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GBSG

For Complete Security

Renewable Energy Security Checklist

Key considerations to ensure the safety of your site

Book now for your FREE security review

Have you ever considered what the true cost would be if your renewable energy site was broken into? What impact would this have on your company's reputation, investor confidence and your bottom-line?

To help you meet your security needs, we have created this **Renewable Energy Security Checklist.** For existing sites, we have broken security considerations into categories covering:

• Perimeter Security;

• Remote Monitoring;

• Security Maintenance.

If you are embarking on the build of a new site, then the section **New Installation** will help you with planning for security provisions.

If you need assistance in evaluating any current or future provisions, please don't hesitate to give us a call on **01775 821 100.** We can visit your site and carry out a free security review which, if nothing else, will provide you with peace of mind.

Contents

Perimeter Security & CCTV Coverage

Q: Do your existing security provisions secure the entire perimeter of your site?

Due to the often remote rural location of renewable energy sites, perimeter security is crucial. For perimeter security we recommend fixed position CCTV cameras sited approximately three metres above ground level on galvanized steel columns, with each camera fitted approximately one metre in from the perimeter fence.

Q: How much coverage do your CCTV cameras provide?

As standard your CCTV cameras should provide coverage for up to 60 metres.

Q: Do your CCTV cameras provide adequate image capture during night-time hours?

Infra-red (IR) cameras will produce high resolution images in the daytime and monochrome images at night. For remote rural locations we recommend IR cameras that give up to 85 metres of infra-red light in darkness.

Q: How do environmental factors such as smoke, dust and fog affect your CCTV cameras?

For exposed rural locations that can be subject to high levels of dust and smoke from agriculture activities, or are prone to foggy conditions, we would recommend thermal imaging cameras. Using heat to produce images, thermal imaging cameras work without sunlight or artificial lights which means that they are not adversely affected by changes in weather conditions.

Q: Are your CCTV cameras paired with a detection system to allow for remote monitoring?

The configuration of any detection system is to enable the CCTV camera to see movement and allow the transmission and recording device to produce good quality and meaningful images. At GBSG we are currently implementing two types of detection systems: **Adpro Intrusion Trace Video Analytics** and **FenceSecure™**.

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Monitoring of Security Provisions

Q: Is your site remotely monitored?

Because crime prevention is far more cost effective than dealing with a crime after it occurs, we strongly recommend that all sites have a CCTV monitoring contract in place. A remotely monitored CCTV system provides a complete security package. Instead of having a CCTV system that just records, a monitored system allows a Remote Video Response Centre (RVRC) to be aware of the status of your site all times. This means that a prompt response can be initiated when an intrusion or activation is visible, resulting in potential problems being dealt with before they occur.

Monitoring provided by

GB MONITORING

Part of the GBSG Group

Q: If your site is monitored, is the monitoring service approved to NSI standards?

The National Security Inspectorate (NSI) is recognised as the leading certification body for the security and fire protection industries in the UK. If the RVRC is approved by the NSI, it means that it is accredited for the monitoring of BS 8418 detector activated CCTV systems used in security applications.

At GBSG we have our own purpose-built RVRC located in our offices in Donington, which is fully approved to the highest NSI Gold standard. Our RVRC is operated 24 hours a day, 365 days a year and is manned by SIA licensed operatives.

Q: Does your transmission system enable the remote monitoring of mains failure or tampering?

The transmitters that we use allow the tamper protection of all detection devices and cabling. In addition, we ensure that they enable the monitoring of any main failure to the mains transmission system through a site pulse that is sent to our RVRC every three minutes. This means that if anyone cuts through the cabling to try and disenable the security system, then we would be alerted within a three minute period and a member of the team would promptly take action.

Security Maintenance

Q: Do you have maintenance provisions in place to protect your security systems?

Your security system should be serviced at least on an annual basis to ensure that everything is operating correctly. CCTV camera faults and recording system malfunctions can have far-reaching consequences, as can detectors that are not pointing in the correct direction. At GBSG we provide a comprehensive maintenance package that consists of remote system health checks, an annual maintenance site visit and 24 hour engineer call-out cover.

Q: Have you robust plans in place to ensure continuity of security provisions in the event of a power failure?

At GBSG we provide systems with full autonomy and protection through the installation of large UPS power supplies. This means that if the power is removed from site, or the broadband communications fail, the system still runs. We can offer further protection with the provision of redundant power supplies, which we recommend for all large solar installations. The back-up power supply will generally be via a 5KVA fixed auto start generator.

New Installation - Key Considerations

The initial site survey should identify the best locations to site CCTV cameras for the provision of relevant and adequate coverage. The integration of access control might also be applicable for certain sites. The most critical objective to meet is to secure the entire perimeter of the site.

The sites location and associated environmental factors should be discussed to determine the most appropriate camera. For example, thermal imaging cameras penetrate through smoke, dust and fog so are not adversely affected by changes in weather conditions.

The detection system chosen should withstand the physical evidence of the site. Another consideration is whether there is the need to configure the detection systems to signal scene and contrast change so that any attempt of sabotage is detected and transmitted to the Remote Video Response Centre (RVRC).

The transmission unit should cover everything that your site needs, including tamper protection. If there is a need for the site to be remotely monitored (which we would strongly recommend), then the transmission system would need to allow the monitoring company to operate the security system. The transmitters that we configure allow our RVRC to operate cameras, an onsite PA for audio-challenge purposes, plus remote relays for a number of site operations, such as automatic gates.

Are you installing an onsite audio challenge facility?
For all monitored sites to be effective, an audio challenge facility should be installed. When live and alarmed images are transmitted to our RVRC, one of our operators will investigate. Via the onsite audio challenge facility the operator is able to warn potential intruders that they are being viewed on live CCTV and, if necessary, the relevant authorities will be called. This is a proven crime deterrent.

Will your signalling meet BS 8418? BS 8418 is the Code of Practice used for the installation and remote monitoring of detector activated CCTV systems. For full compliance with this standard, dual path signalling should be engaged. For example, through broadband, satellite broadband and 3G/4G.

Will power consumption be considered in the design of the security system? At GBSG we are committed to using only low energy equipment on site so that the security solution is as cost effective in the long-term as it could possibly be. For instance, we recently installed 32 cameras on a site and, including the communications equipment, the system runs at less than 800 watts, even during the night.

Will you put a plan in place for security should the power fail?
Two options to consider are back-up power through the installation of UPS power supplies and a redundant power supply.

The GBSG Approach

Through the provision of security solutions to over 100 solar farms across the UK, we have a wealth of experience in tailoring security solutions to provide the best long-term, cost-effective solution for your project.

For new sites we can provide a supply-only service through to a complete turn-key solution, comprising of:

Initial consultation

Security system monitoring

Design of security systems

Comprehensive maintenance package

Installation (civil works optional)

Emergency engineer call-out

If you already have security installed, we can support you through a full monitoring and maintenance package.

The UK's leading security provider for solar.

We have designed and installed security solutions for over 100 solar farms across the UK.
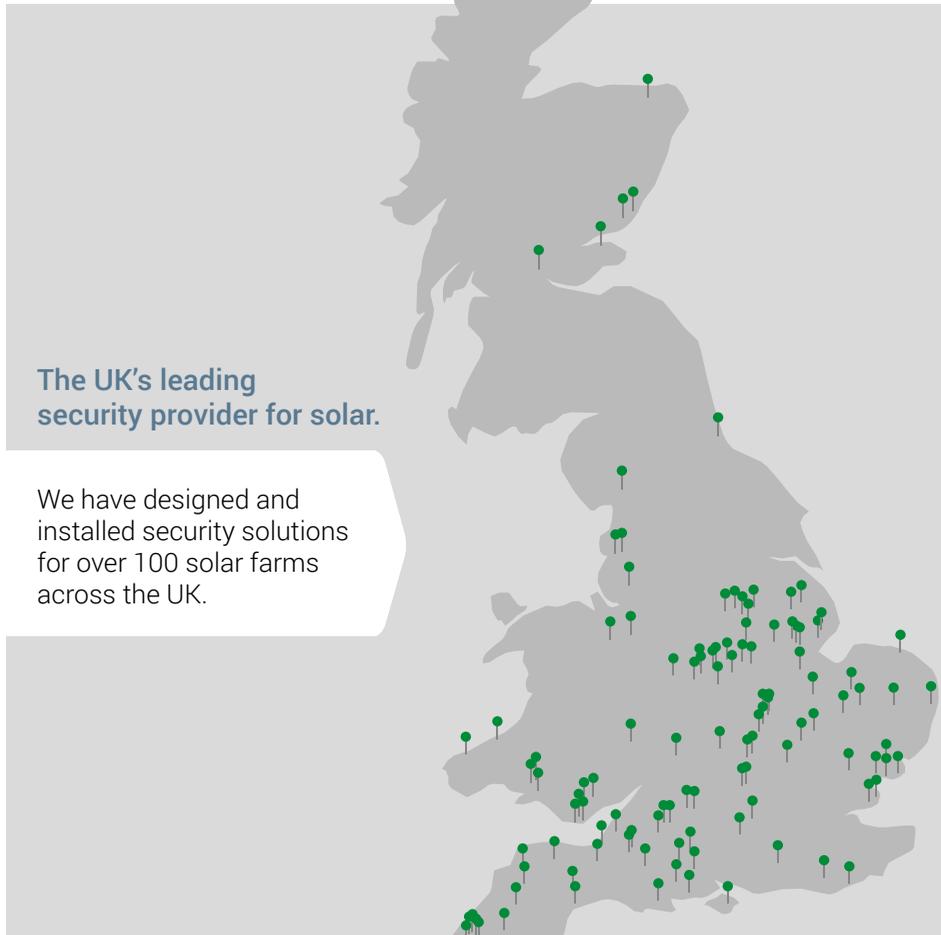
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