



TOTAL SOLUTIONS
IN RENEWABLE ENERGY

SUZLON
POWERING A GREENER TOMORROW



A 20 YEAR LEGACY

Established in 1995, Suzlon has consistently strived to provide affordable renewable energy and make the world a greener place. Its journey is driven by unyielding determination and belief that led Suzlon, which began as a small and innovative entrepreneurial venture with the vision of sustainable development, to become a global enabler of climate change risk mitigation. The persistence of the Suzlon family led to the provision of continuous energy for industries and the creation of a better environment. Suzlon, since its inception, has been synonymous with green energy. Over the last two decades, it has carved for itself, opportunities in the seemingly unyielding face of challenges to achieve many milestones.

1995

- Suzlon Energy Limited is formed and becomes operational
- Suzlon establishes a technical collaboration with leading German wind industry player, Sudwind Energy GmbH

1996

- Suzlon commissions its first 0.27 MW WTG for M/s Indian Petro Chemicals Limited at Dhank, Gujarat

1998

- Suzlon enters Maharashtra by installing a WTG at Vankusawade, Satara District, for Ghodawat Pan Masala Products

1999

- Suzlon forays into Tamil Nadu with the commissioning of its first wind turbine in the State

2000

- Suzlon commissions its first 50 MW at Vankusawade, Satara District, Maharashtra
- Suzlon crosses the 100 MW mark at Vankusawade, Satara District
- Suzlon commissions its first 1 MW WTG for the then Tata Group company, M/s Niskalp Investments

2001

- Suzlon enters Rajasthan by commissioning its first 0.35 MW for Rajasthan State Mines and Minerals
- Formation and commencement of operations of Suzlon Wind Energy Corp, U.S.A., a wholly owned subsidiary of Suzlon Energy Limited, India
- Formation of Suzlon Energy GmbH, Germany, a wholly owned subsidiary of Suzlon Energy Limited, India
- Suzlon initiates its backward integration with the despatch of the first set of blades (Type S-60) from its rotor blade unit in Daman

2002

- Suzlon Energy GmbH, Germany becomes operational
- Suzlon commissions its first 1.25 MW WTG for M/s Velathal Spinning Mills Limited in Tamil Nadu
- Mrs. Jaywantiben, Hon'ble Minister of Power, Daman, flags off Suzlon's first export order to U.S.A.

2003

- Suzlon enters China by opening its representative office in Beijing

2004

- Suzlon Energy Australia Pty Ltd. Australia, a wholly owned subsidiary of Suzlon Energy Limited, India is formed and commences operations
- Suzlon enters Karnataka by commissioning a 3.75 MW wind power project for major mining company, MSPL
- Suzlon integrates further backward with the formation and commencement of Suzlon Control System (SCS), an MBU at Daman, for the design and manufacture of wind turbine control systems
- Formation of Suzlon Generators Pvt Ltd., the production unit for wind electric generators
- Formation of Suzlon Structures Pvt Ltd., the production unit for tubular towers
- Suzlon dedicates its one-of-its-kind 2 MW WTG to the nation after its successful commissioning on the eve of Independence Day
- Formation of Suzlon Energy A/S, Denmark, a wholly owned subsidiary of Suzlon Energy Limited, India
- Suzlon enters Madhya Pradesh by commissioning a 5 MW wind power project

2005

- Suzlon crosses the 1 GW installation mark in India
- Suzlon Rotor Corporation, U.S.A. is incorporated

- Suzlon Energy Limited opens its Initial Public Offer (IPO) for 29.34 million shares to overwhelming response and successful listing on the BSE and NSE
- Suzlon Generators (SGPL) launches its maiden 2.1 MW
- Suzlon commissions its first 600kW WTG in Tamil Nadu

2006

- Inception of Tianjin manufacturing facility in China
- Suzlon ranks #5 among WTG manufacturers in terms of capacity installed in 2005*
- Suzlon enters Australia by signing a contract through its subsidiary, Suzlon Energy Australia Pty Limited (SEA), to build Australia's largest wind farm project for Australia Gas and Light (AGL) Company
- Formation of Suzlon Energy Forge (SE Forge) Limited for the casting and forging of hub casts and other allied components
- Suzlon enters Europe by signing a contract for a 39.9 MW wind turbine capacity project with TECNEIRA (Tecnologias Energeticas, SA) in Penamacor, Portugal
- Suzlon crosses the 2 GW installation mark in India
- Suzlon receives the awards of the Best Manufacturer of the Year and Best Company in Corporate Social Responsibility at the Wind India Conference in Pune
- Suzlon is ranked as the second leading company in the category of Best Service Provider among Manufacturers at the Wind India Conference
- Suzlon receives the IPO of the Year Award at the 3rd Euromoney and Ernst & Young Global Energy Awards 2006
- Suzlon enters the South American market by signing a contract for 224.7 MW with Brazilian energy company, SIIF Energias do Brasil Ltda
- Suzlon is awarded the TERI Alumni Award for Outstanding Entrepreneurship in Energy Environmental Technologies

2006

- Tulsi R. Tanti is awarded the prestigious 8th Ernst & Young Entrepreneur of the Year Award
- Suzlon Rotor Corporation announces the production of its first wind turbine blade in U.S.A. and begins production of blades and nose cones
- Tulsi R. Tanti is honoured with an award under the 'Most promising entrant into the Big League' category at the CNBC-TV18 India Business Leader Awards 2006 function
- Suzlon becomes the only Indian manufacturer to attract Foreign Direct Investment in the Indian wind energy sector with the signing of a turnkey contract with British Petroleum to set up a 40 MW wind power project in Maharashtra

2007

- Suzlon commissions its first wind power project in China
- Suzlon commissions its first 2.1 MW capacity turbine, the V3 S88 test turbine installation, in Australia
- Suzlon Energy (Tianjin) Limited (SETL) formally opens its advanced manufacturing facility, designed for the manufacture of WTGs and integration of major WTG components
- Suzlon completes its first Foreign Currency Convertible Bonds (FCCBs) issue, amounting to USD 300 million, listed on the Singapore Exchange Securities Trading Ltd.
- Suzlon enters Turkey with an order for 31.5 MW of wind turbine capacity from Ayen Enerji Co. Inc.
- Suzlon crosses 3 GW of installations in India
- Suzlon becomes the only power company in India, only renewable energy company in Asia and the only wind power company in the world to achieve the elite status of Superbrand (2008-2009)
- Tulsi R. Tanti is named amongst TIME's Heroes of the Environment for his contribution towards raising awareness and initiating action on global climate change
- Suzlon sets the benchmark of obtaining the single largest order from a Government Public Sector Unit in the Indian wind industry with its new order from ONGC Limited for 51 MW wind turbine capacity
- Suzlon floats its maiden QIP (Qualified Institutional Placement) of

approximately USD 552 million

- Suzlon enters Kerala by commissioning its first 600kW WTG at Agali in the Palakkad District
- Harvard Business School concludes a case study labelled 'The Suzlon Edge' which describes and analyses the evolution of Suzlon, and the business decisions and strategies that made it one of the leading players in the global wind energy arena, making Suzlon a part of the elite list of companies to participate in this activity
- Suzlon commissions its first WTG using concrete tower technology at Nani Sindholi, Gujarat for Suzlon Towers and Structures Limited
- Suzlon enters the Sri Lankan wind energy market by signing a deal with Senok Wind Power Pvt. Ltd. of the Sri Lankan conglomerate, Senok Group

2009

- Suzlon commissions its first WTG in Spain at the Jerez site in Cádiz province for Wigep Andalucia S.A.
- Suzlon enters Nicaragua with its maiden WTG commissioning at the Amayo site in Rivas province for Arctas Capital Group LP
- Suzlon commissions the first WTG at the Akbuk site for its order from Ayen Enerji Co. Inc.
- Tulsi R. Tanti recognised for his entrepreneurial vision in combatting climate change and named Champion of the Earth for the year 2009 by the United Nations Environment Programme (UNEP)
- Suzlon announces its entry into the Balkan region through an order from Technomash Bulgarian Industrial Group AD, Bulgaria
- Suzlon enters Sweden and, with it, the Scandinavian region, with an order from Triventus AB

2010

- Suzlon sets a benchmark by becoming the first company in India to bring investment from a nationalised bank into the wind energy sector when it led the maiden foray of State Bank of India for 15 MW WPPs in the key Indian states of Tamil Nadu, Gujarat and Maharashtra
- Suzlon crosses the 5 GW installation mark in India
- Suzlon global headquarters 'One Earth' receives the coveted Leadership in Energy and Environment Design (LEED)

Platinum Award, bestowed by Her Excellency Meera Shankar, the Ambassador of India to the United States, at a ceremony in Washington, D.C.

- Tulsi R. Tanti is honoured with the 'Special Wind Visionaries of Asia' recognition by Asian Development Bank for the quantum leap of Suzlon in wind power in Asia
- Suzlon crosses the 2 GW installation mark in the US market

2011

- Suzlon crosses the 6 GW installation mark in India
- Suzlon announced the launch of its new S9X suite of wind turbines at the Wind Power 2011 conference
- Suzlon voted the 6th most green brand in India by the global 'ImagePower Green Brands Survey'
- Suzlon launches a powerful environmental awareness campaign in Mumbai titled Pure Air Lovers' Society (P.A.L.S.) which spans 86 cities and places emphasis on the importance of clean air
- Suzlon is named a 'New Sustainability Champion' in a World Economic Forum Boston Consulting Group study of 'fast-growing, high-performing companies' from emerging markets for their environmental and social initiatives
- Suzlon Wind Energy Corp., the North American subsidiary of Suzlon Energy Limited (SEL), opened a state-of-the-art training centre for wind technicians across its North American operations, becoming the only fully operational wind turbine dedicated exclusively for training purposes

2012

- Suzlon commences the maiden commissioning of its Amherst Project in Nova Scotia, Canada, deploying the latest S9X product series

- Suzlon announced the launch of its newest WTG, the S111-2.1 MW, the latest generation of the 2.1 MW fleet designed for low wind speed sites and becoming the highest-yielding IEC Class III wind turbine of any comparable class machine

2013

- Tulsi R. Tanti receives Asia's Most Influential Leader Award and Suzlon receives the award for being Asia's Most Promising Brand for 2012-2013 at the Asian Brand and Leadership Summit

2014

- Suzlon erects its first S97-2.1 MW WTG, built with a hybrid tower (including lattice/tubular combination) at 120 m hub height in Jamanwada, Gujarat

2015


- Suzlon commissioned its 10,000th WTG at the Artilleros wind farm in Uruguay
- Suzlon signed definitive agreements with Dilip Shanghvi Family and Associates (DSA) for equity investments of ₹1,800 Crore in Suzlon Energy Limited for equity infusion to accelerate growth
- Suzlon completes the testing, carried out by an independent third party agency, of the 50 Hz and 60 Hz variants of its S111-2100kW WTG
- Suzlon receives the certification for its S111-2.1 MW turbine, 50 Hz and 60 Hz variants, awarded by TÜV NORD and acknowledging conformity with standards and regulations for the design, testing and manufacturing of the WTG

2016

- Suzlon wins the Golden Peacock awards for eco-innovation

2017

- Crosses 11 GW installation mark in India



SUZLON
SÜDWIND

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LEGACY OF 360°



Suzlon has been built on the Legacy of 360°, envisioned and incorporated by its Chairman, Tulsi R. Tanti, and upheld by every individual who comprises the organisation. Committed to this tradition, Suzlon maintains a comprehensive approach in all aspects of its operations. From establishing multi-faceted and personal relationships with diverse partners to ensuring dedication to investors, and from ensuring environmental and social sustainability to providing end-to-end, customised solutions for customers, Suzlon meets the expectations of each stakeholder without distinction. That is why the business strategies of the organisation are designed to face changing tides and persevere in its chosen direction to reach new frontiers in renewable energy.



TULSI TANTI

CHAIRMAN, SUZLON GROUP

Tulsi Tanti is the Founder, Chairman and Managing Director of Suzlon Group, an Indian MNC and a prominent player in the global renewable energy sector. A visionary and world renowned expert on alternative energy, he champions the cause of renewable energy and is a firm believer in creating sustainable businesses and economies through energy independence and security. Mr. Tanti leads the strategic growth initiatives of the businesses of Suzlon Group. With a market cap of over USD 1.5 billion, the Group provides a full spectrum of green power solutions.

Mr. Tanti spearheaded the wind revolution in India with the founding of Suzlon Energy in 1995. He envisioned the opportunity in the Indian renewable energy industry at a time when the global wind energy market was dominated by international players and characterized by expensive and complicated technologies that were largely unviable for

traditional businesses. Instituting a new business model, Mr. Tanti conceptualized the end-to-end solution to create realistic avenues for businesses to 'Go Green' and thus emerged as a strategic partner in developing sustainable businesses.

Mr. Tanti holds a Bachelor of Commerce Degree and a Diploma in Mechanical Engineering. A leader in every sense, conscientious, astute and deeply committed, with a penchant for green energy issues, he has worked relentlessly to provide affordable clean energy alternatives to industries and a sustainable society for people. His passion can be seen in all aspects of the Suzlon Group, motivating all stakeholders with his vision and the desire to pursue sustainable social, economic and environmental development. Through various business and philanthropic initiatives, he is working to alleviate the effects of climate change to enable a greener future for our planet.

Accolades

26th November, 2003

Mr. Tulsi R. Tanti is recognized with the prestigious World Wind Energy Award.

31st January, 2006

The Foundation of Indian Industry and Economists presented Mr. Tulsi R. Tanti with a Lifetime Achievement Award, naming him the Best Renewable Energy Man of the Decade for leading Suzlon's contribution towards wind energy in India.

8th February, 2006

The Solar Energy Society of India presented the SESI Renewable Energy Pioneer Award to Mr. Tulsi R. Tanti.

16th November, 2006

Mr. Tulsi R. Tanti receives the prestigious 8th Ernst and Young Entrepreneur of the Year Award for India.

7th December, 2006

Mr. Tulsi R. Tanti is recognized as the Most Promising Entrant into the Big League at the CNBC-TV18 India Business Leader Awards 2006.

12th August, 2007

Mr. Tulsi R. Tanti receives the Rajiv Gandhi Award in the Best Industrialist category.

22nd October, 2007

Mr. Tulsi R. Tanti is named among TIME's Heroes of the Environment for his contribution towards raising awareness and initiating action on global climate change.

18th April, 2009

Mr. Tulsi R. Tanti receives the Global Indian Award, presented by the Canada India Foundation.

23rd April, 2009

Mr. Tulsi R. Tanti is awarded the UNEP Champion of Earth.

27th August, 2013

Mr. Tulsi R. Tanti receives Asia's Most Promising Leaders 2012-13 Award from the World Consulting and Research Corporation.

9th October, 2016

Wins the SWITCH lifetime Achievement award

6th September, 2016

Wins the Industry Man of the Year award at the Renewable Energy India (REI) Awards, 2016







CORPORATE OUTLOOK

Suzlon aims at creating sustainable economic, ecological and social development and move closer to fulfilling the vision of a greener tomorrow. By tapping the abundant and natural resources of wind and solar as energy sources, as well as combining them to bring about wind-solar hybrid solutions, Suzlon facilitates the offering of affordable and consistent power. The power solutions provided by Suzlon play a defining role in improving the quality of life by reducing the adverse effects human demands have on the limited, traditional sources. While the organisation is dedicated to technological advancement that benefits customers, it is also focused on bringing prosperity to the environment and society as part of a complete 360° solution. The outlook of the organisation is ubiquitous, covering all aspects, business and social, and is characterised by unique advantages including*:

- a workforce of ~8,500 people
- a presence in 18 countries of Asia, Australia, Europe, Africa and North and South America
- installed capacity of ~17 GW across 16 countries
- most comprehensive product portfolio in the industry
- the pioneered 'Concept to Commissioning' model for end-to-end solutions
- a dedicated life cycle asset management system titled OMS (Operations, Maintenance and Services)
- a full spectrum of services that ranges from feasibility studies to complete life cycle asset management
- a place in the category of the leading Original Equipment Manufacturer

** As on March, 2017*



PHILOSOPHY

Every action undertaken by Suzlon, from hiring motivated employees to accurately applying stakeholders' investment, and from focusing on technological development to offering continued support to customers, is carried out by keeping in mind the vision that guides the business. The activities that lead to the progress of the business are designed to meet the aim of bringing about sustainable development for everyone. Hence, the organisation is dedicated to upholding its philosophy:

'To pursue social, economic and ecological sustainable development for our planet.'

A woman with long, curly hair and a young boy are walking through a field of tall grass. The woman is wearing a white sleeveless top and has her arm around the boy's shoulder. They are both looking towards the left. The background shows a line of trees under a bright, hazy sky, suggesting a sunset or sunrise.

VISION

- To be a technology leader in the wind sector
- To be in the top three wind companies in the key markets of the world
- To be a global leader in providing profitable wind power solutions
- To be the 'Company of Choice' for stakeholders



ONE EARTH

One Earth, the corporate headquarters of Suzlon located in Pune, India, stands as a testimony to the organisational philosophy of pursuing sustainable development. Built in line with its vision of powering a greener tomorrow, the expansive, environment-friendly campus, is spread over ten acres. Divided into inter-connected, individual buildings named after the elements of nature, the campus houses 1,200 employees, members of senior management and the Board of Directors in its Sun,

Aqua, Sky, Tree and SEA lounges. A self-sustaining campus, One Earth employs effective controls and building management systems for minimum disturbance to the natural ecology of the site.

A LEED Platinum and GRIHA 5 star certified building, One Earth is one of greenest corporate campuses in the world and the place where the team of Suzlon comes together from across the globe to work in harmony with nature and build a greener tomorrow, today.

Green features of One Earth



100% powered by on-site and off-site renewable energy including hybrid wind turbines, solar panels and photovoltaic cells



Rainwater harvesting facilities with on-site water treatment and recycling facilities



On-site organic waste converter



'Office in garden' design concept which harvests maximum daylight in work spaces and common areas



Reduction of approximately 35% in operating cost due to energy and water cost savings, a benefit that is transferred to customers through increased investment in technology





END-TO-END SOLUTIONS

The Legacy of 360° ensures that Suzlon provides solutions across the entire spectrum of customer needs, while also assuring satisfaction to employees and investors, and the protection of the environment. It is this focus that resulted in the pioneered 'End-to-End Solutions' business model. A conglomerate of the various services provided to customers, the model is driven by the targets of value engineering and cost reduction which provide better margins and competitive advantages to the organisation as well as its stakeholders and customers. In order to fulfil its offering of 'End-to-End Solutions', Suzlon has implemented both, forward and backward integration. The organisation offers services that comprise all segments of setting up a power plant project as well as maintaining it through its operating life.



360° services conglomerate



The expansive range of solutions offered by Suzlon allows customers to choose either part or full services and opens both markets, retail and institutional. This enables Suzlon to meet customer needs in three ways:

- a. As an equipment supplier
- b. As a service and support provider
- c. As a turnkey solution (Equipment, Procurement and Construction, or EPC) service provider

Suzlon offers a full range of services by aligning, with customer needs, the integration of the following functions:

- Technology and R&D
- Product portfolio
- Supply chain
- Value chain
- Manufacturing and production
- Project development
- Project scheduling
- Services and spares
- Corporate social responsibility

It is the amalgamation of these individual, but related functions, that makes possible the successful implementation of the 'End-to-End Solutions' strategy.



TECHNOLOGY AND R&D

Technology and R&D play a pivotal role in the structure and growth of Suzlon and the fulfilment of its vision. The organisation has invested heavily to create a robust R&D foundation that enables the design of state-of-the-art products by leveraging skills from around the globe:

Country	Unit	
Germany	Hamburg	<ul style="list-style-type: none"> Development & Integration Certification
	Rostock	<ul style="list-style-type: none"> Development & Integration Innovation & Strategic Research
Netherlands	Hengelo	<ul style="list-style-type: none"> Blade Design and Integration
India	Pune	<ul style="list-style-type: none"> Design & Product Engineering Technical Field Support
	Vadodara	<ul style="list-style-type: none"> Blade Testing Center
	Hyderabad	<ul style="list-style-type: none"> Design & Product Engineering (BOP team)
	Chennai	<ul style="list-style-type: none"> Design & Product Engineering (Gear Box Team)
Denmark	Aarhus	<ul style="list-style-type: none"> SCADA
	Vejle	<ul style="list-style-type: none"> Blade Science Center

The wind turbine technology research field has always been dynamic. Suzlon has applied its experience to identify the primary needs of this capricious environment which include reliability, ease of operation, cost reduction and load reduction for weight. Its focused research, evolving development and cutting-edge technology have made Suzlon a market leader in the wind industry.

Presently, the 2.1 MW platform remains the focus of new products and technology while the organisation continues to offer repairs, services and part replacements for earlier models ranging from 600 kW to 2.1 MW. Keeping the aim of increasing the energy yield of wind turbines at the core of its development, Suzlon has developed a product portfolio that contains solutions to meet varied customer needs.



COMPREHENSIVE PRODUCT PORTFOLIO

The international R&D set-up of Suzlon combines the experience, knowledge and expertise of individuals from varied regions. This has enabled Suzlon to move beyond the industry norm and create advancements in technology that contribute to its comprehensive product portfolio with products ranging from 600 kW to 2.1 MW. Keeping in mind the varying needs of the international regions it serves, Suzlon has designed solutions and products that meet differing wind, climatic and geographic conditions. That is why Suzlon turbines can successfully operate across the arid,

desert conditions of Rajasthan and the sub-arctic climates of Canada while remaining compliant with current grid code standards worldwide.

Suzlon records up-time in excess of 98% and works towards making products more reliable and consistent, so as to exceed global availability standards. The inclusion of products and solutions that meet the unique needs of every customer, and the continued support provided, has led Suzlon to be known as the solution provider with a comprehensive product portfolio.



Specifications

	S97	S111
Standard specifications		
Power Rating (MW)	2.1	2.1
IEC Wind Class	IIB/IIIA	IIIA
Swept area (m ²)	7,451	9,852
Standard Hub Height	80m, 90m 100m, 120m	90m, 120m 140m
DFIG - LVRT	Yes	Yes
Speed Flexibility	+/-20%	+/-30%
Power Out Tower (POT)	Yes	Yes
Additional features		
Near shore (C5M corrosion class)	Optional	Optional
120m Hybrid Lattice Tower - STV Light	Optional	Optional
Power in Tower (PIT)	Optional	Optional
HTV (0°C to 50°C, non icing)	50 Hz/60 Hz Optional	50 Hz/60 Hz Optional
LTV (-30°C to 40°C)	50 Hz/60 Hz	50 Hz/60 Hz
Type certification	Yes	Yes

Country specific build standards

India: 50 Hz, STV Light: 0°C...40°C, Non Icing, POT

CE Europe: 50 Hz, STV -10°C...40°C, PIT

Brazil: 60 Hz, STV Light: 0°C...40°C, Non Icing, POT

UL U.S.A, CSA Canada: 60 Hz, STV - 10°C...40°C, POT
60 Hz, LTV - -30°C to 40°C POT







INTEGRATED SUPPLY CHAIN

The supply chain of Suzlon incorporates the workings of numerous verticals, subsidiaries and vendors to provide customers with the solutions that they require. It integrates functions ranging from wind resource analysis to service and maintenance, and is supported by others including quality and safety management,

finance and human resource as well as practices implemented under corporate social responsibility. Furthermore, Suzlon applies its monitoring and R&D practices to ensure the progressive evolution of products and services.

The functions of the supply chain are either carried out in-house or outsourced to vendors. Suzlon aims at consistency in practices and quality in products, both of which are ensured through a rigorous vendor development process. All vendors and subsidiaries are required to meet the quality standards, strategic goals and vision of the organisation. They are carefully screened and analysed on numerous criteria related to materials, processes, quality and environment by a dedicated unit that is comprised of members of senior management among other experts. Vendors are also required and recommended to obtain industry

certifications to verify their practices including:

- Quality Management System standard of ISO 9001:2008 for quality and excellence in production
- Occupational Health and Safety Management System standard of OHSAS 18001:2007 for maintaining a high standard of employee health and safety
- Environmental Management System standard of ISO 14001:2004 for maintaining the Suzlon promise of a minimised carbon footprint



Regular audits lead to an updated vendor list every six months, ensuring that vendors remain vigilant and consistent, and obtain the necessary certificates to remain in association with Suzlon. Vendors are also required to submit prototypes before being authorised, ensuring that the quality is up to the required standards and in line with the corporate strategy.

The vendor development process of Suzlon, with its unique item/vendor combination, is a core advantage of the organisation. Suzlon finds the perfect role for every vendor in the production cycle as per their expertise. Furthermore, Suzlon offers assistance and advice to every vendor to assist with their alignment with the practised methods and expected standards of operation. This protocol, along with the diligence maintained by the quality department, ensures that the quality of production never falters.

This development process also guarantees that all business operations and production practices, in-house and outsourced, remain environment-friendly. Furthermore, the process streamlines the operations and practices of many such vendors, as well as results in them obtaining certifications that verify their international standing.

Its integrated supply chain is divided into individual, but interrelated, functions that allow Suzlon to identify points of advantage for multiple stakeholders including the organisation itself, its investors, its customers and society at large. The various functions ranging from production to quality management, and from project development to corporate social responsibility come together to achieve the goal of a sustainable economy and green environment.



PRODUCTION, MANUFACTURING AND LOGISTICS

Suzlon has established production facilities for entire wind turbines, as well as components thereof, in India and China. The combined manufacturing capacity of the organisation includes that of facilities owned by Suzlon, obtained through joint ventures and outsourced to vendors. The collaborations and

manufacturing facility locations have been strategically made and chosen for their proximity to key markets, manufacturing-friendly policies, economic climate, easy availability of raw materials and skilled manpower, thereby enabling Suzlon to gain the advantages of cost optimisation and simplified logistics.

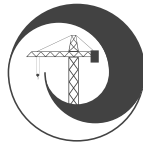
The production facilities utilised by Suzlon include the following:

Location and Facility	Product/Component	Annual Capacity
Forging, generator and electrical unit at Coimbatore, Tamil Nadu, India	Generators	3,000 MW
	Control systems	4,000 MW
Turbine and blade unit at Padubidri, Karnataka, India	Nacelle cover and nose cone	1,890 MW
	Nacelle and hub	1,500 MW
	Rotor blades	2,400 MW
Forging and composite engineering unit at Vadodara, Gujarat, India	Plug, mould, EMT and SPM	–
	Blade testing	–
Electrical unit at Vadodara, Gujarat, India	Transformers	1,500 MW
Blade unit at Dhule, Maharashtra, India	Rotor blades	800 MW
Blade unit at Bhuj, Gujarat, India	Rotor blades	800 MW
Generators unit at Chakan, Maharashtra, India	Generators	2,000 MW
Tower unit at Gandhidham, Gujarat, India	Tubular towers	1,250 MW
Integrated turbine unit at Daman, Union Territory of Daman and Diu, India	Nacelle cover and nose cone	1,260 MW
	Nacelle and hub	1,200 MW
Integrated turbine unit at Union Territory of Pondicherry, India	Nacelle cover and nose cone	630 MW
	Nacelle and hub	924 MW
Blade unit at Jaisalmer, Rajasthan	Rotor blades	400 MW
Blade unit at Dhar, Madhya Pradesh	Rotor blades	400 MW
Blade unit at Anantapur, Andhra Pradesh	Rotor blades	1200 MW
Integrated turbine unit at Tianjin, China (JV)	Rotor blades, Generators, Control Panels and Nacelle	600 MW

The manufacturing facilities of Suzlon make up only a part of the entire solution offered by the organisation. Each customer's requirement is perceived as an individual project that begins at wind resource assessment and continues into the entire lifetime of the turbine.







PROJECT DEVELOPMENT

Suzlon executes all its orders through its project development process which includes the following steps:



Timely delivery is a primary concern of customers in every industry, especially in a capital intensive one such as renewable energy. Suzlon recognizes that its clients make heavy investments of cost, time and effort when they make the transition from traditional to renewable energy generation sources or when they choose to use renewable energy to power their businesses. That is why Suzlon has the Central Planning Cell, an established unit dedicated to ensuring prompt delivery.

Suzlon meets its time commitments by first analysing capacity and then taking up only those orders that can be met by the available capacity. Every aspect of the production and delivery stage is then carefully planned by the CPC, incorporating buffer time in the schedule to allow for any contingencies. This timeline is continuously reviewed and altered to absorb changes and ensure on-time delivery.







QUALITY, HEALTH, SAFETY AND ENVIRONMENT (QHSE) MANAGEMENT

Quality, Health, Safety and Environment (QSHE) management is pivotal to every project of Suzlon, with the people, products and processes of the organisation being carefully scrutinized at every step along the way.

The Quality Management Organisation, QMO, implements and oversees the various practices involved in meeting the quality standards of the company. Its responsibilities include:

- laying individual scorecards for the roles and responsibilities of each process
- setting individual and strategic objectives to enable the measuring of progress against expectations
- solving problem areas before they become significant

These responsibilities are further extended to ensure that short term objectives meet the long term vision, with each employee and process being a part of this endeavour.

The standards for health and safety of the employees across all units, and impact on the environment as a result of business practices, are set and controlled by the global HSE management system initiative. The remote manufacturing facilities of Suzlon host operational activities that cut across various technologies, industrial segments, cultures and climatic conditions. This makes it critical to sustain standards of occupational health and safety across the organisation. Compliance with industry standards and laws of safety ensures that employees are given an environment in which commitment to the organisational vision and mission can thrive, and in which stakeholders have the confidence that safety is an integral aspect of their projects.

Additionally, the organisational vision of powering a greener tomorrow begins within it, by making its business and production practices environment-friendly. Not only do the administrative functions work on the concept of minimising carbon footprint, the manufacturing processes are also designed for minimal carbon emission. This ensures that Suzlon works towards its vision not only by adding to renewable energy, but also by reducing its own carbon footprint. Suzlon has received relevant certifications that validate its many practices. DNV GL – Business Assurance body has awarded Suzlon the following certificates for ‘Marketing, design and development, fabrication, manufacture, testing, delivery, site selection, infrastructure, installation, commissioning, operation, servicing and performance assessment of complete wind turbine generators including the integration of component manufacturing units’:

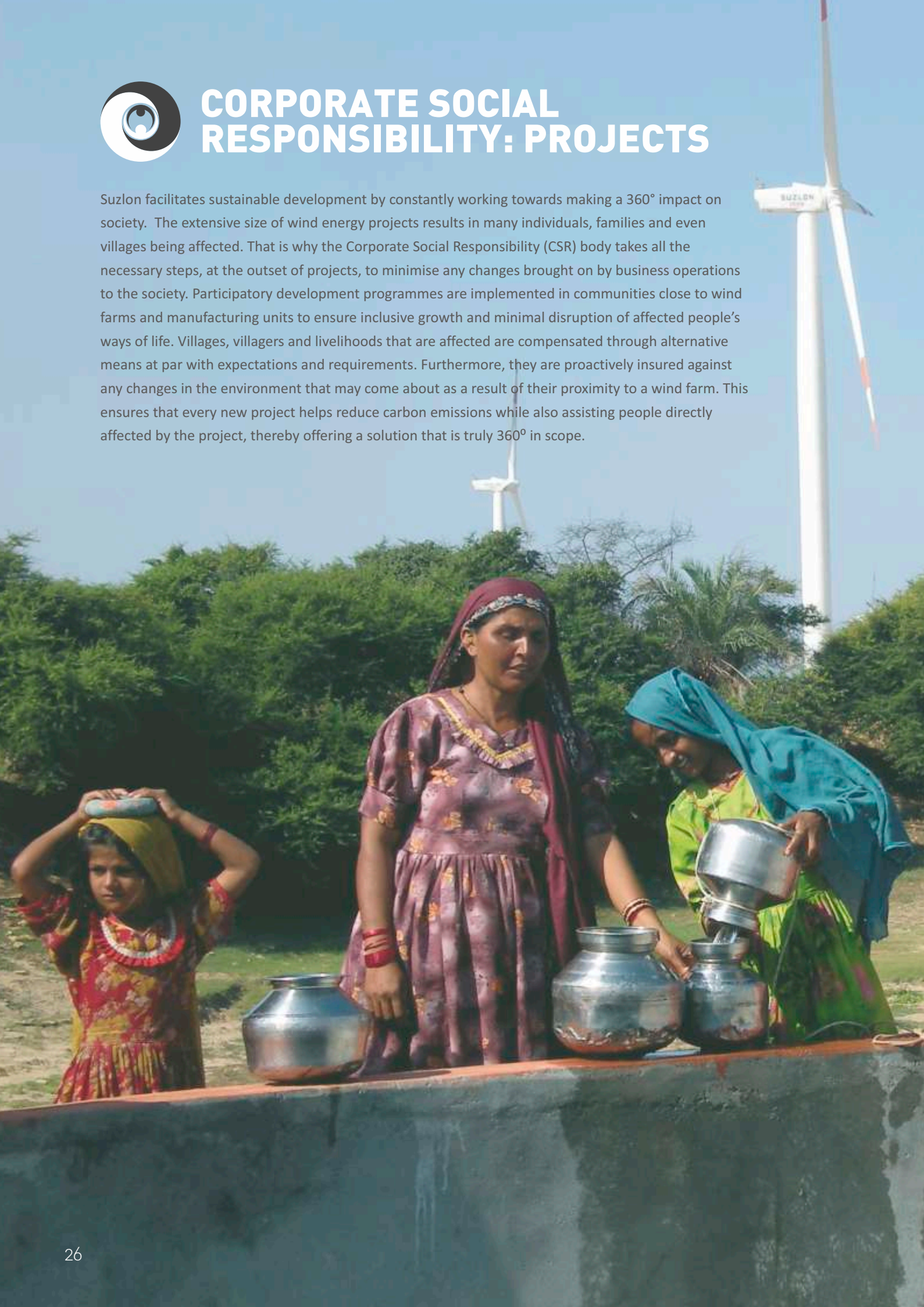
- Quality Management System standard of ISO 9001:2008
- Occupational Health and Safety Management System standard of OHSAS 18001:2007
- Environmental Management System standard of ISO 14001:2004

The QMO maintains continuous monitoring which ensures high and sustained quality in products, processes and practices. The efforts of the organisation are complemented by the HSE guidelines which create an atmosphere that leads to the thriving of employees and, consequently, satisfaction of stakeholders, while maintaining the purity of the environment.



CORPORATE SOCIAL RESPONSIBILITY: PROJECTS

Suzlon facilitates sustainable development by constantly working towards making a 360° impact on society. The extensive size of wind energy projects results in many individuals, families and even villages being affected. That is why the Corporate Social Responsibility (CSR) body takes all the necessary steps, at the outset of projects, to minimise any changes brought on by business operations to the society. Participatory development programmes are implemented in communities close to wind farms and manufacturing units to ensure inclusive growth and minimal disruption of affected people's ways of life. Villages, villagers and livelihoods that are affected are compensated through alternative means at par with expectations and requirements. Furthermore, they are proactively insured against any changes in the environment that may come about as a result of their proximity to a wind farm. This ensures that every new project helps reduce carbon emissions while also assisting people directly affected by the project, thereby offering a solution that is truly 360° in scope.





OPERATIONS, MAINTENANCE AND SERVICES (OMS)

Suzlon offers the advantage of lifetime support to its customers, thereby establishing a partnership that goes beyond the installation and commissioning of WTGs. The OMS division offers SUZlon REliability (SURE services) which is Suzlon’s assurance of dependability at every stage of investment. The SURE suite of services, has been designed to ensure optimum performance, higher yields and maximum RoI and includes:

assetSURE

Asset Management, Operations, Maintenance and Optimization

windSURE

Wind Resource Measurement and Analysis

projectSURE

Project Management, EPC, Power Evacuation and BoP Management

Handled by the OMS team, this range of services offers support to ensure smooth functioning of all WTGs and includes the following practices:

- repair of damage caused by extenuating conditions
- service of equipment to contradict the regular wear and tear of parts
- stocking of spares, including those for WTGs no longer manufactured but only maintained, at pivotal locations

- recalls in case of any grievance
- regular services, and services during peak seasons

An important aspect of OMS is the best-in-class Supervisory Control and Data Acquisition, known as SCADA, system. Designed with TIA 942 with TIER 3 availability, the SCADA system connects each WTG to Suzlon monitoring centres in Pune, India, Chicago, U.S.A. and Melbourne. The SCADA service enables real-time monitoring of WTGs, expedites troubleshooting and notification, facilitates data acquisition and analysis for predictive maintenance, all with secured access. The conditional monitoring systems used in Suzlon WTGs aid in the prediction of component failures which helps the OMS team plan corrective actions. With its global supply chain and local distribution, complemented by in-house manufacturing, the OMS vertical of Suzlon helps the organisation stay ahead of critical component demand in case of breakdowns and ensures smooth functioning of the WTGs across all regions and climatic conditions for the duration of its entire life cycle. This enables the increase of up-time and reduction of down-time, leading to the optimization of the energy yield.





SUPPORT SERVICES

Human Resource

The most valuable asset of Suzlon, its human resource, plays an important role in the growth and success of the organisation. Beginning with just five people in 1995, Suzlon has grown to employ over 8,000 people within 20 years of its establishment. The organisation harnesses the talent of its employees through continuous technical and leadership development, and a focus on their long-term career goals. The high performance culture at Suzlon offers employees immense operational freedom and growth opportunities, with the advantage of learning from its global presence and network. The dedicated team of individuals that shares in the company vision of a greener future plays a pivotal role in the market leadership and competitive edge possessed by Suzlon.

Finance

Smart financing is the key to obtaining positive return on investment. Suzlon ensures that its financial resources are applied keeping both in mind, the organization and the benefit of its customers. A primary part of this endeavour is the implementation of an advanced Enterprise Resource Planning (ERP) system, and associated tools, that result in the maintenance of financial practices adhering to all prevailing accounting laws and regulations, and the provision of transparency to stakeholders.

A primary objective of the Suzlon focus on R&D is a reduced Levelised Cost of Energy (LCoE). This aim drives all the manufacturing and administrative practices of the organisation. Its financial practices, aiming at value generation and cost optimisation, play a pivotal role in this endeavour, and have helped Suzlon develop benchmarks across the globe on various parameters that reduce cost and improve efficiency.



GLOBAL PRESENCE

Suzlon began its operations in 1995 in Gujarat, India. A pioneer in the wind energy generation and renewable industries, the company soon grew to become a market leader. In 2003, it moved beyond its national boundaries with the commissioning of its first WTG in the U.S.A. Today, after two decades in the renewable energy industry, Suzlon has a presence across 18 countries, with installations and research facilities set up under the parent company and, in some cases, under joint ventures.



NORTH AMERICA

Company:

Suzlon Wind Energy Corporation
(wholly owned subsidiary of SEL)

Installation: Over 2,770 MW

Offerings:

- Co-development
- Supply Agreement (SA)
- Operations, Maintenance and Services (OMS)
- Health, Safety and Environment (HSE) services

Key clients:

- EDPR
- EverPower
- Exelon Corporation
- NRG Energy
- SunEdison
- Iberdrola Renewables



**Maps not to scale. All data, information, and maps are provided "as is" without warranty or any representation of accuracy, timeliness of completeness.*

** As on March, 2017*



EUROPE

Company:

- Suzlon Energy A/S
- Suzlon subsidiaries established in Spain, Portugal, Turkey, Nicaragua, Romania and Bulgaria

Regions covered:

- Europe
- Latin America
- South Africa

Installation: ~508 MW

Offerings:

- Engineering, Procurement and Construction (EPC) solutions
- Supply and Installation Agreement (SIA)
- Supply Agreement (SA)
- Operation, Maintenance and Services (OMS)

Manufacturing and R&D facilities:

- Product development and Drive train technology, Rostock and Hamburg, Germany
- Global wind and site knowledge centre, SCADA, Aerodynamics, Loads, Smart pitch control system, Aarhus and Vejle, Denmark
- Blade development & Rotor technical field support, Hengelo, The Netherlands

Key clients:

- IC Power
- Martifer Renewables



INDIA

Company:

Suzlon Energy Limited

Regions covered:

- India
- South Asia
- Middle East

Installation: Over 11,200 MW

Offerings:

- Engineering, Procurement and Construction (EPC) solutions
- Supply and Installation Agreement (SIA)
- Supply Agreement (SA)
- Operations, Maintenance and Services (OMS)

Manufacturing and R&D facilities:

- Blade Test Centre (BTCG), Vadodara
- Engineering (Technical service group), Pune and Chennai
- Manufacturing facilities at Anantapur, Badnawar, Bhuj, Chakan, Coimbatore, Dhule, Daman, Gandhidham, Jaisalmer, Padubidri, Puducherry and Vadodara

Key clients:

- Bajaj Finserv Limited
- Essel Mining (Aditya Birla Group)
- Gujarat Mineral Development Corporation (GMDC)
- Hindustan Petroleum Corporation Limited (HPCL)
- Mytrah Energy Limited (MEIL)
- National Aluminium Company Ltd (NALCO)
- Oil & Natural Gas Corporation Limited (ONGC)
- Rajasthan State Mines & Minerals Ltd. (RSMML)
- Tata Power



CHINA

Company:

Suzlon Energy (Tianjin) Limited (Joint Venture)

Installation: Over 920 MW

Offerings:

- Supply and Installation Agreement (SIA)
- Supply Agreement (SA)
- Design and construction of wind farms
- Technology consulting services

Manufacturing and R&D facilities:

- Design and development of wind energy technologies
- Development, manufacture and sale of wind turbine generator related equipment and spare parts

Key clients:

- Datang
- Guohua
- Honiton Energy
- Huaneng New Energy
- Jingneng



AUSTRALIA

Company:

Suzlon Energy Australia Pty. Ltd. (SEA) (subsidiary of SEL)

Installation: Over 760 MW

Offerings:

- Engineering, Procurement and Construction (EPC) solutions
- Supply and Installation Agreement (SIA)
- Supply Agreement (SA)

Manufacturing and R&D facilities:

- Headquarters at Burnley, Victoria
- Operations across South Australia, New South Wales and Victoria

Key clients:

- AGL Energy Ltd
- Infigen Energy Limited
- Pacific Hydro Australia Pty Ltd
- TrustPower Limited



CORPORATE SOCIAL RESPONSIBILITY: THE SUZLON FOUNDATION

Suzlon is committed to bringing about sustainable economic, ecological and social development and this philosophy extends beyond usual business operations. The CSR practices undertaken by the organisation during each project focus on the areas directly affected by the project. However, Suzlon also has a dedicated body that looks after projects aimed at the betterment of the society and that are implemented at regular

intervals across the country. Leading the corporate social responsibility initiatives of the organisation, the Suzlon Foundation works across eight states, as well as the Union Territory of Daman, in India. Having successfully reached out to 1,072 villages till date, the CSR initiative of Suzlon contributes to the commitment to combat climate change.





Aligned with the vision of the organisation, the Suzlon Foundation enables sustainable development and commits to ethical business practices that are fair to all stakeholders by:

- engaging stakeholders in socially and environmentally beneficial activities
- protecting resources and creating harmony by balancing growth, equity and justice
- ensuring minimal impact on the natural environment
- enabling local communities to develop their potential
- empowering vulnerable communities to address their own development issues and effectively participate in the governance of community institutions
- facilitating individual well-being by enhancing the financial resources of local communities through livelihood promotion, capacity building, market links, micro credit and grants for resource improvement
- promoting access to better education opportunities, quality healthcare and positive behavioural change for individuals
- building social capital by strengthening community based organisations, promoting women empowerment and initiating collective action for self-development to facilitate community well-being
- meeting the physical needs of on-site communities by providing them access to civic amenities and services such as drinking water, roads and transport, alternative energy and healthcare
- facilitating environmental well-being through effective environmental management, soil and water conservation, rainwater harvesting and promotion of eco-friendly livelihoods
- empowering employees to be responsible members of civil society



GROUP HEADQUARTERS: One Earth, Hadapsar, Pune - 411 028, India
Tel.: +91-20-6702 2000 / 6135 6135 Fax.: +91-20-6702 2100 / 6702 2200

Website: www.suzlon.com