

Redback Products

KB76 Disaster Preparation and Recovery Information

V1.0

1. Introduction

This document supplies advice about the preparation for, use during, and recovery from a natural disaster such as storm, flood, or fire.

This document is for use by homeowners or electricians.

The information in this document never overrides safe work practices.

If the threat to your health and safety is imminent, evacuate to a safe location immediately, or as directed by authorities. Your life is worth more than your Redback system.

2. If a disaster event is likely

Optional

You may top up the batteries one or two days prior to an event using solar, grid or both. This will ensure you begin the event with full or nearly full batteries.

Use the Redback Portal>Settings tab to place your system in CHARGE BATTERY or CONSERVE mode for the duration of the event. Change back to your preferred mode after the event (usually AUTO mode).

3. Preparing for imminent and certain disaster

Shutdown the system, including backup functionality.

1. If the installation site is expected to experience immediate partial or total immersion or other predictable damage, and it is safe to do so, shut down the system following manufacturers' instructions. Ensure the Switchgear Cover is fully closed and sealed to prevent water entry.
2. Ensure the Solar Supply Main Switch and Backup A.C. Isolator are both switched OFF. These are usually found on the main switchboard.

4. Use during a disaster

If it is safe to do so, the backup function may be used during a disaster event.

If there is no immediate risk of damage, the system may be used as normal during a disaster. However, if any part of the property has been damaged in any way, including partial immersion, or saturation during firefighting, there is a risk of concealed electrical damage which may affect the safe operation of the Redback system, even in Off-Grid mode.

If there is any doubt about electrical safety:

Owners: if there is no sign of system damage or immersion, shut down the system immediately. If any damage is visible or suspected, or if saturation during firefighting has occurred, do not touch the system. Contact an electrician for assistance.

Electricians: conduct an electrical safety check of the system and shut down as soon as safe.

If the system is to remain in use, note the following points:

1. To get the most out of the system, backup circuit loads should be minimized: this extends the battery backup run time and maximizes the system's ability to run on PV alone, if needed.

2. The Redback system will continue to work normally during a disaster provided it is not damaged internally or externally.
3. If the system detects a fault with the Batteries or PV it will try to protect itself and prevent damage.
4. If the system detects an earth fault an audible alarm will sound.
5. If the grid fails, the system will enter Off-Grid (backup) mode: The inverter will island itself from the grid and backup circuit will be powered by PV and or batteries, up to the inverter backup output limit.
6. If the backup output limit (load) is exceeded, the system will shut down until the load is reduced.
7. Off-grid, the system will shut down if the battery is "flat" and backup circuit loads exceed available PV. The system will restart automatically if there is sufficient PV to restart and meet the backup loads. The system will run off-grid until normal grid supply is restored.
8. If the system is running, excess PV will charge the system batteries.

5. Disaster recovery

Following a disaster event, including partial immersion or saturation, or if electrical damage to the property is suspected, the property must be checked by an electrician before the property can be re-energized from the grid or other sources.

Use the following procedure to check, and possibly recover, the system after the property has been inspected by an electrician and deemed safe to re-energize.

1. Without touching anything, inspect the Redback system exterior for damage or signs of immersion.
2. Inspect the PV panels for impact damage or dislocation.
3. If the system shows signs of damage or immersion, call an electrician to complete the inspection. The batteries or solar panels may be live. Electricians have the correct training and equipment to detect hidden dangers.
4. Electricians: If not already shutdown, shut down the system using the instructions on the system or in the Owner's Guide.
5. Remove the front covers and inspect inside the system for damage, water ingress, mud etc.
 - If damage is evident, take photos, replace the covers, lock out the system and advise the owner. Contact Redback for assistance.
 - If there are no signs of damage or immersion, replace the covers.
6. Assess the installation for damage e.g., are all labels and stickers still in place and legible; are heatsink fins and filters clean and functional; is any required fire protection system still in place?
7. If the property has been made safe to re-energize, restart the system using the start procedure. Contact Redback Customer Service if the system does not recover.

Electricians: Your state government issues inspection and maintenance guidelines which you may find useful e.g., from [Qld ESO](#)

If the grid is not available the system will restart in Off-grid mode, provided sufficient Battery and PV power is available. When the grid is restored, it will revert to the last set mode (usually AUTO but may have been changed prior to the disaster event).

6. Contact Redback Technologies

For emergency recovery, contact your system installer, otherwise the Redback Customer Service Team is available, Monday-Friday, 8:00am- 4:00pm AEST (UTC +10).

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7. Document History

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