



2 Day PV System Design Workshop

This **2 Day PV System Design Workshop** teaches how to design code complaint PV systems.

Audience

- Engineering Professional / Academics / Students
- Contractors / Consultants / Electricians

2 Day Outline

Day-1: 9:15 AM – 5:00 PM	Day-2: 9:15 AM – 5:00 PM
Part A – Basics/Review	Off-Grid System – Part D
Electrical Concepts/Terminology	Off-Grid System Sizing Calculations
PV System Terminology/Concepts	Off-Grid System Backup Storage Calculations
PV Systems Types/Components	Off-Grid System Design Calculations
Part B - Code	On-Grid System – Part E
National Electric Code (NEC) – General	Central Inverter Based System Sizing/Designing
Canadian Electric Code (CEC) – General	String Inverter Based System Sizing/Designing
PV Specific CEC & NEC	Micro Inverter Based System Sizing/Designing
Part C – Design Prep	Systems – Part F
Site Assessment, AHJs Requirement/Approvals	PV System Types Comparison @ Inverter
Load & PV Components for Designing	PV System Types Comparison @ Contract
Electric Grid Structure & Operations	Hybrid / Bimodal PV Systems
Miscellaneous	
Orientation, Strings, Array, Shade, MPPT Analysis/Optimization	
Introduction to PV Pumping System	
Closing	

Workshop Instructor

Dr. Irtaza Syed, PhD, P. Eng., PMP, PVIP, CEA has modeled, simulated, designed, procured, managed, installed, tested and commissioned 100's of Megawatts of renewable energy systems in Canada, USA & Pakistan. Systems include Off-grid, On-grid and Hybrid residential, commercial, institutional and utility scale, ranging from few kW to few MW in size.

Dr. Syed has hand-on experience of the US National Electric, Canadian Electric and Pakistan Electric and Telecommunications Safety Codes. He is teaching these PV courses since 2011 and is very aware of the FIT/Net-Metering rules (Canada / USA / Pak) beside UL/CSA/IEEE/IET standards, LDC/DISCOs and Electrical Safety/Inspection Authorities requirements.

Dr. Irtaza Syed,
 PhD, P. Eng., PMP, PVIP, CEA, MHDI
syed@solartraining.ca