INTRODUCTORY COURSE TO SOLAR PV AND PV POWER PLANTS

Training given by experts in the solar industry

This one day course covers the technical basics of solar PV, starting with a PV module up to a PV power plant. Besides technology aspects, the course provides an overview of cost build up, price outlooks and PV project development. The morning session concludes with an introduction to quality assessment of PV components and power plants. The second part of the course focuses on the PV project life cycle and the trainees are taken through the development phases of a large scale PV power plant.

For whom?
This course is designed for professionals and organisations striving to obtain a certain basic knowledge about solar PV and the development of PV power plants. The typical audience includes project developers and owners, financial institutions, utilities and governmental organisations.

Your benefits
This course provides:
- an introduction to the first principles and practices of the solar PV sector
- knowledge about the basic components of a PV power plant
- an idea of the cost build up of a PV power plant
- insight into what ‘quality’ means in the PV sector and how it is assessed
- awareness of the process of developing a PV power plant and its key best practices
Subjects covered
The training course includes the following subjects:

■ Technical basics of PV power plants
  - the PV module
  - basic electronics
  - inverters
  - foundation & mounting structures
  - PV power plant design

■ Cost build up and price outlook
  - market facts
  - PV power plant cost build up
  - PV module prices
  - cost build up of Balance of System
  - system costs
  - Levised Cost of Electricity (LCoE)

■ Quality aspects
  - overview of IEC standards
  - PV modules standards and testing
  - inverter standards and testing
  - quality in PV power plants

■ PV life cycle focus
  - feasibility
  - development
  - pre-construction
  - construction
  - O&M

■ Role-play: experience situations market actors find themselves in.

■ Q & A session and topics to be addressed resulting from participating in the course.

Practical information
For the following items, please refer to the registration form:

■ Course dates
■ Venue details
■ Registration fee
■ Payment & cancellation conditions
■ Hotel accommodation

The training and all material will be in English. All participants will be provided with a USB flash drive, containing all the slides presented during the training. This will serve as a useful reference afterwards.

To encourage active participation, the number of participants is limited to 20. The course may be cancelled or rescheduled if the number of participants is insufficient.

For more information and to register, please visit: www.dnvgl.com/solar-PV-course.

In-company and customised training courses
On request, DNV GL can also develop customised and in-company training courses. Content, location and duration of the course can be adapted to your specific needs.

PROGRAMME

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>09.00</td>
<td>Introduction</td>
</tr>
<tr>
<td>09.30</td>
<td>Technical basics of PV power plants</td>
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<tr>
<td>10.15</td>
<td>Cost build up and price outlook</td>
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<tr>
<td>11.00</td>
<td>Break</td>
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<tr>
<td>11.15</td>
<td>Quality aspects</td>
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<td>12.15</td>
<td>Lunch break</td>
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<td>13.15</td>
<td>PV life cycle focus</td>
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<tr>
<td>14.15</td>
<td>Break</td>
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<tr>
<td>14.30</td>
<td>PV life cycle focus (continuation)</td>
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<tr>
<td>15.30</td>
<td>Role-play: experience situations market actors</td>
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<td></td>
<td>find themselves in</td>
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<td>16.30</td>
<td>Q&amp;A session and topics to be addressed resulting</td>
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<tr>
<td></td>
<td>from participating in the course</td>
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<td>17.30</td>
<td>End of the course</td>
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ABOUT DNV GL

DNV GL is a global quality assurance and risk management company. Driven by our purpose of safeguarding life, property and the environment, we enable our customers to advance the safety and sustainability of their business. We provide classification, technical assurance, software and independent expert advisory services to the maritime, oil and gas, power and renewables industries. We also provide certification and supply chain services to customers across a wide range of industries. Operating in more than 100 countries, our experts are dedicated to helping customers make the world safer, smarter and greener.

In the power and renewables industry DNV GL delivers world-renowned testing and advisory services to the energy value chain including renewables and energy management. Our expertise spans onshore and offshore wind power, solar, conventional generation, transmission and distribution, smart grids, and sustainable energy use, as well as energy markets and regulations.

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