

# SESI news




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## Opinion article

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### Greener Homes Scheme Phase II: Make or Break for the Domestic Renewable Energy Market.

*Xavier Dubuisson is one of Ireland's leading advocates for solar energy. He has worked for over 5 years at SEI's Renewable Energy Information Office where he has been instrumental in developing the Irish market for renewable energy systems. He now runs his own consultancy in sustainable building design, XD Consulting.*

While Minister Eamon Ryan has been relatively discreet on his agenda for renewable energy policies, it is fair to say that his recent appointment has raised strong expectations among the sustainable energy community. The recent cuts in the Greener Homes Scheme ring loud alarm bells though. More serious than the adjustment in grant levels for certain technologies, it is worrying that communication from the Minister's department or SEI fails to mention budgetary figures or timelines for the programme. If there is one fundamental lesson from over 30 years of support programmes for renewable energy in Europe, it is the absolute need for continuity and long-term vision which enables the industry to have the confidence to invest. Otherwise, the developing Irish renewable energy industry is left with two prospects when operating in the framework of a support programme like the Greener Homes Scheme:

- go for the quick buck, without much regard for quality and customer satisfaction, and do a runner to sunnier horizons when the proverbial hits the fan;

- expand their business to meet the fast rise in demand and invest heavily to deliver a quality

product and service, and pray that somehow orders will keep coming in when the grants dry up.

There is anecdotal evidence that a number of opportunists have chosen the first path to fortune. But the great majority of Irish RE entrepreneurs are clearly in it for the long-term. They'll mop up the rubbish the cowboys have left behind and will plough on for greener energy pastures. It is the government's responsibility to continue to support them and their customers in their effort to realising the targets policy-makers have set. In my opinion, the following actions should be prioritized in Phase II of Greener Homes:

- Reinforcing eligibility criteria in terms of performance and durability, notably by extending them to other key system components than those currently used e.g. minimum insulation requirements for solar hot water tanks;

- Capitalising on the quality and performance data collected by SEI during the product registration process to enable consumers to make a more educated decision based on independent information e.g. solar thermal collectors with the EU Solar-keymark should be pointed out in the product list;

-Addressing the nonsensical list of installers registered with the scheme by introducing a certification process for installers based on the Renewable Energy Installer Academy model (test of skills, code of practice, inspection regime, etc.). The industry indicated its support of such a scheme during the consultation meeting organised by SEI in Spring this year.

-Widening the scope of technologies eligible for grant aid including to log stoves and boilers, solar photovoltaic systems and domestic wind power systems, obviously applying rigorous quality and performance criteria.

The relatively low level of confidence among consumers and professionals in innovative energy technologies is still a huge barrier to their successful deployment in Ireland. A number of cross-sectoral measures are badly required to address this problem:

-Providing continuing education opportunities for professionals involved in the design and engineering of HVAC systems to familiarise them with renewable energy options and empower them to apply them successfully.

-Establishing Centres of Excellence in key technological areas (e.g. solar, geothermal, solid biomass, microgeneration, etc.) where the industry, project developers, consumers and public bodies can access independent and low-cost expert sup-

port at pre-competitive level.

-Strengthening customer advice services provided by SEI and its Renewable Energy Information Office as well as the role of the Local Energy Agencies in this area.

The government will have to give itself the means of its ambitions, and a lot more. As the Stern report demonstrated, addressing our rampant greenhouse gas emissions will require huge investments in the long-term. But the costs of inaction (or doing too little) are much, much higher. If climate change and oil depletion are really political priorities in this country, the government has an imperative requirement to allocate sufficient budgets to tackle them effectively. And since money doesn't grow on trees, it will have to revisit carbon taxes as well as leveraging private investment through appropriate fiscal incentives. As an immediate priority, it is critical that the Minister clarifies how he and his colleagues in the Department of Finance will ensure adequate funding and sufficient continuity for its support programmes so that the industry can get on with business.

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## SESI News and Upcoming Events

### National

The **SESI AGM** is being held in **December** in Dublin. Further details will be emailed to members shortly

SEI are holding a conference on **'Passive Houses'** on Wednesday 31st October in Croke Park. Details on the **'See the Light'** conference are available on the SEI website

A draft **National Energy Efficiency Action Plan for Ireland 2007-2020** was published on the DCMNR website on 3<sup>rd</sup> October ([www.dcmnr.gov.ie/Press+Releases](http://www.dcmnr.gov.ie/Press+Releases)). The draft plan covers government strategy for meeting national and Energy Services Directive targets for the year 2020 in the building, transport and electricity supply areas. Interested parties are invited to submit views and comments by 16<sup>th</sup> November.

### International

The **International Conference on Molecular/Nano-Photochemistry, Photocatalysis and Solar Energy Conversion—Solar '08** will be held in Cairo, Egypt from February 24-28, 2008. Deadline for submission of abstracts is **October 19th 2007**. More information is available at <http://www.photoenergy.org/Welcome.html>

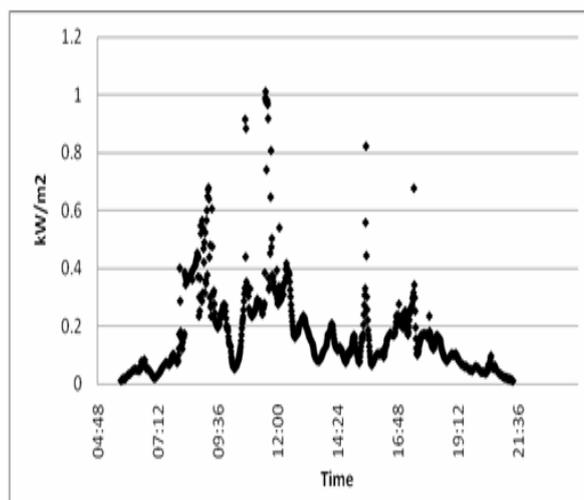
The **5th European Meeting on Solar Chemistry and Photocatalysis: Environmental Applications** will be held in Palermo, Italy, from October 4-8, 2008. A first call for abstracts has been issued, which may be downloaded from <http://spea5.altervista.org>

# New PV Installation and Solar Monitoring Facilities in DIT (part two)

Kevin O'Farrell, treasurer of SESI, is a lecturer in the School of Electrical Engineering Systems at DIT Kevin St. He is also currently carrying out PhD research titled "Selected aspects of the relationship between photovoltaic micro-generators and electric lamps in the particular case of DIT's Kevin Street campus"

Kevin's experimentation installation, situated on the roof-top of the FOCAS institute, was introduced in SESI News, issue 1, 2007. There are four solar-meters, two with shading-rings, for measuring indirect insolation and two for measuring global insolation. One pair is set horizontally and the other at  $30^{\circ}$ . There are  $50 \times 20$  W<sub>p</sub> PV panels wired back to a plug-in board (see images below). This arrangement allows variation in the number of panels used in any experiment plus flexibility in the series/parallel combinations. The roof-top laboratory that contains the plug-in panel also contains a delta-T logger, a PC, resistive and lighting loads, and interconnecting accessories. The external support and wiring arrangement enables PV panels to be replaced, by different sized panels if required.

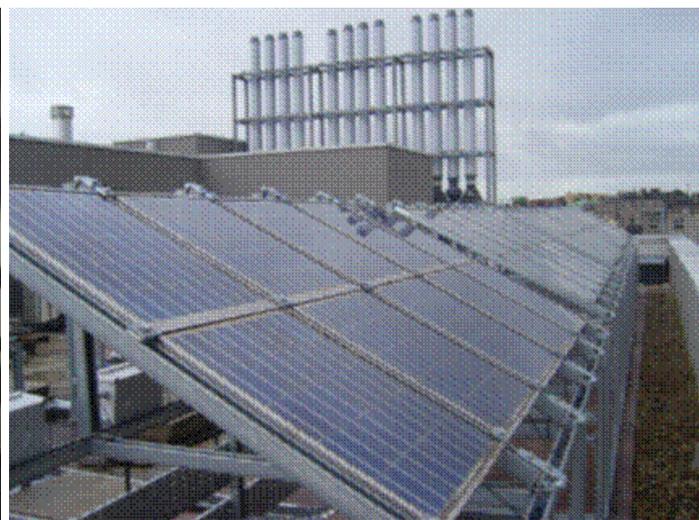
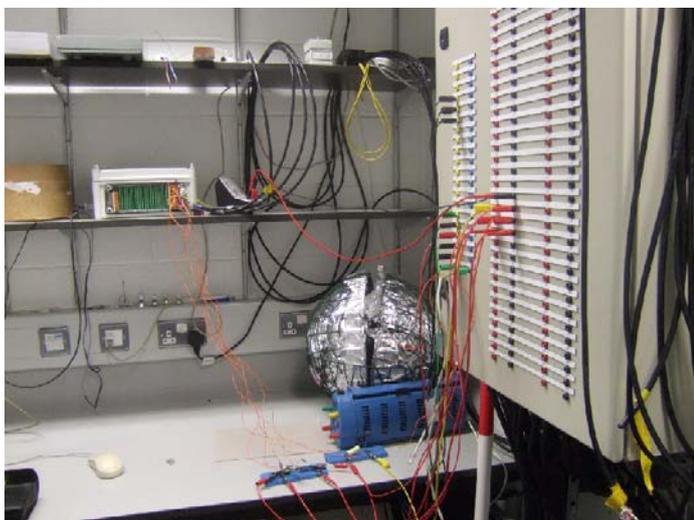
From an experimental perspective 2007 was a very good summer. Fast changing conditions generating irradiation characteristics, such as those show in the accompanying figure (right), will challenge any control system where the aim is to provide loads with a stable supply.



July 22nd 2007.

Readings are at one-minute intervals.

Measured irradiation at 1-minute intervals.



Left: Plug-in connector board on right of picture and logger in centre on shelf. Right:  $50 \times 20$  W<sub>p</sub> PV panels.

Please send any comments or queries on the newsletter to the editors, Emma Coyle and Manus Kennedy, at [sesinews@gmail.com](mailto:sesinews@gmail.com). If you would like to contribute an article or have any news or information to share with SESI members, feel free to email us.

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## Member Focus

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*Each issue it is hoped to include a short piece on one of the society's members, highlighting a little about what they do. If you'd like to be included in this feature, please feel free to submit a brief introduction to you and your work.*

### Manus Kennedy

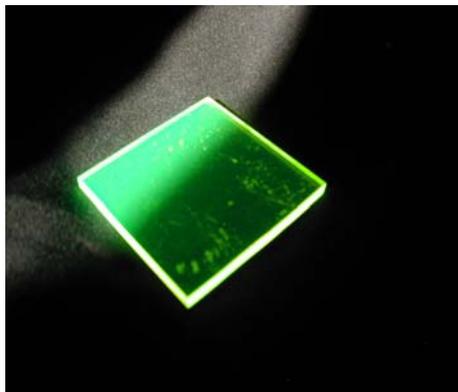


Manus is a PhD researcher in the Dublin Energy Laboratory based at the Focas Institute in DIT. Manus graduated from NUI Galway in 2000 with a BSc in Applied Physics and Electronics. He joined the Sustainability Research Development Group in DIT as a research assistant in 2005. From there the opportunity arose to commence PhD research in the area of Solar Energy. The research is focused on Luminescent Solar Concentrators (picture bottom left), with the aim of optimizing the efficiency of the concentrators using ray-trace computer simulations.

Luminescent Solar Concentrators (LSCs) are static concentrators which do not require expensive solar tracking and concentrate both direct and diffuse light, a significant advantage in cloudy Northern European climates where over 50% of the total annual solar irradiation is diffuse. The concentrators allow a smaller area of solar cells to be used for a given power output, thereby reducing the overall cost per unit power output.

Work on LSCs was first carried out in the late 1970's, but instability of the luminescent dyes used meant they never became a commercial application. There has been much renewed interest in the last 5 years with improved materials having become available.

Manus recently attended the ISES Solar World Congress in Beijing, presenting his findings to date on the effect of concentrator geometry on concentration ratios of LSCs. A most interesting conference included tours of local attractions including an arduous hike along the Great Wall (picture above). China has more than 90 million metres (2006) of installed solar thermal collectors -accounting for 76% of the world total. In 2006, 380 MWp (15% of the world total) of PV solar cells were produced, increasing from 146 MWp the previous year. It is clear that it is worth keeping an eye East for solar energy technology developments.



**Above left:** A luminescent solar concentrator. The intensity of light at the plate edges (where PV cells can be attached) is greater than the intensity of incident light on the top surface.

**Above right:** PV powered street lighting, common in the outer suburbs of Beijing.

# APPLICATION FORM

## Individual Membership

### Address Information

|                      |                    |                |
|----------------------|--------------------|----------------|
| <i>Title</i>         | <i>First name</i>  | <i>Surname</i> |
| .....                | .....              | .....          |
| <i>Address</i>       |                    |                |
| .....                |                    |                |
| <i>City</i>          | <i>County</i>      | <i>Country</i> |
| .....                | .....              | .....          |
| <i>Telephone</i>     | <i>Fax</i>         |                |
| .....                | .....              |                |
| <i>Date of Birth</i> | <i>Profession</i>  |                |
| .....                | .....              |                |
| <i>Email address</i> | <i>Web Address</i> |                |
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Individual Membership Rates - Irish Solar Energy Society (please tick)

|                                      |                                     |   |
|--------------------------------------|-------------------------------------|---|
| Regular €15 <input type="checkbox"/> | Student €5 <input type="checkbox"/> | Unwaged/Retired €6 <input type="checkbox"/> |
|--------------------------------------|-------------------------------------|---|

Combined Membership Rates - International Solar Energy Society and Solar Energy Society of Ireland (please tick)

|  |  |
|--|--|
| Regular €50 <input type="checkbox"/>         | Student (<27) €25 <input type="checkbox"/> |
| Unwaged/Retired €30 <input type="checkbox"/> | Student (>27) €40 <input type="checkbox"/> |

Please return this form along with a cheque made payable to the **Solar Energy Society of Ireland** to Mr Kevin O'Farrell, SESI Treasurer, Room 321, Electrical Services Engineering, Dublin Institute of Technology, Kevin St, Dublin 8

For more information on the International Solar Energy Society please visit [www.ises.org](http://www.ises.org)  
For more information on the Irish Solar Energy Society, please contact Sarah McCormack on 00353 1 4027961 or email [sesireland@gmail.com](mailto:sesireland@gmail.com)



Solar Energy Society of Ireland

MEMBERSHIP



ISES

International Solar Energy Society