

Enhanced Energy Efficiency in Indian Data Centers

**A Joint Initiative to
by**

**CII-Indian Green Building Council (IGBC) and
Lawrence Berkeley National Laboratory (LBNL),
U.S. Department of Energy**

24 July 2018 | Mumbai

Indian Green Building Council (IGBC)

❖ Vision of IGBC

- Enable 'sustainable built environment for all'
- India to be one of the global leaders in sustainable built environment by 2025



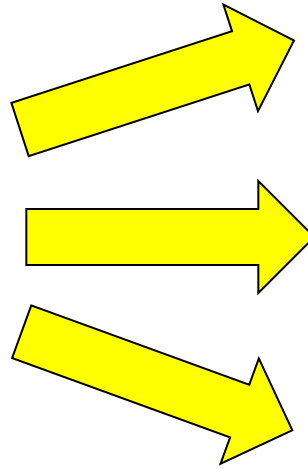
Indian Green Building Council
Greening India since 2001



Green Building Movement in India



**In 2001,
1 Green Building
20,000 sq.ft.**



**4,670 Registered Projects
5.33 Billion sq. ft.**

© Confederation of Indian Industry



Indian Green Building Council
Greening India since 2001

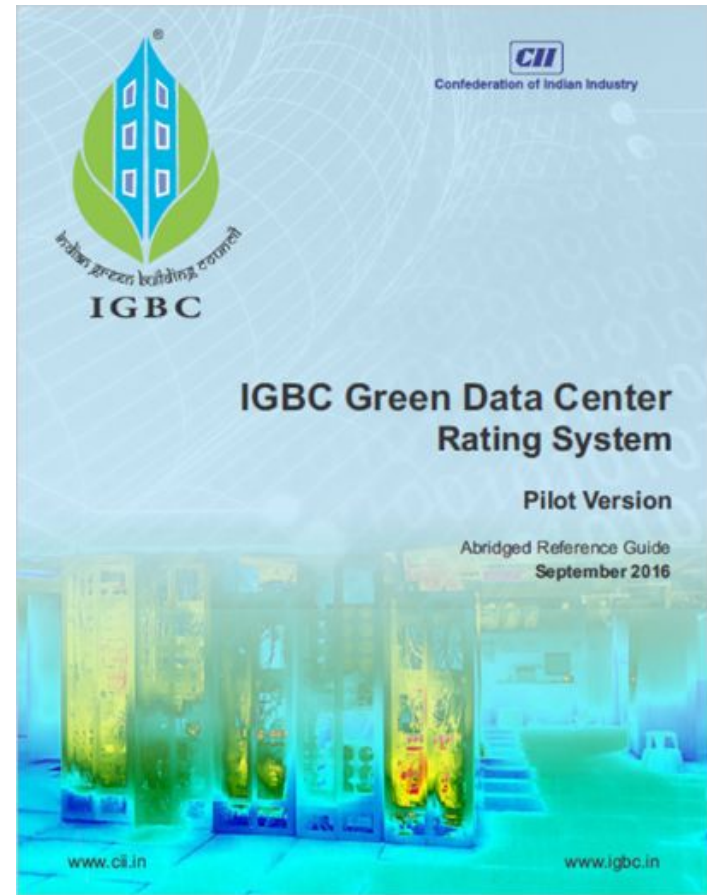
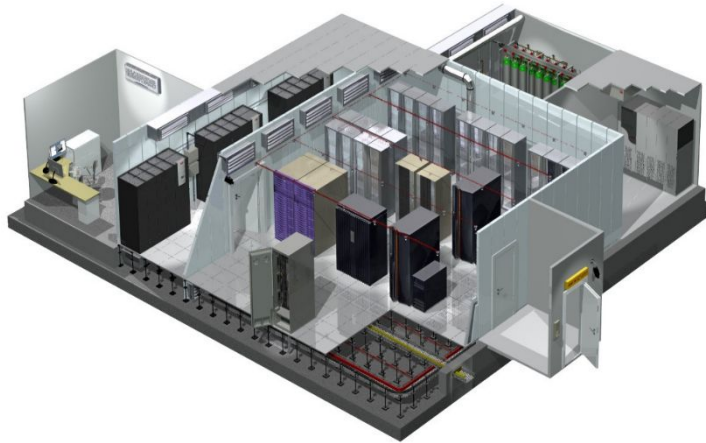


22 IGBC Rating Systems

Commercial	Residential	Built Environment	Industrial
1. IGBC Green New Buildings	6. IGBC Green Homes	12. IGBC Green Cities	18. IGBC Green Factories
2. IGBC Green Existing Buildings	7. IGBC Green Residential Society	13. IGBC Green Villages	19. IGBC Green SEZ
3. IGBC Green Interiors	8. IGBC Green Affordable Housing	14. IGBC Green Township	Health & Wellbeing
4. IGBC Green Campus	Transit	15. IGBC Green Landscape	
5. IGBC Green Data Centres	9. IGBC Green Metro Stations	Education	20. IGBC Green Healthcare Facilities Rating
	10. IGBC Green Existing Metros	16. IGBC Green Schools	21. IGBC Healthy Building for Occupants*
	11. IGBC Green Railway Stations	17. IGBC Places of Worship	22. nZEB rating

Places where we stay, live, learn, work, play, transit & worship should all go green

IGBC GREEN DATA CENTRE RATING SYSTEM



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Unique Features of IGBC Data Centre Rating System

- ❖ **Addresses Data Centre IT & Non-IT load**
- ❖ **At par with International standards**
- ❖ **Key focus areas**
 - **Energy efficiency**
 - **Operation & Maintenance**
 - **Indoor Environment Quality (IEQ)**
 - **Waste management :e-Waste**
- ❖ **Handholding for implementation of green features**



Benefits of Green Data Center

❖ Tangible benefits

- Improvement in Power Usages Effectiveness (PUE)
- Increased reliability
- Reduction in water consumption in case of water cooled chiller

❖ Intangible benefits

- Enhanced e-waste management
- Improved Indoor Environment Quality (IEQ)
- Excellent daylighting
- Green image
- Benchmarking



IGBC Rated Data Centres

❖ Data Centres certified under IGBC (NC category)

- Network Center at GK-1-TCS Ltd, New Delhi
- Wipro Limited SEZ - Data Centre, Noida
- Net Magic Chennai Data Centre, Chennai
- HCL Green Data Centre, Noida
- HSBC Electronic DataProcessing (I) P L, Chennai
- HSBC Electronic DataProcessing I Pvt. Ltd, Hyd
- TCS, Gift city, Ahmedabad

❖ Certification under IGBC Green Data Centres rating

- ICICI Bank

❖ Ongoing projects:

- Net Magic-DC3B, BGRT, Bangalore
- Pi Data Centre
- 2 Reliance Data Centres (process initiated)

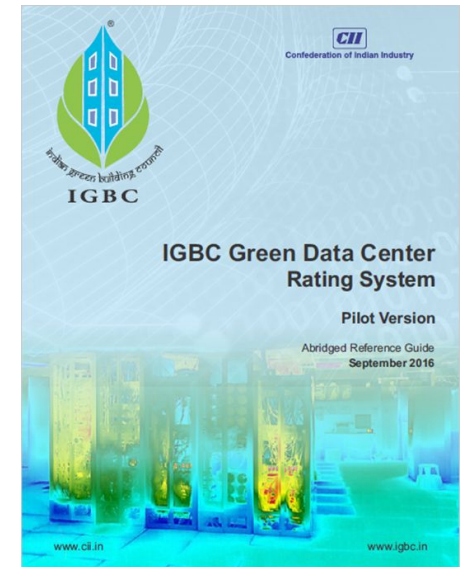
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Support from IGBC

◆ Feasibility study

- Site visit
- Present status with respect to Data Centre rating
- Improvement opportunities



◆ Facilitation and Handholding

- Implementation of green features



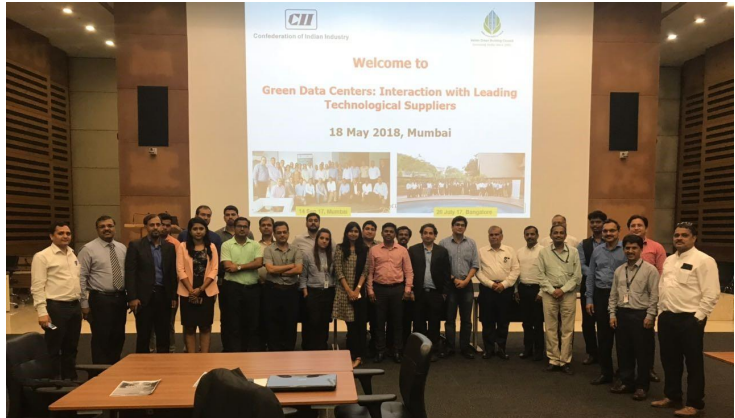
Awareness Programmes on Data centers



20 July 17, Bangalore



14 Sep 17, Mumbai Confederation of Indian Industry



A Joint Initiative by CII-IGBC and LBNL

- ❖ **Continue association with LBNL**
 - **Spearhead energy efficiency in Indian data centres**
- ❖ **Develop and Implement Policies and Programs**

Key Objectives of the Joint Initiative

- ❖ **Develop and recommend Energy Efficiency standards for Indian Data centres**
 - **To augment the minimum requirements included in the ECBC 2017**
- ❖ **Develop user guide for implementing the minimum ECBC standards**
 - **Identify and document case studies**
- ❖ **Capacity building – Spread awareness in DC industry**



1st Advisory Group Meeting and DC Visit, Bangalore



To sum up

- ❖ **Excellent opportunity for Indian Data Centres to improve**
 - **Energy Performance**
 - **Operation & Maintenance**
 - **Benchmark**
- ❖ **Request your support in the joint initiative**
- ❖ **IGBC and LBNL would be glad to support in all aspects**



Thank You !



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