



New VVIP Circuit House, Kolhapur Pune Division



Location	: Kolhapur District, Maharashtra
Site Area	: 4,301 sq.m.
Built up Area	: 1,250 sq.m.
Typology	: Hospitality
Rating Category	: GRIHA for Existing Buildings (EB)
Version	: 1
Date of Award	: 30 th April, 2019
Client	: Government of Maharashtra
Integrated Design Team	: Public Works Department (PWD), Maharashtra
Green Building Consultant	: Energetic Consulting Pvt. Ltd.

The following strategies were adopted by the project team to reduce the impact of the existing building on the environment:

Site Parameters:

- Availability of amenities such as bus stop, bank, restaurant, grocery store and park are within 500 meters of walking distance from the main entrance of the project.
- Preferred parking was provided for electric vehicles.
- Strategies were implemented over 3,449 sq.m. of site area to reduce the Urban Heat Island Effect.

Energy:

- Replacement of old lighting fixtures with LEDs, installations of efficient fans have reduced the annual energy consumption from 41,249 kWh/year to 19,233 kWh/year demonstrating a reduction of 53.37% from the GRIHA base case.
- Solar photovoltaic system of 4 kWp was proposed to generate 6,393 kWh of renewable energy.

Water Efficiency:

- Building water consumption was reduced from 794.1 kiloliters/year to 639.43 kiloliters/year demonstrating a reduction of 19.5% from the total water consumption.

Human Health and Comfort:

- Indoor comfort conditions measured in summer months; Dry bulb temperature= 24 - 27°C, Relative humidity= 57% - 86%, Daylight levels= 320 – 475 lux and Indoor noise levels: 39 – 40 dB; were compliant with benchmarks of the Indian Model for Adaptive comfort, SP 41 and NBC 2005.

Total energy offset
by renewables
= **32.7%**

Total reduction in
building water demand
= **19.5%**

TOTAL CARBON OFFSET BY THE PROJECT:

By planting native saplings & preserving existing trees: 0.44 ton/year

By conservation of conventional energy: 30.83 ton/year