
PROTOCOL: Electrical Certificate of Compliance

1. Introduction

This protocol is intended to provide guidance to staff of the Facilities Management Unit, the University's contracted Maintenance and Porterage service provider and Contractors engaged by the University of South Australia on compliance with relevant State Legislation concerning Electrical Certificates of Compliance (ECOC). Regulations called up under various Acts are mandatory and must be followed where applicable.

Wherever Approved Codes of Practice are recommended or referenced, those documents and associated policy statements may be interpreted with some flexibility provided an equivalent or better standard is achieved. The following protocol outlines the appropriate standard for management of Electrical Certificates of Compliance (ECOC) on behalf of the University of South Australia.

2. Purpose

The purpose of this protocol is to provide a brief outline of the internal protocol specified.

3. Procedure

3.1 General Information

- A person who undertakes any electrical installation work must be appropriately licenced to perform such work and provide proof of licence details upon request.
- A person who connects any electrical installation to the University of South Australia (UniSA) electrical distribution network must ensure that the installation and connection comply with the technical and safety requirements imposed under the regulations of the Electricity Act 1996.
- For the purpose of ensuring, under Part 59 of the Electricity Act, that an electrical installation complies with the above, a person may, subject to the regulations, rely on an Electrical Certificate of Compliance (ECOC) issued in relation to the installation.
- All electrical installation work undertaken on behalf of UniSA must be covered by an ECOC.
- The electrical worker undertaking the work must complete and sign the ECOC.

- All electrical contractors must report all faults/defects through concise reporting using the ECOC. Faults/defects found within an installation will assist in any enquiry after an electrician has issued the ECOC and left the job.
- Once the ECOC has been issued, the installation, including rectification of defects noted, becomes the responsibility of UniSA. Other authorities may issue notification to UniSA to remedy any defects within a given time frame.
- The ECOC form is to be used for all electrical power and lighting work including: new installations, alterations, additions, repairs within the scope of AS/NZS 3000, electrical work associated with gas and plumbing including water heater replacements. This form is not required for maintenance work (i.e. cleaning, greasing, painting, replacing lamps).
 - *New/Additional work*: a new switch board, circuit, lighting point, socket outlet, appliance or machine (including refrigeration and air conditioning equipment) connected into an existing system.
 - *Alteration*: an alteration to the circuit wiring system, relocation of an existing light point, socket outlet, appliance or machine.
 - *Repair*: restoration of an existing installation to a good condition or working order following rectification of a defect or damage.
 - *Hazardous*: an area in which an explosive atmosphere is present or may be present, in concentration such as to require special precautions for constructions, installation and use of electrical equipment.

3.2 Completing an ECOC

- Information common to all ECOC's:

OWNER'S OR OCCUPIER'S NAME	University of South Australia (UniSA)
INSTALLATION ADDRESS	Building and Room number
SUBURB OR TOWN	Campus
- Information specific to Individual ECOC's:
 - Section A – Describe All Work Done
Shall include:
 - Full description of the circuit number and/or switch/distribution board number
 - Describe the work that has been completed, including enough detail so that the work carried out can be easily identified within the next five years. This work must have been examined and tested as required by the Electricity Act 1996.
Resistances measured:
 - *Main Earth Conductor*: a value is only required when you install, alter or repair the main earthing conductor.
 - *Subsidiary Earthing Conductors*: includes sub-main and final sub-main earthing conductors.
 - *Insulation Resistance*: required for all wiring and equipment installed. It may be necessary to carry out IR tests prior to the insertion of electronic devices into the circuit where damage may be caused to those devices.

- *Earth Loop Impedance (new installations)*: the impedance of the fault loop comprising the source, the active conductor up to the point of the fault and the return conductor between the point of the fault and the source. The fault loop impedance test can only be made when the electrical installation has been energized.
 - RCD test results
 - Where contractors have been engaged through the Maintenance Work Order system, reference to a Work Order Number shall be identified on the ECOC.
- Section B – Defects Requiring Remedial Work Observed on Existing Installation
 - In addition to listing any defects on the ECOC, Contractors must bring all defects to the attention of the Contract Supervisor or Campus Services Coordinator (CSC), who will initiate an additional Work Order for remediation and or bring to the attention of the Works Manager: Maintenance.

3.3 Inspection & Testing

- Testing instruments used must be designed for and capable of correctly performing the tests and calibrated to ensure they are in proper working order.
- Instrument calibration test results must be kept for two years. For further information on inspection and testing procedures and requirements, see clause 1.8. & section 8 of AS/NZS 3000:2007.

3.4 Certification

WARNING: All installation work must be described accurately and fully on the ECOC. Contractors who fill out ECOC's for work undertaken by others must first examine and test the work to ensure it has been undertaken correctly. Giving false or misleading information on ECOC's, such as not carrying out an examination or listing test results without actually testing, attracts severe penalties under section 90 of the Electricity Act 1996.

3.5 Distribution of ECOC copies

- 1ST COPY - OWNER'S OR OCCUPIER'S COPY: Contractors are to pass the original to the Contract Supervisor or to the Campus Services Coordinator (the latter where the work has been carried out through the contracted Maintenance and Portage service provider).

The Contract Supervisor is responsible for forwarding the ECOC to the Campus Services Coordinator once received. Contractors are to forward the Owner/Occupier copy of the ECOC within 10 working days of making work on the installation available for connection.

- Campus Services Coordinators (CSC) are to file ECOC's for a period of five years and be available in a central location on campus.

3.7 Audit Process

Electrical Certificates of Compliance will be audited by the Electrical Services Officer (ESO) on a quarterly basis.

- The Works Order Controller will schedule and issue a Work Order to initiate the quarterly audits.
- The ESO will audit these certificates to ensure compliance with AS3000 and ensure records are maintained for a minimum of five (5) years as per legislative requirements.

Representatives from The Office of the Technical Regulator may also carry out random audits.

4. References

- Electricity Act 1996
- AS/NZS 3000:2007 Electrical Installations
(commonly known as the Australian/New Zealand Wiring Rules)
- Occupational Health, Safety and Welfare Act, 1986
- Occupational Health, Safety and Welfare Regulations, 1995
- Electrical Workers and Contractors Licensing Act
- Office of the Technical Regulator, Government of South Australia