

ThinFilmSolar

Driving the thin film movement forward

Le Meridien, San Francisco, USA • 28-29 April 2009



Learn from Industry Thought Leaders:



Thomas Baruch
Founder &
Managing Director
CMEA Ventures



Nolan Browne
Managing Director
MIT-Fraunhofer
Center for
Sustainable
Energy Systems



Bernhard Dimmler
Chief Executive
Officer
Würth Elektronik
Research
Managing Director,
Research &
Development
Würth Solar



Tom Djokovich
Chief Executive
Officer
XsunX



Michael Gering
Chief Executive
Officer
Global Solar
Energy



Danielle Merfeld
Leader
Solar
Technologies
Platform, GE
Global Research



Tony Saxton
Chief Executive
Officer
FTL Solar



Thomas Seitz
Partner
McKinsey &
Company

Plus Insight and Analysis from:

- ▶ **Michael Allman**, President, **Sempra Generation**
- ▶ **Christopher Beitel**, Managing Director, **Applied Materials**
- ▶ **Benny Buller**, Director of Device Improvement, **First Solar**
- ▶ **Steven Chan**, Chief Strategy Officer, **Suntech America**
- ▶ **Matt Cheney**, Chief Executive Officer, **MMA Renewable Ventures**
- ▶ **Tom Djokovich**, Chief Executive Officer, **XsunX**
- ▶ **Paula Mints**, Associate Director, **Navigant Consulting**
- ▶ **Dr. Mohan Misra**, Chief Executive Officer, **ITN Energy Systems**
- ▶ **Dr. Brian Murphy**, Chief Executive Officer, **PrimeStar Solar**
- ▶ **Homayoun Talieh**, Chief Executive Officer, **SoloPower**
- ▶ **Dr. Henning Wicht**, Senior Director and Principal Analyst, Photovoltaics, **iSuppli**
- ▶ **Abe Yokell**, Principal, **RockPort Capital Partners**
- ▶ **Dr. Hein van der Zeeuw**, Chief Executive Officer, **Odersun**

Gain an in depth understanding of the Thin Film market:

- ✔ Understand the current status and potential of the Thin Film market
- ✔ Network with industry leaders
- ✔ Learn from case studies on improving the efficiency and reliability of Thin Film
- ✔ Hear about the latest innovations in the applications of Thin Film
- ✔ Benefit from a series of interactive panel discussions where you have the opportunity to quiz those in the know
- ✔ Gain insight into Thin Film development outside of the United States

Part Of:

Solar Global Series

Organized By:

GreenPower[™]
conferences

Book Now – Call +1 971 238 0700 / +44 20 7099 0600 or Online at: www.greenpowerconferences.com

ThinFilmSolar



As part of the highly successful Green Power Conferences **Solar Global Series**, we are now pleased to announce our **Thin Film Solar** conference, bringing together industry thought leaders and key stakeholders to drive forward the development of the industry.

The **Thin Film industry** has witnessed rapid expansion and manufacturers are now looking to identify ways to sustain that growth and meet expansion targets in a difficult economic climate. There has been impressive investment into thin film technologies but as the global downturn engulfs the financial markets, the industry will face some of its toughest challenges yet.

Through a series of interactive panel discussions and case studies, experts will share their strategies for ensuring the continued development of **Thin Film** solar projects. This is a must attend for those involved in module and cell manufacturing, technology innovation, equipment supply, financing, utilities, energy policy and installation.

Hear what past delegates have had to say about our Solar Global Series events:

“ I learnt a lot from the conference in terms of the market drivers, new technologies and financing. ” ABENGOA

“ Informative, good overview. ” VATTENFALL

Companies who have attended the Solar Global Series include:

Abengoa • AdvanceSis • ARKchem • BP • BSW-Solar • Cagayan Electric Power & Light Co • CEN (European Standards) • CREST • Dresdner Kleinwort • ECOSTREAM • Edwards Vacuum • Ellinas Wind Project Holding • Elnett International • Environmental Technologies International Corporation • European Investment Bank • Evolvence • GE Energy • GNA Communications • Group IPS • Heren Energy • IDC • IDTechEx • iEnergies AS • IMPERIAL • Industrial Fuels & Power • Invest In Germany • Investec • ITW • JTC Corporation • Macquarie • Magenta Partners • Mahindra & Mahindra • McKinsey • Nanosolar • NaREC • Neo Energia SL • NetCrystal • New Energy Finance • NextEnergy Capital • Norconsult AS • Nuon Helianthos • Optic Technium • Optimus Patents • Polysolar • Portuguese Trade & Investment Office • PSE AG • Qatar Petroleum • Q-Cells • Ruston Whebe • Sertec Energy • SgurrEnergy • Sharp, Solaire Direct • SOLAR • Solar Century • Solar Ventures • Solimpeks • SUNTECH-POWER • Total SA • Trina Solar • UK Trade & Investment • WISE India • XinAo • Yingli Green Energy Europe

Endorsed By:

AltaTerra
RESEARCH NETWORK

AHK
German American
Chambers of Commerce
Deutsch-Amerikanische
Handelskammern

EuPD Research

| International Solar

iSuppli

Who Will You Meet?

- ▶ Thin Film cell and module manufacturers
- ▶ Thin Film installers & plant owners
- ▶ Technology innovators
- ▶ Equipment suppliers
- ▶ Utilities
- ▶ Semiconductor companies
- ▶ Investors
- ▶ Industry analysts & press
- ▶ Government representatives

Enhanced Delegate Networking

One of the fantastic new features of **Thin Film Solar** is the online networking system – all pre-registered delegates, speakers and guests can contact each other, organise meetings and network before, during and after the event using this easy to use, private networking system. For more information, please visit the website.

www.greenpowerconferences.com

SolarGlobalSeries

This event is the 7th edition in the **Solar Global Series**. This series is an annual calendar of events covering the range of solar technologies and focusing on different sector developments such as solar power generation, solar architecture and solar investment.

The series provides an excellent platform to do business with solar industry leaders around the world and develop your business. These events have an excellent track record of attracting senior representative from the whole solar value chain.

Book Now – Call +1 971 238 0700 / +44 20 7099 0600 or Online at: www.greenpowerconferences.com

08.15 Registration & welcome coffee

09.00 Chair's opening remarks
Paula Mints, Associate Director, **Navigant Consulting**

Keynote Session – The Current Market and its Development

The state of the current market will be assessed through a series of brief presentations and in-depth discussion. Get a clearer understanding on where the industry is headed and how it is evolving.

09.10 **The Evolution of Thin Film – Market Status**

- ▶ Thin Film's impact on the PV industry
- ▶ How is the thin film landscape changing?
- ▶ Global supply and demand
- ▶ Potential vs. projected production
- ▶ Assessing the expansion plans of the thin film industry
- ▶ Competing with crystalline
- ▶ Expanding existing markets

Expanding into Thin Film

Andrew Beebe, Managing Director, **Suntech Energy Solutions**

Perspectives on Thin Film & Solar Market Development

Thomas Seitz, Partner, **McKinsey & Company**

Thin Film's Competitiveness with Crystalline Silicon

Nolan Browne, Managing Director, **MIT-Fraunhofer Center for Sustainable Energy Systems**

10.30 Networking refreshment break

11.00 **Panel Discussion with Brief Case Studies Investment into Thin Film as the Credit Crunch Bites**

- ▶ The current state of investment
- ▶ Venture capital investments
- ▶ Encouraging investors
- ▶ New funding avenues, where is capital still available?
- ▶ How is project finance changing?
- ▶ Overcoming the obstacles to investment
- ▶ What is the overall outlook?

Moderated by: **Nathaniel Bullard**, Senior Associate, **New Energy Finance**

Homayoun Talieh, President & Chief Executive Officer, **SoloPower**

Commercial Solar Projects and the Prospects for Thin Film

Matt Cheney, Chief Executive Officer, **MMA Renewable Ventures**

Transformative Approaches in Thin Film at Solyndra

Thomas Baruch, Founder & Managing Director, **CMEA Capital**

Key Drivers for Investment

Abe Yokell, Principal, **RockPort Capital Partners**

Addressing the Key Challenges Facing the Development of the Thin Film Market

This session will examine the challenges that the industry is confronting. It will look at what steps can be taken to remove any potential barriers to the advancement of the thin film movement.

12.00 **Panel Discussion – Answering the Critical Questions**

- ▶ How can you improve the efficiency of thin film?
- ▶ How can you drive down the BOS costs?
- ▶ What about reliability issues for flexible substrates?

Dr. Jeffrey J Urban, Associate, **Lawrence Berkeley National Laboratory**

Danielle Merfeld, Leader, **Solar Technologies Platform, GE Global Research**

Benny Buller, Director of Device Improvement, **First Solar**

Moderated by: **Dr. Henning Wicht**, Senior Director and Principal Analyst, **Photovoltaics, iSuppli**

12.45 Networking lunch break

Market Applications & Customer Perspectives

14.15 **Panel Discussion with Brief Case Studies The Applications of Today's Thin Film**

- ▶ In which markets is thin film more competitive than crystalline modules?
- ▶ Early thin film markets and niche applications
- ▶ Different technologies for different markets?
- ▶ The role that thin film can play in green building

Moderated by: **Paula Mints**, Associate Director, **Navigant Consulting**

Thin Film in the Military

Dr. Mohan Misra, Chief Executive Officer, **ITN Energy Systems**

Tony Saxton, Chief Executive Officer, **FTL Solar**

Thin Film in Space-Bound Applications

Kevin Reed, Chief Marketing Officer, **Welsom Space Power Consortium**

Thin Film in the Utility Sector

Michael Allman, President, **Sempra Generation**

Thin Film in BIPV Projects

Michael Gering, Chief Executive Officer, **Global Solar Energy**

15.30 Networking refreshment break

Key Drivers for Emerging Players

15.50 **Panel Discussion Feed-in Tariffs and Government Support**

- ▶ What is still needed?
- ▶ The impact of the DoE's Solar Initiative
- ▶ US Investment Tax Credit
- ▶ Emerging policies and initiatives
- ▶ The Californian perspective
- ▶ New revenue streams

Moderated by: **Jon Guice**, Managing Director, **AltaTerra Research**

James W. McTarnaghan, Partner, **Duane Morris**

Karlynn Cory, Senior Energy Finance Analyst, **National Renewable Energy Laboratory**

16.30 **Panel Discussion with Brief Case Studies Thin Film Rising Stars**

- ▶ Experts and promising thin film manufacturers lay out their plans, hopes and fears for the coming 12 months

Moderated by: **Dr. Lloyd Tran**, Director, **Clean Tech Institute** and President, **International Association of Nanotechnology**

Dr. Brian Murphy, Chief Executive Officer, **PrimeStar Solar**

Tom Djokovich, Chief Executive Officer, **XsunX**

17.30 Close of day one & networking drinks

08.30 Welcome coffee

09.00 Chair's opening remarks
Paula Mints, Associate Director, **Navigant Consulting**

Assessing the Technology and Materials

09.10 **Panel Discussion**
What Does the End of the Silicon Shortage Mean for Thin Film?

- ▶ Assessing price and price advantage
- ▶ Which applications will be most affected?
- ▶ What new challenges will thin film face?
- ▶ Developing a business strategy to prepare for market changes
- ▶ Avoiding and preparing for a bottleneck in the supply of raw materials for thin film

Jon Guice, Managing Director, **AltaTerra Research**

Bernhard Dimmler, Chief Executive Officer, **Würth Elektronik Research**, Managing Director, Research & Development, **Würth Solar**

Dr. Lloyd Tran, Director, **Clean Tech Institute** and President, **International Association of Nanotechnology**

10.00 **Multiple Case Studies and Discussion**
Semiconductors and Disposition Techniques

Amorphous Silicon
Christopher Beitel, Managing Director, **Applied Materials**

CdTe
Dr. Brian Murphy, Chief Executive Officer, **PrimeStar Solar**

CIGS
Michael Gering, Chief Executive Officer, **Global Solar Energy**

Discussion with audience questions:
Which material will lead the way in thin film development?

11.00 **Cost Reduction RoadMap at First Solar**
Benny Buller, Director of Device Improvement, **First Solar**

11.15 Networking refreshment break

11.45 **Panel Discussion**
An Examination of Per Watt Pricing

- ▶ How does thin film stack up against polycrystalline per watt pricing?
- ▶ What does this mean for the future of thin film?
- ▶ Energy yield vs. power rating

Nathaniel Bullard, Senior Associate, **New Energy Finance**
Thomas Maslin, Solar Analyst, **Emerging Energy Research**
Daniela Schreiber, Head Of Research, **EuPD Research**
Vijay Kapur, President & Chief Executive Officer, **ISET**

Regional Focus – Beyond the United States

This session will offer an excellent insight into what is going on in thin film manufacturing outside of the United States. Case studies will be presented from manufacturers in both Asia and Europe.

12.30 **Asia as the Emerging Thin Film Power House**
Lynn Sha, General Manager, **QS Solar**

12.50 **Europe Stands Firm**

Bernhard Dimmler, Chief Executive Officer, **Würth Elektronik Research**, Managing Director, Research & Development, **Würth Solar**

Dr. Hein van der Zeeuw, Chief Executive Officer, **Odersun**

13.30 Networking lunch break

Scalability

14.40 **Panel Discussion with Brief Case Studies**
Debating Turnkey Developments and Increasing Scalability

- ▶ Fully automated and semi-automated Technology
- ▶ Increasing the size of modules
- ▶ Realizing potential through scalability
- ▶ Shifting to large scale gigawatt manufacturing
- ▶ Economies of scale

Christopher Beitel, Managing Director, **Applied Materials**

Dr. J. Manjunathaiah, Vice President Business Development – Solar, **MAG Industrial Automation Systems**

15.30 **Panel Discussion**
Grid Parity and Future Outlook

- ▶ Defining 'grid parity'
- ▶ Are we there yet?
- ▶ What are the key factors and conditions to consider?
- ▶ What actions are needed to achieve grid parity?

Moderated by: **Daniela Schreiber**, Head of Research, **EuPD Research**

Dr. Henning Wicht, Senior Director and Principal Analyst, Photovoltaics, **iSuppli**

Lynn Sha, General Manager, **QS Solar**

16.30 Chair's closing remarks

16.40 Close of conference

Agenda correct at time of going to press. Please see the website agenda for the latest details.

Sponsorship & Exhibition Opportunities



Sponsor **Thin Film Solar** and benefit from:

- ▶ **1st class lead generation:** meet companies actively working in the Thin Film Solar industry
- ▶ **Enhanced brand profile:** pre-event promotional campaign plus extensive on site branding
- ▶ **Excellent publicity:** gain an incredible amount of presence from on site promotion
- ▶ **A cost effective marketing solution:** our development team will be happy to customise a package and develop a cost effective marketing channel to generate new sales leads



Sponsorship options for **Thin Film Solar** offering varying levels of branding and exposure are available to suit budgets and marketing aims. Contact **Ben Leighton** for further details:

Tel: +971 4 8135211 Fax: +44 207 900 1853

Email: ben.leighton@greenpowerconferences.com



FORTHCOMING EVENTS

GulfSolar

*Harnessing the potential of solar power
in the Middle East*

Dubai, United Arab Emirates
6-7 May 2009

Solar Economics Forum
Towards Grid Parity

*An in-depth investigation on
solar finance, investments, markets,
costs and technology*

London, UK
16-18 June 2009

Media Partners:

COLORADO
EnergyNews

CHLOREGY
Green leadership, news & thought.

argus
www.argusmediagroup.com

IPAWorld

ENERGY
CENTRAL

**SUN &
WIND
ENERGY**

Photovoltaics
International

semiconductorTODAY
COMPOUNDS & ADVANCED SILICON

Green Power Conferences consistently work in strategic partnership with industry leading organizations and trade publications. Our international and targeted marketing campaigns ensure excellent marketing exposure for our partners. If you would like to partner with us, please contact ryan.winchester@greenpowerconferences.com

GreenPower
conferences

partners alike. Green Power Conferences offsets the impacts of its commercial activities towards renewable energy projects.

Green Power Conferences was established in 2003 by a team of professional, environmentally aware event experts and were the first to offer professionally organized events focusing on the sustainability sector. Over the last five years, we have welcomed over 8000 delegates from 82 countries and built a global database of 250,000+ contacts. Our expertise lies in producing high quality, interactive conferences that provide ample networking opportunities for delegates and

Book Now – Call +1 971 238 0700 / +44 20 7099 0600 or Online at: www.greenpowerconferences.com

