

Photovoltaics in the UK

Contributing to the Solar Europe Industry Initiative

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UK Position on SET and SEII

- The UK supports the SET Plan and its objectives and has played an active part in the development of the Plan through the Steering and Sherpa Groups.
- We recognise that there could be major opportunities for UK technology development; skills; jobs; exports; and securing our future low carbon growth by actively participating in SET Plan activities.
- The UK has put in place information networks, involving Government policy makers; the Energy Generation KTN; the Energie Helpline; and DECC's SET Plan Update Newsletter to try to ensure that those who need to be aware of this activity have the opportunity to get involved.
- DECC is keen to see UK stakeholders get involved in the Industrial Initiatives, including the Solar Europe Industrial Initiative

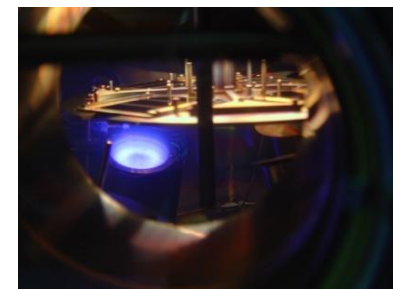
- The UK has had an active research community in PV for many years, participating in a range of European activities - the link to the SEI is discussed in the next two slides
- Both the PV market and the PV industry in the UK has been small relative to some other European countries, although there are some significant players
- The UK Government has no specific target for PV capacity by 2020, but since 1st April 2010, we have introduced a Feed-in Tariff for small scale (up to 5 MW) low carbon electricity generators and this is expected to lead to a strong increase in the uptake of PV
- The tariff applies to generated electricity and is index linked
- For PV, it ranges from 29.3 – 41.3 p/kWh* depending on the system type and size and has a duration of 25 years

*35 – 49 Euro cents /kWh (rate of 1st June 2010)

SEII – Cost Reduction

- This SEII initiative aims to reduce costs of PV modules (and other system components) and increase the lifetime of PV systems, to result in an overall cost reduction of PV generated electricity
- The UK has a long history in PV systems and materials research, including thin film materials and novel devices
- The UK research councils are funding low carbon research including major consortium projects in PV, notably the SUPERGEN (Sustainable Energy Generation) programmes PV21 SUPERGEN (thin film inorganic) and Excitonic SUPERGEN (dye sensitised and organic)
- The goal of these projects is to fundamentally reduce cost per watt by reducing materials and processing costs while increasing light capture and conversion efficiency.

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SEI – System Integration

- The SEI initiative considers the widespread integration of PV systems and the developments required to achieve the 12% by 2020 target
- The experience of implementation of distributed renewable energy in the UK (fully privatised electricity sector, relatively high grid voltage) will input to the integration level research
- The UK combines expertise on PV system performance*, component development and building integration** with that on complementary areas such as networks***, distributed systems and microgrids****, and control and communication systems

EXAMPLE PROJECTS:

* PV Performance, FP6

** UK Domestic and Large Scale BIPV Field Trials

*** EPSRC Supergen FlexNet: Future Network Technologies

**** Microgrids research at Tyndall Centre for Climate Change

Summary

- The UK has a growing PV market and many years of PV research experience
- Particular areas of expertise in the research sector lie in new thin film PV materials and system integration
- UK PV companies have particular skills (e.g. silicon feedstock, customised building integration) to bring to the Industry Initiative and the UK is also strong in the complementary areas needed to address widespread system integration
- The UK is keen to support the development of enhanced grid infrastructure in Europe, to maximise the effectiveness and efficiency of increased renewables deployment including solar PV and others such as wind and marine energy technologies
- We are looking forward to participating in the Solar Europe Industry Initiative to advance PV in the UK and across Europe