



# Powering Hospitality: Solar Solutions for Hotels in India

India's hospitality market is on a robust growth trajectory, projected to reach an impressive \$68.3 billion by 2029. In this expanding sector, energy costs typically consume 15-20% of a hotel's total operating expenses. Embracing solar energy presents a compelling opportunity for hotels to significantly reduce these costs while simultaneously enhancing their brand value through sustainable practices.

🚀 by Narang Solar

# Why Solar? The Business Case for Hotels



## Cost Savings

Hotels can slash electricity bills by 30-50%, effectively offsetting rising commercial tariffs, which typically range from ₹8-12 per kWh. This translates into substantial operational savings.



## Sustainability

A mid-sized hotel can reduce its carbon footprint by 100-300 tons of CO2 annually by adopting solar, contributing significantly to environmental conservation.



## Brand Enhancement

With approximately 80% of travellers preferring sustainable options, adopting solar energy attracts eco-conscious guests, bolstering the hotel's brand image and market appeal.



## Energy Security

Solar power provides a reliable energy source, mitigating the impact of grid fluctuations and ensuring an uninterrupted power supply for hotel operations.

# Key Solar Technologies for Hotels



## Solar Photovoltaic (PV)

Generates electricity for lighting, HVAC, and general operations. Rooftop PV systems are ideal for hotels, typically providing 200kW to 1MW capacity. A standard 100 kW system can yield annual savings of around ₹9-10 Lakhs.

## Solar Water Heating (SWH)

Supplies hot water for guest rooms, laundry, and kitchens. SWH can cover 60-80% of a hotel's hot water demand, significantly reducing fossil fuel consumption and cutting water heating costs by up to 70%.

## Solar Lighting

Efficiently illuminates outdoor areas, pathways, and facades, enhancing guest safety and aesthetic appeal while reducing grid dependency.

# Financial Incentives & Attractive ROI



India offers a robust framework of financial incentives that make solar investments highly attractive for hotels. These include:

- **Net Metering:** Allows hotels to export excess solar power back to the grid, earning credits on their electricity bills. Policies vary by state, offering significant savings.
- **Accelerated Depreciation:** Commercial solar projects can claim a substantial 40% depreciation benefit in the very first year, reducing taxable income.
- **Attractive ROI:** The typical payback period for solar installations is remarkably short, often falling within 3-5 years.
- **Long-term Savings:** Solar systems are durable, lasting 20-25 years, ensuring sustained cost savings and environmental benefits over their lifecycle.

# Indian Success Stories: Hotels Embracing Solar

## ITC Hotels

Recognised as the "Greenest Luxury Hotel Chain" globally, ITC Hotels, including the iconic ITC Grand Chola, are pioneers in sustainable hospitality. They extensively use solar thermal for hot water and integrate comprehensive energy efficiency measures.

## The Leela Palace, Udaipur

This majestic hotel leverages solar energy for water heating, demonstrating a significant commitment to sustainability by saving approximately 50,000 litres of diesel annually.

## Ginger Hotels (IHCL)

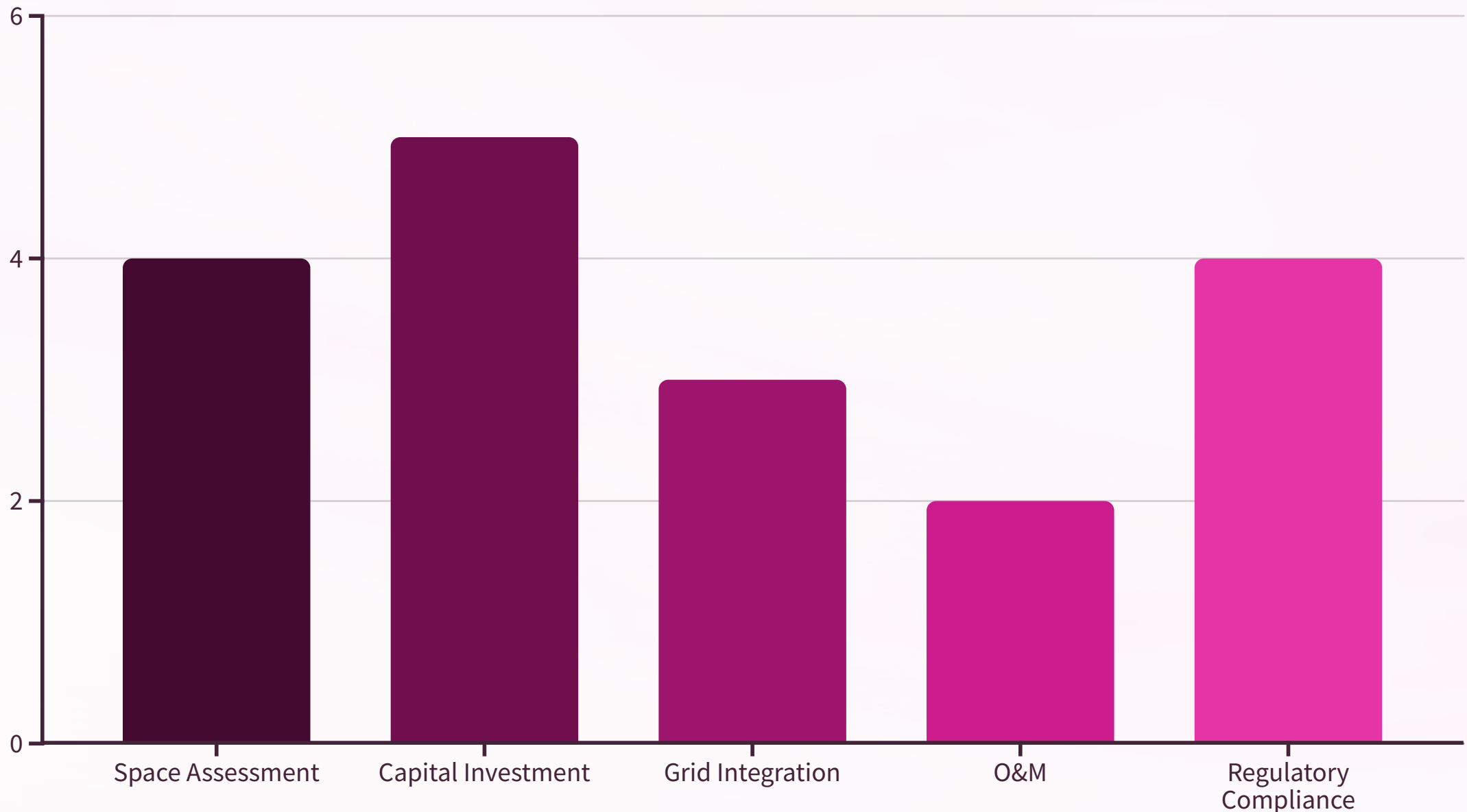
Several properties under the Ginger Hotels brand have successfully implemented rooftop solar PV installations, aligning with their focus on smart and sustainable operations.

## Taj Hotels

The prestigious Taj Hotels group is actively integrating solar water heaters and photovoltaic systems at select properties across India, showcasing their dedication to eco-friendly initiatives.



# Implementation & Operational Considerations



Successful solar adoption requires careful planning and execution. Key considerations include evaluating rooftop area and structural load capacity for PV installations. Initial capital investment for a PV system typically ranges from ₹35,000-₹50,000 per kW. Seamless grid integration with existing electrical infrastructure is crucial. Ongoing operations and maintenance (O&M) are minimal, primarily involving regular cleaning and performance monitoring. Hotels must also adhere to state-specific electricity board norms and safety standards for regulatory compliance.

# Beyond Energy: Holistic Benefits & Future Trends

Adopting solar power extends beyond mere energy savings, offering a multitude of holistic benefits and positioning hotels for future growth:

- **ESG Compliance:** Meeting Environmental, Social, and Governance reporting goals, crucial for attracting socially responsible investors and stakeholders.
- **Green Certifications:** Qualifying for prestigious ratings like IGBC Green Hotels and LEED India, enhancing credibility and market positioning.
- **Competitive Advantage:** Attracting corporate clients and events that prioritise sustainability in their vendor selection, providing a distinct edge.



Future trends indicate deeper integration with Battery Energy Storage Systems (BESS) for 24/7 reliable power. Smart monitoring systems will also become standard, providing real-time data to optimise energy consumption and overall performance.

# Conclusion: A Brighter, Greener Future for Indian Hotels

Investing in solar solutions for hotels in India offers a compelling array of financial, environmental, and reputational advantages. With India's supportive government policies and the continuous decline in solar technology costs, now is an opportune time for the hospitality sector to make this strategic transition. Embracing solar energy is not just about reducing operational expenses; it's a decisive step towards building a sustainable and profitable future for Indian hotels, aligning with global green initiatives and catering to the growing demand for eco-conscious travel experiences.

