



**Scandinavian  
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Training Center

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## Course: Solar PV System Design

Code	City	hotel	Start	End	price	Language - Hours
329	Abha	Hotel Meeting Room	2025-12-07	2025-12-11	11450 SR	En - 25

### OVERVIEW

**After participating in the course, you will be able to:**

- Apply basic principles of solar cell operation and comply with electrical authority and system operator
- Perform AC and DC system losses, fault analysis at combiner boxes and assess solar farm site
- Complete design layout and orientation, financial evaluations and operation of utility scale inverters
- Transform to AC and connection medium voltage (MV) distribution system
- Understand safe design (AC arc flash analysis, labeling and interlocking)

### Description

The last renewable energy resource to be developed in Canada, solar PV systems are unfamiliar to many engineers involved in power generation. The course deals with solar site assessment, installation consideration, financial evaluation of design, DC and AC losses, utility scale inverters, PV system commissioning and authorities technical requirements.

The course focuses on ground-mounted, grid-connected, medium and large utility scale solar farms connected to medium-voltage hydro circuits. Participants will also learn about overall solar farm configuration including DC and AC design and conceptual design of MV substation and AC collector circuits.



## Who Should Attend

- Owners
- Electrical Designers
- Electrical Engineers
- Sales Engineers
- Electricians
- Project Managers
- Installation and Operating Engineers requiring knowledge of PV Solar Systems

## Course Outline

- PV modules
- String voltage and current sizing
- String combiners and recombiners
- Solar farm site assessment
- DC system losses
- DC to AC transformation
- Grounding
- Testing and commissioning of PV system



The Scandinavian Academy for Training Center adopts the latest scientific and professional methodologies in training and human resource development, aiming to enhance the efficiency of individuals and organizations. Training programs are delivered through a comprehensive approach that includes:

- Theoretical lectures supported by PowerPoint presentations and visual materials (videos and short films).
- Scientific evaluation of participants before and after the program to measure progress and knowledge acquisition.
- Brainstorming sessions and practical role-playing to simulate real-life scenarios.
- Case studies tailored to align with the training content and participants work nature.
- Assessment tests conducted at the end of the program to evaluate the achievement of training objectives.

Each participant receives the training material (both theoretical and practical) in printed form and saved on a CD or flash drive. Detailed reports, including attendance records, final results, and overall program evaluations, are also provided.

Training materials are prepared professionally by a team of experts and specialists in various fields. At the end of the program, participants are awarded a professional attendance certificate, signed and accredited by the Scandinavian Academy for Training Center.

### **Program Timings:**

- 9:00 AM to 2:00 PM

### **The program includes:**

- A daily buffet provided during the sessions to ensure participants comfort.
- A closing ceremony on the final day to distribute certificates and celebrate participants achievements.