Aurora ENERGY

ABN 85 082 464 622

MANAGEMENT PLAN 2011

SYSTEM OPERATIONS

DOCUMENT NUMBER: NW#-30149544V4

DATE: 19 FEBRUARY 2011

This page is intentionally blank.

TABLE OF CONTENT

REV NO.	DATE	REVISION DESCRIPTION	APPROVALS	
1		Original Issue.	Prepared by	JS
			Reviewed by	
			Approved by	
2	12/01/2011	First revision	Prepared by	J.Carter
			Reviewed by	
			Approved by	
3	14/01/2011	Second revision	Prepared by	J.Carter
			Reviewed by	
			Approved by	
4	19/02/2011	Third revision	Prepared by	M.Conway
			Reviewed by	BA
			Approved by	BA

This page is intentionally blank.

1. PURPOSE

The purpose of this document is to describe the actions, responsibilities, resources and timescales required to implement the System Operations Management Strategy and Objectives for the period 2012/2013 – 2016/2017

2. STRATEGY

The strategy of System Operations Management is to:

> *To operate the distribution system to provide and maintain supply to customers to agreed service standards while accommodating employee and public safety, asset management activities, and environmental considerations.*

The three key processes for System Operations to assist in delivering the Network Management Strategy are:

1. System Management – the overall management (monitoring and control) of the performance of the Network;
2. System Access – the safe and efficient provision of access to the power system for asset management activities such as construction and maintenance; and
3. Fault Management – the efficient and effective management of power system faults or emergency situations that involve the power system.
4. Support other business initiatives such as:
    1. Improved asset utilisation
    2. Demand Management
    3. Smart grid development
    4. Network safety programs in conjunction with Cable PI devices

3. SCOPE

The activities covered by the System Operations Thread Management Plan are:

1. **Emergency and Unscheduled Power System Response and Repair:** The operational activities associated with the process and work in attending to system faults and emergencies;
2. **System Reconfigurations:** The operational activities associated with the network system management for load, voltage, system stability and constraints;
3. **System Status Checks:** The activities associated with checking and recording of the operational status and equipment verification.

Historically, System Operations Thread had control of two other activities, namely:

- **OH Transformers Load and Voltage Monitoring**

- **OH System, Thermal Inspection**

The management of these two activities has been transferred to Overhead & Structures Thread in order to rationalise like activities and increasing efficiencies with the management of the monitoring and inspection programs.

4. DESCRIPTION OF THE ACTIVITIES

In line with historical practices, operational activities will continue to be performed to manage the real time operation of Aurora's distribution network and to ensure that the network is operated safely and within operating and load limits. It is a business imperative that the activities conducted by System Operations deliver:

- No increase in customer service impacts (SAIDI/SAIFI) from current levels
- No serious injury or loss of life arising from the operation of the Network
- No prosecutions for breaches of legislative compliance

4.1 Emergency and Unscheduled Power System Response and Repair

Fault and Emergency Maintenance covers the operational activities associated with the process and work in attending to system faults and emergencies. This is considered business as usual and a requirement ensuring compliance with ESI Act 1995.

4.2 System Reconfigurations

System Reconfiguration covers the operational activities associated with the network system management for load, safety, voltage and system stability and constraints purposes. This is considered business as usual and a requirement of our licence conditions in that we must comply with ESI Act 1995, TEC and guidelines and the National Electricity Rules.

4.3 System Status Checks

The Power System Management, System Operations - System Status Checks covers the operational activities associated with the checking/recording of the operational status and equipment verification by field personnel and includes but is not limited to checking of system loadings and voltages, substation labelling and system configuration.

5. SPECIFIC ISSUES

5.1 Major Storm Events

There has been an increase in the severity and impact of storms over the last four years. The increase in severity of storm events experienced reinforces the rise in costs that have been seen on the distribution network as a result of greater damage to the infrastructure.

5.2 Operating Diagrams

At times, the operating panels (Pin Boards), GIS, schematics and one-line diagrams, do not accurately reflect the actual status of the network. In particular, the configuration of the Low Voltage Network.

5.3 Emergency and Unscheduled Power System Response and Repair

To address emergency and unscheduled outage events Aurora has a reactive forced maintenance program based on historical outage event data.

This work program includes

1. Ensuring the distribution system does not pose a health and safety risk to the general public;
2. Providing information to customers – keeping the customer informed about interruptions including extent, cause and probable restoration time;
3. Repairing the faulty assets;
4. Providing system access to enable the faulty asset to be repaired for repair – if the fault requires specialist crews;
5. Restoring supply; and
6. Providing information to asset management staff on the interruption.

Once identified, System Operations will conduct emergency system repair and response work when it is considered appropriate and safe to do so. The responsibility of emergency repair and management of system security and control rests with System Operations. Emergency works is conducted to maintain a safe and secure system, and to minimise, both the number of customers affected by a supply outage, as well as the duration of any supply interruption.

The mitigation against personal injury is a requirement of the Workplace Health and Safety Act 1995 set down by the Tasmanian State Government. The TEC states that Aurora must use reasonable endeavours to ensure that customers receive supply reliability within prescribed targets.

Emergency and Unscheduled Power System Response and Repairs are conducted in accordance with Aurora Network's Emergency Maintenance Risk Record.

5.4 System Reconfigurations

The work to be undertaken under this program is to provide a field system switching capability for the distribution network. It also includes activities associated with the other network-connected entities including Transend and Hydro Tasmania.

System Reconfiguration may be a result of:

1. Loading issues;

2. Voltage issues; and
3. System Constraints as a result of Transend/Hydro work.

6. CURRENT ASSET MANAGEMENT PRACTICE

6.1 Asset Identification

Specific equipment labels and operational numbering is assigned to all operational devices, and associated equipment to enable correct identification of the device for operational purposes and routine or emergency maintenance activities.

6.2 Monitoring Devices

All remote monitoring capability on the Network is managed and installed by Asset Threads and operated in real-time by System Operations.

6.3 Operations

Specific operating practices and procedures are assigned to each type of equipment to mitigate personnel and public safety, equipment damage and voltage variation impacts to customer installations.

6.4 Asset Repair and Defect Rectification

For all emergency and unscheduled power system response the System Operations Thread undertakes repairs on all INetwork Assets. Defect identification is reported through Asset Management Systems and repaired by Asset Treads.

6.5 Asset Replacement and Renewal Programs

No asset replacement or renewal programs are managed by System Operations.

6.6 Asset Management Information

System Operations utilises information from the businesses core repositories being G/Tech for all asset standing data and WASP for all condition and event data.

7. MANAGEMENT PLAN MONITORING

A review of this management plan will be conducted upon changes to external standards and codes of practice or upon changes to equipment purchased, with a review prior to each Pricing Determination period.

8. RESPONSIBILITIES

The maintenance and implementation of this management plan is the responsibility of the Distribution Operations Manager.

Approval of this management plan is the responsibility of the Manager – Operations.

9. REFERENCES

NW-#30171179-Distribution Operations Strategic Plan 2010 - 2012