Attachment 6 – Ausgrid's pass through application
Storm Response Plan (PUBLIC VERSION)
August 2015

Ausgrid
Storm Response Plan
April 2012

Contents

Front Cover Image: *PT12254 Lara Close*, Charlestown, June 2007 Storms (Image Credit – Justin White)

Ausgrid Storm Response Plan

1   Objective

The objective of this plan is to outline and provide a documented plan for the effective management of storm response in regard to Ausgrid's assets and electricity supply.

2   Scope

The scope of this plan includes:

- Safety management of public risk due to damaged mains and equipment.

- Management of the transmission network to initially restore substations and customers where supply has been lost, and to ultimately restore the network to a secure configuration.

- Management of the low voltage and high voltage network to restore customer's supply where lost.

- Customer response management.

- Staff management for optimal response.

- Use of the Outage Management System (OMS) in managing storm response, when there will typically be a much larger volume of emergency calls and active work crews than normal situations.

3   Incident Management Framework

This plan forms part of the Ausgrid Incident Management System, which in turn is part of the Ausgrid Emergency Management Plan as shown below.

EMERGENCY/INCIDENT MANAGEMENT

```
          Ausgrid  Emergency
          Management Plan
                 |
          Ausgrid  Incident
          Management System
            "Red Folder"
                 |
   ------------------------------------
   |              |                    |
Site Specific  Hazard Specific   Other Support Plans
   Plans          Plans           and  Procedures
                  |
          ------------------------
          |                      |
   Ausgrid Storm          Other Hazard Specific
   Response Plan                 Plans
```
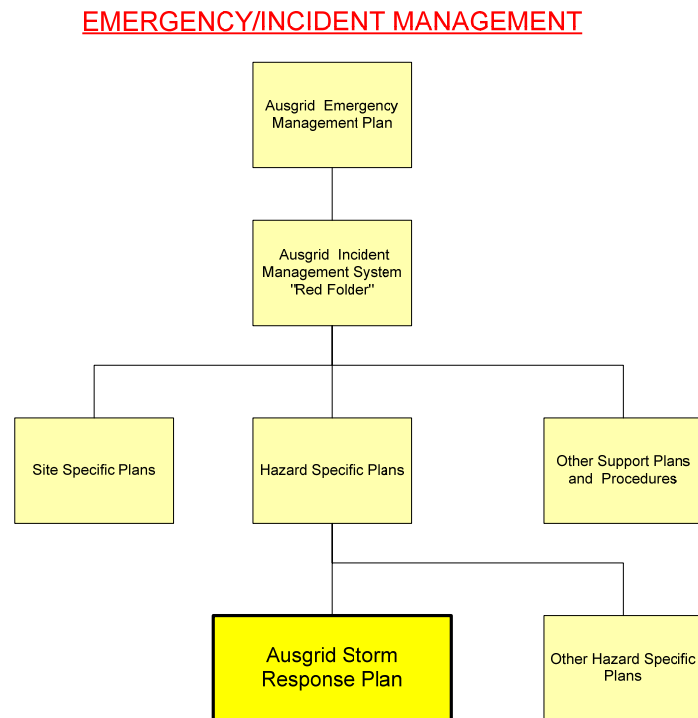
4 Reference to Incident Management System (IMS)

The Incident Management System specifies the "high level", overall organisational response in regard to any incident the organisation faces.

This Storm Response plan specifies divisional and sectional activity to achieve the required IMS response, specifically for **storms**.

The IMS should be consulted for organisational procedural reaction for the following items:

- Incident declaration, escalation, de-escalation and classification.
- Incident response procedure and priorities.
- Incident Management Team structure, contacts and responsibilities.
- Emergency Coordination Centre activation and use.
- Communications (SMS, Teleconference, GRN) procedures.
- Pre-incident and Debrief procedures.
- Record keeping procedures.
- List of supporting plans.

5 Safety

Storms and subsequent repairs to storm damage pose a significant number of safety hazards. The Electrical Safety Rules must be followed at all times. Staff must carefully follow the Hazard Assessment procedure from the Electrical Safety Rules at each job site to identify and control hazards.

Specific hazards that may be more likely and pose higher risks during storms are listed below. For both these hazards and any other hazards identified by staff, work shall be carried out in accordance with existing Safe Work Method Statements, procedures and control methods.

- **Lightning** – Line workers must take care to avoid working aloft when lightning is present in the area. All staff must take care as dangerous voltages can also be present on neutral or earthing conductors, and on underground cable sheaths, during lightning activity in the area.

- **Wind** – Similarly, climbing poles and operating EWP's in high wind conditions carries additional risk and needs to be suitably controlled.

- **Hail, Wet and Inclement Weather** – Working and driving in wet weather and during hail storms can be hazardous. Staff need to be careful driving due to conditions including slippery road conditions, flooding, blacked out traffic signals, and fallen trees, poles and lines. The risk of slips, trips and falls when working increases due to wet and slippery surfaces.

- **Fatigue** – Staff are likely to be working longer than normal hours, shift work and night work during storm response. Staff must be managed in accordance with the *Working Extended Hours Policy (EAOHS 0302.31P)*, in particular, "The duration of continuous working hours shall not exceed sixteen (16) hours in any twenty-four (24) hour period and shall be followed by a ten (10) hour period of non-work." Further advice in managing staff working shifts is contained in section 13 Shift Management.

- **Wires Down** – It is likely that staff will encounter situations with fallen conductors.

  - All fallen conductors must be regarded as alive until they have been identified, isolated and proved de-energised. Precautions for low voltage and high voltage cables must be followed in accordance with the Electrical Safety Rules.

  - In these hazardous situations only *authorised persons*, as defined in the Electrical Safety Rules, may work on the mains in accordance with ESR clauses 6.4.2 "Electrical Hazards or Emergencies with Public Risk" and 6.8 "Handling Fallen Conductors".

  - Other staff must respond in accordance with ESR clause 6.2 "Reporting Dangerous or Emergency Conditions or Damage".

  - Spotters can only cut away and make safe covered 100 amp service wires in accordance with their training. Spotters cannot cut away bare wires or low voltage distributor cables. Further information on the use of Spotters is covered in section 14 Spotters.

  - Note that some fallen wires jobs encountered during storms are telecommunications cables, including copper phone lines, fibre optic cables and co-axial drop cables. These cables are to be treated as alive and handled in accordance with DG01 Broadband Communications Cables and the procedures documented in the Spotters Training Notes.

- **Embedded and Mobile Generators** – Staff must be aware that customers may be using generators at their own installations during blackouts that pose a risk of back-feed into the network, and that ESR clause 7.1 "De-energised Low Voltage Mains and Apparatus" must be followed in regards to this.

SWMS OH601 *Emergency Situations / Extreme Conditions & Routine/Emergency Recovery and Replacement of CCA Crossarms (Includes: Wires Down, Car Hit Pole, Failed Pole, Tree in Mains, Fire, Flood, High Winds etc)* is available as an appropriate SWMS for staff to use during Spotting work.

6   Customer Response

Ausgrid values its customers highly.   Storms can produce havoc with electricity supply causing great inconvenience to customers both large and small.   This plan endeavours to minimise this inconvenience to all customers by optimal, efficient and speedy management of resources to restore supplies as quickly as possible.

The storm response strategy follows the same Electrical Network Incident Response Strategy Priorities as defined in the Incident Management System:

- Safety of Person and Property.
- Environment.
- Transmission.
- High Voltage.
- Key Customers.
- Low Voltage.
- Street Lighting.

Key customers are recognised for their influence in affecting large sections of the community and can include the following:

- High voltage customers.
- Customers with a direct connection to a distribution centre.
- Health institutions.
- Critical communication companies; water; sewerage; critical infrastructure.
- Government institutions.
- Federal and State MPs' offices.
- Customers with critical power requirements.
- Customers with high security requirements.
- Large religious buildings.

Once a storm incident is declared in accordance with the Incident Management System, the Senior Community Liaison Officers (SCLO) will activate the procedures detailed in this document in regard to customer response.

For storms of a lesser category and more localised area, the SCLO will be asked to assist at the request of the Storm Manager.

7 Incident/Storm Classifcation

7.1 Incident Classification

Ausgrid classifies incidents into 3 levels of severity. The Incident Management System contains the Incident Severity Matrix, which is used by the Emergency Duty Manager to declare and classify the incident under one of the following severities: **Incident, Major Incident or Emergency.** The severity of the incident will determine the level of response as prescribed in this plan.

7.2 Storm Categorisation

Storms are a specific and frequently encountered category of incidents. It has been found useful to categorise them as Category 1, 2, or 3. Categorisation of storm damage assists with storm management in the following ways:

- It provides a quickly and easily comprehended "big picture" of the extent of impact the storm damage, and importantly has the same meaning at all levels of the organisation. This means that management and field staff at all levels are aligned as to what is expected from a change in category.

- It determines and reflects the management structure and resourcing that is operating at the depot.

- By escalating the categorisation a depot can pro-actively indicate that additional field and support resources are required.

- By de-escalating the categorisation a depot can proactively indicate that the restoration is being brought under control, potentially releasing resources to other, more affected parts of the business.

Ausgrid has 3 categories of storm at the depot level. The following table correlates the storm category level to the incident severity level.

These classifications can also be used for response to other major incidents, such as bushfires or other natural disasters, and major failures.

8 Instigation and Escalation of Storms

The escalation process for storms shall follow the standard escalation for any electrical incident, as defined in the Incident Management System, and these processes allow the System Control Room to escalate issues to the DOR and/or TSO Duty Manager as appropriate.

To assist the Control Room to communicate incidents to staff who can best deal with them, a communications escalation pathway has been established and is shown below for clarity:

- 1st call   On Call number
- 2nd call   OH Supervisor/Superintendent
- 3rd call   On-Call Duty Officer
- 4th call   Field Services Manager/Area Manager
- 5th call   DO&R and TSO Duty Manager

Observations and recommendations for storm escalation:

- Almost all storms start out as Category 3.
- History shows that initially jobs start as a trickle, and "snowball" over time.
- There are early warning indicators that a storm is going to escalate well beyond Category 3:
  - ➢ Weather reports detailing the magnitude of the storm.
  - ➢ The damage caused prior to it reaching Ausgrid (i.e. in Endeavour Energy's area).
  - ➢ Number of feeders at 11kV and above that have been interrupted by the storm.

8.1 Category 3 storms (least severe)

A Category 3 storm can be managed by a depot (e.g. Dee Why) without additional field staff being called from other areas. ██

A storm is defined as Category 3 when the depot is opened. The storm is managed by the Depot Supervisor, typically the local Overhead Superintendent or Supervising Engineering Officer.

- Jobs, usually from OMS, are received by the Admin and other staff called in to deal with the extent of the incident.   These jobs are then acted upon by the local Depot Supervisor or his nominee, to arrange field response as required.   Field staff, spotters and support staff can be called in as appropriate to assist.
- When a storm is clearly going to escalate beyond Category 3 it is essential that support staff (admin, Engineers, EOs, etc) are put in place early to assist with the following:
  - ➢ That the infrastructure is ready to effectively manage the dramatic increase in workload.
  - ➢ For statistical collation to provide pro-active management tools that promptly identify when escalation is required.
  - ➢ To set up the Spotter network and processes.
  - ➢ To filter work received to remove duplicate jobs.
  - ➢ For assistance with prioritisation of work.
  - ➢ To manage media, political and other external enquiries.
- The On-Call Duty EO/Engineer can form part of the initial support team if practical.

8.2   Category 2 storms

A Category 2 storm can be managed at the depot with the existing depot supervision, however additional crews (and potentially Spotters) from other depots are required to assist with the field restoration. ▮▮▮▮▮▮
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The Depot Supervisor remains in control of the depot storm management.

Spotters are managed and supervised by the depot support staff (Engineering Officers, Maintenance & Breakdown portfolio staff, admin staff, etc). The depot support staff:

- Prioritise work for issue to Spotters.

- Issue work to and receive work from Spotters.

- Ensure the quality of the information returned from Spotters is sufficient to enable the supervisor to dispatch the correct crews to the job.

- Ensure enough Spotters are available and being utilised.

- Call in additional Spotters when necessary.

This serves to relieve the additional burden that is placed on the Depot Supervisor in Category 2 (and Category 1) storms with additional crews to manage and supervise.

The responsibility for the overall Spotter management should be assigned to one person, typically a team member from the Maintenance & Breakdown portfolio.

The Depot Supervisor manages all the additional field staff (including Contractors) required for repair work.

Jobs are spotted before they get to the Supervisor, with sufficient information recorded about the damage and repairs required to allow the Supervisor to effectively prioritise and dispatch appropriate resources.

8.3   Category 1 storms (most severe)

A Category 1 storm represents significant damage to the network, across multiple depots or regions, with significant numbers of staff from other Regions and Organisations involved in the restoration. The other Regions will usually also supply support staff and spotters. ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮
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A dedicated Storm Manager, who is an experienced Manager, is put in place to manage the overall depot storm response for a storm of this magnitude and severity.

- Local Managers or Field Services Managers/Area Managers in "passive" regions (i.e. regions not greatly affected by the storm) could take on roles of Storm Manager in active depots.

As much of the management structure as possible should be located at the depot – it is close to the action and provides for direct communication flow between those managing the storm.

The depot administration and support team is vital to assist with the overall management of the depot. Refer to section 10 Roles and Responsibilities for more detail.

- Use local people where possible as they know the local processes and geography, however this will not always be possible due to availability, rostering and the size and severity of the storm damage.

External staff (i.e. from Endeavour Energy and other utilities) are often called upon in a Category 1 storm:

- They require direct "hands-on" management in the field (e.g. a dedicated Field Co-ordinator), and may also require a Field Co-ordinator to act as a dedicated Supervisor when there are significant numbers of external staff to be managed.

- A dedicated Safety Advisor is required to carry out inductions and record keeping for the external staff.

Category 1 storm response also utilises the autonomous work team concept, wherever possible, for crews supplied from other regions:

- A full set of crews is dispatched with supervision, administrative and engineering officer support included.

- The group is given their own set of work to manage; this could be possibly an area, or series of large jobs.

- The advantage of this approach is they have familiarisation with each others working methods, inherent co-ordination, and a team spirit.

- This approach also shares the increased supervisory burden with the incoming autonomous crew.

- Information from these autonomous groups is fed back into the overall depot storm response, being managed through the Storm Manager.

Where it is not possible for full autonomous crews to be dispatched the need for adequate supervision must be recognised to manage the additional staff:

- Rule of thumb - supervision is required per 15 staff

Staffing rosters must be put in place to manage the large number of staff involved and the extended duration required to complete repairs. These rosters are the responsibility of the Storm Manager, with assistance from administrative and support staff to manage them.

8.4   Impact of storms upon Transmission Network

Any level severity storm can affect transmission assets. When this occurs, the Storm Manager must coordinate with the transmission branch to best arrange for supply to be restored in accordance with Electrical Network Incident Response Strategy Priorities.

9   Storm Organisation

9.1   Overall Management Structure

The overall storm management structure for Ausgrid, incorporating depot and region structures previously described, is shown on the following page.

This structure follows the Incident Management Team Structure defined in the IMS. Detailed explanation of each role is contained in the IMS section 6 Duty Statements and Common Responsibilities, and this document section 10 Roles and Responsibilities.
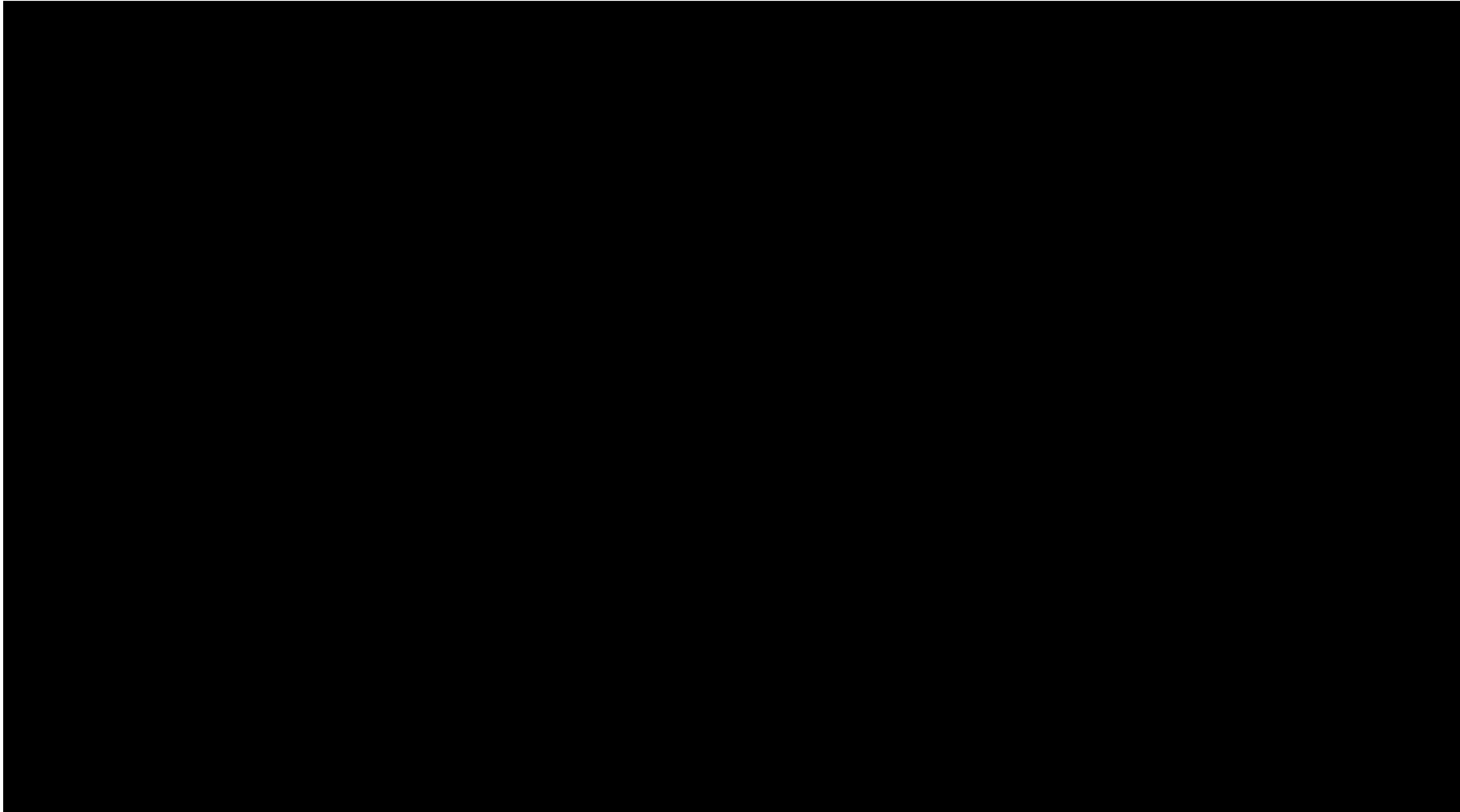
This diagram represents the functional view of the Incident Management structure in regards to storm management.

9.2 Area/Depot Management Structure

9.2.1 Category 3 Organisation – Depot Level

9.2.2 Category 2 Organisation – Depot Level
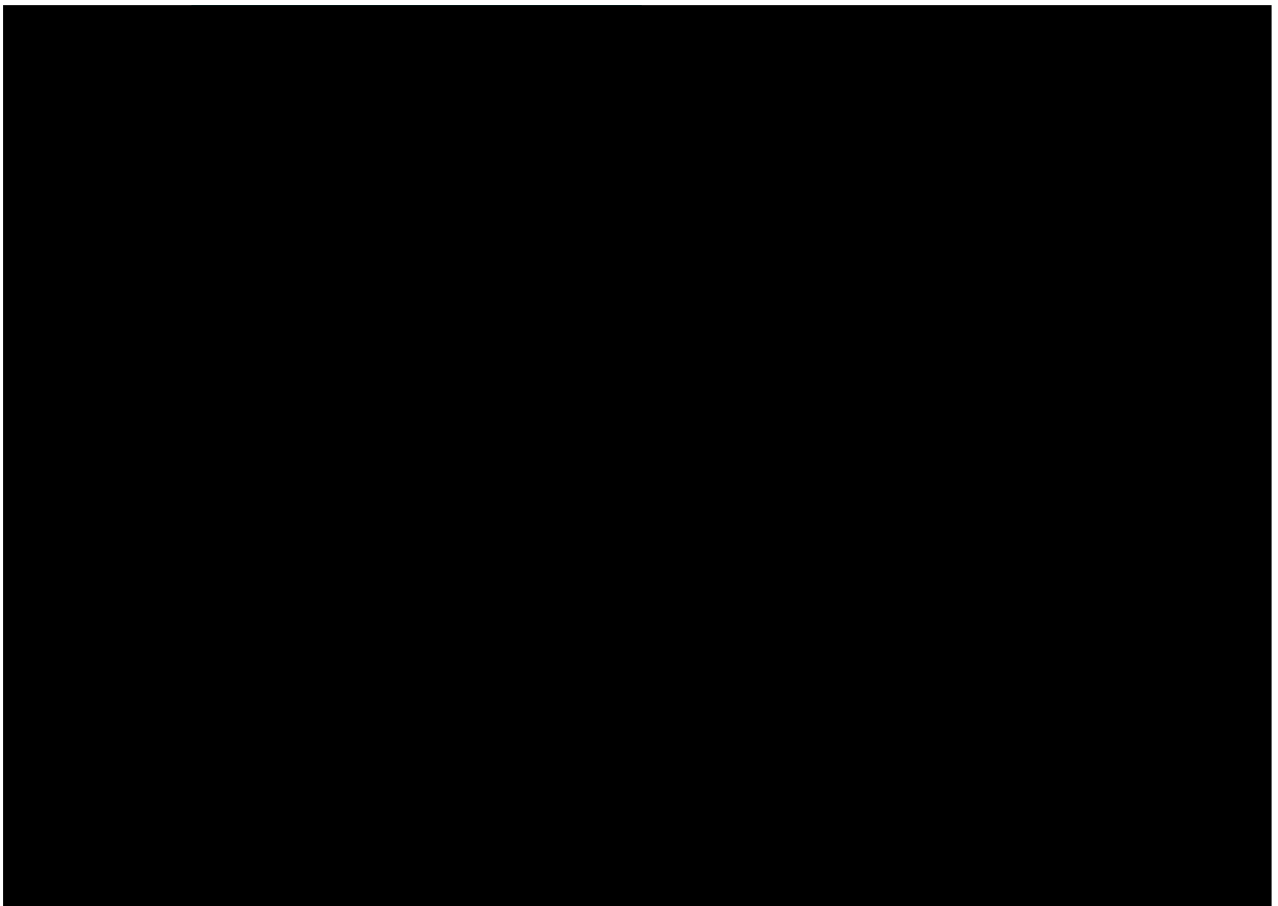
9.2.3 Category 1 Organisation – Depot Level

10 Roles and Responsibilities

10.1 Stategic Overview
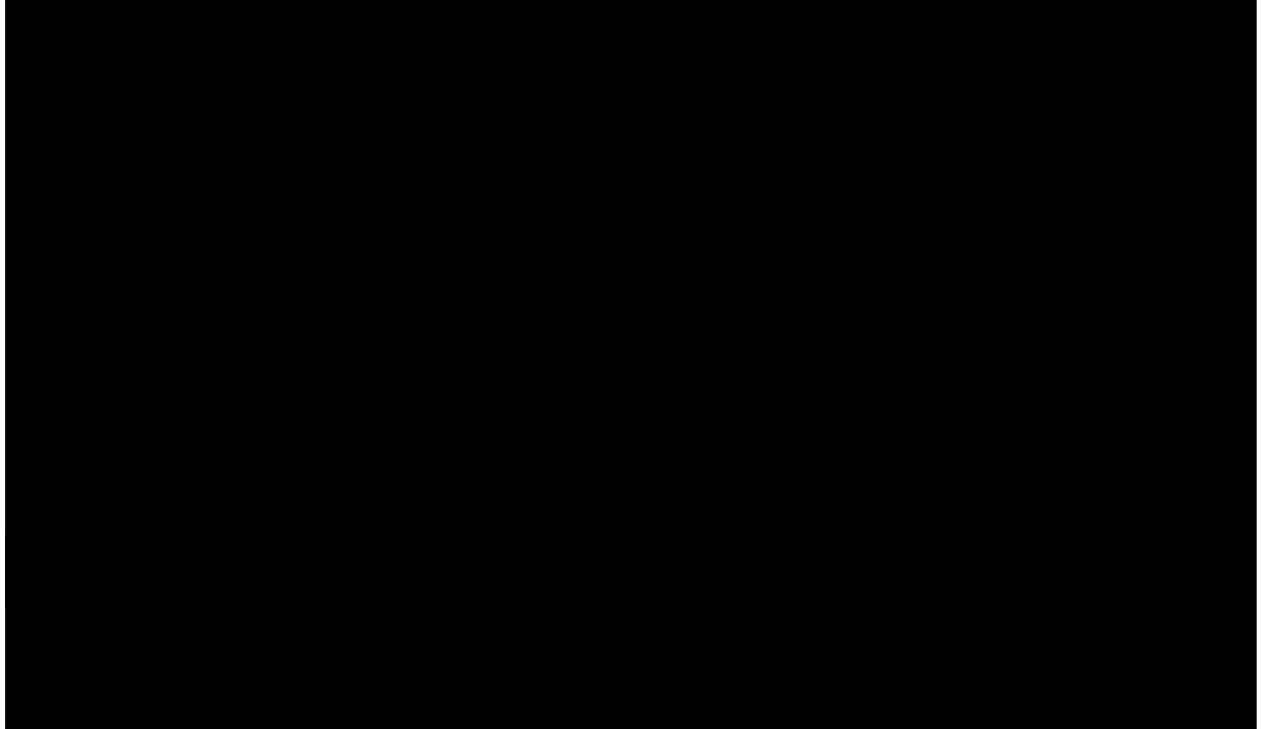
The above hierarchal management structure represents a local operational view at the depot level through to a strategic organisational view at the Duty Manager level.

10.2 Roles and Duty Statements

The following key roles applicable to the repair of storm damage are defined in the Incident Management System. The Duty Statements for these and other Incident Management Team roles should be obtained from there:

- Emergency Duty Manager
- Incident Controller
- Operations Coordinator
- Planning Coordinator
- Logistics Coordinator
- Communications Coordinator
- System Control
- DO&R and TSO Duty Manager (included in section 10.2.1 of this document as well)
- Logistics and Training

Further roles specific to storm response are defined in the following sections.

1. DO&R and TSO Duty Manager (On-Call Duty Manager)	7. Safety Advisor
2. On-Call Duty Officer	8. Regional Manager/Area Manager/Operations Manager
3. Field Services Manager/Area Manager/Operations Manager (Regional Incident Manager)	9. Senior Community Liaison Officer
4. TSO Managers – Transmission Mains, Transmission Substations & Services, Field Operating, Network Test	10. DO&R Communications Officer
5. Storm Manager	11. Logistics
6. Depot Support Staff – Engineers, Engineering Officers, Administration Staff, etc	12. Support Officer

10.2.1 DO&R and TSO Duty Manager (On-Call Duty Manager)

The duty statement for this role is contained in the IMS, and is repeated here for clarity:

- The DO&R and TSO Duty Manager will liaise with Operational Coordinator, Site Incident Manager, Operations Branches (Field Services). The DO&R and TSO Duty Manager acts as the main point of contact for the IMT to all Distribution Operations & Reliability and Transmission & System Operations staff.

- Liaise with the Regional Incident Manager (Field Services Managers/Area Managers) with regard to the establishment of Local Incident Command Centre(s) as required.
  - ➢ Regional Incident Manager's responsibility to establish Local Incident Command Centres

- Inform Contact Centre of Depots opened in response to the Incident

- Liaise with EGM-DO&R and EGM-TSO and the IMT to develop and systematically review the organisational response strategy

- Liaise with Incident Controller to ensure appropriate surveillance (e.g. Helicopters) is engaged to ascertain the extent of damage in a timely manner

- Receive consolidated Network Support Storm Statistics from Transmission & System Operations (through OMS).

- Monitor incident status based on consolidated organisational statistics

- Ensure the 'Electrical Network Response Strategies and Priorities' are followed

- Liaise with the DO&R Regional Incident Managers (Field Services Managers/Area Managers) regarding implementation of strategies

- Working with the logistics team, ensure external staff from other authorities providing assistance are appropriately assessed and briefed on skills, plant, equipment and materials required.

- Provide the Operations Coordinator with updates of the current situation and actions taken.

- Advise the Incident Executive Officer of additional staff that has been appointed to be part of the IMT.

- Coordinate the local debriefs once incident has been de-escalated.

- The DO&R and TSO On-Call Duty Manager is contactable by mobile phone, ▮▮▮▮▮▮▮

10.2.2 On-Call Duty Officer

The On-Call Duty Officer is to assume responsibility for their allocated regions call-out requirements, where applicable including a cross divisional response from DO&R and TSO, to ensure completion of work necessary for restoration of supply in case of emergencies and/or system failures and if necessary, delegate this responsibility to other authorised officers to effect necessary repairs.

- If an emergency or major loss of supply cannot be managed by the Division's resources and has the potential to grow, it is to be referred to the System Operator. In Ausgrid's Network Management Incident System, it is the responsibility of the System Operator to contact the Duty Manager to co-ordinate the restoration effort and open Incident Control Centres (Storm Rooms) in one or more Regions.

- If there is any local knowledge of storm conditions that may help the Duty Manager in his assessment of the storm, he should be informed directly by the On-Call Duty Officer. Other

appropriate local Field Services Managers/Area Managers should also be kept up-to-date of the situation.

- For most incidents and minor system failures, the Superintendent and/or the On-Call Duty Officer will be able to carry out repairs and restore supply with the Division's resources.

- The On-Call Duty Officer will ensure that when an incident, system failure or an emergency occurs, it is dealt with promptly and efficiently to minimise interruption to customers and system losses.

- System Control will initially contact the appropriate front-line Supervisor/Superintendent for incidents/outages.

- In these cases the respective Supervisor/Superintendent will make necessary arrangements to effect repairs and/or restore supply.

- If the problem is beyond the resources of the Supervisor/Superintendent, he is to request assistance from the On-Call Duty Officer who will in turn assume responsibility.

- If the System Operator cannot make contact with any of the front-line Supervisors within a reasonable time, they are to contact the On-Call Duty Officer.
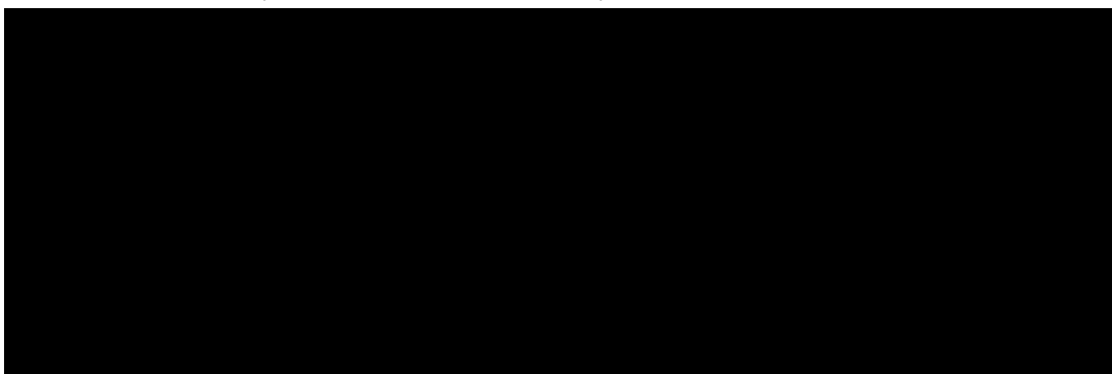
> Upper Hunter Emergency arrangements are in place with on-call field staff.

- When the System Operator contacts the On-Call Duty Officer, they will outline the problem and names of staff whom they have attempted to call. System Control will then hand over responsibility to the On-Call Duty Officer who will make necessary arrangements to effect repairs and restore supply.

- The On-Call Duty Officer will keep the System Operator informed periodically of staff arrangements and job progress.

- The On-Call Duty Officer acts on requests from Control Room Operators, i.e.:

    > To open depots.

    > To contact and call out other appropriate staff, etc.

- During out-of-hours, the On-Call Duty Officer should not attend depots or work sites unless directly requested to by the Manager or System Operator.

- The On-Call Duty Officer when contacted by the System/Area Operator as a last resort due to the unavailability of other staff during a serious emergency, should notify the appropriate Manager – Field Services and/or the On-Call Duty Manager.

- The On-Call Duty Officer system does not override any local on-call agreement in regard to lineworkers, etc, being on call.

10.2.3 Field Services Manager/Area Manager/Operations Manager (Regional Incident Manager)

Each Field Services Manager manages the general storm response for their region, and is responsible for the management of staff working within their region.

Field Services Manager responsibilities:

- General management of the regional response.

- Ensure that Local Incident Command Centres ("Storm Rooms") are equipped and established as required.

- Understand the overall picture of damage and ongoing repairs for the region.

- Ensure that OMS job status and details are accurate to ensure that statistics can be generated – e.g. numbers of jobs, customer without supply, and work crews.

- Escalating and de-escalating the Storm Categories at each of the depots they are responsible for.

- Request staff from other regions/divisions/organisations and allocate them to depots as necessary – including identifying additional ancillary requirements such as Supervisors, Field Coordinators, etc.

- Manage overall workloads and staff levels at each depot, and the flow of staff between depots as required.

- Ensure that continuity of supervision and depot support staff is adequate and maintained.

- Provide staff to other regions and divisions if required, and ensure staff sent to other regions are properly equipped.

- Ensure staff arriving from other regions/divisions/organisations receive local inductions through the Safety Advisor.

- Assist the Regional Manager and Senior Community Liaison Officer with media related issues relevant to the local region when required (e.g. coordinating site visits, providing information for media, etc).

10.2.4 TSO Managers – Transmission Mains, Transmission Substations & Services, Field Operating, Network Test

The Transmission Mains group will operate according to many of the same principles used by Field Services regions in regards to carrying out repairs across a wide area and range of sites in the network. Staff from region based Field Services crews may be called upon to assist Transmission Mains as required.

Transmission Substations work is more likely to be based at key substation sites, with each site ran as a subgroup reporting back to the Incident Management Team. Field Services crews are likely to be called upon to assist in repairs for these sites.

Field Operating and Network Test groups will be primarily responding to work requests and directions from System Control.

TSO Manager responsibilities:

- General management of the respective TSO section response.

- Central collation of statistics for the respective TSO section (numbers of jobs, crews, etc).

- Responsible for escalating and de-escalating the Storm Categories at each of the depots/sites they are responsible for.

- Manage overall workloads and staff levels at each depot/site, and the flow of staff between depots/sites as required.

- Ensures that continuity of supervision and depot support staff is adequate and maintained.

- Request staff from other regions/divisions/organisations as necessary.

- Provide staff to other regions and divisions if required, and ensure staff sent to other regions are properly equipped.

- Assist with any media related issues relevant to the affected infrastructure.

10.2.5 Storm Manager

For Category 2 and 3 storms, the Depot Supervisor (Overhead Superintendent or equivalent) will be the Storm Manager for the depot. For Category 1 storms, the Storm Manager should be an experienced manager, e.g. Portfolio Manager – Maintenance & Breakdowns, Senior Engineer or similar.

Storm Manager responsibilities:

- Ensure the overall restoration prioritisation is adequate for the depot.

- Overall management of the storm response at the depot level.

- Ensure shifts are planned arranged to maintain continuity of the storm repair work, including relief shifts as required for the Storm Manager position.

- Liaise with Field Services Manager regarding overall regional strategies – escalation, staffing, etc.

- Ensure the optimal use of available crews, including staff trained as Spotters, Fuse Replacement technicians, and the availability of Customer Connections technicians for service work.

- Identify when additional staff are required or when staff can be released to other regions.

- Liaise with System Control regarding operational issues.

- Manage the maintenance and use of statistics within the depot:

  - Ensures local statistics are maintained and receives organizational statistics detailing quantities of jobs, trends, etc.

  - Ensure that local OMS job status and details are accurate to ensure that statistics can be generated – e.g. numbers of jobs, customer without supply, and work crews.

  - Use statistics as a management tool.

- Arrange contractors as necessary (e.g. tree trimming) and coordinate their activities.

- Arrange Safety Advisors for external inductions.

- Ensure that follow up work is being properly recorded.

10.2.6 Depot Support Staff – Engineers, Engineering Officers, Administration Staff, etc

Note that this could be either local depot staff, or staff dispatched with autonomous work teams from other regions/organisations.

These staff provide the general administrative and technical support tasks for the field team that they are supporting, including:

- Work Management:

  - Process work when it is received from OMS.

  - Sort and filter jobs to identify and remove duplication.

  - Assist the Supervisor in organising and prioritising work.

  - Timely updates of job status, crew allocation, data and comment entry into OMS for jobs as detail is returned to the depot. **This is crucial to maintain accurate storm statistics as they are generated from the data in OMS.**

- Spotter Management:

  - Prioritise work for issue to Spotters.

  - Issue work to and receive work from Spotters.

  - Ensure the quality of the information returned form spotters is sufficient to enable the Supervisor to dispatch the correct crews to the job.

  - Ensure enough Spotters are available and being utilised.

  - Call in additional Spotters when necessary.

- Depot Administration:

  - Arrange sustenance and accommodation as appropriate for staff working out of the depot.

  - Consider the delivery of sustenance to the field where is it efficient and practical to do so – particularly when staff are working in remote areas.

  - Timesheets for depot staff.

  - Materials ordering.

  - Liaise with Logistics regarding material disposal.

- Staff Management:

  - Maintain a central record all key details of all staff working, whether they are Ausgrid staff, Ausgrid contractors (e.g. Tree Trimmers) or external staff (e.g. Integral Energy). Staffing details are recorded on Storm Response Plan Form SRPF004.

> ➢ Assist with management of shifts and monitor that staff do not exceed permitted working hours.

- Develop and maintain shift rosters. Details regarding hours worked are recorded on Storm Response Plan Form SRPF002.

- Work with and assist customer operations staff as required:
  - ➢ Arrange mobile generators as necessary.
  - ➢ Keep an ongoing list of potential jobs for Media access in case they are required.

- Liaise with System Control (Control Room and Despatch) regarding the status and signoff of OMS jobs as required.

- Handle enquiries received from customers and the Call Centre (that are received separately from OMS).

- Liaise with external agencies such as the SES, RFS and police at a local level. If the requests of these agencies cannot be accommodated directly, it is important to escalate these issues to the Incident Management Team as a priority. Note that the Incident Controller / Incident Management Team will also be dealing with these agencies at a higher level.

- Ensure the security of the depot at all times through the storm.

- Record details of follow up work required after the storm.

- Record information on changes to assets, e.g. replaced poles and substations, and ensure that this asset information is updated in iAMS during or following the storm.

- The allocation of Depot Support Staff tasks should be recorded on Storm Response Plan Form SRPF003. This allows work to be divided between available support staff and individual responsibilities understood.

10.2.7   Safety Advisor

Safety Advisor responsibilities:

- Assist the Storm Manager with all safety related matters.

- Carry out and/or assist with safety audits where necessary.

- Conduct full inductions on external staff that are deployed to work within the area.

- Records of the staff that have been inducted are kept on Storm Response Plan Form SRPF005.

10.2.8   Regional Manager/Area Manager/Operations Manager

The Regional Manager is responsible for the coordination of all Customer Operations resources for their region. The Regional Manager will need to coordinate and manage Customer Operations staff:

- EmSO's responding to OMS jobs issued by System Control (Despatch).

- Work with Ausgrid field staff as part of the operational response, e.g. as Spotters, Street Walkers (on-site communication with customers), or assisting EmSOs and Installation Inspectors. This should also be coordinated with the appropriate DOR Field Services Manager.

- Provide planning and engineering support for the Incident Management Team (knowledge of the local distribution, LV and street lighting network and customer loads details).

- Assist the Senior Community Liaison Officer with contacting key customers.

Customer Operations must provide a 24hr contact for the Regional Manager and Senior Community Liaison Officer incident management team roles for each region. The positions can either be rostered or a primary/secondary contact.

Each region is responsible for planning their resources to ensure it can respond to an incident effectively. This includes ensuring:

- Staff are available to provide support during an incident.

- Support staff have the adequate skills, training and equipment.

- Support staff understand what their role can be in an incident.

10.2.9   Senior Community Liaison Officer

The Senior Community Liaison Officer (SCLO) is responsible for the communication of a coordinated message to key customers in their region and raising any issues back to the Incident Management Team during an Incident. The SCLO is also responsible for:

- Knowing who the key customers are in their region.

- The numbers of customers that need to be contacted during an incident.

- The order in which key customers are to be contacted.

- Coordinating with the Regional Manager (or as delegated) to use additional Customer Operations resources to contact key customers (e.g. more staff for phone calls, door knocking, etc).

- Providing support to either the DO&R Communications Officer or directly to Corporate Communications (depending on the circumstances / extent and severity of the incident) for customer and media information and requests (refer to DO&R Communications Officer role following).

10.2.10   DO&R Communications Officer

During larger, i.e. Category 1, storms across a large area of the network, a DO&R Communications Officer will be appointed. This role is filled by a senior manager within DO&R, and provides for consistent handling of media related issues and enquiries across the whole of the division.

This has the benefit of speeding up the information flow to the media, providing consistent processes and information, and enhancing Ausgrid's public image.

Roles the DO&R Communications Officer may be required to undertake include:

- Assist Corporate Communications with media related issues such as:
  - Arranging appropriate sites for media visits as necessary.
  - Arranging responses to any media related issues.
  - On-site management of the media.

- Assist Corporate Communications and the Incident Management Team with any other storm related issues requiring involvement or follow-up from DO&R.

- Work closely with the DO&R and TSO Duty Manager, region based Field Services Managers, Area Managers and Regional Managers, and Senior Community Liaison Officers to obtain information as required and maintain an up to date and clear picture of the situation.

10.2.11 Logistics

Roles that Logistics will need to provide include:

- Arrange materials delivery in conjunction with depot requirements.

- Resolve any issues regarding materials supply.

- Source additional materials as required.

- Provide access to emergency stores where required.

- Provide ongoing support for the fleet of vehicles and plant.

10.2.12 Support Officer

The Support Officer(s) will need to provide general support to DO&R Management, TSO Management and the Incident Management Team as required. This includes:

- Support services to the management teams including EGM-DO&R, EGM-TSO, Duty Manager, EM's-Operations, and DO&R Communications Officer as necessary.

- Manage statistical information regarding the storm, trends, efficiency, progress etc.

- This support will often include technical knowledge and support as well as administrative functions.

11 Business Process for Storm Repair

Responsibilities

Responsibilities

Supervisor/Depot EOs/ Admin — **1. Receive Storm job via OMS**

Supervisor/Depot EOs/ Admin — **2. Process job ready for issue to spotters/ repair crew**

Job assessed as not requiring Spotter (e.g. by field and/or office information/ evaluation)

Supervisor/ Depot EOs — **3. Issue job to Spotters and update OMS**

Field Spotters — **4. Spot job and capture information regarding job**

Field Spotters — **5. Return information to depot**

Depot EOs/Admin — **6. Update comments & priority for each job & status in OMS**

Job Made Safe (No Supply)

12. Complete job in OMS and log any further work — Support Staff – Depot Admin/EOs

Repairs made

11. Update Status in OMS — Support Staff – Depot Admin/EOs

10. Return Paperwork to Office — Field Crews

9. Repair Damage or Make Safe — Field Crews

8. Issue to the Field for Repair — Depot Supervisor/ Storm Manager / Support Staff – Depot Admin/EOs

7. Prioritise rectification work — Depot Supervisor/ Storm Manager

This section describes the business process to be used for OMS in storm conditions. Technical instructions for using OMS are available on Balin → Software Applications User Guides:

http://balin/techpub/Software%20Applications%20User%20Guides/Index.htm

The process described here includes the following typical jobs received through OMS:

- Wires down

- Trees on mains

- Other hazards

- Single customer outages

Other jobs such as high voltage feeder trips and multiple customer outages that "roll-up" through OMS will be managed through the Control Room, and where necessary transferred to local depots. System Control may also issue work to local depots via telephone, fax or email to the Storm Manager/Superintendent.

For these other jobs, the same principles for managing and prioritising the work will apply.

11.1 Step 1: Receive storm job via OMS

- Job comes into Ausgrid from the Customer though the call centre.
- Job is entered into the OMS system, with appropriate details as supplied by the Customer.
- Job is assigned to the relevant depot for rectification.

11.2 Step 2: Process job ready for issue to Spotters/Repair Crew

- Acknowledge receipt of job in OMS.
- Determine whether job already exists (another customer may have previously called reporting the same problem).
- If job already exists, assign job to same crew/status as duplicates and group jobs if possible in OMS.
- If the job does not already exist, update the status to "AWT-Spotter".
- Prioritise work for issue to spotters, based on the information that is available (on the OMS notice). Priorities are as per the Electrical Network Incident Response Strategy Priorities – refer to section 6 Customer Response.
- If the job:
  - ➢ has already been field assessed, for example by Operators or EmSOs,
  - ➢ is in the early response to the storm before a full spotter process is operating,
  - ➢ or deemed by the Depot Supervisor/Storm Manager as an emergency and a field crew (Lineworker, Jointer or Technician) will be dispatched immediately,
- then the job progresses to Step 7: Prioritise Rectification Work, and the OMS job status should be updated to:
  - ➢ "AWT-Line", or
  - ➢ "AWT-Jointer", or
  - ➢ "AWT-Tech", as applicable.

11.3 Step 3: Issue job to Spotters and update OMS

- Work is issued to spotters based on the priorities listed in Step 2.
- Often multiple jobs are issued to spotters, usually based on a geographic area or route of travel.
- Spotters leaving from depots are issued with information from the OMS regarding the jobs and are required to record information on the job that allows appropriate prioritisation and resource allocation.
- If it is efficient, or other issues such as safety dictate it, information can be issued to spotters over the telephone.
- Update the status of each OMS job issued to spotters to "ASN-Spotter" by assigning the jobs to the chosen Spotter crew.

11.4 Step 4: Spot job and capture information regarding job

- Spotters undertake spotter work in accordance with their training and qualifications. This may also involve making safe (if their qualification allows it) or standing by until a line crew arrives to make safe.
- Spotters assess the extent of the damage, and determine what is required to undertake the repairs.
- Information collected by the Spotters can be recorded in the field or can be conveyed over the telephone to office support, depending upon the urgency of the repairs and how the depot most effectively operates.

11.5 Step 5: Return information to depot

- Information returned either over the telephone, or directly, depending on how the depot most effectively operates.

- The Spotter's comments and information should be returned to the depot to allow the OMS to be updated.

11.6 Step 6: Update comments, priority and status for each job in OMS

- Returned comments and/or job attributes need to be input into the OMS.

- The depot support staff should enter this data into the OMS and update the status of each job accordingly.

- Jobs that will involve no further work (NFW) may be completed or cancelled at this point, as appropriate.

- Jobs requiring further work should have their priority updated (based on all the available information) and the status updated to:
  - ➢ "AWT-Line", or
  - ➢ "AWT-Jointer", or
  - ➢ "AWT-Tech" as appropriate.

- Where advice has been provided that a job has been made safe the priority level should be "Medium/Non-Urgent" unless a higher priority is warranted by other factors.

11.7 Step 7: Prioritise rectification work

- This step is the assessment by the local depot supervisor(s)/ storm manager as to the priority of the jobs available for assignment.

- The key objective of work prioritisation is firstly for safety of people and property, then for environmental protection, and then to restore power to as many customers as possible in the shortest possible time.

- Work is prioritised based on all the available information. Priorities are as per the Electrical Network Incident Response Strategy Priorities – refer to section 6 Customer Response.

- Some High Voltage jobs can be switched in the field to restore supply to the customers, thus allowing the temporary deferral of repairs. These arrangements are firstly to be negotiated and agreed with System Control.

11.8 Step 8: Issue to the field for repair

- Work is issued based on priorities set and the availability of staff.

- When issuing and planning the repairs consideration should be given to any coordination that is required with other authorities such as the SES, police etc, or other workgroups such as Contract Tree Trimmers.

- Update OMS job status to:
  - ➢ "ASN-Line", or
  - ➢ "ASN-Jointer", or
  - ➢ "ASN-Tech"

- by assigning jobs to crews as appropriate.

- A hard copy of the job information and job details sheets should be printed and provided to the crews assigned to the job at this time.

11.9 Step 9: Repair Damage or Make Safe

- Lineworkers, Jointers or Technicians attend the job. They may, depending on the severity of the storm, and the amount of damage to Ausgrid's infrastructure:
  - ➢ Cut away and make the job safe only, or
  - ➢ Make safe and undertake the repairs.

- When the job is cut away and made safe only:
  - ➢ It is done in accordance with all of Ausgrid's safety, environmental and work procedures.

> - A record of the actions taken are made on the paperwork for the job (OMS sheets), along with any additional information that will assist with the follow up repair work.

- When the repairs are undertaken:
  > - They are done in accordance with all of Ausgrid's safety, environmental and work procedures.
  > - An effort should be made to check with affected customers to confirm that power has been restored.
  > - Any secondary problems (such as service problems) associated with the affected customers should also be rectified prior to leaving site.
  > - Any problems that are on the customer's installation, and are therefore the customer's responsibility, should be notified to the customer prior to leaving site.
  > - A record of all actions taken (e.g. repairs, customer notifications etc) should be made on the paperwork for the job (OMS sheets), along with any follow up work that is required.

11.10   Step 10: Return Paperwork to Office

The paperwork associated with the job is returned to the depot, including a subset of:

- OMS sheets.
- Spotters checksheet – SRPF001a.
- Lineworkers checksheet – SRPF001b.
- Any additional notes recorded relevant to the job.

11.11   Step 11: Update Status in OMS

- Update the OMS status for each job based on what has been done in the field.
- For jobs that have been cut away and made safe only, classify the job as:
  > - Status – "AWT-…..".
  > - Priority – "Medium/ Non-Urgent".
  > - Remedy – "Made Safe".
- For jobs that have been repaired and supply has been restored to the customer(s), classify the job as:
  > - Status – "Completed".
  > - Populate the compulsory fields to complete the job in OMS.
- Any additional follow up jobs that are to be completed after the storm incident is closed are to be classified as:
  > - Status – "Incomplete".
  > - Populate "Job Restored" date and time.
  > - Additional completion fields as per feedback.
  > - Insert notepad comments describing additional work to be done.
- For jobs where the customer has to initiate repairs on their installation in order for supply to be restored, classify the jobs as:
  > - Status – "Incomplete".
  > - Populate "Job Restored" date and time (as time crew left the job).
  > - Additional completion fields as per feedback.
  > - Remedy – "Made Safe".
- For jobs that have been made safe only; revert to Step 6: Prioritise Rectification and address against priorities with all other outstanding work.
- Any follow-up work to be fixed post storm is to be entered as a notification into iAMS, indicating the appropriate level of priority the work is to be given.

11.12 Step 12: Arrange for signoff of job in OMS

- Completed jobs are signed off in OMS as paperwork is provided.

12 Storm Statistics/Executive Dashboard

Storm Statistics are extracted from OMS system via the Business Objects application and a summary is presented on the Executive Dashboard, accessible by individual approved Managers.

12.1 Business Objects

The report shows the status of progress of storm escalation and resolution by displaying statistics of current and completed jobs on a depot-by-depot basis in the various stages of repair. These stages are in job categories of **awaiting, spotters, field repair,** and **completed**. It also gives statistics on crew and staff numbers and a rough indication of customers affected. This report is in Business Objects and can be obtained using the following path (within BusinessObjects InfoView):

Public Folders\OMS\Team Folders\Critical Incident Management\Storm Summary 5.1a.

The report shows both active and restored jobs and starts with an overall summary and then displays detailed information for each depot. These reports are being continually improved and may change from time to time.

12.2 Current OMS Executive Dashboard

This application, accessible via an Intranet link, is available only for those Managers who have been approved to have it installed on their computers. It shows the status of active jobs on the network at a glance, but it doesn't show restored events. Installation of the application is via a DAAR Request. The Dashboard is being continually improved and may change from time to time.

13 Shift Management

Shift Management is an important aspect of storm response, and is particularly important when the duration of the storm incident is more than one day (as is the case with Category 1 and Category 2 storms).

Shift Management is the process of planning the shifts of the staff associated with all aspects of storm response to ensure:

- There is adequate coverage of all the skills required throughout the entire storm incident which includes:
  - ➢ Management.
  - ➢ Supervision.
  - ➢ Support and administration.
  - ➢ Field Staff (including Spotters).
- Staff get appropriate breaks in accordance with Ausgrid's policies, and there is planned backup where necessary.
- Emergency staff are available round the clock.

- Time is used efficiently and effectively (refer to section 13.2 Day Work vs Night Work).
- Appropriate records must be kept regarding shifts. Storm Response Plan Form SRPF002 is used to record hours worked and hours stood down in one continuous view, for **all staff** (both Ausgrid and external) working at the depot. Use different colours for worked time (e.g. green) and stand-down time (e.g. red).

13.1   Ideal Shift Management

Different types of staff are more effective with different shift arrangements. For day labour, not normally employed in a shift work roster, the ideal shifts that can be used as a guide for staff management are:

- **Field Staff (Lineworkers, Technicians, ESOs and the like)**
  - Staggered starts with the majority of the working hours in the daylight.
  - Should work 14 hours with a 10 hour stand-down, thus the "day" doesn't shift with stand-down (as it would with a 16 hour day).
  - A minimal emergency staffing provided during the night.

- **Field Staff travelling from other Regions**
  - Commence travel early so they can work a normal day, starting at the same time as the local staff, in the affected area.
  - Ensure that travel time is included in calculating shift hours worked and managing, and that the 16 hour shift limit is not exceeded due to this.

- **Storm Management, Depot Support and Administration**
  - Two rotating shifts of 13 hours, which allows a one hour handover allowance to provide an update on the current information regarding the status of the response;
  - The benefit of this is the same person is doing the same task at the same time in the day (or night as required), which provides continuity of working relationships throughout the response.

- **Spotters**
  - Should be shifted around the clock as required, with less emphasis in the night, as this is the best recovery time and spotter work less effective after dark.

Staff must be managed in accordance with the *Working Extended Hours Policy (EAOHS 0302.31P).* With all staff 16 hours is the maximum shift allowance, and a 10 hour stand-down is required.

13.2   Day Work vs Night Work

Field repair work becomes inefficient at night. Thus repair should be primarily undertaken during the daylight hours, and the stand-down period should align with darkness, whenever possible.

Use skeleton emergency crews during the night to cater for safety issues, assisting System Control / District Operators and external authorities (e.g. Police and SES) as required.

However preparatory work can be effectively completed under darkness, such as:

- Arranging managing and undertaking spotting work.
- Sorting, prioritising and organising work for the next day shift of repair work.
- Night preparation and administration work allows the greatest efficiency and effectiveness of field work to be gained from the daylight hours.

14 Spotters

14.1 General

The use of Spotters wherever possible is essential to ensure:

- Jobs are visited and assessed promptly.

- Damaged assets are made safe.

- A proper assessment of the extent of the damage is recorded.

- The information recorded allows the repair to be appropriately prioritised with all other jobs.

- Appropriate materials and staff are dispatched to repair site.

The principal purpose of spotters is to:

- Assess reports of damaged assets on-site and identify what sorts of assets are involved.

- Provide accurate information as to the extent of the damage and repairs required, in order to assist the overhead work group in prioritising and scheduling repair work.

- Make damaged assets safe, within the level of their training, by:
  - ➢ Cutting away and making safe covered 100A service cables.
  - ➢ Keep the public clear, cordon off, stand-by and call for assistance for all other conductors.

During Category 2 and 1 storms Spotters are managed by the appropriate depot support staff, such as Engineers, Engineering Officers, or Administrative staff depending on how the administrative team is set up.

Information sheets containing depot induction and site amenities details, depot contact phone numbers and other useful information should be given to spotters upon their arrival/induction in the depot. They should also be issued with the appropriate Safe Work Method Statements.

Spotters must be properly trained in accordance with Ausgrid policies and training requirements.

The Spotters training course is available as course code M1651. Each region should ensure adequate numbers of staff are trained as Spotters, and that sufficient equipment to issue to Spotters is available in an incident.

Information gathered by Spotters in the field is recorded on Storm Response Plan Form SRPF001a, refer also to section 11 Business Process for Storm Repair.

14.2 Guidelines for deployment of Spotters

14.2.1 General

- Spotters should be used in teams of two, regardless of whether they are existing trained Spotter 1's or Spotter 2's.

- If spotters can't be used in teams of two then all they can do is standby the hazard, regardless of their training.

- Each spotter crew needs to be created in OMS to enable jobs to be assigned and tracked.

14.2.2 Spotter 1's

- Existing Spotter 1's can only:
  - ➢ Assess the hazard.
  - ➢ Cordon off the area.
  - ➢ Keep public clear of hazards.
  - ➢ Call for assistance.
  - ➢ Standby.

- There is no current training for new Spotter 1's as agreed with the unions.

14.2.3 Spotter 2's

- These have to be electrically qualified employees (which includes Engineers and EOs).
- They should be used in teams of two.
- The second person in the Spotter team of 2 can be a non-spotter trained employee, but they must have all their statutory training, with particular emphasis on CPR and LV Release & Rescue training being current.

14.2.4 Untrained Spotters

- Can only be used to check jobs and standby the hazard as required.

14.3 Spotter's Equipment

Spotter's equipment, as recommended in the Spotters training course, consists of:

- Rubber Insulating Gloves*
- Leather Gloves
- Safety Glasses
- LV Rescue kit*
- First Aid Kit*
- Portable Flashing Light and Batteries*
- Bollards and Danger Tape
- Traffic Hazard Ahead Signs
- Insulated Pliers
- Insulated Ratchet Cutters
- Insulation Tape
- Plastic Knife
- Torch and Spare Batteries*
- Step Ladder
- Volt Stick*
- Insulated Stick
- Appropriate Personal Protective Equipment
- Wet Weather Gear
- Safety Shoes
- Safety Helmet*
- High Visibility Vest
- Communications equipment (eg GRN, mobile phone, etc)
- Street Directory

Items marked with * above contain components with limited shelf life. It is important that these be replaced regularly or stored separately and re-issued whenever the spotter's kit is required.

15   Storm Room

Storm rooms, also referred to as *Local Incident Command Centres* in the Incident Management System, are areas in the depot where all the pertinent information associated with the storm are kept centrally during the storm.

They are effective in storm management as they are a single repository of information, contain all the required equipment for use in storm management, and can be easily accessed by all those associated with the storm response. Where practical, each depot should consider establishing a dedicated storm room particularly for use in Category 1 and 2 storms.

The types of information kept in the storm room include:

- Maps – GIS and UBD.

- Work Planning Boards or folders containing all the work associated with the storm (i.e. outstanding, completed and follow up work).

- Roster information.

- Statistical information (e.g. work outstanding, issued, completed etc).

- Incident Management System documentation, such as the IMS (Red Folder), this document (Storm Response Plan), and copies of checklists and forms as necessary.

Appropriate equipment should be readily available in the storm room, or as a minimum, connections provided for simple and immediate deployment of additional resources. Equipment to be considered for a storm room includes:

- Provision for best utilisation of OMS to suit the depot concerned e.g. computer terminal(s) in the room, overhead projector or large monitors/screens to show storm status, nearby printer and photocopier access.

- Adequate provision of network ports to support the aforementioned equipment.

- At least one analogue and multiple PBX phone lines.

- Facsimile machine and associated phone line connection.

- Whiteboard.

- Television.

- AM/FM radio – including provision to operate from batteries.

- Torches readily available (tested and with charged batteries) in the case of power loss.

- Provision for mobile generator connection – storm rooms should be able to be quickly supplied by portable generator in the event of loss of supply.   The generator should be capable of supplying light for the room and power to a fax machine as a minimum.

- GRN Base Station.

The storm room should ideally be located close to the Storm Manager and Depot Supervisor(s), or these people are able to set up on dedicated desks nearby.

Signage to direct staff should be established, for example signs to direct Spotters and Lineworkers to appropriate locations to receive and report back on jobs. This can help improve communication and reduce clutter and confusion in the storm room.

16   Appendix A – Index of Forms

The following forms have been prepared in conjunction with this plan and shall be used as described in this document:

SRPF001a   Spotter's Check Sheet

SRPF001b   Lineworkers Check Sheet

SRPF002   Shift Planner / Record of Hours Worked

SRPF003   Depot Support Staff Task Allocation List

SRPF004   Personnel Registration

SRPF005   Induction Log