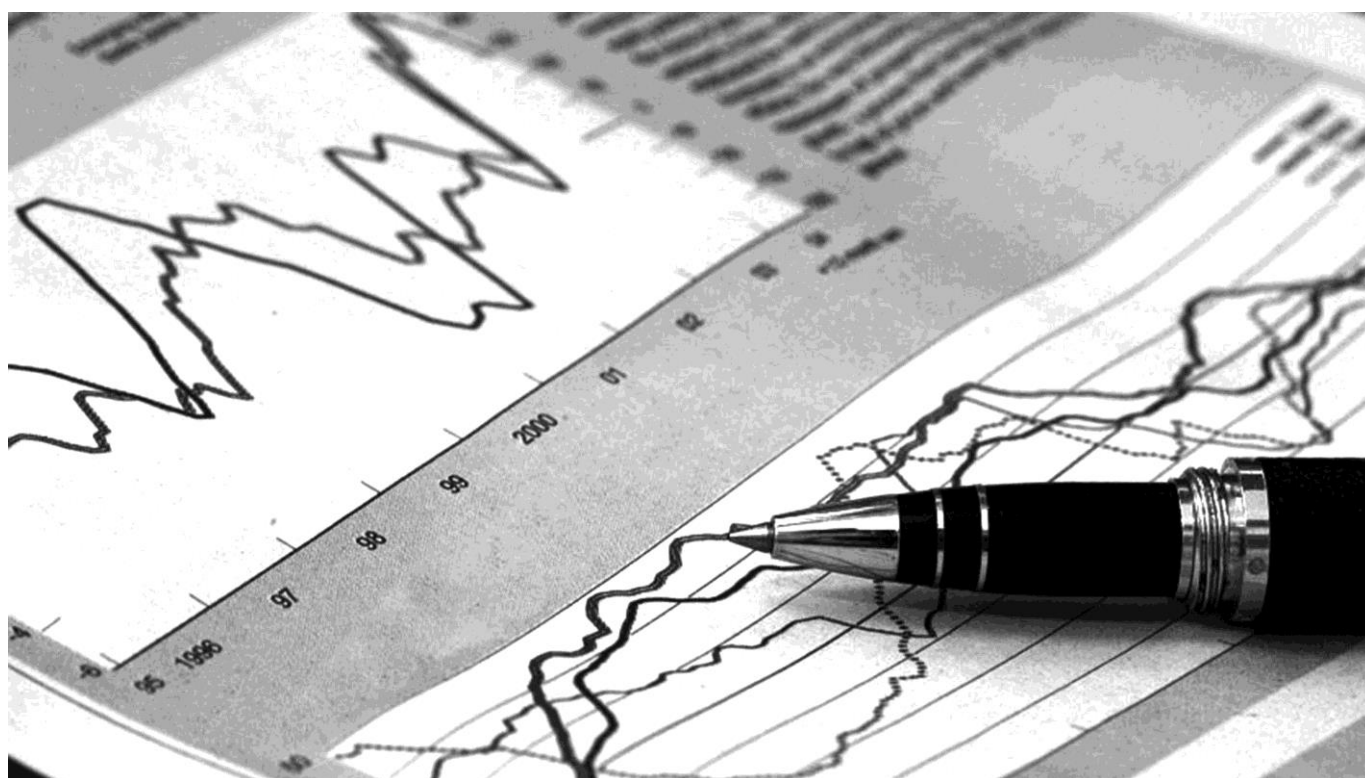


# CRISIL SME IER

## Independent Equity Research

Enhancing investment decisions



### **K.P. Energy Ltd**

Initiating Coverage

## Explanation of CRISIL SME Fundamental and Valuation (CFV) matrix

The CRISIL SME CFV Matrix (CRISIL Fundamental and Valuation Matrix) addresses the two important analysis of an investment making process – Analysis of Fundamentals (addressed through SME Fundamental Grade) and Analysis of Returns (SME Valuation Grade) The SME fundamental grade is assigned on a five-point scale from grade 5 (indicating Excellent fundamentals) to grade 1 (Poor fundamentals). The SME valuation grade is assigned on a five-point scale from grade 5 (indicating strong upside from the current market price (CMP)) to grade 1 (strong downside from the CMP). This opinion is a relative assessment in relation to other SMEs in India. The assessment is based on a grading exercise carried out by industry specialists from CRISIL Research.

<b>CRISIL SME Fundamental Grade</b>	<b>Assessment</b>	<b>CRISIL SME Valuation Grade</b>	<b>Assessment</b>
5/5	Excellent fundamentals	5/5	Strong upside (>25% from CMP)
4/5	Superior fundamentals	4/5	Upside (10-25% from CMP)
3/5	Good fundamentals	3/5	Align (+-10% from CMP)
2/5	Moderate fundamentals	2/5	Downside (negative 10-25% from CMP)
1/5	Poor fundamentals	1/5	Strong downside (<-25% from CMP)

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# K.P. Energy Ltd

November 10, 2017

## Well positioned to weather the storm

**SME Fundamental Grade: 3/5 (Good fundamentals)**

**SME Valuation Grade: 5/5 (CMP has strong upside)**

**Industry: Power Utilities**

**Fair Value: ₹402**

**CMP: ₹300**

Gujarat-based K.P. Energy is an established balance of plant (BOP) solution provider for wind farm development. Given sizeable wind sites and the experience of commissioning complex wind farm projects (~over 150 MW to date), the company's engineering, procurement, construction & commissioning (EPCC) business is uniquely positioned to respond to the challenges emanating from the transition from feed in tariff (FiT) to the auction-based regime. Participation in the upcoming wind auctions as part of a bidding consortium with the primary objective of garnering EPCC orders bodes well for the company. Growth in the EPCC business is expected to increase assets under maintenance (a high-margin business), while sale of power is expected to provide stable annuity-based revenue. Based on the above, we have assigned CRISIL SME fundamental grade of **3/5** to K.P. Energy. However, winning EPCC bids and the capital intensive nature of the power business are key challenges.

### Ready for shift in strategy – participation as a consortium member in the auction

Out of the existing government land acquired by the company, over 140 wind sites (potential of ~300 MW) of 1 hectare each are unexploited. The company has also identified sites for 800 MW of wind capacity, for which land acquisition is under progress. Accordingly, it has tied up with a consortium partner to bid for 280 MW of wind capacity in the upcoming auctions.

### Gujarat is expected to play a dominant role in the upcoming auctions

After 2 GW of competitive bidding by Solar Energy Corporation of India (SECI) so far in FY18, it has plans to conduct 4 GW of wind allocations in the rest of FY18 and ~4 GW of capacity p.a post FY18. Moreover, additional auctions are expected from state governments. Gujarat, with the highest untapped wind capacity in India and the highest market share (over 50% share of winning sites) in the recent SECI auctions, is expected to dominate the upcoming auctions. This is a good augury for the company's EPCC business.

### Revenue expected to increase at 48% CAGR over FY17-20; EBITDA margin to moderate

We expect K.P. Energy's revenue to increase at 48% CAGR (FY17-20) driven by 46% CAGR in the EPCC business' revenue. The EPCC business' realisations are expected to be under pressure owing to competitive bidding. Accordingly, we expect EBITDA margin to moderate to 23.1% in FY20. PAT is expected to increase at 44% CAGR (FY17-20).

### We assign a fair value of ₹402 per share

The sum-of-the-parts (SoTP)-based fair value works out to ₹402 per share. The EPCC business (including operations and maintenance) is valued using a P/E multiple of 8x, while the power business is valued by the discounted cash flow (DCF) method. The fair value implies P/E multiples of 34.6x FY18E and 12.5x FY19E. The assigned valuation grade is 5/5.

## KEY FORECAST – BASE CASE

(₹ mn)	FY15	FY16	FY17	FY18E	FY19E	FY20E
Operating income	269	407	1,101	946	2,083	3,544
EBITDA	48	96	292	223	486	820
Adj net income	30	52	168	99	276	500
Adj EPS (₹)	11.8	6.1	19.7	11.6	32.2	58.5
EPS growth (%)	395.3	(48.4)	222.0	(40.9)	177.5	81.5
Dividend yield (%)	-	-	0.5	0.1	0.4	0.7
RoCE (%)	94.5	53.5	71.0	27.0	46.2	58.6
RoE (%)	99.9	50.2	69.9	25.8	47.6	52.6
PE (x)	-	5.2	6.5	25.8	9.3	5.1
P/BV (x)	-	1.7	3.4	5.7	3.6	2.2
EV/EBITDA (x)	0.3	3.7	4.4	13.1	6.0	3.3

NM: Not meaningful; CMP: Current market price; calculations are based on reclassified financial data

Source: Company, CRISIL Research estimates

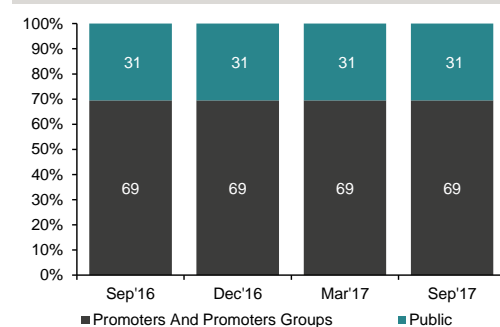
## CFV MATRIX

SME Fundamental Grade	Excellent	Strong Upside	SME Valuation Grade
	5/5	5/5	
4/5	4/5	4/5	
3/5	3/5	3/5	
2/5	2/5	2/5	
1/5	1/5	1/5	
Poor	Strong Downside		

## KEY STOCK STATISTICS

NIFTY/SENSEX	10309/33251
NSE/BSE ticker	----- /KPEL
Face value (₹ per share)	10
Shares outstanding (mn)	8.6
Market cap (₹ mn)/(US\$ mn)	2,565/39
Enterprise value (₹ mn)/(US\$ mn)	2,753/42
52-week range (₹)/(H/L)	350/92
Beta	0.3
Free float (%)	31%
Avg daily volumes (30-days)	3,542
Avg daily value (30-days) (₹ mn)	1

## SHAREHOLDING PATTERN



## PERFORMANCE VIS-À-VIS MARKET

	Returns			
	1-m	3-m	6-m	12-m
KPEL	-8%	23%	124%	190%
CNX 500	4%	6%	11%	26%

## K.P Energy - Business environment

Parameters	EPCC	Operations and maintenance (O&M)	Sale of power
<b>Services offerings</b>	Acquisition of land and permits, wind campaign, construction of civil structures, erection of WTGs (wind turbine generators) and access routes at the wind sites, power transmission infrastructure	Provides O&M services for BOP portion of wind turbine	Owns WTGs and sells power
<b>End users</b>	Original equipment manufacturers (OEMs) and independent power producers (IPPs)	IPPs	Power purchase agreements (PPAs) with state electricity boards (SEB)/ industrials
<b>Revenue contribution (FY17E)</b>	98.5%	0%	1.5%
<b>Estimated revenue contribution (FY20E)</b>	96.0%	1.2%	2.8%
<b>Geographical presence</b>	Gujarat	Gujarat	Gujarat
<b>Sales CAGR (FY12-17)</b>	102.5%	NM	NM
<b>Sales CAGR (FY17-20E)</b>	46.4%	374.7%	82.6%
<b>Growth drivers</b>	<ul style="list-style-type: none"> <li>• K.P. Energy is amongst few players in the industry with proven track record in offering BOP services</li> <li>• Sizeable inventory of wind sites – has acquired over 200 hectares or ha of wind sites and is in the process of acquiring wind sites for 800 MW of projects</li> <li>• Evacuation infrastructure for ~over 200 MW in place</li> <li>• Gujarat is expected to play a significant role in wind capacity addition. K.P. Energy, a Gujarat-focused BOP player, is expected to be a beneficiary</li> <li>• Demand from non-windy states to meet renewable purchase obligations (RPOs) obligation under a competitive auction regime</li> </ul>	<ul style="list-style-type: none"> <li>• ~150 MW assets under maintenance as of September 2017 and expected to rise with additional site commissioning</li> </ul>	<ul style="list-style-type: none"> <li>• Plans to have some of its wind generating assets in the wind sites</li> </ul>
<b>Key competitors</b>	<ul style="list-style-type: none"> <li>• Veer Energy and Infrastructure</li> <li>• Kintech Energy Systems</li> <li>• Weizmann Energy</li> <li>• Maruti Wind Power</li> </ul>	<ul style="list-style-type: none"> <li>• Veer Energy and Infrastructure</li> <li>• Kintech Energy Systems</li> <li>• Weizmann Energy</li> <li>• Maruti Wind Power</li> </ul>	<ul style="list-style-type: none"> <li>• Orient Green Power</li> <li>• Indowind Energy</li> </ul>
<b>Key risks</b>	<ul style="list-style-type: none"> <li>• Prone to vagaries of nature owing to project concentration in only Gujarat</li> </ul>		<ul style="list-style-type: none"> <li>• Renegotiation of PPA at lower rate</li> </ul>

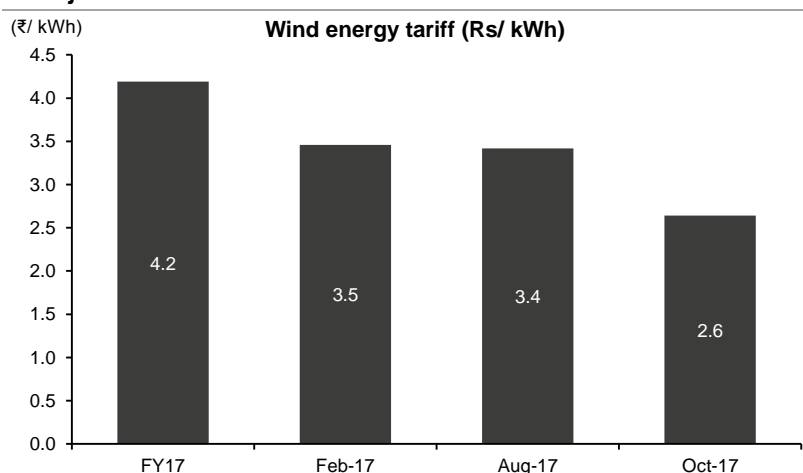
Source: Company, CRISIL Research

## Grading Rationale

### Set to ride out the storm in renewable space

The wind industry is going through a tectonic shift from FiT to a competitive bidding regime. The discovered prices for wind energy fell to as low as ₹2.64/unit in the October 2017 auction versus FiT tariff of ₹4.19/unit in Gujarat. Reduced discovered tariffs will squeeze developers' and manufacturers' returns and margins.

**Figure 1: Discovered tariff under competitive regime is 37% below FiT in Gujarat**



Note: FY17, Feb-17, Aug-17, Oct-17 refers to Gujarat (FiT), SECI I, Tamil Nadu (state bid) and SECI II bidding.

Source: CRISIL Research

As a result, developers are expected to negotiate with OEMs for best wind locations (for achieving a higher plant load factor or PLF) to optimise their returns at low tariffs. The new regime will also push the wind energy market to consolidate towards IPPs, resulting in a reduced customer base for OEMs since unrelated businesses, that were earlier seeking tax breaks, will find it difficult to participate in competitive bids.

We believe K.P. Energy is positioned well to face the impending challenges in the wind energy sector based on the following.

### Unique and comprehensive solutions for OEMs and IPPs

Over FY12-17, the company's revenue increased at a CAGR of 102% led by impressive growth in the EPCC business. Under its EPCC arm, the company offers unique and comprehensive solutions. Over the years, it has developed expertise in providing end-to-end solutions related to BOP aspects of wind power projects and has developed competitive edge over other EPCC providers. Broadly, its services range from site selection, land acquisition and arranging for permits, logistics, EPCC, erection of WTGs, handling crane packages, PPA arrangements, power evacuation facility and O&M (for BOP portion of wind turbine). Given such offerings, OEMs need to supply only the turbines. K.P. Energy takes care of the remaining work, thus addressing developers' and OEMs' pain points. This

becomes even more critical as the market shifts towards an auction-based tariff regime. A standalone EPCC service provider does not enjoy negotiation power.

## Service offerings by K.P. Energy – comprehensively addresses IPPs’ key issues

Stages of development	Remarks
Site identification/ wind resource assessment	<p>The company's key competence is site identification, for which it employs critical activities such as satellite data and physical evaluation of the sites, meso-mapping, wind data study for at least a year, etc. Wind resource assessment is also a critical component of site identification and K.P Energy uses the latest technology such as light detection and ranging (LIDAR) for predicting the wind resource potential of the sites. As a result, it has a good portfolio of wind sites with a weighted average capacity utilisation factor (CUF) of 34%.</p> <p>The company's sites are located in Gujarat, which tops the list of highest wind energy potential state in the country with over ~85% unexploited.</p>
Land acquisition	<p>The company has historically shown good land acquisition and liaison skills. Most of the land for wind sites is on lease from the state government. The company sub-leases land to its clients once the site is passed on as part of its BOT project life cycle. The company is also in the process of expanding the private land bank. A sizeable inventory of land i.e. wind sites provides a more equitable footing with developers vis-à-vis standard EPCC players.</p>
Nodal agency for liaison and clearances	<p>The company has a proven record of obtaining necessary statutory approvals w.r.t installation of WTGs and supporting infrastructure such as sub-station and transmission lines.</p>
Arrangement for equipment and accessories supply	<p>Tie-up with WTG manufacturers enables WTG selection and providing specifications.</p>
Site preparation and Logistic	<p>The company carries out critical activity of site preparation and providing logistics including clearing sites and building internal roads. Historically, it has an experience in developing wind project in difficult terrains including low lying water prone areas, hills, etc. The company has also done bridge works (e.g. Mahuva -1 70 MW projects) required for crane or vehicle movement and carrying turbines.</p>
EPCC	<p>K.P. Energy has a proven track record in terms of erection and commissioning of WTGs. The company undertakes execution of projects on EPCC basis i.e. virtually provides services (BOP) starting from concept to commissioning of the entire wind farm. It undertakes (a) civil works related to WTG foundation and completion of crane platform and (b) meticulous installation and erection of shell towers, nacelle, blades, panels. Broadly, the company builds necessary infrastructure for installation of WTGs.</p>
Transmission system	<p>The company sets up transmission lines for connecting WTGs project activity to feeder lines and subsequently to metering points and substations. Developing transmission system is a complex affair as it involves issues such as right of way which grants the right to build, maintain and operate transmission lines as well as manage the vegetation in and adjacent to the easement area. Rights of way also sometime involves acquiring lands from property owners which again is a complex matter involving disputes and transfer of rights etc. However, the company has the experience of successfully executing transmission related aspect of the wind power project.</p>
Substation	<p>The company sets up substation on its land for step-up of power from 33kv to 66kv using step-up transformer. The company owns the substation as well as the land.</p>
Power evacuation infrastructure	<p>As of FY17, the company has built power evacuation infrastructure for ~over 200 MW of capacity.</p>
PPA arrangements	<p>Historically, the company has provided support for obtaining and finalisation of PPAs.</p>
O&M (BOP portion of wind projects)	<p>The company provides O&amp;M service for infra development and equipment along with EPCC over the life of WTGs, resulting in a long-term relationship with IPPs/ developers.</p>

Stages of development	Remarks
Sale of power	Some WTGs are under the company's name which provides assurance to other developers regarding the service. Also, entry into the power business, although on a small scale, provides a diversified revenue stream and adds to stability of overall revenue because it is annuity-based.

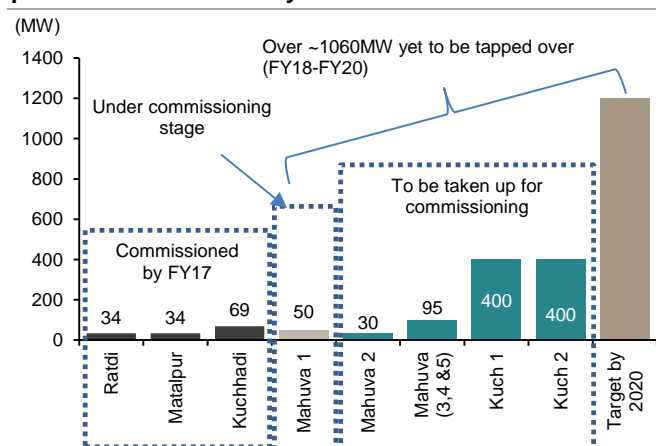
## Site selection & wind farm sites in control

In a wind power project, site selection is critical in determining the plant's PLF. Thus, with the objective of providing more reliability to wind assessment, K.P. Energy employs high-end technology such as light detection and ranging (LIDAR - developed by LEOSPHERE) for the power curve test to assess the wind potential of the sites. According to the company, LIDAR installation cost is ~₹40 mn, which is significant for an EPCC player.

## Company has sizeable wind sites...

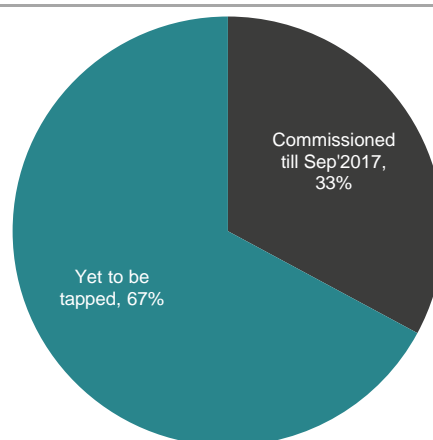
- As per management, the company has acquired over 200 wind sites (a typical site is 1 ha) and is in the process of acquiring much larger wind sites in Gujarat. According to management, the company is in the process of adding additional wind sites for 800 MW of projects. Cumulatively by 2020, the company plans to have wind sites with wind generation potential of ~1200 MW. It acquires land from government authorities on lease (typically for 20 years). This land is mostly unused by the local people and is located in very remote parts of Gujarat and, resultantly, leased at a low rate. As per the wind power policy of 2013, revenue waste land @ 1 ha per WTG is allocated on a lease of 20 years to the developer at a rent of ₹10,000 / ha/ year. The land parcels are sub-leased to the company's clients once the site is passed on as part of its BOT project life cycle. The company facilitates transfer of rights on wind sites.
- Over the years, it has also been acquiring suitable wind sites from private landowners for power evacuation arrangements. Over 90% of the land that the company has so far acquired is government owned.

**Figure 2: Target to have wind sites with wind generation potential of ~1200 MW by 2020**



Source: Company data

**Figure 3: Of the existing government wind sites, ~67% is yet to be utilised**

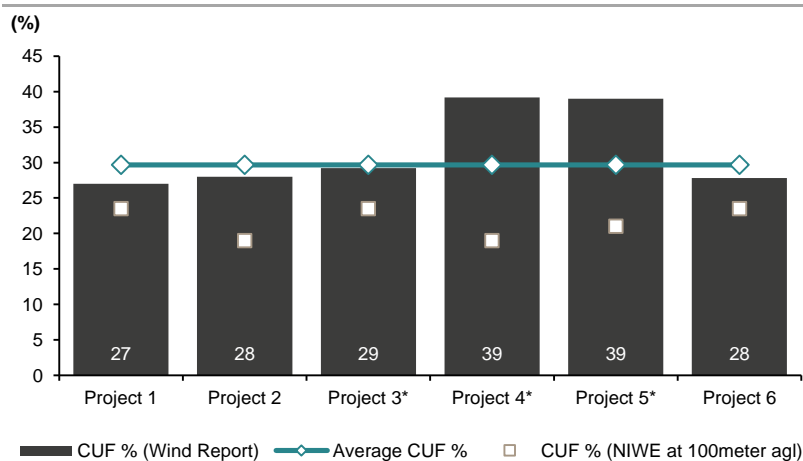


Source: Company data

## ...with superior wind energy potential

The company's wind sites have a CUF >30%, on average, which is relatively higher than the wind energy potential estimated by the National Institute of Wind Energy (NIWE). With competitive auction coming into play and tariff becoming competitive, CUF of >30% is expected to result in lower levelised cost of energy (LCOE) for IPPs and expected to garner a higher share of new orders.

**Figure 4: Wind sites have superior wind energy potential**



Source: Company data; Note: Projects 3, 4 and 5 are at 120 meters mast height, other wind sites are still under assessment. CUF as provided by NIWE for the same geographical locations as the company's wind sites.

## Evacuation infrastructure largely in place

Historical credentials of providing power evacuation give comfort to prospective clients primarily because the activity of providing power evacuation infrastructure involves acquiring land and liaising with multiple stakeholders which adds to the company's competitive position. The company sets up substations at its own cost for evacuating power from the WTGs set up for the client. The substations are set up on land acquired by the company on its individual capacity. According to the company, as of September 2017, it has successfully received power evacuation permission for over 300 MW of wind energy, out of which ~over 200 MW of power evacuation has already been developed (50% more than EPCC projects commissioned in FY17).

K.P. Energy has a competitive advantage because its model is difficult to replicate:

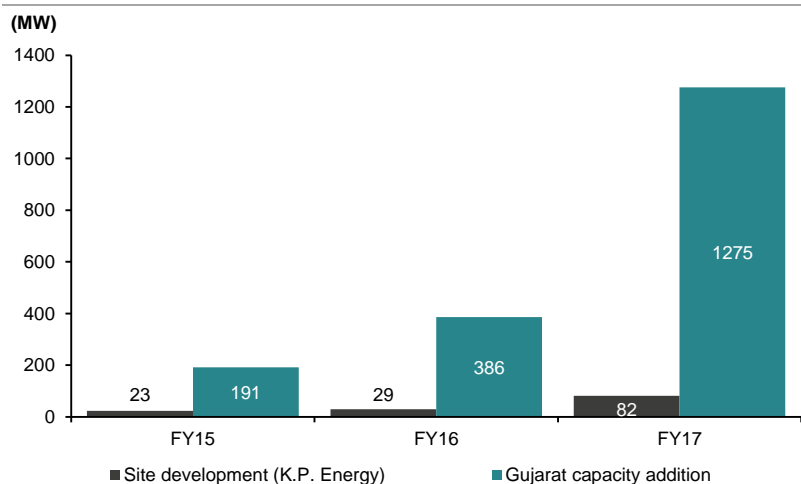
- Land acquisition and building power evacuation infrastructure is complex, and requires liaising with various government departments, understanding land disputes, etc.
- Understanding wind generating potentials of the sites prior to land acquisition.
- Land for wind sites is located in remote locations, which can be a logistics nightmare.



## Garnered significant share in Gujarat EPCC’s business thanks to value proposition

K. P. Energy commands a 6-7% market share (in terms of project commissioning) in a relatively OEM dominated space, which is significant and shows the strength of its value proposition as explained above.

**Figure 5: Market share of 6-7% for an EPCC player is significant**

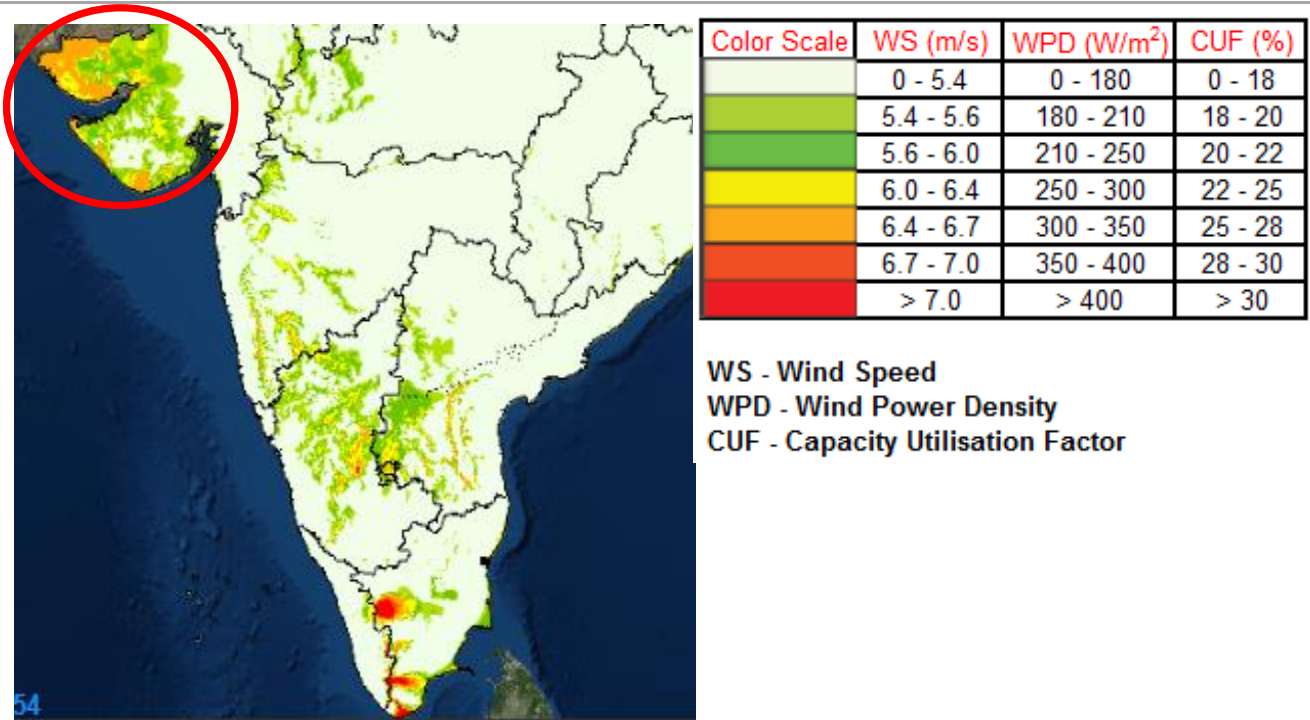


Source: PFC, Company

## Gujarat - expected to play a significant role in wind capacity addition

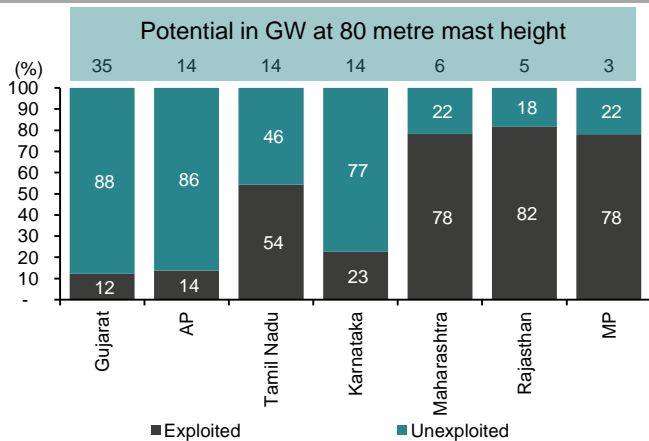
Blessed with a long coast line and good wind speed, Gujarat has immense potential for harnessing wind energy of over 35 GW at 80 meter mast height. Currently, only 12% of the potential capacity has been exploited - lower than other windy states in India. With maximum untapped wind capacity amongst the Indian states, Gujarat is expected to provide significant room for growth for wind power developers and for an experienced BOP player such as K.P. Energy.

**Figure 6: Gujarat is one of the leading states with large scope for wind power generation**



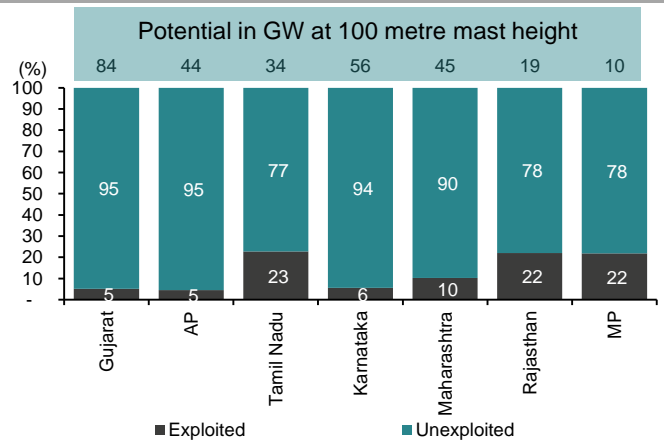
Source: National Institute of Wind Energy (NIWE)

**Figure 7: Gujarat has maximum untapped capacity (at 80 metre mast height)**



Source: MNRE, CRISIL Research; Note: Wind capacity installed capacity is as of October 2016

**Figure 8: It is true even at 100 metre mast height**

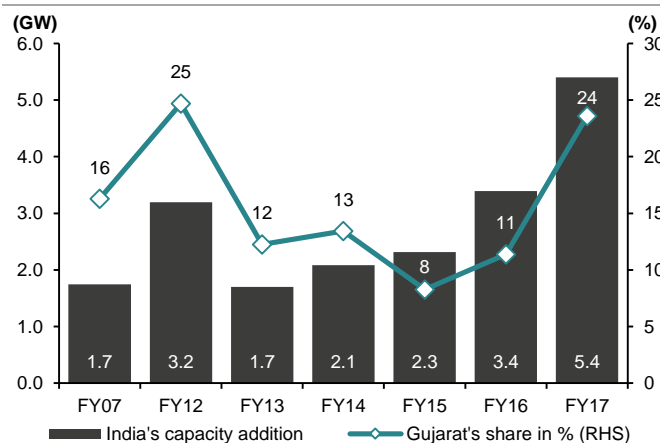


Source: MNRE, CRISIL Research; Note: Wind capacity installed capacity is as of October 2016

For four years ended FY16, Gujarat lagged other states in capacity addition with its share ranging from 8% to 13%. This was, to some extent, a fallout of lower FiT offered by Gujarat utilities vis-à-vis other windy states in India.

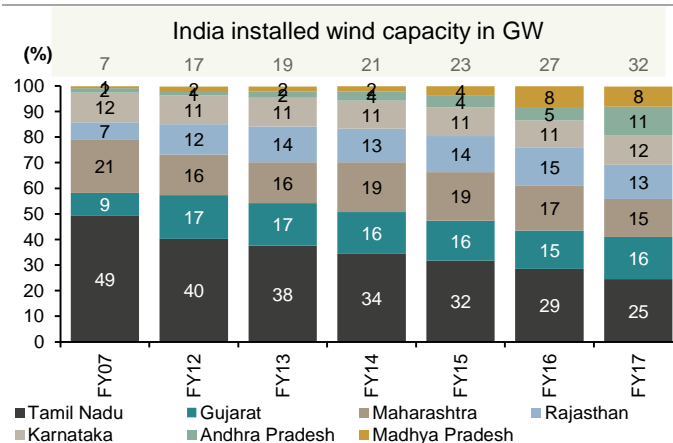
However, capacity addition has picked up in Gujarat with ~24% of India's capacity addition undertaken in this state in FY17.

**Figure 9: Gujarat's share in India's wind capacity addition has picked up...**



Source: CRISIL Research

**Figure 10: ...resulting in second highest installed wind capacity in India**

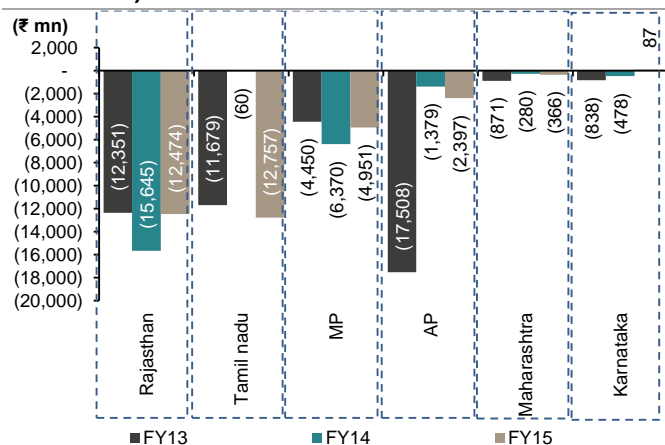


Source: CRISIL Research

We expect Gujarat to have a significant share in upcoming capacity addition in India driven by:

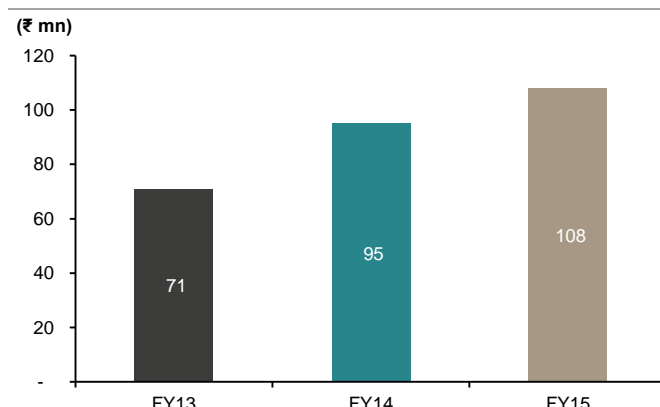
- Competitive bidding: It is expected to provide a level playing field for tariffs.
- Better financials of Gujarat utilities: Historically, Gujarat Urja Vikas Nigam Ltd's (GUVNL's) distribution companies (discoms) have reported profit as against other windy states' discoms, which are still reeling under huge financial losses. GUVNL's discoms include Uttar Gujarat Vij Company Ltd (UGVCL), Dakshin Gujarat Vij Company Ltd (DGVCL), Madhya Gujarat Vij Company Ltd (MGVCL) and Paschim Gujarat Vij Company Ltd. (PGVCL). Even in terms of integrated rating for state power distribution utilities (Ministry of Power or MoP, May 2017), GUVNL's discoms have been rated higher than peers (refer to Annexure). Hence, with better financials, GUVNL's discoms has an edge over other states and are expected to provide payment assurance to IPPs.

**Figure 11: State utilities in India are reeling under financial losses (PAT of utilities selling directly to consumers)...**



Source: Power Finance Corporation (PFC), CRISIL Research

**Figure 12: ... However, GUVNL's discoms' profitability (PAT of utilities selling directly to consumers) is better than that of other utilities**

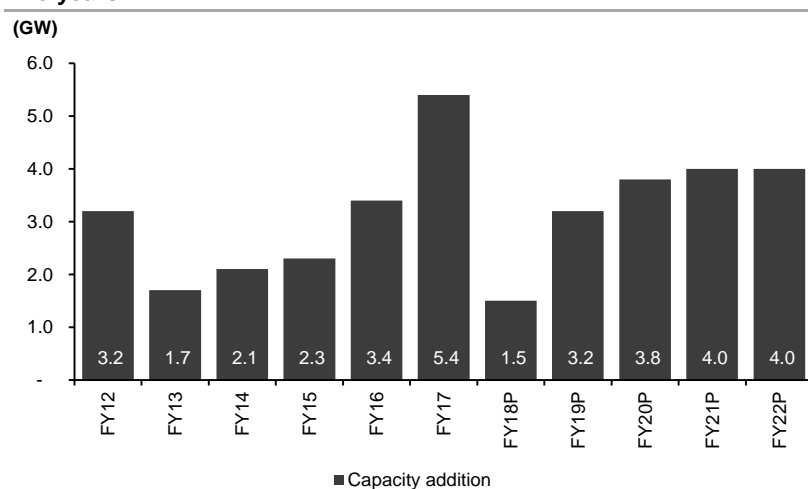


Source: PFC, CRISIL Research

## Despite shift, wind industry gearing for ~17 GW capacity addition over next five years

India signed the Paris Accord in December 2015 as per which the country is committed to reduce the emission intensity of its GDP by 33-35% by 2030. To fulfil this, the government has set a target of increasing renewable capacity to 175 GW by 2022 and wind energy capacity is earmarked at 60 GW. We expect wind power capacity additions of ~17 GW over the next five years (2018-22) compared to 15 GW over the past five years (2013-17).

**Figure 13: About 16-17 GW wind capacities expected to be added over five years**



Source: CRISIL Research

The following factors are expected to drive capacity additions in the sector:

- Improved technology:** Capacity additions in wind energy are expected to be supported by the fact that new wind turbines have higher rated capacity and higher hub height (over 100 meters), and can be set up at low wind sites, which are otherwise considered economically unattractive. Further, advancement in gear technology has helped wind turbines managing adequate generation even at low wind speeds. Technological advancements have allowed players to set up wind mills in states / sites with lower wind density.
- Large scale allocations under the central level competitive bidding:** After 1 GW of competitive bidding by SECI each in February 2017 and October 2017, SECI plans to conduct 4 GW of wind allocations in the remaining months of FY18 and ~4 GW of capacity each year after FY18. Public sector PPAs have lower counterparty risks than discoms that delay payments to developers and have poor financial ratings. Under 1 GW auctions held in February 2017, SECI conducted the biddings and PPAs were signed with PTC India Ltd.
- Increased investments in augmenting the transmission infrastructure:** PGCIL and states such as Tamil Nadu, Rajasthan, Karnataka and Andhra Pradesh are strengthening their evacuation infrastructure to support capacity additions in the long term. This could facilitate transmission of power from windy to non-windy states.

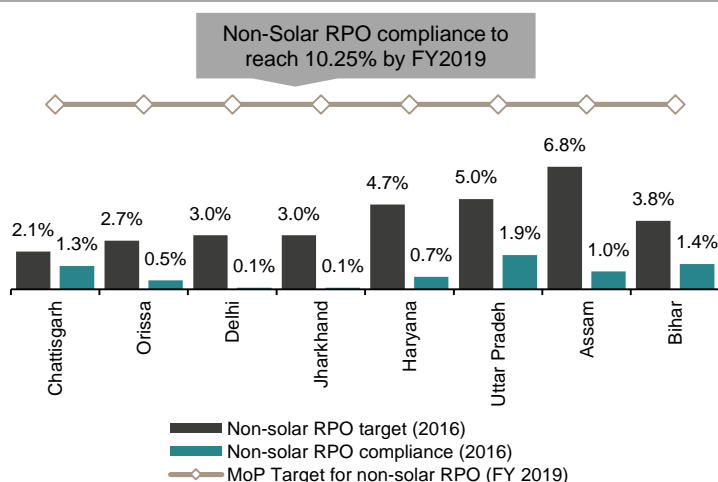
### Investments in augmenting the transmission infrastructure

Entities	Remarks
Tamil Nadu	Transmission system strengthening planned in three phases. Under phase-I, 1,488 circuit km (ckm) of 400 kV lines (a 400 kv single circuit with 'moose' aluminum conductor steel reinforced (ACSR) can transfer 500 MW of power) are planned. Out of which, 390 ckm line has been commissioned. All three phases are expected to be commissioned over 2016-17 and 2017-18.
Rajasthan	2,117 ckm of (132kv, 200 kv and 400 kv) transmission lines planned along with ~5,620 MVA of transformation capacity to be commissioned by 2018.
Andhra Pradesh	~870 ckm of (765/400 kv) 1500 MVA capacity lines to be added under the green energy corridor. Of the total 1500 MVA capacity, ~250 MVA evacuation capacity commissioned in Q2 FY17.
PGCIL	PGCIL is utilising funds earmarked for green energy corridors in Bhuj (Gujarat), Banaskantha/Patan (Gujarat), Banswara/Chittorgarh, Ajmer (Rajasthan), Bhadla (Jodhpur), Akal/Pokaran in Rajasthan and Tirunelveli (Tamil Nadu).
TANTRANSCO	The central government is providing grant to Tamil Nadu Transmission Corporation (TANTRANSCO). The line is expected to evacuate ~3,000 MW of power at voltage level of 765 kv.
POSOCO	Approved 57 schemes with sanctioned grant amount of ₹73 billion. Further, 49 schemes are under different stages of examination/approval. The amount will be utilised for renovation and modernisation (R&M) of transmission systems for relieving congestion, installations of shunt and series compensators for the improvement of voltage profile in the grid.

Source: CRISIL Research

- Upward revision in RPO targets and stricter RPO compliance by states: Discoms are expected to raise their non-solar RPO targets and provide the long-term trajectory based on MoP guidelines, which propose that states ramp up their targets to 10.25% by FY19. Currently, most states have low RPO targets (non-solar RPO target in FY17 was 7.76% versus 8.5% as per MoP).

**Figure 14: Non-solar RPO compliance of some non-windy states**

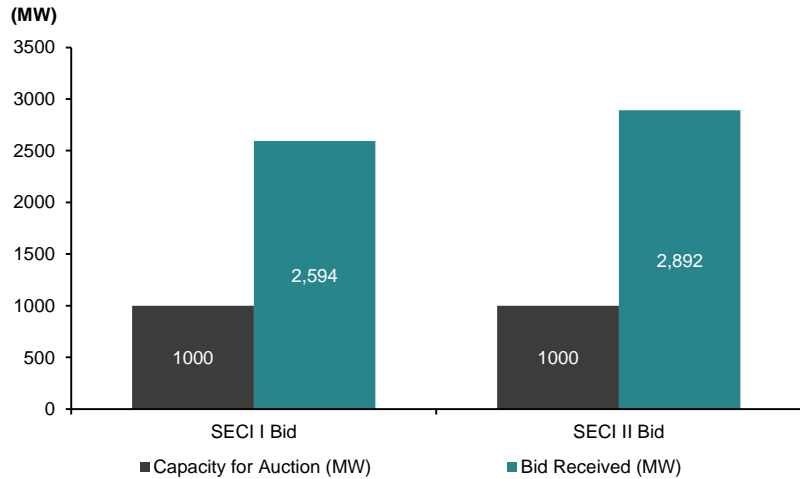


Source: CRISIL Research

## Optimistic business sentiments in the wind sector

Despite wind tariffs falling drastically in the competitive regime, recent bids are 3x oversubscribed, reflecting optimism in the sector.

**Figure 15: Bids are 3x oversubscribed**

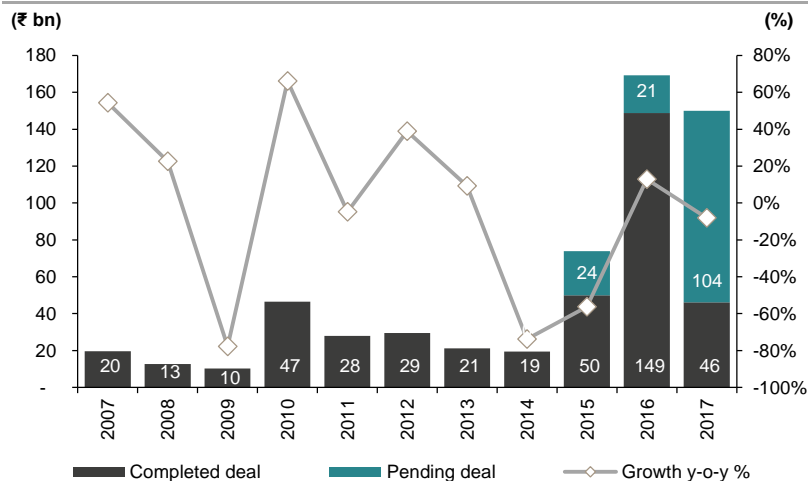


Source: CRISIL Research

## Renewable sector continues to witness a reasonable level of mergers & acquisition and private equity deals

The renewable energy sector in India has witnessed a reasonable level of M&A and PE deals despite the challenge of low tariffs.

**Figure 16: M&A/ PE deals in the renewable space peaked in 2016**



Source: CRISIL Research; 2017 y-o-y growth is based on YTD figures (September 2017)

**Recent M&A and PE deals in the renewable space**

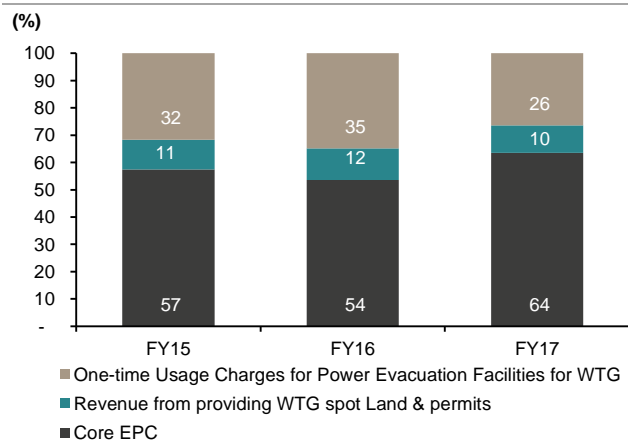
Date	Target	Investor/ acquirer	₹ mn	Remarks
Feb-17	ReNew Power Ventures	JERA	13,000	JERA Co. Inc invested \$200 mn in ReNew Power
Mar-17	Inox's wind power plants	Leap Green Energy Pvt Ltd	8,000	JPMorgan-backed Leap Green announced its plan to buy Inox's wind power plants
Mar-17	JanaJal	Tricolor Clean Capital	330	US-based Tricolor Cleantech Capital announced its plan to invest up to \$5 mn in JanaJal
Apr-17	Hindustan Powerprojects (330 MW of solar assets)	Macquarie Group Ltd	38,761	Macquarie announced its plan to acquire solar power assets of Hindustan Powerprojects
Jun-17	RattanIndia Group	GE Energy Financial Services	5,820	Cross Border GE Energy Financial Services announced its plan to invest \$90 mn in RattanIndia's solar projects
Jul-17	CleanMax Enviro Energy Solutions Pvt Ltd	Warburg Pincus	6,450	Warburg Pincus announced its plan to invest up to \$100 mn in CleanMax Solar
Jul-17	Indian solar power assets of First Solar	IDFC Alternatives Ltd	13,000	IDFC Alternatives decided to invest \$200 mn in First Solar
Aug-17	Pennar Renewables Pvt Ltd	Greenko Group PLC	-	Greenko Solar Energy announced its plan to buy stake in Pennar Renewables Pvt Ltd
Sep-17	Mytrah Energy Ltd	Piramal Group	18,005	Mytrah Energy bought back IDFC Alt's stake with Piramal's debt funding
Sep-17	Engie Abraaj JV	Abraaj Group	6,500	France's Engie SA, Dubai's Abraaj announced its plan to set up wind power platform in India

Source: Industry sources, CRISIL Research

**Unique EPCC business model has shown increasing profits**

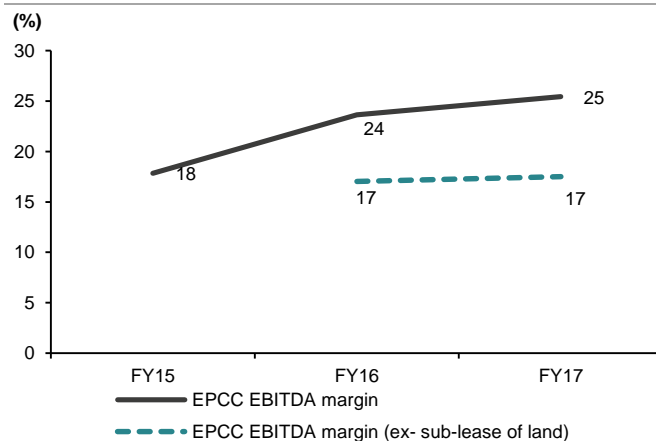
Historical numbers indicate the company has been on a growth path but not at the cost of profitability. After FY14, when the Ratdi wind farm (first of the lot) was commissioned, the EPCC business' EBITDA margin improved gradually to a high of ~25% in FY17. Within the EPCC segment, the company derives revenue from sub-lease of land and fee for commissioning electric transmission lines, which significantly aids EBITDA margin.

**Figure 17: EPCC/ infra development revenue mix**



Source: Company data

**Figure 18: EPCC/ infra development EBITDA margin**

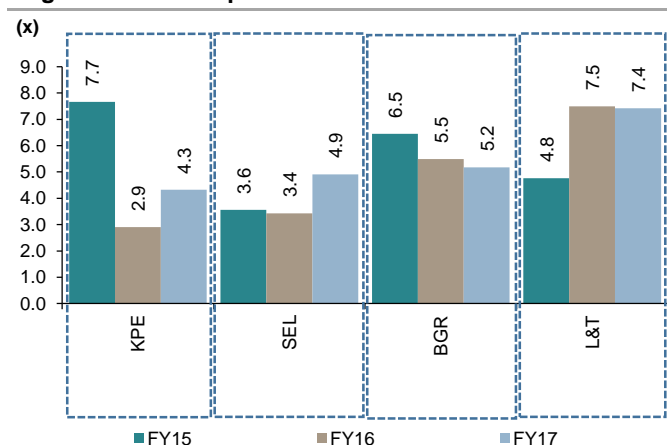


Source: Company data; Note: calculations are based on reclassified financial data

## Relatively asset light model with majority revenue from EPCC

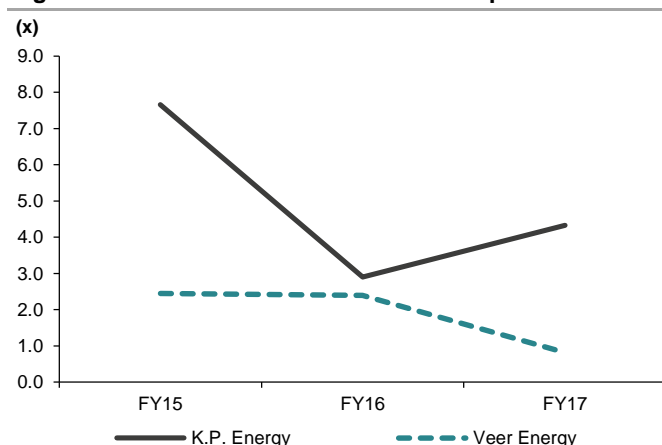
K.P. Energy's business model is asset light which enables it to maintain significantly higher return ratios. During FY12-15, the company spent ~₹100 mn on capex and managed a sales CAGR of 102%. It incurred a capex of ~₹600 mn in FY16-17, mostly for the IPP business. Despite this, overall asset turnover was above 2x in FY17. We observe that K.P. Energy's asset turnover (based on gross fixed assets) is better than its wind EPCC peers.

**Figure 19: EPCC business' asset turnover comparable to large construction peers**



Source: Company filings, CRISIL Research; KPE, SEL, BGR, L&T refers to K.P. Energy, Sadbhav Engineering, BGR Energy, Larsen and Toubro. Note: calculations are based on reclassified financial data; for Larsen & Toubro standalone data is considered

**Figure 20: So is the case with wind EPCC peers**

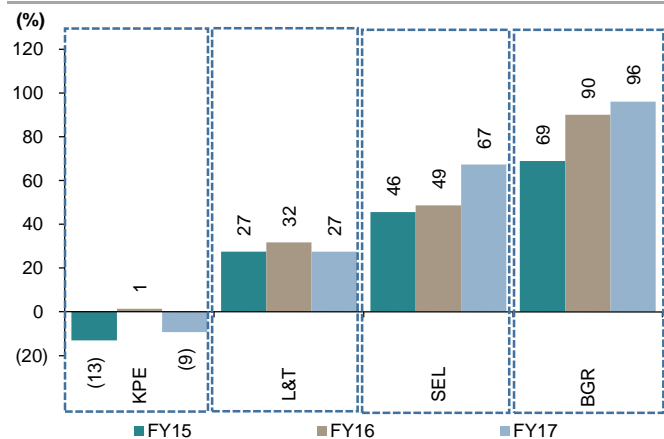


Source: Company filings, CRISIL Research. Note: calculations are based on reclassified financial data

On the working capital front, the company enjoys a good credit period from its long-term suppliers such as Suzlon Energy. This and manageable receivable days have kept working capital under check. This has been possible owing to the company's strong relationship with OEMs/ suppliers and criticality of its services such as control of land, evacuation of power, arranging or buying turbines on behalf of developers from OEMs.

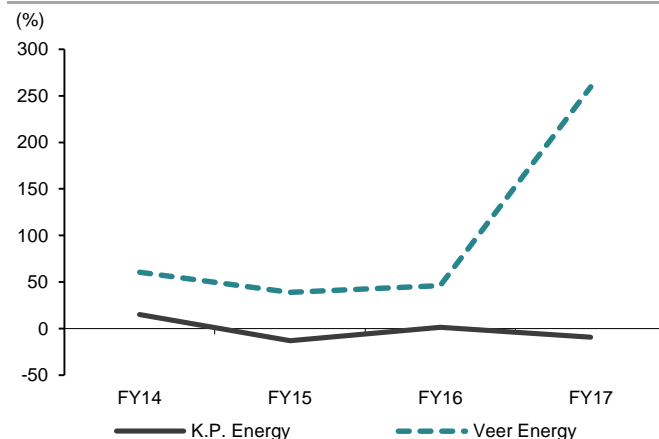


**Figure 21: Net working capital (NWC)/ sales relatively better than that of construction EPCC peers**



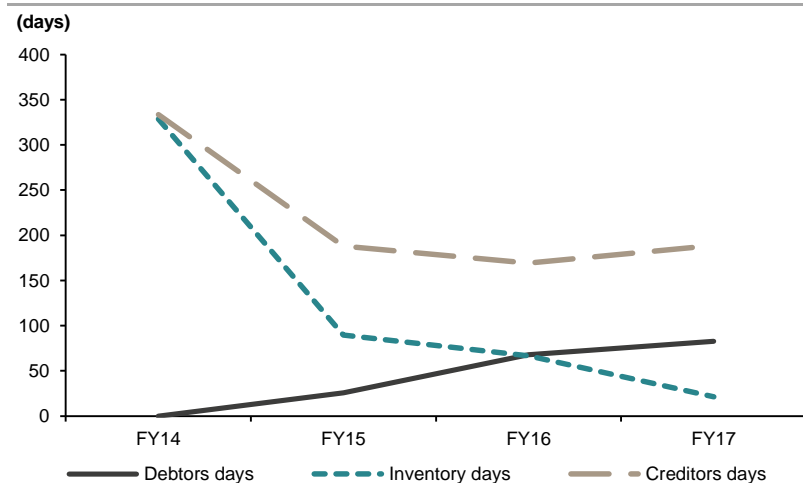
Source: Company filings, CRISIL Research. Note: calculations are based on reclassified financial data; for Larsen & Toubro standalone data is considered

**Figure 22: NWC/ sales relatively better than that of wind EPCC peers**



Source: Company filings, CRISIL Research. Note: calculations are based on reclassified financial data

**Figure 23: Supported by higher credit period for K.P. Energy**



Source: Company data, CRISIL Research; Note: calculations are based on reclassified financial data

## O&M contribution has kicked in

The O&M business' annuity-based revenue kicked in from FY17. The company provides O&M for BOP portion of wind farms. O&M services are free for two years, after which it provides a continuous stream of revenue over the remaining life (typically 23 years) of the WTG.

As of March 2017, the company has commissioned ~132 MW mostly for clients/ end users and these are now part of its O&M portfolio. With further commissioning planned in the future, O&M revenue could be a key earnings driver for the company and we expect ~1.3% of the revenue to be generated from the O&M business in FY20. It is a high-margin business and provides steady cash flows. Going forward, it could be a key earnings driver for the company

as assets under maintenance will keep on rising as and when the wind sites get commissioned.

## **Foray into part ownership of WTGs to build credibility of wind sites**

According to management, the company does not plan to be a large IPP player but prefers to have some of its own WTGs on the wind sites. This is expected to serve two key objectives:

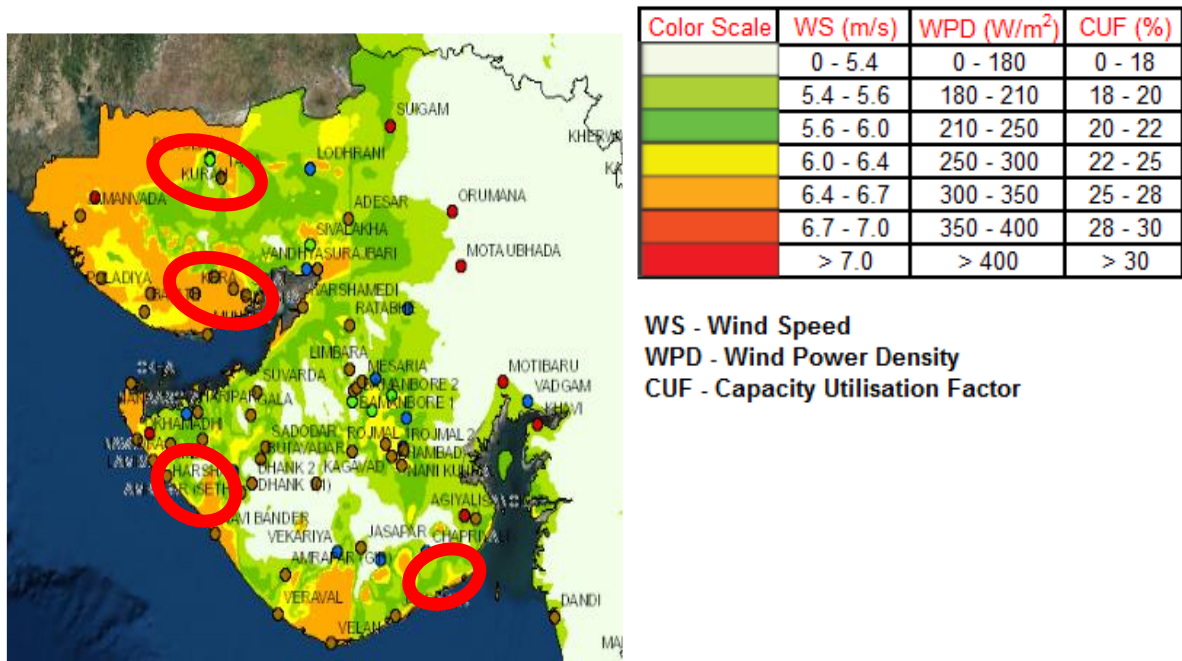
- De-risk volatility in the EPCC business over the long term: The sale of power business generates stable cash flows, which will offset volatility, if any, in EPCC revenue.
- Positive customer perception: Self-owned WTGs on its sites will add credibility to its business and provide assurance to customers (other IPPs/ OEMs) regarding continuity of O&M services/ offerings.

## **Strategic shift: To participate in upcoming wind auctions as part of a bidding consortium**

K.P. Energy has historically been dependent on OEMs, primarily Suzlon, for getting EPCC orders. In the conventional model, a prospective IPP company approaches an OEM, who generally offers a package including WTG equipment, wind sites and an arrangement with EPCC players. Although K.P Energy will continue its engagement with OEMs for getting EPCC orders, commencement of the bidding regime (and resultant low tariffs) will squeeze margins across the value chain. Hence, the company is planning to expand avenues for its EPCC arm by tying up with IPPs and bidding as a consortium partner in the upcoming auctions. However, according to management, K.P Energy's main objective is to get an EPCC order out of the consortium arrangements for leveraging the wind sites and power evacuation infrastructures and, thus, continue to follow a largely asset light model.

According to the company, it has submitted a bid as a consortium (along with a US investor) for 30 MW with the Government of Gujarat. Additionally, as per management, the company recently entered into an agreement with an IPP for bidding as a consortium for 250 MW in the SECI III round of auction. The company is in the process of site acquisition for additional 800 MW projects.

Figure 24: Sites are in windy regions



Source: Company data, CRISIL Research

## Key Risks

### Wind generation prone to vagaries of nature

K.P Energy's revenue generation is concentrated in Gujarat, which is good based on the reasons explained in the previous section. However, the company is prone to vagaries of nature in terms of natural calamities such as earthquake, flood, etc.

### Sale of power business is capital intensive and challenging

The company plans to own some WTGs for sale of power in the wind sites where it is developing or has developed projects for its clients (i.e. IPPs). However, the wind power generation business is different from the company's current service-led model (EPCC), and entails several operational risks such as seasonal wind volatility, which can impact PLFs and, in turn, profitability of the business. Uncertainty on extension of PPA or finding a new power purchaser can affect returns of wind generating assets. Besides, the sale of power business (owning WTGs) is capital intensive which can impact the company's return on capital employed (RoCE). For instance, as of FY17, K.P. Energy has deployed ₹436 mn (136% of FY17 net worth) for the sale of power business.

### Competitive bidding is a zero or one game

The company is planning to participate in the upcoming wind auctions as a consortium member. However, the key risk is that its company's competitors may be better placed to win bids. Since the minimum quantum of a bid in the central, i.e. SECI (50MW), and state (25 MW) projects is high, the company's order book would suffer if the projects are not awarded to it. Meanwhile, a highly competitive bid can also reduce EPCC realisations which can impact the company's margin.

### Regulatory risk

In the case of K.P. Energy, majority of the land for wind site is allotted through the collector (as per Gujarat state policy). Since land is a critical element of wind power generation, any future decision on allocating land through other means or anything that causes retrospective effect on the land already allotted to the company can have a material impact on the business prospects.

## Financial Outlook

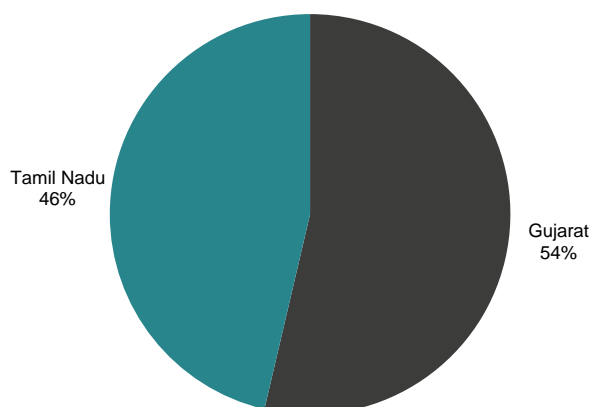
### EPCC business to drive revenue CAGR of ~48% over FY17-20

We expect K.P. Energy's revenue to grow at a CAGR of ~48% over FY17-20 driven by 46% CAGR in the EPCC business' revenue. As the company is strategising its business model, our forecasts factor in the following sources of new order wins for the EPCC business:

- **Business as usual:** K.P. Energy continues to be engaged with OEMs who will channelise EPCC orders from an IPP winning the bid for developing the wind site.
- **Business as a consortium partner in bidding:** We expect majority of the new wind EPCC market to shift towards a new arrangement under which EPCC players will act as consortium partners (along with a prospective IPP player) and will bid under the upcoming wind capacity auctions to be announced by the state and central government entity. Accordingly, we factor in significant order flow for K.P. Energy. Our assumptions of K.P. Energy's consortium winning the bid in the upcoming auctions stem from:
  - Superior wind sites: The company has identified wind sites in the Kutch region, which is known to have good wind generation potential.
  - Land acquisition in final stages: According to the company, it is in the process of acquiring wind sites for 800 MW projects.
  - Gujarat has dominated SECI wind auctions historically: Out of 2000 MW wind auctions held by SECI in 2017 so far, over 50% of the capacity is expected to come up in Gujarat. Proven track record of successful execution of wind farm in Gujarat, is expected to be an advantage while formalising the bid for the upcoming auctions.

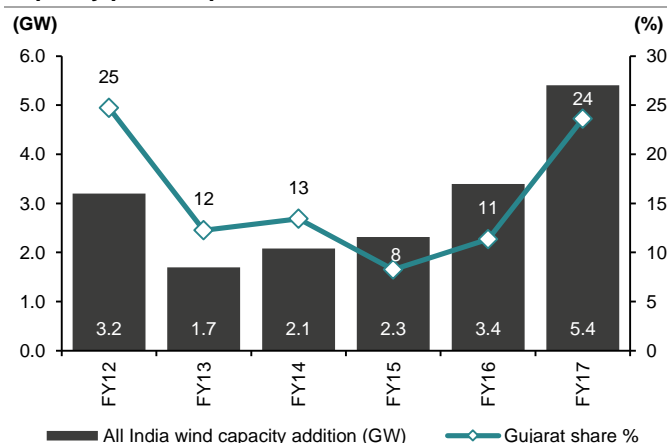
**Revenue to grow at a CAGR of ~48% over FY17-20 driven by 46% CAGR in the EPCC business' revenue**

**Figure 25: Wind sites in Gujarat accounted for over 50% of 2000 MW SECI wind auctions finalised in 2017 so far**



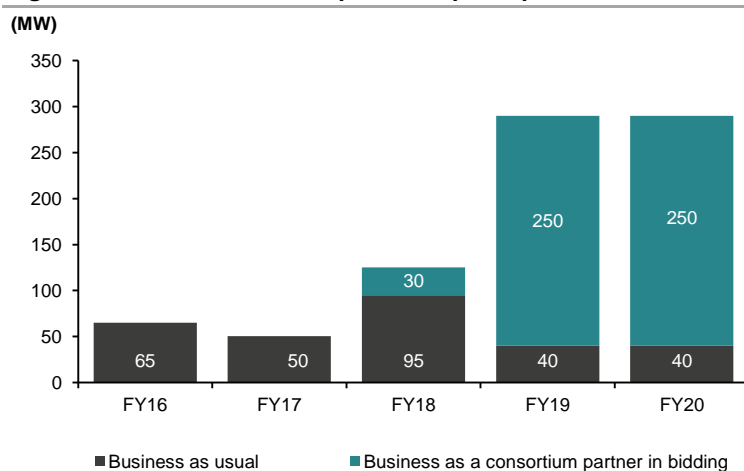
Source: Industry sources, CRISIL Research

**Figure 26: Gujarat's share in India's wind energy installed capacity picked up in FY17**



Source: Company, CRISIL Research

**Figure 27: New order wins expected to pick up from FY18 onwards**



Source: Company data, CRISIL Research

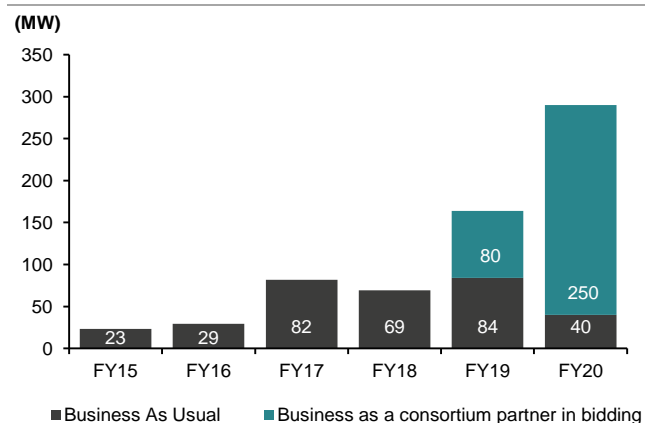
Our assumptions of new order wins depend on the company winning bids in the upcoming auctions as a part of a consortium. Accordingly, we expect new orders to pick up from FY18 onwards as:

- It has tied up with a consortium partner to bid for 30 MW projects in the upcoming Gujarat state auction.
- It has entered into an agreement for 95 MW wind capacity with a client who is expected to participate in the upcoming Gujarat state bid.
- It has also tied up with a consortium partner to bid for 250 MW of wind capacity in the upcoming SECI auctions.

Hence, we expect EPCC commissioning to pick up in FY19. On the other hand, FY18 is expected to witness lower EPCC revenue because of:

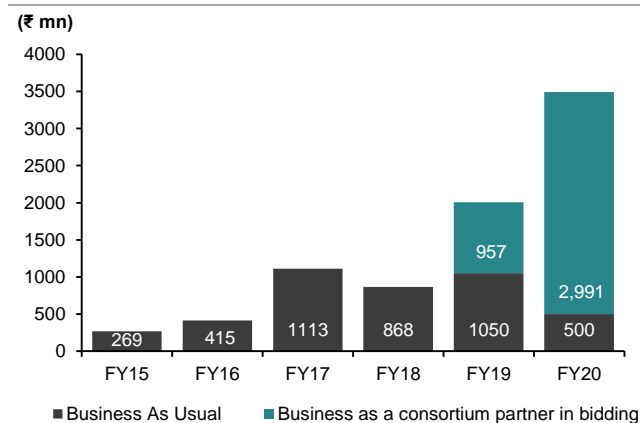
- Expectations of short-term disruptions arising from industry transitioning from FiT to the competitive bid regime.
- Order backlog of 50 MW as of FY17.

**Figure 28: EPCC commissioning to pick up from FY19 onward**



Source: Company, CRISIL Research

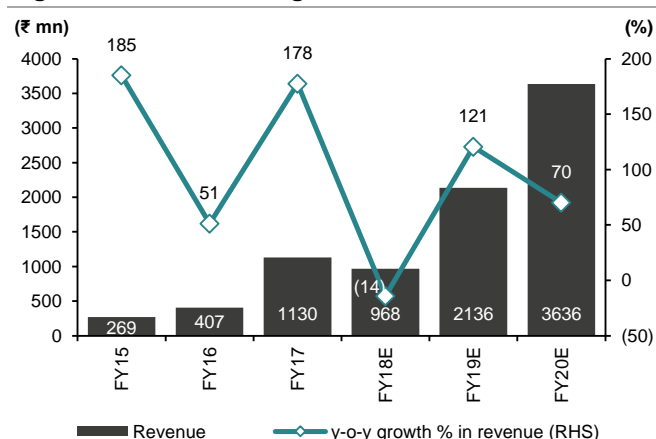
**Figure 29: Resulting in improvement in EPCC revenue in FY19**



Source: Company, CRISIL Research; Note: Gross revenue considered

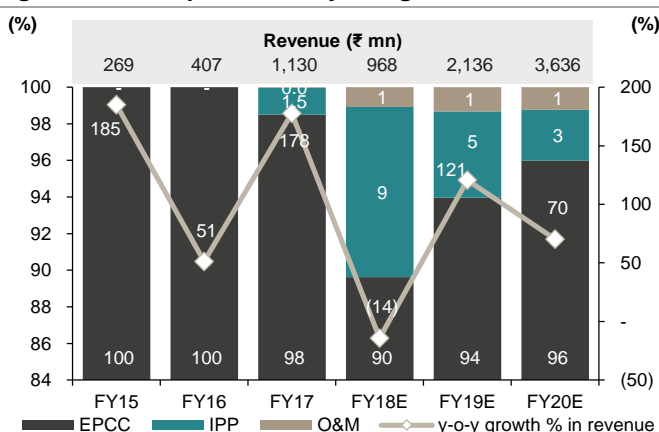
The O&M and sale of power businesses are expected to support revenue. While the company's O&M revenue kicked in from FY17 onwards, the business is expected to contribute ~1% to overall revenue during FY18-20. The company's foray into the sale of power business with four WTGs is expected to provide additional annuity-based revenue of ~₹100 mn per annum.

**Figure 30: Revenue to log 48% CAGR over FY17-20...**



Source: Company, CRISIL Research; Note: Gross revenue considered

**Figure 31: ...complemented by rising O&M and IPP revenue**



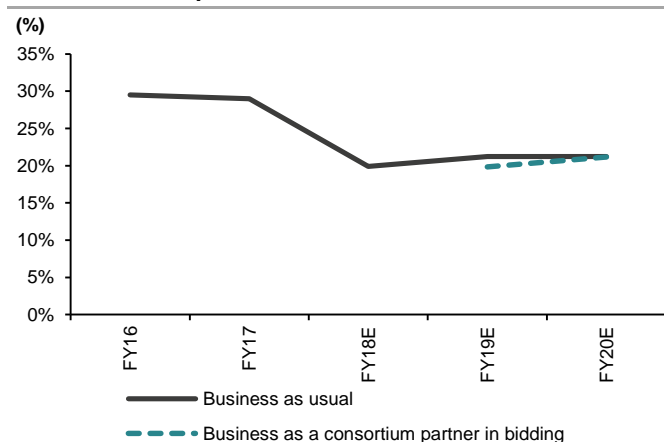
Source: Company, CRISIL Research; Note: Gross revenue considered

## EBITDA to increase at ~40% CAGR over FY17-20; margin to stabilise at ~23% by FY20

We expect earnings before interest, tax, depreciation and amortisation (EBITDA) to increase 2.8x the FY17 number in FY20 on the back of (a) expected commissioning of 520 MW+ wind projects, (b) rising share of the O&M business and (c) the full impact of four wind IPPs from FY19 onwards. As we assume lower site development in FY18, EBITDA is expected to dip ~24% y-o-y in FY18. Thereafter, it is expected to recover to ₹820 mn by FY20.

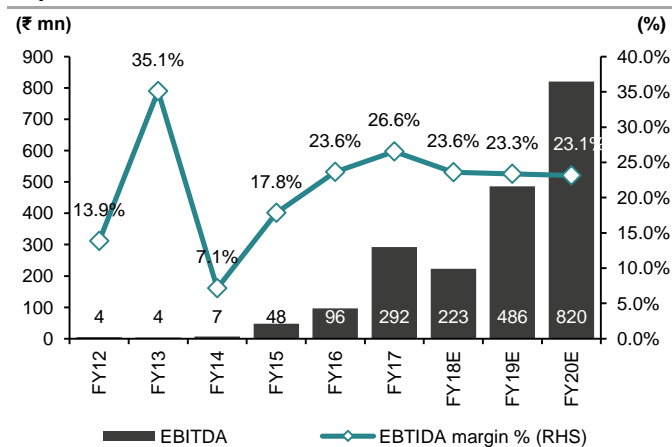
The EPCC business' EBITDA margin (including sub-lease of the land business) is expected to moderate from ~25% in FY17 to ~20% in FY20 owing to (a) pressure on realisations and (b) pressure from rising raw material prices (steel and cement). However, the company is expected to realise the benefits of economies of scale in FY19, which should help margins. The EPCC business' (excluding sub-lease of the land business) EBITDA margin is expected to moderate to ~15% on FY20 from 17.5% in FY17. Additionally, after FY17, contribution from higher-margin businesses - O&M and IPPs - is expected to aid overall margin. Accordingly, we expect a moderation in EBITDA margin after FY17 and it is expected to stabilise at ~23% in FY20.

**Figure 32: Gross margin of EPCC business is expected to see moderation post FY17**



Source: Company, CRISIL Research

**Figure 33: Accordingly, company's EBITDA margin is expected to stabilise at ~23% in FY20**



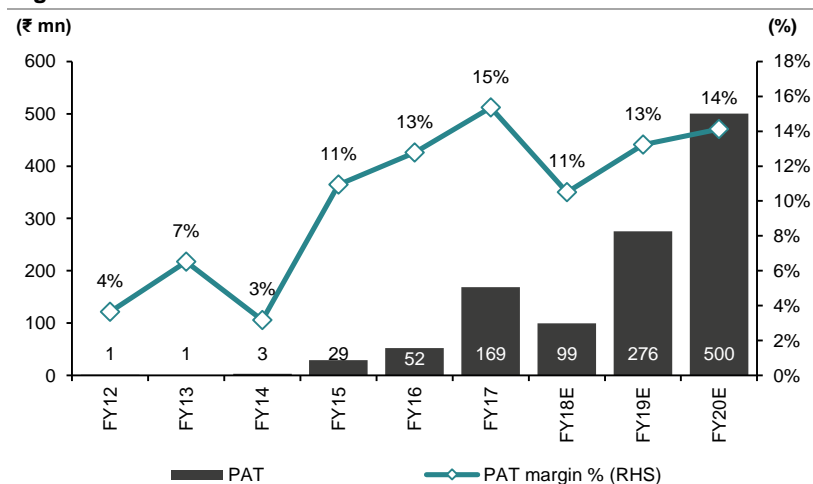
Source: Company, CRISIL Research



## PAT to increase at ~44% CAGR during FY18-20

We expect profit after tax (PAT) to increase at a three-year CAGR of 44% to ₹500 mn in FY20 in line with growth in EBITDA. Accordingly, EPS is expected to increase to ₹58.5 in FY20 from ₹19.7 in FY17.

**Figure 34: PAT to rise at ~44% CAGR over FY17-20**

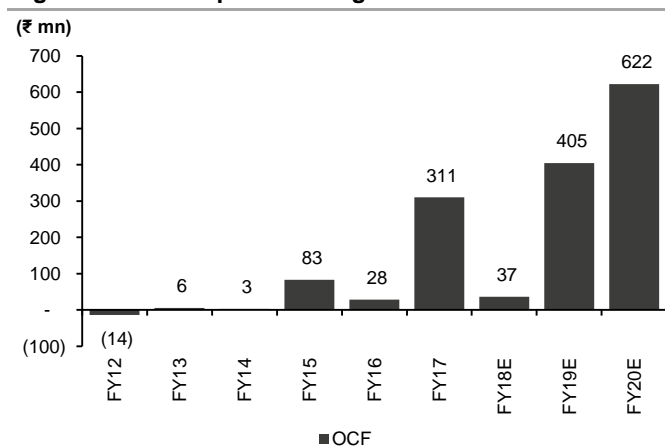


Source: Company data, CRISIL Research

## Operating cash flow expected to grow at ~26% CAGR (FY17-20)

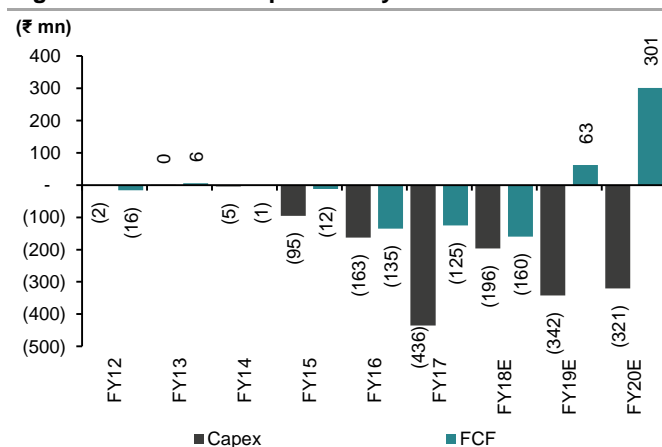
We expect K.P Energy's operating cash flow (OCF) to increase at ~26% CAGR over FY17-20 aided by improvement in PAT and better collection efficiency. We have not factored in any major capital expenditure (capex) on the sale of power business. The only expected capex is on purchase of substations for power evacuation. Accordingly, with the rise in EPCC project commissioning after FY18, we expect free cash flow (FCF) to turn positive by FY19.

**Figure 35: OCF expected to log ~26% CAGR over FY17-20**



Source: Company, CRISIL Research

**Figure 36: FCF to turn positive by FY19E**

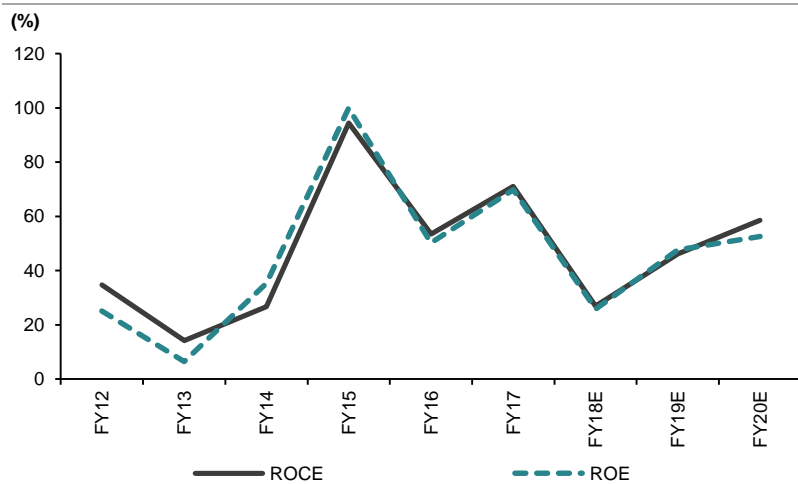


Source: Company, CRISIL Research

## Return ratios expected to rise after a dip in FY18

K.P. Energy's return on equity (RoE) is expected to rise after FY18 with pick-up in execution in the EPCC business which will aid the bottom line. RoE is estimated to increase to ~53% in FY20 from ~26% in FY18. RoCE is estimated to rise to ~59% in FY20 from ~27% in FY18.

**Figure 37: RoCE and RoE expected to reach ~59% and ~53%, respectively, by FY20**



Source: Company data, CRISIL Research

## Management Overview

CRISIL's fundamental grading methodology includes a broad assessment of management quality, apart from other key factors such as industry and business prospects, and financial performance.

### Professional and experienced management

Founding promoters Farukbhai Patel (Managing Director) and Ashish A. Mithani (Whole-time Director & Chief Executive Officer) have over 20 years of relevant experience. They are supported by experienced professionals, who are in charge of project management, planning, HR and administration, quality control and compliance functions. Based on our interactions, we believe the second line of management is professional and experienced.

### Board composition - complying with listing norms

K.P. Energy's board has six members, two of whom are independent directors with experience in varied fields. Raghavendra Rao Bondada, 42, has over 15 years of experience in sectors such as telecom, power, renewable energy and infrastructure, and has served as Executive Director of Aster Group. Sajesh B. Kolte, 43, has experience of over 16 years in companies such as Ceat Ltd, Goodlass Nerolac Paints, Berger Paints and ICICI Bank.

## Corporate Governance

### Satisfactory disclosure levels

CRISIL's fundamental grading methodology includes a broad assessment of corporate governance and management quality, apart from other key factors such as industry and business prospects, and financial performance. In this context, CRISIL Research analyses the shareholding structure, board composition, typical board processes, disclosure standards and related-party transactions. Any qualifications by regulators or auditors also serve as useful inputs while assessing a company's corporate governance.

In our opinion, disclosure levels are satisfactory relative to the company's size based on publicly available information such as half yearly results, annual reports, content on website and other public documents.

### Other key observations

**Quality of earnings:** Over FY13-17, OCF increased at a CAGR of ~170% which improved the quality of earnings. Growth was partly on account of the asset light model under the EPCC division as wind sites are mostly leased and not a part of fixed assets.

**Related party transactions:** In the past, there have been related party transactions with the promoter group companies and promoters. Purchases for the EPCC business from group company K.P. Buildcon Pvt Ltd amounted to ₹65.2 mn in FY14 (78% of total material cost), ₹22.6 mn in FY15 (11% of total material cost), ₹82.6mn in FY16 (36% of total material cost) and ₹ 36.4 mn in FY17 (5.6% of total material cost). In future, if these transactions are priced above market rates, profitability will be adversely impacted.

**Dividend payment:** Since incorporation, the company declared dividends only once in FY17. Our understanding is it has focussed on utilising free cash flows for growth given its foray into the sale of power business.

**Auditor tenure:** The company appointed K. A. Sanghavi & Co. as auditor in place of Bipinchandra J. Modi & Co in FY17; changing auditors periodically maintains objectivity.

## Valuation

**Grade: 5/5**

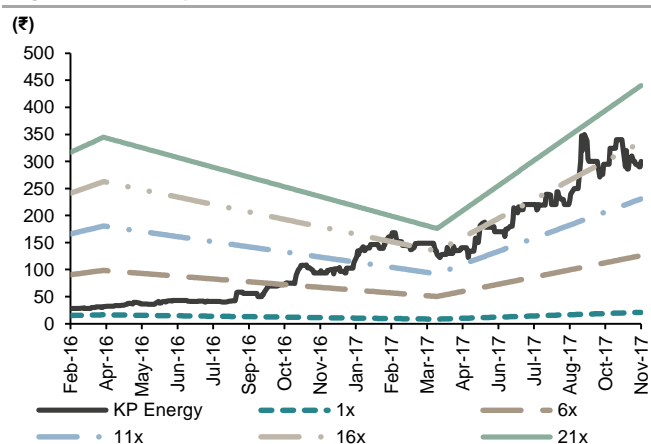
We have valued K.P. Energy by the SoTP method. The EPCC business, including O&M, is valued using a price to earnings (P/E) multiple of 8x, which is at a discount to the median trading multiple of its peers. The sale of power business (four operational WTGs) has been valued by the DCF method. K.P. Energy's fair value works out to ₹402 per share. At the current market price of ₹300, the valuation grade is 5/5.

### Valuation under base case

Sr. No.	Parameters	Method	Multiple	Value (₹/share) of K.P. Energy
A	EPCC business (including O&M)	P/E	8x	376
B	Sale of power business	DCF		26
	Fair value of the business (A+B)			402

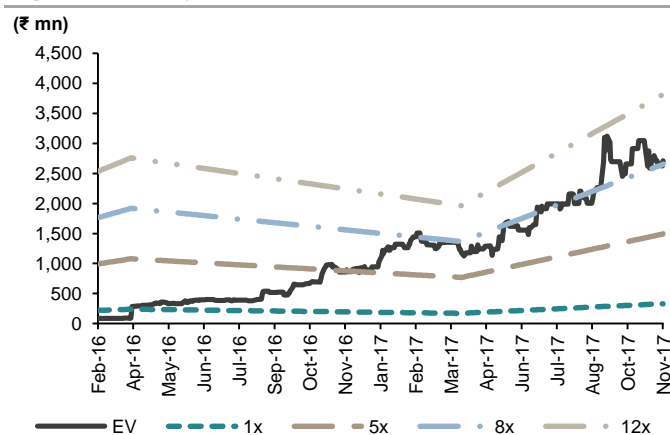
Source: CRISIL Research

**Figure 38: One-year forward P/E band**



Source: NSE, CRISIL Research

**Figure 39: One-year forward EV/EBITDA band**



Source: NSE, CRISIL Research

### Peer comparison

Companies	M.cap	EBITDA margin (%)			PAT margin (%)			RoE (%)			*P/E (x)		
	₹ mn	FY15	FY16	FY17	FY15	FY16	FY17	FY15	FY16	FY17	FY15	FY16	FY17
<b>*Wind EPCC and IPP</b>		<b>48</b>	<b>56</b>	<b>64</b>	<b>4</b>	<b>3</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>118</b>	<b>16</b>	<b>15</b>
Orient Green Power Co	6,946	70	67	75	(70)	(115)	(25)	(23)	(21)	(11)	-	-	-
Veer Energy and Infrastructure	318	8	6	8	4	3	7	4	3	3	118	16	15
Indowind Energy	869	48	56	64	48	56	64	0	0	1	174	45	23
<b>*Large EPCC players</b>		<b>15</b>	<b>15</b>	<b>14</b>	<b>1</b>	<b>1</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>6</b>	<b>28</b>	<b>22</b>	<b>13</b>
Larsen and Toubro	1,770,359	15	15	14	5	5	6	12	12	13	34	22	24
BGR Energy	10,373	9	10	11	1	1	2	2	2	6	28	28	13
Sadbhav Engineering	54,242	17	21	33	(5)	(1)	(1)	(12)	(3)	(6)	-	-	-

Source: CRISIL Research, Industry sources; Note: \*based on median; market cap as on November 10, 2017

## Scenario analysis

Our scenario analysis factors in a slightly lower EBITDA margin versus the base case. This is based on our assumptions that significant order wins in FY18-19 are expected to imply highly competitive realisations (versus the base case), translating to a lower EBITDA margin (versus the base case).

### Base case:

- Business as a consortium is able to win 30 MW in FY19 and 250 MW post FY19
- Order wins of 95 MW in FY19 and 40 MW post FY19 under business as usual

₹ mn	FY18	FY19	FY20
Revenue	945	2,083	3,544
EBITDA	223	486	820
PAT	99	276	500
Fair value (₹)	402		

Source: CRISIL Research

## Scenario analysis

### Case 1:

- Business as a consortium is able to win entire 800 MW in FY19 and 250 MW post FY19
- Order wins of 95 MW in FY19 and 40 MW post FY19 under business as usual

₹ mn	FY18	FY19	FY20
Revenue	945	3,364	8,669
% change from base case	-	61	145
EBITDA	223	692	1,624
% change from base case	-	42	98
PAT	99	408	1,020
% change from base case	-	48	104
Fair value (₹)	828		
% change from base case	106		

Source: CRISIL Research

### Case 2:

- Business as a consortium is able to win 400 MW each in FY18 and FY19
- Order wins of 95 MW in FY19 and 40 MW post FY19 under business as usual

₹ mn	FY18	FY19	FY20
Revenue	945	2,433	5,291
% change from base case	-	17	49
EBITDA	223	539	1,048
% change from base case	-	11	28
PAT	99	309	643
% change from base case	-	12	29
Fair value (₹)	521		
% change from base case	30		

Source: CRISIL Research

**CRISIL SME IER reports released on K.P. Energy**

Date	Nature of report	SME Fundamental grade	Fair value	SME Valuation grade	CMP (on the date of report)
10-Nov-17	Initiating coverage	3/5	₹402	5/5	₹300

Source: CRISIL Research

## Company Background

Incorporated in 2010 and headquartered in Surat, K.P. Energy operates in the wind energy sector. Its activities include identifying wind sites, acquiring land and the necessary permits, EPCC services for setting up wind project infrastructure - including power transmission and O&M services for BOP of a wind farm.

It is promoted by Farukbhai Patel and Ashish A. Mithani. It has wind sites across Gujarat - Ratdi, Matalpar, Kuchhdi, Mahuva, Miyani, Odedar and Vangar.

### Milestones

<b>2010</b>	<ul style="list-style-type: none"> <li>Incorporated as K.P. Energy Pvt Ltd on January 8, 2010 under the Companies Act, 1956</li> </ul>
<b>2015</b>	<ul style="list-style-type: none"> <li>Commissioned 23.1 MW of wind farm projects</li> </ul>
<b>2016</b>	<ul style="list-style-type: none"> <li>Listed on the BSE</li> <li>Received letter of intent of BOP works for 24 WTG at Mahuva, Gujarat from Suzlon Energy Ltd</li> <li>Issued letter of intent to purchase three 2.10 MW Suzlon-make WTGs for its 6.30 MW wind power project</li> <li>Awarded for being one of the top performers in the SME segment (FY15-16) during <i>muhurat</i> trading ceremony by the BSE</li> <li>Overall 29.4 MW of wind farm projects commissioned in FY16</li> </ul>
<b>2017</b>	<ul style="list-style-type: none"> <li>Formed six LLPs: Mannar Power Infra LLP, Miyani Power Infra LLP, Mahuva Power Infra LLP, Belampur Power Infra LLP, Hajipur Renewable Energy LLP and Vanki Renewable Energy LLP</li> <li>Placed purchase order for windcube and LIDAR technology for accurate wind resource assessment and analysis, site suitability, etc.</li> <li>Won bronze award in category of 'Portfolio Performance - Wind Developer of the year' for outstanding achievements in Wind Energy Sector by India Wind Energy Forum (IWEF) Excellence Awards 2017 on October 12, 2017 in Chennai.</li> <li>Completed commissioning of 32 WTGs at its Kuchhdi site (Porbandar, Gujarat), including its own Suzlon make S97_120 WTG of 2.1MW</li> <li>Overall 81.9 MW of wind farm projects (~3 times of FY16) commissioned in FY17</li> </ul>



## Annexure

### Integrated rating for state power distribution utilities

Utility-wise grades	State	Rating agency	5th IR grade (FY16)
Dakshin Gujarat Vij Company Ltd	Gujarat	ICRA	A+
Uttar Gujarat Vij Company Ltd	Gujarat	ICRA	A+
Madhya Gujarat Vij Company Ltd	Gujarat	ICRA	A+
Paschim Gujarat Vij Company Ltd	Gujarat	ICRA	A+
Chamundeshwari Electricity Supply Corporation Ltd	Karnataka	ICRA	A
Bangalore Electricity Supply Company Ltd	Karnataka	ICRA	A
Maharashtra State Electricity Distribution Company Ltd	Maharashtra	ICRA	A
Mangalore Electricity Supply Company Ltd	Karnataka	ICRA	A
Eastern Power Distribution Company of AP Ltd	Andhra Pradesh	CARE	A
Hubli Electricity Supply Company Ltd	Karnataka	ICRA	B+
Southern Power Distribution Company of AP Ltd	Andhra Pradesh	CARE	B+
Madhya Pradesh Pash. Kshetra Vidyut Vitaran Co Ltd	Madhya Pradesh	CARE	B+
Gulbarga Electricity Supply Company Ltd	Karnataka	ICRA	B
Tamil Nadu Generation and Distribution Corporation	Tamil Nadu	ICRA	B
Madhya Pradesh Poorv Kshetra Vidyut Vitaran Co Ltd	Madhya Pradesh	CARE	B
Jodhpur Vidyut Vitran Nigam Ltd	Rajasthan	CARE	B
Ajmer Vidyut Vitran Nigam Ltd	Rajasthan	CARE	C+
Madhya Pradesh Madhya Kshetra Vidyut Vitran Co Ltd	Madhya Pradesh	CARE	C+
Jaipur Vidyut Vitran Nigam Ltd	Rajasthan	CARE	C+

Source: Ministry of Power, CRISIL Research

### Solar versus wind

Particulars	Solar	Wind
Source of energy	Sun provides more predictable energy output	Wind is not everywhere. Sites becomes critical. But it can be harnessed day or night and, thus, produces more electricity than solar
Space and integration	Solar panels take up space. They can be placed anywhere, facing the sun	Space efficient, but should be placed at a height to take advantage of the wind flow
Capital cost (₹ mn/ MW)	59-61	65-70
Maintenance	Requires less maintenance owing to the absence of moving parts	Requires regular maintenance or replacement of moving parts
Noise	Noiseless	Turbines can be noisy
Effect on wildlife	Relatively low impact on wildlife	Can be a danger to wildlife, particularly to birds and other flying creatures. However, risk to wildlife can be mitigated using appropriate measures such as bird-friendly siting of turbines, using reflectors, visual scare deterrence, lasers etc.

Source: Industry sources, CRISIL Research

## K.P. Energy's corporate social responsibility (CSR) activities

CSR activities	Remarks
Protection of wild life	<p><b><u>Measures to check mortality of birds</u></b></p> <p>According to the company, the following measures have been undertaken for mitigating bird mortality:</p> <p><b>Turbine-specific</b></p> <p>Orange coloured tips of turbine blades to isolate them from the background and make them more visible so that birds can avoid them.</p> <ul style="list-style-type: none"> <li>• Use of low revolutions per minute (RPM) blade movement turbines designed specifically to minimise bird collisions.</li> </ul> <p><b>Transmission-specific</b></p> <p>The company has developed a design for overhead transmission lines to mitigate fatality even for long tailed birds. The design of the transmission infrastructure ensures guards, protection measures for accidental injury to flora or fauna during construction or operation of wind projects. Some of the measures undertaken by the company are:</p> <ul style="list-style-type: none"> <li>• Inter conductor spacing of 200 cm in overhead lines (minimum spacing recommended as per international standards is 140 cm) to avoid electrocution and collisions of birds.</li> <li>• Insulated jumpers on electric poles to avoid electrocution of birds.</li> <li>• Ensured spike guards on cross arms to avoid bird perching and electrocution on poles.</li> <li>• Ensured higher ground clearance of overhead lines.</li> <li>• Installed red spears on overhead lines to make it more visible for birds to avoid collisions (specifically at Mahuva Coast).</li> <li>• Installed bird reflectors on poles to make them more visible during night to avoid collisions (specifically at Mahuva Coast).</li> </ul> <p><b><u>Measures undertaken by the company to check mortality of wild animals</u></b></p> <p>According to the company, it has undertaken the following mortality mitigation or protection measures for wild animals (including Asiatic Lion).</p> <ul style="list-style-type: none"> <li>• Maintained higher ground spacing of the overhead lines.</li> <li>• Constructed walls with heights ranging from 2 m to 4 m along with concertina coil fencing to check wild life jumping over electrical switch yards at turbine locations.</li> <li>• Donated dedicated ambulance for animals with the local forest department.</li> <li>• Built drinking water pits for wild animals.</li> </ul>
Environmental clearances	The company has obtained environmental permissions to develop a wind project in the coastal regulation zone (Mahuva) from the Ministry of Environment, Forests & Climate Change.
Tree plantation	The company spent ₹1.33 mn in FY17 on tree plantation (~17,000 saplings). At Matalpar and Karmadia villages of Bhavnagar, it planted ~10,000 saplings at a time. According to the company, in August 2017, ~10,000 saplings were planted. It has set a target of planting and growing 0.1 mn trees by 2022; as of November 2017 it has planted ~27,600 saplings.
Distribution of education kits	The company spent ₹0.23 mn on distribution of education kits in Bhavnagar, Gujarat. The kit included all-weather school bag and necessary learning accessories for kids taking admission for the first time in government schools.
Common infrastructure for villages	The company spent ₹0.95 mn in FY17 on infrastructure aid to villages - building pavements, all-weather roads, strengthening existing roads, constructing cross drainages, etc.

Source: Company, CRISIL Research

## Annexure: Financials – base case

Income statement							Balance Sheet						
(₹ mn)	FY15	FY16	FY17	FY18E	FY19E	FY20E	(₹ mn)	FY15	FY16	FY17	FY18E	FY19E	FY20E
<b>Operating income</b>	269	407	1,101	946	2,083	3,544	<b>Liabilities</b>						
<b>EBITDA</b>	48	96	292	223	486	820	Equity share capital	10	34	86	86	86	86
<b>EBITDA margin</b>	17.8%	23.6%	26.6%	23.6%	23.3%	23.1%	Reserves	39	123	235	360	624	1,105
Depreciation	2	8	12	40	48	55	Minorities	-	1	2	2	2	2
<b>EBIT</b>	46	89	280	183	438	765	<b>Net worth</b>	49	159	322	447	711	1,192
Interest	4	10	20	42	38	37	Convertible debt	-	-	-	-	-	-
<b>Operating PBT</b>	43	79	260	141	400	729	Other debt	25	99	208	378	363	347
Other income	1	0	0	2	1	1	<b>Total debt</b>	25	99	208	378	363	347
Exceptional inc/(exp)	(0)	(0)	1	-	-	-	Deferred tax liability (net)	2	22	66	66	66	66
<b>PBT</b>	44	79	261	143	401	730	<b>Total liabilities</b>	76	279	597	891	1,140	1,605
Tax provision	14	27	92	43	125	229	<b>Assets</b>						
Minority interest	-	-	-	-	-	-	Net fixed assets	99	254	503	837	1,131	1,397
<b>PAT (Reported)</b>	29	52	169	99	276	500	Capital WIP	4	4	179	-	-	-
Less: Exceptionals	(0)	(0)	1	-	-	-	<b>Total fixed assets</b>	103	258	681	837	1,131	1,397
<b>Adjusted PAT</b>	30	52	168	99	276	500	<b>Investments</b>	0	-	-	-	-	-
							<b>Current assets</b>						
							Inventory	53	54	45	47	99	152
							Sundry debtors	19	77	256	209	343	586
							Loans and advances	6	18	31	24	57	99
							Cash & bank balance	9	15	20	15	14	244
							Marketable securities	-	-	-	-	-	-
							<b>Total current assets</b>	88	165	353	296	511	1,082
							<b>Total current liabilities</b>	114	144	437	242	503	874
							<b>Net current assets</b>	(26)	21	(84)	54	8	208
							<b>Intangibles/Misc. expenditure</b>	-	-	-	-	-	-
							<b>Total assets</b>	76	279	597	891	1,140	1,605
							<b>Cash flow</b>						
							(₹ mn)	FY15	FY16	FY17	FY18E	FY19E	FY20E
							Pre-tax profit	44	79	260	143	401	730
							Total tax paid	(12)	(8)	(47)	(43)	(125)	(229)
							Depreciation	2	8	12	40	48	55
							Working capital changes	49	(41)	110	(143)	44	31
							<b>Net cash from operations</b>	83	38	335	(4)	367	586
							<b>Cash from investments</b>						
							Capital expenditure	(95)	(163)	(436)	(196)	(342)	(321)
							Investments and others	-	0	-	-	-	-
							<b>Net cash from investments</b>	(95)	(163)	(436)	(196)	(342)	(321)
							<b>Cash from financing</b>						
							Equity raised/(repaid)	10	79	-	-	-	-
							Debt raised/(repaid)	11	74	110	170	(16)	(16)
							Dividend (incl. tax)	-	-	(6)	(4)	(10)	(18)
							Others (incl extraordinary)	(0)	(22)	2	29	(1)	(1)
							<b>Net cash from financing</b>	20	131	105	195	(27)	(35)
							Change in cash position	8	6	5	(5)	(2)	230
							Closing cash	9	15	20	15	14	244
							<b>Per share</b>						
							Adj EPS (₹)	11.8	6.1	19.7	11.6	32.2	58.5
							CEPS	12.5	7.0	21.1	16.3	37.9	64.9
							Book value	19.7	18.6	37.7	52.2	83.2	139.4
							Dividend (₹)	-	-	0.6	0.4	1.2	2.1
							Actual o/s shares (mn)	3	9	9	9	9	9

Source: CRISIL Research; Note: calculations are based on reclassified financial data

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