



## Dr.T. THIMMAIAH INSTITUTE OF TECHNOLOGY

(Estd. 1986) Oorgaum, Kolar Gold Fields, Karnataka – 563120

(Affiliated to VTU, Belgaum, Approved by AICTE - New Delhi)

### CRITERIA 7.1.2

#### **Environmental Consciousness and Sustainability**

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

1. Solar Energy
2. Biogas Plant
3. Wheeling to the grid
4. Sensor based energy conservation
5. Use of LED bulbs power efficient equipment

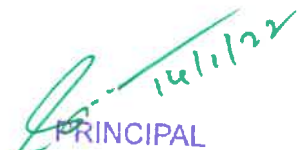
Energy conservation is **the effort made to reduce the consumption of energy by using less of an energy service.** ... Energy conservation measures (ECMs) in buildings reduce the need for energy services and can result in increased environmental quality, national security, personal financial security and higher savings.

#### **Response:**

#### **Solar based energy conservation**

Solar energy is that **produced by the Sun's light** – photovoltaic energy – and its warmth – solar thermal – for the generation of electricity or the production of heat. Inexhaustible and renewable, since it comes from the Sun, solar energy is harnessed using panels and mirrors.

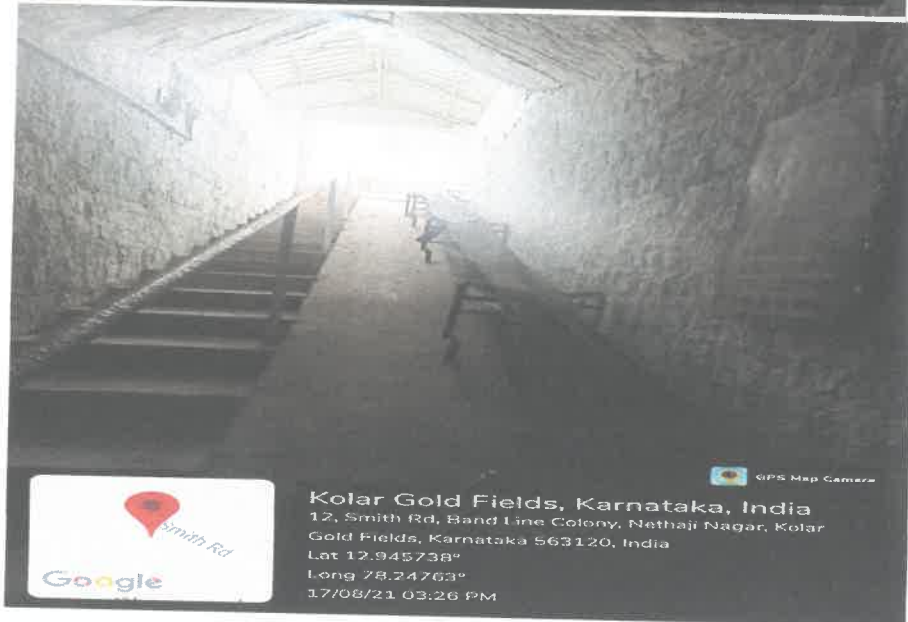
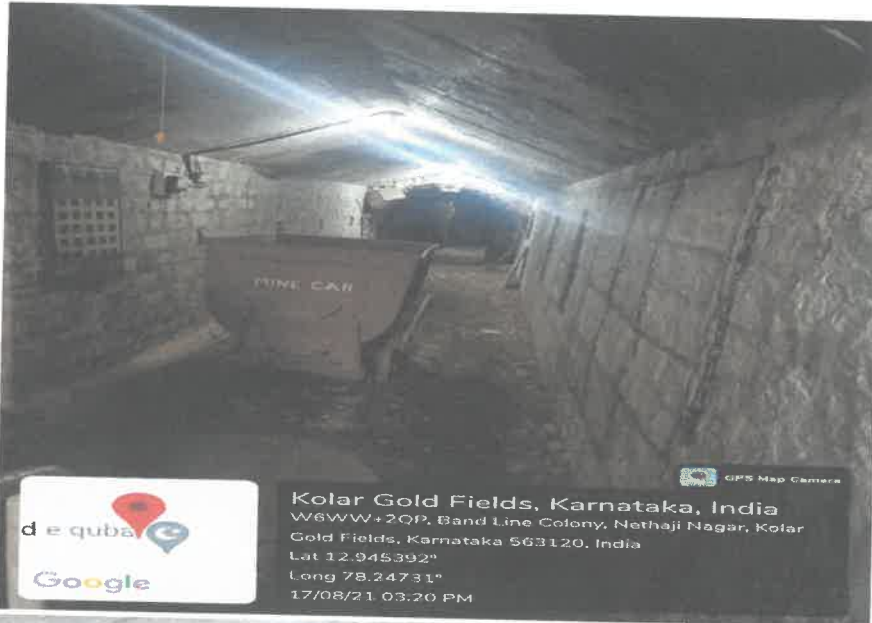
- To install solar cells and solar panels in the college.
- To provide sensor based solar lights in the streets of the campus and in labs.
  - ▶ Load sharing for 4 systems in Civil and Electrical labs are powered by Solar panel
  - ▶ Civil HOD 2 computers/systems are powered by solar energy during day times
  - ▶ During night solar energy is used for lighting near the main gate and street lights and also in the hostel

  
14/1/22

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**Biogas plant**

- ▶ To collect Solid wastes from college canteen and hostels and in the recycling process in biogas plant.
- ▶ Kitchen waste is the best alternative for Biogas Production. It is produced when bacteria degrade organic matter in the absence of air. Biogas contains around 55-65% of Methane, 30-40% carbon dioxide. In this way we utilize all kitchen and food waste for generation of biogas in our Dr.TTIT Campus.



*S. Tulsi/22*  
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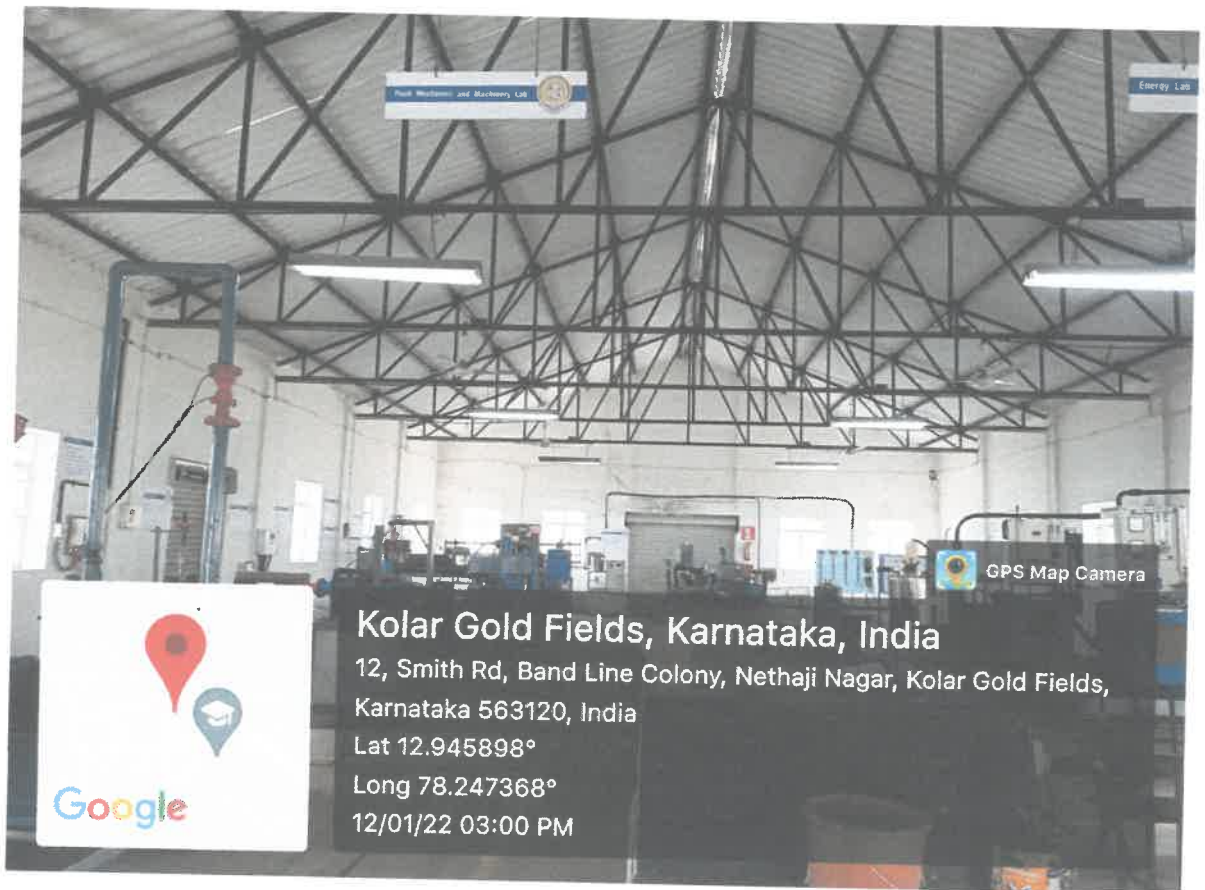
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### Use of Led bulbs

- ▶ To use LED bulbs in the campus to save energy.
- ▶ In Dr.TTIT LED bulbs are used in order to enhance consume lower electric power in the day time and also LED bulbs in the campus street lights utilize solar energy during night times



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