



PANIPAT INSTITUTE OF ENGINEERING & TECHNOLOGY

(An Autonomous Institute, Approved by AICTE, New Delhi & Affiliated to Kurukshetra University, Kurukshetra)

7 AFFORDABLE AND CLEAN ENERGY



SDG 7: AFFORDABLE AND CLEAN ENERGY

Goal 7: To ensure access to affordable, reliable, sustainable and modern energy for all.



7 AFFORDABLE AND CLEAN ENERGY

To ensure its commitment to sustainable energy and align with **SDG 7: Affordable and Clean Energy**, PIET has made substantial investments in renewable energy infrastructure. This includes the installation of solar panels across all campus buildings, the extensive tree plantation drives, and the adoption of energy-efficient infrastructure. These strategic initiatives enable the institute to meet a significant portion of its energy requirements through clean, renewable energy sources, reducing reliance on non-renewable resources and helping in lowering its carbon footprint.

Target: To ensure access to affordable, reliable, sustainable and modern energy for all.



7 AFFORDABLE AND CLEAN ENERGY

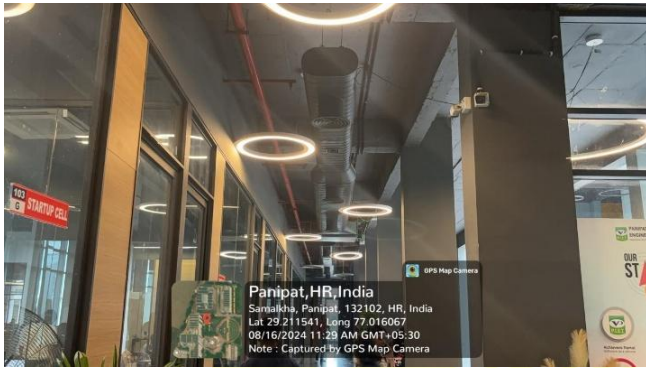


To ensure access to affordable and sustainable energy for all

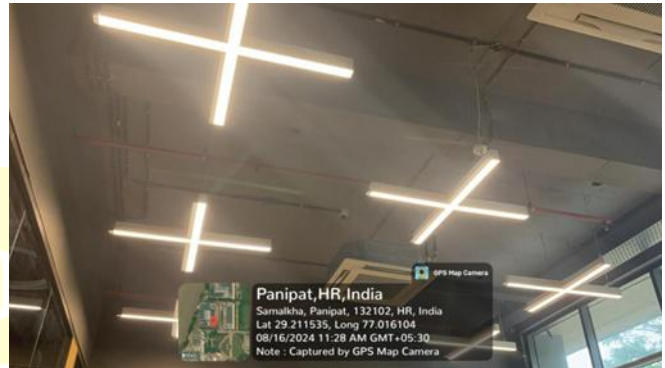


7.1. Energy Saving Infrastructure

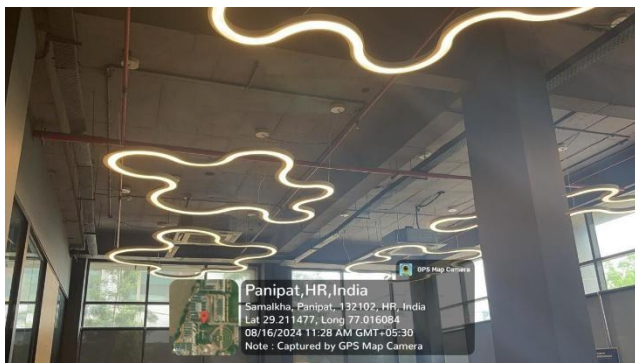
The Institute is committed to create sustainable energy and as a part of this commitment, PIET buildings are working with smart energy equipment's. There is LED light usage across campus and to promote energy saving equipment's majority of CFL lights are replaced with LED lights. This approach shows the institute dedication to ensure sustainable campus environment.



Energy-efficient LED lights in the corridor ground floor, G-Block



Energy-efficient LED lights in AR-VR lab, G-Block



Energy-efficient LED lights in the corridor of G-Block



Energy conservation slogan at the main switchboard in G-Block



Sensor-based energy-conserved classrooms in C-Blocks

7.2. Solar Power Generation at PIET

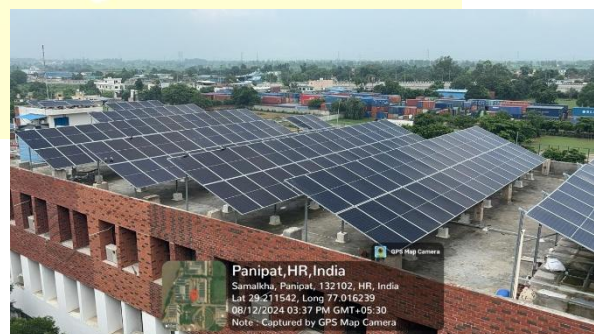
To meet the sustainable energy goals, the institute has installed solar panels on each building across the campus to generate power through solar energy. The solar power system is designed to deliver significant energy output, efficiently supporting essential campus operations, including lighting, heating, and powering laboratory equipment. A 570 kVA solar power plant supplies 21% of the campus's energy needs, supported by solar water heaters installed in residential areas and hostels to enhance sustainability. By adopting this green energy solution, PIET not only reduces its operational energy costs but also sets a benchmark for sustainable practices in educational institutions



An array of solar panels installed on the rooftop of a D-Block building in PIET



An array of solar panels installed on the rooftop of a G-Block building in PIET



An array of solar panels installed on the rooftop of a B-Block building in PIET



Solar Water Heater Installed on Rooftop of Boys Hostel



An array of solar panels installed on the rooftop of an E-Block building in PIET

Table 1 Electricity Consumption and Solar Plant Generation Year 2023

PERIOD	ELECTRICITY CONSUMED (IN KWHS)	SOLAR GENERATED (IN KWHS)
January 2023	24747	39060
February 2023	49170	24850
March 2023	60590	41720
April 2023	38391	19530
May 2023	221334	48580
June 2023	94515	18550
July 2023	310728	46900
August 2023	88850	13230
September 2023	259270	38430
October 2023	166736	21140
November 2023	495928	19740
Total	1810259	331730

7.3: Reduction in Carbon Emissions

There are three major initiatives that PIET has undertaken to reduce carbon emissions. The first is the use of renewable energy for electricity, with evidence for this initiative provided under section 7.2. The institute has taken a significant step toward reducing carbon emissions by purchasing 20 eco-friendly CNG buses, contributing to cleaner and greener campus transportation as its second initiative.

The third initiative focuses on reducing the campus's carbon footprint through extensive tree plantation drives, promoting a green and sustainable campus environment.



PIET's Bus Fleet



Student Availing the Bus Service



Landscaping Football Ground



Landscaping on Pharmacy Block Road



Landscaping near Parking



Landscaping of Open-Air Theatre



Landscaping near Admin Block



Landscaping at Main Gate



Herbal Garden Near Pharmacy Block

7.5. Certifications, Energy Audits, Green Initiatives

PIET has obtained certifications for its commitment to sustainable practices such as PIET has received **Platinum Certificate** awarded in acad. Yr. 2024-25 by none other than the **Solar man of India (Solar Gandhi) – Dr. Chetan Singh Solanki** for PIET’s Valuable Contribution towards Climate Change Awareness through Massive Energy Literacy Program & for being a Valued Supporter in Energy Swaraj Movement, “Silvattein Achhi Hai” in Colleges, Schools & in PIET. It has also received green campus certifications which shows recognition by local and national bodies for its efforts in renewable energy adoption and environmental conservation. For **Green Initiatives PIET has done** large-scale tree plantation drives, created a green buffer zone and enhanced carbon sequestration. It has also implemented eco-friendly practices such as rainwater harvesting and waste segregation, and recycling. Through these efforts, PIET ensures a sustainable and energy-efficient campus, aligning with global standards and contributing significantly to the achievement of SDG 7.



Herbal Garden



Indigenous Plants to maintain Ecosystem



Platinum certificate awarded to PIET for Contribution towards Climate Change Awareness through Massive Energy Literacy Program & for being a Valued Supporter in Energy Swaraj Movement

PIET was awarded Gold Appreciation Certificate TWICE & Gold Climate Clock in Apr. 2023 & 24.7.2024 by Energy Swaraj Foundation in recognition of Energy Literacy.



Green Audit



Energy Audit

Panipat Institute of Engineering and Technology (PIET) is taking small but meaningful steps toward achieving SDG 7: Affordable and Clean Energy. By incorporating renewable energy sources like solar power, introducing eco-friendly transportation, and adopting energy-efficient practices, the institute aims to contribute to a more sustainable future. These efforts reflect PIET's humble commitment to encourage environmental responsibility within its community.

