Preamble....what we all know

- Depleting natural resources
- Environmental impact: Global warming, Climate change
- Energy Security
- Global GDP growth, ever increasing energy consumption
- Rising cost of fossil fuels
- Global regulatory framework

Renewable energy has emerged as most promising solution for energy & environment issues
**Reality Check…..**

In 2012, despite a slowing global economy, India’s electricity demand continued to rise. Electricity shortages are common, and over 40% of the population has no access to modern energy services.

India’s electricity demand is projected to more than triple between 2005 and 2030. In the recently released National Electricity Plan (2012) the Central Electricity Authority projected the need for 350-360 GW of total generation capacity by 2022.

Despite major capacity additions over recent decades, power supply struggles to keep up with demand. Current energy deficit of 10% and peak deficit of 12%.

According to the IEA’s World Energy Outlook (2011) India’s energy demand increases by a compound annual growth rate (CAGR) of 3.1% from 2009 to 2035, which is more than double the world’s energy demand growth at a CAGR of 1.3% for the same period.

12th Plan period (April 2012 to March 2017) has fixed a reference target of 15,000 MW in new wind capacity additions, and an aspirational target of 30,000 MW (RE).

Poverty reduction and economic growth are the prime objectives of the National Integrated Energy Policy; and energy is the key driver of development.

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**The Renewable Energy (RE) Scenario in India**

- The 18 GW strong RE sector in India is 10% of the country’s cumulative power sector capacity and adds 4% of the total power generation.
- Wind power alone accounts for more capacity and net power generation than the nuclear power in India.

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*Source: MNRE*
Key drivers for wind sector which influence Sectoral Viability

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Key Drivers create Sectoral/Project Viability which in turn influences Response viability such as.....

1. Increasing awareness & support to combat Global warming and Climate Change etc
2. Global initiatives eg.COP, Rio+20 drive Renewable Energy investments
3. Maturing technology enable Cost & Performance optimization; Close to achieving grid parity
4. Renewable Energy incentives e.g. RECs, CER, GBI facilitate project feasibility
5. Massive potential in harnessing offshore wind energy
Response effectiveness depends upon environmental footprint

Generic idea regarding environmental footprint...

Environmental footprint will depend upon...

- Wind Resources Mapping
- Land and Site Identification
- Design & Mfg. of WTGs
- Site Infrastructure Development
- Installation & Commissioning
- Power Evacuation
- Life Cycle Asset Management
  - Value Added Services (CSR, Environmental and Stakeholder Managements;)
  - ...
**Government of India – Responsible Approach to Climate Change Mitigation**

- Government of India released the National Action Plan on Climate Change (NAPCC) outlining existing and future policies and programs addressing climate mitigation and adaptation.

- The Plan identifies eight core “national missions” running through 2017 – identifies India’s development objectives while yielding co-benefits for addressing climate change.

- The Plan’s broad goals are consistent with the three pillars of sustainable development – economic; social; and environmental – which all need to be integrated for the provision of adequate energy supplies.


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**Suzlon’s Leadership in India**

- Market leader for 13 years
- More than 6 GW of installed capacity across 40+ wind farms in 8 states
- Developing mega sized wind parks including Asia’s largest one at Kutch, Gujarat with planned capacity of 1500MW
- Over 1600 customers in India
- 2000+ technical manpower
- World class integrated WTG manufacturing facilities with annual capacity of 3.5 GW for supplies to local and global markets
Suzlon Group in Numbers

- **Products**: 600kW to 6MW
- **Employees**: 13,000+
- **Global presence**: 32 countries
- **Installed capacity**: 18+ GW
- **CO2 reduction**: 30+ Mn T YoY
- **Order-book**: $7.5 Bn
- **Turnover**: $3.6 Bn

**Suzlon**

- **Strong technology focus, manufacturing in LCC and presence in high growth markets make Suzlon a leading global player**

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**SUZLON’s Market Leadership**

- **Rajasthan**: 1029 MW
  - Wind parks at Sawai Madhopur (625 MW) & Jodhpur (305 MW)

- **Gujarat**: 1311 MW
  - Wind parks at Kutch (825+ MW - Asia’s largest) and Saurashtra (485+ MW)
  - Manufacturing plants
  - Blade Testing Center

- **Maharashtra**: 1552 MW
  - Wind parks at Dhule (760+ MW), Sangli (270 MW), Satara (285 MW)
  - Manufacturing plants
  - Engineering centers
  - Group Global HQ

- **Karnataka**: 661 MW
  - Wind parks at Koppanguda (257 MW), Harpanhalli, Chittadiya & Hassan
  - Manufacturing plant

- **Kerala**: 21 MW
  - Wind park at Agali

- **Andhra Pradesh**: 8.5 MW
  - Wind farm at Tirupati
  - Upcoming wind park at Anantapur

- **Tamil Nadu**: 1687 MW
  - Wind parks at Sankarneri (700+ MW), Coimbatore (530 MW) and Devarkulam (415 MW)
  - Manufacturing plants

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**Suzlon Energy Ltd.**

- **Gujarat**: 1231 MW
  - Wind parks at Kutch (860+ MW - Asia’s largest) and Saurashtra (400+ MW)
  - Manufacturing plants
  - Blade Testing Center

- **Maharashtra**: 1552 MW
  - Wind parks at Dhule (760+ MW), Sangli (270 MW), Satara (285 MW)
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**Eastern Region**

- **Regional HQ at Kolkata**
- 2 Marketing offices

**Northern Region**

- **Regional HQ at Delhi**
- 3 Marketing offices

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- **#1 for 14 years**
- **45% annual growth**
- **~6000 + dealerships & service centers**
- **1600+ engineers & technicians**
- **45% repeat business**
- **40+ wind farm projects**
- **8 bases**
Suzlon Group installations

Customized solutions as per market requirements
Around 18,000 MW in 30 countries & 2,100 technicians working worldwide*

Environmental Impacts due to the Changes in Land use

- **Infrastructure development & construction**
  - Tree felling (replaced at best by lawns)
  - Water and energy consumption
  - Cementing – reduction in water percolation
  - Short term labor requirements

- **Manufacturing, transport, packaging**
  - Waste disposal, land filling / incineration
  - Emissions and effluents
  - In migration – load on local resources
  - Consumerism and neglect of local produce / resources

Threat to Local Environment
Suzlon’s Efforts

- **Taking CSR seriously** – as a responsibility and sustainable business strategy
  - Not just spending – but making money responsibly
  - Not just looking good /doing good but being good
  - Relating to farmers as partners in success – win – win
  - Gender justice - promoting women farmers

- **Conjunction land use – a major initiative:**
  - Sharing common property resources / land water
  - Investing in conservation and biodiversity (Soil & Water Conservation, tree plantation, indigenous seed banks)
  - Grazing land development;
  - Collective farming (khadins) in desert and arid zones along with participatory NRM;

Suzlon’s Efforts

- **Supportive mechanisms in partnership with Govt and NGOs**
  - Strengthening women farmers - Self Help Groups, Micro-Credit
  - Evolving a cadre of 'jankars' ('wise women') to facilitate small holder's innovation and subsistence
  - Promotion Integrated Agro Based Livelihoods Program (IABLP) approach (farming system approach); emphasizing mutual dependency of degraded land and livestock;
  - Bio-mass recycling for soil improvements

Empowering & enabling Smallholders
Suzlon’s Efforts

- **Encouraging Innovation**
  - Village awards to reward collective efforts
  - Multimedia documentation of outcomes for extension;
  - Technology transfer;
  - Cross subsidizing innovation through 'in kind' support of machinery, factory scrap, technical trouble shooting and market link;
  - Promotion of 'green', organic, eco friendly food among growing middle class that can afford and appreciate nutritive value;
  - Agriculture in public schools to promote farming

It makes business sense ...

What is in it for Corporate?

- License to operate
- Risk reduction
- Reduced generation losses / down time
- Customer Satisfaction and choice
- Employee’s choice
- Brand image – not just green washing
- Investment in tomorrow’s business
- Community as business partners -

Sustainable Business for sustainable Economy
Lessons and points to deliberate

- Demanding “responsible business”
- Engaging businesses in sustainable development
- UN / Govts and research institutions to explore win-wins
- Evolving business perspective from within - it is possible
- Empowering civil society to demand Accountability and transparency

If we don’t co-opt businesses they will co-opt us
Summarizing SUZLON’s Approach...

India is a large developing country with a nearly 700 million rural population directly depending on climate sensitive sectors (like agriculture, forests and fisheries) and natural resources (such as water, biodiversity, mangroves, coastal zones, grasslands) for their subsistence and livelihoods. Climate change is likely to impact all the natural ecosystems as well as socio-economic systems as per the National Communications Report of India to the UNFCCC. In fact, developing countries like India are facing the dual burden of climate change and globalization.

SUZLON’s approach to addressing the challenges of Climate Change is based upon this understanding of Indian context – i.e. an effective response needs to be derived from an integrated approach to adaptation and mitigation.

Thank You