

4th Quarter 2009 Newsletter

January 4th, 2010

Dear CPV Consortium Members:

As we move into 2010, the CPV Consortium would like to take a moment to recap the past year and the recent 4th quarter events. Over the past year the Consortium has attended and spoken at multiple conferences, held its first Annual Membership Meeting, launched a new informational website, increased membership, and helped educate multiple audiences about the advantages and potential of CPV technology. We also closed 2010 with the election of our new Board of Directors and look forward to increased activity from our workgroups, further visibility for the Consortium and CPV technology, the completion of our Environmental Study, and an increase in membership over the upcoming months. I appreciated the effort that everyone has put forth to better the organization and to ensure the success of CPV technology. I hope that this same enthusiasm continues to grow throughout the New Year.

Fourth Quarter Events in Review

CPV Consortium Dinner in Taiwan

The PV Taiwan Conference, held in Taipei October 7-9, 2009, had a section dedicated to CPV technology. Both Pedro Banda (ISFOC) and Nancy Hartsoch (SolFocus) spoke at the conference on behalf of their respective companies as well as for the Consortium. Taiwan-based EverPhoton who was actively engaged as a sponsor for the conference and exhibition hosted an information dinner to introduce the Consortium to interested parties at the conference. Pedro (ISFOC) and Andrew Tzeng (Arima EcoEnergy) addressed the group on the charter, activities, and goals for the CPV Consortium. There were 21 attendees from 8 companies ranging from lens manufacturers to system integrators.



Solar Power International

CPV 201 Workshop: Turning the Corner on Commercialization

Organizers of *Solar Power International*, the largest and most reputable solar conference in the U.S. held in late October in Anaheim, California, invited the CPV Consortium to instruct a workshop on CPV, based on the favorable response to last year's Consortium Workshop named CPV 101. This year's workshop, titled "CPV 201 – Turning the Corner on Commercialization" was focused on not the basics of the technology (that was CPV 101 taught this year by Dr. Sarah Kurtz of NREL) but on the deployment of the

technology with an emphasis on measurements, performance, installation and O&M issues. We had 66 attendees from all sectors of the CPV industry, which made our workshop one of the highest attended at the conference. Attendance at these pre-conference workshops comes with a \$200 price tag in addition to conference fees.

CPV Consortium Director Nancy Hartsch facilitated the four-hour workshop and provided an overview on the state of the industry. Steve Horne, SolFocus and Hansjörg Lerchenmüller, Concentrix shared the podium addressing various aspects related to the Energy Yield as the heart of CPV technology. They covered the fundamentals of CPV, solar resource information, theory of yield calculation, field performance of CPV power plants, energy losses and good plant design.

Holger Janke, CFO of Concentrix Solar discussed the subject of LCOE and economic analysis. Erika Hanson, Director of Field Operations for SolFocus spoke about CPV from a deployment perspective, discussing the field deployment process and the advantages of the deployment of CPV over other solar technologies. Bill Johnston, manager of Renewable Energy for Honeywell’s federal division brought to the workshop the developer’s perspective on CPV and focused on the benefits of CPV for a given application. The workshop was brought to a close with Nancy Hartsch’s review of the environmental aspects of solar and CPV. In addition, we showed the most recent version of the CPV Consortium Virtual Tour, which is up on our website for your review. If you were unable to attend the workshop and would like to know more, the entire presentation is available for download on our website under the Library tab in the Resources section.



Partnering Organization Table



Claire van Zuiden, CPV Consortium’s administrator, represented the Consortium at our display at Solar Power International. The CPV Consortium was a complimentary partnering organization, so we were able to promote the Consortium and our members at the conference in Anaheim. Claire received over 100 business cards and contact information as attendees to the conference visited our

display and inquired about the organization. Since then, she has followed up with those that left their information and many have expressed great interest in becoming members. The table displayed many CPV Consortium materials including our brochure and our CPV “advatorial” which was also printed daily in the Show Guide. A copy of the advatorial is attached here for your reference and use.



Welcome New Member Reflexite

Reflexite’s business is the Management of Light. Current and future priority markets are reflective products, display optics, lighting optics, instrumentation optics, and telecom optics. They combine optical engineering, microreplication and polymer processing technology to provide differentiated products to customers worldwide. Solar is a growing area for the company. www.reflexite.com



Newly Elected Board of Directors

The CPV Consortium is proud to announce the election of two new Board Members: Dr. Andreas Bett, Fraunhofer ISE, and Dr. Martha Symko-Davies, NREL and the reelection of Jan Hildebrandt, 3M and Dr. Gerhard Strobl, AZURSPACE.

Dr. Bett is one of the most respected CPV experts in the world and is currently heading the department of “Materials –Solar Cells and Technology” at Fraunhofer. This department includes the group “III-V-epitaxy and solar cells” which is one of the largest and one of the most respected groups active in R & D for CPV cells, modules, and components. He is also an active member in the IEC TC82 WG7 which develops standards for CPV. In addition, he is currently the chair and main organizer of the 6th International Conference on Concentrating Photovoltaics to be held in April 2010 in Freiburg. We are very excited to have Dr. Bett bring his more than 20 years of experience in CPV technology to the CPV Consortium’s Board of Directors.

Dr. Symko-Davies has been working for the National Renewable Energy Laboratory (NREL) since she received her PhD in 1997. While at NREL, she has held a variety of positions including: Photovoltaic Manufacturing Technology Technical Manager, High Performance PV Project Manager, and her current position as Research Senior Supervisor. In addition, she has been the Department of Energy (DOE) Solar Program Review Chair, the SPIE Energy Symposium Chair, IEEE PVSC Organizing Committee Member, and APS Member. She has authored and co-authored over 30 publications pertaining to photovoltaic’s industry in general, as well as specific papers on Concentrative Photovoltaic technology. We are very

pleased to have Dr. Symko-Davies on our Board of Directors due to her longevity of experience in the photovoltaic field.

Andreas Bett, Martha Symko-Davis, Jan Hildebrandt, and Dr. Gerhard Strobl join Pedro Banda (ISFOC), Hansjörg Lerchenmüller (Concentrix Solar), Brian Gibson (Emcore), and Nancy Hartsoch (SolFocus).

Review of Upgraded Website



Attached are some of the analytics showing traffic data for CPV Consortium website. The graphs include where the source of traffic comes from to the website, what pages have the most traffic, and what country the traffic is coming from.

In order to increase the visibility of the CPV Consortium and traffic to our website, we are asking all members to include information about the CPV Consortium on their website. Thus far, SolFocus, Cyrium Technologies, and Semprius’s websites are in the top 10 means of accessing the Consortium’s website. To see an example of how to coordinate the Consortium into your website please go to: <http://www.solfocus.com/en/industry/>.

Upcoming Events

Workgroup Meetings

We will be holding both Technical and Marketing Workgroup meetings at the 2nd Concentrated Photovoltaics Summit in San Diego, California. These workshops will be held the day before the conference opens (February 1st) at the US Grant Hotel. The Technical Workgroup meeting will be at 3pm and the Marketing Workgroup meeting will follow at 5pm. Agenda and exact room within the US Grant will be sent out in future emails. After the meetings Claire van Zuiden will be organizing monthly conference calls for each of the workgroups to help increase workgroup productivity. Workgroup participation is open to all general members. We encourage these members to join either or both of the groups to further their involvement in the Consortium. Please contact Claire van Zuiden at cvanzuiden@cpvconsortium.org if you are interested in joining a workgroup.

Marketing Workgroup: Nancy Hartsoch, Chair (SolFocus), Frank Middleton (Opel Inc.), Frank Boghe (Umicore), Gerhard Strobl (AZURSPACE), Jan Hildebrandt (3M), Andrew Tzeng (Arima EcoEnergy), Rudy Parekh (Veeco), Hansjörg Lerchenmüller (Concentrix), and John Cerilli (AXT) .

Technical Workgroup: Pedro Banda, Chair (ISFOC), Javier Berrios (Opel, Inc.), Steve Horne (SolFocus), Brian Gibson (Emcore), Andrew Tzeng (Arima EcoEnergy), Roy Lee (Epistar), Ben Depuydt (Umicore), and George Georghiou (University of Cyprus).

Membership Meeting

We will be holding a membership meeting in conjunction with the CPV-6 Conference in Freiburg, Germany. The meeting will be in the afternoon on April 6th, the day before the conference. Further information will follow regarding exact time and location.

Attachments

Please see the CPV Advortorial attached that was distributed at Solar Power International and ran in the daily newspapers at the conference. This document is also available on the website under the member's only section. Attached are summary web analytics showing traffic data for CPV Consortium website. The graphs include where the source of traffic comes from to the website, what pages have the most traffic, and what country the traffic is coming from.

Thank you for all of your help promoting expansion of the CPV Consortium the development of CPV technology. I look forward to working with you in 2010 and I hope that your New Year will be *concentrated* with success, health, and happiness.

Sincerely,

A handwritten signature in cursive script that reads 'Nancy Hartsoch'.

Nancy Hartsoch
CPV Consortium, Chairman and Director