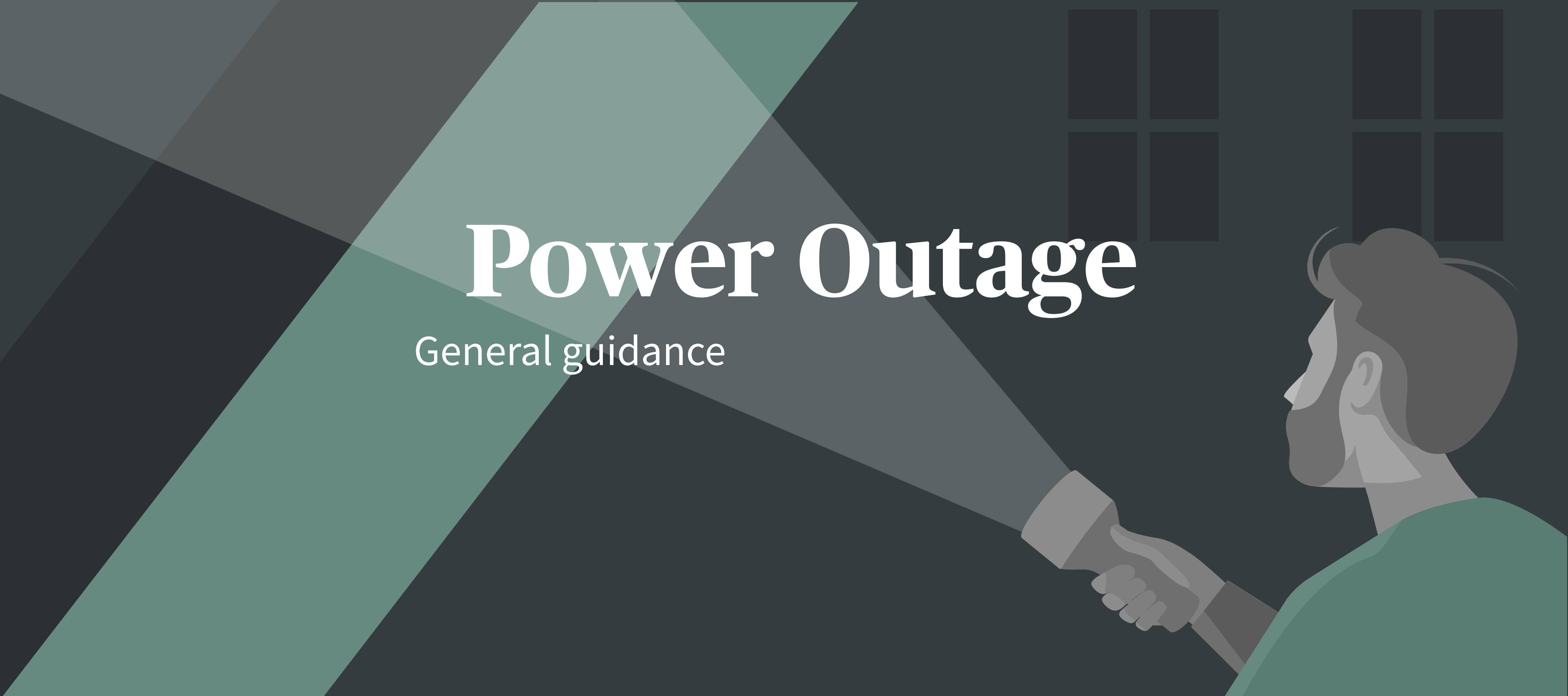




Power Outage

General guidance

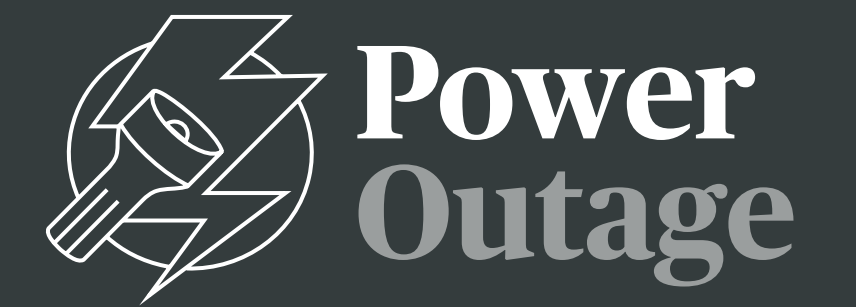




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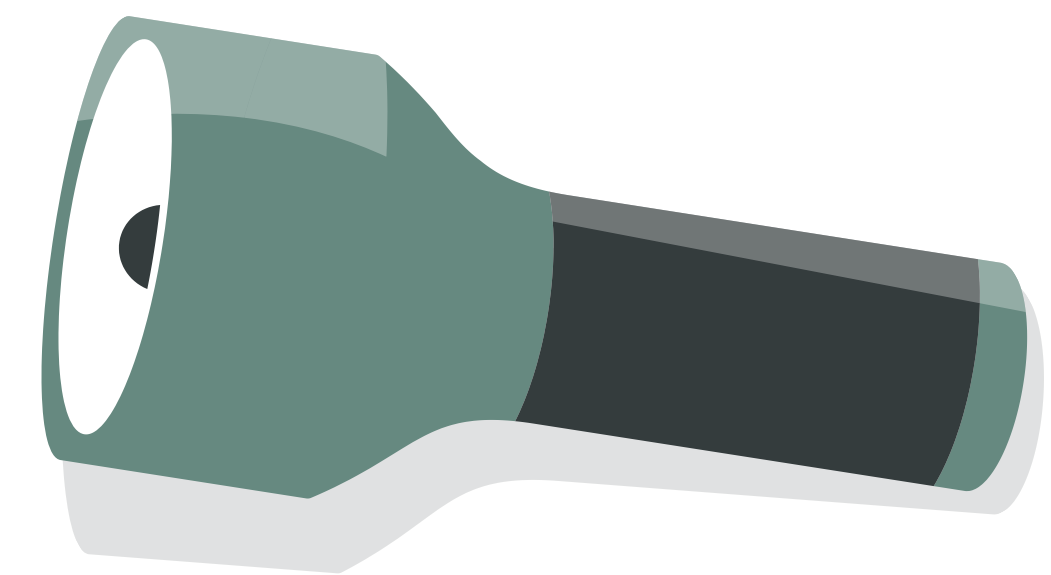
Introduction

The potential planned rolling blackouts this winter could have a range of impacts, including:

- Immediate impact on trading and manufacturing.
- Increased safety risks to staff, customers and visitors.
- Potential damage to equipment or processes from uncontrolled shutdown.
- Disruption to telephony & IT infrastructure with potential loss of data.
- Reduced client support impacting revenue.
- Impact on fire and security protection systems.
- Increased crime.

Pre-planning for such an event will help you increase resilience, maintain safety and minimise disruption.

We've created this guide to help your pre-planning assessment, emergency response discussions and training.





General considerations

- ✓ Check published information about expected rolling blackouts in your area.
- ✓ Consider changing operational or opening hours to reduce the impact.
- ✓ Review, document and communicate your emergency plans and procedures and provide relevant training to managers and key individuals.
- ✓ Document individual roles and responsibilities in advance and communicate these to ensure emergency plans can be invoked quickly.
- ✓ Review and update business continuity and emergency response plans to cater for electricity supply outage.
- ✓ Pre-plan and document the following;
 - Safe close down and start up procedures for equipment and processes.
 - Safe exit from site for staff, visitors and customers.
- ✓ Review risks associated with slips, trips and falls which might be increased due to reduced lighting when staff and members of the public are present on site.
- ✓ Are there increased risks that need to be adequately controlled from liquid spillage due to shutdown, or the use of unfamiliar traffic routes that are not normally used?
- ✓ Complete risk assessments for keyholders attending the premises during a total power outage, as street lighting will not be operating.

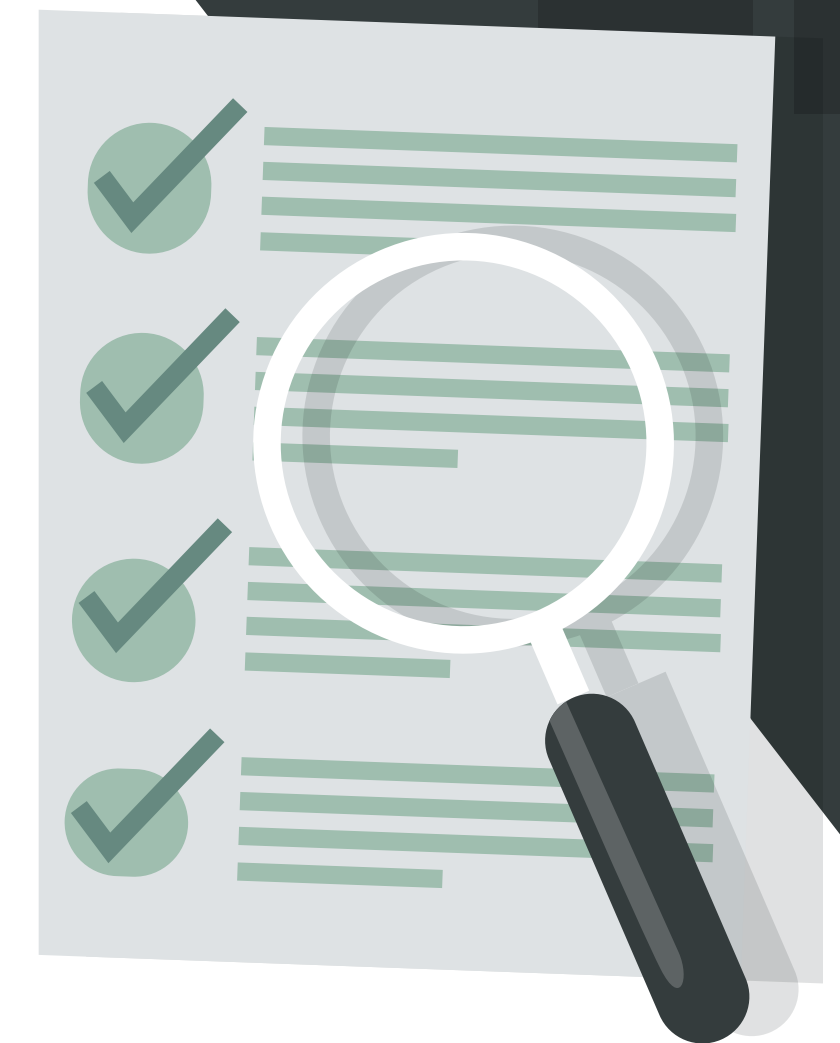


Planned preventative maintenance

Correct scheduled maintenance and testing of services and equipment in accordance with Original Equipment Manufacturers (OEM) recommendations or best practice will help to ensure resilience, safe shutdown/start up and safety.

Review and ensure maintenance is up to date for essential equipment, which includes, but is not limited to, the following:

- Passenger lifts – including emergency lowering facility where applicable.
- Emergency diesel generators – including annual load bank test.
- Uninterrupted Power Supply (UPS).
- Process equipment – including automatic switch-over to backup supply.
- Emergency Lighting.
- Utilities – electrical installations, boilers, refrigeration plant.
- Solid fuel boilers, wood burners, open fires including chimneys.
- Sprinkler systems including pumps.
- Intruder Alarms.
- Automatic Fire Alarms.





Emergency temporary electrical supply

- ✓ Fuel tanks for emergency generators should be kept topped up.
- ✓ Where a generator is not provided:
 - Consider hiring a temporary generator and providing a permanent or semi-permanent connection point and hardstanding to quickly provide a temporary supply for critical use.
 - Consider installing a UPS for critical equipment or IT to facilitate controlled safe shutdown.
- ✓ Risk assessment should be undertaken for temporary generators or additional fuel brought on site, to ensure this is undertaken safely.
- ✓ Ensure procedures and training are in place to close down equipment or back up data prior to power outage and before any emergency generator or UPS system expires.





Critical or vulnerable equipment

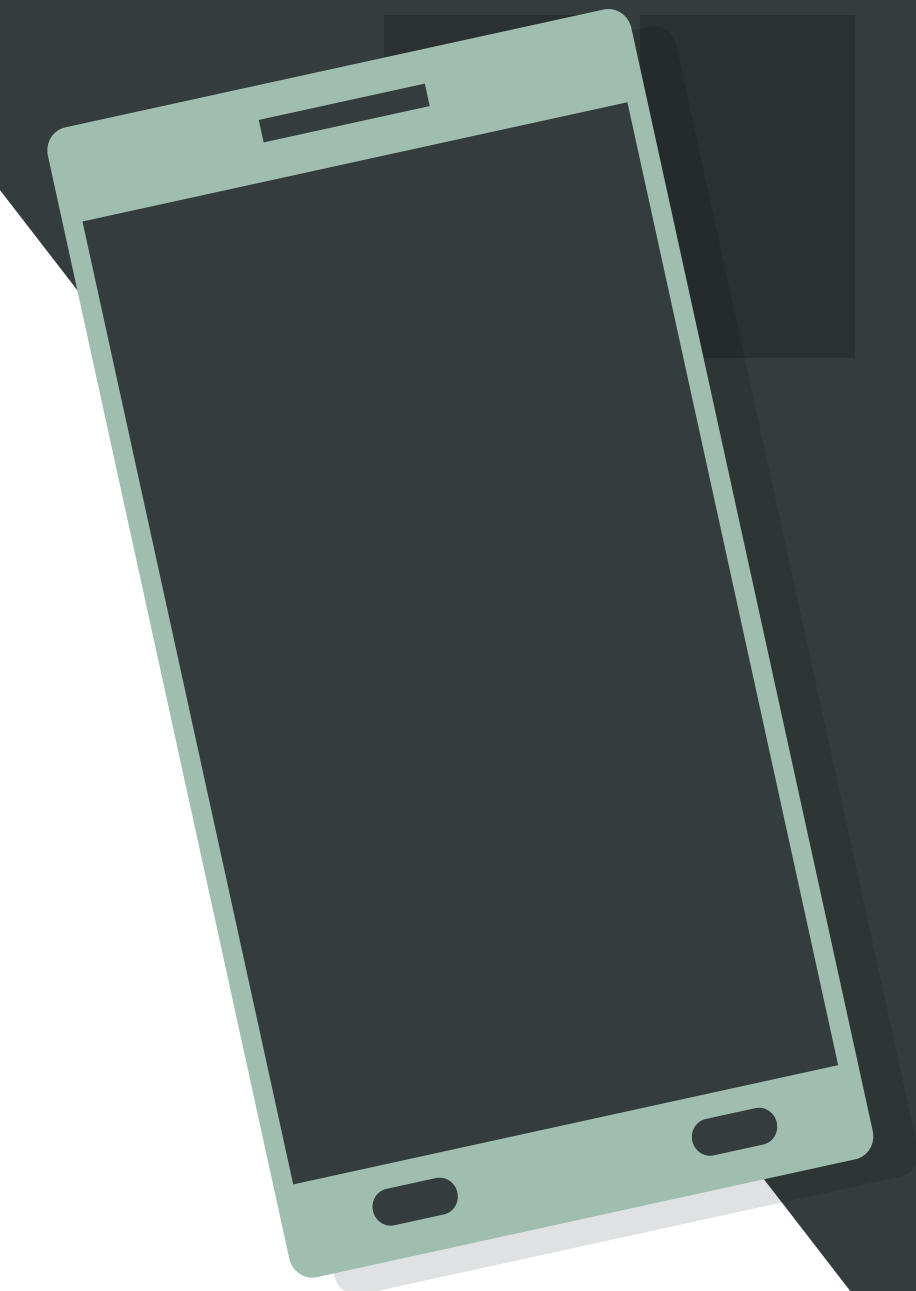
Review, plan and document the safe and controlled shutdown procedures for equipment, including the following:

- Passenger Lifts – stop use in advance of planned power cut.
- Cold stores, freezers and refrigerators – minimise opening, and consider setting a lower temperature 12 hours in advance of a planned power cut.
- Ensure plant and equipment safe shut-down and restart sequences are documented and employees are trained in any monitoring or manual intervention requirements for processes, boilers or fired equipment (kilns, ovens, steam generators, reactors etc.).
- Switch off equipment and, where possible, disconnect to protect against a power surge on resumption of the electricity supply.
- Leave at least one light switched on to show when power has been restored.
- Consider how you manage the use of electric vehicles which cannot be charged during outages.



IT & communications

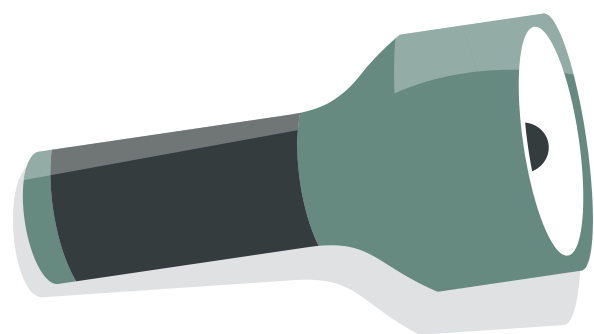
- ✓ Consider how you communicate across your business when IT networks and mobile networks may be affected.
- ✓ Computers and file servers – review data back-up requirements.
- ✓ Review data storage suppliers, including any that are cloud-based, to understand the impact on their service and their plans for resumption of service.
- ✓ Mobile telephone networks and landlines may be impacted during power outages. To increase resilience for key personnel, consider multi-network provider sims for mobile phones.
- ✓ Keep all mobile phones fully charged when mains power is available.
- ✓ Use power banks to keep mobile phones charged for longer.
- ✓ Have a battery powered radio and fresh supply of batteries to obtain ongoing information from local radio stations.





Lighting

- ✓ Ensure emergency lighting systems are functioning correctly and consider time taken for batteries to fully recharge on power resumption.
- ✓ Provide battery powered lanterns and torches with a supply of fresh batteries.
- ✓ Candles should be avoided due to the fire hazards they pose.



Heating

Electrical power outages will impact heating even if the primary boilers are Mains Gas, Oil or LPG, as pumps or fans will be electrically driven.

- Use of temporary or portable heating should be subject to a risk assessment prior to use. This should also consider safe storage of any additional fuel brought to site.
- Before using solid fuel fires, ensure chimneys are cleaned by an approved chimney sweep.
 - Make sure you use a fireguard to protect against flying sparks and hot embers.
 - Keep combustibles clear of solid fuel fires.
- Battery powered Carbon Monoxide detectors should be installed in rooms where combustion heaters or solid fuel fires or wood burners are used.



Fire and security equipment

- **Fire and Intruder alarms** – check the intended duration of supply with your service provider – this will be impacted by the age of the battery and may mean they need to be replaced;
 - Intruder alarms should provide 12 hours battery life.
 - Fire alarms should provide 24 hours battery life.
- Where offsite signalling is provided to intruder or fire alarms, contact your service provider to determine if this will still function, and for what duration, as these will vary considerably.
- **Access Control** – consider security implications as these may fail while open, leaving areas unsecured, enabling unauthorised access.
- Review the impact on other mains powered security related devices such as external lighting and CCTV. Consider on-site security guard presence during prolonged power outage.
- **Sprinkler system pumps** – ensure where diesel back up pumps are provided that these are in working order with functioning battery start facility and full fuel tanks.
 - Where the sprinkler installations only have electric pumps, these will not operate during power outages, so you should review the required additional measures detailed on the sprinkler test card.
 - If possible, increase reserve stocks of diesel and update your fire risk assessments beforehand to ensure these are stored safely.



Slips, trips, falls

- ✓ Are employees using entrances/ exits they do not normally use, and does this present any risk that need to be considered?
- ✓ How will you manage if there is reduced, or no, lighting whilst they are still employees and members of the public on site?
- ✓ Make sure consideration is given to external and yard areas as well as internal areas.
- ✓ Consider areas of the premises that may be prohibited to staff during power outages – this could be yards & compounds, areas where machinery is located, areas where materials are stored on floors.
- ✓ Is there an increased risk of liquid/ spillages being present on the floor causing increased risk of slips due to plant and equipment shut down during outages – how should this be managed?





Power Outage - General guidance

