

Books Authored

LET'S SAVE THE PLANET



TULSI TANTI

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Foreword

Turning the challenge of climate change into an opportunity for long-term sustainable prosperity will require a transformation in the way we produce and consume energy – a Clean Revolution that enables us to meet the needs of the world’s population while conserving the very planet that allows us to survive.

“Let’s Save the Planet” lays out clearly the challenge we face and the steps we must take to meet it. Unlike the many reports that highlight the threat of climate change, but sadly conclude that the necessary steps to cut emissions and mitigate climate change cannot – or will not – be taken, “Let’s Save the Planet” shows the steps we need to take in the short-term are in fact relatively modest, and well within our grasp, but also that many of the actions needed bring a wealth of other benefits – improved local environments, health, security, jobs and increased productivity, to name but a few.

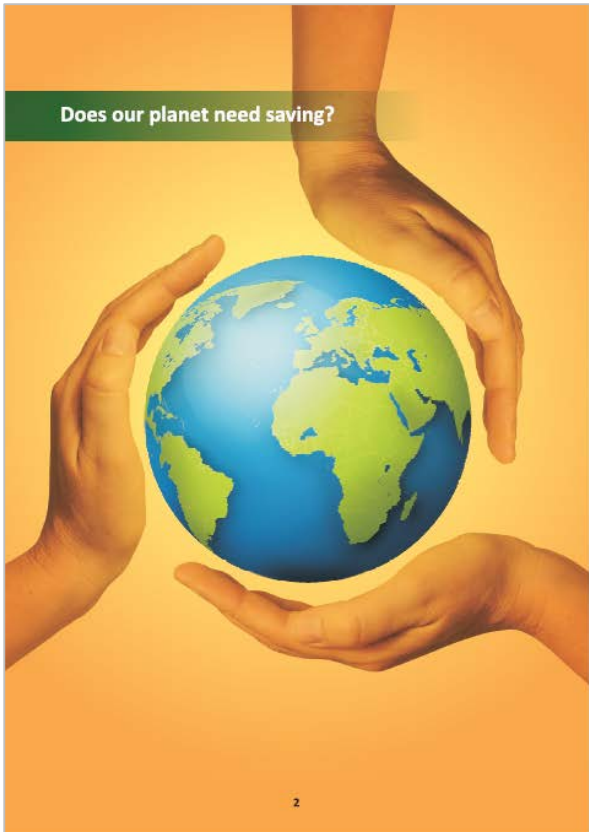
Achieving this Clean Revolution will in turn require inspired leadership not only from politicians, but equally importantly from entrepreneurs and captains of business and industry. The fact that this pamphlet is written by a businessman – rather than a politician or NGO official – is something we should draw encouragement from. Politicians need to provide strong leadership in this area, and work energetically to agree a replacement for Kyoto. But it is the private sector which needs to grab the opportunity to innovate and develop practical solutions that address this challenge and pave a stronger road to growth.

Tulsi Tanti and Suzlon have shown that this leadership can come from all corners of the planet and, through concrete action, that fighting climate change can be a true business opportunity, an example that should inspire and catalyse others to act. The Climate Group is proud to have Tulsi Tanti as a member of our International Leadership Council and to work with him and Suzlon to further our shared goals.

Mark Kenber
CEO, The Climate Group

A LIFETIME OF CONTRIBUTION: SHRI TULSI TANTI, FOUNDER, LATE CHAIRMAN AND MANAGING DIRECTOR

The journey from “The Wind Man of India” to becoming “The Father of Indian Renewable Energy”



Does our planet need saving?

Perhaps not. Planet Earth will be around long after we are gone. It is us – all seven billion of us – that need saving. Our progeny needs saving, we need to leave behind a ‘livable’ planet for them.

“My daughter and the rest of Generation Hot have been given a life sentence for a crime they didn’t commit,” says author Mark Hertsgaard. “The reality is that we’re locked in to at least 50 more years of rising temperatures and the harsher climate impacts they bring. Thus the young people of Generation Hot are condemned to spend the rest of their lives coping with a climate that will be hotter and more volatile than ever before in our civilization’s history.”

Mark puts the official start of Generation Hot at June 23, 1988, when climate scientist James Hansen first testified to Congress about climate change

‘Generation Hot’ may have only been born relatively recently, but we have been creating this change for much longer. Global atmospheric concentrations of CO₂, the most important greenhouse gas, ranged between 200 and 300 parts per million (ppm) for 800,000 years, but have shot up to about 391 ppm over the past 150 years, mainly because of the burning of fossil fuels.

“I believe that the long-term future of the human race must be in space.”

Stephen Hawking argues that it is nearly impossible for Earth to avoid disaster within the next few hundred years, and therefore the human race should expand to other planets

The average temperature on Earth has already warmed by close to 1°C since the beginning of the industrial period, and if we continue on the same path we will breach the threshold beyond which a 2°C increase will become unavoidable by 2020. The consequences of this are already being felt across the world; extreme weather fluctuations, widespread melting of snow and ice, and rising sea levels.

Conclusion

At Suzlon, we are committed to powering a greener tomorrow, today. The 13,000 strong Suzlon family works each today towards:

- Providing energy for all
- Providing affordable energy to its consumers
- Working to build a low-carbon, sustainable economy for every country
- Providing thousands of green-jobs through wind energy

The time to act is now. The Climate Group envisages getting the world together for unified action. I personally urge you to join their unique efforts at TheCleanRevolution.org today: for, as they put it, “A Clean Revolution – a massive scaling-up of clean energy, clean technologies and energy efficiency – will create jobs, boost economic growth, protect the environment and secure clean energy access for all”.

I couldn’t have put it better. The problem of increased demand for energy, due to rapid development, presents an opportunity for us to adopt a more sustainable approach. We can achieve this together, through an integrated approach, involving national and international stakeholders.

In conclusion, we can save the planet. But we need to act fast, or see Earth, as we know it, changed forever.



Tulsi Tanti is the founder and Chairman of Suzlon Group – the world’s fifth largest wind turbine manufacturer. With a family of over 13,000 employees, Suzlon provides the full spectrum of wind power solutions across 32 countries on six continents.

Tulsi also sits on The Climate Group’s International Leadership Council.

The author wishes to thank Neha Arora, Suzlon’s Office of the Chief Economist, and The Climate Group for their assistance and advice in publishing this pamphlet.

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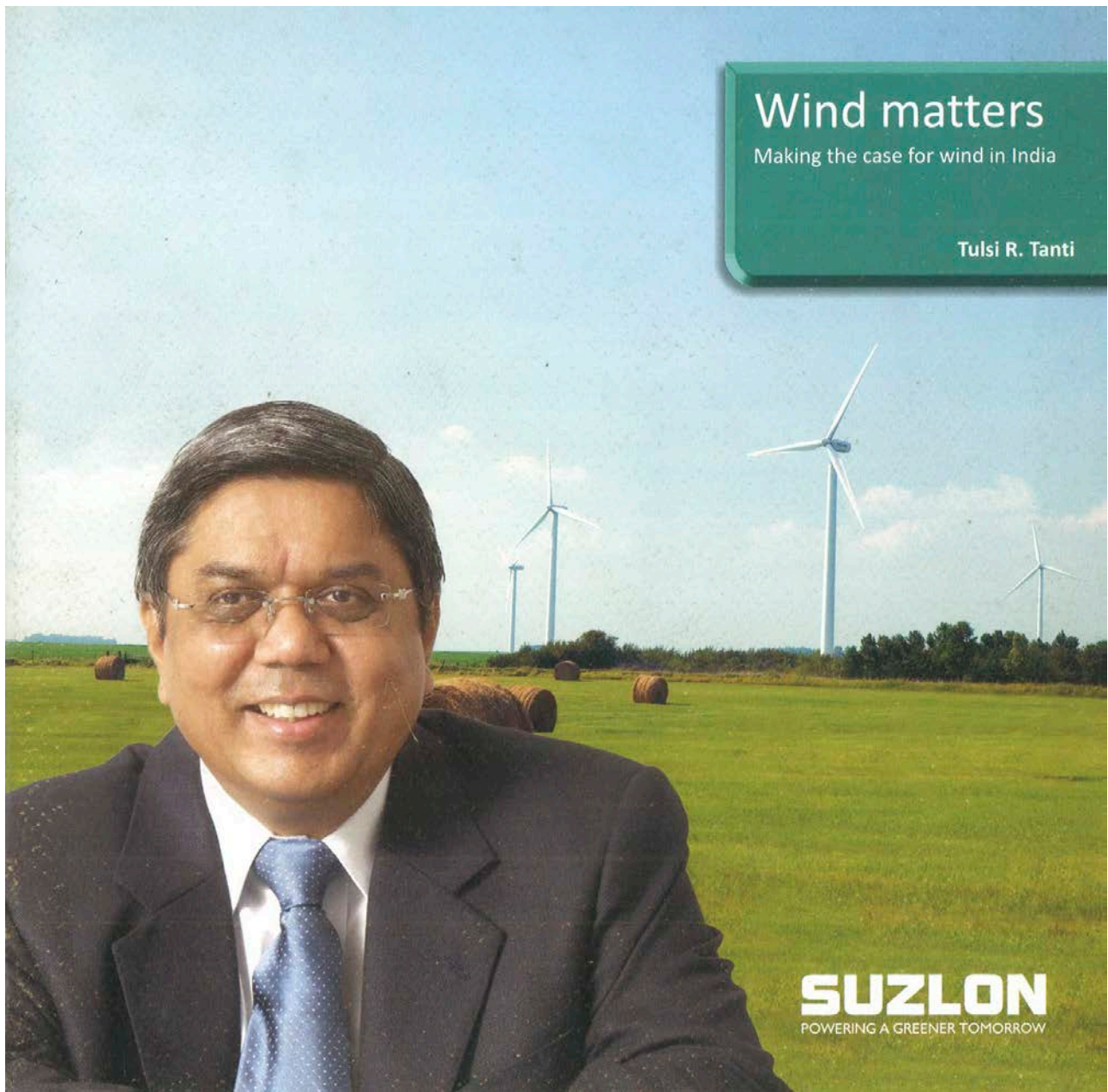
The Climate Group is an independent, not-for-profit organization working internationally with government and business leaders to advance smart policies and technologies to cut global emissions and accelerate a clean industrial revolution.

Its global coalition of companies, states, regions and cities around the world recognize the economic and environmental imperatives of taking decisive action now.

The Climate Group was founded in 2004 and has operations in Australia, China, Europe, India and North America.

WWW.THECLEANREVOLUTION.ORG

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The journey from "The Wind Man of India" to becoming "The Father of Indian Renewable Energy"



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Foreword

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What are the biggest challenges that face humanity today?

On the surface the answer is quite simple – one major concern is the availability of food. This year several international organizations have put a red alert on the rising prices of food. Developing countries are hit the hardest, food accounts for a large portion of expenditure for poor and urban families. When prices of staple foods soar, poor countries and poor people bear the burden.

Take a closer look at the marginalized of the world and another scarce resource is causing alarming adversity: water. There are 884 million people without access to safe drinking water; a shocking 50 per cent of the world’s hospitalizations are due to water-borne diseases.

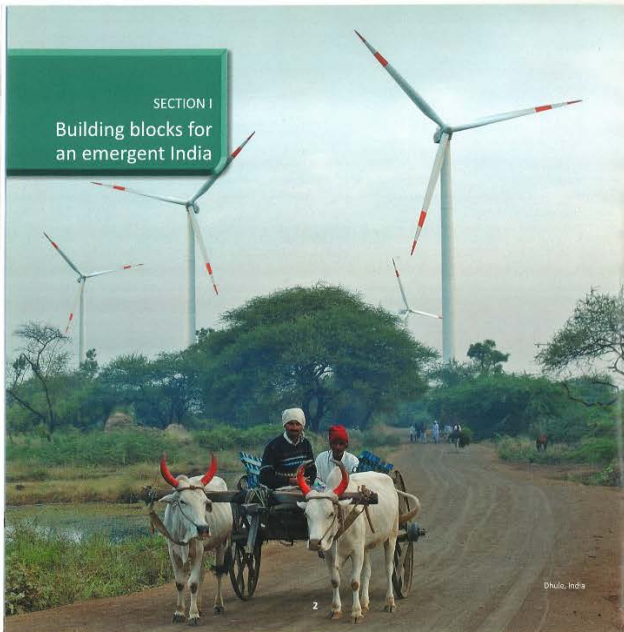
So let us dig even further, and explore the hardships faced by the human populace. Ever wondered what it would be like to live in the dark? No light, no electricity for basic day-to-day appliances, and no power to operate machines for agriculture, or to pump water, or even to run a basic health facility. This is the reality for 1.5 billion people across the world, the vast majority of who are in the developing world. A dearth of regular access to sustainable energy for them results in limited access to food, water and decent health facilities.

Food and water are the most basic needs of survival – but energy is the enabler. In the case of water, energy is required to drill wells or to pump water from a source far away. And when that falls short, energy is required for desalination to produce clean, safe drinking water. Similarly with food, to enhance the productivity of the limited agricultural land available, we need the most advanced technological innovations – all of which are dependent on energy.

Taking the example of India, nearly 35 per cent of our population does not have any access to electricity, we face a power shortfall of over 12 per cent against existing demand, we remain dependent on energy imports and, as the economy roars ahead, so does our need for energy.

We are at a critical juncture. While our economic growth has touched millions, without energy security it cannot be truly sustainable. We have the choice of going down the road the developed world took, relying on expensive, insecure, and environmentally damaging conventional energy sources. Or, we can look towards sustainable energy sources – like wind, a bounty blowing across our nation every day, with the promise of powering our future for many generations to come.

Tulsi R. Tanti
 Pune, July 2011



Building blocks for an emergent India

SECTION I
 Building blocks for an emergent India

This is a tale of two revolutions.

Their stories are remarkably similar; both had their inception in the early 1990s, and both truly gathered steam in the early 2000s. More interestingly, both were poised to really take off at the start of this decade – the Indian economy on the one hand, and India’s wind industry on the other.

The Indian economy today is on an entirely new growth trajectory. Growth levels of eight to nine per cent have been achieved and, more remarkably, maintained for almost a decade; this trend looks likely to continue well into the future.

Such high growth obviously comes with its own set of challenges and necessities. It is my firm belief, however, that we must treat these challenges as opportunities, as building blocks – nothing more, and certainly nothing less.

Securing India’s energy needs

Sustaining the country’s growth rate over the next decade will mean a continuing rise in demand for electricity, which is likely to grow at seven to eight per cent over the same period. India will need to double, in just 10 years, the total electricity capacity additions of the last 60 years, which stands at 174 GW today. This is essential if we are to meet the country’s goal of “Power for All”.

However, even this may not be enough. Despite 50 GW of total power generating capacity added over the past five years, peak demand deficit continues to remain worryingly high at nearly 12-13 per cent. Those of us living in urban areas are reminded of this problem during India’s long and hot summer; but rural India faces a

far more desolate picture on the question of energy: nearly 60,000 villages have no access to power.

The International Energy Agency (IEA) estimates well over 400 million Indians live without any access to electricity at all. India’s GDP is constrained by 1-1.5% per annum due to power shortages. That India has tremendous latent demand is therefore painfully clear.

Energizing India


“India lives in her villages”, observed Mahatma Gandhi over half a century ago, and that remains true today. Unfortunately, however, for rural India, unemployment and underemployment continues to remain high, caught in cyclical monsoon-linked agricultural practices.

The lack of access to reliable power is a major barrier to agricultural growth. Indian farmers remain heavily dependent on the monsoon to grow their crops. We have successively failed to achieve the targeted four per cent growth rate in the agriculture sector.

Sadly the vicious cycle of poverty is fed and accentuated by a lack of access to dependable and affordable energy. Small towns and villages across India depend upon fossil fuels – like kerosene for lighting, biomass for cooking, and diesel and furnace oil for commercial use – harming the environment in the process and costing a disproportionate portion of what is for many very modest incomes.

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Building blocks for an emergent India



Sankaran, India

Building blocks for an emergent India

Tirunveli: Unlocking the potential of SMEs

A great example of the role of wind has played for Small and Medium Enterprises (SME) is seen in the wind energy projects owned by the Tamil Nadu Spinning Mills Association (TASMA). Realizing the greatest challenge facing the sector was access to cost effective and reliable electricity, TASMA turned to wind. Recognizing the potential wind offers, TASMA progressively set up projects totaling today 725 turbines and 467 MW of generating capacity. With a hedge on power costs for the 20 year life cycle of the projects, and security of power supply from wind energy, SMEs gained an enormous competitive edge over their conventional power-reliant global competition, making the region the most competitive in fabric manufacturing worldwide, and unlocking tremendous growth.

A big part of this growth story has also been India's visionary public policy regime and its unique "wheeling and banking" system. Allowing companies to "wheel" power from their wind projects anywhere on the grid to their manufacturing facilities, and "banking" surplus power generation for offset against later use, has allowed the Indian SME sector to compete flexibly on a global scale.

TASMA wind projects have not only benefited the companies in terms of secure energy supplies, but also given them the ability to manufacture 'green', an unmistakable edge in today's climate-aware world.

The projects have also brought the manufacturers commercial advantages from the global Clean Development Mechanism (CDM), with projects registered for carbon emission reduction (CER) certificates since 2003 under the United Nations Framework Convention on Climate Change (UNFCCC).

Building blocks for an emergent India

Providing reasonably priced, sustainable, environment-friendly electricity is the surest way to promote inclusive growth in our country

Increasing India's competitiveness - SMEs

India is a nation of aggregates, and the manufacturing sector is no exception. But India bypassed the manufacturing sector in its headlong growth in the decade gone by, and the reason for this was mostly a lack of affordable electricity.

Not only is a regular supply of electricity difficult to come by, whatever power is obtained is usually at unsustainably high prices, making Indian manufacturing uncompetitive in the global market. Worse, it is the SMEs – the spark plug of any economy – that are the hardest hit.

Today, SMEs contribute 45 per cent of industrial output, 40 per cent of India's exports and employ over 60 million people. On the cusp of a major change in growth trajectory, India's SME segment needs all the help it can get. A continuous and reliable supply of power is essential if our SME sector is to effectively compete on the world stage and sustain India's growth levels.

Combating climate change

Though growth is the highest priority, India appreciates the challenge of climate change, and the need for acting as a responsible nation.





Building blocks for an emergent India

However, coal based generation remains the largest contributor to India's electricity generation, at 65 per cent, making our current energy path unsustainable. India already has become the third largest CO₂ emitter globally, with rapidly ever-growing per capita greenhouse gas emissions. *(Refer exhibit 1.1)*

More to the point, a recent report of the Ministry of Environment and Forests makes the case that no large country in the world is as vulnerable, and on so many dimensions, to climate change as India. With over 7,000 kilometers of coastline threatened by rising sea levels, and rapidly melting glaciers in the Himalayas, India's biodiversity and ecology is under very serious threat.

India will have to answer each of these challenges if she is to provide for inclusive, sustainable growth to her people

Exhibit 1.1 : Effects of climate change on India

	<p>Rising temperatures</p> <p>Indian annual mean temperature showed a warming trend of 0.51° C for the last 100 years. However, the rise in mean surface air across the country, compared with temperatures in 1970, are forecast to rise by 1.7° C to 2° C by 2030</p>
	<p>Sea level rise</p> <p>Sea levels have been rising at 1.3 mm per year in the last two decades and could increase to 2 mm by 2030</p>
	<p>Epidemics</p> <p>Incidence of diseases is likely to sharply increase by 2030 due to rising temperatures, increasing salinity and higher precipitation</p>
	<p>Declining yields</p> <p>Projected yields of major crops, such as rice, maize and sorghum, are likely to decline by 20 per cent by 2030 due to climate change</p>

Source: Ministry of Environment & Forests, CLIMATE CHANGE AND INDIA : A R X A ASSESSMENT A SECTORAL AND REGIONAL ANALYSIS FOR 2030