sept 201	7	30 June 2017		30 Sept 2016			
Company	Debt	Cash & LI	Net Debt	Debt	Cash & LI	Net Debt	Debt	Cash & LI	Net Debt
Vedanta Limited Standalone	38,232	12,375	25,857	42,711	16,698	26,013	41,285	2,114	39,171
Cairn India¹	NA	NA	NA	NA	NA	NA	0	24,339	(24,339)
Cairn India Holdings Limited <sup>2</sup>	3,554	6,562	(3,008)	4,155	6,759	(2,604)	NA	NA	NA
Zinc India	593	19,986	(19,393)	6,959	23,967	(17,009)	1,928	27,186	(25,258)
Zinc International	-	705	(705)	-	614	(614)	0	909	(909)
BALCO	4,647	82	4,565	4,765	102	4,663	5,521	22	5,499
Talwandi Sabo	8,055	294	7,761	8,029	70	7,960	7,643	56	7,587
Twin Star Mauritius Holdings Limited and Others <sup>3</sup>	717	202	515	723	108	615	10,417	207	10,210
Vedanta Limited Consolidated	55,798	40,206	15,592	67,342	48,318	19,024	66,794	54,833	11,961

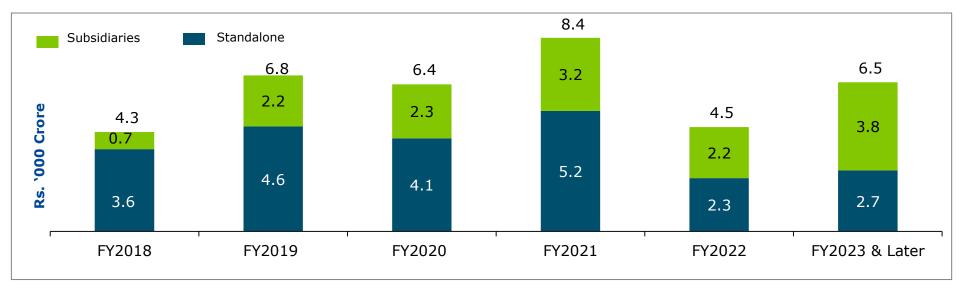
Notes: Debt numbers are at Book Value and excludes inter-company eliminations.

- 1. Merged with Vedanta Limited with effect from April 2017.
- 2. Cairn India Holdings Limited is a subsidiary of Vedanta Limited which holds 50% of the share in the RJ Block
- 3. Others includes MALCO Energy, CMT, VGCB, Sesa Resources, Fujairah Gold, and Vedanta Limited's investment companies.

# **Strong Credit Profile and Balance Sheet at VEDL**



## Maturity Profile of Term Debt (Rs.36,927 Crore) (as of 30<sup>th</sup> Sept 2017)



Term debt of Rs. 36,927 crore (Rs.22,463 cr at Standalone and Rs. 14,464 crore at Subsidiaries)
Maturity profile excludes working capital / short term of Rs.15,269 crore, HZL borrowing of Rs.593 crore and preference share of Rs. 3010 crore

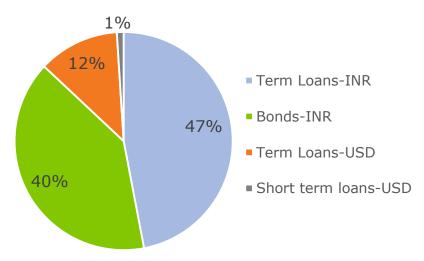
## Continued focus on gross debt reduction and cost optimization

- Long Term debt reduced by c. Rs.9200 crore during YTD FY2018
- > Tapped Rs.1900 crore through competitively priced capital market instruments to refinance high cost bank debt
- > Lowered the average cost of borrowing by c. 70-80 bps on bank debt portfolio due to improving credit profile
- Strong liquidity: Cash and liquid investments of Rs.40,206 crore and undrawn fund based line of credit of c. Rs.5,300 crore

# **Debt Breakdown & Funding Sources**



# **Diversified Funding Sources for Term Debt of \$5.7bn** (as of 30<sup>th</sup> Sept 2017)



 Term debt of \$ 3.4bn at Standalone and \$2.3bn at Subsidiaries, total consolidated \$5.7bn

## **Debt Breakdown**

(as of 30 Sept 2017)

Debt breakdown as of 30 Sep 2017	(in \$bn)
Term debt	5.7
Working capital	0.1
Short term borrowing	2.1
Short term borrowing at HZL	0.1
Preference shares issued pursuant to merger	0.5
Total consolidated debt	8.5
Cash and Liquid Investments	6.2
Net Debt	2.4
Debt breakup (\$8.5bn)	
- INR Debt	91%

Note: USD-INR: Rs. 65.3552 at 30 Sep 2017

# **Segment Summary – Zinc India**



		Q2				H1	
<b>Production</b> (in '000 tonnes, or as stated)	FY 2018	FY 2017	% change YoY	FY2018	FY 2018	FY 2017	% change YoY
Mined metal content	219	192	14%	233	452	318	42%
Refined Zinc - Total	192	150	28%	194	386	252	53%
Refined Zinc – Integrated	192	149	29%	194	386	250	54%
Refined Zinc – Custom	-	1		-	1	2	1
Refined Lead - Total <sup>1</sup>	38	31	24%	35	73	55	32%
Refined Lead – Integrated	38	31	24%	35	73	55	32%
Refined Lead – Custom	-	-		-	-	-	-
Refined Saleable Silver - Total (in tonnes) <sup>2</sup>	140	107	31%	115	255	196	30%
Refined Saleable Silver - Integrated (in tonnes)	140	107	31%	115	255	196	30%
Refined Saleable Silver - Custom (in tonnes)	-	-		-	-	-	-
Financials (In Rs. crore, except as stated)							
Revenue	5197	3400	53%	4477	9674	5842	66%
EBITDA	3001	1977	52%	2369	5369	3054	76%
Zinc CoP without Royalty (Rs. /MT) <sup>3</sup>	63300	54200	-17%	62700	63000	57000	-10%
Zinc CoP without Royalty (\$/MT) <sup>3</sup>	984	809	-22%	973	979	852	-15%
Zinc CoP with Royalty (\$/MT) <sup>3</sup>	1358	1106	-23%	1317	1345	1131	-19%
Zinc LME Price (\$/MT)	2963	2255	31%	2596	2784	2089	33%
Lead LME Price (\$/MT)	2334	1873	25%	2161	2250	1797	25%
Silver LBMA Price (\$/oz)	16.8	19.6	-14%	17.2	17.0	18.2	-7%

<sup>1.</sup> Excludes captive consumption of 1,634 tonnes in Q2 FY 2018 vs 837 tonnes in Q2 FY 2017 & 1,956 tonnes in Q1 FY 2018. For H1 it was 3590 MT as compared to 1921 MT in H1 FY2017

<sup>2.</sup> Excludes captive consumption of 8.8MT in Q2 FY 2018 and 4.3 MT in Q2 FY 2017 & 10.2 MT in Q1 FY 2018. For H1 it was 19.0 MT as compared with 9.8 MT in H1 FY2017

<sup>3.</sup> The COP numbers are after adjusting for deferred mining expenses under Ind-AS. Without this adjustment, Zinc CoP per MT would have been Rs. 63,300 (\$984) as compared with Rs. 62,000 (\$926) in Q2 FY 2017 and Rs. 63,100 (\$980) in Q1 FY 2018. For H1, this would be Rs. 63,200 (\$982) compared to Rs 67,800 (\$1,013) in H1 FY 2017

<sup>4.</sup> During the quarter, the Company sold 220kt of zinc and 30kt of lead forward at a price of \$3,084 and \$2,418 respectively. Of this, 165kt is for the period January to March 2018 and remaining is for April to June 2018.

# **Segment Summary – Zinc International**



- 1 · · · · · · · · · · · · · · · · · ·		Q2				H1	
Production (in'000 tonnes, or as stated)	FY 2018	FY 2017	% change YoY	FY2018	FY 2018	FY 2017	% change YoY
Refined Zinc – Skorpion	23	23	0%	14	36	47	-22%
Mined metal content- BMM	20	16	23%	18	38	35	8%
Mined metal content- Lisheen	-	-	-	-	-	-	-
Total	42	39	13%	32	74	82	-9%
Financials (In Rs. Crore, except as stated)							
Revenue	853	685	25%	801	1654	1138	45%
EBITDA	389	339	15%	321	710	590	20%
CoP - (\$/MT)	1470	1446	-2%	1690	1564	1331	18%
Zinc LME Price (\$/MT)	2963	2255	31%	2596	2784	2089	33%
Lead LME Price (\$/MT)	2334	1873	25%	2161	2250	1797	25%

# **Segment Summary - Oil & Gas**



		Q2		Q1	H1			
OIL AND GAS (boepd)	FY 2018	FY 2017	% change YoY	FY2018	FY 2018	FY 2017	% change YoY	
Average Daily Total Gross Operated Production (boepd)*	190,389	206,230	-8%	196,656	193,505	206,342	-6%	
Average Daily Gross Operated Production (boepd)	180,955	196,399	-8%	187,203	184,062	196,629	-6%	
Rajasthan	153,238	167,699	-9%	159,351	156,278	167,323	-7%	
Ravva	17,266	18,823	-8%	18,361	17,810	19,228	-7%	
Cambay	10,452	9,877	6%	9,491	9,974	10,078	-1%	
Average Daily Working Interest Production (boepd)	115,332	125,575	-8%	119,473	117,391	125,484	-6%	
Rajasthan	107,267	117,390	-9%	111,546	109,935	117,126	-7%	
Ravva	3,885	4,235	-8%	4,131	4,007	4,326	-7%	
Cambay	4,181	3,951	6%	3,796	3,990	4,031	-1%	
Total Oil and Gas (million boe)								
Oil & Gas- Gross	16.6	18.1	-8%	17.0	33.7	36.0	-6%	
Oil & Gas-Working Interest	10.6	11.6	-8%	10.9	21.5	23.0	-6%	
Financials (In Rs. crore, except as stated)								
Revenue	2099	2039	3%	2275	4374	3924	11%	
EBITDA	1176	1047	12%	1385	2561	1841	39%	
Average Oil Price Realization (\$ / bbl)	45.1	41.8	8%	44.9	45.0	39.9	13%	
Brent Price (\$/bbl)	52.1	45.9	14%	49.6	50.9	45.7	11%	

<sup>\*</sup> Including internal gas consumption

# **Segment Summary - Oil & Gas (contd.)**



		Q2		Q1		H1	
OIL AND GAS (boepd)	FY 2018	FY 2017	% change YoY	FY2018	FY 2018	FY 2017	% change YoY
Average Daily Production							
Gross operated	180,955	196,399	-8%	187,203	184,062	196,629	-6%
Oil	173,408	189,873	-9%	179,892	176,632	190,088	-7%
Gas	45.3	39.2	16%	43.9	44.6	39.2	14%
Working Interest	115,332	125,575	-8%	119,473	117,391	125,484	-6%
Rajasthan (Block RJ-ON-90/1)							
Gross operated	153,238	167,699	-9%	159,351	156,278	167,323	-7%
Oil	150,245	164,833	-9%	155,952	153,083	164,691	-7%
Gas (Mmscfd)	18.0	17.2	5%	20.4	19.2	15.8	21%
Gross DA 1	137,562	151,880	-9%	142,148	139,843	151,293	-8%
Gross DA 2	15,606	15,820	-1%	16,988	16,293	16,031	2%
Gross DA 3	70			215	142		
Working Interest	107,267	117,390	-9%	111,546	109,395	117,126	-7%
Ravva (Block PKGM-1)							
Gross operated	17,266	18,823	-8%	18,361	17,810	19,228	-7%
Oil	14,771	16,736	-12%	16,053	15,408	16,874	-9%
Gas (Mmscfd)	15.0	12.5	20%	13.8	14.4	14.1	2%
Working Interest	3,885	4,235	-8%	4,131	4,007	4,326	-7%
Cambay (Block CB/OS-2)							
Gross operated	10,452	9,877	6%	9,491	9,974	10,078	-1%
Oil	8,392	8,304	1%	7,887	8,141	8,523	-4%
Gas (Mmscfd)	12.4	9.4	32%	9.6	11.0	9.3	18%
Working Interest	4,181	3,951	6%	3,796	3,990	4,031	-1%
Average Price Realization							
Cairn Total (US\$/boe)	44.9	41.9	7%	44.7	44.8	40.0	12%
Oil (US\$/bbl)	45.1	41.8	8%	44.9	45.0	39.9	13%
Gas (US\$/mscf)	6.4	7.5	-14%	6.7	6.6	7.3	-10%

# **Segment Summary – Aluminium**



		Q2		Q1		H1	
Particulars (in'000 tonnes, or as stated)	FY 2018	FY 2017	% change YoY	FY2018	FY 2018	FY 2017	% change YoY
Alumina – Lanjigarh	269	292	(8)%	303	572	567	1%
Total Aluminium Production	401	296	36%	352	753	541	39%
Jharsuguda-I	99	132	(25)%	92	191	261	(27)%
Jharsuguda-II <sup>1</sup>	157	48	-	120	277	77	-
245kt Korba-I	65	63	4%	63	128	126	2%
325kt Korba-II <sup>2</sup>	79	52	51%	77	156	77	-
BALCO 270 MW (MU)	-	-	-	-	-	-	-
Jharsuguda 1800 MW (MU)	-	156	-	-	-	511	-
Financials (In Rs. crore, except as stated)							
Revenue	5,212	3,027	72%	4,236	9,449	5,994	58%
EBITDA - BALCO	140	103	36%	175	315	167	89%
EBITDA – Vedanta Aluminium	317	294	8%	352	669	499	34%
EBITDA Aluminum Segment	457	397	15%	528	984	666	48%
Alumina CoP – Lanjigarh (\$/MT)	331	260	27%	312	319	276	16%
Alumina CoP – Lanjigarh (Rs. /MT)	21,400	17,400	23%	20,100	20,600	18,500	11%
Aluminium CoP - (\$/MT)	1,857	1,462	27%	1,727	1,797	1,473	22%
Aluminium CoP - (Rs. /MT)	119,400	97,800	22%	111,300	115,700	98,600	17%
Aluminum CoP - Jharsuguda (\$/MT)	1,853	1,412	31%	1,692	1,781	1,435	24%
Aluminium CoP – Jharsuguda(Rs. /MT)	119,100	94,600	26%	109,100	114,600	96,100	19%
Aluminum CoP - BALCO (\$/MT)	1,865	1,545	21%	1,780	1,825	1,541	18%
Aluminium CoP - BALCO (Rs. /MT)	119,900	103,500	16%	114,700	117,500	103,200	14%
Aluminum LME Price (\$/MT)	2,012	1,620	24%	1,909	1,962	1,596	23%

Including trial run production of 15 kt in Q2 FY2018 and 19 kt in Q2 FY2017 and 19kt in Q1 FY2018 and 34kt in H1 FY2018 vs 29kt in H1 FY2017 Including trial run production of 1 kt in Q2 FY2018 and 22 kt in Q2 FY2017 and 15kt in Q1 FY2018 and 16kt in H1 FY2018 vs 28kt in H1 FY2017

# **Segment Summary – Power**



		Q2		Q1		H1	
Particulars (in million units)	FY 2018	FY 2017	% change YoY	FY2018	FY 2018	FY 2017	% change YoY
Total Power Sales	2,950	3,030	(3)%	1,838	4,787	6,039	-21%
Jharsuguda 600 MW	93	605	(85)%	564	657	1,497	-56%
BALCO 600 MW	132	549	(76)%	551	682	1,156	-41%
MALCO	0	25	-	4	4	115	-97%
HZL Wind Power	143	172	(17)%	156	299	320	-7%
TSPL	2,582	1,679	54%	563	3,145	2,951	7%
Financials (in Rs. crore except as stated)							
Revenue	1431	1385	3%	733	2164	2567	-16%
EBITDA	366	403	-9%	110	476	742	-36%
Average Cost of Generation(Rs. /unit) ex. TSPL	2.09	2.09	0%	1.87	1.93	2.03	5%
Average Realization (Rs. /unit) ex. TSPL	2.85	3.09	-8%	2.71	2.77	2.92	-5%
TSPL PAF (%)	87%	77%	13%	20%	54%	75%	-28%
TSPL Average Realization (Rs. /unit)	3.61	3.63	0.4%	3.62	3.62	3.54	2%
TSPL Cost of Generation (Rs. /unit)	2.64	2.55	3%	3.67	2.83	2.51	-13%

# **Segment Summary – Iron Ore**



Double land (in million due moteis tennes ex		Q2		Q1		H1	
Particulars (in million dry metric tonnes, or as stated)	FY 2018	FY 2017	% change YoY	FY2018	FY 2018	FY 2017	% change YoY
Sales	0.7	0.8	(7)%	2.3	3.0	3.4	(12)%
Goa	0.1	0.3	(59)%	1.9	2.0	2.4	(18)%
Karnataka	0.6	0.5	30%	0.4	1.0	1.0	3%
Production of Saleable Ore	1.2	1.5	(14)%	3.2	4.5	4.7	(4)%
Goa	0.4	0.5	(25)%	2.2	2.6	2.9	(12)%
Karnataka	0.9	0.9	(8)%	1.1	1.9	1.7	11%
Production ('000 tonnes)							
Pig Iron	137	192	(29)%	163	300	372	(19)%
Financials (In Rs. crore, except as stated)							
Revenue	542	490	11%	687	1229	1460	-16%
EBITDA	(4)	105	-	40	36	469	-92%

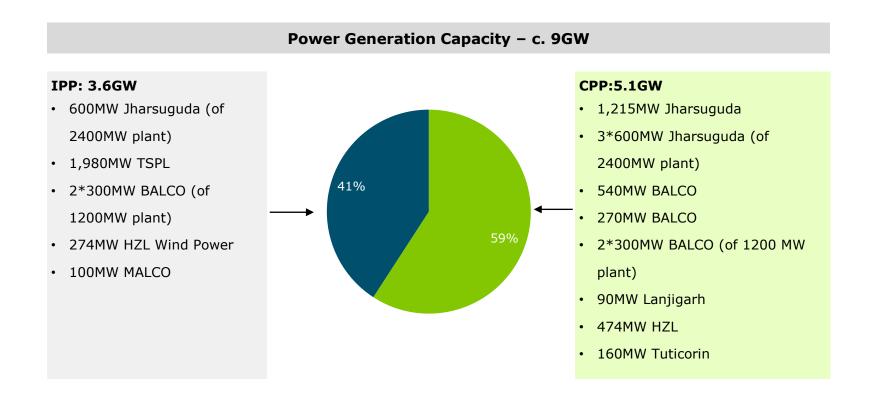
# **Segment Summary – Copper India**



		Q2		Q1	H1		
Production (in '000 tonnes, or as stated)	FY 2018	FY 2017	% change YoY	FY 2018	FY 2018	FY 2017	% change YoY
Copper - Cathodes	106	97	9%	90	197	198	(1)%
Tuticorin power sales (million units)	4	30	(86)%	30	34	90	(62)%
Financials (In Rs. crore, except as stated)							
Revenue	6237	4686	33%	5048	11286	9340	21%
EBITDA	392	371	6%	213	605	811	-25%
Net CoP – cathode (US¢/lb)	4.5	5.3	15%	8.4	6.3	5.6	14%
Tc/Rc (US¢/lb)	21.6	20.5	5%	20.8	21.2	21.7	-2%
Copper LME Price (\$/MT)	6349	4772	33%	5662	6013	4751	27%

# **Segment Summary - Power (contd.)**





Note: MALCO 100MW (IPP) is under care and maintenance since 26th May 2017

# **Sales Summary**



Sales volume	Q2 FY2018	H1FY2018	Q2 FY 2017	H1 2017	Q1 FY2018
Zinc-India Sales					
Refined Zinc (kt)	193	383	148	268	190
Refined Lead (kt)	39	73	32	55	34
Zinc Concentrate (DMT)	-	-	-	-	-
Lead Concentrate (DMT)	-	-	-	-	-
Total Zinc (Refined+Conc) kt	193	383	148	268	190
Total Lead (Refined+Conc) kt	39	73	32	55	34
Total Zinc-Lead (kt)	232	456	179	323	224
Silver (moz)	4.7	8.3	3.5	6.3	3.6
Zinc-International Sales					
Zinc Refined (kt)	24	36	27	45	12
Zinc Concentrate (MIC)	7	21	7	13	15
Total Zinc (Refined+Conc)	31	57	33	58	27
Lead Concentrate (MIC)	12	30	11	21	18
Total Zinc-Lead (kt)	43	88	44	78	45
Aluminium Sales					
Sales - Wire rods (kt)	87	173	74	160	86
Sales - Rolled products (kt)	7	13	4	4	6
Sales - Busbar and Billets (kt)	73	125	34	61	52
Total Value added products (kt)	167	310	112	225	144
Sales - Ingots (kt)	213	408	173	291	195
Total Aluminium sales (kt)	380	717	284	516	338

# **Sales Summary**



Sales volume	Q2 FY 2018	H1FY 2018	Q2 FY 2017	H1 FY 2017	Q1 FY2018
Iron-Ore Sales					
Goa (mn DMT)	0.1	2.0	0.3	2.4	1.9
Karnataka (mn DMT)	0.6	1.0	0.5	1.0	0.4
Total (mn DMT)	0.7	3.0	0.8	3.4	2.3
Pig Iron (kt)	154	288	201	370	134
Copper-India Sales					
Copper Cathodes (kt)	59	97	43	86	38
Copper Rods (kt)	46	97	53	108	51
Sulphuric Acid (kt)	133	241	103	270	108
Phosphoric Acid (kt)	51	97	53	95	46

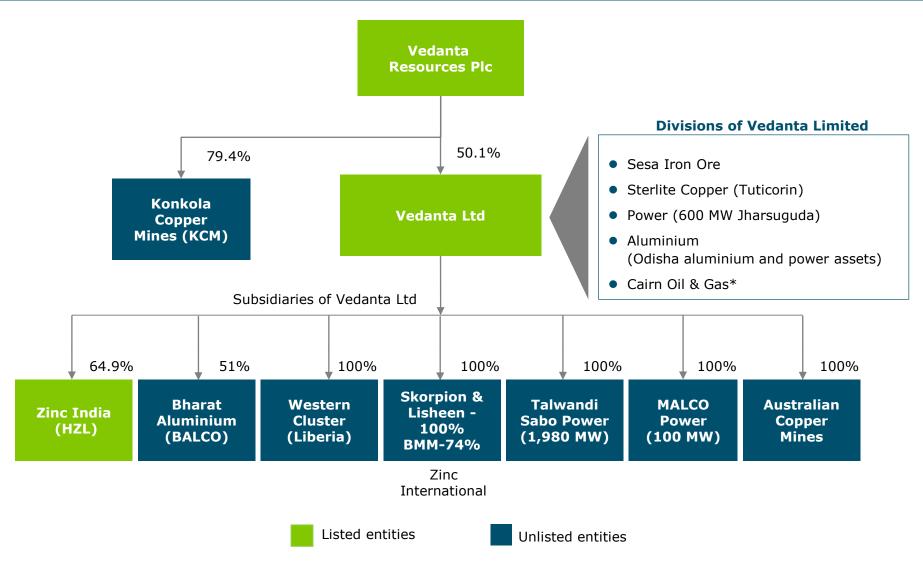
Sales volume Power Sales (mu)	Q2 FY2018	H1 FY2018	Q2 FY2017	H1 FY2017	Q1 FY2018
Jharsuguda 600 MW	93	657	605	1497	564
TSPL	2582	3145	1679	2951	563
BALCO 270 MW	-	-	-	-	-
BALCO 600 MW	132	682	549	1156	551
MALCO	0	4	25	115	4
HZL Wind power	143	299	172	320	156
Total sales	2950	4787	3030	6039	1838
Power Realisations (INR/kWh)					
Jharsuguda 600 MW	1.10	2.21	2.45	2.36	2.39
TSPL <sup>2</sup>	3.61	3.62	3.63	3.54	3.62
BALCO 270 MW	ı	ı	ı	ı	ı
Balco 600 MW	1.10	2.64	3.14	2.99	2.67
MALCO	-	3.07	7.89	5.50	3.07
HZL Wind power	4.29	4.29	4.44	4.38	4.00
Average Realisations <sup>1</sup>	2.85	2.77	3.09	2.92	2.71
Power Costs (INR/kWh)					
Jharsuguda 600 MW	3.46	2.19	2.23	2.01	1.97
TSPL <sup>2</sup>	2.64	2.83	2.55	2.51	3.67
BALCO 270 MW	-	-	-	-	-
Balco 600 MW	2.78	2.25	2.31	2.30	2.13
MALCO	-	18.57	5.35	4.06	18.57
HZL Wind power	0.57	0.38	0.45	0.48	0.20
Average costs <sup>1</sup>	2.09	1.93	2.09	2.03	1.87

<sup>1.</sup> Average excludes TSPL

<sup>2.</sup> Based on Availability

# **Group Structure**





Note: Shareholding as on Sept 30, 2017

\*50% of the share in the RJ Block is held by a subsidiary of Vedanta Ltd

# **Results Conference Call Details**



Results conference call is scheduled at 6:30 PM (IST) on Thursday, 2 November 2017. The dial-in numbers for the call are given below:

Event		Telephone Number
Earnings conference call on November 2, 2017	India – 6:30 PM (IST)	Mumbai main access +91 22 3938 1017 Toll Free number 1 800 120 1221 1 800 200 1221
	Singapore - 9:00 PM (Singapore Time)	Toll free number 800 101 2045
	Hong Kong - 9:30 PM (Hong Kong Time)	Toll free number 800 964 448
	UK - 1:00 PM (UK Time)	Toll free number 0 808 101 1573
	US - 9:00 AM (Eastern Time)	Toll free number 1 866 746 2133
For online registration	http://services.choruscall.in/diamondpasmber=5267915	ss/registration?confirmationNu
Replay of Conference Call (2 November 2017 to 9 November 2017)		Mumbai +91 22 3065 2322 Passcode: 68610#