

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

Options:

- A. 4 or All of the above
- B. Any 3 of the above
- C. Any 2 of the above
- D. Any 1 of the above
- E. None of the above

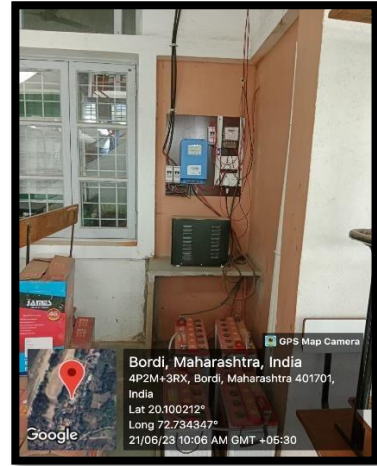
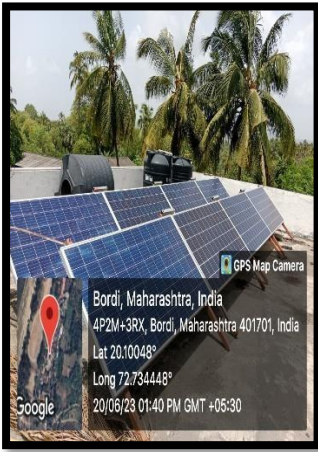
- In order to develop awareness regarding energy conservation by saving energy, **boards** reminding everyone of energy saving are displayed on the campus at various points where most of the students have footfall.
 - Instead of using heating mantle, Department of Chemistry has started using **Solar Distillation Plant** from the academic year 2017-18. This gives 2.5L of conductivity water per day thereby reducing the power requirement. Heating mantle of 2000W if used continuously for 8 hours gives 7L to 8L of conductivity water. Consequently 1 L of conductivity water - requires 2 units of current. Department of Chemistry requires 200L of conductivity water per year. 200 L of conductivity water require 400 units of (energy) electricity. With the help of solar Distillation Plant, we are able to save 400 units of electricity.
 - In an effort to initiate Green Energy Drive, we have installed **solar panels** to run computers of various departments like Microbiology, Biotechnology, Botany, Zoology and Physics from 2019-20.
 - The daily power requirements for computers and printers for various departments are met with the help of two solar panel with capacity of 2 x 335W they are mounted on the terrace of the college building.
 - **Solar Charge Controller** (20A) is used to control switching between solar and mains power accordingly. And the other four solar panels with capacity 4 x 335W are made available for college office, Principal office and Internet service room. With the help of these, 4 desktop computers, 2 laser printers, 6 fans and 8 LED bulbs and Principal's office PCs functions smoothly.
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- Solar Charge Controller (60A) is used to control switching between solar and mains power accordingly.
 - Every classroom is provided with **LED** bulbs connection and LED tube lights in laboratories. We have in all 150 tube-lights and 50 CFL/LED bulbs
 - The **suction pump**, in the Chemistry laboratory has been established in April

2018. It is ecofriendly as instead of oil we are using water. As water is recycled so **wastage of water is avoided**. In the oil pump there were chances of oil spill as well as filtrate getting contaminated with oil. In this suction pump these problems are avoided. The suction pump is economic as we do not need to change oil as it works on water. It is easy to operate and has zero maintenance cost. Before these 3 separate suction pumps were used in 3 different labs.

- But now with a single suction pump 3 vents are provided in each lab, so as to make the filtration process easy and fast. The 3-pump used previously were of 0.5HP each so total 1.5HP was used. Now this single pump is of 1HP so consumption of power is reduced by 0.5HP. Hence, we can say that it has 3-fold suction capacity over oil suction pump.
- We have **manually operated ice crusher in chemistry lab** as into save the electricity.
- **Supportive Photographs:**

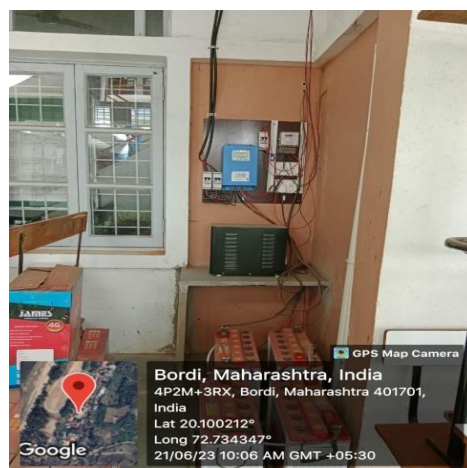
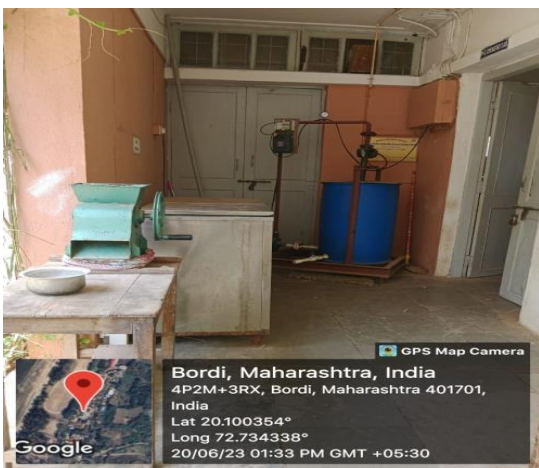
Use of Solar Energy and Water Conservation





Manually operated ice crusher

Batteries



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