



# VIDHAN BHAVAN, Nagpur Division



<b>Location</b>	: Nagpur, Maharashtra
<b>Site Area</b>	: 18,516 sqm.
<b>Built up Area</b>	: 20,485 sqm.
<b>Typology</b>	: Commercial
<b>Rating Category</b>	: GRIHA for Existing Buildings (EB)
<b>Version</b>	: 1
<b>Date of Award</b>	: 30th May, 2019
<b>Client</b>	: Government of Maharashtra
<b>Integrated Design Team</b>	: Public Works Department (PWD), Maharashtra
<b>Green Building Consultant</b>	: Gadin Consultancy & Co.

GRIHA EB



**3 STAR**

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

#### Site Parameters:

- Preferred parking were provided for electric vehicles.
- Strategies were implemented over 11,409 sqm. of site area to reduce the Urban Heat Island Effect.

#### Energy:

- Solar photovoltaic system of 40 kWp was proposed to generate 60,341 kWh of renewable energy.

#### Water Efficiency:

- Building water consumption was reduced from 3,199.87 kL/year to 1,868.25 kL/year.

#### Human Health and Comfort:

- Indoor comfort conditions measured in summer months;  
Dry bulb temperature= 29 - 34°C, Relative humidity= 29% – 40%,  
Daylight levels= 100 - 121 lux, Artificial lighting levels= 343 - 472 lux and  
Indoor noise levels: 40 - 43 dB were compliant with benchmarks of the Indian Model for Adaptive comfort, SP41 and NBC 2005.

#### Social Benefits

- Provision of ramps at entrance and parking space for differently abled people.

Total energy offset  
by renewables  
= **25.26%**

Total reduction in  
building water demand  
= **41.61%**

#### TOTAL CARBON OFFSET BY THE PROJECT:

**By planting native saplings & preserving existing trees: 1.85 ton/year**

**By conservation of conventional energy: 10.42 ton/year**