L3 EPA Electrical Power Protection and Plant Commissioning Engineer

EPA Specification Section 2 – Mapping the Standard

Contacts

This specification has been designed to provide all the advice and guidance you need to prepare yourself and your apprentices for end-point assessment. However, if you have any further questions please contact the EUIAS Help Desk using one of the following:

Help Desk email: enquiries@euias.co.uk

Help Desk telephone: 0121 713 8310

Purpose

The purpose of this section is to introduce the elements of the standard and the referencing system used by the EUIAS. It provides and 'at-a-glance' view of which parts of the standard are assessed by which assessment method.

The Standard

The standard is divided into Knowledge, Skills and Behaviours, plus specific skills.

Technical Knowledge:

EPPPC Engineers will have

TK1 a comprehensive understanding of UK electrical power systems

TK2 a detailed understanding of the application/operation of relevant plant & equipment

TK3 fault analysis methods in order to interpret results

TK4 how high voltage power generation, transmission and distribution plant & equipment operates

TK5 protection, control and telemetry equipment and the impact on the electrical network of its operation

TK6 commissioning and testing procedures & processes

TK7 failure mode(s) of plant and equipment and the impact on the electrical network and the knowledge to identify required remedial actions

TK8 high voltage electrical network operations and topologies

TK9 high voltage safe systems of work and risk management

TK10 the application of Electricity Supply Standards, regulations and policies

TK11 test equipment to select appropriate equipment for commissioning

Core Skills

The EPPPC Engineer, working autonomously, will:

S1 apply sound engineering and analytical processes to both normal and abnormal conditions on high voltage power generation, transmission & distribution plant & equipment

S2 apply safe working practices in line with company processes and legislative requirements

S3 use of a wide range of test equipment to confirm the suitability of the high voltage plant for conformity and operational service

S4 accurately read and interpret a wide range of engineering diagrams and drawings

S5 prepare and check technical reports

S6 effectively communicate with others to confirm that the tests meet the required standards/specifications

Specific Plant Skills

PL1 undertake testing, commissioning and maintenance activities on electrical power systems and equipment. This could include transformers, switchgear, conductors, battery systems and ancillary equipment

Specific Protection Skills

PR1 undertake protection, testing, commissioning and maintenance activities involving functionality testing and the injection of currents and voltages into high voltage equipment and their associated protection and control systems to simulate the range of fault conditions and scenarios that can occur on the electrical system

PR2 use appropriate test equipment to verify protection and control settings and ensure correct installation and operation of modern microprocessor and numerical based protection as well as older electromechanical relays

PR3 ensure that protection systems interface correctly with the associated high voltage equipment and, where necessary, coordinates effectively with the wider high voltage system

Behaviours

B1 Team working: safely working as a member of a team to achieve required outcomes within time, cost, quality and budget constraints

B2 Interpersonal skills: able to relate to people at all levels and take others' views into account to ensure the best possible outcome

B3 Communication: confident and effective communicator both verbally and in writing ensuring that all parties understand

B4 Problem solving: pro-actively identifies and solves problems, within personal area of expertise, by using a logical and systematic approach

B5 Methodical: identifies and applies procedures and processes as appropriate to the situation

B6 Ownership: takes personal responsibility for the work of themselves and others under their control

The Knowledge, Skills and Behaviours statements are assessed in the End-point Assessment elements as follows.

Knowledge Assessment	Knowledge (TK1, TK5, TK8, TK10)
Technical Interview	Knowledge (TK1, TK2, TK3, TK4, TK5, TK6, TK7, TK8, TK9, TK10, TK11)
	Skills (S1, S2, S3, S5, PL1, PR1, PR2, PR3)
	Behaviours (B4, B5)
Practical Observation	Skills (S1, S2, S3, S4, S6, PL1, PR1, PR2, PR3)
	Behaviours (B1, B2, B3, B4, B5, B6)