# Renewable Energy Generation Application Guide



## Risks

The global rise of renewable energy, especially wind turbines, creates new complexities within the safe operations of power generation, transmission, distribution, and maintenance of new energy equipment.

Maintenance and operators at wind farms are faced with various risks such as:



#### **Equipment in Motion**



**Confined Space** 



Fall from Heights



**Electrical Hazards** 

These critical areas of application put personnel and equipment at risk and even pose life threatening situations. The smooth operation of a wind farm and the protection of personnel requires a safely solution that mitigates risk and eliminates human error.

Trapped key interlock solutions are customised to each user's procedures with a predetermined sequence of operations ensuring power is fully isolated, operations are followed, and safe access is available.

#### Where Trapped Key Solutions can be Found



On/Off-Shore Wind Power Safety solutions:

- Roof access / lifts & ladders
- Converters & Transformers
- HV/MV/LV Switchgear
- Rotor Access
- Pitch Box
- Rotor access
- Pitch Box



Hydro-Power Safety solutions:

- Converters & Transformers
- HV/MV/LV Switchgear
- Turbine Access
- Rotor Access



Hydro-Power Safety solutions:

- Converters & Transformers
- Tracker Maintenance
- HV/MV/LV Switchgear



### **Benefits of Trapped Key Interlocking**

Why use a trapped key interlock safety solution?

To **PROTECT** personnel from hazards ensuring predetermined sequences of operations are followed. To **PREVENT** loss of operations and setback due to equipment damaged by mis-followed operations. To **PROVIDE** risk control and peace of mind; eliminating human error and ensuring everyone has the right to be safe at work!

A trapped key interlock solution is;

**INTEGRATABLE** onto new equipment or retrofit into existing procedures and equipment.

**CUSTOMIZABLE** to your specific safety requirements through the sequenced design and or with custom product.

**RELIABLE** and robust safety solution that can withstand harsh environments, maintaining the integrity of the safety solution for years to come.

#### How A Trapped Key Interlock Solution Operates



Power is isolated. The key can be removed and taken to the key exchange.

The initiating key from step 1 is inserted into the key exchange, re-leasing the access key(s) and trapping the initiating key. Access key(s) can be taken to the appropriate access door(s) and personnel can safely perform maintenance and operations.

Power can only be restored when maintenance is complete, trapped key solution is followed in reverse, returning all access keys, and releasing initiating key to restore power.

#### No Compromise on Safety

Our team will partner with you to design your safety interlock solution scheme, build a bill of materials, and coordinate with multiple equipment OEMs to ensure your wind power facility safety solution is implemented in the field with peace of mind; mitigating risk and eliminating human error.

Working with Global OEM's and Integrators to ensure the safest most efficient energy around the world!



CONTACT US TODAY Discuss with one of our experts on your renewable energy project.

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