demosite

IEA PVPS TASK VII EXHIBITION CENTRE FOR PV INTEGRATION

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www.demosite.ch

STANDARD PRODUCT

CUSTOM PRODUCT

PROTOTYPE

IT POWER

IT POWER LTD
The Warren, Bramshill Rd
Eversley, Hampshire, RG 27 OPR (UK)
Tel. +44 118 973 0073
Fax +44 118 973 0820
Email itpower@itpower.co.uk

OVE ARUP & PARTNERS
Newcastle upon Tyne, UK

BP SOLAR LTD
Sunbury on Thames, UK

NPAC
(Newcastle PV Applications Centre)
Newcastle upon Tyne, UK

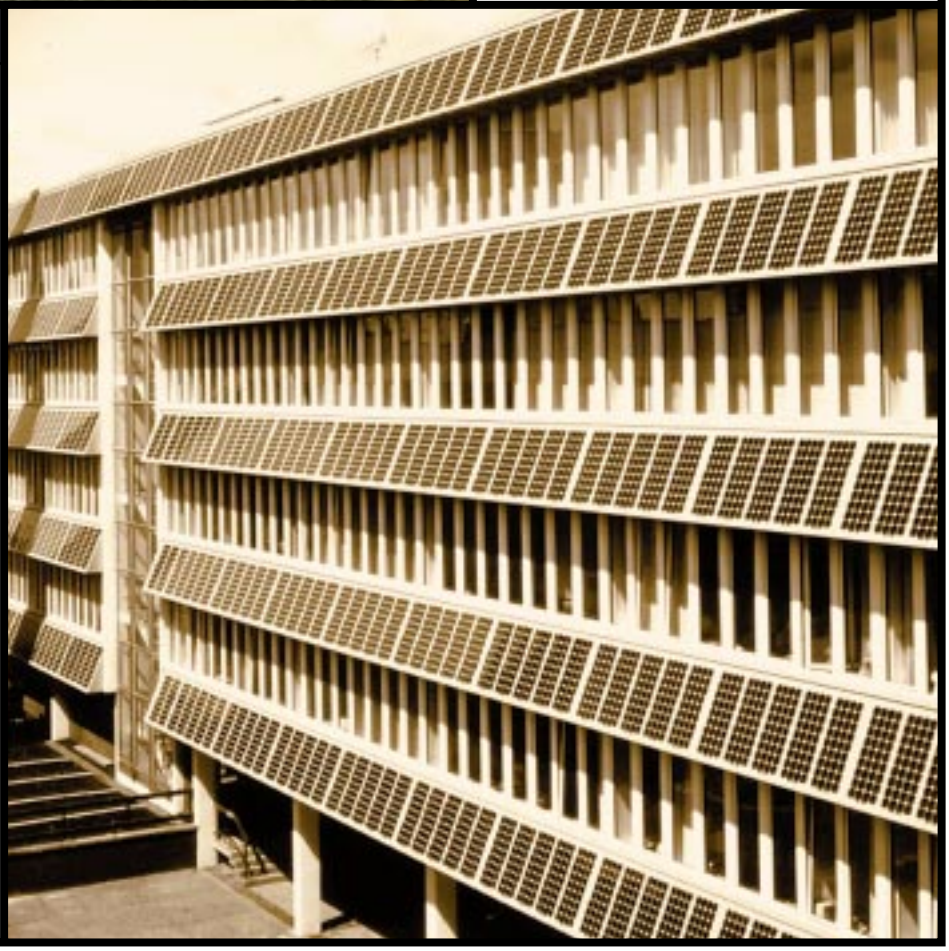
SYSTEM DESCRIPTION

This is an element of one of the largest photovoltaic façades installed in northern Europe, on a building at the University of Northumbria in Newcastle-upon-Tyne (UK).

The refurbishment of this building, which dates back to the sixties, included:

- replacement of the old single-glass windows with double glazing;
- addition of a new skin: a rainscreen overcladding system, with frameless PV modules tilted at 65°, on the south-facing façade.

The DEMOSITE stand presents the façade over the height of one floor and a length of 5 m, with seven monocrystalline laminates under a row of windows.



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APPLICATION FIELD

Building type	façade, overcladding for new and refurbished buildings
Building elements	photovoltaic modules; rainscreen overcladding, windows
Mounting technology	silicone mastic gluing of photovoltaic panels into conventional rainscreen overcladding
PV Module	standard production (BP SOLAR)

AT DEMOSITE

PV Area	modules 4,3 m^2 cladding 6,1 m^2
PV Module	BP SOLAR 585
Power, voltage	85 W, 18 V (standard test conditions)
Size	1183 x 523 mm
Connection	7 modules in series; MC-Contact connectors.

IT POWER

The demonstration unit at DEMOSITE was constructed by the following firms:

Glass
Pilkington Glass Ltd
Prescott Road,
St-Helens, WA10 3TT, UK

Overcladding
Christian Pohl GmbH
Robert Bosch Str. 6
50769 Köln, Germany

Connectors
Multi-Contact AG
Stockbrunnenrain 8
4123 Allschwil, Switzerland

Framing
LB Plastics Ltd
Fir Works, Nether Heage,
Derby DE56 2JJ, UK

SYSTEM TECHNOLOGY

The new south-facing façade of the University of Northumbria consists of uPVC framed windows with insulation, double glazing and photovoltaic cladding. For the cladding, BP SOLAR photovoltaic panels were glued to a powder coated aluminium frame with silicone.

The support structure for the cladding units is fixed to the conventional building structure. The cladding units are simply lifted onto the support structure and held in place on support bars. No fixings are required. Hinged soffit panels allow easy access to the wiring behind the cladding.