Best Practices of EMRC Srinagar

1. Title of the Practice

a. *Reducing carbon footprints*
b. *E Waste Management*

2. Objectives of the Practice

a. The objective of reducing carbon footprints in the environment is a part of the social responsivity of the institution for a cleaner environment for our future generations. Carbon emission is one of the main reason for global warming and gradual meltdown of world glaciers and polar ice. The centre has been doing its bit to cut down the carbon emission by adopting the use of clean solar energy and using electric/electronic gadgets having 5-star rating.

b. E-waste management refers to the proper handling, disposal, and recycling of electronic waste. It's crucial due to the hazardous materials electronic devices contain, such as lead, mercury, and cadmium. Proper management involves recycling, refurbishing, and safely disposing of electronic devices to prevent environmental pollution and health risks. The objectives of e-waste management include:

- Environmental Protection:
- Resource Conservation:
- Health and Safety:
- Promoting Sustainable Practices

3. The Context

The context of reducing carbon footprints stems from the urgent need to address climate change, a global crisis driven by excessive greenhouse gas emissions. With rising temperatures, melting ice caps, and extreme weather events, the consequences are profound and far-reaching, impacting ecosystems, economies, and human health.

- *Kolahoi glacier, the largest glacier in Kashmir Himalayas, has lost 23% area since 1962 and has fragmented into smaller parts.*
- *Area under irrigation-intensive agriculture has shrunk by 39%, whereas the built-up area has expanded by 476.19% at a rate of 12.53% per year between 1980 and 2018 in Kashmir.*

Technological advancements offer solutions, from renewable energy sources to carbon capture technologies. Reducing carbon footprints involves adopting sustainable practices to minimize greenhouse gas emissions, combating climate change. Efficient technologies and green infrastructure play pivotal roles, promoting energy efficiency and cleaner production methods.

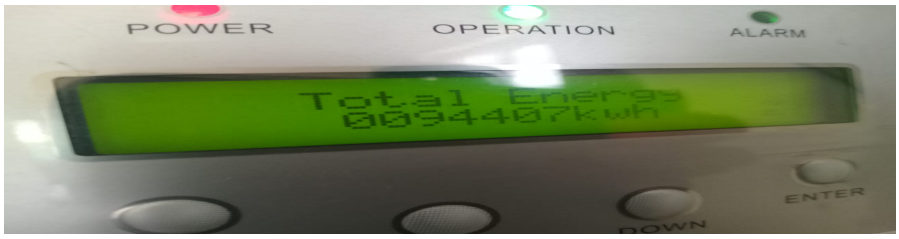
4. The Practice

a. The Centre has taken initiatives to reduce carbon emission by utilizing clean solar energy. The Centre has 50KW on grid Solar panel installed on the rooftop.

b. The Centre has reduced the e-waste by adopting modern technologies thus minimizing the electronic waste by 150%. The Centre has been upgraded to High Definition/4K with automation of its production/post-production workflow by establishing state of the art Central Apparatus Room (CAR).

5. Evidence of Success

a. Till date, 94,407 KWh units of electricity has been generated & exported to the main grid.



b. Use of Tapes/Optical Discs has been discontinued by adopting automation of the production workflow and a 23GB Optical disc has been replaced with 3.3 TB Optical Discs of same size.

6. Problems Encountered and Resources Required

Energy Meter has not been installed till date which is very important to determine the import/export of energy. Here are several key problems encountered for its execution:

1. **Cost Implications :** Many low-carbon technologies involve high initial costs and long payback periods, deterring investment and adoption.

3. **Infrastructure Challenges:** Requirement of large sun facing surface area & Installation of Solar Panels on the roof top poses significant challenges as well as risks to the manpower.

4. **Intermittency of Renewable Energy:** Renewable energy sources like solar are intermittent and available during day only, meaning they depend on weather conditions and may not always be available when needed. Addressing the intermittency challenge requires innovative solutions such as energy storage systems, grid modernization, and demand-side management.

5. **Behavioral Change and Public Perception:** Encouraging officials to change the equipment with new technologies and adopt low-carbon lifestyles and behaviors can be challenging due to inertia, lack of awareness, and resistance to change. Overcoming societal norms, cultural attitudes, and consumer preferences that favor carbon-intensive practices requires targeted education, communication, and social mobilization efforts.

Dated 09.05.2024

Sd/-
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