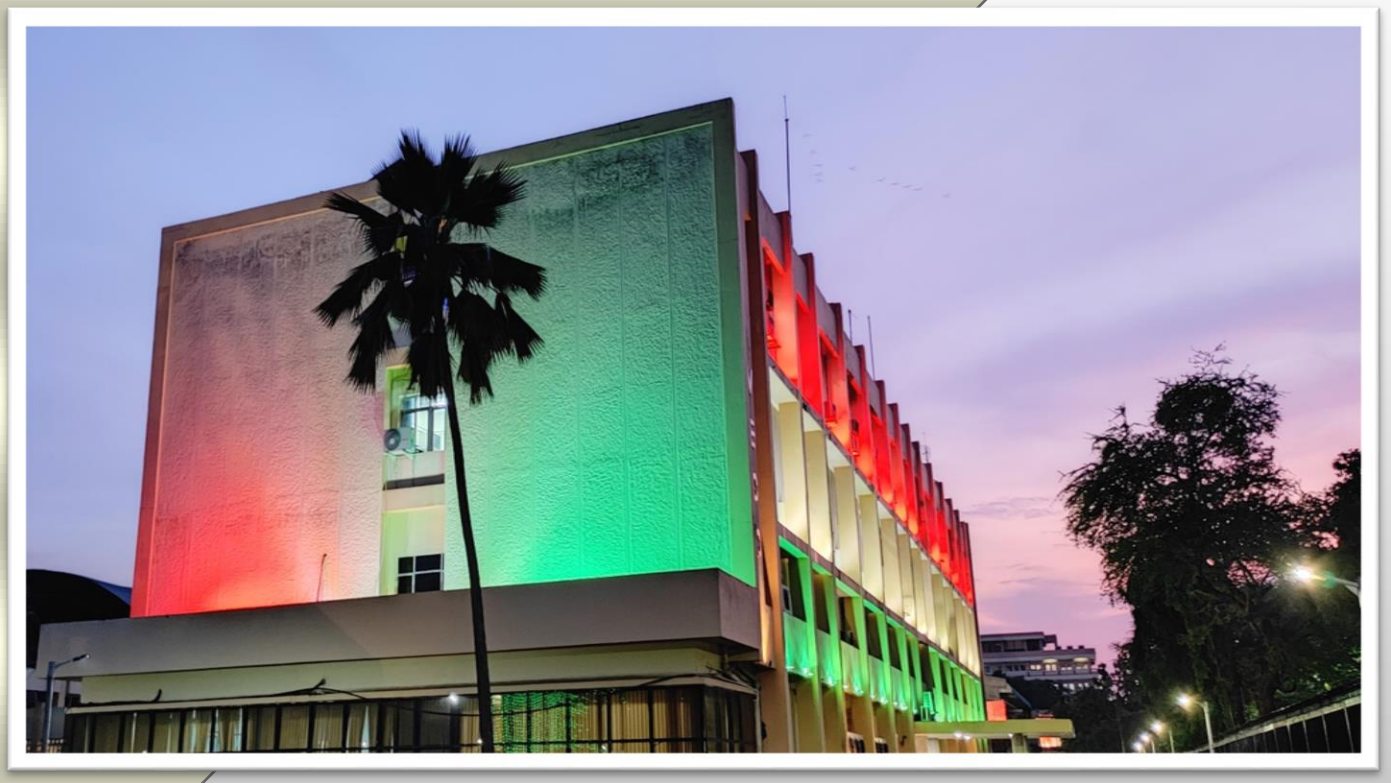
Government of India
Department of Atomic Energy

VECC Annual Progress Report
2022 - 23



Variable Energy Cyclotron Centre
Kolkata

Figure 1: Low Conductivity Water system

ON-GRID SOLAR POWER PLANT AT VECC

Solar energy has the potential to provide at least 1,000 times the energy consumed globally with the amount of solar energy received by our planet. On a sunny day the sun gives off around 1 KW of power to the earth's surface per square meter. Sunlight is a clean source of energy and easily accessible, unlike most of our other sources of energy.

On-grid solar power system works in addition with the National power grid. Excess or deficiency of power can be managed by this arrangement. Either the solar power system or the grid will provide power all the times. In on-grid type solar power system, there is no need to store the energy in batteries.

Power demand of VECC varies from 4.5 MVA to 6.2 MVA throughout the year. Average power consumption of VECC per month is 21,81,000 units. Majority of the power demand is met by WBSEDCL. Average charges per unit consumption is ₹7.5.

Power demand of MCF varies from 600 KVA to 1000 KVA throughout the year. Average power consumption of MCF per month is 3,29,000 units. Majority of the power demand is met by CESC. Average charges per unit consumption is ₹7.5.

Following On-grid solar power systems has been installed at VECC & MCF.

1. 15 KWp - Main building, VECC
2. 20 KWp - DG building, VECC
3. 20 KWp - PSI building, VECC.
4. 20 KWp - Store building, MCF.

50 KWp On-grid solar power system at Rajarhat site is under commissioning stage.

Total solar power generation in all the above 4 plants during the last calendar year i.e. 2022 is 83,312 units. Effective saving of money during the last calendar year due to above solar power plants is around ₹ 6,24,840.00

Whereas reduction of CO_2 emission during the last calendar year is around 66,650 Kg of CO_2, considering per 1 unit of solar power generation is 0.8 kg of CO_2.

(Please note that the above calculation considers only the reduction in CO_2 emissions for the electricity generated from a solar power plant vs. a coal and does not take into account CO_2 from other parts of the value chain.)