SOLAR TRADE ASSOCIATION

Commercial Rooftop Solar:
Confidence Checklist

Today more than ever solar makes commercial sense. Stable electricity bills, corporate ethics and the reliability of PV systems are encouraging forward-looking companies to go solar. But when it comes to investing in solar installations on commercial rooftops it is a case of caveat emptor. It can also be difficult to identify contractors experienced in dealing with the additional technical challenges presented by commercial-scale systems. Those without the experience may underestimate the costs and risks involved leading to unsafe working practices and poorly designed and installed systems that do not perform to their full potential.

Technical guidance will be forthcoming from the IET in a Code of Practice, but this will initially be voluntary. It is not the intention of this STA checklist to replicate any of the content in such technical guidance but to complement and, where appropriate, reinforce it. In addition to using this checklist, commercial company managers should ensure contractors are using whichever of the following two documents is most applicable to the project:

- **MCS Guide to the installation of Photovoltaic systems 2012** (ISBN 978-0-9574827)
  This document is only appropriate for systems up to 50kW and no larger. It may also be superseded by the document below at some point.
- **IET Code of Practice for Grid Connected Solar Photovoltaic Systems** (ISBN 978-1-84919-721-2)
  This document is due for publication in September 2015.

The STA has developed this checklist for commercial company managers to help select a quality installation partner and to manage the build as it progresses. If you select an STA member as your preferred contractor who, in turn, can demonstrate they will comply with all of the check-points below then you can be confident you are dealing with a competent contractor.

Solar Trade Association 53 Chandos Place, London WC2N 4HS
t: +44 (0)203 637 2946 e: enquiries@solar-trade.org.uk w: www.solar-trade.org.uk @thesolartrade

Project Stage	Check Point
Pre-Quotation	**Site Survey – undertake a detailed survey considering:** • Panel layout: avoid shading, take roof elements such as skylights into account • Inverter location: identify suitable location(s) • Mounting frame requirements: understand what fixings are required • Cable runs: identify possible cable runs • Materials handling/storage • Asbestos: identify possible asbestos containing materials • Site specific risk assessment • Welfare arrangements • Traffic flows **Establish client requirements and objectives – i.e. design for:** • Budget • Electrical load and/or carbon target • Available roof-space
Design Proposal	**Should incorporate:** • **Design Details** – a summary of the information gathered during the site survey. Provide a drawing showing the module layout, give details on proposed inverter locations, and cable runs etc • **Module Layout** – does not interfere with continued correct operation of roof elements e.g. vents & flues, does not cover rooflights and also allows for future maintenance access • **Design Strategy** – i.e. maximum system size based on available roof-space, design for budget or design for electrical load • **Roof load calculations** – details of the expected load from the PV system including the mounting frame design (e.g. wind loads, snow loads etc) • **Electrical design calculations** – details of cable/component sizing • **Expected Generation** – the expected annual generation modelled using specialist proprietary software. Assumptions behind the calculations should be given along with any externally validated figures • **Roof Access** – a clear description of the proposed access arrangements to comply with HSE Working at Height guidance plus full consideration of fragile roofs and roof elements (e.g. skylights) • **Installation Methodology** – a clear description of the installation methodology proposed and details of the qualifications of the people who will be involved in the project (esp. Principal Designer under CDM) • **Warranties** – give details of all warranties to be provided (length, what is covered, who the warranty is with) along with impacts of proposal on any existing roof covering warranty • **Scope** – an itemised list of activities (including any project development work needed), services and kit required. The list should state what's included, what is excluded and describe the roles & responsibilities of contractor before during and after the installation. Explain what the client is expected to do • **Price** – an overall price that is linked to the scope • **Financing Options** – a clear description of the finance options available. PPA solutions should have all assumptions explained e.g. percentage of onsite usage • **Timeline** – a clear timeline for project delivery that takes any external time dependencies into consideration • **Module Origin** – details of the country of origin of the proposed modules and confirmation that all applicable import taxes and duties have been paid in full
Development (these are activities that may be undertaken by the installation contractor as a bundled turn-key service or separately by others managed by you as the client)	• **Structural Survey** – confirm that the roof can take the weight of the proposed system; obtain confirmation from a suitably qualified structural engineer • **Permissions** – obtain or confirm that all permissions have been granted e.g. planning permission, grid connection, any licences required to do the work • **Lightning and Surge Protection** – the services of a qualified LSP consultant are essential
Installation (these are activities that would only normally be done by the installation contractor or professionals engaged by them)	• **Address all key risks** – the installer will produce comprehensive and site specific risk assessments and method statements • **Asbestos** – where avoidance of asbestos containing materials is not possible then a specialist contractor must be engaged • **Use suitably qualified staff**
Commissioning and Handover	• Comply with IET code • Provide comprehensive documentation for customer including commissioning certificates, O&M manuals and warranty documents • Identify service and maintenance requirements • Support client with FIT or ROC applications