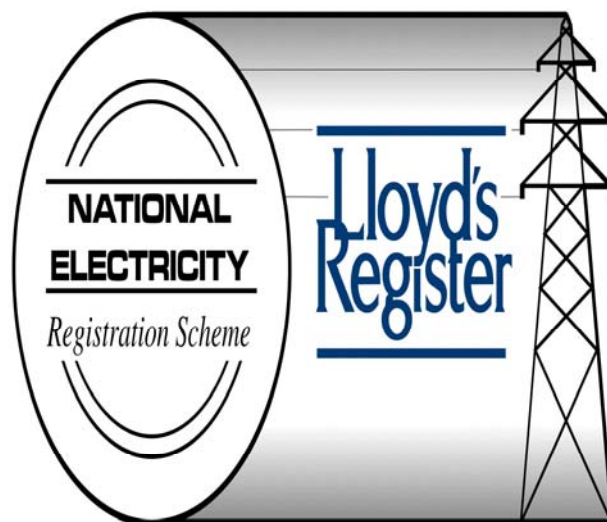


National Electricity Registration Scheme (NERS)

Guidance Document – Safety Management System

Version 5.0 – October 2009



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Document History

Changes from version Rev 4 November 2007

1. Competency assessment and documentation requirements (throughout the document) further clarified and expanded

Introduction

Among the Statutory Instruments that legislate on the construction and operation of electricity networks or installations two key ones are;

- The Electricity Safety, Quality and Continuity Regulations 2002 (amended 2006), and
- The Electricity at Work Regulations 1989.

These regulations are enabled under the Health and Safety at Work Act 1974.

The Electricity Safety, Quality and Continuity Regulations were principally directed towards the owners and operators of electricity generating, transmission and distribution systems and require that such systems are constructed, installed, used and maintained in such a way as to prevent danger or interruption to supply, so far as is reasonably practical. The Electricity at Work Regulations 1989 require that, in the workplace, electrical systems and any works carried out on them do not give rise to danger and that any person who may be exposed to the risk of danger shall have adequate technical knowledge or experience, or be under a degree of supervision. Also enabled under the H&SW Act were the Management of Health and Safety at Work Regulations 1999. These further required that employers set up and manage suitable and sufficient arrangements to ensure the health, safety and welfare of the entire workforce in the workplace.

These and other legal requirements have together created within the electricity industry a consensus which recognises that documented and comprehensive safety management systems are a prerequisite for contractors working on existing and potential electricity distribution system infrastructure. The National Electricity Registration Scheme (NERS) acknowledges this consensus and the existence and ongoing use of a safety management system is a requirement for initial and ongoing accreditation under the scheme.

The purpose of this document is to make explicit the elements of a safety management system that will meet the requirements of the NERS. The main elements of such a safe system of work are:

- Management of Work Activities
- Identification of Roles and Responsibilities
- Training, Assessment of Competence and Authorisation of Staff
- Risk Assessments and Method Statements
- Monitoring and Supervision
- Accident Prevention and Investigation

The policy and procedures that relate to a safe system of work shall be written, clearly and unambiguously, communicated to all staff and be regularly reviewed and updated. All documents should be controlled and individual policies and procedures should be approved, by the UCP, before issue. A system of control shall be in place to ensure that all documents available for use and reference are current and approved. Where documents are issued in hard copy there should be an issue list together with records of receipt.

This document should be read in conjunction with the current version of the National Electricity Registration Scheme Requirements Document.

1. Scope

Before any individual can be put to work or placed in an environment which has or may have the risk of electrical hazards, the level of training, experience and competence must be formally assured so as to obviate, so far as reasonably practical, the risk of danger.

An accepted industry definition of a Competent Person is someone with adequate training, experience and knowledge and has had that competence assessed and authorised in writing to undertake specific tasks associated with the installation of electrical plant or equipment. The Safety Management System shall include a documented process that provides assurance of compliance with the spirit of the general requirement and definition above.

It should be clear that the process covers work done on behalf of the company and should therefore be relevant to work carried out by the company. It should be understood that where activities are/may be carried out on client owned systems and networks then a separate 3rd party (client) defined process of competence and authority may need to be followed.

The assessment process and the authorisation processes are two separate and independent functions, which must be undertaken by separate named officers who themselves have sufficient training, knowledge and experience to effectively undertake the responsibilities assigned to them. The formal system must be robust, free from commercial pressures and adequately document the training, knowledge, experience, selection, assessment, authorisation and appointment of staff and re-authorisation.

For the purposes of NERS the assessment of competence and authorisation processes shall be applied to individuals working for a Utility Connections Provider (UCP) who perform work on existing or potential electricity distribution assets within the scope of that UCPs NERS accreditation. Such individuals may be direct labour of that UCP, or subcontractors of that UCP.

2. Safe System of Work

2.1 Control of Safety Related Documents

The UCP should have a Safety Policy Statement that relates directly to the Safety Management System (SMS). The responsibility for producing Health and Safety documentation relating to the SMS should be clearly identified and those given such responsibility should have sufficient knowledge and experience to be able to effectively execute their duties. Evidence to substantiate the relevant knowledge and experience should be maintained.

Internally produced SMS documentation should be controlled.

A procedure should be in place to control the issue of safety related documents (internally & externally produced) including a defined distribution list, signature for receipt, identification and withdrawal of superseded documents.

Responsibility for reviewing the effectiveness of the SMS internal policy and procedures should be clearly identified and records maintained of reviews.

2.2 Risk Assessments and Method Statements

A procedure should be in place for undertaking risk assessments and producing method statements. The procedure should identify those responsible for undertaking generic risk assessments, producing method statements, communicating the information to staff and reviewing the effectiveness of the procedure. The risk assessments must address safety issues with respect to the work being carried out.

Project specific risk assessments should be undertaken when unusual circumstances may present risks outside of those covered under generic risk assessments. This risk assessment is to ensure that all control measures are in place and that no site conditions exist that would compromise the work proceeding safely.

In all circumstances site risk assessments shall be made before work begins and reviewed daily or more often if conditions change. Evidence of completed daily work site risk assessment documents shall be held by the UCP for a specified time.

Staff undertaking risk assessments shall be adequately trained to do so. The person responsible for reviewing the effectiveness of risk assessment process must be clearly identified.

2.3 Personal Protective Equipment

A procedure shall be in place to ensure that suitable PPE is made available for the work being carried out for both directly employed and sub-contract staff. The procedure should also clearly identify how the suitability of electrical safety PPE is to be assessed and approved. PPE must be maintained in good condition, correctly used and routinely inspected. Records shall be kept of PPE issue together with routine inspections undertaken and any comments on condition.

2.4 Control of Electrical Safety Tools and Equipment

A procedure shall be in place for the control of tools and test equipment used for work. The procedure should allocate responsibilities for the approval, supply, control and issue of tools and equipment used by directly employed and sub-contract staff. The methods used to assess the suitability of tools and equipment should also be identified.

Those responsible for carrying out routine inspections and formal testing / calibration of tools and equipment shall be identified together with the test standards to be used. A suitable register shall be maintained identifying equipment by unique serial numbers and the location where the equipment is held or the individual to whom it has been issued. The register should also record dates of routine inspections and calibrations together with comments on condition and a repair history.

The procedure should identify how tools and equipment should be stored to prevent damage or deterioration in a depot, on a site, or whilst in transit on vehicles. Provision shall also be made for tools and equipment that are not fit for service to be held in quarantine. A quarantine area shall be a defined separate area to that in which serviceable tools and equipment are held, and should have controlled access. The procedure should also identify how tools and equipment, no longer serviceable, are to be replaced.

3. Assessment and Authorisation of Competence

3.1 Procedure

A written procedure, relevant to the scopes undertaken/to be undertaken, by the UCP shall be in place for assessing and authorising the competence of individuals whose work involves undertaking, assisting in the undertaking of, specific tasks associated with the installation of electrical plant or equipment.

The procedure shall reference relevant Legislation, Safety Rules, Code's of Practice, as the basic safe operating practices, against which such assessments shall be carried out and authorisations awarded. The procedure shall identify the responsibilities of the Assessing Officer and Authorising Officer under the Safety Management System. It should be demonstrable that the assessment and authorisation process is free from commercial pressure.

For the authorisation of an individual's assessment of competence the Authorising Officer should be provided with the candidate's assessment file, which shall include recommendation for authorisation i.e. certificate of competence signed by the Assessing Officer. The Authorisation Officer must be satisfied that the candidate has the necessary skills and ability to work safely on, or near, the existing or proposed electrical networks and that the extent and limitation of the authorisation being given is unequivocal.

This procedure, when produced, shall only be relevant to individuals in order that they can work for and on behalf of the UCP assessing company. It should not be confused with any other authority related procedures that 3rd parties may require individuals to be subjected to where activities are on, or related to, their particular networks.

3.2 Assessing Officer

The Assessing Officer must be suitably qualified with appropriate knowledge and experience of the operational aspects, safe working practices, UCP safety procedures, legislations, and technical reference documents that are relevant to the work

The Assessing Officer shall have a minimum of three years experience in a role that gave responsibility for controlling/supervising the type of work carried out by those he/she is to assess.

Where the Assessing Officer is to assess the competence of persons to perform operations associated with the installation of electrical plant or equipment, then in addition to the above, knowledge of the electricity distribution networks, the Model Distribution Safety Rules, relevant adopting utility codes of practice, relevant areas of the Electricity, Safety, Quality & Continuity and the Electricity at Work Regulations shall be required.

The Assessing Officer's appointment must be formal, in writing, and the name(s) and designation should be notified to Lloyd's Register (*including any subsequent additions and/or changes*). The duties and responsibilities, with respect to the SMS, should be defined in writing. Training and previous experience in interviewing techniques should be demonstrable (e.g. NVQ A1 & A2 or equivalent.)

Evidence of the Assessing Officers academic qualifications, background and experience should be available. The Assessing Officer should not be subject to coercion or conflict of interest in undertaking assessment duties. A process shall be in place for keeping the Assessing Officer up to date with current operational and safety issues covering relevant electrical disciplines.

The Assessing Officer must review all competencies on an annual basis and this process shall be documented using a passport or alternative scheme accepted system of registration. The passport is a document that will be held by each Craftsperson and Operative. The Assessing officer will ensure that all competencies are current and that all passports are reviewed and relevantly updated annually. Competencies for craftspersons will also be updated on the basis as described in Section 13 (NERS Passport Ongoing Competency Records) of the NERS Requirements document and with reference to the relevant sections (3.1; 3.6; 3.7) of this guidance.

The Assessing Officer shall establish a system for ensuring that all DNO specifications, safety rules etc which are relevant to the scope of registration and held by the UCP, are current. He/She shall ensure that he is familiar with the variations that may exist between DNOs in terms of safety systems, procedures and specifications. The Assessing Officer must arrange the briefing of competent and authorised staff on such variations as they may relate to the work that they may be performing in the host DNO's region. These briefings and associated assessments shall be documented. If the variations are such that additional competencies are required then the Assessing Officer shall arrange for these (for example additional cable jointer competency, to account for a joint specification variation). The additional competency shall be documented by the Assessing Officer, following a satisfactory test and assessment, by having the competency added to the craftsperson's competency record (passport) and if necessary by the reissue of a certificate of competence, verifying that assessment, duly signed by that UCP Assessing Officer and Authorising Officer.

Changes of Assessing Officer shall be notified to Lloyd's Register in writing and relevant information on the successor, as described above submitted, for review.

The Assessing Officer can be an employee of the UCP or a consultant employed for this specific role.

3.3 Authorising Officer

The Authorising Officer shall have suitable authority and shall have an appreciation of relevant distribution networks, of safe working practices and DNO Safety Distribution Safety Rules. The Authorising Officer's appointment must be formal, in writing, and the name(s) and designation shall be notified to Lloyd's Register.

The duties and responsibilities, with respect to the SMS, shall be defined in writing. Supporting evidence of the Authorising Officers academic qualifications, background and experience should be available. The Authorising Officer shall have the necessary authority to enforce this SMS and conformance with relevant Safety Rules. A process must be in place to enable the Authorising Officer to keep up to date with current safety legislation, safety rules and relevant electrical operations, including accident investigations.

The Authorising Officer shall be a full time employee of the UCP in a senior management position.

3.4 Selection for giving Authority

A selection procedure shall be in place for individuals who the UCP feel may be able to undertake tasks on electrical plant or equipment. The selection process must indicate responsibilities on how selection is identified and must also identify the minimum levels of knowledge, training and experience that are required for selection. Candidates shall then have their competency assessed in a structured way against a set of agreed criteria and trade skills. A trade test may be part of this process, carried by a recognised training establishment or authority. The selection and assessment process shall be documented and records maintained for all individuals even if they are unsuccessful.

3.5 Training in the Safety Management System

A procedure shall be in place for training staff selected to be assessed as competent to undertake the tasks associated with the work. The scope and level of training is dependent on the level of competence to be authorised and the procedure shall lay out the minimum requirement.

The following table offers a guide to minimum training requirements for the different competency levels. The subject area content should be tailored to be relevant to the individual designation. Such training shall include assessments to determine that an acceptable level of understanding has been achieved.

Qualified Supervisor	Qualified Supervisor (Civil operations only)	Craftsperson	Operative (Team Leader)	Operative	Subject
					Model Safety Rules
					Safety Management System
					Health & Safety at Work Act
					ESQC Regulations
					Electricity at Work Regulations
					Basic Electrical Awareness
					Risk Assessment
					Emergency Aid including Resuscitation
					NRSWA (Relevant to gaining entry onto the Street Works Qualification Register)

Note: Where basic electrical awareness is not included in the guide it is because gaining entry onto the Street works Qualification Register includes the unit *Location and Avoidance of underground utilities*-

Training resources should be identified and evidence of training, such as training certificates, should be available for inspection. Where training under personal supervision is undertaken the minimum requirements in terms of duration, level of responsibility and limit of work activities shall be clearly defined. The person providing the personal supervision shall have the necessary experience and be authorised in writing to undertake these duties.

3.6 Assessment

The assessment procedure should identify the form of assessment to be undertaken. Whether in the form of theoretical (oral or written tests) or practical skills tests any questions must be commensurate with the level of authority being sought.

An assessment file should be compiled for each candidate and shall provide background supporting evidence towards the competence required; previous authorities held, employment history, training details, and experience and skills test. The Assessing Officer may accept documented assessments of practical skills tests provided they are undertaken by a recognised training institution/facility. The Assessing Officer shall keep records of tests including, in the case of oral tests, oral responses given.

The Assessing Officer shall be satisfied that the candidate has demonstrated an adequate level of skill and knowledge before making a formal recommendation for an assessment of competence to be given Authorisation, which shall be documented. A process may be put in place for candidates who fail to attain the required standard, in the form of development plans, additional training or working under close supervision. It would be expected that review periods would also be set to monitor progress.

An auditable trail of the assessment process shall be maintained which when successful shall result in an entry in the Craftsperson's/Operative's passport to provide for ready site based evidence.

3.7 Certificates of Competence

In addition to the issue of NERS Passports and/or the renewal/review of information entered into them by the UCP Assessing Officer, certificates of competence are required for person's who undertake, or assist in the undertaking of, specific tasks associated with the installation of electrical plant and equipment. The certificate shall be issued following an assessment of competence conducted by the UCP Assessing Officer. That assessment, if satisfactory, shall be given authority by the UCP Authorising Officer. The certificate shall be duly signed and dated by the UCP Assessing and Authorising Officers.

The scope of competence assessed and authority must be clear, on the certificate, be within the UCP accredited scopes and a validation period shall be defined (*maximum permissible period is 3 years*), with an annual review to ensure that the duties and activities performed within the review period are commensurate with the assigned assessment of competence and authorisation.

The certificate shall include a declaration requiring signature that the holder understands and accepts the responsibilities associated with the duties detailed on it and is aware that a separate authority may be required where and before work is to be carried out on a 3rd party owned network

An example certificate is provided in the Appendix of this document.

3.8 Competence and Authorisation Records

An administration system shall be in place to record and control issued certificates of competence. Paper records should be protected against risk of possible destruction. Records should include, training data, copy training certificates, assessment and authorisation details together with review dates. Access to the records should be limited to defined staff.

3.9 Competence and Authorisation Review and Refresher Training

A procedure shall be in place to review competencies, which should also detail the provision of refresher training both for trade skills and SMS knowledge. The procedure should indicate responsibilities for identifying refresher training and to initiate training when any changes of type of work, takes place.

Before an existing assessment of competence is considered for annual renewal and subsequent ongoing authority, a check shall be made that during the review period, work has been undertaken across the competence scope(s) originally given. In the event that this is not the case then the assessment of competence and its authority may be withdrawn or additional test/assessment performed in order to keep current or re-instate the element of competence and its authority. (For example, a joiner may not have performed a particular joint type for which he had originally been assessed as competent, within the review period. Under such circumstances it may be decided that it is necessary for the joiner to perform such a joint under supervision to retain or regain that element of competence).

4. Sub-Contractors

A policy shall be in place, which describes the control and use of subcontract staff in respect to the UCP's SMS. Sub-contractors must operate within an SMS. This may be achieved either through compliance with their own SMS where the subcontractor holds their own NERS accreditation or through a full integration of relevant subcontractor staff into the UCP's SMS. The control and supervision of work undertaken by subcontractors shall be the equivalent of that for work undertaken by directly employed staff.

The subcontractors shall be required to possess passports and where relevant to the work – certificates of competence (see note below). In the case of 'labour only contractors' the passports shall be maintained by the Accredited UCP's Assessing Officer who shall ensure that the procedures and systems for awarding and updating competencies is common for all passport issued by the UCP regardless of the holders employment status with the UCP.

Note: Where the work involves sub contractor individuals undertaking, or assisting in the undertaking of, specific tasks associated with the installation of electrical plant and equipment, then, in addition to the passport requirement, those individuals shall also possess a certificate of competence. Where the sub contractor (carrying out the work) is an accredited UCP, possessing the scopes relevant to the work, then this certificate should be issued through and under that sub contractor's SMS. The UCP sub contracting out the work should also satisfy themselves of the competence of such persons through their own procedures, and if necessary carry out their own assessments.

If the sub contractor's accredited scopes are not relevant to the work that they are being required to do or if the sub contractor is "labour only" then sub contractors individuals shall be subject to the UCP, who is sub contracting out the works, SMS and shall be issued a certificate of competence under that SMS. In this case supervision is the responsibility of the employing UCP sub contracting the work.

Reference Section 5; 5.1 and 5.2 of NERS Requirements Document

5. Site Monitoring and Audits

A procedure shall be in place which describes how the operation of the Safety Management System is monitored on site for both directly employed and subcontract staff. The responsibility for undertaking site monitoring and formal site audits shall be identified and the staff assigned these duties shall have the necessary knowledge and experience. The frequency of formal site authorisation audits shall be defined and a programme produced to ensure that all individuals are audited within a review period. The review period shall be a maximum of one year. The review period should be shorter for newly authorised staff or those found to have an area of weakness in knowledge or skill identified from routine monitoring (supervision), site safety audits, or an operational incident.

The procedure shall outline a range of remedial actions that are matched to the severity of any non-conformances that are identified during site audits. These may include retraining, increased frequency of site audits or both. Site audits shall monitor conformity with the SMS and include detailed inspections of work instructions, method statements, generic/site specific and daily risk assessments, safety documents, safety clearances, electrical tools and test equipment. The procedure shall contain a sample audit sheet, a non-conformance close out procedure, and a process for monitoring trends of quality and safety.

A review process shall be in place, which monitors the overall effectiveness of the audit procedure. Records shall be maintained of audits, audit findings, close out actions and reviews.

6. Accident Investigation and Reporting

A procedure shall be established that describes the responsibility for accident and incident investigations involving the distribution system, relevant Safety Rules or the Safety Management System. This procedure shall also describe and the manner in which such accidents and incidents are investigated and reported. All accidents and incidents of a serious nature shall be reported to Lloyd's Register. Incidents involving the distribution system must also be reported to the host DNO. Incidents and accidents shall be notified to the Health and Safety Executive as required by Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR).

Responsibilities within the UCP for accident and incident investigation and reporting shall be identified and the level of an investigation should be commensurate with the severity of the accident/incident. Accidents/incidents involving personal injury, electrical flashover, electric shock, loss of supply or any breach of the relevant Safety Rules should have a panel of enquiry established. The person undertaking an accident investigation or leading a panel of enquiry shall have sufficient knowledge and experience to undertake these duties. All panels of enquiry should, where appropriate, make available the opportunity for the host DNO to attend.

The procedure shall identify methods for recording accident investigations. It shall also identify responsibilities for ensuring that enquiry recommendations are implemented and reviewed and for ensuring that learning points are communicated to relevant managers and employees.



Appendix 1 – Example of a Certificate of Competence

COMPANY LOGO

CERTIFICATE OF COMPETENCE

CERTIFICATE NO	Certificate validation period (maximum 3 years from date of issue)
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<p>We hereby certify that :-</p> <p>Name</p>	<p style="text-align: center;">STATEMENT</p> <p style="text-align: center;">Employed as</p> <p>Has been assessed as competent in having sufficient practical and/or technical knowledge and/or experience to enable the avoidance of danger personally and/or to others, and has also been assessed as being competent to carry out the following tasks on electrical plant or equipment.</p>
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ISSUE

Name, Designation and Signature

(Assessing Officer)

Date

Name, Designation and Signature

(Authorising Officer)

Date

Date of issue

Expiry date if different from validation period

RECEIPT

- I am aware that a separate written authority will, or may, be required where and before work is carried out on a 3rd party owned site, system or network (this includes Distribution Network Operator and/or Independent Distribution Network Operator owned sites, systems and networks)
- I also understand that the authority indicated on the certificate, and any other authority associated with it, is only valid whilst I am employed on actual contract(s) operated by the company.
- As the holder of this authority I understand and accept my responsibilities associated with the duties detailed above.

Signature of person assessed as competent

Date

This certificate is issued with relevance to accreditations gained under the National Electricity Registration Scheme (NERS)





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