Suzlon Energy

BUY

INDUSTRY	CAPITAL GOODS
CMP *(As on 16 Mar 15)*	**Rs 26**
Target Price	**Rs 34**
Nifty	8,633
Sensex	28,438

KEY STOCK DATA	
Bloomberg	SUEL IN
No. of Shares (mn)	3,539
MCap (Rs bn) / ($ mn)	92/1,464
6m avg traded value (Rs mn)	886

STOCK PERFORMANCE (%)

52 Week high / low			Rs 37/9
	3M	6M	12M
Absolute (%)	101.6	18.5	160.0
Relative (%)	95.4	11.1	129.6

SHAREHOLDING PATTERN (%)	
Promoters	29.75
FIs & Local MFs	23.04
FIIs	13.05
Public & Others	34.16

Source : BSE

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Wind in its sails, again

Having faced multiple crises over FY09-14, we believe Suzlon is on the cusp of a turnaround. It has aggressively reduced debt from its heavily levered balance sheet by divesting its German subsidiary Senvion (for Euro 1bn) and via a preferential issue of Rs 18bn to Dilip Shanghvi and Associates (DSA). These developments will enable the company to not only reduce debt but also provide much needed working capital to ramp up business in the rapidly growing Indian wind energy market.

With the NDA government's ambitious plans for renewable energy, we expect favourable policy environment for wind power to continue. Aided by significant operating and financial leverage, we expect Suzlon's earnings to grow manifold over the next few years. Suzlon is among a handful of listed companies levered to India's fast growing renewables industry. We initiate coverage with a BUY and TP of Rs 34/sh based on 14x FY17E EV/ EBITDA.

- Suzlon will utilise Rs 90bn (raised via Senvion sale and DSA equity infusion) to cut its debt by Rs 60bn to Rs 77bn and also utilize the remaining amount (Rs 22bn, ex capex) to fund its working capital requirements. With working capital funds available, we believe the company can easily ramp up volumes in the rapidly evolving Indian wind power market.
- Our confidence stems from primary customer feedback which suggests that Suzlon has the best overall product offering and it lost market share primarily owing to funding constraints. The Indian wind energy market is also set for a big leap as accelerated depreciation (AD) and generation based incentives (GBI) have been re-introduced. The NDA government has ambitious plans of adding 38GW over FY15-22.
- As 25% of Suzlon's expenses are fixed in nature (FY16E), we expect a quantum jump in profits as volumes ramp up. We expect Suzlon to achieve PBT break-even in FY16E (1,250MW of sales, 150% increase over FY15E), which implies 35% market share. This looks plausible, given the company's order book of 1,147MW. With a capacity of 3.6GW, Suzlon can further ramp up volumes without incurring significant capex.
- We initiate coverage on Suzlon with a TP of 34/sh, based on 14x FY17E EV/EBITDA. Our assigned multiple is at a premium to European WTG companies which we believe is justified given better growth prospects of the Indian market and Suzlon's abnormally depressed earnings. **BUY**

FINANCIAL SUMMARY*

(Rs mn)	FY14	FY15E	FY16E	FY17E	FY18E
Net Sales	204,029	196,545	97,517	134,959	162,710
Operating EBITDA	1,147	7,450	11,007	19,208	24,240
APAT	(28,051)	(22,905)	16	6,257	9,914
Diluted EPS (Rs)	(4.6)	(3.9)	0.0	1.0	1.7
P/E (x)	NM	NM	NM	24.9	15.7
EV / EBITDA (x)	183.8	32.8	20.5	11.7	8.9
RoCE (%)	(0.9)	(0.9)	8.5	31.2	34.0

Source : Company, HDFC sec Inst Research *FY16/17/18 estimates exclude Senvion

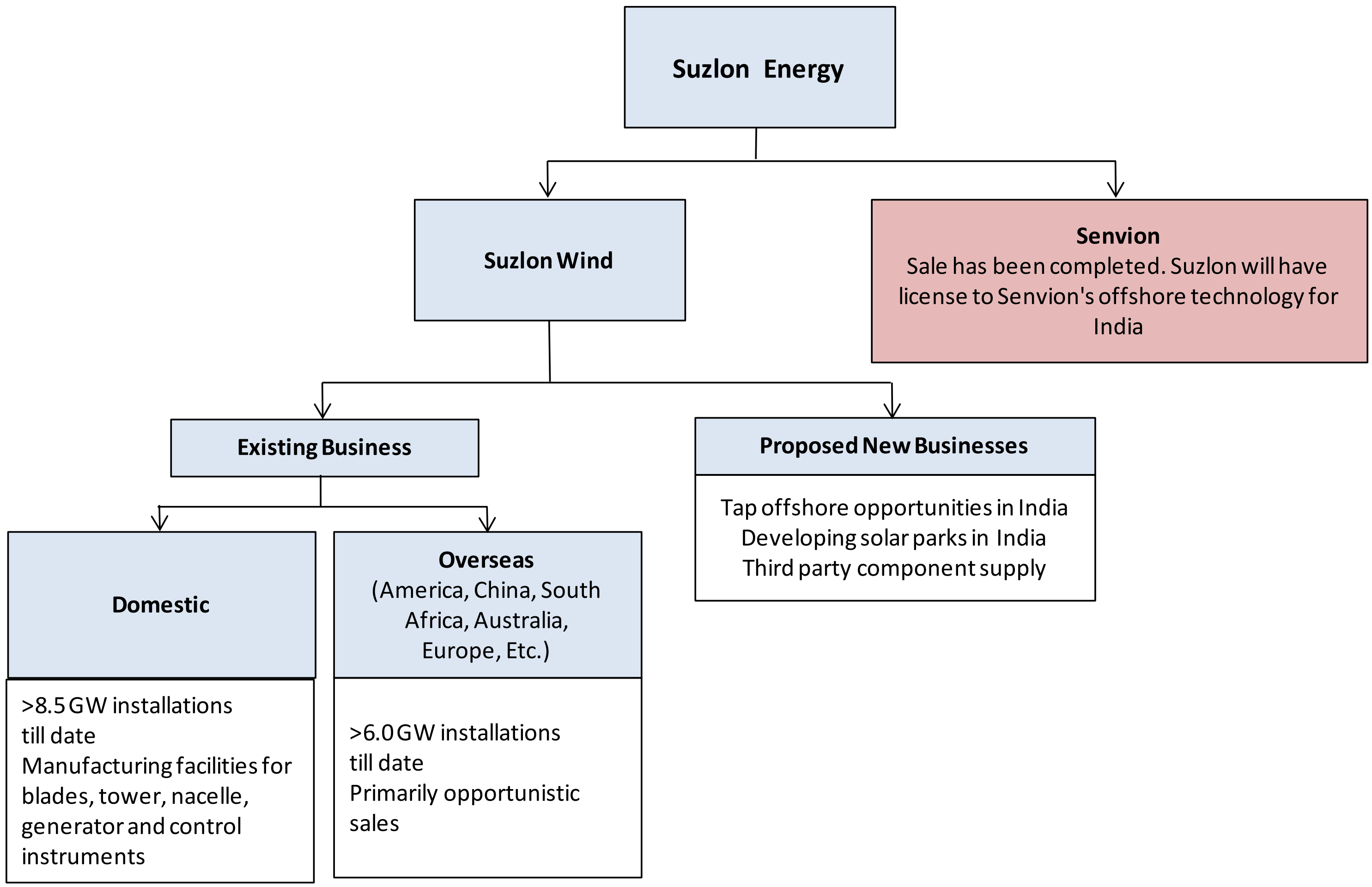
Suzlon has sold off Senvion. FY16 onwards, financial statements will only reflect Suzlon Wind's performance

Suzlon Wind comprises Suzlon's Indian and overseas (ex-Senvion) operations

Suzlon's WTG manufacturing capacity is 3,600MW per annum in India and 600MW in China (25% stake in JV)

The company intends to take up development of hybrid solar and wind parks but does not plan to manufacture Solar panels. This is driven by the fact that wind farms need large tracts of unused land, which can be used for solar panels

SUZLON – COMPANY OVERVIEW



Source : Company, HDFC sec Inst Research

What went wrong? Almost everything

Suzlon acquired REpower (Senvion) after an extended bidding war with Areva for an amount of 1.3bn Euros in 2007

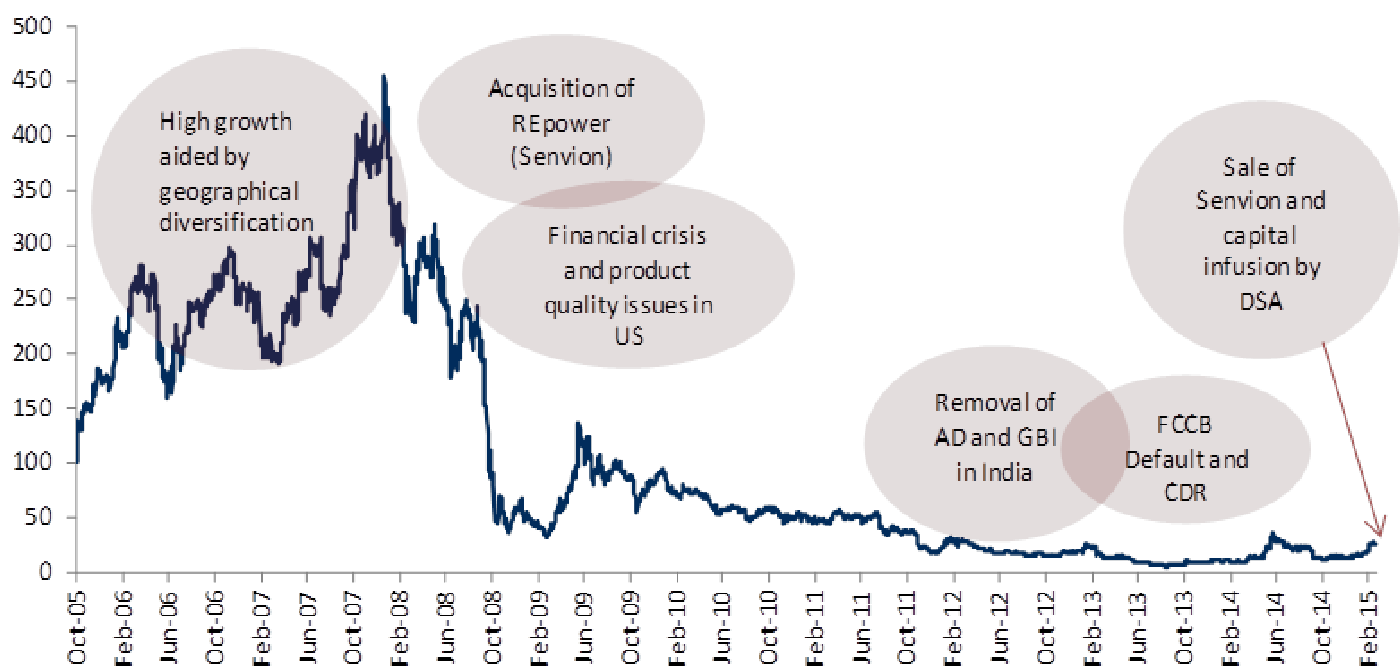
- Over the trailing five years, Suzlon has gone through multiple crises. Company's working capital intensive business model, coupled with its global ambitions led to massive accumulation of debt. A policy driven slowdown in domestic wind turbine business exacerbated matters further, leading to an FCCB default and consequently CDR.
- Excessive focus on global market share and easy financing led to the company aspiring for high growth in a short span of time. It has had turbine installations from Brazil to Australia and from USA to South Africa. It can be said (with the obvious benefit of hindsight) that the company over extended itself.

Due to the global financial crisis in 2008-09, liquidity for wind farm developers dried up

Suzlon also had product quality issues with one of its clients in USA which impacted the company's volumes in USA

In 2012, accelerated depreciation and GBI benefits for wind farm developers were removed in India leading to a sharp dip in Indian market volumes

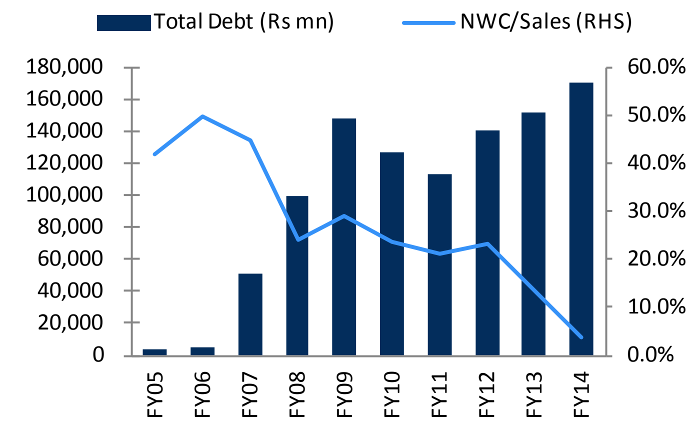
Suzlon's share price history and key events



Source : Company, HDFC sec Inst Research

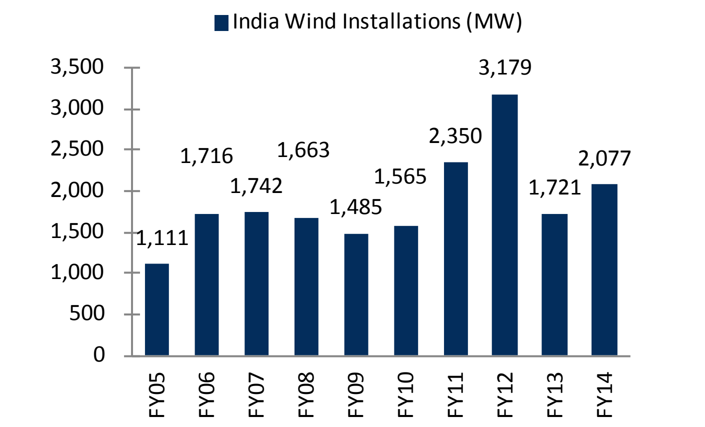
With domestic volumes drying up and company unable to repatriate Senvion's profits, liquidity dried up and the company could not repay its FCCB thus going into CDR

Persistently high debt and working capital



Source : Company, HDFC sec Inst Research

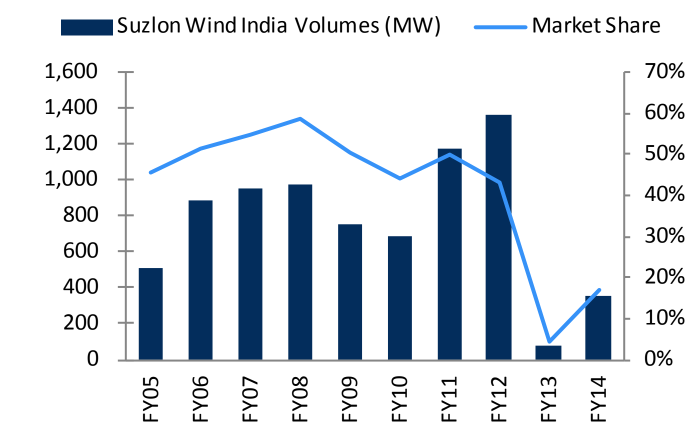
Sharp drop in India installations



Source : Company, HDFC sec Inst Research

With working capital facilities frozen, Suzlon's India sales volume dipped to 75MW in FY13 from 1,366MW in FY12, leading to massive fixed cost under recovery

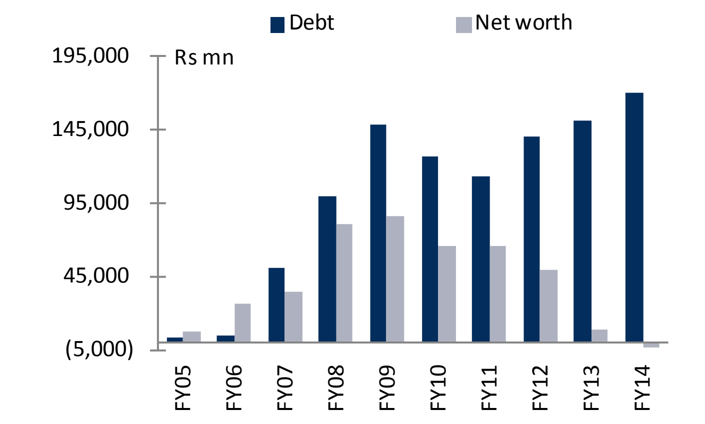
Loss of market share



Source : Company, HDFC sec Inst Research

NWC has declined in FY13/14 as volume of business has come down and company has been forced to delay payments to suppliers due to fund crunch

Erosion of net worth and CDR



Source : Company, HDFC sec Inst Research

However, there is light at the end of the tunnel

Corporate restructuring will allow Suzlon to focus on its business, something which was missing in FY13-15

DSA has entered as a financial investor and has a vote pooling arrangement with the Tanti family

Deleveraging of balance sheet enables Suzlon to gain access to vital working capital funds helping it to ramp up volumes in the rapidly evolving and fast growing Indian market

The company intends to focus solely on the Indian market with no global ambitions as of now

Sale of Senvion and equity infusion by DSA to reduce balance sheet stress and provide liquidity

- Suzlon has sold its German subsidiary Senvion and will use the proceeds (Rs 72bn / Euro 1bn) to de-leverage its stretched balance sheet.
- DSA (Dilip Shanghvi and Associates) will infuse Rs 18bn into Suzlon Energy through preferential allotment of 1bn shares at a price of Rs 18/sh. Post the deal (on a diluted basis assuming FCCBs convert fully), DSA will hold 16.7% in Suzlon while the Tanti family will end up owning 17.5%.
- These two developments will lead to a reduction of rupee debt by Rs 60bn (from Rs 89bn now) and will also provide much needed working capital (Rs 22bn, ex of capex requirements) to the business. DSA can provide further non-fund based working capital support to Suzlon, if required.
- Of the remaining debt, CE Bonds of $647mn (Rs 41bn) due in FY18 are likely to be postponed to FY23. There are no term debt repayments in FY16/17/18, which will allow the company to focus on operations.

DEBT AND WORKING CAPITAL POST RESTRUCTURING

Rs bn	Pre deal	Post deal	
Domestic debt	89	29	Effective interest rate is 11%
Credit enhanced bonds (US$ mn)	647	647 (Rs 40.8bn)	Effective interest rate is 6.3%
Other foreign debt (US$ mn)	115	115 (Rs 7.2bn)	
Total	**137**	**77**	
FCCBs (US$ mn)#	484	484 (Rs 30.5bn)	Quasi equity* as conversion price is Rs 15.46
Working capital funds (Rs bn)	-	22	

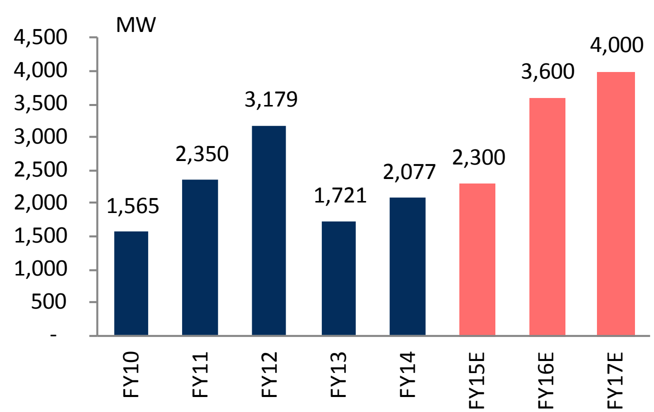
Source : Company, HDFC sec Inst Research *Apart from US$ 28.8mn Apr-16 FCCBs which convert at Rs 54/sh #As on 9MFY15. As on date FCCBs outstanding are US$ 401mn.

With new customer profiles emerging in India, the business should become less cyclical and less policy driven

Indian central government's focus on renewables

- The NDA government has been making all the right noises with regard to renewable energy. Both Solar and Wind power are high up on the agenda. We expect faster execution of projects and removal of policy bottlenecks.
- Very ambitious targets have been set for both wind and solar power. The government intends to help setting up 100GW of solar and 60GW of wind energy by the year 2022 vs. an installed base of 3GW and 22GW respectively as of now.
- Key incentives for wind power: Accelerated depreciation (AD) and Generation Based Incentives (GBI) have been restored by the government. Restoration of AD will lead to a revival in the small investor market - a mainstay of Suzlon in the previous years. In addition, many state governments have provided attractive feed-in tariffs for wind energy to make these projects attractive for investors. Please see annexure 1 for details of these incentives.

India wind installations : bottomed out?



Source : Company, HDFC sec Inst Research

Emergence of new customer profiles

- Wind power in India was driven traditionally by SMEs which used wind farms to save on their tax obligations. The market was hence heavily dependent on the accelerated depreciation benefit. Also, it led to no incentive for technology improvement as incentives were not based on generation but on investment.
- However, in the past few years, three new customer profiles have emerged (1) Large corporates and PSUs (2) Independent wind power producers and (3) Financial investors looking to buy out operating wind farms that offer moderate but stable annuity income.
- **Emergence of these new customers will make the wind sector less cyclical and less subject to the vagaries of policy**. It will also lead to faster improvement in technology as sophisticated institutional buyers seek improvement in operating metrics.
- Suzlon's proposed JV with DSA for setting up a 450MW wind farm is an attempt by the company to tap into the financial investor customer segment. The company intends to develop and sell off the assets thus created to such investors. If decent yields are achieved, such projects may be sold off at significant profits. Suzlon plans to keep a ready inventory of 500MW of such projects.

CUSTOMER PROFILES AND REVENUE MODELS

	Key reason for setting up wind farms	Revenue models				
		Long term PPA at Feed in tariff with AD but no REC	Long term PPA at Feed in tariff with GBI but no REC	Long term PPA at APPC* with GBI and REC	Open access with AD and REC	Captive consumption with AD and REC
Small to medium investors	Tax saving	Y			Y	
Independent power producers	Primary Business		Y	Y	Y	
PSUs	CSR		Y			Y
Large corporate	CSR and tax saving	Y	Y			Y
Financial investors	Attractive and stable returns	Y	Y	Y	Y	Y

Source : Company, HDFC sec Inst Research *APPC is average power purchase cost of a Discom

Historically, Suzlon has been the market leader in India but liquidity issues led to dramatic loss of market share over FY13-15

However, the company remains largest WTG Company in India (by capacity) and has entrenched customer relationships

Suzlon's competitive positioning remains strong

- Wind site is the most important criterion for choosing a supplier, especially for an investor. Suzlon, by virtue of being in the industry for the last 20 years, has one of the best wind site inventories available according to customers.
- Suzlon has very strong presence in the small investor segment. The company virtually pioneered the concept of total solutions, wherein Suzlon takes care of the whole process of setting up and operating a wind farm. Suzlon does everything from scouting the wind site to liaison with the SEBs. The developer only provides funding.
- Suzlon's equipment is at par with competitors in terms of performance and technology. However, owing to the funds crunch faced by Suzlon, their after sales service suffered.
- With increased liquidity, we believe Suzlon will be able to regain market share. Traditionally, Suzlon has been the best supplier for investors as it had the best land sites and also offered lax payment terms.
- Major competitors include Gamesa, Regen, Windworld (Enercon), Inox Wind, GE and Siemens. MNCs like GE and Siemens only supply equipment and do not offer EPC. Thus, they are at a disadvantage with respect to Suzlon, especially when it comes to servicing the retail segment.

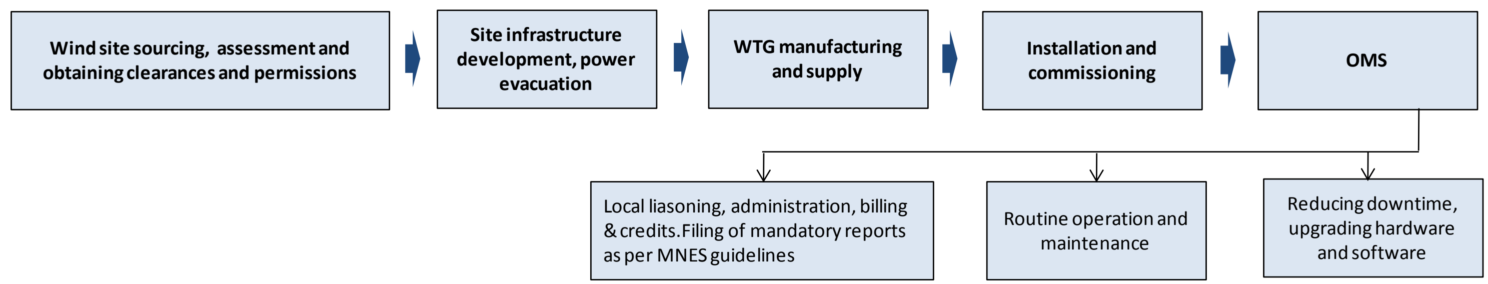
KEY COMPETITORS

Name	Capacity	Range of WTG Models (MW)	Remarks	Market share (%)		
				FY13	FY14	FY15E
Suzlon	3,600	1.25 – 2.1	Largest domestic WTG manufacturer by capacity.	24	19	21
Gamesa	1,500	0.85 - 2.0	Part of the Spanish multinational company. Has a strong positioning in India.	6	19	25
Kenersys India	400	2.0 - 2.6	WTG venture of the Kalyani Group and US-based private equity firm the First Reserve Corporation. Specialises in onshore turbines.	NA	NA	NA
GE India	450	1.6 - 1.7	Part of GE. The company has strong plans for India.	NA	NA	NA
Vestas	100	1.8 - 2.0	Largest WTG maker in the world. Has seen India as a swing market. Currently dormant, but may become active if India market picks up again	3	4	NA
Inox Wind	1,100	2.0	Relatively new entrant. Part of Gujarat Fluoro group. The company is planning to come up with an IPO. Has made big strides recently.	15	7	22
Regen Powertech	750	1.5	Chennai based company promoted by NSL Group.	16	16	NA
Wind World	NA	<1.0	Erstwhile Enercon. The company is a traditionally strong player in India but has lost market share as its technology is old.	26	17	15

Source : Inox Wind RHP, Industry estimates, HDFC sec Inst Research

Suzlon offers complete turnkey solution to clients

SUZLON'S BUSINESS MODEL



Source : Company, HDFC sec Inst Research

Some challenges will persist

Land is a primary input in the business and wind sites is a key differentiating factor among WTG suppliers

Wind business remains dependent on government subsidies/incentives for developers to achieve attractive IRRs

Business remains working capital intensive

- WTG (wind turbine generator) business in India has historically been highly working capital intensive in nature and it continues to remain so. Setting up 1MW wind farm typically requires upto Rs 40mn of working capital.
- Working capital intensive nature of the business leads to an accumulation of debt on the balance sheet. Since a big chunk of the business still comes from small to medium investors, there is a risk of debt going out of control, especially in a weak business environment.

A land intensive business

- Setting up wind farms is land intensive in nature. Suzlon's USP has been providing end to end solutions to customers. Right from land acquisition to liaison with SEBs. **Typically, 10-15 acres of land is required to set up 1MW of wind power.**
- India is not a country which is blessed with numerous high quality wind sites. Also, most of the good quality wind sites have already been utilized. Thus, finding further wind sites and at an attractive price remains a challenge.
- A way out of this situation is older wind farms to upgrade them to higher capacity. However, the trend is yet to pick up due to challenges related to multiple land holdings, power evacuation and renegotiation of long term PPAs.

Wind business will be government driven

- Despite advances made in technology, wind energy remains dependent on government subsidies and incentives. Lack of good wind sites means that PLFs remain low (25-30%) and hence cost of production of a unit is higher than conventional modes.
- Also, transmission bottlenecks are common place as the conventional grid is not geared up for the intermittent and unpredictable nature of wind energy. While **dedicated transmission corridors** are being talked about, whether it will be able to scale up to the extent necessary remains to be seen.

While wind energy costs are higher than coal based plants, there is little variability in costs

WIND POWER COST IS HIGHER THAN CONVENTIONAL SOURCES

Mode	Cost/Kwh*	Key assumptions
Wind	3.5	PLF – 35%, D/E : 70% Capital cost : Rs 70mn/MW
Imported coal	3.3	PLF – 80% D/E – 70% Capital cost : Rs 70mn/MW Imported coal price : US$60/tonne for GCV of 6,000 Domestic coal price : Rs 2000/tonne, GCV of 3,200
Domestic Coal	2.8	
Hydro	2.9	PLF – 50% D/E : 70% Capital cost : Rs 90mn/MW
Solar	4.8	PLF – 25%, D/E : 70% Capital cost : Rs 70mn/MW

Source : Company, HDFC sec Inst Research *For PBT breakeven in year 1

Financials : Set for a quantum improvement

With financial issues behind, Suzlon can go the whole hog in regaining market share in the fast growing Indian market

- Post the corporate restructuring, focus will now shift back to Suzlon's operations. There is significant operating leverage available and with the market expected to grow strongly, we believe Suzlon can achieve significantly higher domestic sales as compared to what it achieved in 9MFY15 (393MW).

As discussed, the company will use the proceeds from equity infusion by DSA and sale of Senvion to reduce its long term INR debt and for working capital leading to interest cost saving of Rs 6.6bn per annum

- We believe the first target for the company is to achieve PBT breakeven. The company has two lines of business - Wind turbine & generator sale and erection (WTG) and O&M. WTG business fetches the company revenue of Rs 65-70mn/MW with a contribution margin of 22-25%, while the O&M business is expected to touch Rs 16bn of revenue in FY16 with a contribution margin of 50-55%. The WTG business is working capital intensive and requires Rs 40mn/MW of working capital.
- Suzlon has an installed base of 14GW of WTGs. The company undertakes the operation and maintenance for a majority of these turbines. Typical O&M contract includes - local liasoning, billing, periodic inspection & maintenance of turbines, filing of regulatory reports, reduce down time and ensuring quick availability of spares in case of break down.
- The company charges Rs 1mn/MW (1.8mn for overseas installations) with a built in escalation clause for its services. Most of the Indian buyers prefer to outsource O&M contract to Suzlon as it is a hassle free solution.

We expect company to achieve PBT breakeven in FY16, aided by reduced interest expenses and ramped up volumes

KEY ASSUMPTIONS AND ESTIMATES

Rs mn	FY14	FY15E	FY16E	FY17E	FY18E
WTG Revenue	42,720	34,510	81,250	117,000	143,000
MW sales	723	493	1,250	1,800	2,200
Rs mn/MW	***59***	***70***	***65***	***65***	***65***
OMS Revenue	13,550	14,470	15,917	17,509	19,260
Revenue from operations	**56,270**	**48,980**	**97,167**	**134,509**	**162,260**
Employee benefit expenses	7,874	7,816	7,972	8,211	9,443
Other expenses	16,382	14,457	14,818	18,110	20,645
Operating EBITDA	**(10,829)**	**(3,678)**	**11,007**	**19,208**	**24,240**
OPM	*(19.2)%*	*(7.5)%*	*11.3%*	*14.3%*	*14.9%*
Depreciation	3,745	3,712	3,862	4,012	4,222
Finance costs	18,462	17,520	8,176	8,726	9,126
PBT	(34,750)	(24,660)	19	7,821	12,392
PAT			**16**	**6,257**	**9,914**
Long term Debt		**108,326**	**48,326**	**48,326**	**48,326**
Working capital debt		29,000	29,000	29,000	29,000
Fully diluted shares (mn)		5,988	5,988	5,988	5,988

Source : Company, HDFC sec Inst Research

Valuation and recommendation: BUY with a TP of Rs 34/sh

Suzlon trades at a justified premium to European peers given the company's abnormally low earnings and also significantly higher growth prospects of the Indian market

GLOBAL COMPARISON

Relative Valuation	Country	P/E (x)			EV/EBITDA (x)			EV/Revenue (x)			EBITDA (%)		
		FY15E	FY16E	FY17E	FY15E	FY16E	FY17E	FY15E	FY16E	FY17E	FY15E	FY16E	FY17E
Suzlon	**India**	**NM**	**NM**	**24.9**	**32.8**	**20.5**	**11.7**	**1.2**	**2.3**	**1.7**	**3.9**	**11.3**	**14.3**
Vestas	Denmark	23.8	18.7	19.2	7.7	7.2	7.5	1.1	0.9	1.0	14.3	12.5	13.3
Gamesa	Spain	19.9	20.6	17.6	10.8	7.9	7.2	1.1	1.0	0.9	10.2	12.7	12.5
Nordex	Sweden	40.1	25.9	20.0	10.5	8.5	7.3	0.7	0.7	0.7	6.7	8.2	9.6
Xinjiang Goldwing	China	37.4	12.1	11.7	15.9	12.3	10.5	2.7	2.1	2.0	17.0	17.1	19.0

Source : Company, HDFC sec Inst Research, Bloomberg

However, it is trading in line with domestic capital goods stocks. Our TP is based on 14x FY17E EV/EBITDA

DOMESTIC PEER COMPARISON

Company	TP	CMP	Rating	Market Cap		P/E (x)			EV/EBITDA (x)			EV/Revenue (x)		
				Rs bn	US$bn	FY15E	FY16E	FY17E	FY15E	FY16E	FY17E	FY15E	FY16E	FY17E
L&T	1,725	1,681	BUY	1544	24.5	23.9	21.2	17.4	21.3	18.9	15.7	2.7	2.4	2.0
BHEL	189	258	SELL	632	10.0	32.2	24.2	21.9	17.9	13.3	11.7	1.6	1.5	1.3
Cummins India	985	883	BUY	245	3.9	34.7	31.0	26.0	31.3	26.4	21.5	5.4	4.6	3.8
Suzlon	**34**	**26**	**BUY**	**156***	**2.5**	**NM**	**NM**	**24.9**	**32.8**	**20.5**	**11.7**	**1.2**	**2.3**	**1.7**
Thermax	939	1,225	SELL	146	2.3	42.4	38.0	28.7	29.3	26.2	18.6	3.0	2.8	2.2
Crompton Greaves	230	170	BUY	109	1.7	36.7	25.6	16.2	17.3	14.2	10.1	0.8	0.8	0.7
Voltas	222	281	SELL	93	1.5	30.3	24.8	20.3	26.9	19.8	15.3	1.8	1.5	1.3
CUMI	225	189	BUY	35	0.6	44.9	27.1	16.8	15.6	12.1	8.5	1.8	1.7	1.4

Source : Company, HDFC sec Inst Research * Fully diluted

There are various state and central level incentives available to wind farm developers

Annexure 1 : Overview of Indian domestic wind sector

KEY INCENTIVES TO PROMOTE WIND ENERGY

Regulation	Explanation	Impact
Accelerated Depreciation (AD)	Depreciate 80% of the wind asset in the first year of installation in books of account	Provide tax savings for Wind Energy developers in the initial years of installations, particularly favourable for small investors and captive users
Generation Based Incentives (GBI)	Incentive of Rs 0.50 per kWh for a period of 4 to 10 years, albeit with a cap of Rs 10mn per MW	Incentivize actual generation rather than mere establishment of capacity, thus attracting large IPPs and FDI in the wind market
Feed in Tariffs (FIT)	This is applicable to developers that avail of GBI (and not RECs) wherein they can additionally receive a preferential tariff from state distribution companies to which they are selling electricity. Several states have increased wind power tariffs by 2-15% to attract investments	A shift in wind power projects from wind rich states like Tamil Nadu and Gujarat to low wind density states like Rajasthan, Madhya Pradesh and Maharashtra
Renewable Purchase Obligations (RPO)	Mandate requiring distribution companies, open access consumers and captive consumers to buy a fixed percentage of electricity from renewables and to be met through direct purchases via bilateral contracts and Renewable Energy Certificates (REC)	RECs being traded as a currency in the Wind Energy market whereby states that cannot directly purchase electricity from local wind developers can purchase RECs at market rates to meet the RPO quota. This removes the geographical barrier

Source : Company, HDFC sec Inst Research

STATE LEVEL INCENTIVES

	Andhra Pradesh	Karnataka	Madhya Pradesh	Maharashtra	Rajasthan	Tamilnadu	Gujarat
Wheeling and Transmission	As per Rules, Regulations and terms and conditions as approved by the Commission.	5 % of energy	Allowed 2% of energy + transmission charges as per ERC	Normal Open Access Charges	Normal Open Access Charges	5% of Energy in case of consumption at HV / EHV and 7.5% in case of LV	Normal OA Transmission Charges and transmission losses for 66 kV and above
Banking	Allowed	Allowed @ 2% of energy input	Allowed	15 Minutes Adjustment	6 Months	5% (12 months)	Monthly settlement
Feed in Tariff (Rs/Kwh)	4.70	4.20	5.92	*Zone 1 – 5.70 Zone 2 – 5.01 Zone 3 – 4.18 Zone 4 – 3.92	Rs. 5.93 /unit for Jaisalmer, Barmer and Jodhpur etc. and Rs. 5.64 /unit for other district	3.51 (Levelised)	4.15
Open Access	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed	Allowed

Source : MNRE, HDFC sec Inst Research *Zones according to wind energy density, higher the density lower the tariff

REC mechanism

REC mechanism was intended to help states with poor wind sites to fulfill their RPO obligations

- REC (Renewable energy certificates) is a mechanism wherein states which are wind deficient can fulfill their renewable purchase obligations (RPO) by buying RECs from renewable power generators.
- RPO is mandated by law and every state has to come up with its RPO targets. Non-compliance of RPO can in theory lead to penalties being imposed on obligated entities.

Poor RPO compliance has led the REC market to stagnate

- REC mechanism has failed to attract as much interest as envisaged due to lack of compliance from buyers. Since the penalties for non compliance of RPO are not adequately being imposed, compliance has been poor.

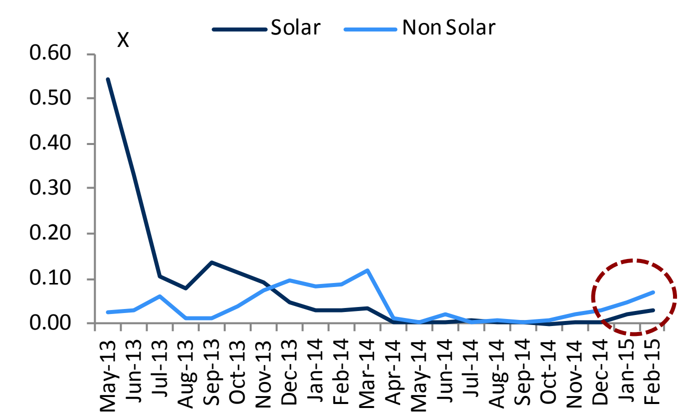
We expect stricter implementation of penalties going forward which should enable REC market to take off

REC MECHANISM: KEY HIGHLIGHTS

REC Denomination	1 REC = 1 MWH
Categories	1. Solar REC 2. Non Solar RECs
Sellers	RE generators, not selling via preferred tariffs
Buyers	Distribution companies, open access consumers, captive consumers
Floor Price	1. Solar REC - 3500/REC 2. Non Solar - 1500/REC
Forbearance Price	1. Solar REC - 5800/REC 2. Non Solar - 3500/REC
Penalty for Non-compliance	'Forbearance' Price

Source : Company, HDFC sec Inst Research

Offtake/closing inventory of RECs



Source : REC registry HDFC sec Inst Research

Top 5 states constitute nearly 80% of total wind energy potential in India

Potential estimates do not take into account the actual feasibility of setting up a wind farm and hence realisable potential may be lower

However, improved technology can lead to even higher potential

WIND ENERGY POTENTIAL IN INDIA

States / UTs	Estimated potential (MW)		Installed capacity (upto Dec-14)
	50 m hub height	80 m hub height	
Gujarat	10,609	35,071	3,581
Andhra Pradesh	5,394	14,497	912
Tamil Nadu	5,374	14,152	7,394
Karnataka	8,591	13,593	2,548
Maharashtra	5,439	5,961	4,370
Jammu & Kashmir	5,311	5,685	
Rajasthan	5,005	5,050	3,053
Madhya Pradesh	920	2,931	567
Orissa	910	1,384	
Uttar Pradesh	137	1,260	
Kerala	790	837	35
Uttarakhand	161	534	
Andaman & Nicobar	2	365	
Chhattisgarh	23	314	
Arunachal Pradesh	201	236	
Bihar		144	
Pondicherry		120	
Assam	53	112	
Sikkim	98	98	
Haryana		93	
Jharkhand		91	
Meghalaya	44	82	
Himachal Pradesh	20	64	
Manipur	7	56	
West Bengal	22	22	
Lakshadweep	16	16	
Nagaland	3	16	
Diu Damn		4	
Total	**49,130**	**102,788**	**22,466**

Source : NIWE (National Institute of Wind Energy), HDFC sec Inst Research

IRRs are highly sensitive to PLF and capital cost

IRR calculation for AD builds in tax benefits to the developer

Building in tax incentives, IRR for AD projects is highly lucrative and thus it can be seen why Indian market declined in FY13 after AD was removed

Feed in tariff for AD based projects are lower than GBI based projects in some states as the regulator builds in AD benefits into the tariff

Typical IRRs and their sensitivity

KEY ASSUMPTIONS	
Capacity (MW)	1.0
Debt funding	70%
Interest rate	13%
O&M/MW (Rs mn)	1.0
O&M Escalation per annum	5%
AD (accelerated depreciation)	80%
Depreciation rate* (if AD is not availed)	15%
Receivables (days)	60.0
GBI (Rs/kwh)	0.5
Project lifecycle	20 years

Source : Company, HDFC sec Inst Research *According to the Income Tax Act

Sensitivity of IRR to PLF/Tariff/Capital Cost when AD is availed

		PLF		
		25%	30%	35%
Tariff (Rs/Kwh)	4.5	18%	28%	38%
	5.0	23%	35%	46%
	5.5	29%	42%	54%

		PLF		
		25%	30%	35%
Cost/MW (Rs mn)	60.0	32%	45%	58%
	70.0	23%	35%	46%
	80.0	17%	27%	37%

Source : HDFC sec Inst Research

Sensitivity of IRR to PLF/Tariff/Capital Cost when GBI is availed

		PLF		
		25%	30%	35%
Tariff (Rs/kwh)	4.5	10%	17%	24%
	5.0	14%	21%	30%
	5.5	17%	26%	35%

		PLF		
		25%	30%	35%
Cost/MW (Rs mn)	60.0	20%	29%	39%
	70.0	14%	21%	30%
	80.0	10%	16%	23%

Source : HDFC sec Inst Research

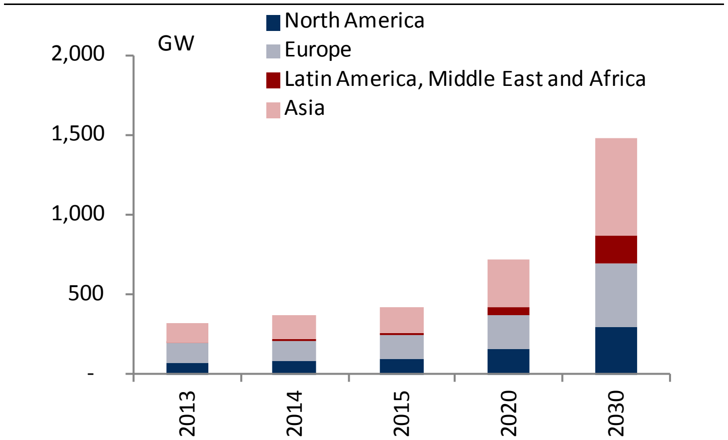
Globally, wind energy installations continue to grow, regional cyclicality notwithstanding

China has overtaken USA as the largest WTG market in the world

Global wind industry overview

- The global wind industry witnessed a bounce back in 2014, with aggregate installations surging 42% YoY to 51 GW vs. a contraction of 20% the previous year. Subsequently, cumulative global wind installations stood at 370 GW spread across an impressive 90+ countries. Evidently, wind energy has undergone rapid development in the past decade and has reached considerable scale.
- According to the GWEC (Global Wind Energy Council) Outlook 2014 report, the base case (Moderate scenario) assumes cumulative installations of 712 GW in 2020 and 1,480 GW in 2030 with exponential growth expected in the developing regions (Brazil, Africa, India, China).

Global Wind Installations

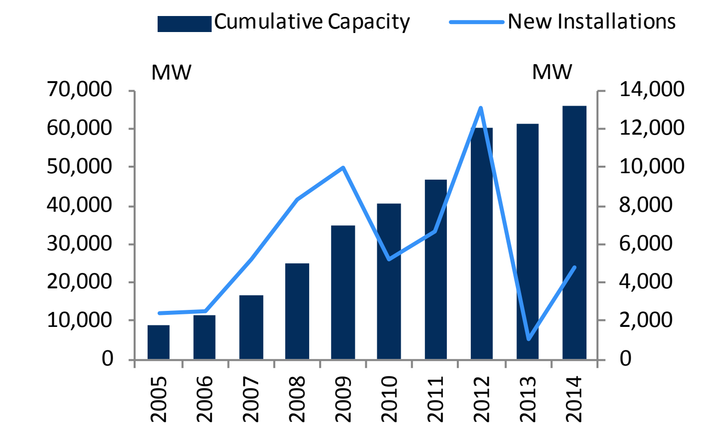


Source : GWEC (Global Wind Energy Council), HDFC sec Inst Research

USA

- USA witnessed a five-fold jump in installations in 2014 as compared to the previous year, which saw a sharp slump in the market (decline of 92% YoY in installations) caused primarily due to policy uncertainties. The Production Tax Credit (PTC), which was to expire on 31-Dec-12, was extended for a year at the last minute. This extension led to a surge in orders (and installations from the fourth quarter of 2013) and continued the upward trend through 2014.
- The Production Tax Credit (PTC) is a federal incentive that provides financial support to renewable-based power generation companies of 2.3 cents/kWh for the first ten years of a renewable energy facility's operation. The PTC for wind and other renewable energy technologies expired at the end of 2013. On 17-Dec-14, Congress passed a tax extenders bill that retroactively extended the PTC for projects that were under construction by the end of 2014. This is the sixth instance of policy expiration and subsequent (short-term) extension.
- Another factor that contributed to the rapid growth was the increased interest from corporations to invest in wind energy, with the likes of Amazon, Yahoo, Walmart, Google, Microsoft and IKEA among the list of investors.

US Wind Installations

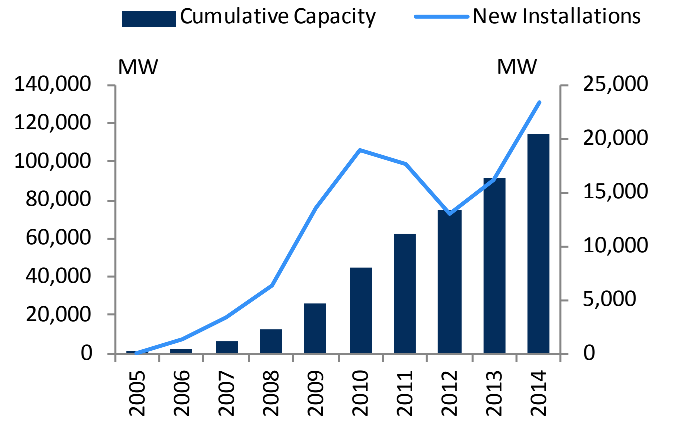


Source : GWEC, HDFC sec Inst Research

China

- Additions in 2014 stood at 23 GW, clocking an impressive 45% growth over the previous year, despite the high base. China with a cumulative capacity of 114 GW retained its position of global leader in terms of new installations and cumulative capacity for the fifth consecutive year. Renewables accounted for 20% of total generation in 2013, of which wind contributed 2.6%.

China Wind Installations

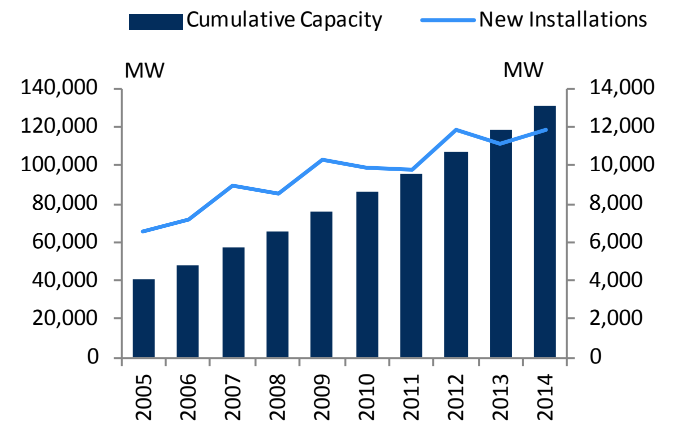


Source : GWEC, HDFC sec Inst Research

Europe

- Europe has consciously been focusing on developing sustainable sources of energy over the past decade by consistently adding renewable-based installations, which in 2014 accounted for 79% of new power installations. The EU added 12.8 GW of wind power capacity, a modest 4% growth over the previous year, taking the total installed capacity to 134 GW. Germany led the EU pack with 5.3 GW of installations, followed by UK (1.7 GW) and Sweden (1 GW). Wind now contributes 14% to Europe's total installed generation capacity, the highest amongst all the continents.
- However, a number of large markets like Denmark, Spain and Italy, which have shown speedy growth in installations in the past, are now witnessing a significant slowdown (YoY decline in installations of 90%, 84% and 75% respectively). The reason for this is restrained liquidity as the European Union is going through an extended slow down.

Europe Wind Installations



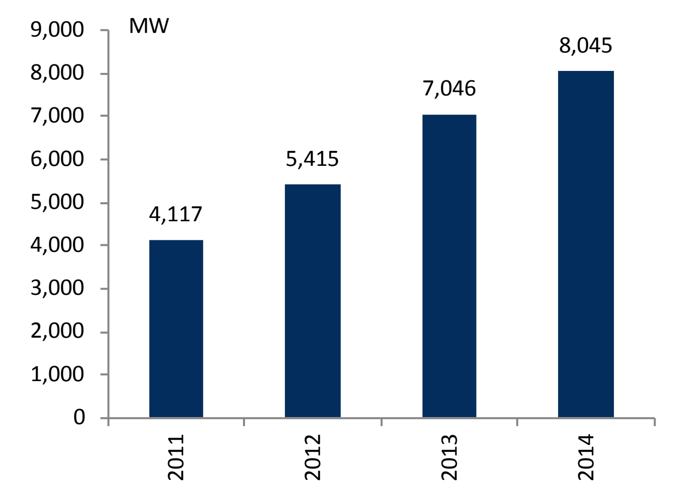
Source : GWEC, HDFC sec Inst Research

Suzlon has got license from Senvion for usage of Senvion's offshore wind turbine technology in India

Offshore wind : An idea for the future

- Offshore wind power is a relatively new technology that involves setting up of wind turbines in water bodies to generate electricity. Offshore turbines are more efficient in terms of generation capacity as the wind speeds are much stronger vis-à-vis wind speeds on land.
- However, the industry is still in its infancy as the cost of setting up offshore wind farms is very high. The cost of offshore wind farms is 1.5-2x that of onshore wind farms. Further, under sea transmission infrastructure and grid integration is a work in progress even in the developed European markets.
- Currently, more than 90% of offshore installations (8,045 MW) are in the North European region (North, Baltic and Irish seas and the English Channel). Though Europe has been the dominant driver of offshore wind installations in the past, China and USA are now emerging as the next big markets. While USA has two projects under construction aggregating 500 MW, China presently has seven offshore projects under construction totaling 1,566 MW and another 3,500 MW in the pipe.
- Indian offshore wind market is still in a very nascent stage. Offshore potential in India has been preliminarily assessed at 350GW. A National Offshore Wind Energy Authority is being proposed to provide a conducive environment for harnessing offshore wind energy including setting up of a demonstration offshore wind power project to show case technology.

Global cumulative offshore installations



Source : GWEC, HDFC sec Inst Research

MAIN CATEGORIES OF INCENTIVES GLOBALLY

Production-based Incentives

- **Feed-in Tariff**: The generator is guaranteed a minimum tariff per kWh for a specified period.
- **Production Tax Credit:** Mostly in the U.S. The generator receives a tax credit.
- **Quota System:** Distribution companies are obligated to buy certain amount of renewable energy. Awards the generator with certificates that can be sold into a market to these obligated entities. There may or may not be a price guarantee.

Investment-based Incentives

Investment-based incentives provide awards for the initial investment, regardless of how much electricity is generated.

- **Investment Tax Credits:** provide individual investors with the opportunity to offset the investment against their personal income tax.
- **Accelerated Depreciation:** In some countries, renewable energy plants can be depreciated for tax purposes in a few years that can be offset against profits elsewhere in the company.
- **Interest-free loans:** Some governmental agencies like the Carbon Trust in the UK provide interest-free loans for the purchase of renewable energy equipment.
- **Loan Guarantees:** To de-risk the investment in renewable assets in emerging markets, export agencies or the European Investment Bank may provide certain guarantees regarding the exchange rate or the loan up to a limit.

Source : HDFC sec Inst Research

KEY INCENTIVES IN SOME COUNTRIES

US	PTC – 2.3c/kwh RPS obligations enacted by states
Germany	Feed in tariff Loans with relaxed repayment and interest rate
China	Lower corporate tax rate of 15% vs. 25% Feed in tariff Financial subsidies
India	Feed in tariff Accelerated depreciation RPO obligations

Source : HDFC sec Inst Research

INCOME STATEMENT - CONSOLIDATED

Year ending March (Rs mn)	FY14	FY15E	FY16E	FY17E	FY18E
Revenue	**204,029**	**196,545**	**97,517**	**134,959**	**162,710**
Growth %	***7.9***	***(3.7)***	***(50.4)***	***38.4***	***20.6***
Raw material consumption	144,354	133,566	63,719	89,429	108,382
Employee expenses	22,314	22,757	7,972	8,211	9,443
Other expenses	36,214	32,772	14,818	18,110	20,645
Total Expenses	**202,882**	**189,095**	**86,510**	**115,750**	**138,470**
EBIDTA	**1,147**	**7,450**	**11,007**	**19,208**	**24,240**
EBIDTA %	***0.6***	***3.8***	***11.3***	***14.2***	***14.9***
EBIDTA Growth %	***(111.6)***	***549.6***	***47.8***	***74.5***	***26.2***
Other income	715	277	1,050	1,350	1,500
Depreciation	7,769	8,895	3,862	4,012	4,222
EBIT	**(5,907)**	**(1,168)**	**8,195**	**16,546**	**21,518**
Interest	20,700	18,881	8,176	8,726	9,126
PBT	**(26,607)**	**(20,049)**	**19**	**7,821**	**12,392**
Tax	1,444	2,857	4	1,564	2,478
PAT before minority interest	**(28,051)**	**(22,905)**	**16**	**6,257**	**9,914**
Minority Interest	282	(322)			
APAT	**(27,769)**	**(23,227)**	**16**	**6,257**	**9,914**
APAT growth %	***(26.4)***	***(16.4)***			
EPS	**(11)**	**(6)**	**0.0**	**1.0**	**1.7**
EPS growth %	***(47.4)***	***(42.3)***	***NM***	***NM***	***58.5***
Adjustments	6,000	60,933			
Reported PAT	(33,769)	(84,160)	16	6,257	9,914
Reported EPS	(13.6)	(23.3)	0.0	1.0	1.7

Source : Company, HDFC sec Inst Research

BALANCE SHEET - CONSOLIDATED

Year ending March (Rs mn)	FY14	FY15E	FY16E	FY17E	FY18E
SOURCES OF FUNDS					
Share Capital	4,976	7,209	11,976	11,976	11,976
Reserves	(10,415)	(79,460)	(54,762)	(48,505)	(38,591)
TOTAL SHAREHOLDERS FUNDS	**(3,759)**	**(70,811)**	**(42,785)**	**(36,528)**	**(26,615)**
Minority Interest	584	906	250	250	250
Long Term Debt	116,409	137,701	50,140	48,326	48,326
Short Term Debt	54,124	35,532	29,000	29,000	29,000
TOTAL DEBT	**170,533**	**173,232**	**79,140**	**77,326**	**77,326**
Deferred Taxes	7,379	7,168	100	100	100
Long Term Provisions	3,547	4,085	2,915	4,035	4,868
TOTAL SOURCES OF FUNDS	**178,284**	**114,580**	**39,620**	**45,183**	**55,929**
APPLICATION OF FUNDS					
Gross block	84,742	88,242	37,859	40,359	43,859
Net Block	43,667	38,272	7,827	6,315	5,593
CWIP	4,334	4,334	2,500	2,500	2,500
Goodwill	91,479	32,129			
Investments	7,067	909	2,000	4,000	4,000
LT Loans & Advances	5,181	8,178	2,987	3,137	3,294
CURRENT ASSETS					
Inventories	40,329	37,694	26,186	36,752	44,540
Trade receivables	59,455	59,233	31,945	44,222	53,346
Cash & equivalents	24,480	22,617	8,813	9,203	17,087
Loans & Advances	18,450	13,202	14,937	15,684	16,468
Other Current Assets	8,164	5,658	1,992	2,091	2,196
TOTAL CURRENT ASSETS	**150,878**	**138,403**	**83,873**	**107,952**	**133,637**
CURRENT LIABILITIES AND PROVISIONS					
Current Liabilities	54,956	51,156	33,331	42,403	49,284
Provisions	69,364	56,487	26,235	36,317	43,810
TOTAL CURRENT LIABILITIES	**124,320**	**107,643**	**59,567**	**78,720**	**93,094**
NET CURRENT ASSETS	**26,558**	**30,760**	**24,307**	**29,232**	**40,543**
TOTAL APPLICATION OF FUNDS	**178,285**	**114,580**	**39,621**	**45,183**	**55,929**

Source: Company, HDFC Sec Inst Research

CASH FLOW STATEMENT

Year ending March (Rs mn)	FY14	FY15E	FY16E	FY17E	FY18E
PAT from operations	(27,769)	(23,134)	16	6,257	9,914
Interest	17,925	18,881	8,176	8,726	9,126
Depreciation	7,769	8,895	3,862	4,012	4,222
Working capital change	(3,712)	(9,269)	(27,590)	(3,564)	(2,752)
Others	11,804	(1,268)	(1,050)	(1,350)	(1,500)
OPERATING CASH FLOW	**6,017**	**(5,895)**	**(16,587)**	**14,080**	**19,010**
Capex	(6,567)	(3,500)	(2,500)	(2,500)	(3,500)
Free Cash Flow	(550)	(9,395)	(19,087)	11,580	15,510
Investments & Others	1,839	6,460	76,050	(650)	1,500
INVESTING CASH FLOW	**(4,728)**	**2,960**	**73,550**	**(3,150)**	**(2,000)**
Capital issuance	2,120	-	39,392	-	-
Debt issuance	6,921	2,699	(82,378)	(1,814)	-
Interest	(7,471)	(18,881)	(8,176)	(8,726)	(9,126)
FCFE	(1,100)	(25,577)	(109,640)	1,040	6,384
Dividend	-	-			
FINANCING CASH FLOW	**1,570**	**(16,182)**	**(51,161)**	**(10,540)**	**(9,126)**
NET CASH FLOW	**2,859**	**(19,117)**	**5,802**	**390**	**7,884**
Closing cash	24,480	22,617	8,813	9,203	17,087

Source : Company, HDFC sec Inst Research

RATIOS

Year ending March	FY14	FY15E	FY16E	FY17E	FY18E
PROFITABILITY %					
GPM	29.2	32.0	34.7	33.7	33.4
EBITDA margin	0.6	3.8	11.3	14.2	14.9
EBIT margin	(2.9)	(0.6)	8.4	12.3	13.2
APAT margin	(13.7)	(11.7)	0.0	4.6	6.1
RoE	NM	NM	NM	NM	NM
Core RoCE	(1.1)	(1.3)	9.3	36.4	42.8
RoCE	(0.9)	(0.9)	8.5	31.2	34.0
EFFICIENCY					
Tax rate %	(5.4)	(14.2)	20.0	20.0	20.0
Asset turnover (x)	1.1	1.7	2.5	3.0	2.9
Inventory (days)	72.1	70.0	98.0	99.4	99.9
Debtor (days)	106.4	110.0	119.6	119.6	119.7
Payables (days)	47.8	61.5	78.4	79.5	79.9
Cash conversion cycle (days)	130.7	118.5	139.2	139.5	139.7
Debt/EBITDA (x)	148.7	23.3	7.2	4.0	3.2
Net D/E	NM	NM	NM	NM	NM
Interest coverage	(0.3)	(0.1)	1.0	1.9	2.4
VALUATION					
EPS (Rs/sh)	(11.2)	(6.4)	0.0	1.0	1.7
DPS(Rs/sh)	NA	NA	NA	NA	NA
BV (Rs/sh)	(1.5)	(19.6)	(7.1)	(6.1)	(4.4)
P/E	NM	NM	NM	24.9	15.7
P/BV	(17.2)	(1.3)	(3.6)	(4.3)	(5.8)
EV/EBITDA	183.8	32.8	20.5	11.7	8.9
EV/Revenues	1.0	1.2	2.3	1.7	1.3
OCF/EV (%)	2.9	(2.4)	(7.3)	6.3	8.8
FCF/EV (%)	(0.3)	(3.8)	(8.4)	5.2	7.2
FCFE/MCAP (%)	(1.7)	(27.3)	(70.4)	0.7	4.1

Source : Company, HDFC sec Inst Research

Rating Definitions

BUY	:	Where the stock is expected to deliver more than 10% returns over the next 12 month period
NEUTRAL	:	Where the stock is expected to deliver (-)10% to 10% returns over the next 12 month period
SELL	:	Where the stock is expected to deliver less than (-)10% returns over the next 12 month period

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