



KNIGHTS ENERGY  
*for professional Solar Solutions*

[www.knightsenergy.co.ke](http://www.knightsenergy.co.ke)



## CCTV & Construction Monitoring Service

*SPECIALISED SOLAR POWERED CAMERAS  
designed to monitor construction sites for Safety, Quality & Assurance*

Welcome



## CONTENTS

Use of Solar Powered CCTV Cameras To Monitor Construction Sites For Safety, Quality & Assurance.....	03
Introducing Solar Powered Cameras.....	06
How building site security camera, deterrence systems and surveillance work.....	08
Knights Energy & Construction Sector Security.....	10
Benefits of Solar Powered Security Cameras.....	11
The Bottom Line.....	12
What to Consider When Buying Solar Powered Security Cameras.....	13
FAQS ON Solar Powered Security Cameras.....	14
Knights Energy Specialised Solar Powered Cameras Services.....	16
About Knights Energy.....	18



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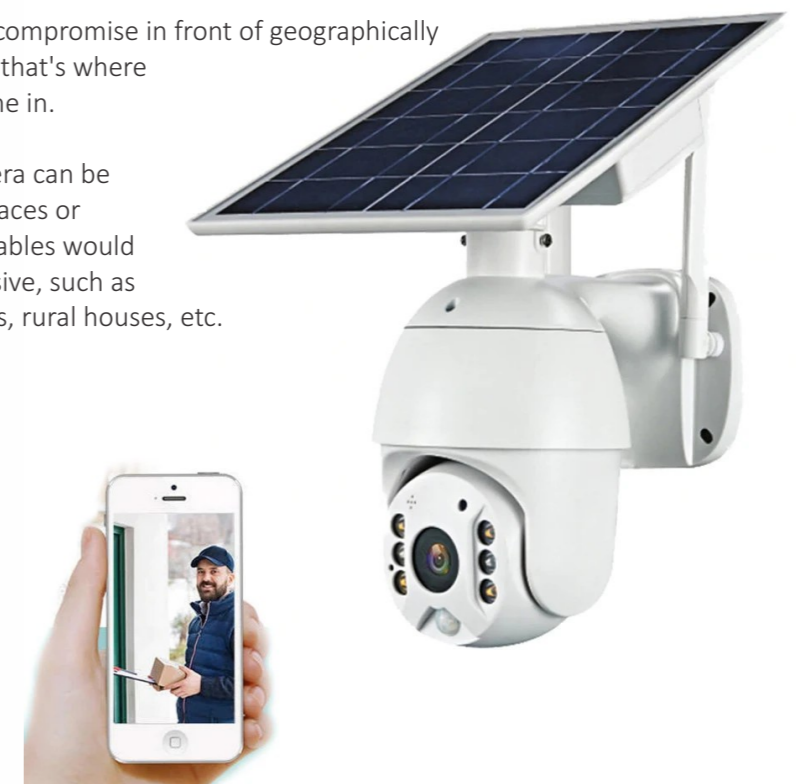
Your security needs shouldn't compromise in front of geographically challenging environments and that's where the solar security cameras come in.

## Use of Solar Powered CCTV Cameras To Monitor Construction Sites For Safety, Quality & Assurance

Delivering a quality construction project on time, on budget, and ensuring people and the community are safe does not happen by accident. Monitoring construction sites with cameras and sensing devices, equipped with deterrence systems as needed, substantially reduces onsite theft, vandalism and disruption as well as providing a platform for improving productivity and managing occupational health and safety (OH&S) hazards.

Your security needs shouldn't compromise in front of geographically challenging environments and that's where the solar security cameras come in.

A solar-powered security camera can be used to monitor the off-grid places or remote areas where running cables would be impossible or overly expensive, such as construction sites, barns, farms, rural houses, etc.



# Introducing Solar Powered Cameras

Solar security cameras, or solar panel security cameras, use the solar panel to get power and require no electric sources or cabling.

By utilizing solar power, you can get the best from natural resources to charge and run the solar-powered security cameras systems, without subscription charges or monthly fees.

Normally, a self-sufficient wireless solar security camera system is sold in bundles, including a solar panel and a solar security camera with rechargeable batteries. Or you can also buy a DIY solar powered security camera and use a solar panel to power your camera.



One of the **TOP** benefits, is that you can install a solar security camera anywhere you wish.



## Reduce Costs, Improve Quality & Safety



Hundreds of companies are using construction site cameras to provide a number of benefits, all aimed at improved project quality and improved project management.

The construction industry loses \$1 billion annually to construction site theft and vandalism. Protect your assets. Receive alerts anytime someone goes where they shouldn't.

- Reduce thefts and vandalism at your site
- Provide a safer workplace
- Lower insurance costs with recorded evidence
- Building & construction site remote CCTV monitoring
- Receive instant alerts – day or night
- Ensure safety protocol follow through
- Review footage to identify, prevent & manage

# How building site security camera, deterrence systems and surveillance work

Solar-powered security cameras use high-grade solar panels to capture the sun's rays and convert the sunlight into direct current (DC).

Afterwards an inverter will change the direct current to alternating current (AC), which can be utilized to power solar security IP cameras

and batteries for continued use.

When the sunlight is not available, the wireless solar powered security cameras can still get power from the rechargeable batteries which stores excess electrical power generated by the solar panel.



An advanced building site camera system will accommodate a range of security features and devices to achieve total site protection:

## Warning & Deterrence

Even if criminals are caught post an event, the costs and disruption are rarely recovered. Preventing theft or equipment damage from happening is more cost-effective than reacting to incidents. Deterrence system solutions include:

- **Optical and thermal cameras and passive infrared sensors (PIR)** to detect and record intruders or events. Where risk of false alarms is high, combined with Artificial Intelligence (AI) to narrow the range of events.
- **Audio warnings.** In this situation, onsite intruders are warned with an alarm or verbal caution to leave the site. In most cases this is effective enough to prevent further issues without the need for a response team of security guards or police officers.
- **High-impact illumination.** This is designed to startle outside parties, particularly in remote locations. Immediately illuminating an area usually encourages offending individuals to leave the site before any damage is done.
- **Alerting and informing remote guard or monitoring services.** This enables an informed decision about mobilizing police or guards to a site where a confirmed event has occurred.

## Monitoring

Monitoring your whole building site can have an effect on safety, productivity and claims management.

Building site security cameras can be configured to provide 4K video time lapse footage or live CCTV so that construction managers can check on issues and progress at any time and rewatch old feeds. Colour footage improves insight into events as they happen, and makes informed decision making easier.

Camera equipment is connected through a 3G/4G platform, Wi-Fi or even satellite to selected mobile devices, for surveillance on-the-go.



## KNIGHTS ENERGY & Construction Sector Security

Building site surveillance shouldn't be left to chance. A sophisticated network of security cameras and other devices gives operators the best chance of reducing the risks of construction crime, improve productivity and safety performance.

Knights Energy's surveillance and deterrence solutions are tailored to suit the unique nature of the construction industry. At Knights Energy, we provide reliable solutions and platforms with cameras using solar powered platforms.

## Benefits Of Solar Powered Security Cameras

### Solar Security Cameras Allow for Flexible Locations

A solar-powered security camera requires no cables and power grid to work, so it can be used in various surveillance applications, such as remote sites or geographically challenging environments.

### Easy to Install & Move

The DIY solar powered wireless security cameras are fast to install in any locations you desire, as you don't need to run any messy cables or drill holes, which is quite a cost-effective security option. Better yet, you can easily move your solar security cameras when a project advances or completes, such as the construction and then take your solar IP cameras to a new site.

### Environmental-Friendly

Powered by the renewable sunlight, the solar-powered security cameras won't destroy the environment or cause any pollution as the waste and disposable batteries do.

What's more, creating an infrastructure to support traditional surveillance systems can be disruptive. Solar-powered surveillance cameras require no infrastructure and can allow such areas as wetlands to be preserved.

### Solar Cameras Provide Day & Night Monitoring

As mentioned earlier, the solar-powered wireless security IP cameras can be powered by the rechargeable batteries at night when sunlight is not available.

And the WiFi solar security cameras of select brands are packed with starlight sensors that can provide brilliant color night vision with movement sensors- a big leap compared with other security cameras.

### Easy to Scale

The solar-powered security cameras also come as a flexible and scalable solution if you would like to add 2 or 3 more cameras later. In virtue of the security camera viewer, you can also watch live viewing of multiple solar IP cameras simultaneously on your smartphone.

### Solar Powered Security Cameras Feature Long Lifespan

Most manufacturers of solar panels offer a 25-year standard warranty, which means the solar panel for security cameras can still produce no less than 80% power after 25 years and it also requires little maintenance.

# The Bottom Line

A remote interactive surveillance system is often less expensive than hiring security guards, with the added benefit of having multiple eyes on multiple points.

Plus, it gives a contractor not only peace of mind that the business is being protected after hours, but also a wealth of information about what goes on in the yard during the day related to safety and operations.

The fact sheet goes on to say: "Crime prevention on construction sites has become a major concern of all responsible contractors.

In some cases, the difference between making a profit or sustaining a loss on a job will relate to the contractor's ability to control crime problems on the site." When it comes to securing a construction site, remote interactive surveillance is a valuable tool.



# What to Consider When Buying Solar Powered Security Cameras

During your selection process of best solar powered security cameras, here are some key factors to consider;

## 1 How Much Electricity Can the Solar Panel for Security Cameras Produce

The amount of electricity a solar panel for solar security cameras can generate is determined by multiple factors, like the average sun exposure, weather conditions, tilt angle of the panel, etc. Our installation team works to maximize the efficiency of your outdoor solar security cameras through positioning, obstacle clearance and maintenance, once in a while.

## 2 What Battery Size Do Your Solar Powered Security Cameras Need

The rechargeable batteries are used to power your solar security cameras in case the sunlight is not available.

To ensure that the wireless solar powered security cameras have enough juice to work, the batteries need to be at least 10 times the capacity of the maximum output of the solar panel. Our experts will guide you based on what you require.

## 3 Where Will the Solar Security Cameras Save Footage

The solar-powered security cameras with SD cards might be good options if you prefer to record motion activated videos locally. You may also use a cloud service.

You can also easily play back and manage the videos of wireless solar powered surveillance

cameras with movement sensors saved on memory card via your phones.

## 4 Do You Have WiFi in the Place Where Wireless Solar Security Cameras Are Installed

The WiFi solar powered security cameras with motion sensor can send you instant alerts when there is Internet connection. If not, the solar-powered security cameras with SD card can still record motion detection events onboard even there is no WiFi/Internet.

Thanks to the introduction of solar-powered cellular security cameras, they operate on the 3G/4G cellular data and are designed to work in places with no hard-wired internet. Any features you expect from a wireless solar powered security camera working with Internet, can also be found among the solar-powered cellular security cameras.

## 5 Cost of WiFi Solar Powered Security Cameras

The initial investment to buy the best quality solar CCTV security camera kit might be heavy, but the future benefits will absolutely outweigh the cost with the long lifespan of solar panels and the installation of more solar security cameras.

So rather than choose the fake/dummy solar powered security cameras or the low resolution cheap solar IP cameras, it's more worthwhile to go for the high-quality solar security cameras from trusted brands.

**"Crime prevention on construction sites has become a major concern of all responsible contractors..."**



**When you are looking for wireless solar powered outdoor security cameras, make sure it is at least full HD (1080p) to identify recognizable details.**

# F.A.Qs

## On Solar Powered Security Cameras

**Q If There Is No Sun for Two Days, Will the Solar Powered Security Camera Systems Still Have Power?**

A solar-powered security camera can still produce electricity on cloudy or rainy days. The amount is undoubtedly much less than that during sunny periods, but it is NOT nothing. That is to say, the solar panel will keep charging your solar cameras when there is light hitting in. Even in the worst situation where you have no direct sunlight at all, your solar IP camera can still get power from the rechargeable batteries for normal work.

**Q Do Solar Powered Surveillance Cameras Need Lots of Maintenance?**

In general, the solar-powered security cameras, including solar panels, require pretty low maintenance.

To maintain the optical performance of your solar security cameras, it is recommended to clean and inspect the solar panel about once every six months. You can use purified water and a soft brush to clean the panel on your own.

**Q How Can I Protect My Solar Panel for Solar Cameras from Theft?**

Indeed, your wireless solar powered surveillance cameras with movement sensors would be the best deterrent against thefts.

Once the thieves enter the monitoring zone, the solar-powered surveillance cameras will send you instant alerts and scare burglars away with sound alarms.

Our installation team will guide you on the anti-theft measures we put in place, including the hidden camera tactic, unreachable places positioning, blocked access, steel bolts, etc.



**Q How Long Can Solar Powered Security Cameras with 16/32GB SD Card Record and What If the SD Card Is Full?**

Indeed, the bitrate of your solar-powered wireless home security cameras will largely affect the recording file size. The higher the bitrate is, the clearer images and videos you will get, and the bigger the file size will be.

When the SD card of your WiFi solar powered security cameras is full, the older videos will be automatically overwritten by the new ones.

So you don't need to manually delete the footage of your wireless solar powered surveillance camera with a movement sensor – just remember to regularly back up the important files on a regular basis or use cloud services.

**Q Can I Connect the Solar Powered Security Camera to Multiple Devices, Like Two Smartphones at Home?**

Absolutely YES! Most cameras will support multiple streams with one mainstream.





# KNIGHTS ENERGY SPECIALIZED SOLAR POWERED CAMERAS SERVICES;

(Designed to monitor construction sites for Safety, Quality & Assurance)



## Monitor your Construction Site Remotely

*Affordable, Easy-to-Install, Portable, Wireless, Solar-Powered Site Cameras*

Our Systems provides time-lapse and job site security cameras that deliver quality, ruggedness, and extreme ease of use. Our construction cameras can be installed and put online in minutes as they are 100% solar-powered. Each wire-free camera includes integrated, patented cellular and WiFi connectivity. We also avail web-based user interface, which means you can access your cameras from any PC or mobile device via web browser – with no software to purchase or install.

Our Services:

### Construction Surveillance monitoring:

We Install and connect the customer to observe the construction process anywhere. On home office or Mobile device. With backup and voice command enabled. On demand service

### HSEQ and site management and reporting:

Onsite and offsite monitoring of HSEQ aspects of a project and reporting on agreed aspects. On demand

### Facility surveillance, management and reporting:

CCTV onsite monitoring and reporting

### Surveillance data archiving and event analysis and reporting:

Record, archive and retrieve for analysis all surveillance data as and when required. On demand and continuous

### CCTV Installation and O&M:

Design and installation of CCTV systems – On demand

### Offsite Data backup:

Backup of critical surveillance data offsite. Continuous

## Reporting Services

### HSEQ reporting:

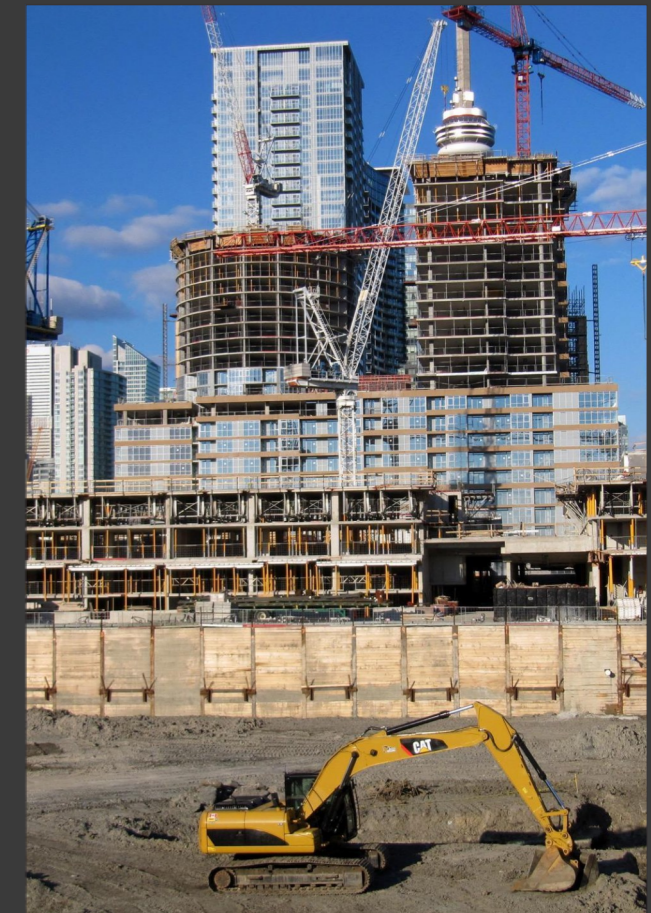
Near misses, Anomalies, Completion of critical operations: Safety end of project reporting, Daily progress reporting (HSE reporting matrixes)- End of project documentation and presentations (Forms and reports)- On demand

### Project management reporting:

Quality control reporting, Identify technical anomalies, Control of critical processes, resource utilization and monitoring, personal management etc For Project managers. On demand

### Information archiving for Security analysis:

Reporting on specific events and incidences as and when required – On demand service



## Monitor Construction Progress 24/7

Check in on construction stages visibly with no need for a site visit. Confirm subcontractor deliverables. Manage and plan schedules based on material deliveries, weather, and site progress.

- Reduce site travel costs
- Keep stakeholders informed
- Manage subcontractors & milestones
- Monitor construction progress
- Remote access from anywhere
- Showcase your project with time-lapse

# About Knights Energy

Knights Energy is positioned to meet the challenges of the rapidly growing global solar market

Knights Energy is a Renewable Energy Company specializing in Low Carbon Technologies with a special emphasis on Solar and Wind Energy in Africa. The Company has the capacity to realize projects of variable complexity and provide the expertise to fully supply and install simple to complex on-grid and off-grid Photovoltaic power plants with verifiable experience in the task at hand.

Over the years, the Company has become one of the biggest installers and maintenance partners for medium and large scale solar installations in the region with a considerable number of solutions for Domestic, Institutional, Commercial and Industrial projects.

Knights Energy has developed an integrated Quality, Health, Safety, Security and Environment Policy statement to confirm the top management's commitment to Health & Safety. The Company is also fully equipped with the industry standard equipment for Professional solar plant installation safe and quality installation, Testing and certification as well as full-fledged Operation and maintenance team.



## Why us for your solar solutions?

At Knights Energy, we provide solar solutions for industrial, commercial, and residential applications, that enable individuals and organizations to be part of a sustainable green energy powered world. We work to provide options that meet the specific customer needs and are consistent with ensuring Environmental Sustainability.

## Why Renewable Energy

Renewable energy can make a major contribution to the twin challenges of responding to a growing global demand for energy services while reducing the negative impacts associated with current production and use.

These energy options reduce greenhouse gas emissions and particulates and freeing up fossil fuel for other key sectors, thus improving energy security. Investments in renewable energy are making a growing contribution towards migrating climate change, but to stay below a 2°C increase in average global temperature, these developments need to be significantly enhanced. By mixing these potentials, Kenya can contribute significantly to reduce global GHGs as well as its unhealthy reliance on imported fossil fuels.



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