



**SOLARPRAXIS**

*Engineering & Practical Expertise for Renewable Energies*

CONFERENCES

## Programme

**25<sup>TH</sup>/26<sup>TH</sup> JANUARY, 2010**  
**PRAGUE, CZECH REPUBLIC**

## **PV Power Plants 2010 – EU**

Utility-Scale PV: Technology,  
Markets & Financing,  
Production & Development

**ENSURING THE SUCCESS OF LARGE-SCALE PV  
PROJECTS – THROUGH COMPLETE UNDERSTANDING**

# **PV Power Plants 2009 – EU**

**25<sup>th</sup> and 26<sup>th</sup> January 2010**

## **The Market**

For many years photovoltaics has been a prime technology for the supply of small-scale decentralised energy. However, with falling costs, advances in technology and new areas of application the size of PV systems has grown dramatically. Plants of three-digit MWp are in the planning stage and GWp plants are already being evaluated.

The multi-MWp systems present entirely new challenges for grid-integration as well as they demand swift reductions in installation time and costs, international standards for Total Quality Management and Intelligent Network-Integration. For investors, the complex matrix of criteria for comprehensive project evaluation must become more transparent.

## **The Conference**

PV Power Plants is Europe's first conference to focus exclusively on "Utility-Scale Solar Power Plants", the market segment for systems that requires very high capital investment.

These investments demand thorough risk assessment capabilities combined with comprehensive understanding of the technology, markets and industry developments.

The experts from Solarpraxis, with its engineering background, undertook numerous yield assessments and project support activities in 2008 for > 200 MWp projects.

Together with key players of the market they assure that the conference will provide the participants with essential know-how. Therefore, it will be a crucial event for all investors, planners and component suppliers of PV Power Plants.

The conference is going to be a platform to establish new contacts and will especially aim for a dialog on the technology and the ways of ensuring confidence on the large capital outlay. The know-how of European industry experts – in particular from Germany – will ensure a conference discussion of highest standards.

**We are looking forward to welcoming you at the PV Power Plants Conference in Prague!**

# Monday, 25<sup>th</sup> January

**10:00** Registration and get together with snacks and drinks

## Plenary Session

### MARKET, POTENTIALS AND POLITICAL FRAMEWORK

**11:00** Welcome and opening words  
Definition of large scale pv power plants  
*Karl-Heinz Remmers, Solarpraxis AG*

**11:20** The future of Utility-Scale PV in Eastern and South Eastern Europe from a political point of view  
*Doc. RNDr. Ladislav Miko, PhD., Minister of the Environment, Ministry of Environment of the Czech Republic, tbc*

**11:40** Potentials of Utility-Scale PV Power Plants in the European Union  
*N.N., EPIA tbc*

**12:00** Project Overview: approved and outstanding project  
*Denis Lenardic, Photovoltaic Resources*

**12:20** Actual markets for Utility-Scale PV Power Plants in Central and Western Europe  
*Markus Hoehner, EuPD Research*

**12:40** Questions and Discussion

**13:00** Lunch

### EASTERN AND SOUTH EASTERN EUROPEAN MARKETS

**14:30** Legal framework for PV Power Plants in East and South Eastern Europe – state of affairs and expectations  
*Olaf Naatz, Rödl & Partner*


**14:45** Czech Republic and Slovakia  
*Mirjam Schwan, German-Czech Chamber of Industry and Commerce*

**15:00** Poland and the Ukraine  
*Janusz Staroscik, Komfort Consulting*

**15:15** Greece  
*Chrysa Zouli, Elasis Electrical Solutions, tbc*

**15:30** Turkey and the mediterranean area  
*Engin Özgökçen, EKCON Management Consultants GmbH*

**15:45** Questions and Discussion

**16:00** Coffee break  REC

# Monday, 25<sup>th</sup> January

## Forum 1

### TECHNOLOGY – MOUNTING AND SUBSTRUCTURE

What are the most suitable mounting systems for the different module types? What are the new developments?

The talks will stimulate the subsequent discussion.

- 16:30** Static and safety requirements for roof-top mounting systems  
*Hans Urban, Schletter Solar Montagesysteme*
- 16:50** What are suitable mounting systems for open areas? Static and safety requirements  
*Philipp Graf von Koenigsmarck, LEIT-RAMM Graf von Koenigsmarck GmbH & Co. KG, tbc*
- 17:10** Static and safety requirements for sensory tracking systems  
*Andreas Schwedhelm, DEGERenergie GmbH*
- 17:30** Applications of steel in the Photovoltaic sector  
*Albert Knotz, Welser Profile AG*
- 17:50** Different points of view regarding static requirements: Are statics and dynamic loads a hot topic? – Discussion  
*Hans Urban, Schletter Solar Montagesysteme*  
*Philipp Graf von Koenigsmarck, LEIT-RAMM Graf von Koenigsmarck GmbH & Co. KG, tbc*  
*Andreas Schwedhelm, DEGERenergie GmbH*  
*Albert Knotz, Welser Profile AG*
- 18:30** End of the conference day 1
- 19:00** Dinner

## Forum 2

### PROJECT DEVELOPMENT

What are the necessary steps for successful project development? At what point can you call it a “project”? What are the no-go criteria? What are the most important points for planning and design?

- 16:30** Project development step by step: How to differentiate yourself in the PD/EPC-business of large-scale PV-parks  
*Dr. Stefan Parhofer, Gehrlicher Solar AG*
- 16:50** Conditions and pitfalls in remuneration for feeding solar power  
*Michael Mack, Solar Engineering Decker & Mack GmbH*
- 17:10** Challenges for photovoltaic plants in open spaces  
*Stefan Müller, Enerparc AG*
- 17:30** Environmental requirements for open-space systems: e.g. Germany  
*Rainer Brohm, BSW-Solar, tbc*
- 17:50** Safety requirements for commercial roof-top installations  
*Christian Brune, ecosafety*
- 18:30** End of the conference day 1
- 19:00** Dinner

### INDUSTRY GUIDE

#### “PV Power Plants 2010” – April 2010

Circulation: 12.000 copies.


This high-quality, English-language publication is the first industry guide to focus exclusively on large-scale photovoltaic power plants and targeted to system integrators, distributors, project developers, top planners and investors. Besides corporate portraits it will include an overview of market conditions, advances in technology, new areas of application and perspectives.

More at [www.renewablesinsight.com](http://www.renewablesinsight.com) (on-line from October 2009)

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### TECHNOLOGY – INVERTERS AND GRID CONNECTION

- 9:00** What is the best architecture for large scale solar – micro-inverters or central inverters?  
*Steve Rhoades, Satcon Technology Corporation*
- 9:15** A new inverter concept as key driver for BOS (Balance of System) cost reduction  
*Dr. Christian Keller, Converteam GmbH*
- 9:30** Grid integration of large scale PV-plants – requirements and solutions for central- and string-inverters  
*Frank Niebling, SMA Solar Technology AG*
- 9:45** Rules for solar power plants - Dimension of the inverter  
*Bodo Giesler, Siemens AG*
- 10:00** Status of inverters, trafos and control conceptions  
*Dr. Antonio Notholt Vergara, Fraunhofer Institute for Wind Energy and Energy System Technology*
- 10:15** Requirements for monitoring systems for megawatt PV power plants  
*Martin Sauter, skytron® energy GmbH & Co. KG*
- 10:30** Questions and Discussion
- 10:45** Coffee break  REC

### TECHNOLOGY – PRODUCT APPLICATION AND QUALITY

- 11:15** Benefits of high efficiency modules in PV projects – New applications of bi-facial modules  
*Dr. Kenichiro Wakisaka, SANYO Component Europe GmbH*
- 11:30** Thin-film modules: efficiency, performance and system costs  
*Manfred Bächler, Phoenix Solar AG*
- 11:45** Tracker and concentrator systems – Status of use and technology after falling prices for solar modules  
*Lars Podlowski, SOLON SE*
- 12:00** Questions and Discussion
- 12:15** Best choice of modules for different environmental conditions – software simulations as basis for yield forecasts  
*Kathleen Peters, Valentin Energiesoftware*
- 12:30** Discussion: yield calculations and reality  
What are yield forecasts? What can be done to have them “seem favourable”? What systemic mistakes and discrepancies do exist?  
*Klaus Kiefer, Fraunhofer ISE; Robert Pfatischer, meteocontrol GmbH; Michael Mack, Solar Engineering Decker & Mack GmbH; Kathleen Peters, Valentin Energie Software; Tom Tansy, Fat Spaniel Technologies, Inc.; Uwe Hartmann, DGS e.V.*
- 13:15** Lunch

## Forum 2

### FINANCING

- 9:00** Funding of large scale projects in the EU – a developer's point of view  
*David Majert, Hansesolar*
- 9:15** Seed financing for photovoltaic projects  
*Gerard Reid, Ardour Capital Investments International GmbH*
- 9:30** Project financing during construction stage  
*Christian Baumgart, Bayern LB, tbc*
- 9:45** Bankability of modules, inverters and EPC-Status  
*Matthias Fawer, Bank Sarasin & Cie AG*
- 10:00** Acquisition of PV projects – Key factors for an equity investor  
*Andreas Kollegger, RENERGIE Raiffeisen Managementgesellschaft für erneuerbare Energie GmbH*
- 10:15** Project financing of PV plants: Are non-recourse structures available in emerging Europe?  
*Martin Mayr, Head of Competence Center Renewable Energies, UniCredit Leasing S.p.A. – Vienna Branch*
- 10:30** Questions and Discussion
- 10:45** Coffee break  REC

### FINANCING AND INSURANCE

- 11:15** Introduction: financing, guarantees and insurance: Is there 100% security?  
*Robert Pfatischer, meteocontrol GmbH*
- 11:30** Evaluation of guarantees, warrantors and guarantee insurances from the point of view of an insurance provider  
*Michael Sorg, Münchner Rück*
- 11:45** Evaluation of guarantees, warrantors and guarantee insurances from the point of view of a bank  
*Pavel Cech, Česká spořitelna a.s., tbc*
- 12:00** Guarantees and service concepts offered by inverter manufacturers  
*Peter Bruhns, Schneider Electric*
- 12:15** How do project developer evaluate yield guarantees/predictions?  
*Joachim Reiß, Q-Cells SE, tbc*
- 12:30** Insurance on long term guarantees  
*Christian Leers, TRUST Versicherungsmakler AG*
- 12:45** Questions and Discussion
- 13:15** Lunch

## FORUM 1

### TECHNOLOGY – QUALITY ISSUES DURING CONSTRUCTION AND IN PROJECT MANAGEMENT

Quality management during module purchase can substantially reduce problems in large PV systems. What can go wrong? What kind of quality measures, norms and designations already exist? What can be expected? How can the construction time and quality of power plants be improved?

**14:30** On-site workflow optimisation

*Carel Zwankhuizen, IB Vogt*

**14:45** Quality assurance in module production for large systems – what could go wrong?

*Jürgen Arp, abastrial*

**15:00** Systematic quality assurance to avoid expensive downstream problems

*Klaus Kiefer, Fraunhofer ISE*

**15:15** Existing quality programs – are they sufficient for large power plants?

*Willi Vaaßen, TÜV Rheinland Group*

*Uwe Hartmann, DGS e. V.*

**15:45** Questions and Discussion

**16:00** Closing remarks

**16:15** End of the Conference

## FORUM 2

### LIFE CYCLE MANAGEMENT AND SECURITY

Fast discovery and repair of possible malfunctions and protection against theft are essential for maintaining the ROI of power plants. These factors must be properly considered owing to the long investment timescale. What monitoring systems are available? What is best of class? How can theft be avoided through design and by monitoring? How does monitoring increase equipment availability and what plant availability can be achieved?

- 14:30** Success Factors of LSPV Projects  
*Edwin Cunow, PVConsult International*
- 14:45** Performance Care – Monitoring and maintenance of megawatt PV-Plants  
*Martin Rabinák, Solar Asset Management s.r.o.*
- 15:00** Surveillance of systems – better availability  
*Tom Tansy, Fat Spaniel Technologies, Inc.*
- 15:15** Requirements on the part of insurance providers for maintenance and protection against theft and vandalism  
*Bernd Hartmann, Allianz, tbc*
- 15:30** Construction and surveillance tools for theft protection  
*Christian Dürschner, Solarpraxis AG*
- 15:45** Questions and Discussion
- 16:00** Closing remarks
- 16:15** End of the Conference

## Participation fees

### Until 15<sup>th</sup> January

Regular	Euro 895,00
Members*	Euro 745,00
One-day-pass	Euro 495,00

### After 15<sup>th</sup> January

Regular, late bird	Euro 995,00
Members*	Euro 845,00
One-day-pass	Euro 595,00

*VAT not included.*

\*Members of partner associations

**The price includes:** Conference documentation, coffee breaks with snacks, two lunches, buffet dinner on the evening of conference day 1.

## Application conditions

Registration is possible up to 72 hours before the conference starts. After that it will only be possible to register directly at the event and to pay on-site by credit card at “late bird”-price. You will receive a confirmation and an invoice shortly after submitting your registration. The payment is due on our account with registration. Any bank fees must be paid by the applicant. In case of registrations during the last two weeks, please be prepared to deposit a confirmation of payment, issued by your bank, at the registration desk or to pay by credit card before the conference starts. The organiser reserves the right to refuse admission if the payment has not arrived verifiably before the start of the conference. Cancellations received in writing up to 6 weeks before the start of the conference will have to pay a 20% administration charge. In case of cancellations after this date or non-attendance the full participation fee is due.

A substitute delegate can be nominated at no extra charge, up to 72 hours before the conference starts or at the registration desk at the conference. We reserve the right to change the speakers and other parts of the conference program.

## Legal notice

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pictures of gatherings, public processions, and similar activities such as public events, in which the depicted people have taken part.

Should you not agree to the possible publication of such pictures, please contact us in advance.

## **Organiser**

Solarpraxis is a leading conference organiser in the solar energy sector. Its events, including the acclaimed Forum Solarpraxis in Berlin, as well as the CIS-ES in Madrid and the CIS-IT in Rome, have become essential meeting points for the solar industry in their respective countries. They are focused on market, financial and political issues.

In addition to organising conferences, Solarpraxis has both Publishing and Engineering Divisions, creating useful synergies for its clients and partners.

## **Conference Management**

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## **Conference Venue**

Marriott Hotel  
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