Electricity Industry Competency Framework

Asset Management 2012

1.   **Introduction**

In line with HSE's strategy, *The Health & Safety of Great Britain: Be Part of the Solution*, the electricity industry has developed its own 5 year strategy, *Powering Improvement*.

Vision

The UK Electricity Industry will be a world leader in health and safety performance by 2015.

Strategy

ENA and Energy UK member companies and trade unions commit, with the support of HSE, to build on our partnership approach to bring about continuous improvements in the management of safety and occupational health in the electricity sector in the 5 years leading up to 2015. We will do this by supporting the priorities in the HSE strategy, in particular the themes of leadership, worker involvement and improving competence, and by proactively managing the risks that cause real harm and suffering.

In addition to the three over-arching themes that run throughout the lifespan of *Powering Improvement,* namely leadership, improving competence and worker involvement, each year the strategy will focus on a specific topic which has been identified as a priority area for our sector. Each topic will be led by a senior industry champion.

- 2010 Leadership
- 2011 Occupational health/wellbeing
- 2012 Asset management/maintenance
- 2013 Behavioural safety/personal responsibility
- 2014 Beyond 2015 – Next steps

The topic for 2012 was asset management and maintenance focusing on the "softer" aspects of asset management to produce sector-specific high level guidance including a competency framework for asset management and maintenance within the electricity sector. The delivery plan for the year comprised four outputs and this guidance supports Output 1:

Output 1

The National HESAC Powering Improvement Asset Management sub-group will develop, in partnership with other stakeholders (e.g. the Institute of Asset Management and the Institution of Engineering and Technology) as appropriate, industry competency guidelines for managers, supervisors and operational staff involved in and/or responsible for asset management.

2. Scope

The document provides guidelines for developing and assuring individual competence for managers, supervisors and operational staff in the electricity sector on what they need to know about asset management issues. The guidelines should always be considered in line with individual companies' specific business objectives.

It is intended to be a high level document and is designed to avoid overlap with existing guidance and information.

This document does not deal with Competency Management Systems which are about controlling in a logical and integrated manner a set of activities within the *organisation* that will assure competent performance at work.

3. Definitions

Asset management:

Systematic and organised practices through which an organisation optimally manages its physical assets and their associated performance, risks and expenditures over their life cycles for the purpose of achieving its organisational strategic plan. (BSI PAS55).

Maintenance:

Planned/preventive maintenance – planned actions, including inspections, at specific intervals to keep physical assets in safe working order.

Corrective maintenance – maintenance required when an asset has failed or worn out in order to bring it back into working order.

Competence in Asset Management

Asset Management requires a multidisciplinary approach. In many respects, it is not a new discipline so much as a new amalgamation of existing ones. However, it takes thinking about physical assets to a new level through its holistic approach and focus on ensuring that assets are used to deliver business objectives in an optimised and sustainable manner. It embraces competences in engineering, financial management, operations, business management and people development. The precise mix of competences needed to deliver Asset Management strategies, plans and projects effectively depends on the context and circumstances in which these things are done.

Arising from this is one of the major challenges in defining Asset Management competences, that is how to avoid focusing too much on the components of Asset Management such as system engineering and maintenance techniques and concentrate instead on what someone needs to know about these in order to leverage the contribution they make to the delivery of Asset Management strategy and objectives.

For example, it may take an information management specialist to define an asset information system but an asset manager should be able to define its requirements. For many organisations, developing and assuring the competence of people working in Asset Management is an essential precursor to delivering improved business performance.

(Institute of Asset Management 2008)

4,   **Key principles**

Aims

The aim is to ensure that individuals:

- Are clear about the competence expected of them;

- Have received appropriate training, development and assessment;

- Have appropriate experience;

- Maintain or improve their competence over time;

General requirements

For a person to be competent, they need "qualifications, experience, and qualities appropriate to their duties". These include:

- such training as would ensure acquisition of the necessary knowledge of the field in which they are expected to perform tasks;

- adequate knowledge of the hazards and failures of the equipment for which they are responsible;

- knowledge and understanding of the working practices used by the organisation in which they work;

- the ability to communicate effectively with their peers, with any staff they supervise, and with their managers;

- an appreciation of their own limitations and constraints, whether of knowledge, experience, facilities, resources, etc., and a willingness to address these constraints;

- Practising their competencies. Competence is a condition which tends to deteriorate if it is not practised. Competent people will struggle to perform well in a dysfunctional team or organisation;

Other aspects:

- Some activities occur infrequently which makes it hard to maintain the competence of those who perform the;.

- Attitudes, beliefs, lifestyles and work relationships all exert important influences on people's ability to perform;

- Changes in process and advances in technology should drive competencies;

- Knowledge and understanding of health and safety responsibilities – both personal and those of their employing organisation;
- Competence involves much more than technical training, including attitude and behaviour as well as experience and knowledge;

- Competence might be transferable from one work situation to another, but the extent to which this is possible depends very much on the *context* in which apparently similar competence is required;

Operational specific

Professional engineers with responsibility for design or for supervision of operators should have:

- a detailed working knowledge of all statutory provisions, approved codes of practice, other codes of practice, guidance material and other information relevant to their work; an awareness of legislation and practices, other than these, which might affect their work; and a general knowledge of working practices in other establishments of a similar type;

- an awareness of current developments in the field in which they work;

- the ability to analyse and interpret information and make sound, justified decisions about any actions that need to be taken;

- evidence of Continuing Professional Development (CPD);

Safety & emergencies

- Competence plays a very important role in controlling health and safety risks. The role of people in controlling risks is central. While this is important in normal situations, it is vital in abnormal and emergency situations;

- The possession of competence will not in itself guarantee safety. It can never guarantee that any particular task is performed properly, since that depends on the correct application of that competence in the particular circumstances and in simple terms may be subject to human error. However, the possession of competence and the robustness of the organisation's management systems should reduce risk and improve the predictability of good performance;

Training & development

- The minimum skills and competencies that each member of a team must be able to demonstrate should be clearly defined;

- Competence should be measured, as a minimum by observation, practical assessment or scenario testing as appropriate;

- For Operational Competence there should be a formal period of initial training, commensurate with level of responsibility, before assuming operational responsibilities;

- Training should include both verbal and practical testing to ensure a satisfactory level of knowledge and competence, commensurate with level of responsibility;

- Training should include instruction and assessment on both normal and emergency operations including aspects relating to process and personal safety and environmental management;

- Refresher training, commensurate with level of responsibility and the requirements of the particular company should be carried out on a regular basis. Refresher training may comprise verbal and practical testing including 'on-job' observations;

5. Elements of Asset Management Competence

The detailed requirements of the different grades and functions should take account of, and be aligned with, current industry practice and the National Skills Academy for Power approach to skills and competencies (see www.power.nsacademy.uk).

When allocating roles and responsibilities the intention should be to select the right person for the right task. When doing this there is a need to consider whether the person is a new worker, existing worker, supervisor etc.

Elements to be considered:

How best to:

- Select and recruit staff
- Allocate responsibilities
- Develop competence
- Assess competence
- Monitor competence (e.g. at defined frequencies and via ad hoc sample audits)
- Deal with poor performance
- Manage information
- Manage change

Levels of competence need to be considered for:

(i)   Crafts (either generic, or specific e.g. Linesmen, Jointers, Fitters)

(ii)   Supervisors (team leaders, SAPs, etc)
(iii)   Professional (managers, specialists, etc)
(iv)   Contractors

Levels of competencies:

- Competent person
- Authorised person
- Senior authorised person
- NERS authorisation codes (start for contractors and Independents)
- CDM / Project Manager

a. Crafts

Stage 1 – complete appropriate training
Stage 2 – complete a work-based task assessment
Stage 3 – carry out technical competence validation test
Stage 4 – Refresher training to maintain currency

Need to consider –
- Grade
- Location
- Qualifications
- Experience
- Skills
- Competencies
- Authorisation
- Age [in consideration of retirements and in order to provide 'hand-down' information]

b. Supervisors

Stage 1 – complete appropriate training
Stage 2 – complete a work-based task assessment
Stage 3 – carry out technical competence validation test
Stage 4 – Refresher training to maintain currency

Need to consider –
- Grade
- Location
- Qualifications
- Experience
- Skills
- Competencies
- Authorisation
- Age [in consideration of retirements and in order to provide 'hand-down' information]

c. Professional

Stage 1 – complete appropriate training
Stage 2 – complete a work-based task assessment
Stage 3 – carry out technical competence validation test
Stage 4 – Refresher training to maintain currency

Need to consider –
- Grade
- Location
- Qualifications
- Experience
- Skills
- Competencies
- Authorisation
- CPD
- Age [in consideration of retirements and in order to provide 'hand-down' information]

d. Contractors

- Conduct due diligence on the company
- Assess the CV of each individual's background and previous experience / qualifications / authorisations.
- Assess / audit their work
- Manage the contract and monitor standards of work
- Look for evidence of the person maintaining competence
- CPD record

6. <u>Further information</u>

Asset Management – an anatomy Version (IAM, December 2011)

The IAM Asset Management Competence Requirements Framework (November 2008)

Health and Safety Executive, Managing Competence for Safety-Related Systems, Parts 1 & 2, 2007

www.power.nsacademy.co.uk