




Green Company Rating System

L&T – Powai (West) Campus



© 2013 Larsen & Toubro Limited : All rights reserved



Plant Profile – Powai Campus

Boundary of Assessment: Powai (West) Campus

- Heavy Engineering
- Hydrocarbon IC
- Powai General Management

Campus users: 7,865

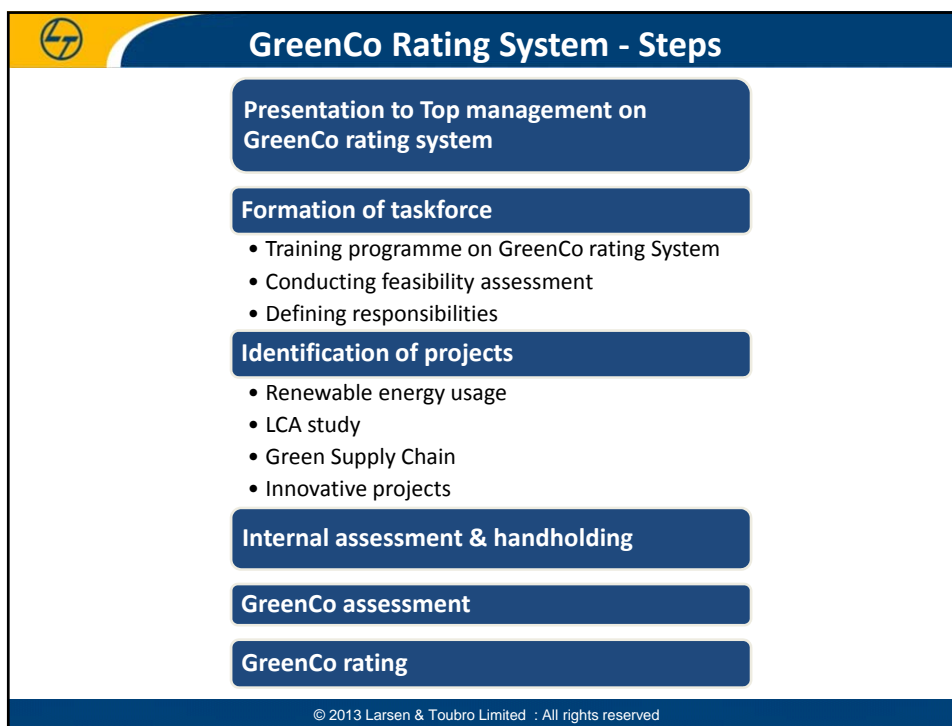
- Number of employees: 3920
- Others (canteen, contract workmen, FTC, etc) : 3400
- LTIT students: 545

Plant Area: 231,015 sq.mt

- Green cover: 49,500 sq.mt (83% of available open area)

Production (Heavy Engineering): 5,497 Tons/year

© 2013 Larsen & Toubro Limited : All rights reserved

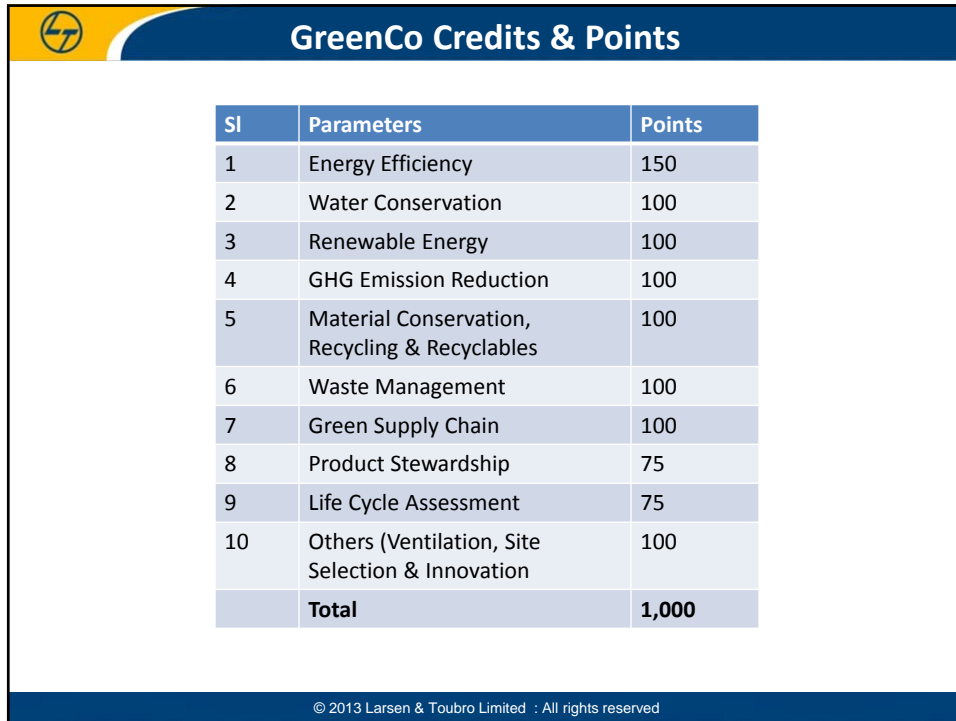


GreenCo certification levels

Mandatory Requirements- 7 credits
Credit Points- 1000

Rating	Points
Certified	350-449
Bronze	450-549
Silver	550-649
Gold	650-749
Platinum	>750

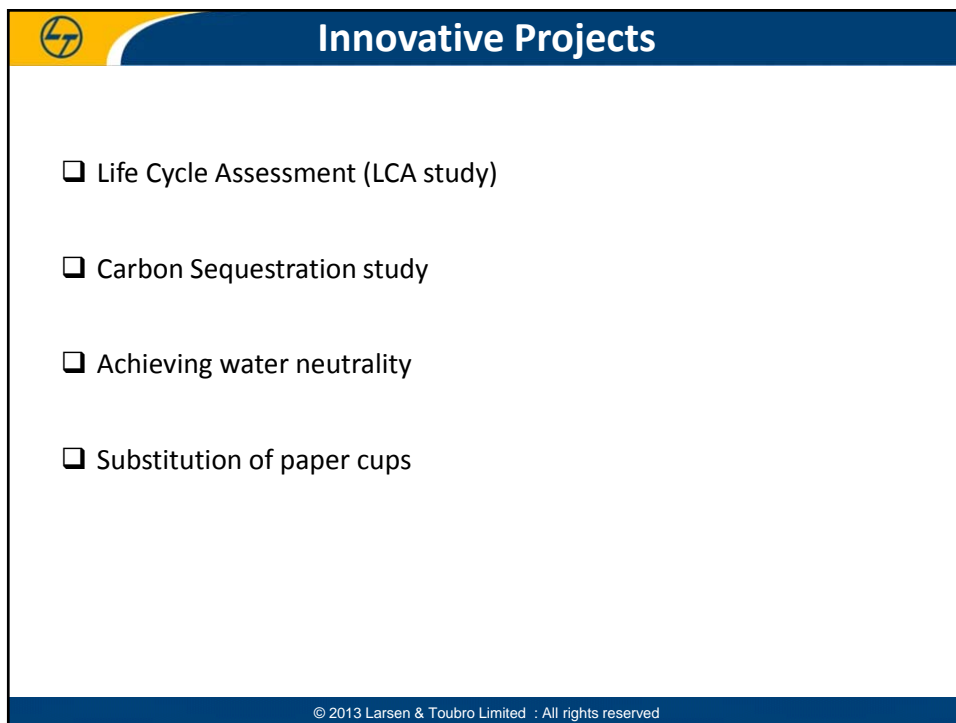
© 2013 Larsen & Toubro Limited : All rights reserved



The table is titled "GreenCo Credits & Points" and is located within a blue header bar that also contains a logo on the left. The table has three columns: "SI", "Parameters", and "Points". It lists ten categories of credits, each with a corresponding point value. The final row shows a "Total" of 1,000 points.

SI	Parameters	Points
1	Energy Efficiency	150
2	Water Conservation	100
3	Renewable Energy	100
4	GHG Emission Reduction	100
5	Material Conservation, Recycling & Recyclables	100
6	Waste Management	100
7	Green Supply Chain	100
8	Product Stewardship	75
9	Life Cycle Assessment	75
10	Others (Ventilation, Site Selection & Innovation)	100
	Total	1,000

© 2013 Larsen & Toubro Limited : All rights reserved



The table is titled "Innovative Projects" and is located within a blue header bar that also contains a logo on the left. The table contains a list of four items, each preceded by a square checkbox.

Innovative Projects
<input type="checkbox"/> Life Cycle Assessment (LCA study)
<input type="checkbox"/> Carbon Sequestration study
<input type="checkbox"/> Achieving water neutrality
<input type="checkbox"/> Substitution of paper cups

© 2013 Larsen & Toubro Limited : All rights reserved

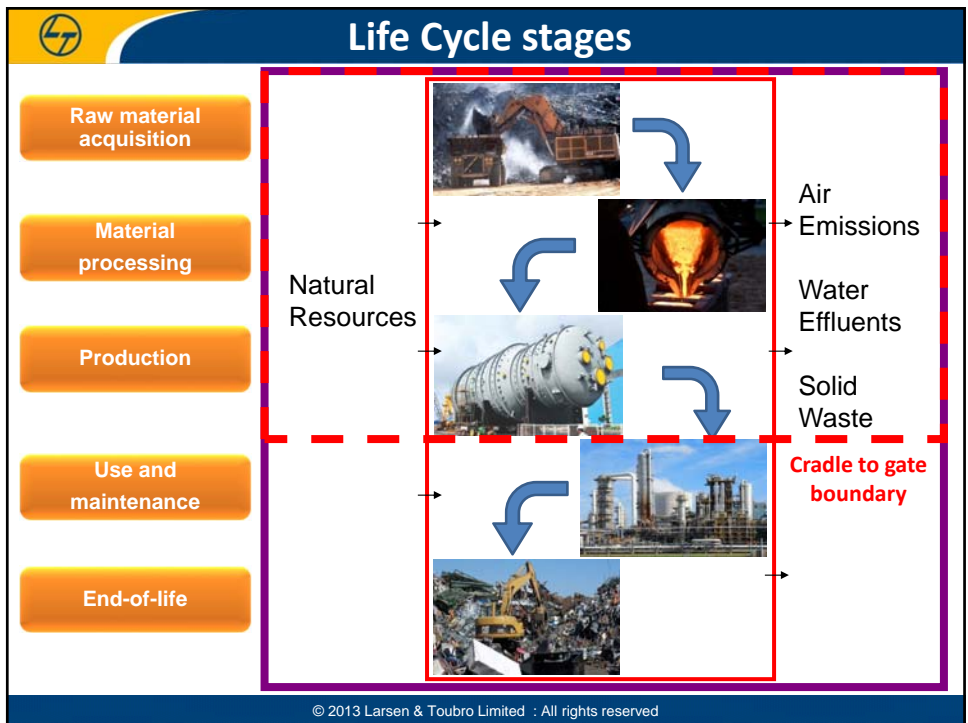
Life Cycle Assessment – L&T


“Compilation and evaluation of the inputs, outputs and the potential environmental impacts of a product system throughout its life cycle” – ISO 14040/44

Target

- To conduct the LCA of process gas boiler assembly
- This product has been chosen as the Company has developed an expertise in the manufacturing of the same over several years and it represents a significant portion (> 25 %) of the Company’s order book (Powai – West) for FY 2012-13
- The Company expects to receive similar orders in future

© 2013 Larsen & Toubro Limited : All rights reserved



 **Carbon Sequestration study – Powai Campus**


Tree Inventory highlights

- Total tree count: **4120**
- Total species: **136**
- Unusual species: **39**
- Bio-diversity index: **High**
- Floristic composition: **Rich**

	Lawn (sq. m.)	Herbs, Shrubs and Creepers (sq. m.)	Nursery (sq. m.)	Total (sq. m.)
East Campus	8,959	3,711	1,748	14,418
West Campus	8,490	6,219	2,338	17,047
Total	17,449	9,930	4,086	31,465


	Herb species	Creepers species	Shrub species	Ornamental species
Count for overall area	8	6	14	16

© 2013 Larsen & Toubro Limited : All rights reserved

 **Carbon Sequestration**

- The process of removal of carbon from the atmosphere and storing it in tree parts is known as ‘carbon sequestration’
- Trees, through their natural life process, act as a sink by absorbing atmospheric CO₂ and store it in various parts such as stem, leaves, bark and roots in the form of carbon
- Approximate Carbon sequestered per year = **127.4 tons**
- Approximate Total Carbon sequestered till date = **2,191 tons**

© 2013 Larsen & Toubro Limited : All rights reserved



Water neutrality - Methodology

Water Neutrality:

It is a methodology to ensure that water consumed by industrial operations (water debit) is replenished fully or partially by harvesting water inside and outside premises (water credit)

Water Balance Index:

Ratio of water credit to water debit

Action plan consists of

- Ensuring compliance to regulatory requirements
- Water audit of Powai campus
- Water footprint mapping
 - Assessment of benefits from water conservation & harvesting measures
 - Assessment of water harvesting outside boundary (Watershed development, check dams)

© 2013 Larsen & Toubro Limited : All rights reserved



How it was achieved?

Powai (West) Campus achieved water neutrality by combination of following measures



Achieving zero wastewater discharge status



Reducing water consumption through host of initiatives



Use of recycled wastewater in campus



Rain Water Harvesting




Creating water bodies for communities by way of constructing check dams

© 2013 Larsen & Toubro Limited : All rights reserved

Powai - Water Positive Campus

Facility	Water Debit ¹ (Fresh Water Consumption)	Water Credit ¹		
		Water Recycled/Reused	Harvested Rain water (Real time use) ²	Groundwater Recharge ³
L&T Powai Campus (West)	317,900	122,713	154,648	41,730



Total Water Debit : 317,900 M³

Total Water Credit : 319,091 M³

Water Balance Index of L&T Powai (West) Campus : 1.004


Water Positive Status

¹ Quantities in cubic meters
² Harvested rain water includes roof top water harvesting at Powai campus (west) & real time water utilization from the 50 check dams by community at Thane District, Maharashtra, constructed by LTPCT
³ Groundwater recharge derived from 50 check dams constructed

© 2013 Larsen & Toubro Limited : All rights reserved

Substitution of Paper Cups

- Annual average consumption of paper cups = 54 lakhs
- Waste generation = 17.7 tons/year
- Substitution with ceramic mug
- Target: Avoid 75% of paper cup consumption



© 2013 Larsen & Toubro Limited : All rights reserved

⚡

Impact on Environment

• Water consumption during manufacturing (liters)	14.6 million
• Waste generation	17.7 tons/year
• Approx. nos. of trees cut	426 nos/year
• Approx. carbon emissions	426 tons/year
• Approx. carbon footprint per person per year in Powai Campus	65 kg of CO₂

*Note: 1. It takes 24 trees to produce one ton of paper :
 2. One tree removes one metric ton of carbon dioxide (CO₂) from atmosphere
 3. No. of users = 6500 (Approx.)
 4. Weight of one paper cup - 3.28 gram*


Ref: <http://www.paperlessproductivity.com/ecoimpact.htm#>

© 2013 Larsen & Toubro Limited : All rights reserved

⚡

Advantages

- **A step towards a zero waste campus**
- **Waste reduction**
- **Reduction of indirect carbon footprint**
- **Reduction of impact on environment**
- **Creating benchmark for others to follow**



© 2013 Larsen & Toubro Limited : All rights reserved

GreenCo Credits & Points		
Sl	Parameters	Points
1	Energy Efficiency	150
2	Water Conservation	100
3	Renewable Energy	100
4	GHG Emission Reduction	100
5	Material Conservation, Recycling & Recyclables	100
6	Waste Management	100
7	Green Supply Chain	100
8	Product Stewardship	75
9	Life Cycle Assessment	75
10	Others (Ventilation, Site Selection & Innovation)	100
Total		1,000

© 2013 Larsen & Toubro Limited : All rights reserved

GreenCo Credits & Points			
Sl	Parameters	Points	Score card
1	Energy Efficiency	150	121-130 ●
2	Water Conservation	100	61-70 ●
3	Renewable Energy	100	71-80 ●
4	GHG Emission Reduction	100	71-80 ●
5	Material Conservation, Recycling & Recyclables	100	51-60 ●
6	Waste Management	100	81-90 ●
7	Green Supply Chain	100	31-40 ●
8	Product Stewardship	75	71-75 ●
9	Life Cycle Assessment	75	41-50 ●
10	Others (Ventilation, Site Selection & Innovation)	100	71-80 ●
Total		1,000	650-749 ●

Powai (West) Campus achieved GreenCo GOLD rating

© 2013 Larsen & Toubro Limited : All rights reserved

Recognition



THE WORLD'S GREENEST COMPANIES
THE 2012 RANKINGS

Newsweek ranks L&T 4th Globally in list of Greenest Industrial Companies



'Corporate Governance & Sustainability Vision Award' by Indian Chamber of Commerce, 2013



Golden Peacock Award for Excellence in Corporate Governance in 2011



S&P ESG INDIA EQUITY INDICES

Among Top 10 in S&P ESG India Index 2012



MEMBER OF
Dow Jones Sustainability Indices

In Collaboration with RobecoSAM

L&T Ranks as the Corporate Sustainability leader in the Construction & Materials Sector 2012 (Emerging Markets)



CARBON DISCLOSURE PROJECT

Responsible business striving towards a low-carbon future

L&T Ranks among Top 10 in Carbon Disclosure Leadership Index (CDLI 2012)



AIMA's best CSR case study award 2012



Environmental Investment Organisation
Carbon Ranking GLOBAL 500

EIO, UK Rank: 2nd in India and among top 12 in BRICS (Brazil, Russia, India, China & South Africa) Countries



L&T Conferred 'Caring Company Award' By World CSR Congress 2013

© 2013 Larsen & Toubro Limited : All rights reserved

Thank You

For more information visit:
www.Intsustainability.com

Write to us at
sustainability-ehs@larsentoubro.com

© 2013 Larsen & Toubro Limited : All rights reserved