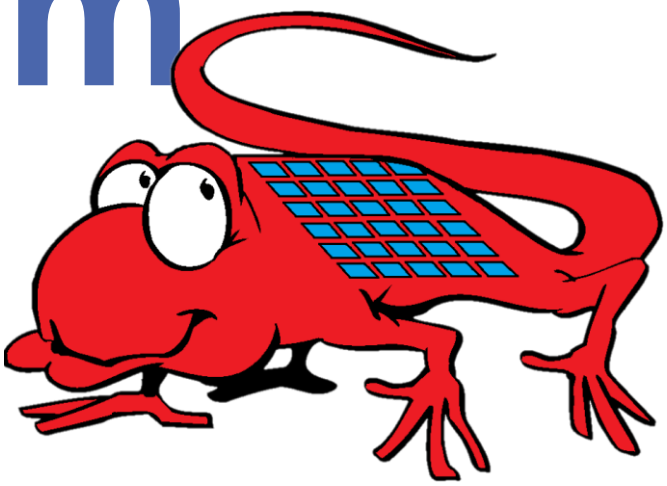
Lizard Solar Pumping System

Give Your Sun a Job!



Shutdown Procedure

Zener ECOdrive 8000 3 Phase Pump Motor Control

2.2kW – 18.5kW

North West Pumps & Power

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Patent Number 2012200426

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Before You Start

Please DO NOT switch off the solar panel array isolator(s) while the pump is in operation. Follow the shutdown procedure as detailed.

⚠Warning

- Dangerous voltages are present under solar array(s) and inside control cabinet while pump unit is operating and the **sun is shining**
- Do not open control cabinet door until the system has been correctly shutdown and solar array(s) isolated - Shutdown Procedure (see pg2)

⚠Caution

When Closing Up Solar Array

- Take note of all hinges to avoid pinch points around edges of panels
- Avoid contact with solar panels as they become hot when operating
- Secure base skids using ground anchors or fixings to concrete slab(s)

⚠Extreme Weather Procedure

During the event of high wind or cyclonic conditions, array(s) can be secured following the Emergency Procedure (see pg3)

After the adverse weather has passed, please visually inspect all solar panels for any signs of damage. If damage has occurred, please DO NOT touch the system, and contact North West Pumps & Power on one of the numbers in the contact section at the end of this document.

Shutdown Procedure

Push or switch the pump on/off switch (**1**) to begin the shutdown sequence. This will be a controlled pump stop via the ECOdrive, and will allow the pump to stop properly. Allow about 10 seconds for the pump to stop before proceeding. Next turn the pump outlet isolator (**2**) to the 'OFF' position. Now that all loads have been removed from the drive, the Solar/Grid/Generator supplies can be isolated. Switch the circuit breakers in the control cabinet (**3**) to the 'OFF' position.

Next, isolate the solar panel array(s) via the DC isolation switch (**4**) located under each array. There is one isolation switch for each array. At this point, the ECOdrive screen will temporarily display 'Power Failure' and eventually turn off.

*In emergencies, a quick shutdown can be achieved by switching the pump isolator off (**2**) then switching off the DC Isolator under each solar array (**4**)*

NOTE: Allow the Zener ECOdrive at least 10 minutes to discharge internally before disconnecting any wiring

Emergency Procedure

Please follow the Shutdown Procedure (see pg2) to isolate power to the pumping system. If the system needs to be powered down quickly, please follow the procedure at bottom of the Shutdown section. **The following procedure must be done using a minimum of 2 people.**

Support outer edge of solar frame, and remove lynch pins, support pins and brace

To close array(s), starting from one end, support the outer frame of each solar panel. Remove lynch pins, support pins and braces to allow solar frames to swing down and rest on A-frame supports. This process will have to be repeated for all bracing support struts on each array, until the panels are free to swing down and close against the A-frame.

After all the bracing has been removed and array is in closed position (Transport Position) it should look like this

Once in this position, the opposing solar frames can be circled with tie down straps to secure them in the closed position.

After the adverse weather has passed, please visually inspect the panels for any signs of damage. If damage has occurred, please DO NOT touch the system, and contact North West Pumps & Power on one of the numbers provided below.

Contact Information

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