ITC Grand Chola

- 16,30,000 sft of built up area with 600 keys
World’s Largest LEED Platinum Rated & India’s first GRIHA 5-Star rated Hotel

- Principal Architect – SRSS Architects, Singapore
- Project Architect – CR Narayana Rao
- Energy Consultant – The Energy and Resources Institute (TERI)
- Sustainability Consultant – Environmental Design Solutions (EDS) Pvt. Ltd.
- Interior Designer – Wilson Associates, Singapore
- Lighting Consultant – Bo Steiber, Singapore
- MEP Consultant – Spectral Services Consultants Pvt. Ltd. (AECOM)
- Landscape Architect – Belt Collins International Pte. Ltd., Singapore
- Commissioning Agent – SGS India
- Principal Contractors – Larsen & Toubro Ltd.
Green Measures

Water Use Optimization
Key Elements
Potable Water Use Reduction more than 40% on the base case.

- Native & naturalized plant species
- Shading of ground covers by trees to reduce evapo-transpiration
- Drip irrigation, micro-sprinklers & timer based controls
- 3/6 Litre (0.8/1.6 gpf) Dual flush toilets, and low flow faucets
- Water from last cycle of wash reused for first cycle in laundry

- On site sewage treatment plant (SBR of 675 KLD) to tertiary standards
- STP Treated water used for flushing, irrigation and air conditioning make up
- Multiple zone hydro pneumatic water distribution system
Energy Use Optimization

Key Elements

- Chiller efficiency of 0.55 IKW/ton (COP 6.3) under ARI conditions (ASHRAE baseline 0.57 IKW/ton, COP 6.1)
- Variable speed cooling towers, with 76 gpm/HP. And Approach Temp: 7°F (ASHRAE 38 gpm/HP, approach 10°F)
- Central AC plant with Hartman loop (Intelligent All variable system)
• Ipad based room control system - Operates room lighting, sets moods, manages air conditioning, operates television, surf hotel information, restaurant menus and much more.

• Guest Room Temperature control -
  • Unrented 26 °C and all Lights are OFF.
  • Rented and Occupied 22 °C and Lights On as per Guest requirements.
  • Rented and Unoccupied. 24 °C and all lights OFF.

• Oxygen trimming in boilers - Continuous monitoring of the flue gases and adjusting the air and fuel mixture for optimized fuel efficiency

• Multiple zone Hydro pneumatic water distribution system with Jockey and main pump concepts

• CO₂ Sensor based TFAs and AHUs operated by IBMS
Renewable Energy Integration –

- 100% Green power equivalent to 27,900,000 kWh by means of 12.6 MW wind turbines installed at Kundadam, Near Kovai.
- 20% Hot water through Solar collectors

43.4% annual energy savings compared with the ASHRAE 90.1.2004 Baseline

Annual Energy Use Comparison - ASHRAE Baseline v/s Proposed ITC Grand Chola Design
Financial Sense?

• 3 key requirements
  – Mind Set
• 3 key requirements
  – Funds

• 3 key requirements
  – Legwork
• 3 key requirements
  – Mind Set
  – Funds
  – Legwork

Clients play a major role
Can be outsourced

• Additional upfront costs of of app 5%
• Paybacks and IRRs
• Operating cost savings
• Intangibles viz. Increased Customer awareness
• Soft Benefits (Increased productivity/ greater occupant health/ Improved Public relations)
ITC Ltd – Hotels Division

- First hotel chain in the world with all its Luxury hotels (10 numbers), having been awarded LEED® Platinum green certification.

- ITC Limited, a corporation with the largest number of business units**, having been awarded LEED® Platinum green certification.

- ITC Maurya, New Delhi - World's first hotel with LEED® Platinum certification, under the Existing Building (EB) category.

- ITC Green Centre (headquarters of ITC’s Hotels Division) - World's highest rated LEED® Platinum certified building (99 points out of 110).

- ITC Gardenia - Asia's first LEED® Platinum certified hotel, under the New Construction (NC) category

- ITC Grand Chola, Chennai - World’s largest LEED® platinum certified hotel in the New Construction category.
ITC Green Centre, Gurgaon

US Secretary of State, Hillary Clinton calls it: “Monument to the future. The centre is a model for environmental stewardship and economic development....”

Thank You