Level 4 End-Point Assessment for Electrical Power Networks Engineer – Operational Delivery Engineer

EPA Specification Section 3 – Service Delivery and Gateway Eligibility

- EUIAS Service Delivery
- How to prepare for gateway
- The Gateway meeting
- Timeline

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

EUIAS Service Delivery

Whether you are an employer or a training provider (or both) your initial engagement will probably be with a business development manager who will introduce you to this document and take you through the EPA service that we offer. Our aim is to make the experience as straight-forward and easy to engage with as possible.

The key to a successful EPA experience is early identification of requirements to enable proper planning to take place and this section explains the requirements for preparing for the Electrical Power Networks Engineer – Operational Delivery Engineer EPA.

All the requirements discussed below are important, but some of them are critical, in particular the Gateway Eligibility Requirements. It is important to note that the end-point assessments cannot proceed without the Gateway Eligibility requirements being met. A completed Gateway Eligibility Report with supporting documents is required for each apprentice before EPA.

The EPA Window

All end-point assessments have a 'window' during which the end-point assessment must be completed, to avoid apprentices 'timing out'. The EPA window for the Electrical Power Networks Engineer Standard is 6 months. The EPA window for each apprentice commences on the date they successfully complete the first element of their EPA, for example, the day of the knowledge test. All EPA activities must be completed within this 6-month window and EUIAS will work with you to schedule the EPA as close to the beginning of the window as possible to allow for re-sits if necessary.

Service Level Agreement (SLA) and Cohort Registration Form

EUIAS uses four documents to capture the details of the end-point assessment agreement:

- Service Level Agreement form – signed by the lead provider
- Cohort Registration form – signed by lead provider; this form identifies the apprentices in the cohort
- Learner Data Form – signed by the lead provider (to be used with the Cohort Registration Form)
- EPAO Appointment Form – signed by the employer; this confirms that the employer has selected Energy & Utilities Independent Assessment Service (EUIAS) as their end-point assessment service for this apprenticeship programme

Initial Engagement

Initial engagement with EUIAS will usually take place well before the EPA is due to take place and sometimes before the apprentices start their programme. The initial engagement meeting will cover:

- The numbers of apprentices in the cohort

- Any Reasonable Adjustments you want to apply for
- The relevant specialist pathways: it is very important that this apprenticeship, and the pathway within it, is the right one for your requirements. The apprentice will be assessed against the requirements of the Standard and not what they actually do within their job role
- The expected date(s) of EPA
- The employer and or lead provider for each apprentice
- The assessment methods and the order in which they must be undertaken including confirming arrangements with the Service Delivery team:
    - Stage 1 - Knowledge Test – location details of where it will take place, invigilation arrangements (who will invigilate) are usually made by the employer
    - Stage 2 – Practical Observation – location details of where it will take place and employer technical expert details
    - Stage 3 - Technical Interview, based on a work log compiled during the apprenticeship – The work log is must be compiled by the apprentice throughout the apprenticeship and completed by gateway. The work log must be submitted 3 weeks before the interview and reviewed by the technical experts before the technical interview and arrangements made with the Service Delivery team. The location details of where the interview will take place including employer technical expert details
- If there is risk of supplying technical experts the employer must state the risk at this stage as it affects pricing, and technical experts must be standardised and approved by the EUIAS before they can carry out any assessments
- Arrangements for 'site review' to confirm that the proposed location for the practical observation provides all of the required opportunities for the apprentice to cover the Standard should be clearly identified by completing the 'Practical Assessment Review Form' and submitted to the EUIAS for a review, this form is included in Section 7 'Supporting documents and Guidance', in this Specification
- Completion of the Service Level Agreement
- The EUIAS operates a two-stage payment schedule:
    - Stage One applies at the registration stage when the initial registration fee is due
    - Stage Two applies at Gateway, when the balance of the agreed fee is due

Further details of the assessment methods are in Section 5 of this EPA Specification.

During the initial engagement, we will also cover the support that is available employers and or training providers. We are confident that most, if not all the answers you need are contained within this Specification, but we are always available to provide answers to specific queries using the Help Desk email enquiries@euias.co.uk.

Appointment/Registration

The appointment stage is the first formal stage of working with EUIAS. This stage must involve both the employer and the training provider (if applicable).

Successful appointment involves the completion of the Cohort Registration Form, officially appointing EUIAS as the EPAO for this cohort. The form contains:

- Details of the employer and lead provider this may be the training provider (if applicable)
- Confirmation of learner numbers, names and specialist pathways
- Confirmation of expected EPA dates
- Confirmation of the level of service agreed with EUIAS, with pricing
- Confirmation that you will give a minimum of three months' notice of apprentices being ready for EPA (especially important if you bring forward the completion date)
- Signatures from the lead provider
- Completion of the Learner Submission form listing each learner in the cohort
- A purchase order from the lead-provider to EUIAS to the value agreed

If it has not already taken place, the details of the EPA will be discussed (as described in the Initial Engagement Section above) with the employer and training provider (if applicable) to agree roles and responsibilities.

On-programme

It is the responsibility of the training provider to create and deliver the apprentice training programme, ensuring you comply with the relevant ESFA rules. The EUIAS has no formal involvement in the 'on-programme' aspect of the apprenticeship. However, we DO provide guidance on the work log requirements for the technical interview. This can be found in Section 5 of the Specification.

We do appreciate that circumstances change so please notify us if:

- expected end-dates change, giving at least three months' notice of readiness for end-point assessment
- any cohort details change, especially if an apprentice drops off the programme
- any anticipated changes in venues for the end-point assessments

Scheduling the end-point assessment

The EPA for Electrical Power Networks Engineer – Operational Delivery Engineer is very resource intensive, both in terms of availability of specialist settings for the practical observation and also in terms of availability of the specialist industry technical experts and employer technical experts that are required. It is imperative that the apprentices **must** be available for all assessments, which seems obvious, but can prove problematic if communications are not as clear as they should be. Employer, training provider and EUIAS **must** keep in touch and notify each other of any changes as soon as they occur.

To help things run smoothly, you **must** inform EUIAS between 3 and 6 months before you expect to have your Gateway meetings with the cohort. The EUIAS Service Delivery team will be contacting you during this time, to facilitate two-way communication. Your proposed EPA date may be sooner than was originally anticipated at the time of registration, which is OK so long as the apprentice(s) has been on programme for at least a year.

We cannot confirm any EPA arrangements until we have confirmation of Gateway Eligibility, as discussed in the next section, but we will put together a provisional plan and share it with you. As a customer, you probably want to confirm gateway Eligibility on one day and have the first end-point assessments the next day. The reality is that scheduling takes time and can take varying periods of time. The early notification helps us put together a provisional schedule, but we can only confirm it after Gateway Eligibility requirements are all met. The fewer changes you make to the information you give us three months before Gateway, the sooner it will be before we can start the EPA. We too commit to making last-minute changes as rare as possible.

We always aim to accommodate your requirements when scheduling, taking account of availability of apprentices, location and availability of assessment venues, availability of employer technical experts and independent industry technical experts and also ensuring that we have evidence of the pre-requisites, in particular the apprentice:

- has achieved L2 English and mathematics. The apprentice must provide evidence of achievement for both. The EUIAS will require copies of the certificates before any end-point assessment can take place
- should be advised by the employer and training provider (if training provider has been appointed) to gather evidence throughout their on-programme training
- has compiled and submitted a work log to EUIAS **1 month** prior to the interview as the work log will be reviewed by the independent industry technical expert in preparation for the interview. Details of work log requirements can be found in Section 5.3 of the Specification
- mid and end-of-year performance reviews
- feedback from the employer and or training provider to show how they have met the Apprenticeship Standard during the on-programme

The employer and or training provider **must** be confident that the apprentice has developed all the knowledge, skills and behaviours defined in the apprenticeship standard. To ensure this, the EUIAS recommend that the apprentice attends a formal meeting with their employer to complete the Gateway Eligibility Report. As soon as possible after Gateway, EUIAS will confirm with you the end-point assessment arrangements for each apprentice in the cohort.

We will always try to schedule as soon as possible within the 6-month window, to allow time for any re-sits before the window closes.

How to prepare for gateway

On completion of their on-programme learning apprentices should be ready to pass through 'gateway' to their end-point assessment.

At this point, the EUIAS recommend that the employer, training provider and apprentice hold a Gateway Eligibility meeting. The purpose of this meeting is to confirm that all parties agree the apprentice has met the requirements of the Apprenticeship Standard and is ready for end-point assessment. **Note** that the EUIAS is **NOT** present at this meeting. It is your sole responsibility to assure yourself, along with the training provider (if applicable) that the apprentice is ready for end-point assessment.

You are advised that the apprentice should prepare for this meeting by bringing along work-based evidence, including:

- Sufficient evidence in the form of a Work log of evidence to demonstrate that they have consistently applied the Knowledge, Skills and Behaviours as described in the Standard
- Mid and end-of-year performance reviews
- Feedback to show how they have met the Apprenticeship Standard while on-programme

Before the meeting, apprentices must have:

- achieved Level 2 English
- achieved Level 2 maths
- completed a satisfactory formal training plan that was agreed with the apprentice by the employer
- complete their work log evidence which should demonstrate that they have consistently applied the knowledge, skills and behaviours

Apprentices should be advised by employers and providers to gather this evidence throughout their on-programme training, **copies or scans of certificates WILL be required by EUIAS** before the apprentice can start EPA. Typically, these will be functional skills qualifications at Level 2 or GCSEs at grade C or above, or grade 4 and above.

It is recommended that the lead provider completes regular checks and reviews of this evidence to ensure the apprentice is progressing and achieving the Standard before the gateway meeting is arranged.

The Gateway meeting

Employers must confirm that apprentices are ready for their end-point assessment (EPA). The EUIAS recommend that the employer and lead provider hold a meeting with the apprentice to confirm that the apprentice is ready for their end-point assessment. To comply with end-point assessment rules, EUIAS is **not** present at the Gateway meeting. Ideally it would be conducted with the apprentice, training provider and the employer present. Gateway meetings last about an hour and are completed on or after the apprenticeship on-programme end date.

During the meeting, the apprentice, employer and training provider will discuss the different aspects of the apprenticeship standard and confirm that the apprentice has met the full criteria of the Apprenticeship Standard during their on-programme training. A copy of the Standard and the Assessment Plan (ST0475/AP01) should be available at the meeting. This can be accessed via the link below:

https://www.instituteforapprenticeships.org/apprenticeship-standards/electrical-power-networks-engineer-v1-0

In addition, the apprentice should be informed that EUIAS will be conducting the end-point assessment and that copies of the following policies are available on the EUIAS web site at euias.co.uk

- Appeals Policy
- Complaints Policy

A full list of EUIAS policies can be accessed via the link below:

https://www.euias.co.uk/end-point-assessment/policies/

At the meeting, the apprentice should be informed that they are required to have proof of their identity with them for each end-point assessment activity. The EUIAS will accept the following as proof of identity:

- a valid passport
- a UK driving licence
- a valid warrant card issued by HM forces or uniformed services

- Other photographic ID card such as an employee ID card or travel card

At the meeting, the Gateway Eligibility Report (GER) below must be completed, agreed and signed by all 3 parties* and submitted to EUIAS at enquiries@euias.co.uk with the subject line "GER – apprentice name – provider name".

A completed GER form is required for every apprentice you want to enter for end-point assessment.

*Where possible. We recognise that some meetings will take place at distance in which case an email agreement from the apprentice should be appended to the GER form.

The current Electrical Power Networks Engineer Assessment Plan (ST0475/AP01) mandates that the EPA should only start once the EPA gateway requirements have been met and evidence must be submitted to the EUIAS. As gateway requirements, the employer must meet with the apprentice and be satisfied that the apprentice is consistently working at, or above Level set out in the occupational standard and apprentices without English and mathematics at level 2 must achieve this level as a minimum prior to taking the EPA. The Gateway Eligibility Report is a requirement of the EUIAS. If it is not possible to have the employer present at the time the Gateway Eligibility Form is completed by the apprentice and training provider, EUIAS will contact the employer to gain their signature.

Reasonable adjustments

If you wish to apply for reasonable adjustments on behalf of any of your apprentices, please do so at the same time as submitting the GER form, using the EUIAS Reasonable Adjustment Policy and Application that can be found at www.euias.co.uk

Re-sits and Re-takes

Any component that is failed can be re-sat within the EPA window. It is not possible to re-sit outside of the EPA window. Where any assessment method has to be re-sat or re-taken, the apprentice will be awarded a maximum EPA grade of pass, unless the EUIAS determines there are exceptional circumstances requiring a re-sit or re-take. If an apprentice is not successful, they can undertake a period of further training and re-take the failed components within a new EPA assessment window.

The EUIAS resit and re-take policy can be found at www.euias.co.uk This can also be accessed via the link below:

https://www.euias.co.uk/wp-content/uploads/2020/02/Re-sit-and-Re-take-Policy-v5.0.pdf

Timeline

Typical timeline in months, before and after the Gateway.

Initial engagement – Up to 30 - 36 months before Gateway

Initial engagement, informal meeting between EUIAS and to agree:

- The numbers of apprentices in the cohort
- Any Reasonable Adjustments you want to apply for
- The relevant specialist pathways
- Expected location(s) for the knowledge test, practical task and the technical interview underpinned by the work log
- The training provider (if one has been appointed)
- The expected date(s) of EPA
- The payment schedule
- Completion of Service Level Agreement (lead provider) and at this stage the EUIAS must be informed if the lead provider has a risk in relation to technical expert requirements. If the EUIAS are to supply independent technical experts the EUIAS will provide a price at this stage

Registration - 30 – 36 months before Gateway to 6 months before Gateway

The apprentice is on-programme and compiling their work log of evidence to support the technical interview.

Formal Appointment/registration using the Cohort Registration form (Triggers Stage 1 payment)

- EUIAS will issue the Privacy Notice which must be shared with every apprentice in the cohort

Employer/training provider:

- Confirmation of expected EPA dates
- Confirmation of the level of service agreed with EUIAS, with pricing
- Confirmation that you will give three months' notice of apprentices being ready for EPA
- Completion of the Learner Submission form including each learner in the cohort
- A purchase order from the lead provider to EUIAS to the value agreed

30 - 36 months before Gateway to 6 months before Gateway

Update calls (as agreed)

- EUIAS will periodically call designated contact to enquire about progress towards EPA
- EUIAS provides on-going support via enquiries@euias.co.uk
- Lead provider will give at least 6 months' notice of any proposed change to EPA dates

6 months before Gateway to Gateway

- Lead provider completes the 'EPNE Practical Assessment Review Form', and submits to the EUIAS this form will include details about the practical task, see Section 7 'Supporting Documents', for further details

3 months before Gateway to Gateway

- Employer or training provider to compile evidence of meeting eligibility requirements (Level 2 or higher in English and maths)
- Employer or training provider should also be arranging practice assessments for apprentices

Gateway

Employer and or training provider:

- Provide completed Gateway Eligibility Report for each apprentice
- Ensure ALL eligibility requirements are met for each apprentice going forward to EPA
- Purchase order for Stage 2 payments

Gateway, and the 6 month EPA window

End-point assessment window (NB. 6 month window for each assessment commences on the date of their first EPA activity, work log to be submitted 3 weeks before the Technical Interview)

The assessment methods must be undertaken in the following order:

1. Knowledge test - Our pricing is based on being able to test every apprentice in the cohort at the same time (Knowledge test)

2. An observation of practical work activities practical observation work activities

3. Technical interview, based on a work log compiled during the apprenticeship and must be the final assessment component

Responsibilities of EUIAS:

- Schedule the assessments, in discussion with the employer and or training provider
- Will ask the employer to provide technical expert(s) for the practical observation for this pathway – Operational Delivery Engineer. The employer technical expert will be approved by the EUIAS and initially standardised. The employer technical expert will be expected to carry out the practical observation, assess the practical activities, provide a preliminary grade, complete and submit the formal assessment documentation to the EUIAS and attend the technical interview upon request
- Provides the independent industry technical expert(s) for the technical interview
- Provides the invigilator for the knowledge test (if agreed in the price)
- Arranges re-sits within the 6 month EPA window, if required
- Carries out a final moderation to confirm grading decisions
- Will provide results of EPA with 11 days of final moderation

Responsibilities of Employer and / or training provider

- Ensures apprentices are briefed and prepared for EPA, including location and timings of assessments
- Provides venue for the knowledge test (and re-sits if required)
- Provides employer technical expert(s) for the delivery and carrying out the assessment of the practical observation
- Provides an employer technical expert to support the interview process, which must be the technical expert who conducted the practical observation
- Provides access and details of venue for practical activities, as previously agreed with EUIAS

Nb. A re-take will be arranged, with the agreement of all parties, for apprentices who have failed a component or components and are deemed to require further training before being ready for end-point assessment.

Time-line summary for Employers and training provider; refer to previous section for detail

30 – 36 months before

- Completion of Learner Data Form (completed by the lead provider)
- Completion of Cohort Registration Form (completed by the lead provider)
- Raise purchase order for registration fees (Stage 1 payment)
- Completion of Service Level Agreement (lead provider) and at this stage the EUIAS must be informed if the lead provider will be using their own technical experts. If the EUIAS are to supply independent technical experts the EUIAS will provide a price at this stage
- Completion of EPAO Appointment Form

6 months before Gateway

- Notify EUIAS of any changes to EPA dates
- Confirm arrangements for knowledge test, practical observation, and technical interview underpinned by the work log with EUIAS; this will include EUIAS review of the 'Practical Assessment Review Form' for the practical activities assessment and site(s)
- Apprentices completing their logbook

3 months before Gateway

- Notify EUIAS of any changes to EPA dates
- Employer/training provider compiling eligibility documents (Level 2 or higher in English and maths, satisfactory completion of the formal training plan agreed with the apprentice by the employer; and sufficient evidence in the form of a work log to allow the apprentice to evidence consistent demonstration of KSBs
- Carry out practice assessments with the apprentices and the apprentices must finalise their work log

Gateway

- Gateway meeting between apprentice, provider and employer to confirm Gateway readiness
- Return completed Gateway Eligibility Report, with required documentation, to EUIAS, one per apprentice
- Submit purchase order for Stage 2 payment to EUIAS

6 Month

- Ensure apprentices are available for their EPA activities
- The assessments must be scheduled in the following order with the EUIAS Service Delivery team: Starting with the Knowledge test followed by the Practical Observation and finishing with the technical interview underpinned by the work

Level 4 End-Point Assessment for Electrical Power Networks Engineer – Operational Delivery Engineer

EPA Specification Section 4 – The EPNE Standard and Pathway with Amplification and Guidance

Contacts

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Help Desk telephone: 0121 713 8310

The Electrical Power Networks Engineer Standard in detail

The Electrical Power Networks Engineer consists of the following core requirements, this applies across all pathways:

- Core Technical Knowledge (10 elements)
- Core Skills (11 elements)
- Core Behaviours (6 elements)

The following pages list each of the elements of the Standard and additional amplification and guidance from the EUIAS on the range and depth expected.

Core Technical Knowledge
Assessed in Knowledge Test
CTK1 Electrical power principles electrical power principles: alternating current and direct current theories; dynamic and static engineering systems; application of electrical and electronic circuit theory; the use of complex wave forms
CTK2 Three-phase systems with consideration being given to harmonics and their effects and the methods of power distribution
CTK3 Electricity network design, capabilities, complexities, operations and topologies; operation and limitations of plant and equipment
CTK4 The operation of the electricity network in normal and fault conditions
CTK5 Safe systems of work and risk management; the application of Electricity Supply Standards, Regulations including environmental requirements. These are Health and Safety at Work Act 1974, Electricity at Work Regulations 1989, Management of Health & Safety at Work Regulations 2003, Control of Substances Hazardous to Health (COSHH) Regulations 2002, The Electricity Safety, Quality and Continuity Regulations 2002, The Environmental Protection Act 1990
CTK10 The key interfaces of the electricity network

Core Technical Knowledge

Assessed in Practical Observation

CTK6 Company requirements with regard to project management tools, techniques and processes

CTK9 Company business planning and resource control measures

Core Technical Knowledge

Assessed in Technical Interview

CTK7 Company engineering policies appropriate to their role

CTK8 Engineering problems including how to identify the problem, gather and analyse all relevant information, provide and implement a workable solution and monitoring its effectiveness

CTK9 Company business planning and resource control measures

Core Technical Knowledge

Amplification and Guidance

CTK1 Electrical Power Principles

This element is assessed during the Knowledge Test and requires a good understanding of electrical power principles, including:

- Alternating and direct current theory and principles including the formulae used for common power calculations
- Application of electrical and electronic circuit theory including the effects and control of power factor
- The principles of complex wave forms and their phase angles
- The principles and purpose of ring and radial circuits
- Series and parallel circuits and the connection of instruments to measure amps, watts and volts in those circuits

CTK2 Three-phase Systems

This element is assessed during the Knowledge Test and requires a good understanding of:

- The design and purpose of three-phase systems
- The principles of three phase operation and typical vector groupings
- The fundamental cause, effect and control of harmonics on the network
- The connection and winding arrangement of three-phase transformers
- The effect and control of lagging and leading voltage

CTK3 Electricity Network Design

This element is assessed during the Knowledge Test and requires a good understanding of:

- The design principles and layout of overhead and underground networks
- The typical plant and equipment used on the network and their purpose, operation and limitations
- Current UK generation, transmission and distribution system voltages and their regulatory tolerances
- The purpose and principles of earthing substations and the methods used
- The common methods used for voltage control
- The principles and methods used for circuit protection

CTK4 Operation of the electricity network in normal and fault conditions

This element is assessed during the Knowledge Test and requires a good understanding of:

- The plant and equipment used for the isolation and switching of circuits
- The types of network fault, the typical causes and the methods used to identify and control them
- The principles of network protection and the equipment used to protect circuits

- The equipment used to measure and control circuit voltage and current
- The typical types and capabilities of equipment used to conduct switching
- The principles of switching and controlling networks in normal and fault conditions

CTK5 Safe systems of work and risk management. The application of relevant legislation, regulations and standards, including:

This element is assessed during the Knowledge Test and requires a good understanding of:

- The purpose and general requirements of the following: Health and Safety at Work Act 1974, Electricity at Work Regulations 1989, Construction Design and Management (CDM) Regulations 2015, Management of Health & Safety at Work Regulations 2003, The Electricity Safety, Quality and Continuity Regulations 2002
- The principles and techniques used for risk identification and hazard management
- The types, purpose and information contained in typical operational safety documents used to achieve safety from the system
- The fundamental requirements relating to the control and management of work / persons on or near electrical networks
- The responsibilities of persons involved in organising and controlling operational activities of the network

CTK6 Company requirements with regard to project management tools, techniques and processes

This element is assessed during the Practical Observation and requires the apprentice to demonstrate a good understanding of:

- The relevant Company project / engineering management tools which are applicable to the control operations being observed e.g., how they can be used to control / monitor operations / inform others of their work project details
- How they have applied the relevant Company project / engineering management tools to the control operations being observed
- How to use project management tools to present technical information in a clear and concise manner e.g., presentation / briefing to a manager using project management tools

CTK7 Company engineering policies appropriate to their role

This element is assessed during the Technical Interview and requires the apprentice to use supporting evidence from their work log to demonstrate a good understanding of:

- The use of Company business planning and resource control measures and how they impact control operations e.g. how to identify budget/resource considerations for their control operations
- Presents business planning / resource control measures information in a clear and concise manner to sufficient depth for the audience. e.g., presentation / briefing to a manager demonstrating the use of planning / resource control measures in their control operations
- Identifies the risks of inadequate business planning / resource control measures in their control operations and chooses an appropriate course of action e.g., demonstrates the methods used to plan their control operations to make the most effective use of the resources required including contingency plans

CTK8 Engineering problems including how to identify the problem, gather and analyse all relevant information, provide and implement a workable solution and monitoring its effectiveness

This element is assessed during the Technical Interview and requires the apprentice to use supporting evidence from their work log to demonstrate a good understanding of:

- How to gather and analyse relevant information to implement solutions to resolve control operations problems e.g., information they have used to solve operational / engineering problems
- How to recognise and define problems associated with their work projects. e.g., methods they have used for identifying and analysing technical problems
- How to tackle issues in a step by step logical way and make suggestions for solving problems which benefit customers and the business. e.g., plans they have implemented to deal effectively with engineering / operational problems

CTK9 Company business planning and resource control measures

This element is assessed during the Practical Observation and the Technical Interview where it requires the candidate to use supporting evidence from their work log. The assessments require the apprentice to demonstrate a good understanding of:

- How to gather and analyse information in order to implement effective planning solutions or resource requirements in their control operations e.g., examples of information they have used to support their planning or projects

- The link between their control operations and the Company strategies and policies which ensure compliance with the Company business planning and resource control measures e.g., examples of how their control operations align with the Company policy / procedures
- How to develop operational project plans that contain objectives, budgets, desired outcomes, timescales and evaluation records e.g., examples of operational plans / switching schedules they have developed which contain all necessary data including contingency plans

CTK10 The key interfaces of the electricity network

This element is assessed during the Knowledge Test and requires a good understanding of:

- The purpose, responsibilities and operating principles of the UK power regulator
- The principles used by the regulator to control pricing
- The aims and objectives of the regulator for power companies
- The general purpose of the Electricity Safety, Quality and Continuity Regulations 2002
- The responsibilities placed upon employers for the safety, quality and continuity of the UK electricity supply

Core Skills

Assessed in the Practical Observation

CS1 Comply with company and industry health, safety and environmental standards, regulations, company operating procedures and working practices relating to the health, safety and environmental practices used within the sector

CS2 Ensure that all safety considerations are incorporated and evident in all working practices relating to the preparation and monitoring of safety practices during the observation

CS4 Produce timely communications providing information to stakeholders both in writing and verbally relating the use and dissemination of information relevant to their job role

CS8 Use company IT systems to provide accurate and reliable data to support business decisions relating to the use of IT systems and equipment during the course of their job role

CS11 Uses company risk tools and techniques to evaluate and predict the reliability of engineering systems and equipment relating to the identification and control of risks

Core Skills

Assessed in the Technical Interview

CS3 Apply asset management, design, planning, control, electrical project, or operational engineering principles as appropriate to their role to maintain and improve the integrity, safety and longevity of the transmission/distribution electrical network relating to the use and implementation of asset management methods and processes during their work projects

CS5 Read, understand and interpret technical information relative to their role, identified in company strategies and policies and work in compliance with technical specifications relating to the interpretation and delivery of technical information during their work projects

CS6 Produce clear and precise reports in relation to their activities to line management, other business departments and/or to external stakeholders relating to the production and use of technical reports and communication of information to relevant parties

CS7 Develop and agree project plans to undertake their activities. These plans will contain clear objectives, budgets, desired outcomes and timescales. Also included will be implementation criteria, monitoring process controls and evaluation records relating to the development and use of project plans relevant to their job role

CS9 Demonstrate that their work activities supports the business to achieve its regulatory incentive mechanisms relating to their awareness of regulatory requirements and how they affect the projects undertaken

CS10 Provide information to support business planning processes in relation to their role activities relating to the production of relevant technical information and implementation into the business planning process

Core Skills

Amplification and Guidance

CS1 Comply with company and industry health, safety and environmental standards, regulations, company operating procedures and working practices

- How their design work complies with HS&E requirements and the health, safety and environmental considerations which affect their control operations e.g., the relevant health, safety and environmental legislation relevant to the planning and development of their control operations
- How they follow and comply with the appropriate Company HS&E policies and procedures. e.g., examples of how relevant legislation has influenced their control operations
- How to present HS&E information in a clear and concise manner to sufficient depth for the audience. e.g., brief a supervisor / manager on the HS&E considerations / requirements for an operational procedure

CS2 Ensure that all safety considerations are incorporated and evident in all working practices

- How to recognise and identify specific risks associated with their control operations and choose appropriate courses of action e.g., examples of how specific risks have been identified in their project work and how they dealt with it
- How they follow and comply with the appropriate safety considerations in their control room operations e.g., examples of how they have had to change a project to cater for a safety consideration
- Presents safety information in a clear and concise manner to sufficient depth for the audience. e.g., brief a supervisor / manager on a safety consideration in an operational procedure and their proposal/s to deal with the requirements

CS3 Apply asset management, design, planning, control, electrical project, or operational engineering principles as appropriate to their role to maintain and improve the integrity, safety and longevity of the transmission/distribution electrical network

- How they have gathered and analysed relevant information in order to maintain and improve the integrity / safety / longevity of the electrical network e.g., examples of technical information they have gathered and used to support their control operations on the network P8/1
- How they have linked their control operations to Company strategies and policies to ensure compliance with the Company engineering principles e.g., examples of how their control operations align with the Company strategy / policy of maintaining supplies
- How their control operations support the business to achieve regulatory incentive mechanisms. e.g., examples of how their control operations have improved the reliability of the network and reduced potential outages

CS4 Produce timely communications providing information to stakeholders both in writing and verbally

- Present information in a clear and concise manner to sufficient depth for the audience. e.g., a briefing to a supervisor / manager explaining an operational procedure
- Demonstrates that others' views are considered and support, where required, is offered to them. e.g., examples of how they have taken on board others' views (internal / regulatory) and modified an operational procedure to cater for the changes
- Speaks confidently, listens to others and takes required action to progress work. e.g., a briefing to a stakeholder/manager to explain the requirements of an operational procedure

CS5 Read, understand and interpret technical information relative to their role, identified in company strategies and policies and work in compliance with technical specifications

- How they have gathered and analysed relevant information in order to produce operational plans which meet Company requirements / specifications e.g., examples of technical specifications / data they have used to support the development of their control operations which align to the Company strategies / policies
- How they have used and interpreted technical Information to develop project plans that contain objectives / budgets / desired outcomes / timescales / evaluation records e.g., examples of operational plans they have developed which contain all of the relevant detail and align with the business strategies / policies
- How they have used technical information to recognise and define design problems which they have tackled in a logical manner e.g., how they have used system plans to identify an operational issue and how they have resolved the problem

CS6 Produce clear and precise reports in relation to their activities to line management, other business departments and/or to external stakeholders

- How they have gathered and analysed relevant information in order to produce clear and precise reports in relation to their activities to line management, other business departments and/or to external stakeholders e.g., examples of technical data they have used to support their reporting of an operational procedure on the network
- How the reports they have produced link to Company strategies and polices e.g., examples of how their technical data / report/s have supported the network design of the business
- How reports they have produced have been used to support internal and / or external stakeholder requirements e.g., examples of reports / data

they have captured has been used to influence / gain approval for an operational procedure

CS7 Develop and agree project plans to undertake their activities. These plans will contain clear objectives, budgets, desired outcomes and timescales. Also included will be implementation criteria, monitoring process controls and evaluation records

- How they have gathered and analysed relevant information in order to develop and agree project plans e.g. examples of project plans / switching schedules they have developed which have been used to agree activities from a manager / supervisor
- How they have developed project plans that contain objectives, budgets, desired outcomes, timescales and evaluation records e.g., examples of project plans / switching schedules they have developed consider all of the necessary items
- How project plans they have produced have been used to deliver required stakeholder outcomes P8/5 e.g., examples of project plans / switching schedules they have produced have been used to gain approval

CS8 Use company IT systems to provide accurate and reliable data to support business decisions

- Identify and describe the use of the appropriate Company IT systems, techniques and processes used in their control operations e.g., use a range of software packages including specific Company operational control software
- Use the appropriate Company IT techniques and processes in their control operations e.g., demonstrate the use of control software when working on network operations
- Use IT systems to present network information in a clear and concise manner to sufficient depth for the audience. e.g., brief a manager / supervisor on their control operations using the Company's software

CS9 Demonstrate that their work activities supports the business to achieve its regulatory incentive mechanisms

- How they have gathered and analysed relevant information in order to support the business to achieve its regulatory incentive mechanisms e.g., examples of how their control operations have improved network reliability which has contributed to a reduced level of faults
- How their work projects / designs link to Company strategies and polices and support the achievement of regulatory incentive mechanisms e.g., examples of how their control operations improve the integrity and longevity of the network
- How the Company regulatory incentive mechanisms impact / affect relevant stakeholders and their requirements e.g., examples of where their control operations have had a positive impact on the Company's regulatory requirements / strategy

CS10 Provide information to support business planning processes in relation to their role activities

- How they have gathered and analysed relevant information in order to support the business planning processes in relation to their role activities e.g., examples of how they have used planning information to organise / plan their control operations for an outage
- How they have conducted control operations that support / comply with the business planning processes e.g., example of control operations they have developed or are working on and how they align with the business planning timelines
- Identify stakeholders which are affected by the business planning processes and how they are affected e.g., contacting an internal / external stakeholder to keep them informed on the progress of a planned outage and how it aligns with the planning process

CS11 Uses company risk tools and techniques to evaluate and predict the reliability of engineering systems and equipment

- Identify and describe the use of company risk tools and techniques to evaluate and predict the reliability of engineering systems and equipment used in the designs e.g., examples of how they have used engineering systems / data to evaluate the performance / limits of a piece of apparatus for a control operation
- Use Company risk tools and techniques to evaluate the engineering systems and equipment used in their control operations e.g., example of using Company systems to evaluate / model the use of specific arrangements / equipment for a switching operation
- Presents all information in a clear and concise manner to sufficient depth for the audience. e.g., presents / briefs a supervisor / manager on their proposal for the use of equipment for an isolation procedure on the network

Core Behaviours

Assessed in the Practical Observation

The behaviours are assessed through natural performance during the practical observation and have been incorporated into the relevant core skills elements

B1 Health, Safety & Environment - follows health, safety and environmental policies and procedures and is prepared to challenge unsafe behaviour using appropriate techniques to ensure the protection of people and property when working alone and/or with teams. Demonstrates high concentration and the desire to reduce risks through regular monitoring and checking information

B3 Interpersonal Skills - works well with people from different disciplines, backgrounds and expertise. Takes others' needs and concerns into account and supports them to accomplish an activity safely and on time

B5 Risk Awareness - has the embedded desire to reduce risks through systematic monitoring and checking of information identifying mitigation actions on an on-going basis

Core Behaviours

Assessed in the Technical Interview

B2 Stakeholder management – is proactive in identifying their stakeholders and managing their expectations, presenting appropriate information to them clearly and concisely

B4 Analysing and solving problems – takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business

B6 Planning & organising – takes a forward looking perspective when considering the delivery of decisions, activities and projects and ensure plans are in place to manage anticipated issues, considers contingency planning

Core Behaviours

Amplification and Guidance

B1 Health, Safety & Environment

- How they follow health, safety and environmental policies and procedures and where necessary challenge unsafe behaviour using appropriate techniques e.g., demonstrates compliance with Company HS&E policies and procedures
- Demonstrates high levels of concentration and the desire to reduce risks through regular monitoring and checking of information e.g., takes responsibility for self and others and autonomy in making decisions to implement HS&E policies and procedures

B2 Stakeholder management

- Proactive in identifying stakeholders and managing their expectations, presenting appropriate information e.g., takes responsibility for analysing situations and drawing logical, sound solutions that benefit customers and the business
- Provide stakeholders with appropriate information clearly and concisely to support the business planning process e.g., meetings with internal / external stakeholders to discuss projects and manage their expectations

B3 Interpersonal skills

- Demonstrates how they can work well with people from different disciplines, backgrounds and expertise e.g., communicates and works well with other people as a team effort to achieve results
- Demonstrates how they take others' needs and concerns into account and supports them to accomplish an activity safely and on time e.g., listens and takes on board others views during discussions / meetings

B4 Analysing and solving problems

- Takes responsibility for solving problems by identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business e.g., discussions / briefing with manager / supervisor to discuss solutions to project issues

- Take responsibility for solving problems by identifying and analysing issues and agreeing contingency measures e.g., discussion with supervisor / stakeholder

B5 Risk awareness

- Demonstrates they have an embedded desire to reduce risks through a systematic approach e.g., examples of risk registers risk analysis for projects
- Monitors and checks information on an on-going basis and takes mitigating actions when required e.g., examples of project planning with check points to monitor progress / measures in place

B6 Planning & organising

- Takes a forward-looking perspective when considering the delivery of decisions, activities and projects e.g., discussion with supervisor / stakeholder to plan project progression
- Ensures plans are in place to manage anticipated issues, considers contingency planning e.g., discussion with supervisor / manager to plan project development and agree contingency measures

Operational Delivery Engineer Pathway

In addition to the Core Knowledge, Skills and Behaviours the Operational Delivery Engineer Pathway also contains:

- Specific Skills - 8 elements

The following list each of the elements of the Operational Delivery Engineer pathway providing amplification and guidance on the range and depth expected this is then followed by the assessment method(s) used per element.

Specific Skills Operational Delivery Engineer
Assessed in the Practical Observation
SS1 Plan, manage and undertake a range of engineering activities and operations to the electricity network, to meet design, safety, time and commercial requirements
SS2 Be Authorised to work on the electricity network in-line with company/asset owner requirements
SS4 Take responsibility for and control others who may be working on the network
SS5 Issue, review and communicate to all site personnel the agreed safe systems of works associated with the activities being carried out
SS6 Ensure the completion of final hand back documentation to the agreed specifications and timescales
Specific Skills Operational Delivery Engineer
Assessed in the Technical Interview
SS3 Understand and take control of reactive activities including testing, inspection and maintenance of appropriate plant and equipment to meet operational requirements

Specific Skills Operational Delivery Engineer

Amplification and guidance

SS1 Plan, manage and undertake a range of engineering activities and operations to the electricity network, to meet design, safety, time and commercial requirements

- Use and interpret a range of technical information provided to plan and conduct operational activities on the electrical network
- Produce and gain approval of all documentation and demonstrate a clear understanding of its purpose for safe systems of work
- Carry out a site specific network inspection prior to commencing network operations and confirm the necessary network operations and issue appropriate safety documentation in line with Company policies and procedures
- Use and refer to the technical information provided to check / confirm the completed work on the network meets the required Company standards / specifications

SS2 Be Authorised to work on the electricity network in-line with company/asset owner requirements

- Demonstrate a core knowledge of their role and responsibilities as an “authorised” person for the work being conducted on the electricity network
- Provide evidence to demonstrate they hold a current relevant level of Company authorisation to carry out the operational work activity
- Comply and adhere to all relevant Company policies, procedures and safety rules throughout the operational work

SS3 Understand and take control of reactive activities including testing, inspection and maintenance of appropriate plant and equipment to meet operational requirements

- Produce a work plan which ensures that HS&E considerations take priority and processes and practices comply with Company standards, procedures and HS&E legislation
- Communicate information confidently in a clear and concise manner and provide others with a sufficient depth of information e.g. timescales, intended outcomes and any additional requirements
- Demonstrate their ability to identify and recognise risks and take appropriate action to reduce them through systematic monitoring and checking of information / conditions

SS4 Take responsibility for and control others who may be working on the network

- Produce a work plan which ensures that HS&E considerations take priority and processes and practices comply with Company standards, procedures and HS&E legislation
- Communicate information confidently in a clear and concise manner with sufficient depth to control others working on the network e.g. timescales, intended outcomes and any additional requirements
- Demonstrate their ability to recognise risks and take appropriate action to reduce them through systematic monitoring and checking of information / conditions

SS5 Issue, review and communicate to all site personnel the agreed safe systems of works associated with the activities being carried out

- Demonstrate their ability to review and agree a safe system of work for the intended activities and issue either verbally or in writing the relevant safe system of work in line with Company policies and procedures
- Demonstrate their ability to present information in a clear and concise manner with sufficient depth and confirm the recipients understand critical safety / technical information given in relation to the planned work
- Demonstrate their ability to reduce / manage risks through systematic monitoring and checking of information and monitor and review the safe system of work as the activity progresses

SS6 Ensure the completion of final hand back documentation to the agreed specifications and timescales

- Demonstrate their ability to conduct the final handover in line with the Company / stakeholder's requirements and standards
- Demonstrate their ability to deal effectively with questions / issues that arise during the handback process
- Demonstrate their ability to complete the required records of the handback process to meet the quality standards required by the Company