Outlook for BIPV in the UK

Ray Noble
REA Solar Power Specialist

As a result of the CSR the changes to the FIT are:-
BIPV started in the UK

- The Northumberland Building in 1996 blazed the way for BIPV
- Largest PV integrated facade in the World (40kWp)
- Used standard PV laminates bonded into a Rainscreen
- Installed before Multi Contact Connectors were invented
UK continued to lead the way

- Largest Commercial Installation (103kWp)
- Largest Canopy (105kWp)
- Zero Carbon Housing (108kWp)
- The Iconic Solar Showcase
Thin Film BIPV trialled

- Thin Film PV Laminates as BIPV in the UK
- Problems – glass type, fixed sizes, wiring, degradation
BIPV products continue to be developed, roof tiles, laminates to suit building dimensions and building codes.
Product Development

Glass Laminates and Double Glazed Units, Low e Coatings, Argon Fill - PV Building Materials
So we had the pedigree but no market!

UK Energy Ministers came made promises and went!

Feed in Tariffs were always rejected despite strong lobbying by the REA and only small budget capital grants were provided.

The lobbying finally worked and from April 2010 the FIT was introduced.

But they forgot BIPV!
Number of Installations since April 1\textsuperscript{st} 2010

**No. of Installations**

- Domestic Installations
- Commercial Installations
- Industrial Installations
- Community Installations

- Hydro
- Micro CHP
- Photovoltaic
- Wind

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MWp Installed since April 1st

Installed capacity (MW)

- Domestic - Total Installed Capacity (MW)
- Commercial - Total Installed Capacity (MW)
- Industrial - Total Installed Capacity (MW)
- Community - Total Installed Capacity (MW)

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Are FITs effective?

Yearly installation in Germany in MW

Feed in Tariff

Capital Grants
UK Predictions – Our Green Deal

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Outlook for BIPV

- BIPV market will continue to develop particularly around new / refurbishment of buildings
- Roofs, one complete warranty is required covering all materials
- As a result Building Industry are now becoming PV Installers
- Future roofs will all be BIPV!
On what type of Buildings?

- BIPV is suitable for all Buildings - Domestic, Public and Commercial
- Facades and Atria – One complete warranty is again required
- Facade Installers are already PV Installers
- Free Roof / Free Facade paid for by the FIT over 25 years!!!
MCS Certification Scheme

MCS was developed to protect domestic customers from “cowboy products and installers”

MCS is now being further developed to include BIPV products, PV Roof Tiles and PV Support Systems

We do not want “dodgy” products.

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Or dodgy installations.

Incorrectly designed systems not capable of resisting Access Loads or Wind Loads
The Engineer told the Architect you must put PV facing South!

Use PV on appropriate areas of the building and without needing to change the shape of the building.

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<th>Effect of orientation and pitch on array performance (% of ideal)</th>
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<td><strong>Vert.</strong></td>
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However Solar does like light!
Cornwall to Power the UK!

- Reason why the PV Installers are flocking to Cornwall
- UK Electricity Consumption = 380TWh / year
- PV in Cornwall generates 128kWh / m² / year (900kWh / kWp / year)
- Area of PV required = 1,146 sq miles
- Requires one BIPV Canopy 37 miles x 37 miles
- Area of Cornwall = 1,375 sq miles
Thank You

Ray Noble
rnoble@r-e-a.net
www.r-e-a.net