



Investor Presentation April 2019

Lighting up Lives!



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Low Capacity Utilization:

- Installed capacity (345 GW) is twice of the peak demand (177 GW) resulting in low utilization
- 24 GW thermal assets stranded putting pressure on the banking system
- While Energy demand has grown, it has not kept pace with growth in Indian Economy
- Capacity glut & weak SEB finances impacted thermal PLFs; FY18 saw initial signs of reversal of decline in PLF

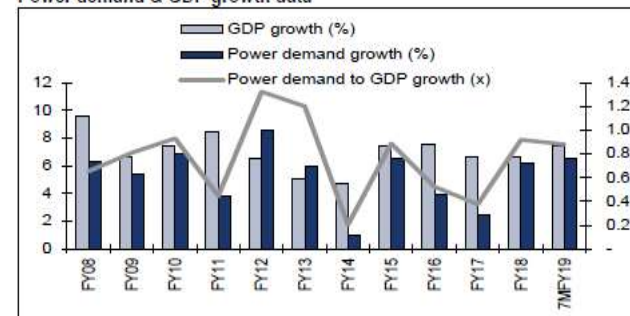
Stress on financials of Discom not yet resolved:

- UDAY impactful with shifting of losses & reduction of AT&C losses but ARR-ACS gap needs to be addressed
- Cross subsidy burden on
- Sharp increase in receivables stretching developers and lending system

Declining trend in Solar tariffs:

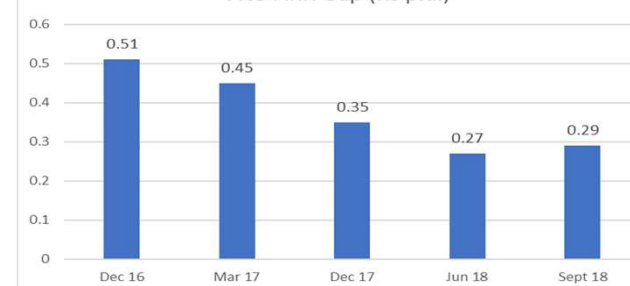
- Intense competition coupled with declining module prices driving tariffs down; renewable tariffs have achieved grid parity
- Discoms preferring 3-5 year PPAs and avoiding LT PPAs for thermal assets

Power demand & GDP growth data

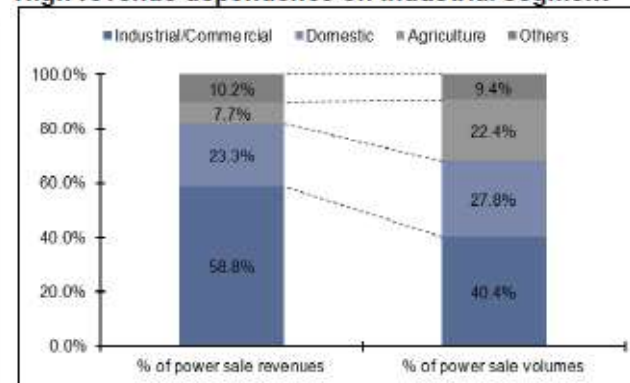


Source: MoSPI, CEA, I-Sec Research

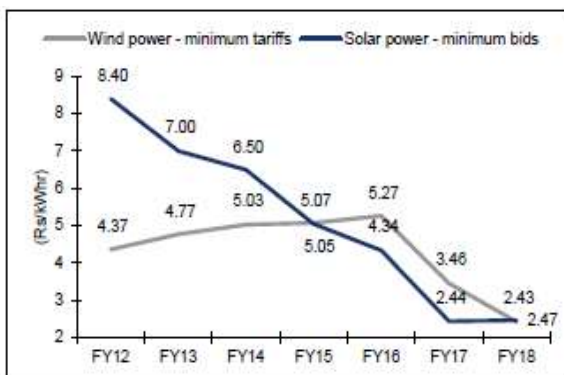
ACS-ARR Gap (Rs p.u.)



High revenue dependence on Industrial segment



Source: PFC AR'16, I-Sec research



Source: Industry, CERC, I-Sec Research ; * FY17 data for wind tariff is bid-based

Discoms' dues increasing in FY19



Tata Power's controlled aggression in Renewables driving healthy business growth



Demand augmentation:

- Peak demand surge – 13GW in 7MFY19 over FY18 - probably the highest ever
- SAUBHAGYA will likely result in 8-10% peak demand increase, and 3-5% base demand increase initially
- Load shedding reduction contributed >60bps to FY18 power demand growth

Enough capacity to sustain for next 4 years – What after that?

- Capex in generation required soon to address demand growth and retirements of inefficient and old plants
- Stressed asset resolution to be driven with growth in demand and the Samadhan and Parivartan schemes

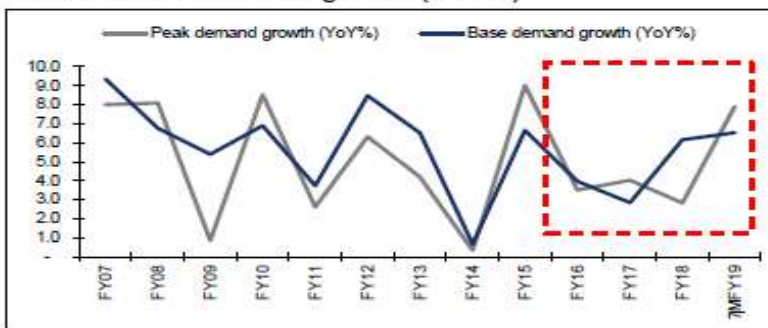
Consolidation in Renewables

- Continued thrust on renewables; Rationalization of bids in recent rounds
- Green Transmission Corridor positive for growth
- Recent regulatory orders upholding existing PPAs a positive

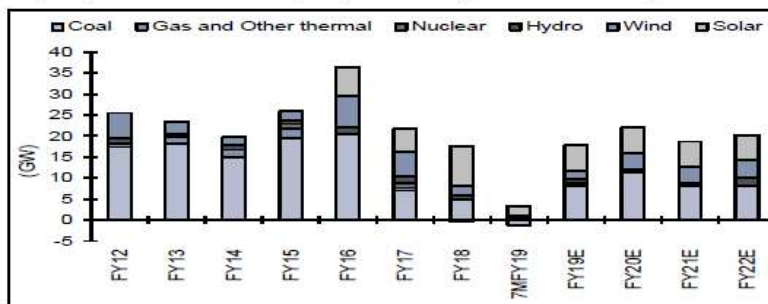
Distribution Reforms

- UDAY Scheme has been impactful but tariff reforms remain the last mile
- Private participation in distribution must for Discoms' turnaround

Peak and base demand growth (YoY %)



Capacity addition – thermal capacity addition negative in 7MFY19 on plant retirements



Source: CEA, I-Sec Research

AT&C loss trend



Source: Ministry of Power, PFC I-Sec Research

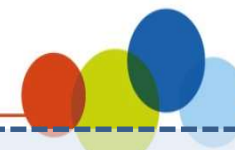
Calibrated Growth strategy to secure market leadership with sustainable profitability



Tata Power

Lighting up Lives!

Consolidated 11 GW portfolio with 30% in clean, non-fossil power



CONVENTIONAL GENERATION (EX – CGPL)

ASSURED RETURNS

	MW
Regulated	2,855
Fixed RoE	549
Total	3,404

MERCHANT

	MW
Merchant + Short term PPA	246
Total	246

TRANSMISSION & DISTRIBUTION

REGULATED – TRANS.

	CKM
Mumbai	1,188
Powerlinks JV	2,328
Total	3,516

REGULATED – DISTRN.

	Mln Cust
Distrib. License	2.4
DF	0.1
Total	2.5

CGPL, COAL & INFRA

CGPL + KPC

	Size
CGPL	4,150 MW
Coal Mines	21 MT (Eq share)
Ships	3 own & 3 lease

RENEWABLES + TATA POWER SOLAR EPC

WIND

	MW
Feed in Tariff	931
LT PPA Bid	230
Total	1,161

SOLAR

	MW
Feed in Tariff	975
LT PPA Bid	320
Total	1,295

SERVICE BUSINESSES

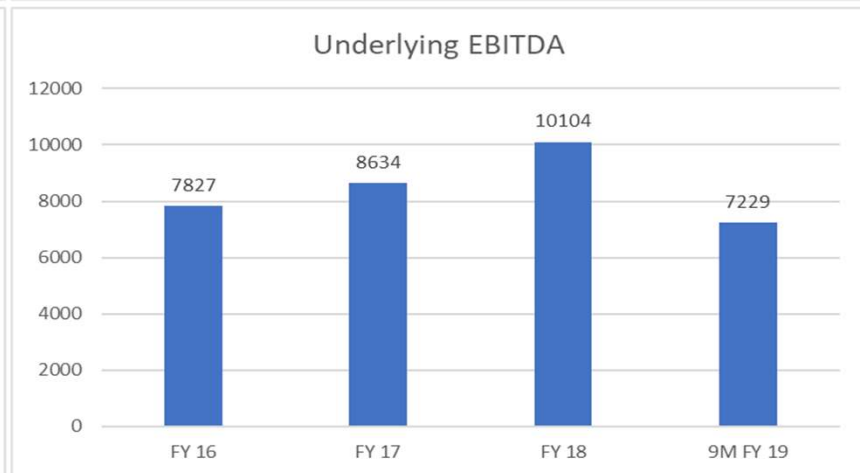
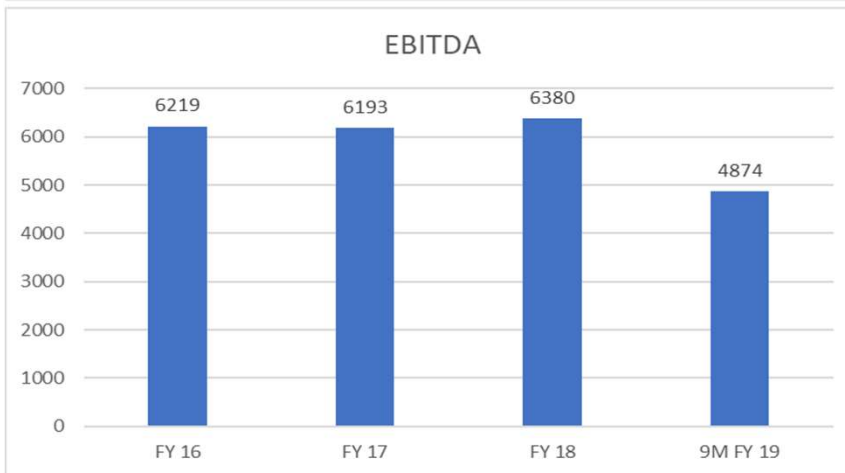
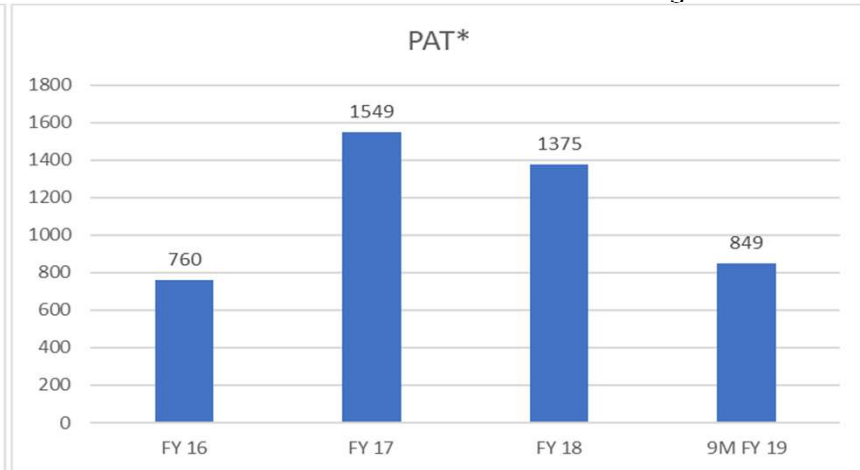
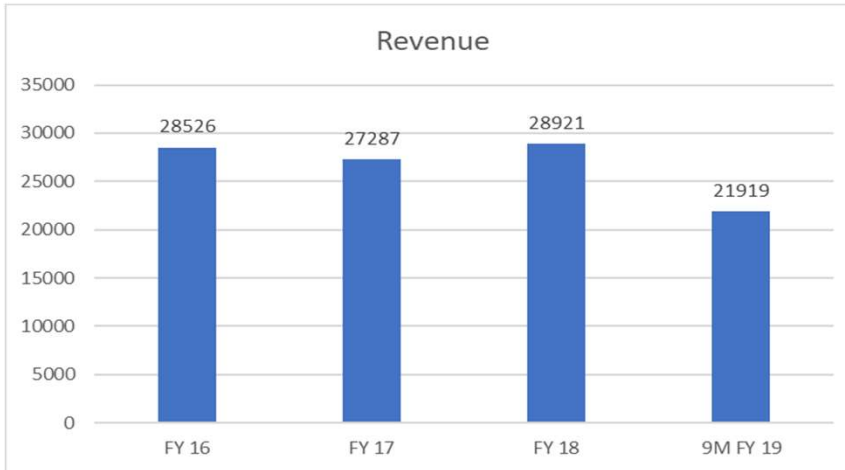
OTHER BUSINESSES

Businesses
Construction & O&M Services
Value Added Distribution Services
Tata Power Trading

- 100+ years experience of the Indian Power Sector and pioneer with a number of firsts
- 34% capacity (conventional) in regulated generation and 24% (renewable capacity) under healthy return regime; Mundra hedged with Coal Companies
- Integrated Solar EPC business with 1.5 GW of large scale capacity installed till date
- Scaling up Renewables, Distribution and Services business to achieve market leadership



All figs in Rs Crores



* Before exceptional items

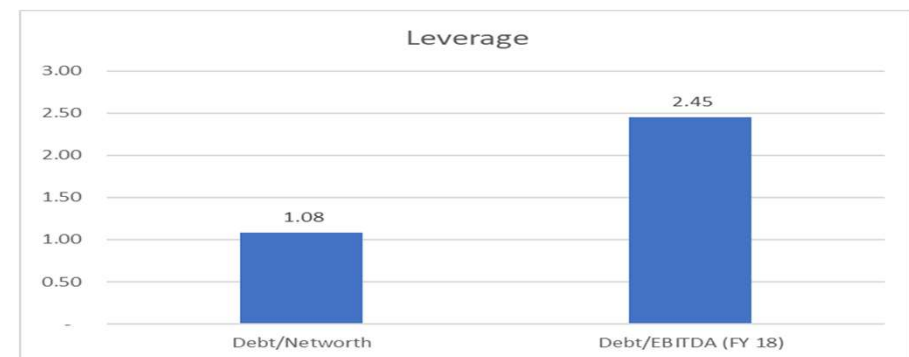
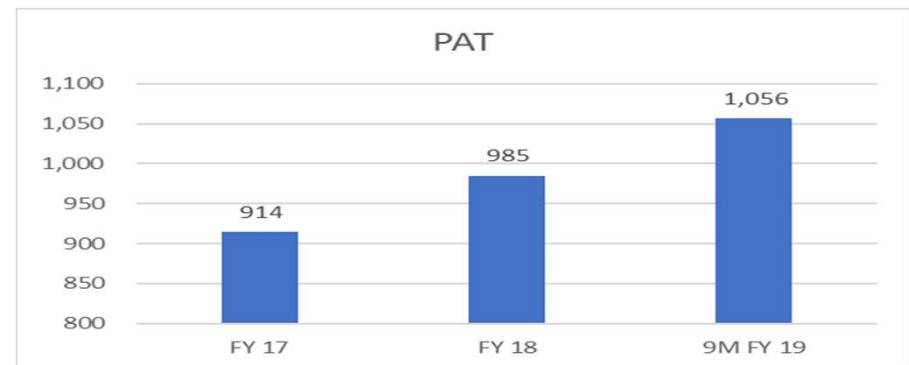
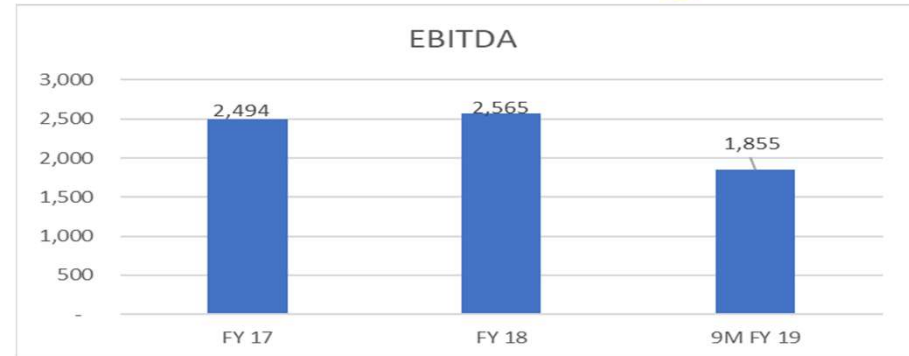
Despite pressures from under-recovery in CGPL, robust underlying EBITDA growing by ~ 30% in last 3 yrs.



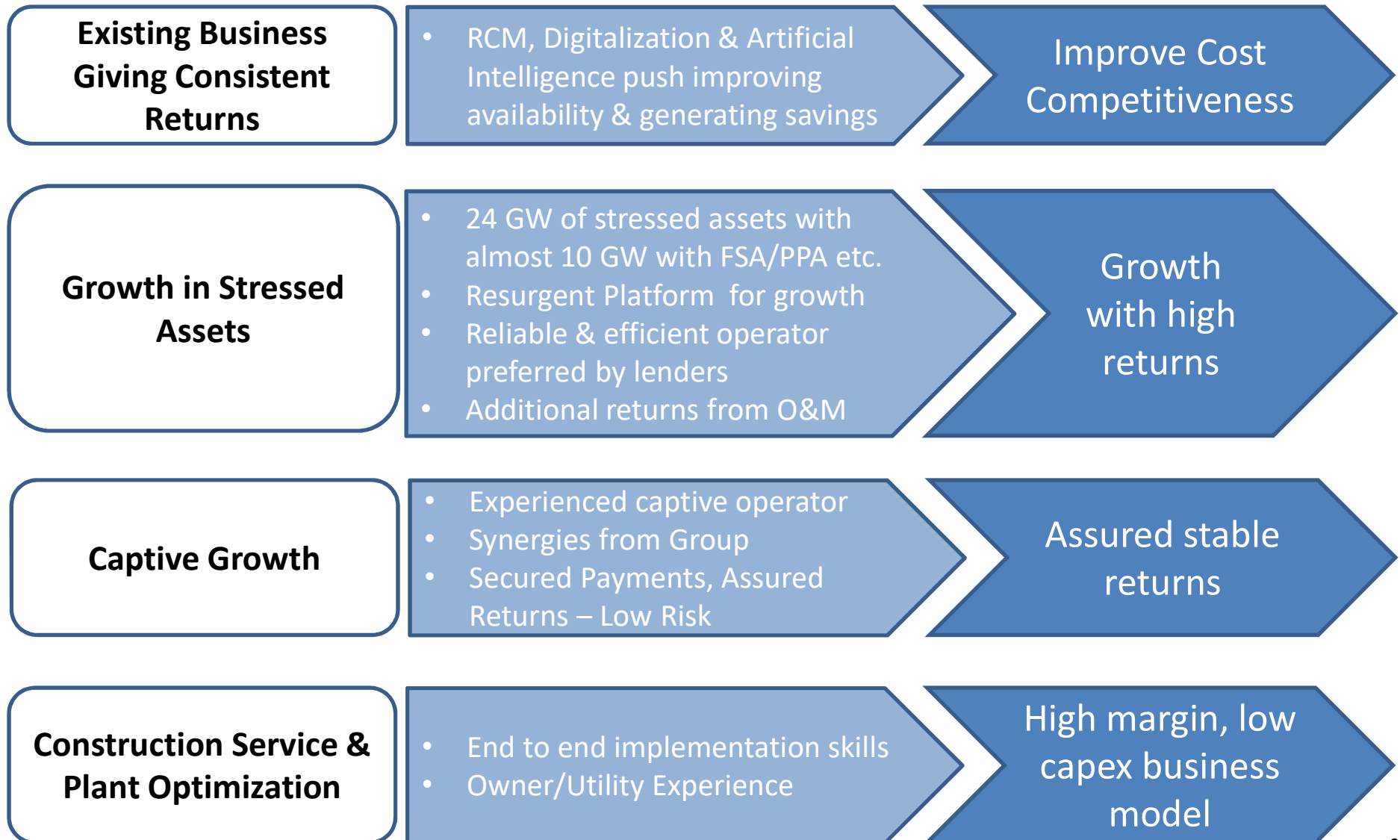
Plant	MW	Remarks	Reg Equity
MO Thermal	930	100% Regulated with 5 yr PPA (BEST & TPC-D)	Rs 1,803 crs
MO Hydro	477		
Jojobera	428	100% regulated	Rs 284 crs
Maithon	1,050	74% JV; 100% regulated	Rs 1,582 crs
IEL (Captive)	375	74% JV; Negotiated PPA	N/A
Zambia Hydro	120	50% JV; 100% Fixed RoE	N/A
CKP (Captive)	54	30% JV, Fixed RoE	N/A
Haldia	120	100 MW Merchant; 20 MW PPA	N/A
Bhutan Hydro	126	Merchant Capacity	N/A
Total	3,650		

- Cost Competitive, Profitable & Sustainable Generator
- Technology Pioneer through operational excellence, Digitalization & AI
- Value Added Services through Niche Solutions
- Responsible Generator of choice for Community & Employees

Before Eliminations



Stable returns with maintenance capex & cost optimization providing growth



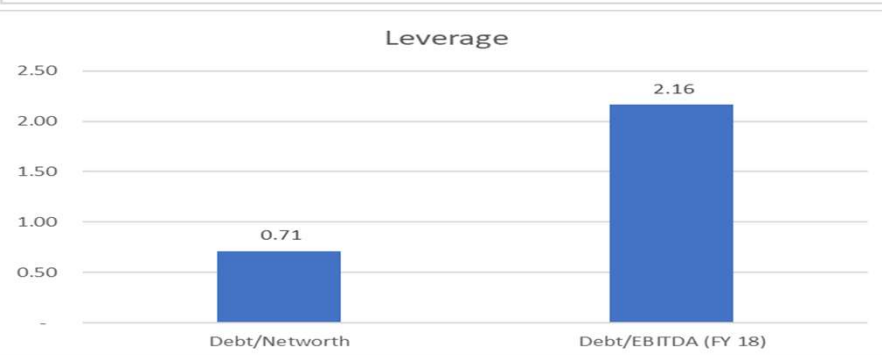
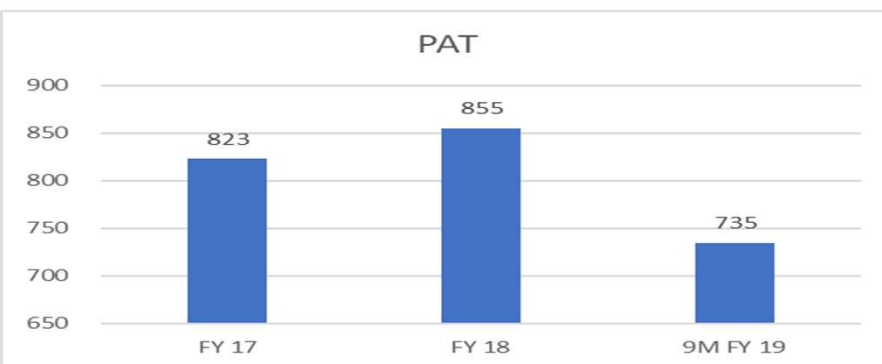
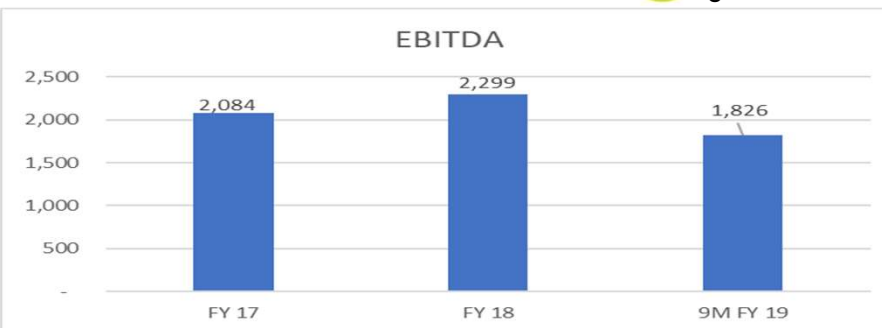


Transmission	CKM	Reg Equity
Mumbai	1,188	Rs 1,164 crs
Powerlinks	2,328	Rs 468 crs
Total	3,516	Rs 1,632 crs

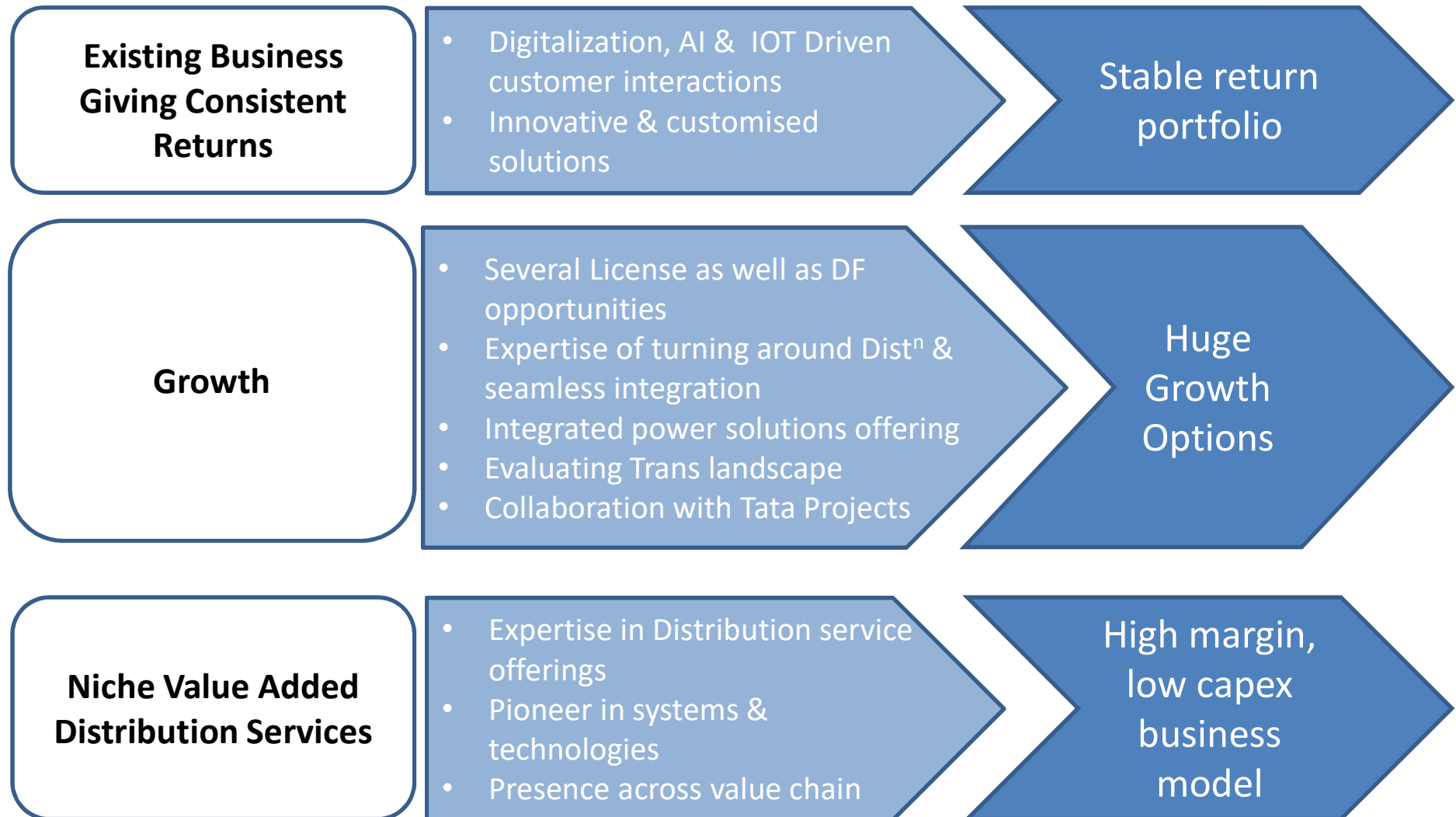
Distribution	Mln Cust	Reg Equity
Mumbai License	0.7	Rs 830 crs
Delhi License	1.7	Rs 1,371 crs
Ajmer DF	0.1	N/A
Total	2.5	Rs 2,201 crs

- Track record of turning around Distr. Business achieving significant loss reduction
- Adopting and implementing latest technologies (AI/IOT) to offer superior services to customers.
- First mover advantage in integrated solutions; Leverage presence across the value chain to provide seamless integration

Before Eliminations





Assured returns with a drive towards asset light business






Renewable Developer Company Overview

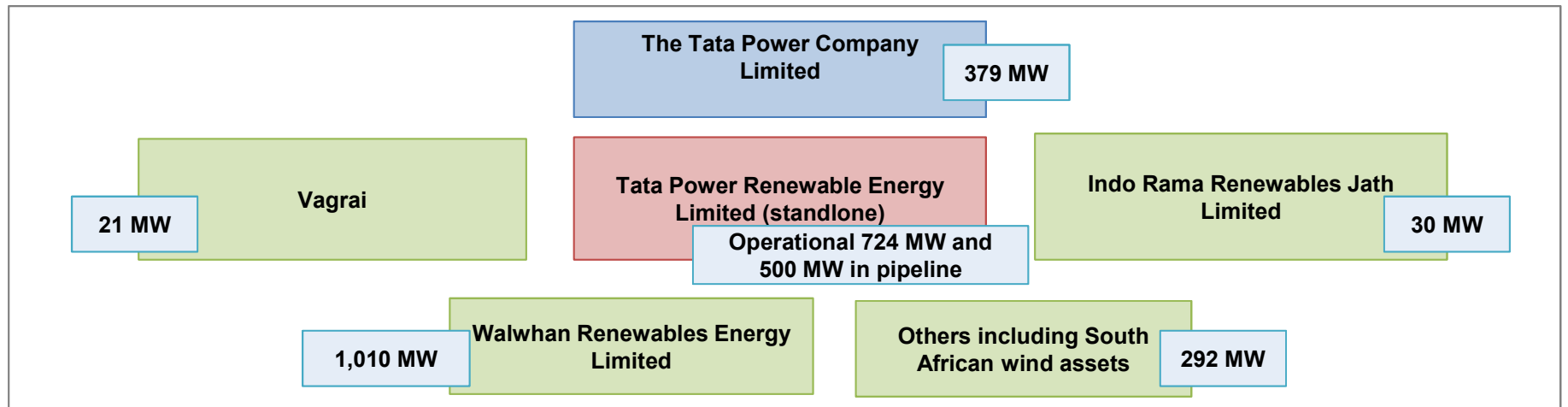
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Tata Power is 6th largest Renewable energy player in India with a portfolio of 2,064 MW (Tata Power assets, TPREL & Walwhan) operational and 500 MW under construction in India and 230 MW operational in South Africa
- 

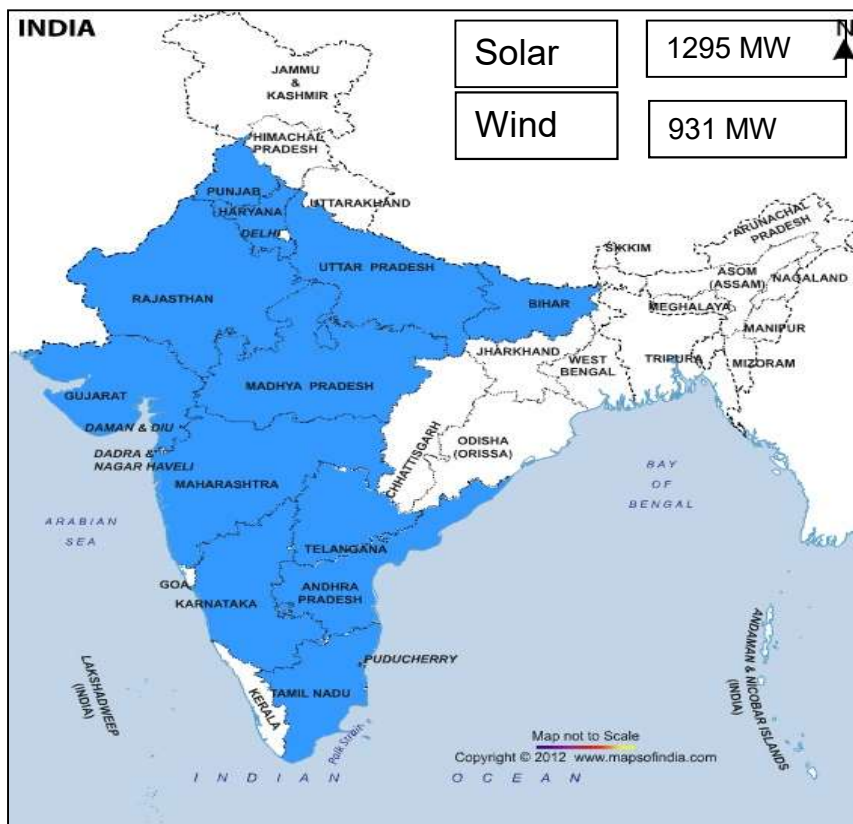
Balanced portfolio with complimentary renewable energy sources and presence across 11 states, thereby de-risking portfolio with an average tariff of ~ Rs. 6 per kWh
- 

Robust platform to benefit from the huge market potential to increase the capacity

Renewable Project Portfolio

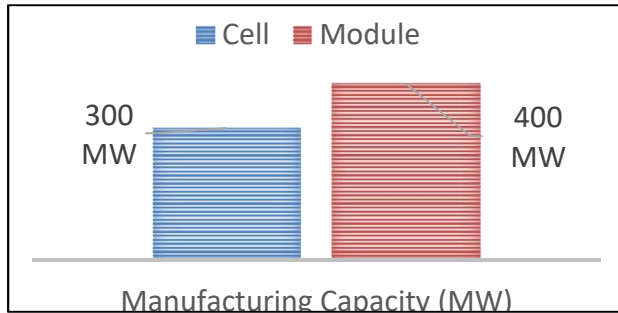


~2.5 GW of Operating capacities and 500 MW in pipeline; future growth in Solar



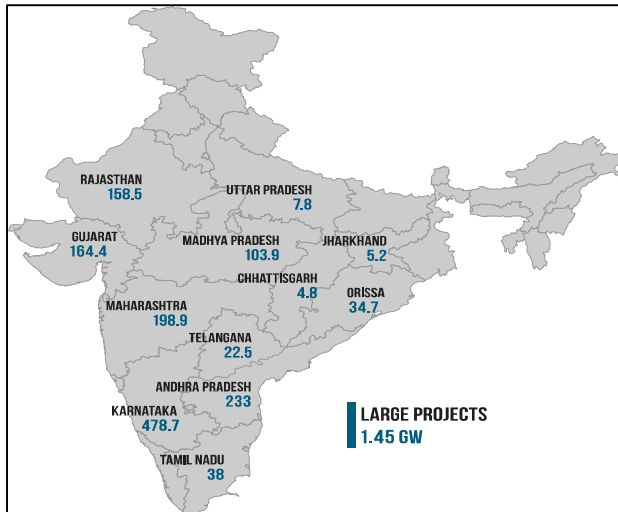
State wise installed capacity

State	GJ	RJ	MP	MH	AP	TS	KN	PB	TN	UP	BH	Total
Solar	100.0	66.0	130.0	128.0	205.0	15.0	314.0	36.0	249.0	1.0	40.0	1284.0
Wind	193.6	185.0	44.0	238.6	100.0	0.0	50.4	0.0	120.0	0.0	0.0	931.6
Total	293.6	251.0	174.0	366.6	305.0	15.0	364.4	36.0	369.0	1.0	40.0	2215.6



In-House Manufacturing of Solar Cells and Modules

- Over 1GW modules shipped globally
- Rated as Tier-1 bankable manufacturer by several rating agencies such as GTM, BNEF
- Highly automated manufacturing lines ensuring best quality product



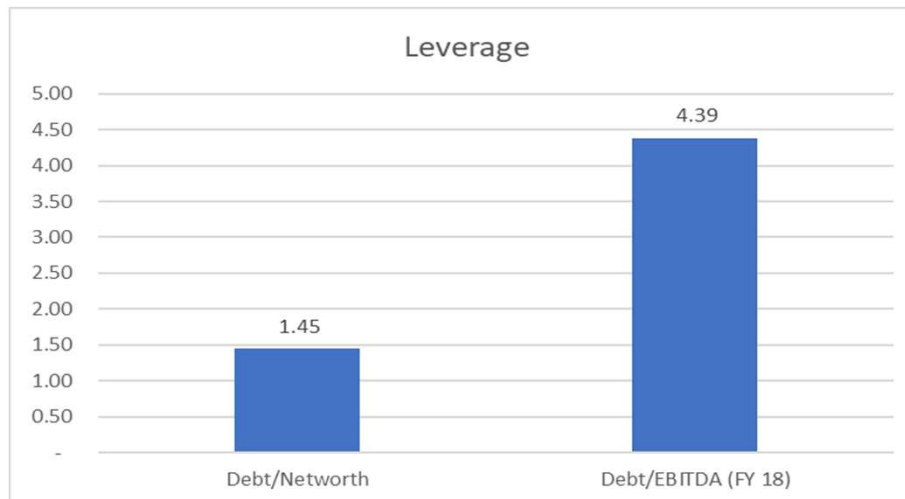
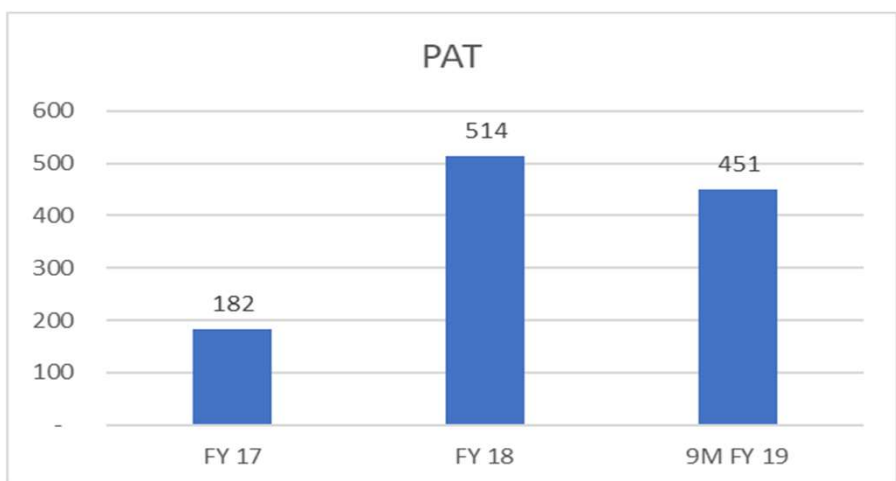
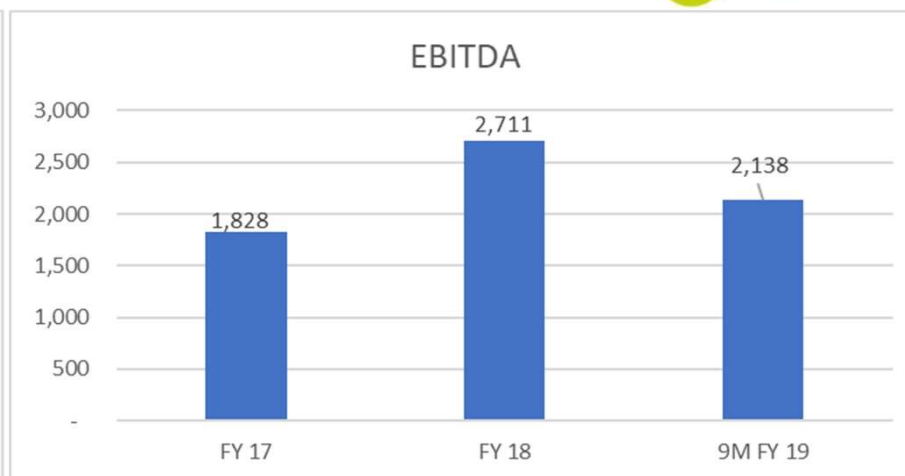
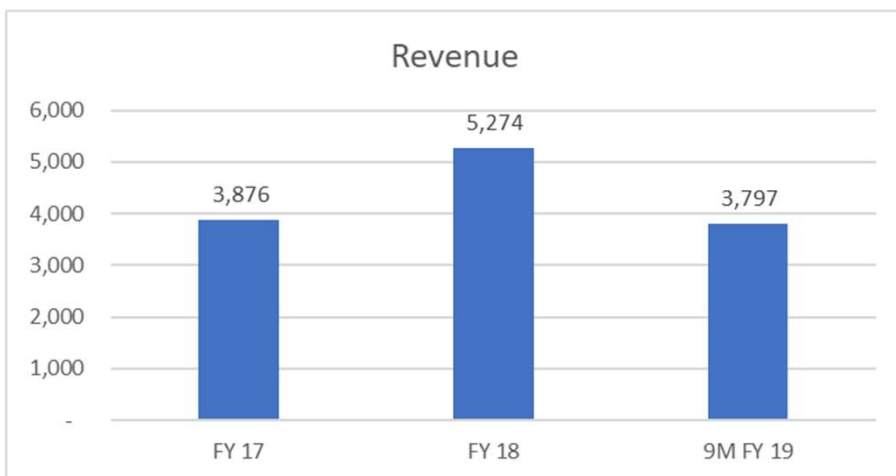
EPC Capabilities for Self and Third Party Projects

- With over 1.5GW of EPC Projects Commissioned, TP EPC arm is one of the biggest in India.
- Strong orderbook of ~1 GW
- Huge potential to leverage Group business opportunities
- Strong Capabilities in key areas
 - Engineering and design optimizations
 - Low cost procurement might
 - Cost light project execution
 - Intelligent O&M systems for predictive maintenance



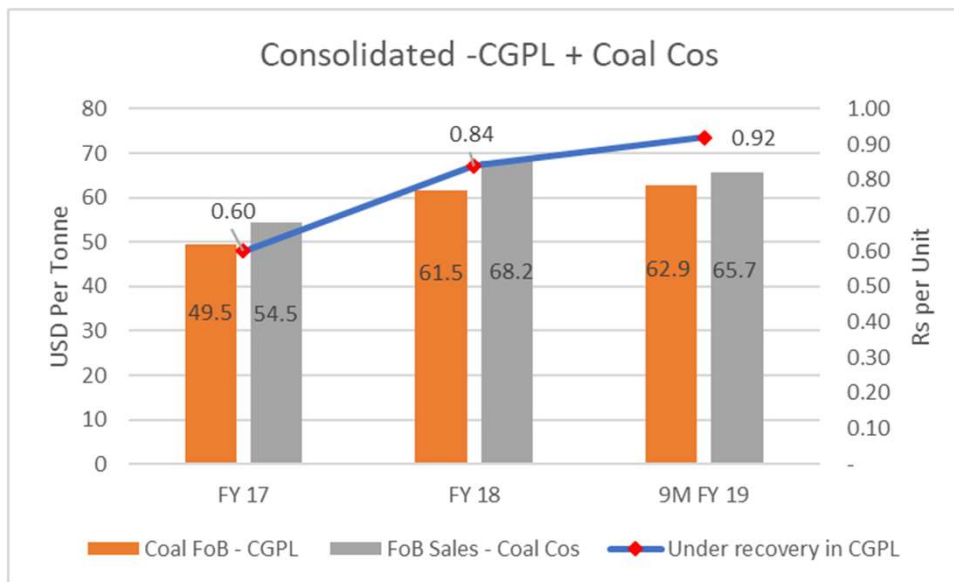
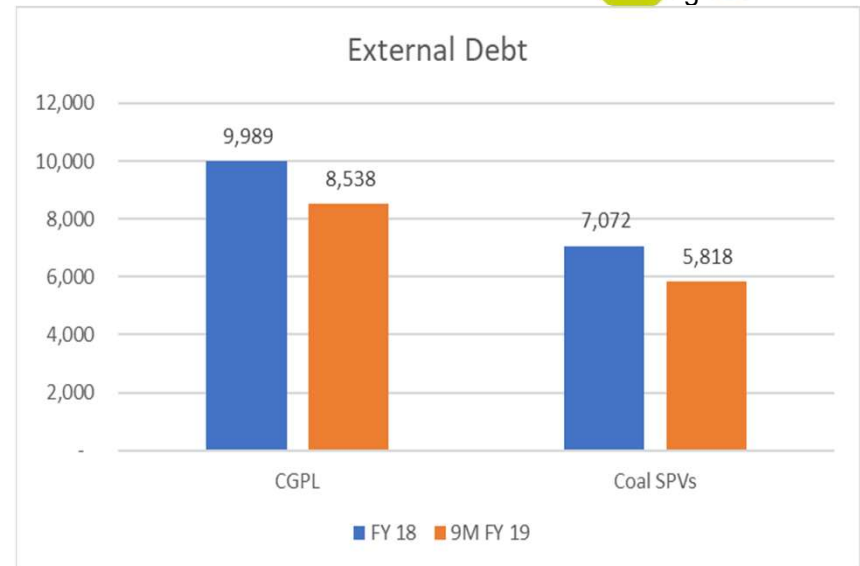
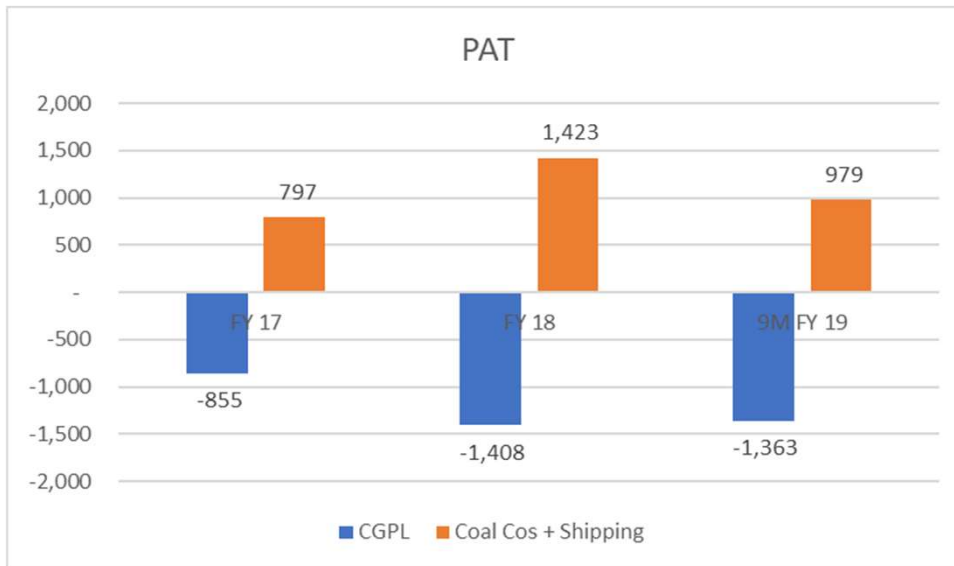
India's No.1 Rooftop EPC Company for last 4 yrs as per BTI

- Commissioned ~ 246 MW till date serving residential, government, commercial and industrial segments.
- Executed 12 MW world's largest rooftop solar and commissioned India's largest vertical solar farm.
- Poised well to grow with fast growing rooftop market in India



* FY 17 financials for Walwhan is from Sept 16

Robust EBIDTA growth generating significant cash for incremental capacity addition



- Sharp rupee depreciation & increased coal prices widened CGPL losses.
- Coal blending increased to reduce the losses by securing higher discount to market prices
- DMO obligations have put the natural hedge under stress.
- However, Company refinanced CGPL loans to defer part of the repayment obligations reducing the gap funding significantly. Also, overall reduction in debt at CGPL + Coal SPVs



Growth strategy

Lighting up Lives!



1



Simplify

- Reorganized businesses internally to drive focused operation & growth
- Divest and exit from non-core investments as well as subscale assets to free up capital

2

Together
wE
Achieve
More

Synergize

- Aligning with initiatives in new / emerging business areas at the Group level for maximum business impact
- Synergize within Tata Group and Tata Power Group

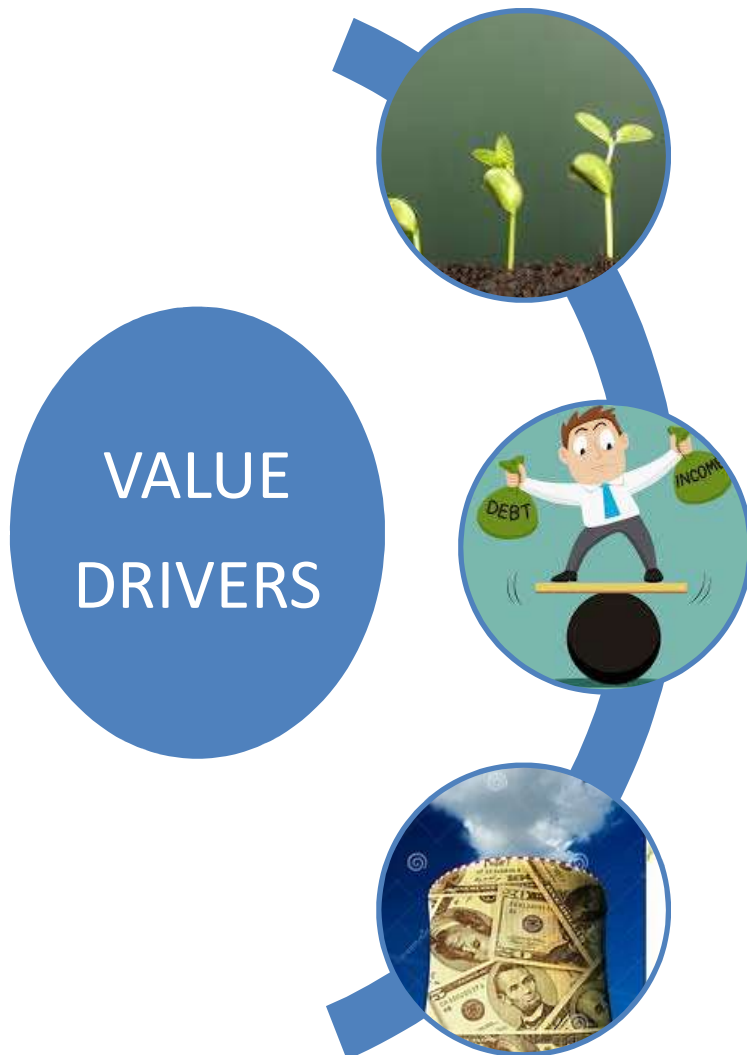
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Scale/Stretch

- Achievement of scale in focus businesses
- Value added businesses with high RoI to make significant contribution to profitability
- Improve return on capital employed in existing businesses

Focused Strategy for unlocking value and drive future growth



Calibrated Growth Model

Deleveraging Balance Sheet

CGPL Resolution



Renewable
Growth

Asset Light Model

Value Added
Business



- Steady businesses generating Rs 10,000 crores (~USD 1.5 Billion) operational cash flow every year.
- Our refinancing capabilities have helped to achieve sustenance of debt service providing more time for resolution of CGPL under-recovery.
- Current cash flows can sustain maintenance capex and approx. 500 MW of annual growth. The high Cash RoE from renewable business can fund further capacity additions
- Parallel efforts in divestment of non-core investments & proceeds from Arutmin to assist in bringing debt down to levels of Rs 40,000 crores (~USD 6 Billion).
- Regulatory changes in Delhi to assist in realization of Regulatory Assets over next 3 years. Funds to be used for growth and/or reduction of debt.
- Resurgent Venture to allow capacity addition at lower equity outlay and provide avenues for high margin plant optimization and operational services.
- Focus on value added services and micro grid solutions to address bigger issues

Robust platform to become a market leader in Renewables

500 MW of minimum annual growth in base case



Non-Fossil based capacities to be 40%- 50% of the total portfolio



500 MW of projects in pipeline, further bids being pursued



Adequate potential capacity still available to be tapped



Growth plans to be pursued with a cautious approach; capability to tap inorganic opportunities

Renewables sector outlook- more opportunities for growth



**Solar
750 GW**



**Wind
102 GW**

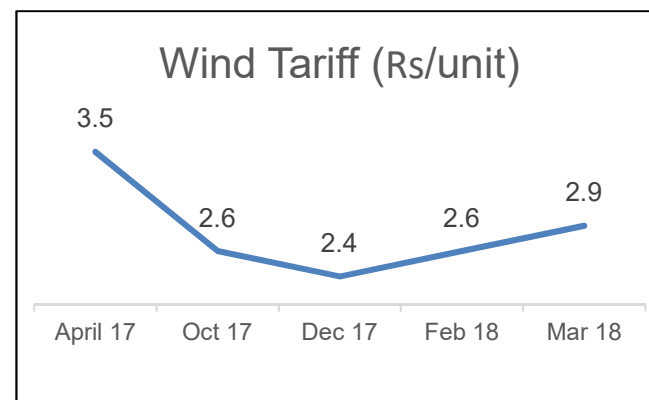
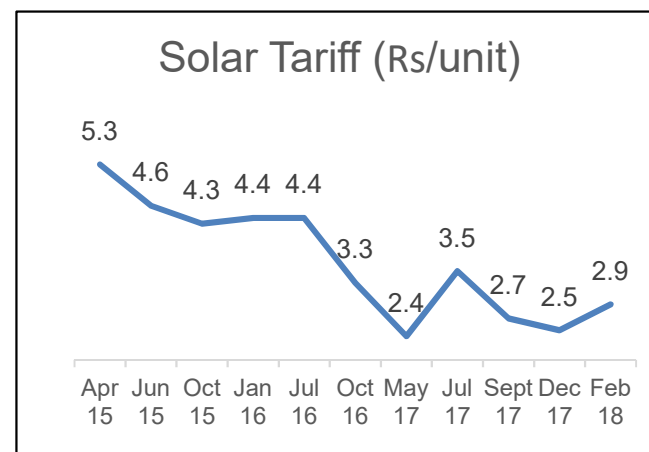


**Small Hydro
20 GW**



**Bio-Energy
25 GW**

- India has a target of 175GW by 2022
- To achieve this ~105GW is to be added in next 4 years
- Highest growth potential in solar rooftop generation
- Competition is high in renewable bids adding stress on margins



India green energy resource potential - 900GW offers huge growth opportunities



✓ **EPC cost / Module Pricing**

- Engineering optimisations in own manufacturing / EPC,
- Long term tie up for module procurement,
- Better quality monitoring in procurement being a manufacturer

✓ **Low financing cost and ability to raise long term funds**

- Demonstrated access to low cost, long tenor funding from both domestic & off shore sources

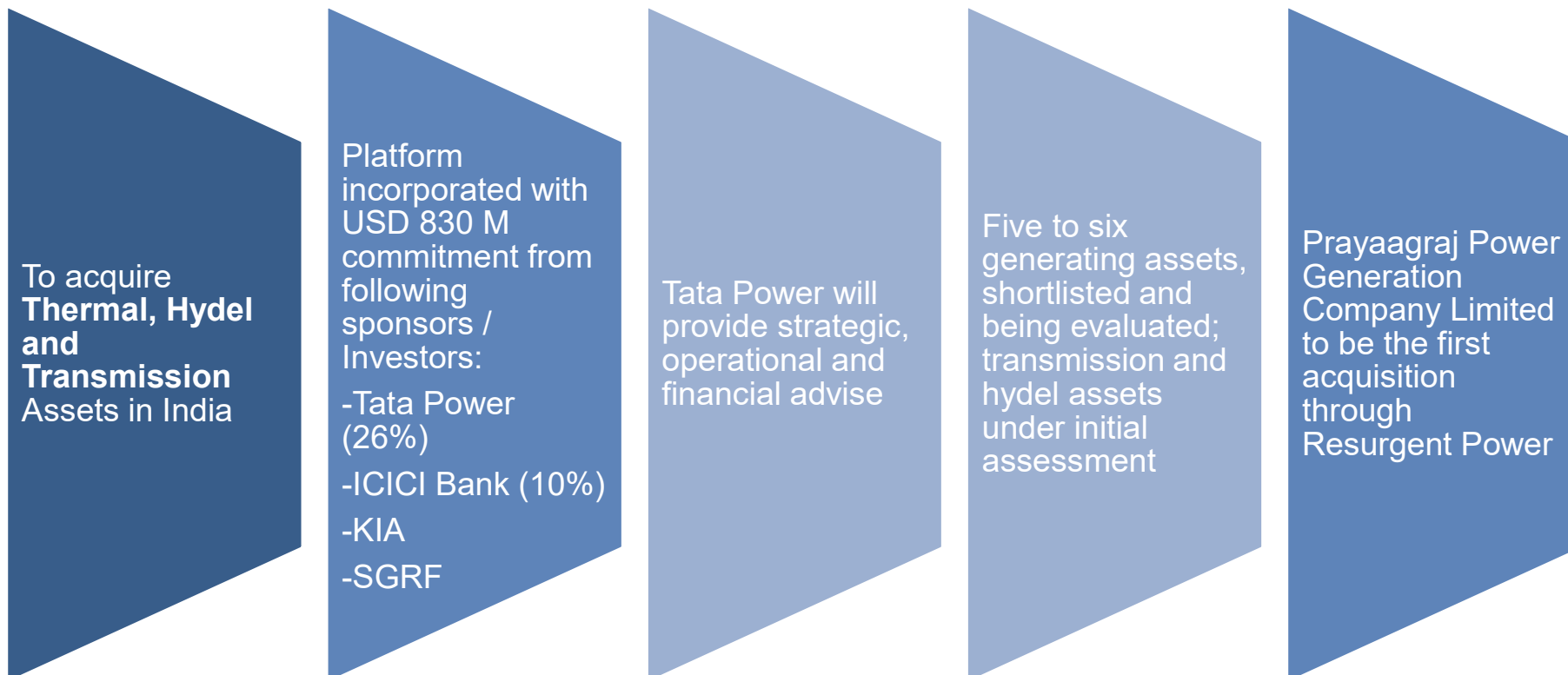
✓ **O&M cost**

- Shared cost, shared spares, intelligent module cleaning

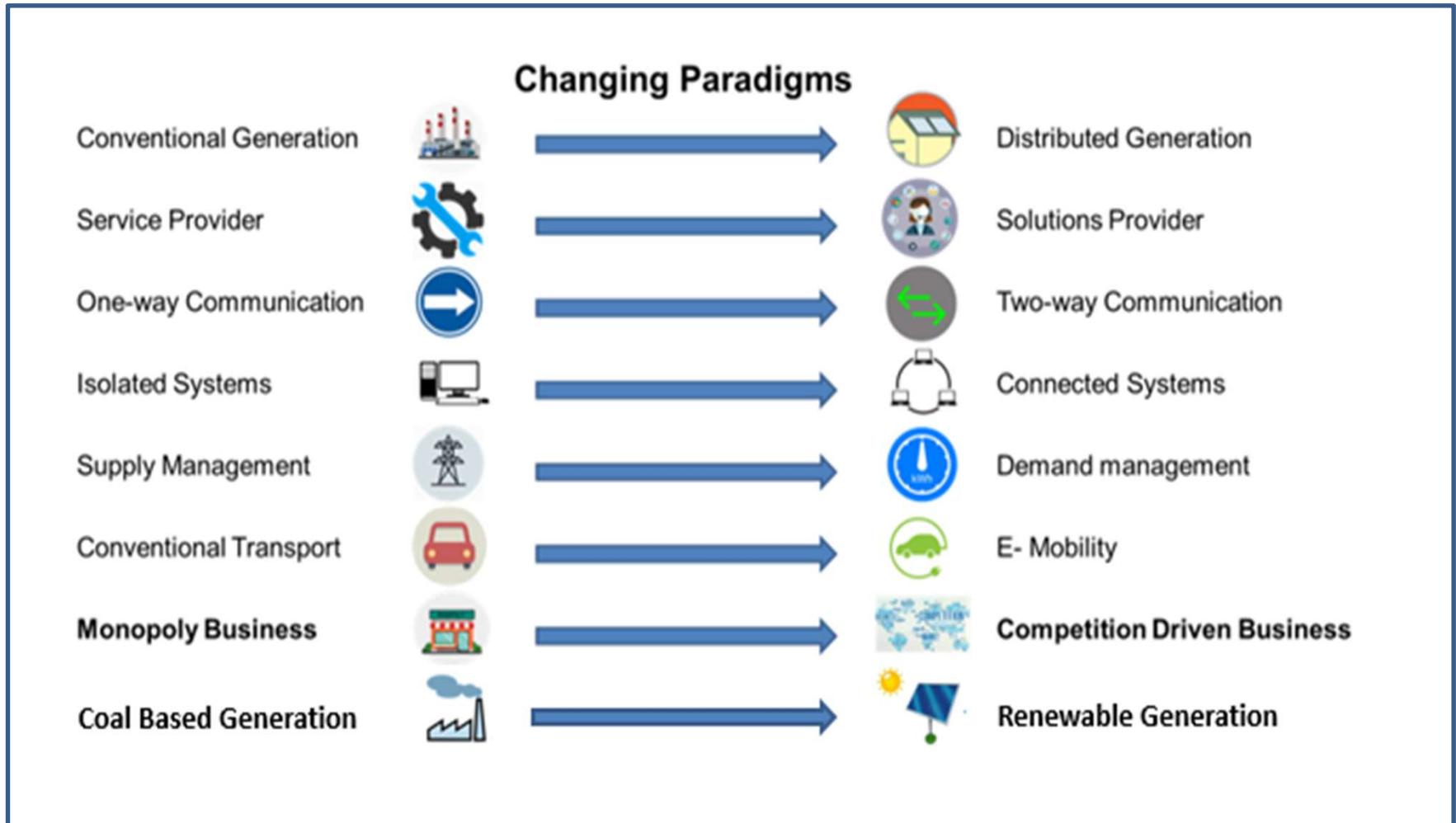
✓ **Energy Efficiency/ AC DC Packing**

- Technological intervention to improve efficiency

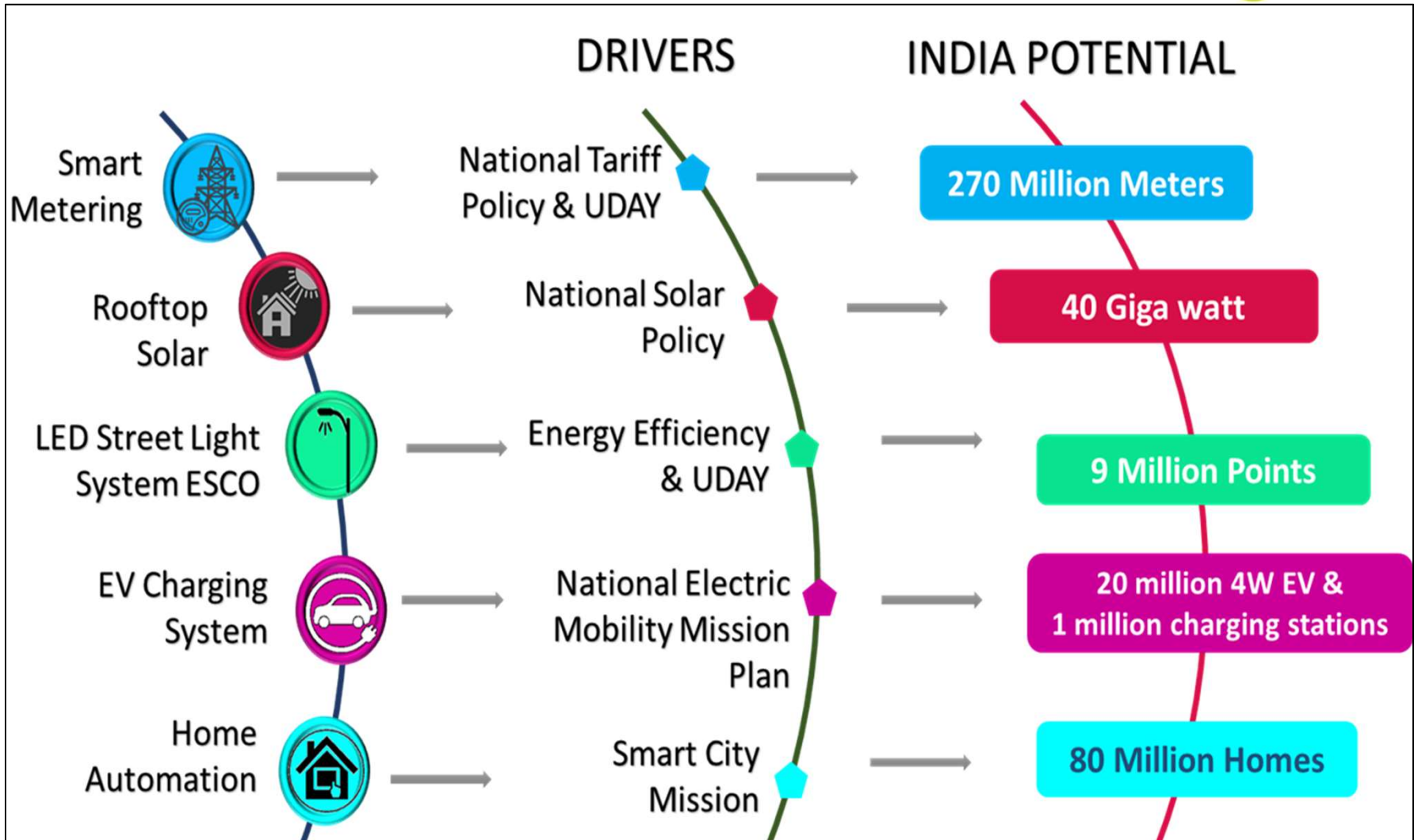
Tata Power to leverage on low cost funding, in-house EPC to be competitive



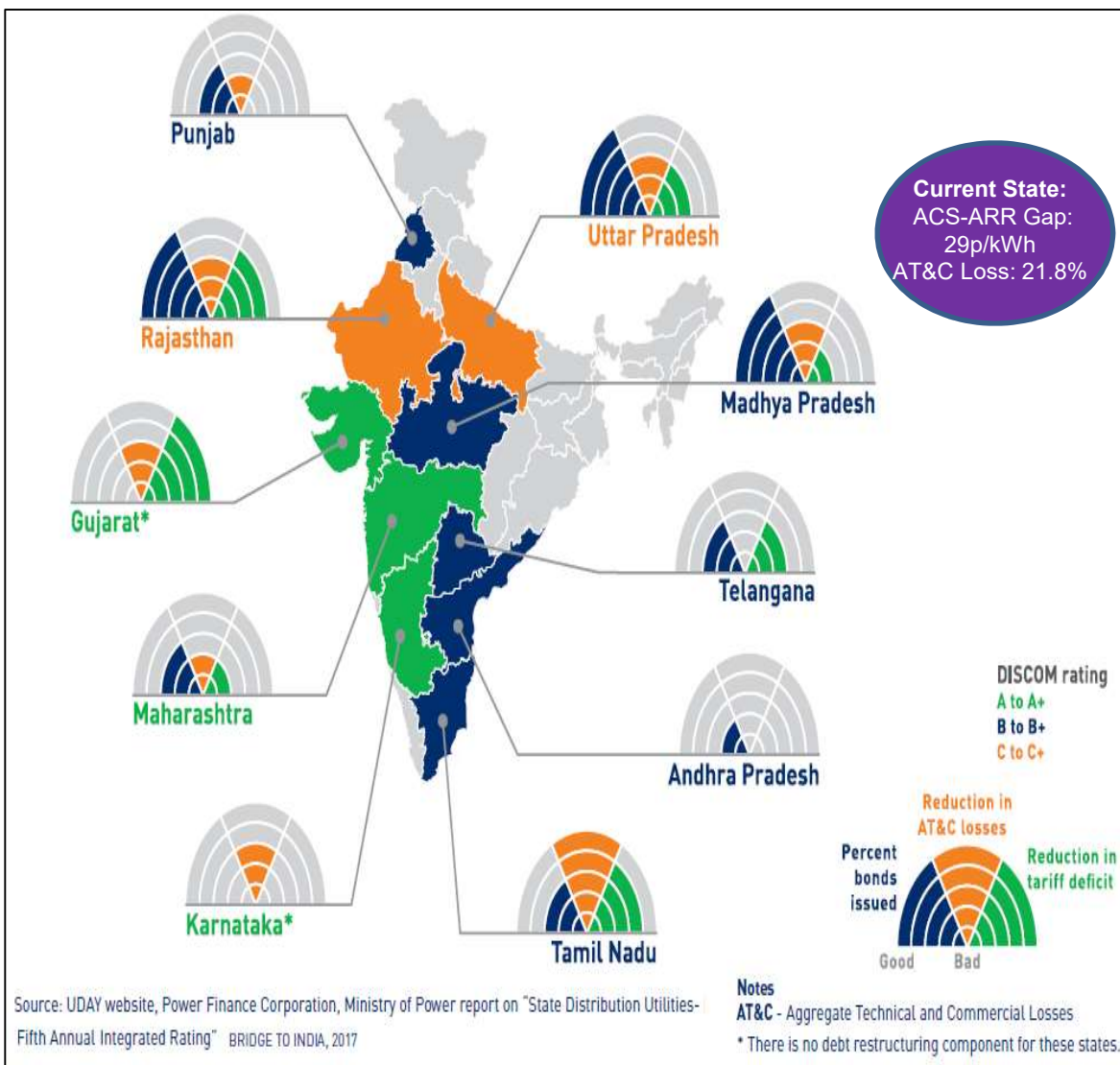
Huge inorganic growth potential through Platform. Similar structure can be used for Renewables Growth



Transformation phase in sector to offer new opportunities



Tata Power is fully geared to capitalize on opportunities in Value Added Distribution Services as well as incubate innovative projects such as Storage & Micro-Grid



Although the debt has reduced in all cases, but most states have been unable to reduce AT&C losses as well as ACS-ARR gap as per the yearly targets.

The full impact of transfer of loans and losses on State Govt. finances will be seen in FY20, Losses which is expected to reduce in FY 19 from the FY 18 levels, is again expected to balloon in FY 20 to more than the FY 18 levels driven by SAUBHAGYA scheme

This will restrict the ability of State Govts. to raise funds for other development objectives and will put huge pressure on them to privatize distribution circles / adopt franchisee model.

Post UDAY, high AT&C losses states would require greater private sector participation



The Need

- Only a small fraction of rural households (10%) electrified
- Over 3.5 crore households in India are yet to be electrified
- Nearly 80% of rural households in the electrified villages in some states of India receive power supply <2 hrs.
- Nearly 62 crore people in Africa (2/3rd of the population) are without electricity supply
- A localized cost effective microgrid will be able to ensure universal access to electricity

MICRO GRID



The Solution

- Packaged solution “Utility In a Box” with solar, storage and biomass
- Development of low cost and high efficiency appliances & meters
- Intelligent smart meters and inverters
- Promoting anchor economic activities in villages
- Microgrid pilot projects by Tata Power underway in Bihar and UP
- The aforementioned solutions can be applied to the unelectrified parts of sub-Saharan Africa too

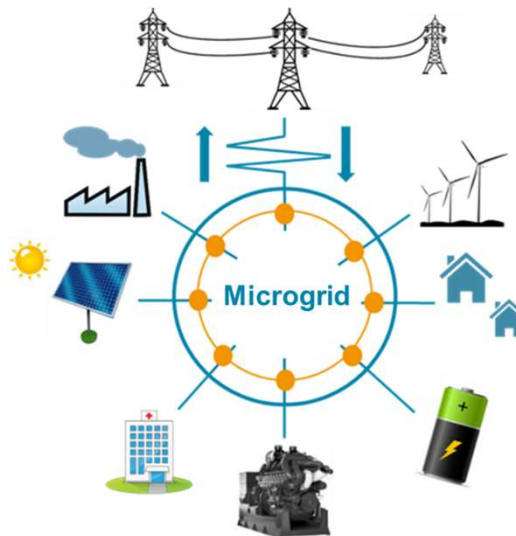
Microgrid can have an immense growth potential



EV Charging and Storage



Smart meters and cities



Home Automation and Smart Homes



Transmission & Distribution



LED Lighting



Distributed Generation and Rooftops



Generation: Renewable



Monetization of
Non-Core Assets

Targeted Leverage



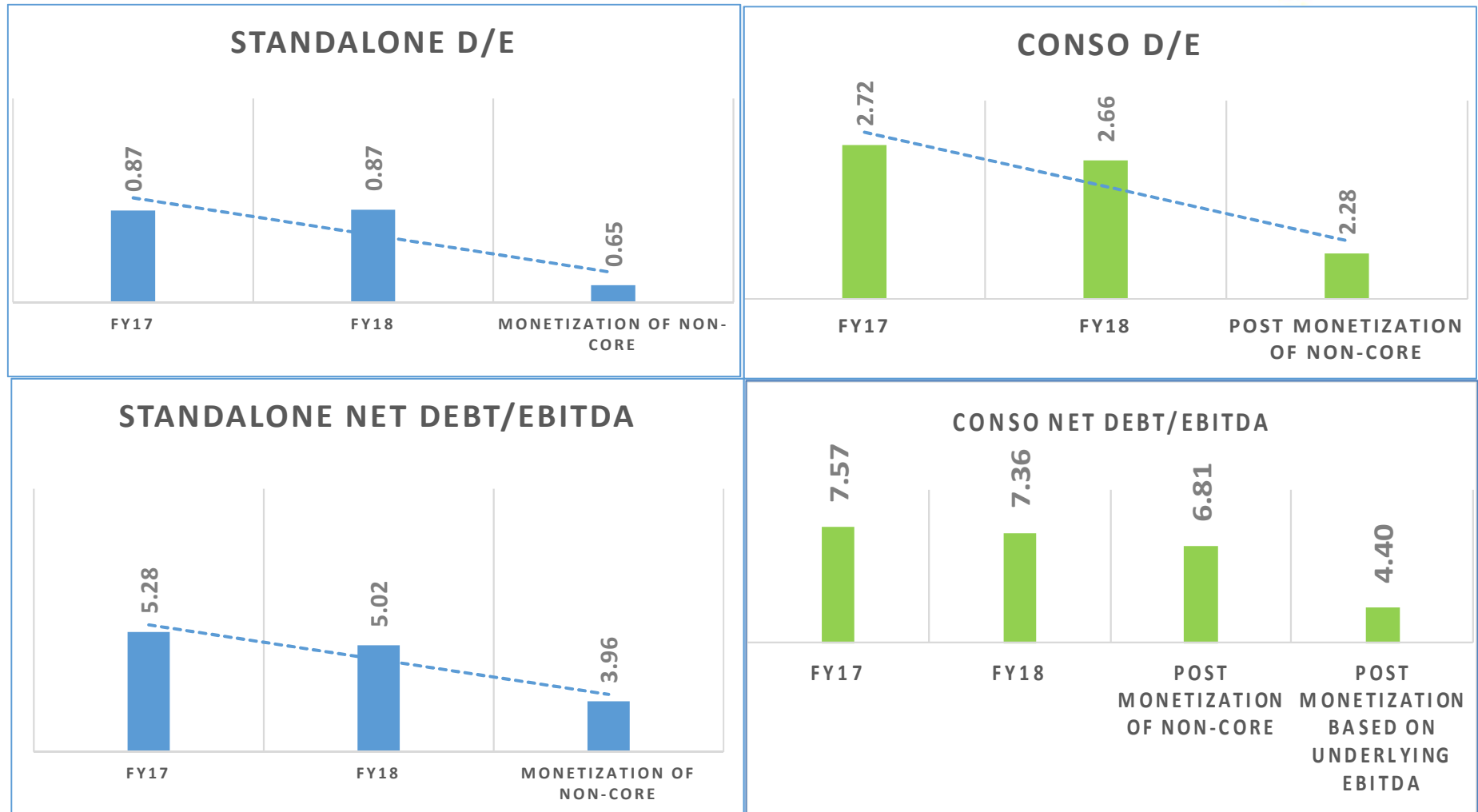
- Sold holdings in IEX (Rs 199 crs) & Tata Comm (Rs 2,150 crs)
- Realized USD 160 M out of USD 400 M from Arutmin Sale
- Sale of Defense business under regulatory approvals – Rs 1,050 crs to be received on approvals and RS 1180 crs on contract realization
- Tata Projects classified as “Assets held for sale”
- Quoted investments ~ Rs 150 Cr, Other assets Classified as “ Assets Held for Sale”- Nelito, Tata Ceramics, NELCO

**~ Rs 8,000 crores worth of divestments are planned out of which
~ Rs 3,300 crores of consideration realised (incl. Arutmin)**



PARTICULARS	STANDALONE			CONSOLIDATED		
	Rupee	Forex	Total	Rupee	Forex	Total
Long term	8,338	-	8,338	22,722	3,782	26,504
Short term	6,942	19	6,961	14,275	2,604	16,879
Current Maturity of LT	1,758	-	1,758	3,427	81	3,508
Total Debt	17,038	19	17,057	40,424	6,467	46,891
Less: Cash			28			1,090
Net Debt			17,029			45,801
Equity			15,649			20,418
Net Debt to Equity	Q3 FY19		1.09			2.24
	Q4 FY18		1.14			2.48

- **Company has used 510 M of proceeds received from Tata Communications stake sale & IEX, realization from Arutmin sale and dividend from coal companies to reduce debt**
- **Options to monetize other assets under active consideration.**



Low dividend yielding assets monetization to boost RoE, EPS
Leverage too improved through monetization of non core assets



Compensatory
Tariff

A Coal
Hedging

B Coal
Blending

C Other
Initiatives

CGPL – High Powered Committee report on Compensatory Tariff



- Gujarat Government initiated a High Powered Committee Report to find out solutions for the imported coal based power projects. HPC took inputs from earlier reports and engaged with all stakeholders and made various recommendations on 3rd Oct 18.
- Supreme Court passed an order that the HPC's report does not infringe upon its earlier order and directed CERC to hear all parties and pass an order in 8 weeks.
- As the other four states' procurers were not party to this agreement, discussions are in progress with them to secure their decision on the compensatory tariff.
- After receiving procurers' decisions, Company to approach CERC for their approval of comp tariff.

Parameter	Recommendation/Proposal
Effective Date	<ul style="list-style-type: none"> • Proposed to be made effective prospectively from 15th October 2018. No past losses.
FOB Under-recovery	<ul style="list-style-type: none"> • Compensation/Relief only for FOB under recovery subject to cap of HBA(6322CV) Index of USD 110/MT(on monthly basis). • Cap of HBA(6322CV) Index to be reviewed once in five years. • No compensation against Fuel Transportation & Fuel Handling under recovery
Lender's Sacrifice	A notional fixed deduction of 20 paise per Kwh against Energy Charges
Mining Profit	100% of mining profit from Indonesian mining company receivable in India pertaining to Mundra offtake subject to minimum of 15 Paise per kWh.
PPA Extension	<ul style="list-style-type: none"> • Extension for 10 years. • Fuel Cost passed through. • No mining profit sharing and Lenders sacrifice. • Capacity Charges for the extension period adjusted with last year Capacity Charges(Current PPA) and consequential increase in O&M expenses plus additional capacity charges on R&M Cost in accordance with prevailing Regulations



Fig in Rs crs

Generation at Mundra

CGPL	9 Month FY19	9 Month FY18	FY 18	FY 17
Revenue	5,094	4,556	6,419	6,109
EBITDA	(117)	150	16	552
PAT	(1,363)	(871)	(1,408)	(855)

Coal mining & Coal Infra Companies

Coal & Infrastructure Business	9 Month FY19	9 Month FY18	FY 18	FY 17
Revenue	6,585	6,938	8,641	7,123
EBITDA	2,030	2,346	2,889	1,792
PAT	979	1,197	1,423	797

Net PAT	(384)	326	15	(58)
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- Natural hedge has worked in favor till FY 18
- Lower prices due to slow Chinese demand and the Indonesian DMO regulation in FY 19 led to realization in Coal Cos reducing
- Consolidated PAT turned negative in FY 19 due to above DMO impact

Company refinanced the ECB Loans with rupee bond and loans that have pushed out the repayments and stopped the gap funding requirement.

This will provide breathing room for Tata Power before a long term resolution is found



Optimizing Coal Blending to reduce Under-recovery

CGPL is firing different Off Spec Coal to reduce the fuel cost

CGPL has significantly changed the coal blend mix to reduce the coal cost

Sale of additional Power beyond 80%

CGPL is in discussion with Procurers to sell its power beyond 80% at a higher tariff than that in PPA to reduce losses

Coal Blend in FY 18

MCV – 77%

LCV – 13%

HCV – 10%

Coal Blend by Dec 2018

MCV – 43%

LCV – 37%

HCV – 20%

Reduction in Coal Cost



Competitive Coal Procurement	Around 2-3 MMT of coal being procured at the discounts ranging from 5% to 8% on sustainable basis
Alternate Sourcing of Coal	Exploration of Russian mine underway with a no-go decision in next 12-15 months. This can supply 8 MTPA of coal at cost plus basis. Development to take 3-4 years
Lower cost of financing	Achieved 200 bps reduction in Interest cost and repayment tenure was elongated for Rupee loans. Refinanced ECB loans at similar costs with elongated tenor
O&M Practices	Sustainable savings through better Outage planning , reduced Insurance cost, aux consumption optimization etc.

- Mundra and coal assets continue to demonstrate natural hedge
- Development of Russian Coal mine being pursued
- Every possible solution for Mundra being explored.

While CGPL pressure is there, Tata Power is now focusing on growth to forge market leadership and deliver sustainable profitability.



- 1 An Integrated player across the value chain, well positioned to withstand sectoral challenges and capitalize on opportunities
- 2 Underlying business performance robust with regulated conventional and good renewable assets
- 3 Thrust on renewable growth (without compromising on returns)
- 4 Shift from asset heavy to asset light model thru Platform and Value Added Services
- 5 Deleveraging through monetisation key focus to strengthen the balance sheet
- 6 Coal Business continues to provide hedge for Mundra; coal blending & other initiatives for cost reduction to continue to contain losses

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Thank You!

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