

Inox Wind Ltd(IWL)

-Working Capital woes to end soon



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Inox Wind Ltd - Investment Snapshot

(as on Mar 16, 2017)

Recommendation :- BUY

Maximum Portfolio Allocation :- 5%

Investment Phases & Buying Strategy

1st Phase (Now) of Accumulation :- 80%

Current Accumulation Range :- 170-180Rs

Inox Wind is our typical Multibagger stock, which is a Good Investment due to the enormous growth opportunities in sector primarily due to increase in government focus on renewable energy space which will result in increase in order book. The business model is robust with good pricing power which will deliver superior returns in the long run. This is a good investment from a three year perspective.

Core Investment Thesis :

The company is in the wind energy space which has been growing at a fast clip due to improvement in demand post restoration of Accelerated Depreciation and Generation based incentives.

Current Market Price – Rs. 180.00

Current Dividend Yield – Nil

**Bloomberg / Reuters Code –INXW. IN/
INWN.NS**

BSE / NSE Code – 539083/INOXWIND

Market Cap (Rs. Cr) – 3966

P/E - 8.84

Face Value – Rs. 10

**52 Week High / Low – Rs. 295.00 /
Rs.163.00**

Promoter's Holding - 85.62%

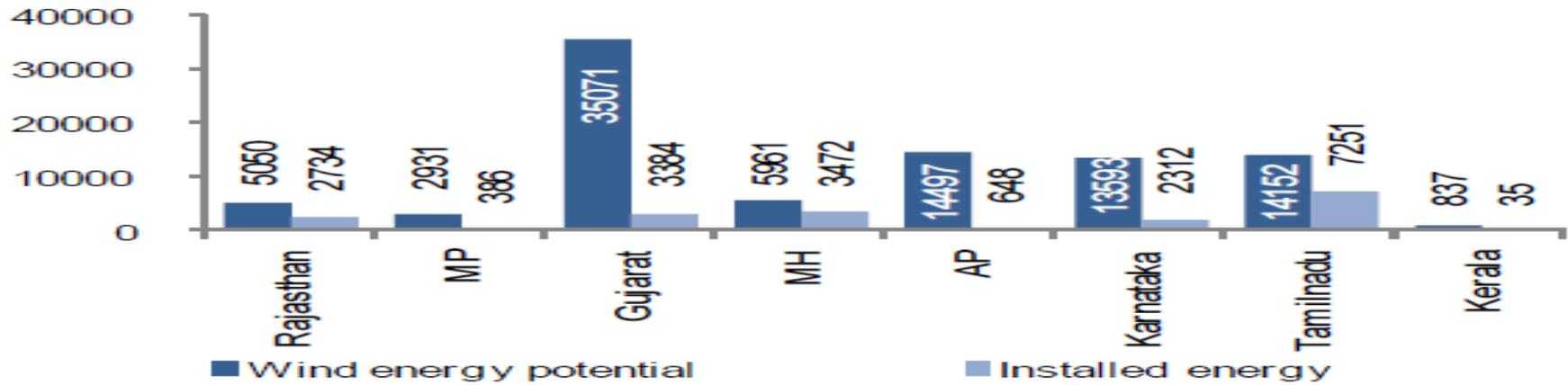
Other Holdings - 14.38%

Key Investment Highlights

- 1.) **Presence in a growing segment** :- Company caters to the Wind Energy Industry which has been growing rapidly which provides immense opportunities to the companies in the sector.
 - 2.) **New Capacities to drive growth**- Company currently has 800MW and is increasing capacities to 1600MW in FY17 which will enable the company to drive growth.
 - 3.) **Strong Pricing Power** :- Company has strong pricing power as the company is moving to 100 meter larger rotor blades.
 - 4.) **Growing Order Book**:- The companies order book has been growing rapidly which provides revenue visibility for the next two years.
 - 5.) **Restoration of AD & GBI benefits** :- The company is likely to benefit from restoration of AD & GBI benefits which was earlier discontinued.
 - 6.) **In-house Manufacturing** :- Company has an in-house manufacturing facility located at Gujarat, Madhya Pradesh and Himachal Pradesh.
 - 7.) **High IRR**:- The company is likely to benefit from IRR of 14-15% on normative tariffs excluding GBI and IRR would increase by another 3% including GBI.
 - 8.) **Increase in Market Share**:- The company has been continuously growing its market share from about 0% in FY10 to about 12% currently.
 - 9.) **Management/ Corporate Governance** :- The company has a good management and adhere to strong corporate governance norms. The company is run professionally by a team of professionals who have a strong understanding of the business and have a strong vision about its business.
 - 10.) **Valuations** :- In spite of so many advantages, the company is quoting at reasonable valuations for the Quality of this stock which has a strong operating performance and provides revenue visibility.
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Industry Opportunity & Potential - An Overview

Indian Wind Energy Market

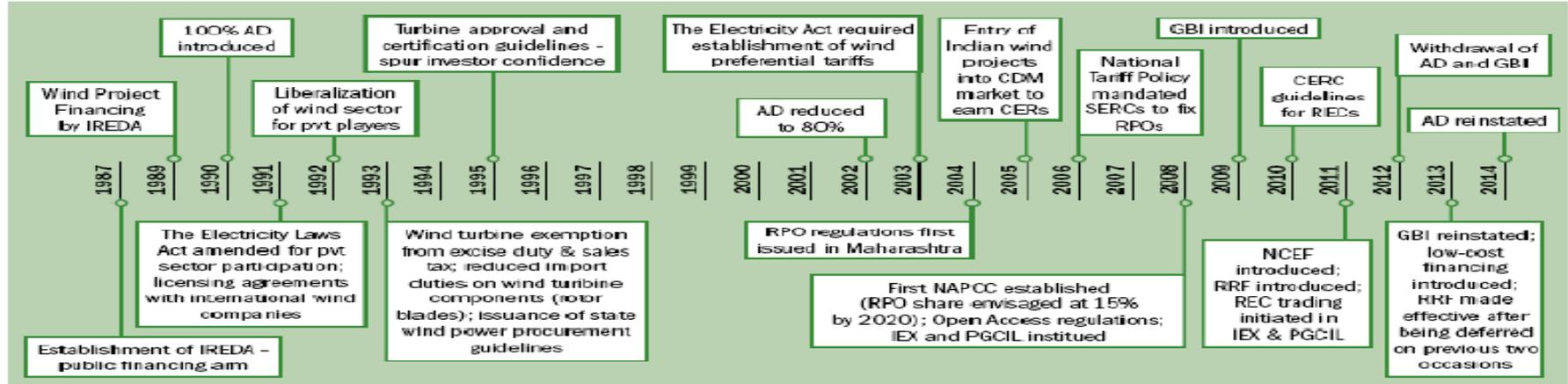


Wind Energy Potential vs Installed Capacity(MW)

- Wind energy capacity for installed electricity generation totaled 20.23GW, of the 234GW of electricity generated in India in FY15 with a share of 8.65%.
- The renewable energy sources together account for only 12.6 percent of total capacity, wind accounts for 8.7 percent.
- Among the Indian states, Tamil Nadu led with a total installed capacity of 7,251 MW, followed by Maharashtra with 3,472 MW, Gujarat with 3,384 MW, Rajasthan with 2,734 MW, and Karnataka with 2,312 MW in FY15.
- States like Maharashtra, Rajasthan and Tamil Nadu had utilized their overall wind energy potential by more than 50%. Madhya Pradesh, Gujarat and other states on the other hand have been able to utilize below 25% only which presents a huge opportunity for wind energy manufacturers, plant developers and Government to expand this sector.

Renewable Energy Policy

Historical perspective on policy framework for renewables



- The Electricity Act, 2003 mandates policy formulation to promote renewable sources of energy by the central government, the state governments, and the respective agencies within their jurisdictions.
- The SERC's (State Electricity Regulatory Commission) determine the tariff for all renewable energy projects across the states, and the state-owned power distribution companies (DISCOMs) ensure grid connectivity to the renewable energy project sites.
- As mandated under Electricity Act 2003, 26 SERC's had fixed quotas in terms of percentage of electricity being handled by the power utility) to procure power from renewable energy sources. The mandate, called a Renewable Purchase Specification (RPS), varies from 0.5% to 10% in various states.

Impact of Regulations

Regulation	Explanation	Impact
Accelerated Depreciation	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 installation, particularly favorable for small investors and captive users.
Generation Based Incentives	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 Foreign Direct Investment in the wind market.
Feed in Tariffs	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.

India's Untapped Wind Potential

Potential v/s currently installed capacity (MW)

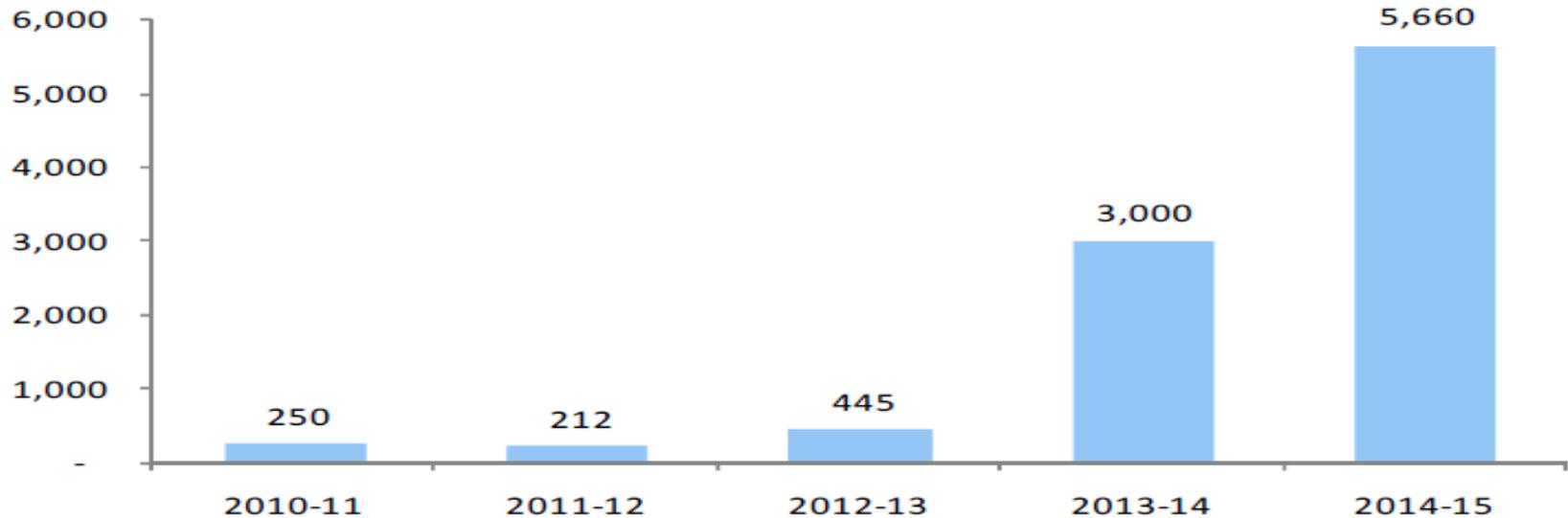
State / UTs	Installable Potential		Installed Capacity
	@50 m	@80 m	
Andhra Pradesh	5,394	14,497	913
Gujarat	10,609	35,071	3,581
Jammu & Kashmir	5,311	5,685	-
Karnataka	8,591	13,593	2,549
Kerala	790	837	35
Madhya Pradesh	920	2,931	567
Maharashtra	5,439	5,961	4,370
Odisha	910	1,384	-
Rajasthan	5,005	5,050	3,053
Tamil Nadu	5,374	14,152	7,394
Uttarakhand	161	534	-
Uttar Pradesh	137	1,260	-
Others	489	1,833	-
Total	49,130	102,788	22,462

India's Untapped Wind Energy Potential (MW)

- According to the Centre for Wind Energy Technology (C-WET), India has the potential to install over 100,000MW of wind turbines at 80meters hub height, implying an untapped wind power potential of 78GW.
- Based on C-WET estimates, India has explored only 22% of its wind power potential which indicates strong long term business opportunity for domestic WTG manufacturers.
- Preliminary assessments indicate that the coastlines of Tamil Nadu in Rameshwaram and Kanyakumari and Gujarat have reasonably high offshore wind potential which is the next emerging technology which will drive growth for the wind energy sector.

Generation Based Incentives

Generation based incentives FY11-15(Rs mn)

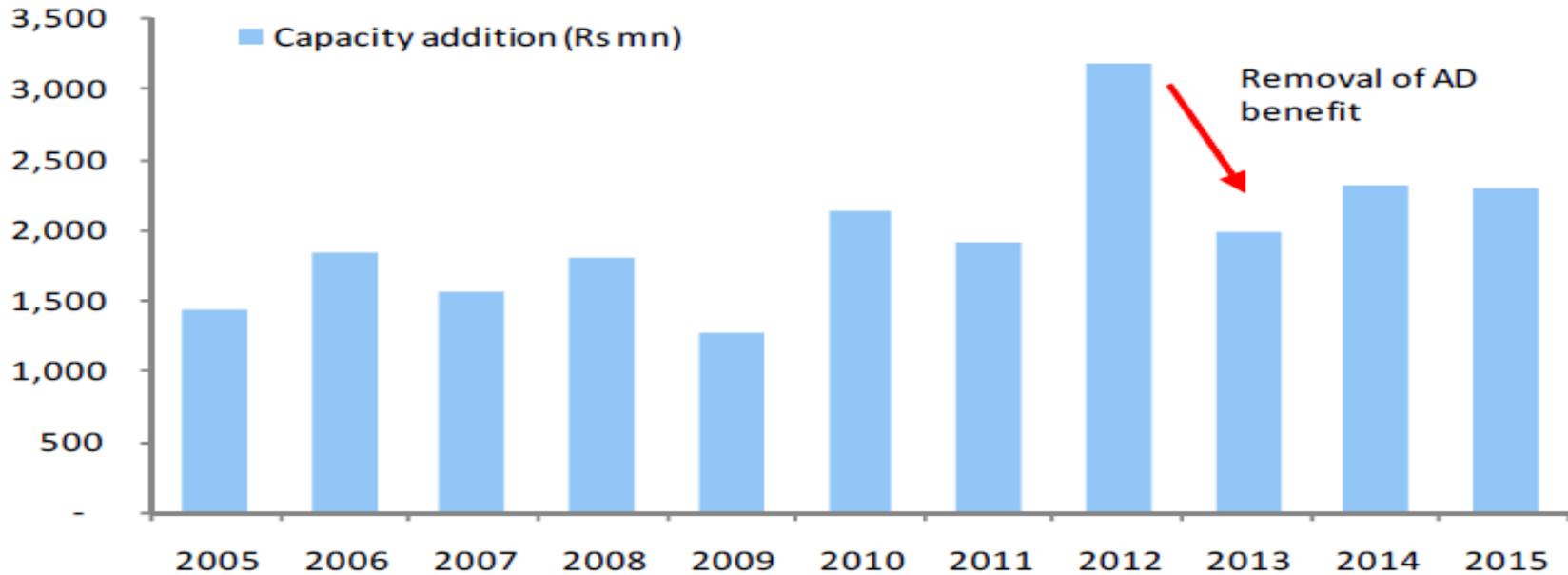


• To broaden investor base and incentivize actual generation, GBI scheme was extended for the 12th plan period. Under the scheme, a GBI will be provided to wind electricity producers at Rs. 0.50 per unit of electricity fed into the grid for a period not less than four years and a maximum period of 10 years with a cap of Rs 10mn per MW. Every 1MW can generate ~2mn units each year at 24-25% PLF, which implies Rs1mn, can be claimed annually for the next 10 years Under the scheme, a GBI will be provided to wind electricity producers at Rs. 0.50 per unit of electricity fed into the grid for a period not less than four years and a maximum period of 10 years with a cap of Rs 10mn per MW. Every 1MW can generate ~2mn units each year at 24-25% PLF, which implies Rs1mn, can be claimed annually for the next 10 years.

• GBI is provided by the Ministry of New and Renewable Energy (MNRE), which in turn is funded by the union budget and the National Clean Energy fund.

Accelerated Depreciation

Wind power: Yearly capacity addition (MW)



- The government reintroduced accelerated depreciation as capacity addition pace reduced due to its removal in 2012—~3GW was added in FY12 and capacity addition dropped to 1.5GW once benefit was removed.
- AD benefit has been the key reason for increase in participation from captive players and SMEs. With the benefits being restored from FY15, renewed interest in wind power is expected from FY16. Currently, 80% of capital cost is allowed as depreciation in the first year and for following years, 80% of the written-down value is allowed.

Renewable Purchase Obligation(RPO) & REC

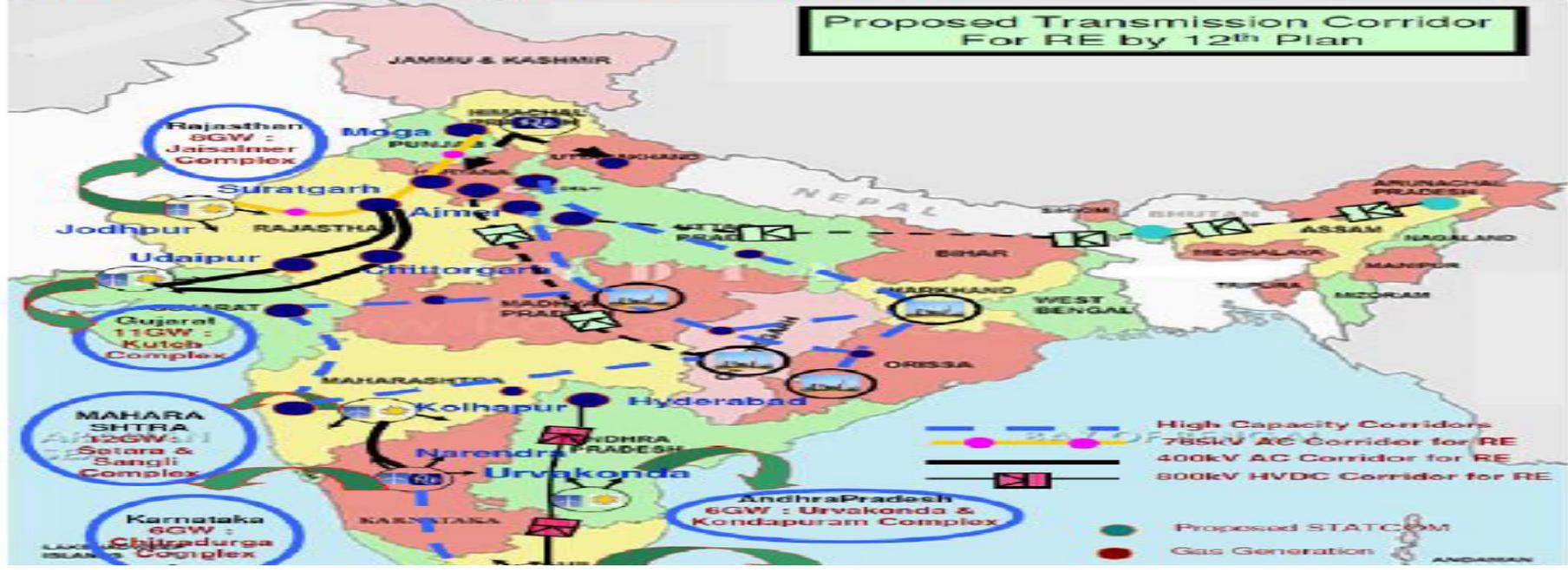
Renewable Purchase Obligation by state (FY14)

Name of state	Non Solar RPO	Solar RPO
Maharashtra	8.5%	0.5%
MP	4.7%	0.8%
T Nadu	9%	0.1%
Rajasthan	8.2%	1.0%
Haryana	3%	0.1%
Gujarat	6%	1.0%
Chhattisgarh	5.3%	0.5%
Karnataka	10%	0.3%
Andhra Pradesh	4.8%	0.3%
Odisha	5.8%	0.3%

- The Electricity Act 2003 proposed mandatory Renewable Purchase Specification (RPS) for all states-26 states have specified targets for the uptake of electricity from renewable energy sources.
- With the introduction of the Renewable Energy Certificate (REC) scheme in 2010, states could look at fulfilling the RPS under this provision by procuring equivalent REC's. Both these measure failed due to lack of regulatory authority to ensure compliance at the state level.
- The amendment to the Electricity Act has proposed (1)Formulation of a National Renewable Energy policy, (2)Making at least 10% of total power generated by thermal plants to be from renewables (Renewable Generation Obligation),(3) Bundling of renewable power with thermal with the State Regulators allowed to modify the existing PPAs to account for the same, (4)Removal of open access surcharge for renewables and (5)Stiff penalties in case of noncompliance with RPOs by discoms. These initiatives will result in increased uptake of electricity from renewable energy sources.

Green Energy Corridor

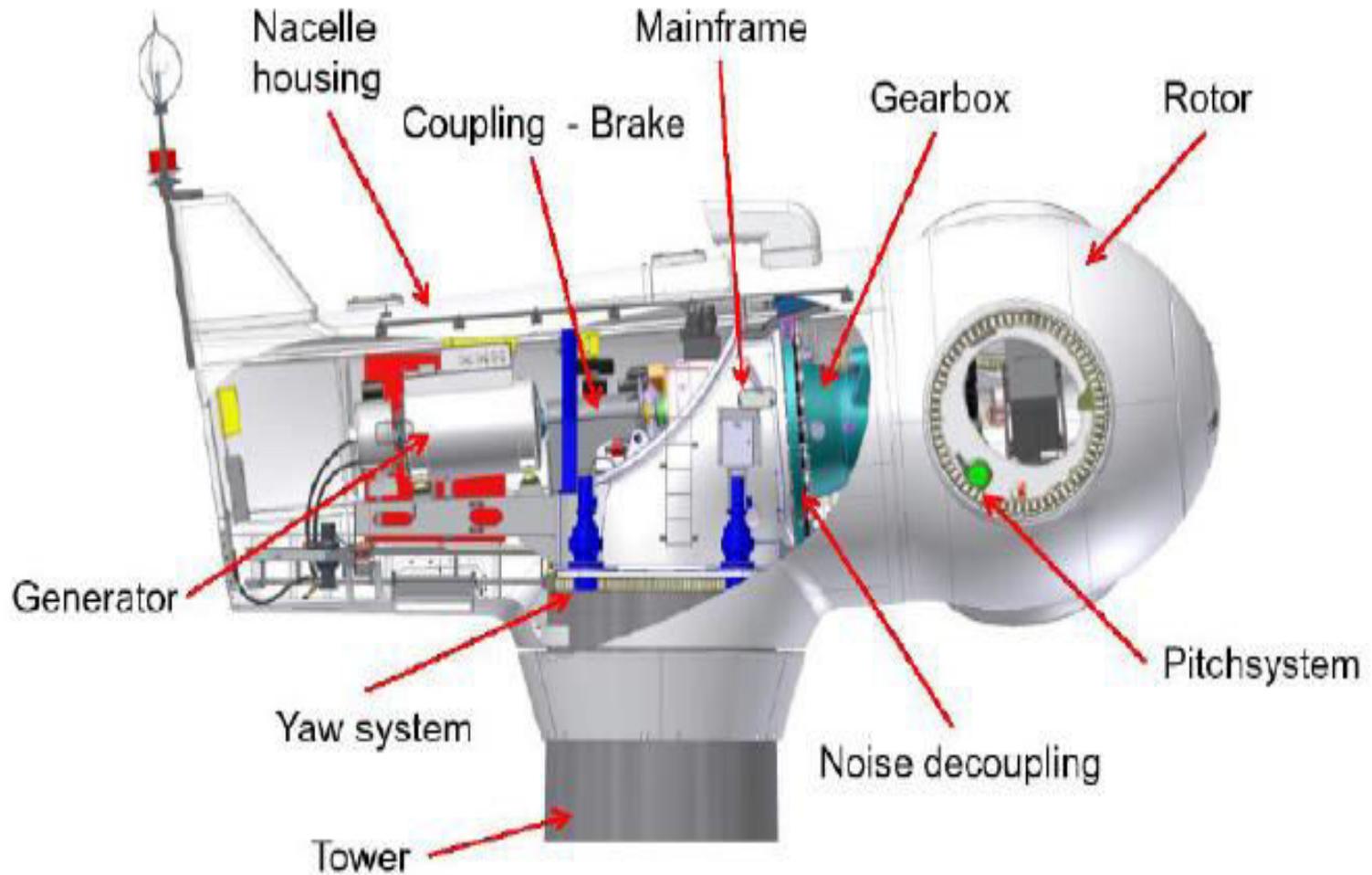
Proposed renewable energy corridor for evacuation



- To evacuate power generated from renewable (RE), in the 12th plan (2012–17), a green energy corridor has been proposed to be made in the key RE states of Tamil Nadu, Karnataka, AP, Maharashtra, Himachal Pradesh, and Rajasthan.
- The green energy corridor is necessary to evacuate large-scale wind and solar power in these states and ensure accurate generation and scheduling forecasts by the load-dispatch centre.
- The total spend on developing the green-energy corridor is Rs430bn with PGCIL incurring a capex of Rs.210bn and the balance by the states. Orders for this corridor have already begun and a €1bn loan has also been tied up with German bank KfW to fund this project.

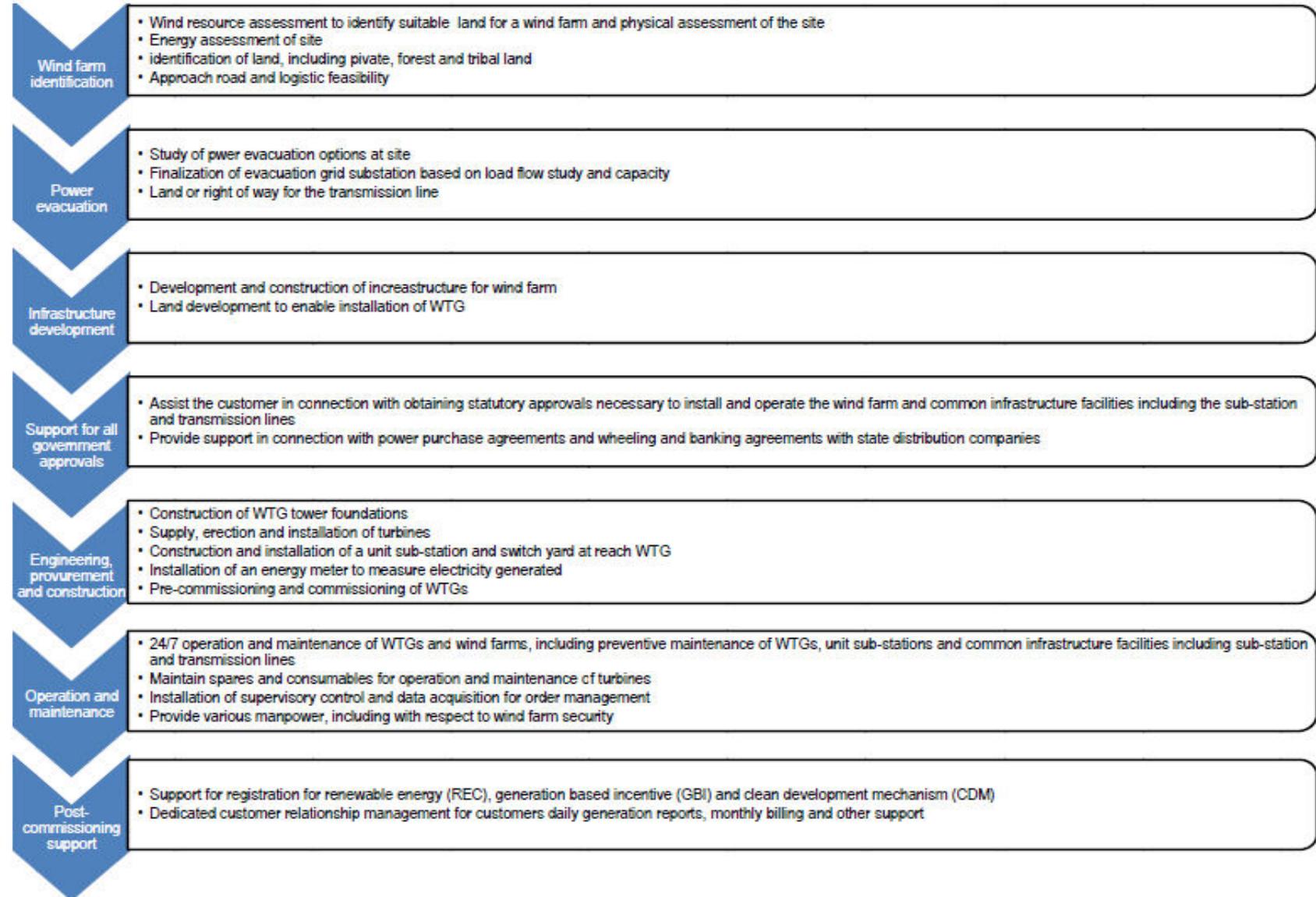
Wind Turbine Generator- Key Parts

Key parts going into a Wind Turbine Generator



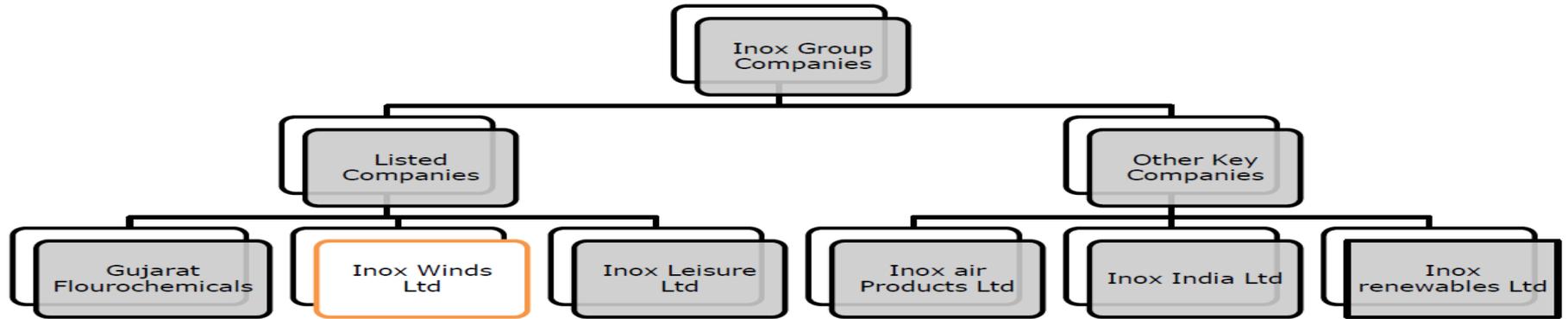
Role of Wind Turbine Generator

Role of a Wind Turbine manufacturer in India



IWL – Investment Arguments

Company Snapshot



- IWL belongs to Inox group companies and is a fully integrated player in wind energy market with the state-of-art manufacturing plants near Ahmedabad (Gujarat) for blades and tabular towers; at Una (Himachal Pradesh) for Hubs and nacelles.
- IWL is one of the largest manufacturers of Wind Turbine Generator (WTG) in India. IWL supplies the key components of WTG along with associated and auxillary components and offer wind farm projects on a turnkey basis across India through their wholly owned subsidiaries - Inox Wind Infrastructure Services Ltd (IWISL) and Maruti Shakti Energy India Ltd (MSEIL).
- IWL has the projects across different states like Rajasthan, Maharashtra and Andhra Pradesh and have an aggregate power project capacity of 5000MW.
- IWL being one of the largest player among the top three leading energy providers apart from Gamesa, & Suzlon is well positioned given the company holds latest technology from AMSC. The company has almost doubled its market share from 10% to 23% in FY16.

Order Book Update

Order Book Update

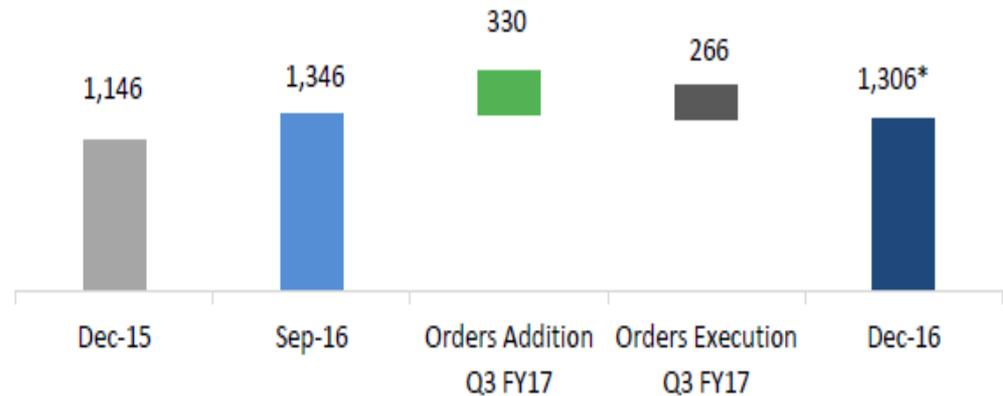
31st Dec 2016

Total Order Book (MW) 1306

Estimated Execution Period 12 - 15 Months

Order Addition – Q3 FY17 (MW) 330

MOVEMENT IN ORDER BOOK (MW)



Key Highlights of the quarter:

- NTPC Partnered with Inox Wind for its maiden foray into Wind Energy with a 50MW order
- Repeat Orders from Sembcorp Green Infra, Renew Power, Adani Wind etc.
- Continues to strengthen its position and market share across IPPs, PSUs, utilities, corporates and retail customers

Diversified & Reputed Clientele

IPPs: Adani Enterprises, Sembcorp Green Infra, Atria, Tata Power, CESC, Malpani Group, Renew Wind Energy, Ostro Energy amongst others

PSUs: IOCL, NTPC, SJVNL, NHPC, GIPCL, RITES, GACL, GMDC, PTC Green Energy amongst others.

One of the largest Order Books in the Industry

113M turbines launch

Launched 113 Meter Turbines with Hub Height of 120 m

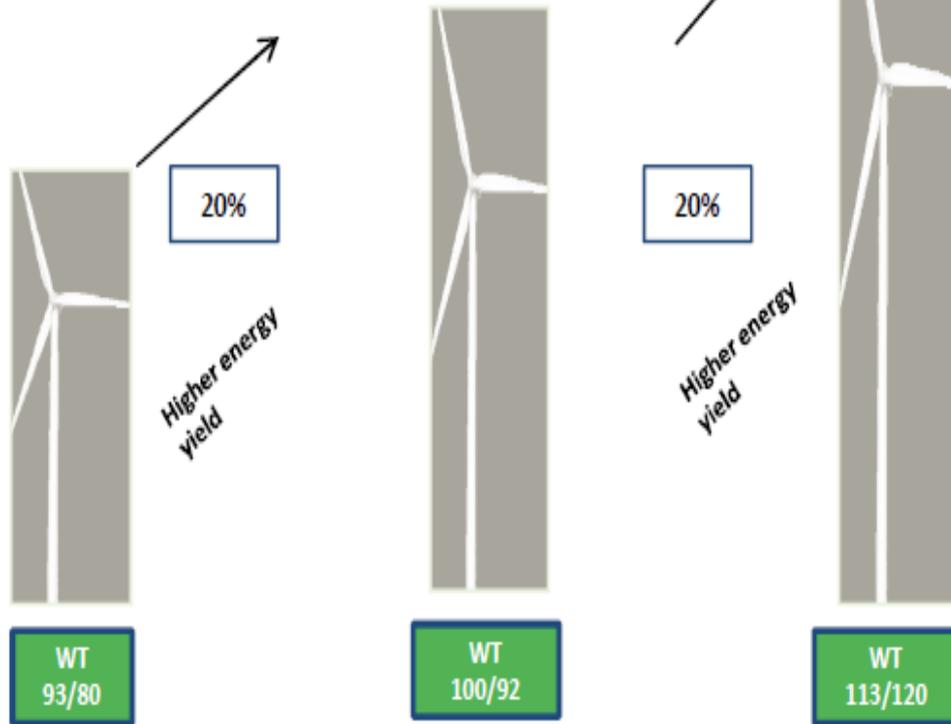
Higher Energy Yield

Lower Energy Cost

Higher Returns

IWL's Technology Edge:

- More efficient power curves
- Higher uptime
- Lower O&M
- Increased margins
- Higher market share
- Higher IRR for investors
- Expands market – Ideal for low wind pockets



Set to Launch 120 m Hybrid Tower

Working Capital

Particulars (Rs Cr)	Mar-16	Sept-16	Dec-16
Inventory	541.6	672.7	745.6
Receivables	2,414.3	2418.2	2488.6
Payables	1,177.8	887.7	1152.4
Others	137.4	177.4	118.6
Net Working Capital	1,640.8	2025.9	1963.2

Enhanced manufacturing capacity
Inventory backlog cleared, only synchronised component being supplied

~200 MW capacity ready for commissioning and another 80 MW erected as on 31st Dec

Common infrastructure ready at multiple sites.
Robust production & commissioning expected in Q4

Momentum of uptake in collection continues.
Majority of new orders are backed by Letters of Credit (LCs)

**SIGNIFICANT IMPROVEMENT
EXPECTED IN COMING QUARTER**

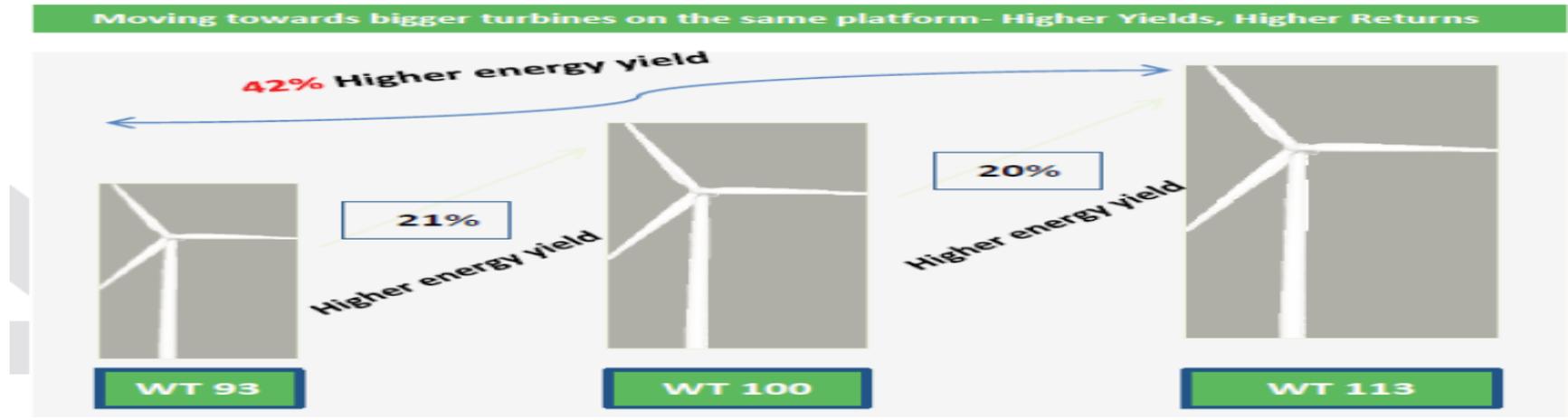
Capacity Expansion

CURRENT CAPACITY (MW)

Plant Location	Una, Himachal Pradesh	Rohika, Gujarat	Barwani, Madhya Pradesh	Total
Nacelles & Hubs	1,100	-	-	1,100
Blades	-	800	800	1,600
Towers	-	300	300	600

- IWL has two manufacturing facilities in Gujarat and Himachal Pradesh and the company has already increased its existing capacity of Rotor blade sets from 256 to 400 blades and is on the way to increase tower production from 150 to 300 towers per annum at Gujarat plant.
- IWL is also constructing a new manufacturing unit at Bharwani (Madhya Pradesh) with Nacelles and hubs capacity of 400 units, Rotor blade capacity of 400 Sets and tower capacity of 300 Units among which blade and tower facility have become operational from FY16.
- Post expansion, IWL's production capacity will increase to 1100 Nacelles and Hubs, Rotor blade capacity of 1600 units and tower production capacity to 600 in numbers.
- IWL's expansion at Madhya pradesh and Gujarat plants will result in near doubling of the capacity to 1.6GW per annum and the expansion would help IWL to finish the orders with in the deliverable time.

Proven Technology



- IWL has a comprehensive product portfolio and can manufacture turbines up to 2MW apart from a range of turbine models which allows it to supply various types of WTG's that can suit the needs of its customers in terms of both cost and wind conditions at a proposed WTG site.
- IWL launched the 93m blade turbines and has installed 1242MW of turbines. It has introduced 100m blade turbines which are specifically designed for low-end sites.
- IWL 93m blade turbines help generate better output at a low wind speed sites. IWL has also entered in to a licensing agreement with windnovation Engineering solutions of Germany to manufacture rotor blades of 113M which enables IWL to save on production cost and its height ensures better wind capture.
- IWL's 93m blade turbines offer more Efficient Power Curves, Improved Up-times and Reduced O&M , Ideal for low wind pockets, Higher Energy Yield & Improved Realizations etc which will help the company to increase its market share.

Limited Competition

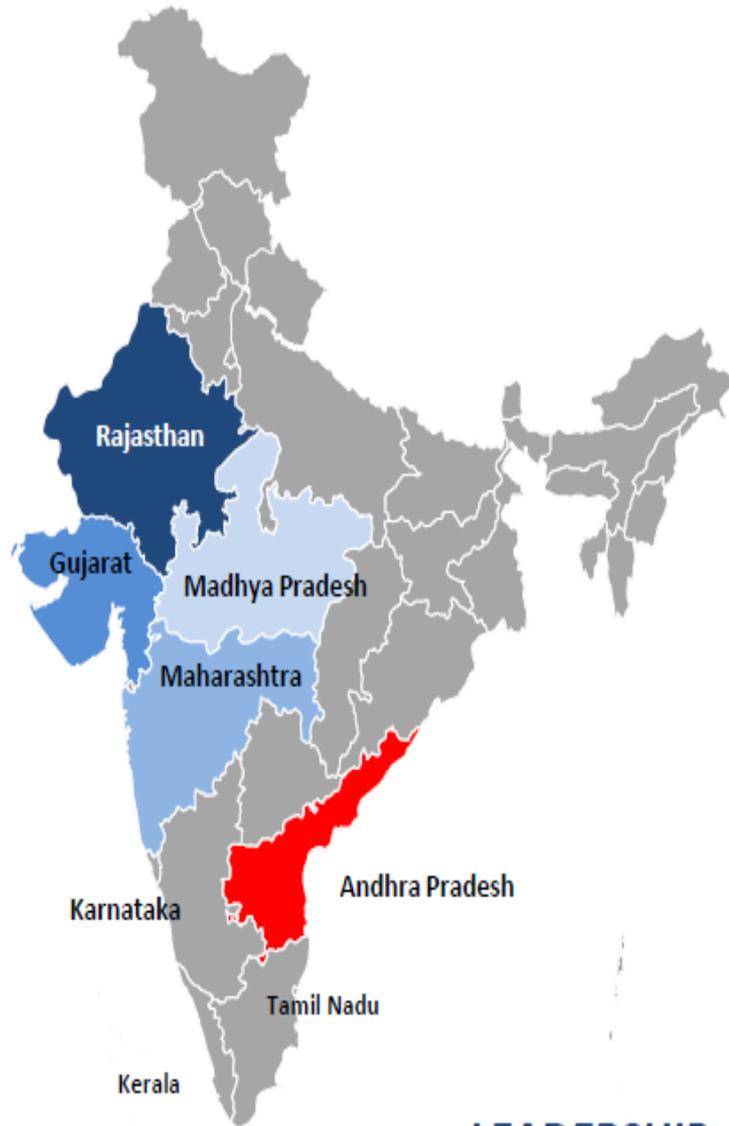
List of wind turbine generator manufacturers and capacity in India

Sl No	Manufacturer Name	Capacity	Rating	Technology
1	Gamesa Wind Turbine Private Limited	1,500	800/850/2000	Gamesa Innovation and Technologies, Spain
2	GE India	450	1,500/1,600	GE Infrastructure Technology International, USA
3	Inox Wind Ltd.	1,100	2,000	AMSC- Austria GmbH
4	Kenersys India Pvt. Ltd.	400	2,000	Kenersys GmbH, Germany
5	Leitner Shiram Manufacturing Ltd.	250	1,350/1,500	WindFin B.V. The Netherlands
6	ReGen Powertech Pvt. Ltd.	750	1,500	VENSYS Energy AG Technology, Germany
7	Suzlon Energy Limited	3,700	600/1,250/1,500/ 2,100	Suzlon Energy GmbH /SudWind, Germany
8	Vestas Wind Technology India Pvt. Ltd.	1,000	1,650/1,800/2,000	Vestas Wind System, Denmark
9	WinWinD Power Energy Pvt. Ltd.	1,000	1,000	WinWinD, Finland
10	Others	1,850		
Total		12,000		

• There is limited competition within Indian WTG suppliers with the top 4-5 players holding almost 88% of the market. Key players operating in the industry are Inox Wind, Suzlon Energy, Gamesa, GE, and ReGen Powertech.

• One of the key factors limiting competition is the unique nature of the Indian WTG market, where the WTG supplier also needs to have access to land, arrange for the related infrastructure (evacuation facilities, road infrastructure), and arrange for the power off-take with the discom. This limits competition from overseas players especially Chinese & Koreans who do not have the wherewithal to arrange all this.

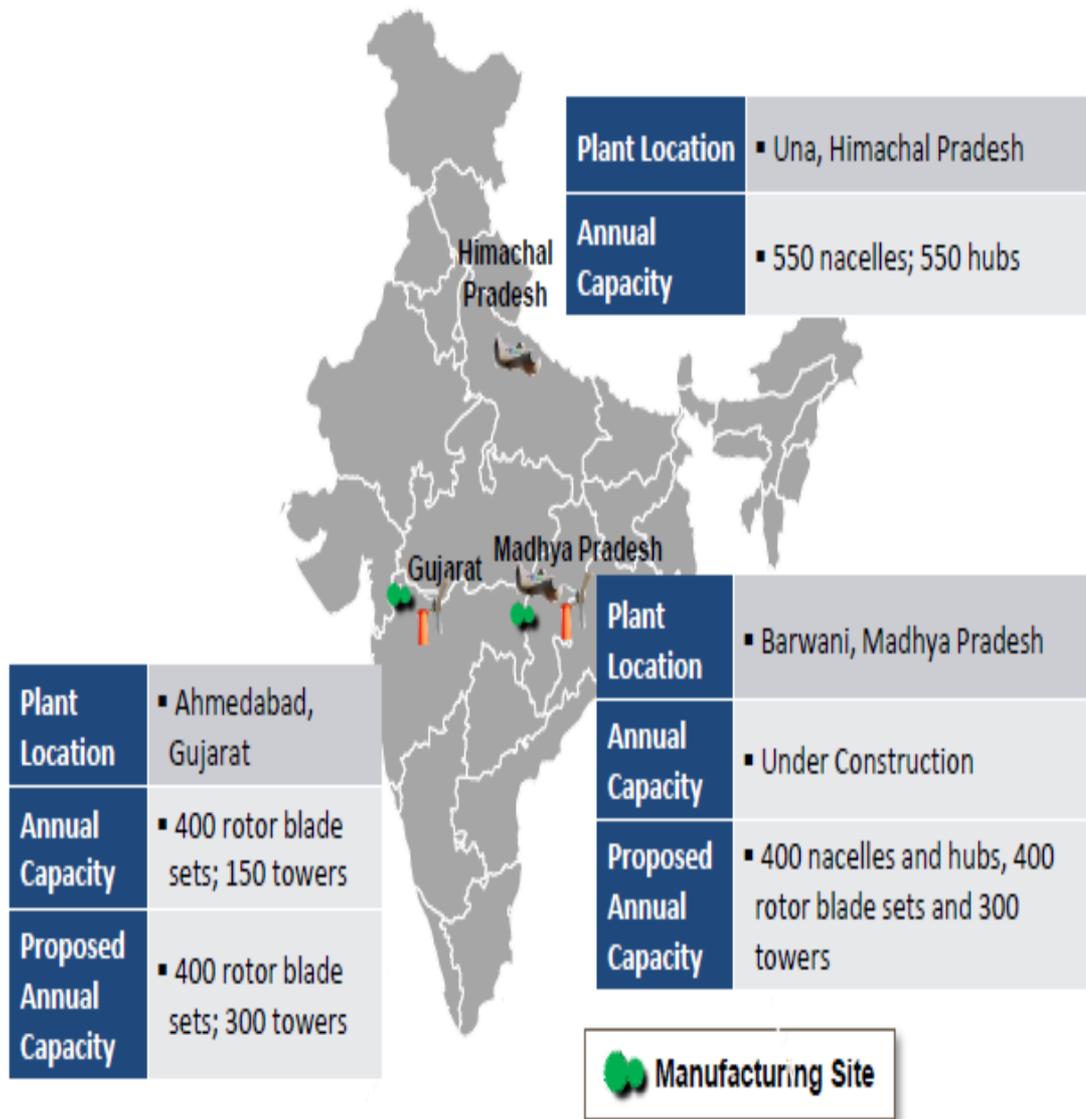
Pipeline of Project Sites



- Amongst the largest land bank owners in Gujarat, Rajasthan and Madhya Pradesh
- Expanded presence in Andhra Pradesh and Karnataka and Kerala
- Sufficient Land Bank as of December 2016 for installation of an aggregate capacity of more than 4,500 MW

LEADERSHIP ACROSS WIND RICH STATES

In-House Manufacturing



UPDATE ON CAPACITY EXPANSION:

- Gujarat blade facility capacity raised from 256 sets per annum to 400 sets per annum.
- New Madhya Pradesh facility:
 - Construction in full swing.
 - Blade plant expected to commence production from June 2015. Will be ramped up gradually.
 - Tower plant construction has commenced and is on track for commissioning in H2 FY16.

Project IRR

Wind Tariff Order (Summary)

	Unit	Gujarat	MP	Rajasthan
Capital Cost	Rs mn/MW	60.6	59.6	56.5
Debt Equity	%	70%-Debt and 30% equity	70%-Debt and 30% equity	70%-Debt and 30% equity
CUF	%	24%	20%	21%
O&M	Rs mn/MW	0.8	1% of capital cost	0.787
O&M escalation	%	5.72%	5.72%	5.85%
		6% per annum	7% per annum	
Depreciation		for the first 10 years and balance spread over useful life	for the first 10 years and balance spread over useful life	5.83% for first 12 years and balance spread over useful life
Interest rate		13%	12.75%	12.71%
Working capital				
Interest on Working capital		12%	13.25%	12.21%
O&M charges	Month	1	1	1
Maintenance and Spares (% of O&M)		15.00%	15.00%	15.00%
Debtors	Month	2	2	1.5
RoE		14%	14%	16%
Levellised tariff	Rs /Kwh	4.61	5.92	5.64
Levellised tariff with AD	Rs /Kwh	4.23		5.31

- Of the 4GW of project sites with IWL Wind, ~2.5GW is in Gujarat and another ~0.9GW in Madhya Pradesh which provides visibility for order execution.
- Wind projects will accrue IRR of 14%-15% based on normative tariffs(excluding GBI). With generation based incentives and refinancing of loans, developers could accrue additional 300-350bps RoE in projects which has enabled the company to increase its order-book.

Consolidated P&L

Particulars (Rs Mn)	Q4 FY16	Q4 FY15	YoY %	Q3 FY16	QoQ%	FY16	FY15	YoY %
Revenue from Operations	18,286.4	9,300.5	96.6%	9,414.4	94.2%	44,141.3	27,089.7	62.9%
Cost of Material Consumed	10,770.0	6,499.6	65.7%	5,495.7	96.0%	27,148.1	18,152.5	49.6%
Changes in Inventories of Finished Goods & Work-in-Progress	599.7	-1,343.8	-	-178.9	-	285.3	-1,441.3	-
EPC, O&M, Common Infrastructure Facility and Site Development Expenses	2,368.0	1,938.7	22.1%	1,464.2	61.7%	5,345.8	3,635.5	47.0%
Employee Expenses	279.0	158.0	76.6%	252.7	10.4%	919.7	549.1	67.5%
Foreign Exchange Fluctuation (Gain)/Loss (net)	7.4	-265.2	-	42.4	-	187.2	-315.6	-
Other Expenses	1,258.6	609.4	106.5%	793.0	58.7%	3,472.2	1,944.8	78.5%
Expenditure Capitalized	-135.9	-	-	-	-	-135.9	-	-
EBITDA	3,139.8	1,703.8	84.3%	1,545.3	103.2%	6,918.9	4,564.7	51.6%
<i>EBITDA Margin %</i>	<i>17.2%</i>	<i>18.3%</i>	<i>-115bps</i>	<i>16.4%</i>	<i>76bps</i>	<i>15.7%</i>	<i>16.9%</i>	<i>-118bps</i>
<i>EBITDA Excluding Forex Impacts</i>	<i>3,147.1</i>	<i>1,438.6</i>	<i>118.8%</i>	<i>1,587.7</i>	<i>98.2%</i>	<i>7,106.1</i>	<i>4,249.1</i>	<i>67.2%</i>
<i>EBITDA Margin % Excluding Forex Impacts</i>	<i>17.2%</i>	<i>15.5%</i>	<i>174bps</i>	<i>16.9%</i>	<i>35bps</i>	<i>16.1%</i>	<i>15.7%</i>	<i>41bps</i>
Depreciation	122.5	56.3	117.6%	86.0	42.42%	350.1	203.6	71.97%
Other Income	201.3	38.5	422.9%	149.9	34.3%	664.8	152.7	335.4%
Finance Cost	254.2	158.3	60.6%	200.7	26.7%	959.5	622.5	54.1%
PBT	2,964.4	1,527.7	94.0%	1,408.5	110.5%	6,274.1	3,891.3	61.2%
Tax Expense	872.1	348.9	149.9%	378.4	130.4%	1755.4	927.1	89.3%
PAT	2,092.4	1,178.8	77.5%	1,030.0	103.1%	4,518.7	2,964.2	52.4%
<i>PAT Margin %</i>	<i>11.4%</i>	<i>12.7%</i>	<i>-123bps</i>	<i>10.9%</i>	<i>50bps</i>	<i>10.2%</i>	<i>10.9%</i>	<i>-71bps</i>
Earnings Per Share (EPS)	9.43	5.89	60.1%	4.64	103.2%	20.36	14.81	37.5%

Consolidated Balance Sheet

Particulars (Rs Mn)	FY16	FY15	Particulars (Rs Mn)	FY16	FY15
Share Holders' Funds:			Non-current assets:		
Equity share capital	2,219.2	2,219.2	Goodwill on Consolidation	174.0	16.5
Reserves and Surplus	16,218.7	11,700.0	Fixed Assets	5,942.1	2,502.6
Total of Shareholder funds	18,437.9	13,919.1	Non-current investments	0.0	0.0
Non-current liabilities:			Deferred Tax Assets (Net)	347.4	223.9
Long term Borrowings	508.8	788.6	Long-term loans and advances	1,641.2	1,081.0
Deferred tax liabilities (Net)	448.4	209.4	Other non-current assets	136.2	46.5
Other Long Term Liabilities	24.0	24.0	Total non-current assets	2,298.8	1,367.9
Long Term Provisions	49.5	24.8	Current assets:		
Total of Non-current liabilities	1,030.7	1,046.8	Current Investments	622.2	0.0
Current liabilities:			Inventories	5,416.4	4,238.2
Short-term borrowings	13,988.4	7,670.6	Trade receivables	24,143.2	14,321.8
Trade payables	11,777.7	7,112.3	Cash and bank balances	4,787.7	7,096.1
Other current liabilities	1,968.3	1,900.0	Short-term loans and advances	3,893.1	2,355.3
Short-term provisions	439.5	523.4	Other Current Assets	539.2	290.3
Total of Current liabilities	28,174.0	17,206.3	Total Current Assets	39,401.6	28,301.7
Total Equity & Liabilities	47,642.6	32,172.2	Total Assets	47,642.6	32,172.2

Concerns & Reasoning

1.) Capital Intensive Business :

The WTG business in India requires high working capital; this is evident from the fact that setting up a 1MW wind farm typically requires INR40m of working capital.

2.) Change in regulatory policies :

In the past, withdrawal of accelerated depreciation (AD) and generation-based incentives (GBI) led to a sharp decline in wind energy capacity addition. Any such adverse policy changes in future can impact the business.

3.) Weak Financials of SEB's :

State electricity boards (SEBs) and government distribution companies own nearly 95% of the distribution network. The cost of generating wind power at Rs3.7-6/kWh is relatively high compared with predominantly coal-based conventional power (Rs3.5/kWh). SEBs' weak financial condition might deter them from purchasing expensive wind power and thus impact wind power demand in future.

4.) Non-Availability of Land :

The wind energy business is land intensive—2MW of turbines require 40 acres of land, of which actual used is 2.5 acres. To achieve annual capacity addition of 4GW, the industry would require ~80,000 acres of land every year. However, this won't be easy as land availability for wind farms is a contentious issue in most states. Even for the available privately-owned land, change of land use status from agricultural to non-agricultural is time-consuming.

THANK YOU