



Training Programme on Solar Energy & Photovoltaic (PV) System

Title	Solar Energy and Photovoltaic (PV) systems	
Duration	5 days	
Venue	NTPC School of Business, Noida, India	
Day	Time	Topic
Day 1	Forenoon (FN) 3 hours	Basics of Solar Energy Solar Irradiance, Normal and Global solar radiation. Significance of solar constant etc. Solar PV cell, Types of solar PV cell: Mono, poly and amorphous, tandem - their advantages and disadvantages Solar Module technology, Panel, Array Advancement of solar PV: trends and costs Solar PV standards, conformity & quality
	Afternoon (AN) 3 hours	Balance of systems - Solar inverter, Working of solar PV system, Efficiency and performance aspects of solar PV system, Advantages and limitations of solar PV systems Applications of Solar PV Systems (AC & DC systems) and their relevance Batteries / Energy storage Design parameters, Operation, Maintenance and Trouble-shooting.
Day 2	Forenoon (FN) 3 hours	Centralised, Decentralised Solar and Grid connected PV Systems, Rooftop Solar systems - Techno-institutional models & financial models. Cost Economics of Solar PV system Case experience from India and other countries Recent developments and grid integration - challenges & opportunities
	Afternoon (AN) 3 hours	Enabling Policies for Solar Power Development - Experiences from India and other countries Case examples of different solar applications – Residential, Commercial and Agriculture
Day 3	Forenoon (FN) 3 hours	Measurements of solar radiation and use of software/Hands on exercises Demonstration of Solar PV design software and Resource Assessment – PVSyst, Homer etc.
	Afternoon (AN) 3 hours	Introduction to Pre-feasibility, Feasibility Study and DPR, Tools and techniques for undertaking feasibility study and DPRs. Technical Specifications and Planning & Design of Solar Power Plants



Day 4	Forenoon (FN) 3 hours	Socio-economic impacts of solar energy for development schemes of Government. Existing challenges in integrating solar energy with other development schemes. Use of solar energy for addressing cross cutting development challenges including job creation, gender mainstreaming in project design, empowering women etc. Opportunities of Solar Energy in Myanmar in enhancing Energy access & Livelihoods
	Afternoon (AN) 3 hours	Monitoring and evaluation of solar programmes/schemes Design of M&E framework for solar programmes Impact assessment – framework & indicators (social, institutional, environmental & economic) Case examples from Global South
Day 5	Forenoon (FN)	Exposure Visit to solar project facilities
	Afternoon (AN)	Valedictory Session

Pedagogy - Through lecture sessions and case studies (incl. videos), the programme aims to equip participants to take up and handle solar PV projects for various applications (residential, commercial and agriculture) and to enhance electricity access.