



THORBURN
SECURITY SOLUTIONS

**Protection Profile
Renewable Energy**

**“The best
protection
under the sun”**

THORBURN
SECURITY SOLUTIONS

a **TSECO** solution



Sector Expertise

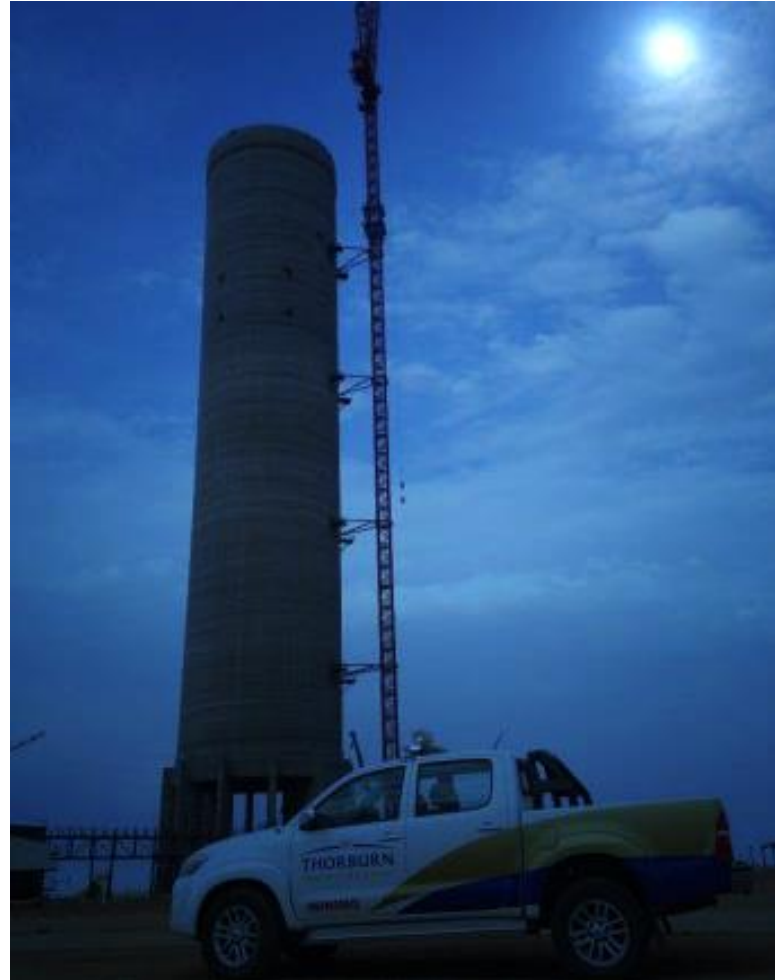
Thorburn Security Solutions specializes in Renewable Energy protection. We understand the vital role which energy management plays, and the important interplay between various parties to support the secure production of energy.

We strive to bridge the gap between theoretical renewable energy security strategies, emerging security as well as environmental standards, and practical managerial actions.

We believe in partnerships and tailor-made solutions. Renewable energy contracts have tested our operational systems numerous times as they are sizeable, require custom equipment, uniforms and vehicles, specialized recruitment and training and are mostly far removed from urbanisation. Our success within this industry stems from the translation of our experience to meet the unique requirements of these solar projects, incorporating the very important Health & Safety aspect into our service design.

The challenges facing renewable energy security are quite unique and require an in-depth understanding of interrelated issues which are not that prevalent in other industries: skill levels, the threat, collusion, intimidation, environmental issues, industrial action, health & safety, and contractors.

Our ability to assess risk, evaluate safeguards, design and provide a holistic and integrated solution of products and services, puts us at the forefront of this industry sector.



We know and understand the environment, basing our operational designs on a set of **fundamental principles** prevalent in all renewable energy operations:

- ❖ **screening & vetting of security personnel**
- ❖ **regional and national investigators**
- ❖ **utilization of technology**
- ❖ **contractor management**
- ❖ **standards and procedures**
- ❖ **health, safety & environment enforcement**



Thorburn has successfully commenced numerous renewable energy security contracts, from site establishment or greenfield projects, to full production facilities at remote sites such as:

- ❖ **Abengoa Solar CSP Project**
- ❖ **Abeinsa EPC**
- ❖ **Sishen Solar (Acciona)**
- ❖ **Jasper Solar Project (Iberdrola)**
- ❖ **Bokpoort EPC (Acciona)**
- ❖ **Ilanga Solar (GrupoCobra)**
- ❖ **Gamu Solar Farm**
- ❖ **Touwsrivier PV Project (RESA)**
- ❖ **Kathu 1 (Acciona-Sener)**
- ❖ **Karoo Solar**

We ensure that your high profile energy facility is secure, resilient, and well managed, no matter how extensive or complex.

Coupled with our knowledge of this environment and in providing quality, performance, safety compliance and best practice sharing, Thorburn delivers excellent levels of security.





Thorburn & Renewable Energy Protection

Management and monitoring of security at a renewable energy facility can prove to be a challenge, due to the vastness of the expanse these farms occupy, the very real risk of electrocution and the large amount of valuable capital equipment (including solar panels and wind generators) which is dotted over a large geographic area.

We take many factors into consideration when selecting the right electronic security measures for your facility, such as the glare from the sun on the lens of a camera which may render imaging useless, the extreme temperatures experienced in those areas that make solar farming a viable proposition, and the effect this has on external equipment.

The success of physical security at renewable energy projects is co-dependent on the back-up of sophisticated technology solutions, underpinned by a robust maintenance and support plan.

At Thorburn we understand that security systems need to be robust, reliable, low maintenance and affordable.





Thorburn has the expertise to design an integrated solution and offers a wide range of suitable services and equipment for this environment:



- **Design, spec and installation of electronic security systems**
- **Thermal imaging cameras (for both day and night without additional lighting)**
- **Real-time remote monitoring of unmanned areas or sites**
- **24/7 alarm monitoring with video identification (*Videofied*)**
- **Perimeter protection surveillance solutions**
- **Trained, professional Security Officers**
- **Dedicated mobile security patrols & reaction teams**
- **Event-driven CCTV solutions with video analytics**
- **Access & time management systems**
- **Electronic systems maintenance (preventative and correctional)**
- **Effective cleaning of solar panels**
- **Drone helicopters for aerial surveillance and ease of panel maintenance**





Customised Security Plan

Thorburn drafts a tailor-made security plan for each renewable energy facility, encapsulating all the elements and security strategies vital to the planning, mobilisation, transition and the ultimate provision of the service.

The plan covers:

- scope of service
- risk overview
- logistics required
- manpower
- deployment plans
- work schedules & procedures
- management & supervision
- quality control
- health & safety
- contingency planning



We have the best blueprint for your protection.



Our security strategy is built on the following cornerstones:



The plan addresses risks (inter alia) such as:

- Substation sabotage
- Electrocution
- Community or labour unrest
- Malicious damage to plant, offices & equipment
- Intrusion or trespassing
- Structural failure
- Dangerous reptiles - snakes
- Security access control
- Assault
- Theft of copper cable, copper bearing equipment or other essential commodities such as solar panels
- Veld fires spreading in the dry and windy winter periods
- Health, Safety & Environmental issues

We worry about security, so you don't have to.



Case Study

Abeinsa Solar

Abeinsa EPC is the *Abengoa* Society in charge of the execution of turnkey projects which include solar thermal, biofuels, water works and environmental projects, in sustainable manners, anywhere in the world.

Abeinsa incorporated the following profiles to the EPC project, as the first 2 solar thermal plants in SA:

- ❖ **KHI Solar One**, of 50MW tower technology, is the 3rd commercial plant of *Abengoa* tower technology, and the first one outside of Spain. It is located in Uptington in the Northern Cape Province
- ❖ **KaXu Solar One**, of 100MW cylinder-parabolic technology, is located near Pofadder, in the Northern Cape

These projects got underway in 2012 and Thorburn Security Solutions was appointed as the security service provider at both sites.

We share a little of our journey these projects have taken us on and how our service offering has, and will continue to evolve, as our services are called for by more and more renewable energy companies.

A "greenfield" project

The start-up:

From a location and plan layout on a map, to placing a security hut and accommodation for our Security Officers.





Factors we had to consider

- Officers' uniforms to withstand the weather extremities (daily desert sun and icy nights)
- Officers' accommodation including sleeping, cooking and ablution facilities as well as water and electric needs

Evolving

As the construction and operation of the multiple sites of the project grew, our security solutions expanded in tandem.

- The original caravan accommodation evolved into a fully functional mobile home for our Officers
- From the barren, open piece of land, the perimeter boundaries brought access control measures which we fulfilled with booms and access tags for site personnel
- All contractors on site were subject to blitz raids and checks by our trained security personnel
- Thorburn managed the project's overall risk, provided intelligence to the project owners with regards to syndicates (through informants), built integration systems and technology solutions as well as procedural practices for general health, safety, environment and security
- The manpower complement for this project grew to in excess of 40 Officers posted to the sites over time

We consistently evolve our operational, logistical and technological approach to ensure a safer environment within an ever-changing setting.



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a **TSEBO** solution