REPORT ON SOLAR ENERGY UTILISATION

1. Introduction

PSG Institute of Technology and Applied Research (PSG iTech), Coimbatore, has undertaken initiatives to promote renewable energy utilisation and reduce dependence on conventional electricity sources through the installation of solar photovoltaic (PV) systems across its campus. This initiative reflects the PSG iTech commitment to energy conservation, environmental responsibility and sustainable campus development.

Solar energy installations have been established across different buildings and facilities, contributing to the generation of clean electricity and supporting the PSG iTech efforts towards reducing its carbon footprint.

2. Solar Energy Installations

The PSH iTech has installed solar photovoltaic systems at various locations across the campus. The installations include:

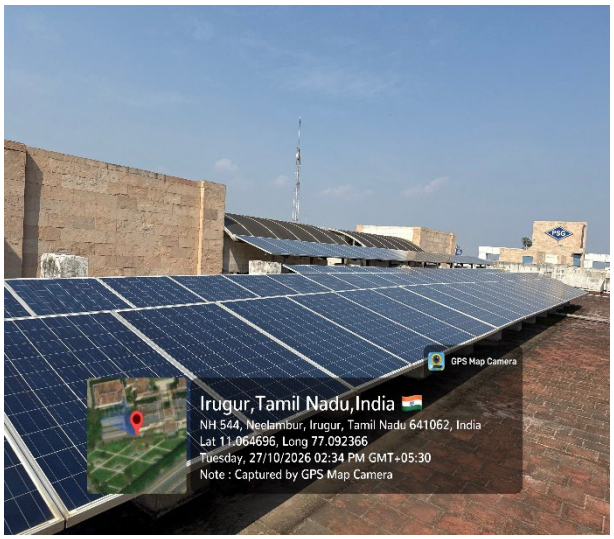
Location	**Installed Capacity**
E1 Block	40 kW
E2 Block	60 kW
Centre of Excellence (COE)	100 kW
Vehicle Parking area	60 kW
Total Installed Capacity	**260 kW**

The cumulative installed solar power capacity is **260 kW**, distributed across the campus to support renewable electricity generation.

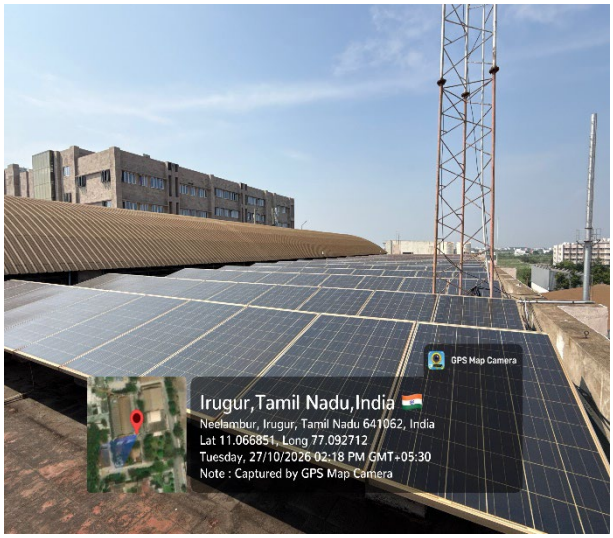
3. Photographs of solar installations



Solar Panel Installed at E1 block



Solar Panel Installed at E2 block



Solar Panel Installed at COE



Solar Panel Installed at Vehicle Parking Area

4. Solar Energy Generation and Performance

The solar PV installations contribute to the PSG iTech electricity requirements through the conversion of solar radiation into electrical energy.

The recorded energy generation and estimated performance indicators are presented below:

Parameter	Recorded Value
Total Installed Solar Capacity	260 kW
Average Daily Energy Generation	594.4 kWh/day
Estimated Annual Energy Generation	221,124 kWh/year
Approximate Solar Panel Area	1,300 m²
Equivalent Area in Square Feet	13,993 sq. ft.

The recorded average daily generation of approximately 594.4 kWh/day is based on a 31-day reference month. The estimated annual generation of 221,124 kWh/year is calculated by extrapolating the recorded monthly generation over 12 months.

The solar installations occupy an approximate panel area of 1,300 m², demonstrating the institution's utilisation of available campus infrastructure for renewable energy generation.

5. Contribution to Sustainable Development Goals

The PSG iTech solar energy initiative supports the following United Nations Sustainable Development Goals (SDGs):

SDG 7 – Affordable and Clean Energy: Promotes the adoption and utilisation of renewable energy through campus-based solar power generation.

SDG 9 – Industry, Innovation and Infrastructure: Encourages the integration of sustainable energy technologies into institutional infrastructure.

SDG 11 – Sustainable Cities and Communities: Supports the development of environmentally sustainable institutional infrastructure.

SDG 12 – Responsible Consumption and Production: Encourages responsible energy utilisation and efficient resource management.

SDG 13 – Climate Action: Contributes to climate change mitigation through the adoption of renewable energy.

6. Conclusion

The installation and utilisation of 260 kW of solar photovoltaic capacity at PSG iTech demonstrate the commitment to renewable energy adoption and sustainable campus development. With an estimated annual generation of 221,124 kWh, the initiative represents a significant step towards reducing conventional energy dependence and promoting environmentally responsible institutional operations. Through continued investment in renewable energy infrastructure, PSG iTech reinforces its commitment to energy conservation, environmental sustainability and the development of a greener campus.