

## DIVISIONAL REVIEW POWER

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A SERIES OF POSITIVE METRICS UNDERPINNED A SUCCESSFUL FY2017 IN POWER WITH THE ENTIRE POWER ASSETS OPERATIONAL



BALCO power plant



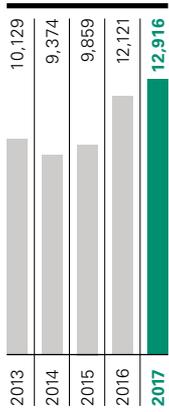
**AJAY DIXIT**  
CEO, POWER

### The year in summary:

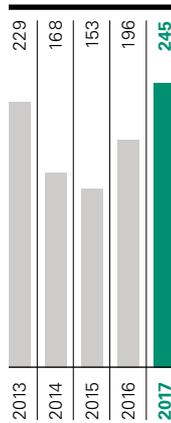
A series of positive metrics underpinned a successful FY2017 in Power with the entire power assets operational; Talwandi Sabo attained record plant availability in the fourth quarter with all units functioning; And for Balco and Jharsuguda IPP plants, there was less reliance on imported coal.



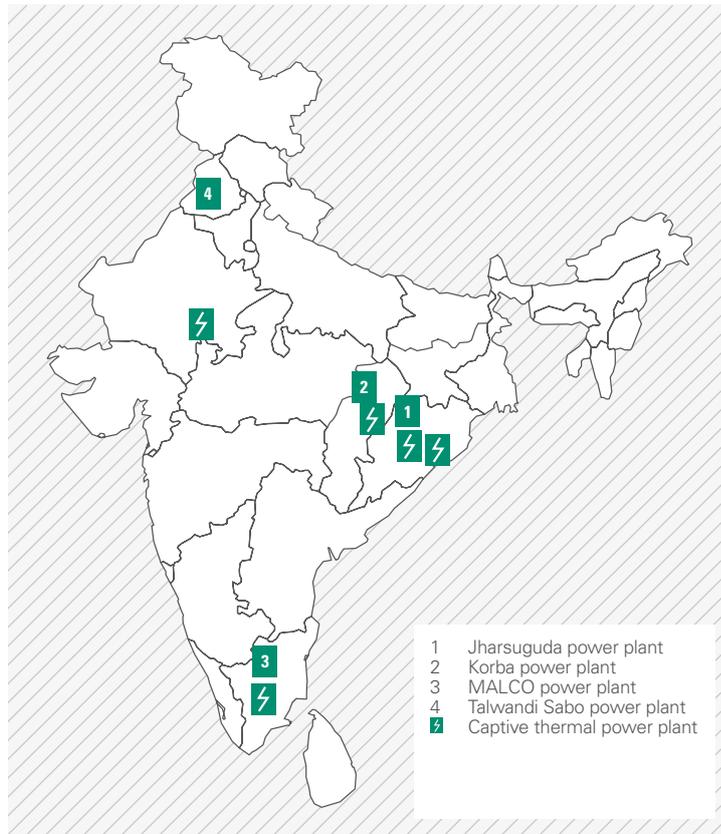
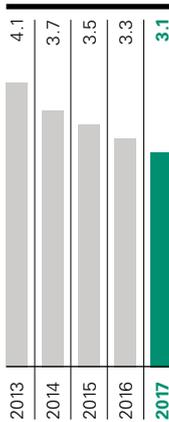
**SALES**  
(MILLION KWH)



**EBITDA**  
(US\$ MILLION)



**UNIT COSTS**  
(US CENTS/KWH)



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Talwandi Sabo attained record plant availability in the fourth quarter with all units functioning.

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**SAFETY**

A broadly consistent year in terms of lost time injuries: one took place during the year, compared to two in FY2016. The frequency rate was decreased to 0.09 compared to 0.18 previously.

At MALCO energy we implemented the SAP EHS Module, to provide us with tighter control and better data on safety observations, the Risk Register, Work Clearance Management (WCM) and incident investigations.

We also conducted workshops on Experience Based Quantification (EBQ), and on high PM emissions and pot line FTP stack emissions with participants from TSPL and other power plants.

**ENVIRONMENT**

One of the main environmental challenges for power plants is the management and recycling of fly ash. We were pleased to record an improvement in our overall waste recycling rate, from 44.34% in FY2016 to 54.84% in this reporting year.

We also saw an improvement in the way we collect, recycle and reuse water. The rate rose to 11% in FY2017 compared to 6% in the previous year.



# DIVISIONAL REVIEW CONTINUED

## POWER

### PRODUCTION PERFORMANCE

	FY2017	FY2016	% change
<b>Total power sales (MU)</b>	<b>12,916</b>	12,121	6.6%
Jharsuguda 600MW*	<b>3,328</b>	7,319	(54.5)%
BALCO 600MW	<b>2,609</b>	1,025	–
BALCO 270MW*	–	169	–
MALCO	<b>190</b>	402	(52.7)%
HZL wind power	<b>448</b>	414	8.2%
TSPL	<b>6,339</b>	2,792	–
TSPL – availability	<b>79%</b>	80%	

\*Jharsuguda 1,800MW and BALCO 270 MW have been moved from the Power to the Aluminium segment from 1 April 2016.

### SALES AND UNIT COSTS

	FY2017	FY2016	% change
Sales realisation (US cent/kwh) <sup>1</sup>	<b>4.2</b>	4.5	(6.4)%
Cost of production (US cent/kwh) <sup>1</sup>	<b>3.1</b>	3.3	(4.5)%
TSPL sales realisation (US cent/kwh) <sup>2</sup>	<b>7.0</b>	6.6	5.4%
TSPL cost of production (US cent/kwh) <sup>2</sup>	<b>5.6</b>	5.4	4.8%

1 Power generation excluding TSPL.

2 TSPL sales realisation and cost of production is considered above based on availability declared during the respective period.

### FINANCIAL PERFORMANCE

(IN US\$ MILLION, UNLESS STATED)

	FY2017	FY2016	% change
Revenue	<b>835.9</b>	707.5	18.1%
EBITDA	<b>244.8</b>	196.3	24.7%
EBITDA margin	<b>29.3%</b>	27.7%	–
Depreciation and amortisation	<b>88.2</b>	74.1	19.0%
Operating profit before special items	<b>156.6</b>	122.2	28.2%
Share in Group EBITDA %	<b>7.7%</b>	8.4%	–
Capital expenditure	<b>59.6</b>	50.1	19.0%
Sustaining	–	7.6	–
Project	<b>59.6</b>	42.5	40.2%

### OPERATIONS

In FY2017, power sales were higher at 12,916 million units compared with 12,121 million units in FY2016, driven by commissioning of additional units at Talwandi Sabo Power Limited (TSPL) and BALCO over the last year. The Jharsuguda 1,800MW and BALCO 270MW smelters have been moved from the Power segment to the Aluminium segment, effective from 1 April 2016.

The Jharsuguda 600MW power plant operated at a lower plant load factor (PLF) of 68% in FY2017 (FY2016: 71%).

Power sales from TSPL were significantly higher during the year at 6,339 million units, with all three units fully operational. The third 660MW unit achieved its commercial operation date (COD) on 24 August 2016 and was capitalised on 1 September 2016. The plant achieved full ramp up during FY2017, and had record availability of 85% in Q4. The power purchase agreement with the Punjab State compensates Vedanta based on the availability of the plant. In April 2017, a fire took place in the coal handling facility of the power plant. This resulted in a shutdown of all three units of the power plant for around 60 days. There were no injuries in the incident and the operational team is working towards rectification, and a safe and swift restart.



Solar power plant at BALCO

The 600MW BALCO IPP units (2x300MW) operated at a PLF of 58% in FY2017, due to the weak power market.

The MALCO power plant operated at a lower PLF of 23% in FY2017 compared with 48% in FY2016, due to a lower offtake from the Telangana State Electricity Board (TSEB). We entered into a contract with TSEB for power supply from June 2016 to May 2017, following the completion of the earlier sales contract with the Tamil Nadu Electricity Board. However, we are entitled to compensation at 20% of the contracted rate for any offtake below 85% of the contracted quantity.

Average power sales prices, excluding TSPL, were lower in FY2017 at 4.2 US cents per kwh (FY2016: 4.5 US cents per kwh) primarily due to softening rates in the open access power market.

During FY2017, average power generation costs excluding TSPL improved to 3.1 US cents per kwh (FY2016: 3.3 US cents per kwh) mainly due to increased generation from the newly commissioned and more energy-efficient BALCO power plant.



TSPL's average sales price was higher at 7.0 US cents per kwh compared with 6.6 US cents per kwh in FY2016, and power generation cost was higher at 5.6 US cents per kwh compared with 5.4 US cents per kwh in the previous year, driven mainly by increased coal prices.

EBITDA improved by 25%, driven mainly by extra power sold from the commissioning of additional capacities at TSPL and BALCO, despite the weaker demand.

#### OUTLOOK

During FY2018, we will remain focused on increasing the plant availability and increased sales from fully commissioned capacities at BALCO and TSPL plant availability above 75%.

#### STRATEGIC PRIORITIES

- › Tie up balance capacity under long or medium-term open access for BALCO;
- › Achieve over 90% availability;
- › Achieve successful outcome in regulatory matters; and
- › Tie-up for power sales at MALCO.

#### PORT BUSINESS

##### VIZAG GENERAL CARGO BERTH (VGCB)

During FY2017, VGCB operations showed a decrease of 38% in discharge as well as in dispatch, compared with FY2016. This was mainly due to reduced coal imports, driven by higher coal prices and a weaker power market. The dispatch tonnage decreased by 38% to 4.4 million tonnes (FY2016: 7.1 million tonnes) and generated an EBITDA of US\$1 million. VGCB is one of the deepest coal terminals on the eastern coast of India, which enables the docking of large Cape-size vessels.

##### MORMUGAO PORT, GOA

Sterlite Ports has been awarded the project to design, build and operate a multi-cargo port terminal in Mormugao Port, Goa, with 19 million tonnes per annum capacity, to handle iron ore, coal and other commodities.

Visakhapatnam and Goa together will place Vedanta Limited in the major league of port infrastructure operators, with combined handling capacity of 33 million tonnes.