

NATURE-AL DIRECTION TO ENERGY ISO – 9001-2008 Certified Company



safe

accurate efficient renewable

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COMPANY BACKGROUND

- Veer Energy & Infrastructure Limited is in the area of renewable energy & infrastructure development company, headquartered in Mumbai, India.
- Conceived in 2006 with just 20 people, Veer Energy is now a leading independent wind farm developer in India.
- > Veer Energy is listed on Bombay Stock Exchange (BSE) with more than 20,000 shareholders currently.
- The company is currently active in western region of India and have developed approximately 184 MW Wind farm which is in operation.
- > Veer Energy's development of wind energy is consistent with what is prescribed by the Kyoto Protocol.
- Veer Energy's wind farm design ensures an optimal economic balance due to professional site selection and technical quality of the wind turbines.
- Veer Energy is an ISO 9001: 2008 Certified Company Since 10.06.2011.







- Formation of Veer Energy & Infrastructure and commencement of business.
- Started marketing of wind turbine simultaneously started identifying good wind potential sites across India.
- Selected Kutch, Surajbari site in Gujarat as per the wind resource data. Started building 55 MW electrical substations for power evacuation along with purchasing of land for the wind farm.
- Received the 1st order for power evacuation along with land for 7.2 MW from Elecon Engineering Ltd.
- Successful commissioning of the substation.
- Received the 1st order for complete infrastructure development for 22 MW, including civil foundation, transmission line, erection and commissioning, O&M and power evacuation facility from Southern Wind Farms Ltd (SWL).





- Successful commissioning of the SWL order. Commissioned 79 wind turbines in a record 75 days.
- Commissioned balance capacity and started marketing and selling of wind turbines.



- Received order from SWL to develop infrastructure for 2.7 MW in Tamilnadu and successfully completed it within 2 months.
- Veer Energy announces its plan to set up 200 MW wind farm in Gujarat and had applied for various permissions.





- Company has successfully set up their own wind farm at Surajbari, Kutch up to 1.35 MW containing 6 WTG of SWL make 225 KW.
- Company has successfully set up & marketed (sold) 2.55 MW containing 8 WTG of 225 KW SWL make & 1 WTG of 750 KW GWL make.
- Company has successfully set up & commissioned total infrastructure of 6 WTG of GWL make 750 KW.
- Company has successfully done O&M activity for 30 MW wind farm consist of 112 WTGs.
- Company has done maintenance of 55 MW Chandrodi Substation, 66/33 KV since last two years.
- Company has successfully setup 30 MW Sub-station at Mota Gunda.
- Company has erected around 29 Wind Turbines of 850 KW each of Gamesa Wind Turbines Pvt. Ltd at Mota Gunda Site.
- Company has Signed MOU at Vibrant Gujarat for 180 MW of about Rs. 1100 Crores.
- Established Veer Enterprise GmbH in Stuttgart, Germany for exposure in foreign market and to concentrate on the Solar industry which is the next target of the company.







- The Company has successfully set up 35 MW of Substation at Vinjalpur, Jamnagar, Gujarat.
- The company acquired additional 5 MW of Power Evacuation permission from GETCO for our substation at Chandrodi, Kutch, Gujarat.
- The company has also acquired lease land of 298.80 hectors from government at Rajasthan.
- The company received an order for installation of 94 Windmills of 850 KW- make Gamesa Wind Turbine at Rajasthan, out of which 24 Windmills are installed 0.850 Kw x 24 WTGs. (Out of 79.8 MW at Ludarva, Jaisalmer, Rajasthan company has completed 20 .4 MW).
- The company have joined hands with Suzlon, a leading manufacturer of WTG in India for its next project of 35.7 MW at Vinjalpur containing 17 Windmills of 2.1 MW to be installed at Villages of Dist. Jamnagar, Gujarat.
- Company received an additional of 5.6 MW Power Evacuation Permission for Mota Gunda Substation.





- Company has successfully completed the Foundation and Erection for 4.00 MW at Mota Gunda, Jamnagar.
- Company has Completed Commissioning of 0.450 MW (0.225 Kw X 2 WTGs) of GWL Make for Accurate Industries Ltd at Mota Gunda.
- Company has also Completed Commissioning of 1.70 MW (0.850 Kw X 2 WTGs) of GAMESA Make at Mota Gunda.
- Out of 35.00 MW at Vinjalpur, Jamnagar company has completed 4.20 MW consisting of SUZLON Make 2.10 MW X 2 WTGs.
- Out of 79.80 MW at Ludarva, Jaisalmer, Rajasthan company has completed about 8.50 MW. (0.850 x 10 WTGs).
- Company received additional permission of 15.00 MW Power Evacuation Permission for Mota Gunda Substation, Jamnagar from GETCO.

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- Company has successfully completed the Foundation and Erection work for 12.00 MW (1500 Kw X 8 WTGs of Suzlon Make) at Vinjalpur, Jamnagar.
- Company has also Completed Commissioning of 4.00 MW (2000 Kw X 2 WTGs of GAMESA Make) at Mota Gunda.
- Out of 79.80 MW at Ludarva, Jaisalmer, Rajasthan company has completed about 47.60 MW (0.850 Kw X 56 WTGs).
- Company received an additional permission of 20.00 MW Power Evacuation facilities for power project at Village Ludarva, Jaisalmer, Rajasthan from RRECL.



Land & Micrositing

- Identifying suitable wind rich sites and procuring the same, forms the base of the wind farm.
- The policy of Veer Energy has always been to work closely with the local community throughout the planning, construction, and operation of Veer Energy's wind farms.
- In the course of wind farm construction, Veer Energy places great importance on working closely with local authorities and land owners and seeking opportunities to include local suppliers and contractors.
- Liaison committees are set up with representatives of the local communities and through these liaison committees Veer Energy is able to keep the local communities informed of progress and respond to any concerns or issues raised.





Civil Foundation

- The location will be taken up for construction of foundation. There are two types of foundations, one is for tubular tower and the other one is for structural tower i.e. Lattice tower. Normally, tubular tower foundations are pit type foundation where the pit of about three meters depth will be dug. After the excavation of sand, the next process is of pouring concrete which will be allowed for curing as per the required duration.
- Foundations for the turbines consist of a steel reinforced concrete plinth of approximately 15m in diameter depending upon the size of the wind turbine and with a central column of around 5m in diameter onto which the turbine tower is fixed.
- Foundations are backfilled and restored after construction so as to leave only a small stone apron around the base of each tower visible.





Erection & Commissioning

- The wind turbines are erected with utmost care with help of highly skilled engineers and labors.
- A combination of high capacity cranes along with supporting cranes are used in erection of the wind turbines.
- Structures and components of wind turbines need to sufficiently accomplish their intended purposes during later operation for which Veer Energy ensures that quality management measures are adequately implemented during the erection of a wind turbine. Critical inspections are undertaken at every stage to ensure compliance with the different locationoriented requirements of setting up a wind project.
- We have experience & expertise in setting up a Wind farm Power Project of approx. 100 MW across various geographies of Gujarat.





Electrical D.P. Yard & Transmission Line

- The power generated from the wind turbines is passed through a network of transformers, isolators, meters and then fed to the transmission lines which transmits the power upto the on-site sub station.
- Electrical connections between the turbines are made via on ground cables to the on-site electrical substation.
- These cables are laid using RSJ poles, so far as far possible, routed to follow site access tracks.





Operation & Maintenance

- At Veer Energy, service and maintenance are just as important to us as choosing the right wind turbines & sites. Thus, we want you to know that we view the operation & maintenance of the wind farm as the beginning of a close partnership that will last the next 20-25 years, or more.
- Our team of highly experienced and dedicated engineers are committed to ensure a trouble free operation of the wind turbines with minimal downtime.
- We are currently providing O & M service for 104 WTG of 225 KW of Windmill, 6 WTG of 750 KW of Windmill to our esteemed clients & also doing O & M of our substation of capacity 55 MW & 25 MW at Chandrodi & Mota Gunda resp.
- We take preventive & breakdown maintenance of the WTGs & its related equipments including replacement of spare parts & other components for specified capacities of WTGs. We provide operation service round the clock, like Watch and ward security Arrangement, Diagnosis of fault in WTGs in the event of breakdown, Record and report daily generation and breakdown data, Regular inspection of the WTG and all parts thereof Maintenance of history cards and log books, Liaison with respective EB, for joint meter reading, raising invoices and Payments follow up.
- ➢ We do periodic maintenance service, tower torquing once in year, Nacelle torquing & cleaning Control & Power panel maintenance, Transformer yard maintenance and related works, Internal HT line patrolling and maintenance, Office transformer & VCB House keeping, Replacement of gear oil, Rotor bolt torquing, Generator alignment, Greasing work, Power panel & Capacitor panel maintenance work, Yaw brake servicing etc.



TURN KEY SOLUTION



WINDPARK - LOCATION



 <u>CHANDRODI WINDPARK (60 MW)</u> SURAJBARI KUTCH, GUJARAT Co-ordinate: Latitude: 23.3342⁰ N Longitude: 70.6372⁰ E
 <u>MOTA GUNDA WINDPARK (45.60 MW)</u> BHANVAD JAMNAGAR, GUJARAT Co-ordinate: Latitude: 647264° E

Longitude: 2456680° N

<u>VINJALPUR WINDPARK (35 MW)</u>
 KHAMBHALIYA
 JAMNAGAR, GUJARAT

Co-ordinate: Latitude: 562503° E

Longitude: 2450798° N

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- BHAVNAGAR WINDPARK (30 MW) KUNDHADA (Available)
 BHAVNAGAR, GUJARAT
 Co-Ordinate: Latitude: 799256° E
 Longitude: 2366041° N
- RAJASTHAN WINDPARK (100 MW) LUDARVA JAISALMER, RAJASTHAN Co-ordinate - Latitude: 677096° E Longitude: 2986545° N

CHANDRODI WINDPARK – PROJECT INFO



PROJECT INFORMATION

Wind farm Capacity: 60 MW

Start of Construction: Apr 2007

Commissioning: Mar 2008

Operating Life: 20 years

Grid Operator: GETCO

Power Utility: GUVNL / Torrent

SUBSTATION DETAILS

Rating: 66 / 33 KV

Capacity: 30 MVA x 2 nos.

Commissioning: Oct 2007



MOTA GUNDA WINDPARK – PROJECT INFO



PROJECT INFORMATION

Wind farm Capacity: 45.60 MW

Start of Construction: Dec 2010

Commissioning: Mar 2011

Operating Life: 20 years

Grid Operator: GETCO

Power Utility: GUVNL

SUBSTATION DETAILS

Rating: 66 / 33 KV

Capacity: 30 MVA x 2 nos.

Commissioning: Mar 2011



VINJALPUR WINDPARK – PROJECT INFO



PROJECT INFORMATION

Wind farm Capacity: 35.00 MW

Start of Construction: Dec 2011

Commissioning: Mar 2012

Operating Life: 20 years

Grid Operator: GETCO

Power Utility: GUVNL

SUBSTATION DETAILS

Rating: 66 / 33 KV

Capacity: 30 MVA x 2 nos.

Commissioning: Mar 2012



KUNDHADA WINDPARK – PROJECT INFO



PROJECT INFORMATION

Wind farm Capacity: 30.00 MW

Start of Construction: Jan 2012

Commissioning: Jun 2012

Operating Life: 20 years

Grid Operator: GETCO

Power Utility: GUVNL

SUBSTATION DETAILS

Rating: 66 / 33 KV

Capacity: 30 MVA

Commissioning: Jun 2012



LUDARVA WINDPARK – PROJECT INFO



PROJECT INFORMATION

Wind farm Capacity: 100.00 MW

Start of Construction: Oct 2011

Commissioning: Mar 2012

Operating Life: 20 years

Grid Operator: RVVNL

Power Utility: RVVNL

SUBSTATION DETAILS

Rating: 66 / 33 KV

Capacity: 79.80 MVA

Commissioning: Mar 2012



WINDPARK - WIND TURBINES



Existing Wind Turbines:

Make: Southern Wind Farms Ltd. Model: GWL 225 Rated Power: 225/40 KW Rotor Diameter: 29.8 m Hub Height: 50 m Make: Elecon Engg. Co. Ltd Model: T600-48 Rated Power: 600 KW Rotor Diameter: 48 m Hub Height: 50 m

Make: Gamesa Wind Turbines Pvt. Ltd.
Model: G58
Rated Power: 850 KW
Rotor Diameter: 58 m
Hub Height: 65 m



WINDPARK – WIND TURBINES



Existing Wind Turbines:

Make: Suzlon Energy Ltd. Model: S 88 Rated Power: 2100 KW Rotor Diameter: 88 m Hub Height: 80 m Make: Suzlon Energy Ltd. Model: S 82 Rated Power: 1500 KW Rotor Diameter: 82 m Hub Height: 78.5 m Make: Gamesa Wind Turbines Pvt. Ltd. Model: G 97 Rated Power: 2000 KW Rotor Diameter: 97 m Hub Height: 90 m



Past Performance and Projections

Year	Gujarat (in MW)	Rajasthan (in MW)	Tamilnadu (in MW)	Total Installation (in MW)
2007-08	25.58	0.00	0.00	25.58
2008-09	18.85	0.00	2.70	21.55
2009-10	6.32	0.00	0.00	6.32
2010-11	30.60	0.00	0.00	30.60
2011-12	29.15	20.40	0.00	69.15
2012-13	5.00	8.50	0.00	35.06
2013-14	10.88	47.60	0	41.48
2014-15E	75.00	50.00	0	125.00

WINDPARK – CLIENTELE



Existing Customers:

- 1. Gamesa Wind Turbines Pvt. Ltd 124 Nos.(G58 850 KW)
- 2. Suzlon Energy Ltd 12 Nos. (S82 1500 KW)
- 3. Indian Renewable Energy Foundation (IREF Reliance ADAG) 75 nos. (GWL 225 KW)
- 4. Mudra Online Technologies 2nos. (GWL 225 KW)
- 5. Kidstuff Promotions 2 nos. (GWL 225 KW)
- 6. SWL 8 nos. (GWL 225 KW)
- 7. Elecon Engineering Co. 13 nos. (Elecon T600)
- 8. Vivek Agro Products 1 no. (GWL 225 KW)
- 9. Hi- Tech Sweet Water Technologies Private Limited. 2 Nos. (GWL 225 KW)
- 10. Macro Polymers Pvt. Ltd 2 Nos. (GWL 225 KW)
- 11. Medion Healthcare Pvt. Ltd- 4 Nos. (GWL 225 KW)
- 12. Anup Engineering Ltd 1 No. (GWPL 750 KW)
- 13. JSL Industries Ltd. 1 Nos. (GWL 225 KW)
- 14. Sankalp Recreation P. Ltd. (G58 850 KW)- Ahmedabad
- 15. Cera Sanitaryware Ltd. (G58 850 KW) & More

ORGANISATIONAL STRUCTURE



MANAGEMENT TEAM

The Board of Directors of the Company, comprises of the following:

- 1. Mr. Yogesh M. Shah Chairman & Managing Director
- 2. Mr. Prakashchandra C. Shah Executive Director
- 3. Mr. Nilay P. Shah Executive Director
- 4. Ms. Nisha B. Shah Independent Director
- 5. Mr. Joseph J. Tauro Independent Director
- 6. Mr. Chetan H. Mehta Independent Director
- 7. Mr. Mitesh J. Kuvadia Independent Director

