

7.1.2 - The Institution has facilities for alternate sources of energy and energy conservation

(Ref. following link for images

https://drive.google.com/drive/folders/1-BHm3uVDMEZ8WLFvP_3XKpWLCL9ajbiZ?usp=sharing)

1. Solar energy

Solar-powered street lamps are used in the University as well as residential quarters and the hall of residence as shown in Fig.1. Further, grid-integrated and stand-alone rooftop PV systems are installed at rooftop.



Fig.1(a). Solar street lamp in residential campus

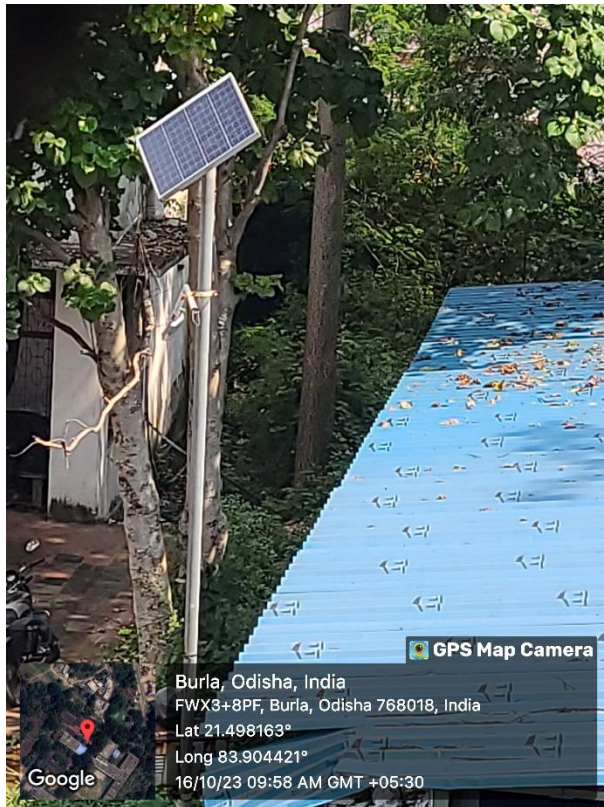


Fig.1(b) Solar street lamp in academic campus

2. Biogas plant

A mega biogas plant to utilize the biomass from different halls of residence is planned to be implemented in the future.

3. Wheeling to the Grid

Grid-integrated roof-top photovoltaic (PV) system is installed in the University as shown in Fig.2.



Fig. 2. (a) Rooftop Grid-connected Photovoltaic System



Fig.2. (b) The inverter, monitoring and protection for grid-connected PV System

4. Sensor-based energy conservation

A sensor-based water level detector is implemented in Rohini Hall of Residence to reduce the overflow of water and maintain the appropriate level in overhead tanks as shown in Fig.3 (a) and (b). This reduces excess pumping and saves energy and water as well.



Fig.3. (a) Sensor inside the overhead tank



Fig.3. (b) Control Circuit in the pump house

5. Use of LED bulbs/ power-efficient equipment

Most of the Air conditioners installed in the institution are 3 star and above labelled by BEE. The lamps in halls of residence, street light, institution are replaced by LEDs in a phased manner on failure. This has reduced the load on the transformers and improved the power factor.

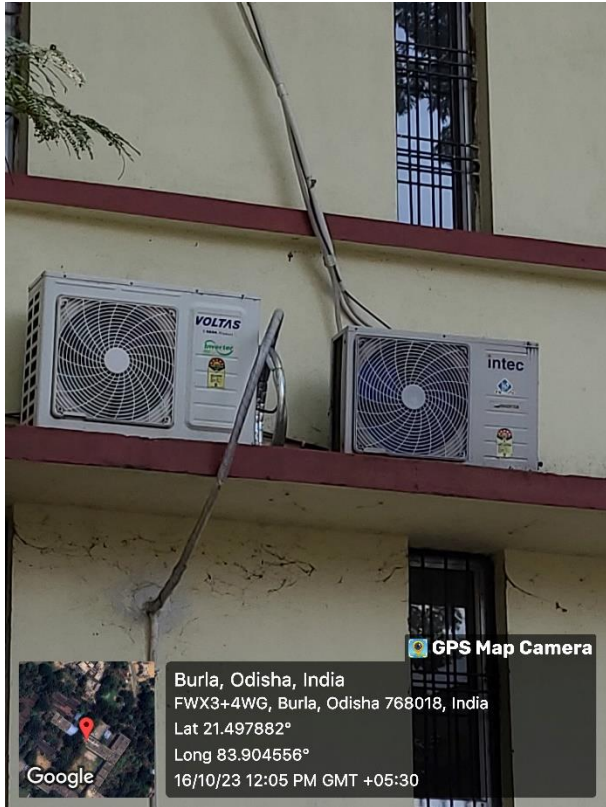


Fig.4. Star rated Air Conditioners