



**Operating and
Maintenance Protocol**
between Ausgrid and
*(Applicant for Generator
Connection)*
for *(Generating Facilities)*

May 2011

Document Approved by:

Ausgrid	<i>Applicant for Generator connection</i>	<i>Other Party(s) associated with Generating Facilities</i>
.....

Operating and Maintenance Protocol
between Ausgrid and
(Applicant for Generator Connection) for (Generating Facilities)

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1 Introduction

This Operating and Maintenance Protocol is agreed to by Ausgrid and *Generator* to:

- ensure the safe, reliable and compliant operation of Ausgrid's network and the Generator's Facilities.
- establish guidelines for co-ordination between Ausgrid and the *Generator* to provide safe, and timely maintenance (including monitoring and testing) of Ausgrid's network and the Generator's Facilities.

Work on the Connection Point is to be performed in accordance with Ausgrid's Electrical Safety Rules (especially Clause 15.3) and work on the Generator's Facilities is to be performed in accordance with the Generator's Electrical Safety Rules of an equivalent standard.

Details of Personnel responsible for the development, operation & maintenance of the Generating Units, power transfer arrangement, period of connection etc. also form part of this protocol and must be kept current.

This protocol must be read in conjunction with Clause 13.2 of the Generator Connection Agreement: Instrument of Agreement of which it forms part.

2 Definitions

Access Permit (AP)

A pre-printed form which is to be completed and issued in accordance with the Generator's governing Electrical Safety Rules and attached as Appendix C. In general, authorised persons must issue and receive an Access Permit for specific high voltage equipment before work can be commenced on or near this equipment.

Note: The Generator's governing Electrical Safety Rules must be acceptable to Ausgrid. For this agreement and conformity the Generator may agree to adopt Ausgrid's Electrical Safety Rules and associated forms.

Authorised Person

A competent person who has been trained and authorised to issue and/or receive Access Permits in accordance with the governing Safety Rules.

Connection Point(s)

Where the Generator's Facilities electrically connect to Ausgrid's Distribution System following extension of Ausgrid's system if necessary to enable the connection.

Earthed

The equipment is electrically connected to the general mass of earth with the earthing equipment secured in accordance with the governing Safety Rules.

Note: This agrees with the commonly used definition of earthed.

Isolator or Disconnecter

A device used to provide a visible break in a network. Usually these devices can only be opened when there is no load current. Air break switches are included in this definition.

Isolated

Mains/Apparatus have been separated from all sources of supply and all isolations have been secured. Wherever possible each isolation point has a visible break.

Note: This agrees with the commonly used definition of isolated.

Operating Agreement (OA)

A written agreement issued by one organisation responsible for operating a high voltage network to another. The Operating Agreement specifies the high voltage equipment covered by the agreement and the status of this equipment at the time the agreement is issued. The agreement states that the status of the specified equipment will not be altered until the organisation receiving the

agreement surrenders it to the issuing organisation. Operating agreements are used where one organisation has to alter the status of its network at the Request of another organisation for the duration of the change which may be for a maintenance activity.

Operator

An operator is a person who is authorised to carry out operating work.

Request

The formal notification that an “Access Permit” or an “Operating Agreement” is required. Field staff usually make requests for Access Permits to their network’s control room. One organisation’s control room usually makes requests for Operating Agreements to another organisation’s control room.

Secured

Equipment is Locked and Danger Tagged in accordance with the governing Safety Rules.

3 Supply Configuration

The Generator facilities are connected to the Ausgrid network at *(location of the connection point)*.

A single line diagram of the interconnection is shown in Appendix A.

(Include appropriate details of the generating units, transformers, switchgear, protection, metering, communication etc).

4 Generator Ownership and Responsibility

(Include details as appropriate with respect to ownership & responsibility issues)

All work, including operational work, on the Generator Facilities will be done by Generator personnel under their Safe Work procedures.

Approaching from the line side Ausgrid owns the distribution system up to the Connection Point including the Isolating Switch/Circuit Breaker. All work, including operational work, on Ausgrid’s distribution system up to the Connection Point will be done by Ausgrid’s personnel under Ausgrid’s Electrical Safety Rules.

When either party requires isolation of equipment under the control of the other party an operating agreement will be issued as set out in this protocol.

5 Site Access

Items of Access	Location Address	Details of Locks & Keys
Site		
Generating Unit(s)		
Switch Room		
Any other item(s)		

6 Maintenance Procedures

(Include details of the Maintenance Procedures applicable including monitoring and testing, person responsible for the maintenance, frequency of visits & test runs, contact person in case of any problem etc).

Note: The following Table is a guide and may be modified to suit the requirements of the Generating Facilities

Maintenance Procedures	Name & Status of Person responsible	Frequency of visit & Test Runs	Type of Records kept & availability for Audit	Contact person in case of emergency
Details of protection used including Protection and Control Schematic Diagram				
Protection Data and Settings				
Protection Checks Required				
Tripping Checks Required				
Control Arrangements & Settings				
Alarm Arrangements & Settings				
Instrument Transformers' Details				
Switchgear Details				
Other				

7 Equipment Labelling

All electrical equipment in the station has been labelled in agreement with Ausgrid. Refer to Appendix A.

8 Operating Agreements

An operating agreement is to be exchanged between parties when one party carries out operating work necessary to isolate interconnecting electrical apparatus for the other party. The Ausgrid operating agreement will be used by both parties.

Notice required - 5 working days - except in an emergency

Details of the process of issuing and cancelling of the operating agreements are stated in the Ausgrid's Electrical Safety Rules.

The Ausgrid Operating Agreement is attached in Appendix B.

9 Operating Notes

(Provide details of the conditions of operation, period of operation, applicable restrictions etc).

10 Operating Sequences

(Include mode of operation, sequence of operation of the Generating Units and associated Switchgear. If detailed Start/Stop sequence is required include it as Appendix D).

11 Communication Protocols

(If necessary develop Communication Protocols between Ausgrid and Power Station to provide clear communication and understanding between the two parties covering General Site Access, Planned Work and Emergency Operating Work).

12 SCADA Notified Alarms and Signals

If required Alarms & Signals at the Connection Point are notified via Ausgrid SCADA system. Ausgrid system operators should notify *Power Station* of any problems.

(Include all Controls & Alarms)

Note: Include any other site specific item as is necessary

13 Contacts

The following will be maintained as a current list of Ausgrid and Generator Facilities contact names and numbers.

Generator Facilities

Business Hours (planned outages):

AFTER HOURS AND EMERGENCY:

Ausgrid

Business Hours (planned outages):

Network Outage Coordinator

Ph: (02) 9269 4444

Fax: (02) 9269 4480

AFTER HOURS AND EMERGENCY:

Ausgrid System Operator

SYDNEY Ph: (02) 9269 4558

Fax: (02) 9269 2271

WALLSEND Ph: (02) 4951 9601

Fax: (02) 4951 9619

Project Manager:

14 Reference Documents

Ausgrid Electrical Safety Rules.

Generator's Electrical Safety Rules.

APPENDIX A Single Line Diagram

APPENDIX B Ausgrid Operating Agreement



OPERATING AGREEMENT

1. ISSUE

The following high voltage and/or low voltage Mains/Apparatus have been:

- a) Isolated in accordance with *(Name of Organisation)* Electrical Safety Rules
 - b) Earthed and short-circuited (strike out if not applicable)
- to allow *(Name of Organisation)*..... staff to work on the interconnection between their network and *(Name of Organisation)*..... network

Mains/Apparatus

.....
.....
.....

ISOLATION POINTS THE MAINS/APPARATUS HAVE BEEN ISOLATED AT THE FOLLOWING POINTS:

.....
.....

Earthing Earthing and Short-circuiting equipment has been applied to the Mains/Apparatus at the following locations: (strike out if not applicable)

.....
.....

The above Mains/Apparatus will remain in this condition until this Operating Agreement is cancelled.

ISSUED BY (print name) Signature

Classification *(Name of Organisation)* Time Date.....

2. ACCEPTANCE BY RECIPIENT

- I hereby acknowledge that I have received advice from the *(Name of Organisation)* representative that the Mains/Apparatus referred to above have been:
 - a) Isolated from all possible sources of supply from the *(Name of Organisation)* network.
 - b) Earthed and short-circuited on the *(Name of Organisation)*..... network (strike out if not applicable) and shall remain so until this agreement is cancelled.
- I am aware of the nature and position of the Mains/Apparatus covered by this agreement and will regard all other Mains/Apparatus as alive.
- I understand it is my responsibility to inform those persons working under this agreement of the Mains/Apparatus covered by this agreement.

ACCEPTED BY *(Name of Organisation)* representative (Print name)
Signature Classification Time Date

3. CANCELLATION

The above Mains/Apparatus are no longer required to be isolated/earthed. This Operating Agreement is hereby cancelled. I have advised all persons working under this agreement to regard the above Mains/Apparatus as alive.

CANCELLED BY *(Name of Organisation)*..... representative (Print name)
Signature Classification Time Date

Noted by *(Name of Organisation)*..... representative (print name)signature.....

APPENDIX D Operator Log Sheet
