
High efficient products
Green Cities
Green Sites
our committed journey continues!
Shachidevi TK
CTO, indus Towers
13th April 2012

Telecom tower operation

To manage Network Operation and provide 24x7 UPTIME











Some Challenges

1. Distributed cluster of sites and remote geographies
2. Erratic and Discontinuous Electricity supply from grid

First step to go green

- High efficiency equipment : DC Power Plant.
- Reduce usage of Air conditioner using Fan Cooling Units etc.
- High temperature withstanding BTS.
- Moving sites from indoor to outdoor.
- Intelligent devices to sense the load requirement and supply only as much as needed.

High efficient products & solutions

Second step: Solar hybrid solution 2011-2012



Third Step: Consolidation of nearby sites (2011-2012)

- Consolidate assets of nearby sites.
- Opportunity is to use higher rating DG and working at optimized power.
- Optimize EB consumption.

High efficient products & solutions

Forth step: 2011-2012



Green city technology



Going DG Free

Enhancing grid power supply

Augmenting Battery Bank

Deployment of FCU

Solar Power

Eliminating DG running at site by augmenting EB or Battery

Green city concept

Going DG Free

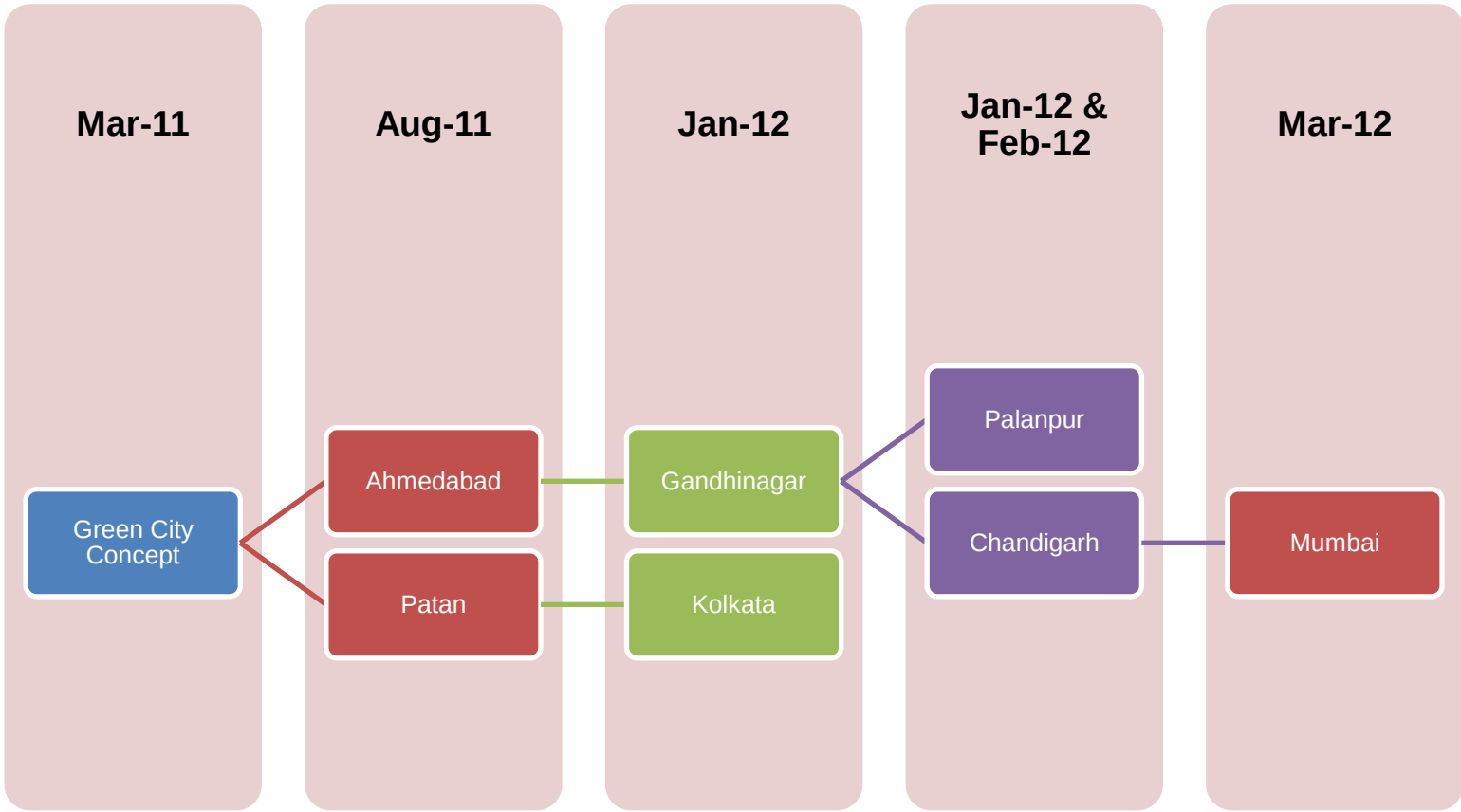
To drive our commitment towards environment

Elimination of DG running at all sites in the Municipal limits of a given city by using other non polluting sources to reduce carbon foot print

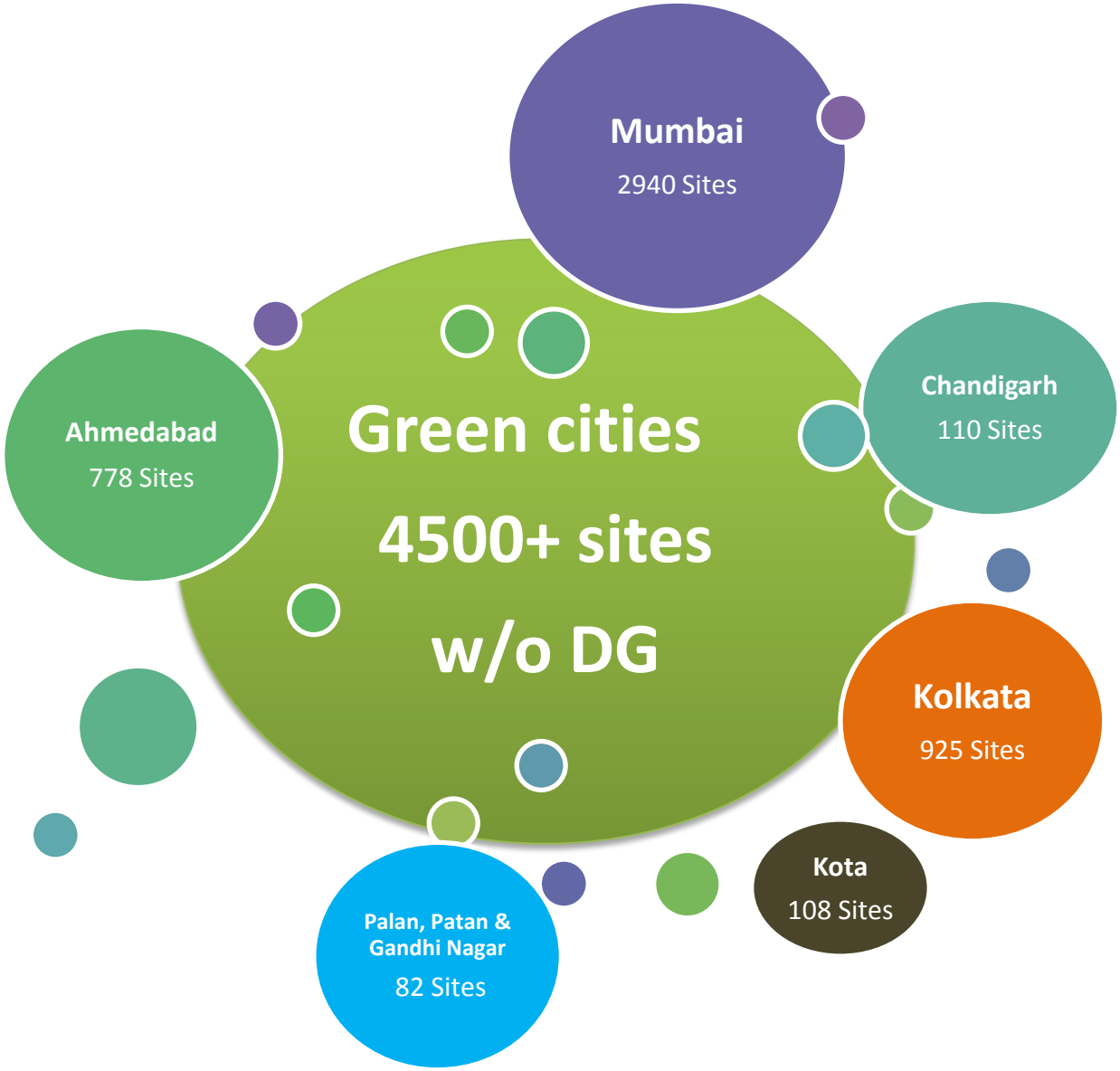


Our Value System: Commitment towards environment

Green city project journey



Green cities



Green city add on









Ensuring green environment

Green Experience



Improved Network Uptime

Living Indus value every day

Green Experience

Reduction in carbon foot print

Predictable & Sustainable Model

Reduction in Energy consumption

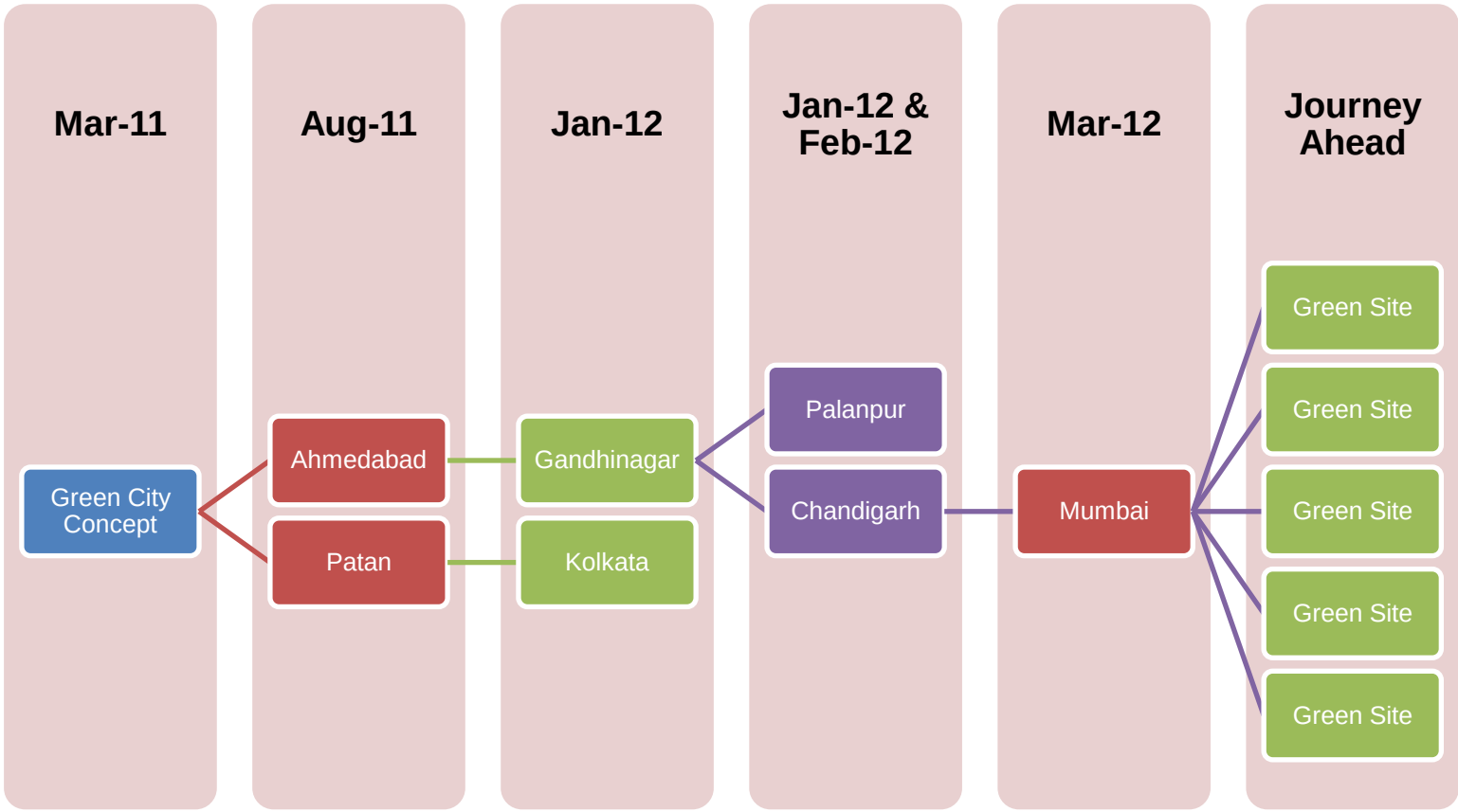


Fifth step :Changing gears

From Green City to Green Site

2012-2013

Green sites journey



Taking indus Towers' Green from City to Sites

Why green sites?

To penetrate green concept in areas where mass green is currently not feasible

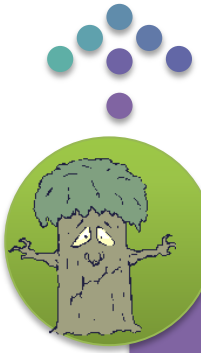
To promote site wise energy solutions due to dynamic nature of network

To create a sustainable model which can be replicated across geographies

A journey towards indus' bottom of the pyramid

Timeline

Sites to be converted : basis is on Technical, Business & Environmental Feasibility



April'13 : 20K Green Sites



Sept'12 : 15K Green Sites



Apr'12 : Launch of **Green Sites**



Apr'11-Mar'12 : Launch of Green Cities

20% of indus Tower site to go **Green** by April'13

On news stand for going green



Indus Towers green plan

As part of its Indus Carbon Abatement Programme, telecom tower company Indus Towers launched its Green City programme in Mumbai. Under this, Indus Towers will eliminate diesel gensets, reduce energy consumption, reduce cooling, install more energy-efficient equipment and provide for secondary storage. These solutions will be introduced in urban and rural areas without compromising network connectivity. The company plans to roll out 12,000 new green cell sites by September 2012 and 20,000 green cell sites by April 2013 at an investment of ₹165 crore. Indus Towers also announced that all of its 2,940 cell sites in the Mumbai have go

Indus Towers to make 20K more towers diesel-free

ANJU YADAV
Mumbai

Telecom tower company Indus Towers will make 20,000 of its sites or 20 per cent of its network diesel-free by April 2013 at an investment of up to Rs 165 crore as part of an initiative to reduce carbon footprint.

The company announced all of its 2,940 sites in the financial capital have gone diesel-free, making Mumbai the seventh such city nationally under its campaign Indus Carbon Abatement Program.

Indus Tower is the world's largest telecom tower company, a joint venture among entities of Bharti Group, Vodafone Group and Aditya Birla Group.

Due to frequent power disruptions across the energy-deficient country, mobile tower firms depend on the carbon- emitting diesel for keeping the towers running. To go diesel-free, Indus will enhance electricity supply at the site, augment battery bank, deploy free cooling unit and increase usage of solar power interventions, he said. Indus Tower saves up to 5 million litre diesel annually

GREEN INITIATIVE: (From L-R) Sameer Singha, BS Shantharaju, Chief Executive Officer, Indus Towers and COO, Bimal Dayal in Mumbai at the announcement of its campaign on Indus Carbon Abatement Program

THE company has already turned over 8,900 towers in its portfolio of 1.10 lakh diesel-free and will work towards taking the number to 20,000

through its nearly 9,000 diesel-free sites of which Mumbai city will alone accounts for around 2 million litre per annum, BS Shantharaju, chief executive officer, Indus Towers said.

The concept of the Green City, which conceptualized in early 2011, is to manage network operations by eliminating diesel genset running at the site by using electricity supply/battery bank/other technology initiative (deployment of FCU, inverter and other technical solutions) without compromising on the network connectivity.

The company has already turned over 8,900 towers in its portfolio of 1.10 lakh diesel-free and will work towards taking the number to 20,000 by April 2013, Shantharaju added.

Interview | Region | Contributed

energy deployment for telecom

indus TOWERS

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Indus Towers' sites turn Green in Mumbai

India Infoline News Service | 17:09 , Mar 14, 2012

Indus Towers has so far converted over 6 cities across India as 'Green'.

Indus Towers Limited, the world's largest telecom tower company rebranded Mumbai as a 'Green City' under its national campaign – Indus Carbon Abatement Program. As a part of the company's commitment towards environment and reduction in carbon footprint, 'The Green City' was conceptualized in early 2011. Indus Towers has so far converted over 6 cities across India as 'Green'.

Indus Towers to make 20k more towers diesel-free by April 13

PTI Mar 14, 2012, 07.59PM IST

Tags: Solar power | Indus Towers | gandhinagar | Carbon footprint | Bharti Ai

MUMBAI: Telecom mast operator Indus Towers will make 20,000 of its sites or ... diesel-free by April 2013 at an investment of up to Rs 165 crore as part of an initiative ... footprint, a top company official said today.

Indus Towers is a joint venture between telecom majors Bharti Airtel, Vodafone and Idea Cellular

Business Standard

Monday, Apr 09, 2012

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diesel-free by April 13

Due to frequent power ... tower firms depend on the ca...

To go diesel-free, Indus will enhance electric... bank, deploy free cooling unit and increase usage of so... said.

Indus Tower saves up to 5 million litre diesel annually through its nearly 9,000 diesel-free sites of which Mumbai city will alone accounts for around 2 million litre per annum, Shantharaju said.

The company today announced all of its 2,940 sites in the financial capital have gone diesel-free, making Mumbai the seventh such city nationally.

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Indus Towers' sites turn green in Mumbai

Published on: March 14, 2012 - 23:55

More in: Business

MUMBAI: Indus Towers Limited rebranded Mumbai as a "Green City" under ... national campaign – Indus Carbon Abatement Programme. As a part of ... company's commitment towards environment and reduction in carbon ...rint, 'The Green City' was conceptualized in early 2011 and has so far ...ed over 6 cities across India as 'Green', namely Ahmedabad, Gandhi ... Patan, Palanpur, Chandigarh and Kolkata.

...ompany's green roadmap starts with using 'green' telecom equipment ...een' design of passive telecom sites, through enhanced site sharing and ...er generation through green sources. The initiative is to manage ...work operations by eliminating Diesel Genset running at the site by ...menting electricity supply/battery bank/other technology initiative ...oyment of FCU, inverter and other technical solutions) without ...romising on the network connectivity. Indus is committed towards ...tion in diesel consumption and has taken proactive steps ...ds greening of telecom, starting from their Corporate colour to ...rate responsibility; Indus Towers has always been committed to its ...ns in an environment-friendly manner. The company is planning to ...all possible solutions to power the telecom towers in the near future ...ns to be the largest green energy deployment in the world for ...h infrastructure industry, said a press release.

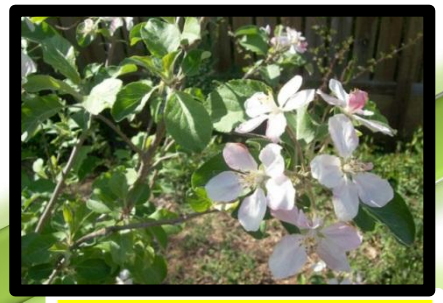
शहरों में हरियाली ला रही इंडस टावर्स

कोलकाता : दूरसंचार टॉवर कंपनी इंडस टावर्स लिमिटेड ने अपने राष्ट्रीय अभियान इंडस कार्बन एंबेटमेंट प्रोग्राम के तहत ग्रीन सिटी के रूप में कोलकाता की फिर से ब्रांडिंग की है. कार्बन के निशान को कम करने और पर्यावरण के प्रति अपनी वचनबद्धता के तहत वर्ष 2011 के शुरू में ही हरित शहर/ग्रीन सिटी परिकल्पना की गयी. इंडस टावर्स ने अब तक भारत के छह शहरों को हरित के रूप में बदला है. इंडस टावर्स की रणनीति अपने टावरों को बिद्युत कराने के उद्देश्य से केवल वैकल्पिक ऊर्जा के उपयोग तक ही सीमित बल्कि हरित उपकरणों के उपयोग जैसे अन्य सभी पहलुओं पर काम केंद्रित है, ताकि ऐसी प्रक्रिया अपनायी जा सके, जिससे पर्यावरण पड़े और ऐसे मॉडल को अपनाया जा सके, जो व्यवसाय की तरफदारी करे. इंडस डीजल की खपत में कमी लाने के की दिशा में सक्रियतापूर्वक इसने दूरसंचार को हरित बनाने की दिशा में कॉर्पोरेट रंग से लेकर कॉर्पोरेट जिम्मेवारी तक इंडस टावर्स अपनी सेवाएं उपलब्ध कराने के प्रति वचनबद्ध है. इंडस टावर्स ने शातारा जू ने जारी एक प्रेस विज्ञप्ति में कहा है कि कंपनी पिछले दो वर्षों में लियन लीटर डीजल का उपयोग कम कर चुकी है और कंपनी की यह कोशिश होगी कि इसे आगे भी हर वर्ष कम किया जाता रहे. इंडस टॉवर्स लिमिटेड दूरसंचार परिचालकों को बुनियादी ढांचा उपलब्ध कराती है.

Green Sites : Ideas at various stage



Fuel Cell
Bio CNG,PNG
Li-ion Fe
Batteries



Solar RESCO.
Solar Opex.



- Smart devices, IIPMS, controller, FCU, ID to OD.
- Optimize site planning to reduce the DG running.
- VRLA+ batteries.
- Outdoor BTS

Further innovation of the products/solutions needed

Green Opportunities

RESCO : 3 phase power model:

Phase I

- Provide power to primary customers i.e. **telecom tower companies**

Phase II

- Provide surplus power to local **community** helping in advancement of surrounding areas

Phase III

- Feed the **excess power to GRID**

Micro grid opportunity

Green challenges

Insufficient grid power availability;
National/State governments must focus on 24x7 grid availability to urban and rural areas.

High entry level cost of new technology;
Fuel cell, Li-ion Fe batteries need good manufacturing base in India, need clear life cycle model.

Takers for RESCO model;
TAIPA has initiated and is discussing RESCO model. Investors , renewable energy technology providers, solution providers to tie up together to provide economically viable solutions with life cycle support model needed.

Product → Solution

Green game changers

- Cost effective micro grids.
- Long power storage devices with small foot print.
- Self diagnostic and built in healing features.
- Built in redundant feature or fail safe feature to assure continuous operation.
- Predictive maintenance indicators built in.
- Anti vandalism features built in.

Any product/solution should be cost viable

Thank You !