

## 7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual.

### Provide web link to:

- Best practices in the Institutional web site  
Any other relevant information

### Title of the Practice:

## 1. Renewable Energy Resources

### 1. Objectives of the Practice (in about 20 words)

Energy management is the means of controlling and reducing a building's energy consumption, which enables owners and operators to Reduce costs, Reduce carbon emissions and Reduce risk.

### 2. The Context (in about 30 words)

Use of LED lights instead of incandescent lamp and tube lights is one of the important green practices along with use of natural ventilation, natural light are useful practices carried out to reduce the use of electricity.

### 3. The Practice (in about 50 words)

At VPIMSR, energy conservation measures are taken up by means of replacing all conventional bulbs by low energy consuming bulbs. Few energy conservation measures adopted by VPIMSR are Solar Rooftops and Solar Heaters. VPIMSR has installed Solar Rooftops mounted on the Library building and installation of 2 Solar Water Heater Systems with 500 LPD in the Ladies Hostel. In addition, replacement of old incandescent bulb and tube lights by LED lamps has been followed and is continued till date by VPIMSR as a response towards green practices of energy conservation.

### 4. Evidence of Success Describe in about 40 words.

#### Energy Consumption ( in Units) :

Fixed PV installations rooftop-mounted systems Canadian Technology are employed at VPIMSR, with the capacity of 30 KW. These solar panels are working in full capacity. It is depicted from Mahavitaran electricity bills of VPIMSR that the electricity bill is reduced by 70%. Thus solar photovoltaic panels are efficient in harnessing solar energy throughout the year. VPIMSR has installed LED with 9W outdoor luminary solar photovoltaic panel in open spaces. This has considerably reduced energy consumption.

### 5. Energy utilized in Five Years at VPIMSR

Solar panels were implemented in December 2018.

From April 2016 to November 2018, total energy consumption was 68665 Units and after implementation total energy consumption From December 2018 to October 2021 was 11123 Units. (Ref. Green audit)

Mean consumption before implementation was 2985.434783 Units and Mean consumption after implementation was 461.3824 Units.

To hypothetically prove, significance difference mean before and after consumption, t test was applied

Considering, Df=24

Alpha 0.05,

Critical value was 1.52 and calculated value was 2.06 which is below significance level. Hence it is **proved that there is significance difference in mean of energy consumption before and after implementation of solar panels.**

Solar energy is the most abundant of all energy resources. The rate at which solar energy is intercepted by the Earth is about 10,000 times greater than the rate at which humankind consumes energy. Solar panels harness sunlight to generate electricity. So, they pose fewer pollution risks to the environment in comparison to conventional sources of energy. Unlike a generator, they run without producing any noise and give out lesser emissions of harmful gases. Furthermore, it is a good source of energy that combats climate change. Thus, rooftop solar is ideal as it reduces carbon footprints.

**6. Problems Encountered and Resources Required** (in about 30 words).

Finding out the suitable source for installation was a tedious task due to lack of technical expertise. Besides, the pandemic situation had also delayed the process. Furthermore on seasonality also affected the use of energy through solar panels. Heavy maintenance charges are another problem encountered.

## **Title of the Practice**

# **2. Green Campus Initiatives**

**1. Objectives of the Practice** (in about 20 words)

VPIMSR fosters sustainable development by promoting a plastic-free campus, energy conservation, rainwater harvesting, and environmental awareness initiatives.

**3. The Context** (in about 30 words)

VPIMSR integrates eco-friendly practices, promoting sustainability through energy savings, waste recycling, water conservation, and Green Audits, aligning with Swachh Bharat's goals for environmental responsibility and awareness.

**2. 4. The Practice** (in about 50 words)

VPIMSR actively promotes sustainability through initiatives like rooftop solar panels, rainwater harvesting, sprinkler irrigation, and LED lighting to reduce carbon footprints. Green Campus Committee and NSS foster environmental awareness via clean campus drives, tree plantation, and community outreach, ensuring sustainable resource management, eco-friendly practices, and compliance with government environmental policies.

**3. 5. Evidence of Success** (Describe in about 40 words)

VPIMSR balances environmental protection with sustainable goals, using 30 KV rooftop solar panels to reduce electricity bills by 70%, harness solar energy, cut CO<sub>2</sub> emissions, and promote eco-friendly practices through environmental audits and awareness initiatives.

**4. Problems Encountered and Resources Required** (in about 30 words).

To Rejuvenate and Restore the Green Campus was the major problem encountered.