

70-65-60 Photovoltaic systems

System outline

110 Grid connected photovoltaic system

- **Description:** A fully operational Photovoltaic system will be provided to the roof.

The system will be sized to achieve the requirements of the Building Regulations Part L assessment, as defined by the SBEM results and provide 10% of the buildings predicted energy usage.

A display panel shall be provided in the entrance area showing instantaneous and cumulative electricity generation.

The system will be installed by MCS (Microgeneration Certification Scheme) accredited Contractors that have the capability to undertake the supply, design, installation and commissioning of a complete fully operational PV Micro generation system.

The installation will be grid connected and include PV generators, DC isolator switches, DC cabling, inverters, AC cabling, AC isolator switches, PV distribution board, contactor and kWhr import/export meter all designed, installed and tested in accordance with DTI/Pub URN 06/1972 (second edition/2006), the DTI guide Photovoltaics' in Buildings, 'Guide to installation of PV systems' 2nd Edition 2006, the Engineering Recommendation (Energy Networks Association) G59 and BS 7671.

The Contractor will allow for all attendances and cost associated with UKPN for the G83/G59 approvals and testing.

The PV shall achieve a minimum performance of 1.5kWp - an indicative PV panel layout is shown on the electrical services drawings.

The panels shall be complete with mounting system suitable for a flat roof. The mounting system shall not penetrate the roof finish.

- **System performance:** 70-65-60/210 Design of photovoltaic systems
- **System manufacturer:** Submit proposals
- **Mounting:** 90-90-60/330 Free standing mounting frame for solar modules.
- **Switchgear and controls:** 90-50-45/450 Switch-disconnectors type A;
90-60-40/330 Power conditioning units;
90-50-45/450 Switch-disconnectors type B;
90-60-25/490 PV array junction boxes;
and 90-50-45/396 PV generator junction boxes.
- **Energy meters:** 90-65-55/340 Energy meter
- **Cable type:** Submit proposals
- **Cable sizes:** Submit proposals
- **Rewireable installation:** Required.
- **System accessories:** Submit proposals
- **Execution:** 70-65-60/620 Installing photovoltaic systems generally
- **System completion:** 70-65-60/810 Inspection and testing