



BiPVco 

The Building Integrated Photovoltaic Company

“ WE ARE DELIGHTED TO BE ASSOCIATED WITH THIS PIONEERING MANUFACTURING COMPANY THAT HAS TAKEN THE TECHNOLOGY OF INTEGRATING SOLAR PHOTOVOLTAIC CELLS ONTO ROOFING SUBSTRATES INTO A NEW PARADIGM. ”

THOMAS BREWER
PROCESS ENGINEERING MANAGER AT SABMILLER



Building Integrated Photovoltaics incorporate PV functionality into conventional building materials in parts of the building envelope such as roofs, skylights and facades. The technology is increasingly being incorporated into new and existing buildings as a principle or auxiliary source of electrical power.

The main advantage of building integrated photovoltaics over the more common non-integrated systems is that the initial cost can be offset by reducing the amount of building materials and labour that would normally be used to construct the part of the building that BIPV modules replace.

BIPV are lightweight, flexible, do not compromise the roofs integrity and can be of aesthetic/architectural merit.

ABOUT BIPVco LIMITED

BIPVCO - THE BACKGROUND

BIPVco was spun out as a business in April 2015 following 5 years of collaborative research between Tata Steel Europe and Swansea University / SPECIFIC . Initial support from Wales government, helped incubate the technology until it was spun out.

BIPVco's product offering is unique and first to world. It addresses many of the shortcomings of the current offerings while delivering premium performance and value to the owners.

The research program developed ways of integrating thin film CIGS PV cells directly onto the very substrates that make up the roofs / walls so that true BIPV functionality could be achieved without having to resort to heavy mounting systems (with an appearance akin to traditional power plants) on roofs of architectural merit.

BIPVco is an independent company with global investors and senior management equity with strong alliances with multinational OEM manufacturers across its supply chain.

Our manufacturing hub is based at Shotton Works, North Wales, the home of Tata Steel Europe's Colorcoat and buildings systems operations.

WHAT DO WE DO?

BIPVco is positioned in the market as a hybrid, between that of a module manufacturer and building components company. This strategic position will enable the delivery of more cost effective and aesthetically pleasing solutions whilst ensuring the integrity of the roof. Consolidated roof and Photovoltaic performance warranties will ensure confidence and bankability. BIPVco works in partnership with major roofing and substrate manufacturers and installers to deliver a holistic and efficient solution to a specific project.

BIPVco is based at the PV Accelerator building on the TATA Steel Site in Shotton, North Wales. The building is home to both our manufacturing and business operations.

BIPVco - A UNIQUE PV COMPANY

The global market for Photovoltaics is huge and over the last two decades has seen considerable growth. The global market is estimated to be around 60GW. Ground mounted installations account for 40% of the global market and roof mounted installations account for 60%.

But uncertainty within the global economy, changes in legislation, increasing energy costs, a drive towards reductions in CO2 emissions and sustainability are all having significant impacts on the industry.

Global trends are now moving more towards roof mounted PV installations, partially a result of decreasing financial incentives for ground based installations and an increasing demand for agricultural land. Whilst true Building Integrated Photovoltaics represent only a small percentage of the Total Market (2%), growth is estimated to double annually.

BIPVco recognised that there remained a window of opportunity for a flexible thin film building integrated photovoltaic solution. The market requires a flexible and lightweight module that can be integrated into building components of various shapes and sizes.

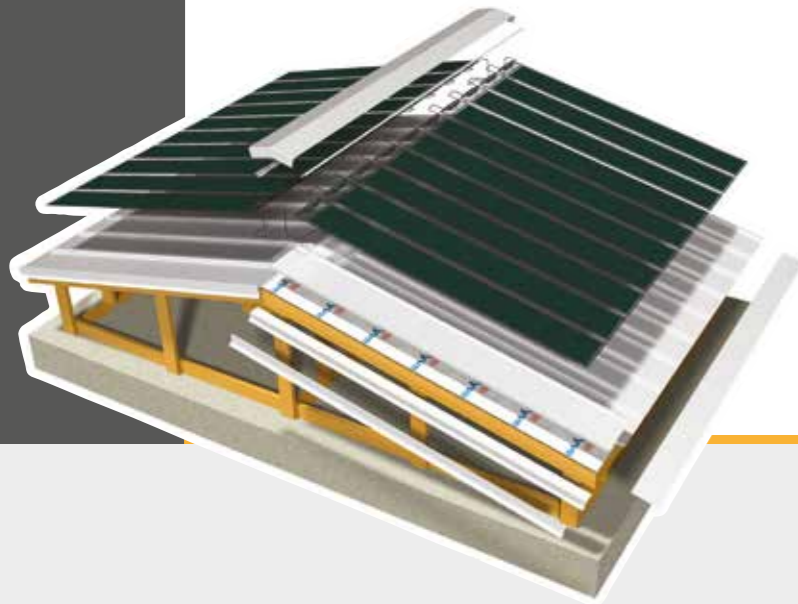
THE BIPVco OBJECTIVE IS SIMPLE...
TURN BUILDINGS
INTO POWERSTATIONS.
WITHOUT MAKING THEM LOOK LIKE ONE.



BIPVco ROOFS

BIPVco's approach is to functionalise traditional metal and membrane roofing products from simply a passive weather proofing and insulating product to a power generating entity. Using advanced materials and manufacturing processes, BIPVco has developed a truly integrated photovoltaic solution.

CIGS is the leading 2nd generation PV technology, but is mostly commercially available on glass, which is unsuitable for application onto steel and membrane roofs due to its weight. BIPVco modules are extremely lightweight, durable and flexible, making them suitable for application onto steel roofs with minimum load bearing capacity.



AN OVERVIEW OF THE PRODUCTS FEATURES:

FLEXIBLE AND LIGHTWEIGHT - BIPVco modules are extremely lightweight & flexible which makes them suitable for application onto steel & membrane roofs.

INTEGRATED - BIPVco modules are encapsulated directly onto a pre-painted metal component or membrane roof to create a combined PV roof solution which can be installed in a similar way to traditional roofing components.

WARRANTED - BIPVco offers combined roof and PV warranties. PV modules also come with a 25 year power output guarantee.

EFFICIENT - BIPVco cell efficiencies are in excess of 15%

DURABLE - BIPVco use CIGS (Copper Indium Gallium Selenide) thin-film solar cells with a stainless steel substrate. They are therefore flexible and durable.

COST EFFECTIVE - Cost effective integrated PV solutions. Initial costs can be offset against a reduction in material and installation costs.

SELF CLEANING- BIPVco Modules have a unique self-cleaning surface & therefore reduce maintenance costs over their lifetime.

TECHNICAL DATA



The Cells and the junction boxes are fused onto the steel substrate roof at the BIPVco factory so the pre functionalised roof can be installed in one process.



A stand-alone flexible module with a 'peel and stick' capability that can be adhered to the approved metal or membrane substrate at the roof/wall manufacturer's factory under controlled conditions.



The Cells and the junction boxes are fused onto the TPO membrane substrate roof at the BIPVco factory so the pre-functionalised roof can be installed in one process.

All the above are specification products with associated roof system warranty.



THE BIPVco VISION:
TO CONVERT THE BUILDING ENVELOPE
FROM A LIABILITY INTO AN ASSET BY
USING THE ROOF AND WALL SPACES
TO GENERATE RENEWABLE SOLAR ENERGY.



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