

Skills for a greener world

# EUIAS L4 EPA Supporting Documents for

Electrical Power Networks Engineer (Control Engineer; Electrical Project Engineer and Operational Delivery Engineer) QAN 603/7295/3













# EUIAS Level 4 EPA Supporting Documents for

# Electrical Power Networks Engineer (Control Engineer; Electrical Project Engineer and Operational Delivery Engineer) QAN 603/7295/3

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# Updates to the supporting documents

Since the first publication of the EUIAS Electrical Power Networks Engineer Supporting Documents – Control Engineer; Electrical Project Engineer and Operational Delivery Engineer, the following updates have been made.

Version	Date first published	Section updated	Page(s)
V3.0	10 October 2023	Rebranded	All
		Revised Practice Knowledge Test	10 - 34
		Revised Appendix D	36 - 45
V2.0	25 April 2023	New template and pathway specific criteria IDs	All
V1.0	2020	First published	All



# Appendix A: Glossary

**Amplification** – provides more detail on how individual knowledge, skills or behaviours statements should be interpreted. Where the KSB statements, themselves are deemed self-explanatory, no amplification is provided. Assessment may include questions on anything identified in the amplification

**Behaviours (as part of KSBs)** – specific mindsets, attitudes or approaches identified as part of the apprenticeship standard that must be evidenced during endpoint assessment

**Elements** – are the knowledge, skills and behaviours and what is needed to competently undertake the duties required for an occupational standard

**Gateway** - the stage of the apprenticeship where the apprentice, employer and training provider determine whether the apprentice is ready to undertake end-point assessment

**Guidance** – is only provided where it is required to support interpretation of the KSB statements

**Knowledge (as part of KSBs)** – specific information, technical detail, and 'knowhow' identified as part of the apprenticeship standard that must be evidenced during end-point assessment

**Pathways** – a specialist route within an apprenticeship standard that builds on the occupational competence for a new entrant to the occupation

**Skills (as part of KSBs)** – the practical application of knowledge identified as part of the apprenticeship standard that must be evidenced during end-point assessment

**Standard** – An occupational standard is a description of an occupation. It contains occupational profile, and describes KSBs needed for someone to be competent in the occupation's duties. Occupational standards are developed by employers for occupations that meet the Institute for Apprenticeships and Technical Education current occupation criteria

Topic - is a collection of elements grouped into a theme e.g. Health and Safety



# Appendix B: Gateway Eligibility Form

(Standard Version: ST0475 version 1.0; Assessment Plan Version: ST0475/AP01)

Apprentice's name:	Apprentice's job title:
Name of Employer:	Name of Training provider:
Employer representatives present:	Training provider representatives present:
Apprenticeship start date:	Apprenticeship on-programme end date:
Gateway meeting date:	
Has the apprentice taken any part of the end-point assessment for this apprenticeship standard with any other End Point Assessment Organisation?	Y / N
If "Yes" please give details:	



#### Apprentice's details

Eligibility requirements:

The apprentice must confirm their achievement of the following:

Eligibility requirement	Achieved by the apprentice? Y/N	Evidence (Scans of certificates MUST be included)
Achieved Level 2 English or higher		
Achieved Level 2 Maths or higher		
Satisfactory completion of the formal training plan agreed with apprentice by the employer		
Compiled and submitted a competent work log of evidence that meets the specification requirements, on which the technical interview will be based		



#### Gateway Eligibility Declaration

The apprentice, the employer and the training provider must sign this form to confirm that they understand and agree to the following:

- 1. The apprentice has completed the required on-programme elements of the apprenticeship and is ready for end-point assessment with EUIAS.
- 2. EUIAS has been informed about any reasonable adjustment and/or special considerations requests.
- 3. The apprentice will only submit their own work as part of end-point assessment.
- 4. All parties agree that end-point assessment evidence may be recorded and stored by EUIAS for quality assurance purposes.
- 5. The apprentice has been on-programme for a minimum duration of 365 days.
- 6. The apprentice has achieved English and maths Level 2 or higher as detailed in this document.
- 7. The apprentice has compiled and submitted a competent work log of evidence, on which the technical interview will be based.
- 8. The apprentice, if successful, gives permission for EUIAS to request the apprenticeship. certificate from the ESFA who issue the certificate on behalf of the Secretary of State.
- 9. The apprentice has been directed to the EUIAS Appeals Policy and Complaints Policy.
- 10. The employer/training provider has given the EUIAS at least three months' notice of requesting this EPA for this apprentice.
- 11. If the Gateway Eligibility Report is not completed in full, meeting all requirements, and submitted to EUIAS, the end-point assessment cannot take place.

Signed on behalf of the employer (print name):	Signature:	Date:
/		
Signed on behalf of the training provider (print name):	Signature:	Date:
Apprentice's name (print):	Signature:	Date:
EUIAS use only:		

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EUIAS Sign off:	
Comments/actions:	

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# Appendix C: Practice Knowledge Test

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## Level: 3

#### **Electrical Power Networks Engineer**

#### Paper Code: Practice Paper

This examination consists of 40 multiple-choice questions.

The Pass mark is 32 correct answers.

A mark of 36 or more is a Distinction.

The duration of this examination is 60 minutes.

You must use a **pencil** to complete the answer sheet - pens must NOT be used.

When completed, please leave the examination answer sheet and question paper on the desk.

For this paper:

- the use of a scientific calculator (non-programmable) is permitted
- access to the internet or intranet is NOT allowed
- apprentices can refer to any material as this test is open book i.e. Training Materials, Company Policies, Work Logs

For each question, fill in ONE answer ONLY.

If you make a mistake, ensure you erase it thoroughly.

You must mark your choice of answer by shading in ONE answer circle only. Please mark each choice like this:

- 1 (A) (B) (C) (D)
- ANSWER COMPLETED CORRECTLY

Examples of how NOT to mark your examination answer sheet. These will not be recorded.

 1
 Image: Constraint of the system constraints of t

This paper must be returned to EUIAS with the apprentice answer sheets.

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You may use this page for rough work. This page must not be removed.

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Questio	n 1	
Identify the material that is typically used in the design of a transformers core to		
Possible answers		
a)	Limited brass	
b)	Cross link polyethylene	
c)	Silicon alloys	
d)	Tungsten carbide	

Question 2			
Identify t	Identify the term that is used to describe the circulating movement of current back		
and forth	th in the core of a transformer creating he	eat.	
Possible answers			
a)	Copper losses		
b)	Eddy currents		
c)	Lenz law		
d)	Electromotive force		

## [Turn to the next page for question 3]



Identify the phrase that is correct for the following statement about the Root Mean Square (r.m.s) value.

The r.m.s value of an a.c. circuit is \_\_\_\_\_\_ of direct current which would have the same effect or energy change as the alternating current.

Possible answers		
a)	Equal to value	
b)	Twice the value	
c)	Half the value	
d)	The square value	

#### **Question 4**

Refer to the Power Factor diagram below. What do the letters A, B and C represent?



# Possible answers a) A = Apparent Power, B = Real Power and C = Reactive Power b) A = Reactive Power, B = Apparent Power and C = Real Power c) A = Apparent Power, B = Reactive Power and C = Real Power d) A = Reactive Power, B = Real Power and C = Apparent Power

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#### [Turn to the next page for question 6]

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For a balanced three-phase system, which ONE of the following is the formula for calculating the PHASE voltage of a STAR connected transformer?

Abbreviations below stand for:

- VP Phase Voltage
- VL Line Voltage
- IL Line Current
- Ip Phase Current
- $\sqrt{-1}$  Root 3 (root of three)

Possible answers

a)	$VP = VL \div \sqrt{3}$
b)	VP = VL
c)	$VP = IL \div Ip$
d)	$VP = VL - \sqrt{3}$

Question 7		
In a bala	nced star-connected three-phase system the value of the phase current:	
Possible answers		
a)	varies above and below the line current	
b)	is higher than the line current	
c)	is a third less than the line current	
d)	is equal to the line current	



In a balanced three-phase system with delta-connected load and 415 V line voltage, what would the value of the phase voltage be?

Possible answers		
a)	0 V	
b)	240 V	
c)	415 V	
d)	440 V	

Question 9		
In a bala	anced three-phase system with a star-	connected load and 10 A line current,
what wo	ould be the value of the phase current?	
Possible answers		
a)	5.77 A	
b)	10 A	
c)	17.3 A	
d)	30 A	

[Turn to the next page for question 10]



Which ONE of the following describes the effect of harmonics on a three-phase electrical network?

#### **Possible answers**

a)	The networks current and voltage are distorted and deviate from their
	standard sinusoidal waveforms
b)	The networks current and voltage are regulated and conform to their
	standard sinusoidal waveforms
c)	The networks current is decreased, and the voltage increased
	proportionally to regulate their standard sinusoidal waveforms
d)	The networks current and voltage is increased causing network problems
	and system faults

Question 11		
Which harmonic typically causes neutral current to increase most significantly?		
Possible answers		
a)	The third harmonic	
b)	The fifth harmonic	
c)	The seventh harmonic	
d)	The twelfth harmonic	

#### [Turn to the next page for question 12]



In a balanced three-phase system, what would be the value of the neutral current?

Possible answers	
a)	Zero
b)	Line current
c)	Phase current
d)	3 x phase current

Question 13	
Three-pl	nase transformers should only be connected in parallel under which ONE
of the following conditions?	
Possible answers	
a)	When they are identical in all respects
b)	When they have exactly the same losses
c)	When permission is obtained from the manufacturer
d)	When they have the same secondary voltages

[Turn to the next page for question 14]



Refer to the diagram below.

In the order shown, which transformer wiring configurations does this diagram represent?



Possible answers		
a)	Single-phase star, single-phase delta	
b)	Three-phase star, three-phase delta	
c)	Single-phase delta, single-phase star	
d)	Three-phase delta, three-phase star	

[Turn to the next page for question 15]



The UK's electricity is typically generated in large commercial power stations. At what voltage is it generated?

Possible answers	
a)	11 kv
b)	25 kv
c)	132 kv
d)	400 kv

Question 16		
At what	voltage is the transmission of el	ectricity across the UK primarily
conduct	red?	
Possible answers		
a)	11 kv	
b)	132 kv	
c)	415 kv	
d)	400 kv	

[Turn to the next page for question 17]



Question 17		
What are	e the typical voltage tolerances for high voltage (up to 132 kV) power	
networks	s?	
Possible answers		
a)	High voltage ± 3% of nominal voltage	
b)	High voltage ± 6% of nominal voltage	
c)	High voltage +6% to -10% of nominal voltage	
d)	High voltage ± 10% of nominal voltage	

Question 18		
Which st	Which statement describes the typical method for controlling the output voltage on	
a 33/11	kV transformer to keep it within its statutory limits?	
Possible answers		
2)	An automatic voltage control relay monitors the transformers output	
a)	voltage and regulates the voltage via a tap changer	
b)	A control engineer monitors the transformers output voltage and	
	regulates the voltage via an automated tap changer	
c)	A current transformer (CT) monitors the transformers output voltage and	
	regulates the voltage via a tap changer	
d)	An automated tap changer monitors the transformers output and	
	regulates the voltage via an automatic voltage control relay	

[Turn to the next page for question 19]



An engineer needs to determine the electrical rating of a switchgear, that will be used on a power network.

What critical factor should the engineer consider?

Possible answers		
a)	The manufacturer of the switchgear to be used	
b)	The location of the switchgear in the electrical circuit	
c)	The proximity of commercial and domestic buildings	
d)	The ability to operate the switchgear manually or remotely	

Question 20		
'A low voltage network which has the neutral bonded to earth at several different		
points in	the system. What type of earthing system is the above known as?	
Possible answers		
a)	Terra Neutral Split system	
b)	Terra Neutral Terra Firma system	
c)	Protective Multiple Earthing system	
d)	Earth Loop Impedance system	

[Turn to the next page for question 21]



A transformer which consists of a single winding and is used to step up or step down a constant supply voltage.

What type of transformer is this known as?

Possible answers	
a)	Current transformer
b)	Voltage transformer
c)	Earthing transformer
d)	Auto-transformer

Question 22		
What wo	What would be the effect of a fault on the protection of a low voltage network with a	
low earth loop impedance value?		
Possible answers		
2)	The fault current would take longer to activate the protection, the lower	
aj	the value	
b)	The fault current would activate the protection faster, the lower the value	
c)	The fault current would activate the protection at the same time	
	regardless of the value	
d)	The fault current would not activate the protection if the value was below	
	the UK standard	

#### [Turn to the next page for question 23]



When considering network protection there are devices that provide an advantage of being able to support overcurrent for a period of time and be reset.

Which device would provide this advantage?

Possible answers	
a)	High Rupturing Capacity (HRC) fuses
b)	Rewireable fuses
c)	Contactor relays
d)	Rewireable relays

Question 24	
Which ONE of the following is an example of a 'Rise in Earth Potential' (ROEP)?	
Possible answers	
a)	A ROEP is created by increasing the number of earth electrodes in a
ч,	substation to prevent system faults
b)	A ROEP is a phenomenon which occurs during long periods of high
	voltage switching in a substation which stresses the earth system
c)	A ROEP is created by bonding all auxiliary steelwork to earth in a
	substation together to prevent system faults
d)	A ROEP occurs when a large current flows to earth through the effects of
	a high voltage fault

#### [Turn to the next page for question 25]







Which piece of network equipment does the following sentence describe?

'It reduces earth fault current and limits the amount of fault current returning to the transformer'.

Possible answers	
a)	A voltage transformer
b)	A switch fuse
c)	A neutral earthing resistor
d)	A protective multiple earth

#### **Question 27**

Voltage transformers (VT) can be used for circuit control, safety protection and measurement.

Which ONE of the following describes the principle of VTs operation?

Possible answers	
a)	A VT can be used to step down the voltage of the system to a value which is acceptable to the lower rating of meters and relays
b)	A VT can be used to step up the voltage of the system to a value which is acceptable to the higher rating of meters and relays
c)	A VT can be used to convert the alternating waveform of the system to a direct waveform to supply meters and relays
d)	A VT can be used to accept the voltage of the system and connect it directly to the higher rated meters and relays



Questio	n 28	
Which ONE of the following describes the typical capabilities of a high voltage		
switch?	switch?	
Possible answers		
a)	The switch is load making but not load breaking or fault making	
b)	The switch is non-load making but is load breaking and fault making	
c)	The switch is load making and breaking, and fault making	
d)	The switch is non-load making or breaking but is fault making	

ERICPD is an acronym used by health and safety organisations as a risk assessment model to help prioritise health and safety measures in the workplace. What does ERICPD stand for?



Possible	Possible answers	
a)	Eliminate, Report, Investigate to Control Potential Danger	
b)	Eliminate, Remove, Insulate, Caution, Protect and Discipline	
c)	Eliminate, Reduce, Isolate, Control, PPE and Discipline	
d)	Eliminating Risks Insures Complete Protection from Danger	



Which ONE of the following identifies the primary purpose of a risk management strategy?

Possible answers	
a)	A risk management strategy provides a cost efficient approach to
	identifying, assessing, and managing the company's financial risk
b)	A risk management strategy provides a timely and effective method of
	measuring the exposure to risk in the event of an incident
c)	A risk management strategy provides a structured and coherent approach
	to identifying, assessing, and managing risk
d)	A risk management strategy provides an auditable process which
	protects a company from any liability in the event of an incident

Question 31	
Which ONE of the following describes the primary purpose of the Electricity at	
Work Regulations 1989?	
Possible answers	
a)	They aim to prevent the loss of time or production in the process of maintaining an electrical supply in a work environment
b)	They aim to prevent death or injury to any person from electrical causes while working or in a work environment
c)	They aim to improve electrical working practices to provide a more efficient use of tools and equipment in a work environment
d)	They aim to reduce death or injury to an acceptable level to any person from electrical causes while working or in a work environment



A 'permit-to-work' system is a formal written system used to control certain types of work that are potentially hazardous.

Identify the elements which must be included on a 'permit-to-work' document?

Possible answers	
a)	Date of issue, description of work, points of contact, signature of
	document receiver
b)	Date and time of issue, location of work, points of isolation, signatures of
	issuer and receiver
c)	Date and time of issue, cost of work, points of switching, signature of
	company director
d)	Date and time of issue, description of work, points of switching,
	signatures of the working party

#### Question 33

In relation to commercial projects, the Construction Design and Management (CDM) Regulations 2015, require that under certain circumstances construction work is notifiable in writing to the HSE.

Which statement identifies ONE of those circumstances?

Possible answers	
a)	Where planned construction work will last longer than 20 working days
b)	Where planned construction work will last longer than 30 working days
c)	Where planned construction work will last longer than 40 working days
d)	Where planned construction work will last longer than 50 working days

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The Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR) places duties to report certain incidents that may involve the safety of those not employed by the duty holder.

Which of the following identifies ONE of these incidents?

Possible answers		
a)	Any single interruption of supply of 5 megawatts or more at the time of	
	the interruption for a period of one hour or longer	
b)	Any single interruption of supply of 1 megawatt or more at the time of the	
	interruption for a period of five hours or longer	
c)	Any multiple interruption of supply of 20 megawatts or more for more than	
	two 5 minutes periods	
d)	Any single interruption of supply of 20 megawatts or more at the time of	
	the interruption for a period of one hour or longer	

Questio	on 35		
Which st	tatement states the principles of maintenance as defined by the Electricity		
at Work	Regulations 1989?		
Possible answers			
	As may be financially viable to prevent danger, all systems shall be		
a)	maintained so as to prevent, so far as is reasonably practicable, such		
	danger		
b)	As may be necessary to improve performance, all systems shall be		
D)	maintained on an annual basis to prevent any loss of power to the system		
	As may be convenient to prevent danger, all systems shall be isolated to		
c)	prevent injury to operatives working on the system, based on time and		
	cost of maintenance operation		
d)	As may be necessary to prevent danger, all systems shall be maintained		
	so as to prevent, so far as is reasonably practicable, such danger		



What is meant by the term achieving 'Safety from the System'?

Possible answers		
a)	Safeguards that all equipment shall be made dead, prior to any work	
	activities being permitted on the electrical system	
b)	The condition which safeguards tools and equipment from the dangers of	
	work being conducted on the electrical system	
c)	The condition which safeguards persons working on or near to equipment	
	from the dangers which are inherent in that system	
d)	The condition which safeguards persons, tools, equipment, and plant	
	when working near the electrical system	

#### Question 37

Ofgem set price controls on the revenues of Transmission and Distribution Companies using the RIIO model to encourage Companies to consider a number of factors.

What factors do the initials RIIO stand for?

Possible answers		
a)	Revenue = Ideas + Implementation + Outlay	
b)	Reward = Input + Investment + Outlay	
c)	Reward = Innovation + Ideas + Outputs	
d)	Revenue = Incentives + Innovation + Outputs	



The Electricity Safety, Quality and Continuity Regulations 2002 (ESQCR) place duties on persons to report certain instances.

Which ONE of the following is reportable under ESQCR?

Possible answers		
a)	More interruptions to the electricity supply	
b)	Major interruptions to the electricity supply	
c)	All interruptions to the electricity supply	
d)	All planned interruptions to the electricity supply	

#### **Question 39**

The Construction Design and Management Regulations 2015 (CDM) place certain responsibilities on duty holders involved in the work project to improve health and safety.

Which ONE of following states an aim of the CDM regulations?

Possible answers		
a)	To appropriately cost the work so the tasks involved are managed to	
	achieve financial success	
b)	To carefully plan the work so the risks involved are kept to a minimum	
	and recorded for audit purposes	
c)	To plan the work to ensure the project is delivered within the set	
	timescales	
d)	To sensibly plan the work so the risks involved are managed from start to	
	finish	



The regulator Ofgem set targets for the Energy Network Companies.

Which ONE of the following identifies three of the targets?

#### Possible answers

a)	Consumer value, economical network design and good waste disposal
b)	Customer service, network reliability and environmental performance
c)	Customer communication, network performance and cost reduction
d)	Consumer interaction, network monitoring and reduced wastage

#### End of Questions

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# Practice Knowledge Assessment

#### Answer scheme

Question	Answer	
1	С	
2	В	
3	A	
4	С	
5	A	
6	A	
7	D	
8	С	
9	В	
10	A	
11	A	
12	A	
13	D	
14	D	
15	В	
16	D	
17	В	
18	A	
19	В	
20	С	

Question	Answer
21	D
22	В
23	С
24	D
25	В
26	С
27	A
28	С
29	С
30	С
31	В
32	В
33	В
34	A
35	D
36	С
37	D
38	В
39	D
40	В



			RGY & UTILITIES PENDENT SSMENT SERVICE
Candidate ID Attempt			
Last Name			
First Name			
Exam Date		Paper	
Centre Name			
Centre Number			
MARKING INSTRUCTIONS         Answers should be completed using a HB pencil.         ③ ⑤ ● ANSWER COMPLETED CORRECTLY			
Examples of how NOT to n	nark your examination shee	t. These will not be recor	rded
6 6 6 G G DO NOT	partially shade the answer c	ircle.	
© © @ ® DO NOT	use ticks or crosses.		
8 6 6 🗿 DO NOT	use circles.		
⑤ ⑤ ● ● DO NOT :	shade over more than one o	ircle.	
10000	11 0 0 0 0	21 0 0 0 0	31 (0 (0 (0 (0
20000	12 0 0 0 0	22 0 0 0 0	32 0 0 0 0
3 6 6 6 6	13 0 0 0 0	23 6 6 6 6	33 6 6 6 0
4 6 6 6 0	14 6 6 6 0	24 6 6 6 0 0	34 6 6 0 0
50000	15 6 6 6 0	25 6 6 6 0	35 6 6 6 0
60000	16 0 0 0 0	26 0 0 0 0	36 0 0 0 0
7000	17 6 6 6 0	27 6 6 6 0	37 6 6 6 0
80000	18 0 0 0 0	28 0 0 0 0	38 6 6 6 0
9000	19 0 0 0 0	29 0 0 0 0	39 0 0 0 0
10 0 0 0 0	20 0 0 0 0	30 0 0 0 0	40 0 0 0 0

EUIAS Knowledge Test EPNE Answer Sheet v1.1



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# Appendix D - Level 4 Electrical Power Networks Engineer Practical Observation Planning Form

#### Instructions

This form has two purposes:

- 1. To help you plan a practice Practical Observation for your apprentices
- 2. To inform EUIAS of the proposed task(s) for the live assessment

The apprentice is assessed:

- in a real working environment
- typically, be one day i.e. between 5 and 6 hours depending on the activity(s) and a maximum of 6 hours. The actual time allowed will be based on the comparable time an industry competent worker would take to achieve successful task(s) completion

Equipment and resources needed for the assessment must be in good and safe working condition.

The activities should be designed to assess a broad range of the skills, knowledge and behaviours developed over the period of the apprenticeship. However, as a minimum the practical observation must cover the activities and KSBs listed in the Planning Form below.

EUIAS offers a service to review the employer/training provider's Practical Observation task brief.

Task variations: If you have more than one apprentice being assessed, use the "Practical Task variations" section of the form to indicate what the task variations that will be put in place so that apprentices are not asked to complete identical tasks.

Complete the 'Level 4 Electrical Power Networks Engineer Practical Observation Planning Form' and submit it to the Service Delivery team via <u>enquiries@euias.co.uk</u>, for **review 1 month before the start** of the end-point assessment.


# Level 4 Electrical Power Networks Engineer Practical Observation Planning Form

Employer name and site address:	
Training provider (if applicable)	
Standard:	Electrical Power Networks Engineer
Pathways: (Select a pathway)	Control Engineer Electrical Project Engineer
	Operational Delivery Engineer
Level	4
Location of practical	
Summary of activity: Please provide a brief summary of the overall task/s to be completed during the assessment period	
Contact Details: Employer/training provider representative, email address and contact number overseeing the setup of the competency test (documents and site).	
Date submitted to EUIAS	

Estimated total duration of practical task(s) must be typically one day i.e. between 5 and 6 hours depending on the activity and a maximum of 6 hours.

Please state time for the practical task(s): \_\_\_\_



# **Practical Observation Checklist**

This checklist will assist the employer and/or training provider with planning the activity. Please confirm all required elements are covered:

Core knowledge to be covered in the task	Covered on activity
Please use the space below to provide a summary of the planned	
practical observation activities for each criteria.	
Explain how the apprentice will meet:	
K6 Company requirements with regard to project management tools,	
techniques and processes.	
Explain how the apprentice will meet:	
K9 Company business planning and resource control measures.	

Core Skills to be covered in the task	Covered on activity
Please use the space below to provide a summary of the planned	
practical observation activities for each criteria.	
Explain how the apprentice will meet:	
<b>S1</b> 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.	
Explain how the apprentice will meet:	
ELIAS Lovel 4 End point Assessment for Electrical Power Networks Engineer	Daga 28

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Core Skills to be covered in the task	Covered on activity
<b>S2</b> Ensure that all safety considerations are incorporated and evid in all working practices relating to the preparation and monitoring safety practices during the observation.	dent of
<b>Explain how the apprentice will meet:</b> <b>S4</b> Produce timely communications providing information to stakeholders both in writing and verbally relating the use and dissemination of information relevant to their job role.	
Explain how the apprentice will meet: S8 Use company IT systems to provide accurate and reliable data support business decisions relating to the use of IT systems and equipment during the course of their job role.	a to
Explain how the apprentice will meet: S11 Uses company risk tools and techniques to evaluate and pre- the reliability of engineering systems and equipment relating to the identification and control of risks	dict e

Core Behaviours to be covered in the task	Covered on activity
Please use the space below to provide a summary of the planned	
practical observation activities for each criteria.	
Explain how the apprentice will meet:	
B1 Health, Safety and Environment - follows health, safety and	
environmental policies and procedures and is prepared to challenge	
unsafe behaviour using appropriate techniques to ensure the	

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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.	
Explain how the apprentice will meet:	
<b>B3</b> 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.	
Explain how the apprentice will meet:	
<b>B5</b> Risk Awareness - has the embedded desire to reduce risks through systematic monitoring and checking of information identifying mitigation actions on an on-going basis	

PLUS Select the Pathway Specialist Skills to be covered in the task	Covered on activity	
Pathway: Control Engineer Specialist Skills		
<b>Control Engineer will</b> be observed safely managing a 'network desk', in-line with their Authorisation, in planned and unplanned situations demonstrating the control of network outages and their implications, identifying risks and how they have been minimised.		
Please use the space below to provide a summary of the planned		
practical observation activities for each criteria.		
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	Explain how the apprentice will meet: CE1 Remotely control the electrical network, in accordance with operating procedures and safety rules to ensure the safe and efficient operation of the power system	
	Explain how the apprentice will meet: CE2 Control all outages and network access requests ensuring risks to the network and system security are minimised	
	Explain how the apprentice will meet:	
	<b>CE3</b> Manage planned and fault operations and activities on the network to provide a safe and secure electricity supply	
	Explain how the apprentice will meet: CE4 Undertake work in complex, dynamic and reactive environments and provide technical/operational guidance to the rest of the business	
	Explain how the apprentice will meet: CE8 Work effectively under appropriate Control Engineer Authorisation in-line with company requirements	
	Pathway: Electrical Project Engineer Specialist Skills	Covered on activity
	<b>Electrical Project Engineer will</b> be observed undertaking engineering activities on a 'live' project demonstrating that it will meet safety, time, budget and stakeholder requirements including how project designs have been implemented, any changes made with the rationale for them and produce final construction plans.	
	Please use the space below to provide a summary of the planned practical observation activities for each criteria	
ļ	practical observation activities for each criteria.	



Explain how the apprentice will meet:	
EP1 Project manage activities to ensure projects are	delivered on time,
meet stakeholder and budget requirements	
How will the apprentice meet:	
EP2 Understand and work to project designs and inte	erpret
requirements to fit the specific environment the proje	ct is being
constructed in	
How will the apprentice meet:	
EP3 Manage stakeholder relations and produce final	construction
plans	
How will the apprentice meet:	
EP5 Be Authorised to work on the electricity network	in-line with
company/asset owner requirements	
v	
How will the apprentice meet:	
EP6 Issue, review and communicate to all site perso	nnel the agreed
safe systems of works associated with the activities I	peing carried out



How will the apprentice meet:		
EP7 Ensure the completion of final hand back docum	entation to the	
agreed specifications and timescales		
Pathway: Operational Delivery Engineer Specialis	st Skills	Covered
		on activity
Operational Delivery Engineer will be observed wo	orking in-line with	
Authorisation requirements for network, plant and ap	paratus.	
Responsible for the planning, management and cont	rol of agreed	
operational and safety requirements in line with spec	ified job tasks to	
include issue of "safety from the system documentati	on", engineering	
activities and control of working parties. On completion	on of task return	
network, plant and apparatus back to the control of the	ne network owner	
following approved company protocols		
Please use the space below to provide a summar	v of the planned	
practical observation activities for each criteria		
How the expression will most		
How the apprentice will meet:		
OD1 Plan, manage and undertake a range of engine	ering activities and	
operations to the electricity network, to meet design,	safety, time and	
commercial requirements		
How the apprentice will meet:		
OD2 Be Authorised to work on the electricity network	in-line with	
company/asset owner requirements		



How will the apprentice meet:		
<b>OD4</b> Take responsibility for and control others who may be working on		
the network		
How the apprentice will meet:		
<b>OD5</b> Issue, review and communicate to all site personnel the agreed		
safe systems of works associated with the activities being carried out		
How the apprentice will meet:		
<b>OD6</b> Ensure the completion of final hand back documentation to the		
agreed specifications and timescales		
Practical Task Variations - Describe how you can vary this task/s to en	sure that	
the assessment does not become predictable.		
Variation 1:		
Variation 2:		
Variation 3:		
Specific requirements (for example: authorisations/access arrangements/PPE):		



#### **Remember:**

• The specific detail of the tasks to be undertaken should be **kept confidential from the apprentices** 

Practical Task: Include relevant photographs to illustrate task(s)



Date received		
Date signed off		



# Appendix E: Practice Practical Observation Template

This document is for use by the person from the employer/training provider playing the role of the assessor during the practice practical observation. It is designed to help replicate the live assessment experience and to enable feedback to be provided to the apprentice.

Full Name of Apprentice	
Location(s) of Practice Practical Observation	
Full Name of Assessor	
Date of Practice Practical Observation	
Start Time	
End Time	
Assessor - Additional comments:	

				Grade
Please indicate the apprentice's practic	e practi	cal of	oservation	
grade (F/P/M/D):				

#### **Please Note:**

The Practical Observation is graded out of 100.

Pass: Each criteria must be met to achieve a pass, which will provide 60 marks.

Distinction: All of the Pass criteria must be met and ONE of the criteria from each of the distinction areas, which will provide additional 25 – 40 marks.

Fail: The apprentice does not demonstrate the pass criteria.



K6 Company requirements with regard to project management tools, techniques and processes						
B3 Interpersonal Skills - works well w	with people from d	lifferent d	lisciplines, backgrounds and expertise. Takes others' r	eeds and		
concerns into account and supports	them to accomplis	sh an act	ivity safely and on time.	П		
ALL of the following:	must acmeve	•	achieve a minimum of ONE of the following:	U		
<ul> <li>Chooses and uses the approprior company project/engineering tools, techniques and process project work</li> <li>Uses project management too technical information in a clear manner to sufficient depth for</li> <li>Demonstrates how they can viscopple from different disciplin backgrounds and expertise to projects</li> </ul>	briate management ses in their ols to present ar and concise the audience vork well with es, develop their		<ul> <li>Demonstrates how they are able to consult and involve appropriate people from other areas to capitalise on different skills/perspectives/experience and/or knowledge to improve the management of their projects</li> <li>Demonstrates how they are able to transmit difficult technical operational information in an understandable manner</li> </ul>			
Assessor must ask the following Assessor must standardised questions			all additional questions asked for clarification and I by the apprentice including examples.	Recording timeline.		
Questions Develop some open						
ended questions						
Fail Awarded 🗆 Pas	ss Awarded		Distinction Awarded			





K9 Company business planning and resource control measures						
To achieve a Pass the apprentice must achieve		To achieve a Distinction the apprentice must	D			
ALL of the following:		achieve a minimum of ONE of the following:				
<ul> <li>Chooses and uses the appropriate company business planning and reacontrol measures in their work</li> <li>Presents business planning/resource control measures information in a concise manner to sufficient depth to audience</li> <li>Identifies the risks of inadequate buplanning/ resource control measures asset project/s</li> <li>Demonstrates they have an embed desire to reduce risks through systemonitoring and checking of information an on-going basis and taking mitigations when required</li> </ul>	esource	<ul> <li>Demonstrates how they are able to consult and involve appropriate people from other areas to capitalise on different skills/perspectives/experience and/or knowledge to improve the planning process</li> <li>Demonstrates how they are able to transmit difficult planning and/or resource information in an understandable manner</li> </ul>				
Assessor must ask the following Ass	essor must record	d all additional questions asked for clarification and	Recording			
standardised questions. the	responses provid	ed by the apprentice including examples.	timeline.			
Questions Develop some open						
ended questions						
Fail Awarded 🛛 Pass Awa	arded 🗌	Distinction Awarded				





**S1** Comply with company and industry health, safety and environmental standards, regulations, company operating procedures and working practices

**B1** Health, Safety and 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

To achieve a Pass the apprentice must achieve	Р	To achieve a Distinction the apprentice must	D
ALL of the following:		achieve a minimum of ONE of the following:	
<ul> <li>Takes actions to ensure their project work complies with the health, safety and environmental considerations which affect their projects</li> <li>Chooses and uses the appropriate company health, safety and environmental policies and procedures</li> <li>Presents health, safety and environmental information in a clear and concise manner to sufficient depth for the audience</li> </ul>		<ul> <li>Consults and involves appropriate people from other areas to capitalise on different skills/perspectives/experience and/or knowledge to improve the health, safety or environmental arrangements of their operational procedures</li> <li>Assesses the impact of a health, safety or environmental problem and seeks out solutions by making suggestions to remedy or resolve the situation</li> </ul>	
• Demonstrates how they follow health, safety and environmental policies and procedures in their designs and where necessary challenge unsafe behaviour/practices using appropriate techniques			



Demonstrates high levels of a the desire to reduce risks thro monitoring and checking of in	concentration and ough regular formation in their			
designs				
Assessor must ask the following	Assessor must	record a	all additional questions asked for clarification and	Recording
standardised questions.	the responses	provided	l by the apprentice including examples.	timeline.
Questions Develop some open				
ended questions				
Fail Awarded 🛛 Pass	Awarded		Distinction Awarded	





S2 Ensure that all safety considerations are incorporated and evident in all working practices						
<b>B5</b> Risk awarene	ess - has the embed	ded desire to redu	uce risks	through systematic monitoring and checking of information	ation	
Identifying mitigation actions on an on-going basis						
ALL of the follow	wing:		•	achieve a minimum of ONE of the following:		
<ul> <li>Uses and health, sat procedure</li> <li>Recognise associated appropriat</li> <li>Presents s concise m audience</li> <li>Demonstra to reduce and check basis and required</li> </ul>	follows the appropri fety and environmer s es and identifies spe d with their designs te course of action safety information in anner to sufficient d ates they have an e risks through syster ting of information o taking mitigation ac	ate company ital policies and incific risks and chooses an a clear and epth for the mbedded desire matic monitoring in an on-going tions when		<ul> <li>Consults and involves appropriate people from other areas to capitalise on different skills/perspectives/experience and/or knowledge to ensure safety considerations are incorporated into their operational procedure/s</li> <li>Assesses the impact of an operational problem and seeks out solutions by making suggestions to remedy or resolve the situation safely</li> </ul>		
Assessor must	ask the following	Assessor must	record a	all additional questions asked for clarification and	Recording	
Standardised qu		the responses	provided	by the apprentice including examples.	umenne.	
ended questions	lop some open					
Fail Awarded	□ Pass	Awarded		Distinction Awarded		
ENERGY &	EUIAS Level 4 End-p	oint Assessment for E	Electrical P	ower Networks Engineer (Control Engineer; Electrical Proiect Eng	ineer and	

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S4 Produce timely communications providing information to stakeholders both in writing and verbally in relation to their role activities

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

To achieve a Pass the apprentice n	nust achieve	Р	To achieve a Distinction the apprentice must	D
ALL of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Presents information in a clear manner to sufficient depth for t</li> <li>Demonstrates that others' view considered and support, where offered to them</li> <li>Speaks confidently, listens to c required action to progress wo</li> <li>Demonstrates how they can w people from different discipline and expertise</li> <li>Demonstrates how they take o and concerns into account and to accomplish an activity safely</li> </ul>	and concise the audience vs are e required, is others and takes rk ork well with es, backgrounds thers' needs I supports them y and on time		<ul> <li>Communicates effectively with stakeholders to provide operational information in both written and verbal formats to keep them informed</li> <li>Communicates effectively to transmit complex operational information in an understandable manner</li> </ul>	
Assessor must ask the following	Assessor must	record a	all additional questions asked for clarification	Recording
standardised questions. and the response			ided by the apprentice including examples.	timeline.
Questions Develop some open ended questions				
Fail AwardedDPass	Awarded		Distinction Awarded	



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S8 Use company IT	<b>S8</b> Use company IT systems to provide accurate and reliable data to support business decisions					
To achieve a Pass ALL of the following	the apprentice nng:	nust achieve	Р	To achieve a Distinction the apprentice must achieve a minimum of ONE of the following:	D	
<ul> <li>Chooses and systems, tech their project v</li> <li>Uses IT systection clear and con the audience</li> </ul>	d uses the approp hniques and proce work ems to present inf ncise manner to se	riate company IT esses used in ormation in a ufficient depth for				
Assessor must as	k the following	Assessor must	record a	Il additional questions asked for clarification	Recording	
standardised ques	stions.	ons. and the responses provided by the apprentice including examples.				
Questions Develop some open						
ended questions						
Fail Awarded	□ Pass	Awarded		Distinction Awarded		





S11 Uses company risk tools and techniques to evaluate and predict the reliability of engineering systems and equipment							
B3 Interpersonal Skills - works well w	with people from d	ifferent d	lisciplines, backgrounds and expertise. Takes others' n	eeds and			
concerns into account and supports	them to accomplis	sh an act	ivity safely and on time				
To achieve a Pass the apprentice	must achieve	Р	To achieve a Distinction the apprentice must	D			
ALL of the following:			achieve a minimum of ONE of the following:				
<ul> <li>Chooses and uses the approprish tools and techniques to expredict the reliability of engine and equipment used in their presents all information in a comanner to sufficient depth for</li> <li>Recognises risks and choose action depending on the situation depending on the situation reduce risks through system and checking of information or basis and taking mitigation action action and taking mitigation action and taking mitigation action action action action action and taking mitigation action ac</li></ul>	briate company valuate and eering systems blanning designs clear and concise the audience s appropriate tion mbedded desire matic monitoring in an on-going ctions when		<ul> <li>Consults and involves appropriate people from other areas to capitalise on different skills/perspectives/experience and/or knowledge to predict the reliability of engineering systems and equipment in their planned operational procedures</li> <li>Assesses the impact of an operational problem and seeks out solutions by making suggestions to remedy or resolve the situation safely</li> </ul>				
required							
Assessor must ask the following	Assessor must	record a	all additional questions asked for clarification and	Recording			
standardised questions.	the responses <b>p</b>	provided	by the apprentice including examples.	timeline.			
Questions Develop some open							
Fail Awarded   D   Pass	Awarded		Distinction Awarded				





## Pathway: Control Engineer Role Specific Skills

CE1 Remotely control the electrical network, in accordance with operating procedures and safety rules to ensure the safe and efficient operation of the power system **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 To achieve a Pass the apprentice must achieve Ρ To achieve a Distinction the apprentice must D achieve a minimum of ONE of the following: ALL of the following: • Ensures Health, Safety and Environmental Consults and involves other control room  $\square$ engineers to safely carry out complex considerations are taken into account and operational procedures and achieve a safe prioritised when carrying out operational and effective outcome procedures Identifies and assesses the impact of an Follows Company policies and procedures operational problem and seeks out and finds a for the operational work being undertaken solution/s to resolve the situation to an Presents technical information clearly and effective outcome concisely explaining their plans for conducting operational procedures Demonstrates they have an embedded desire to reduce risks through systematic monitoring and checking of information on an on-going basis and taking mitigation actions when required Assessor must ask the following Assessor must record all additional questions asked for clarification Recording standardised questions. and the responses provided by the apprentice including examples. timeline.





Questions Deve ended questions	elop son ;	ne open			
Fail Awarded		Pass A	Awarded	Distinction Awarded	



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CE2 Control all outages and network access requests ensuring risks to the network and system security are minimised

**B1** Health, Safety and 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

To achieve a Pass the apprentice must achieve		Р	To achieve a Distinction the apprentice must	D
ALL of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Implements the Company Health Environmental policies and proce during the planning and delivery operational procedures</li> <li>Follows the correct Company po strategies during their operationa</li> <li>Speaks confidently and listen to when taking requests to access network</li> <li>Demonstrates high levels of com- and the desire to reduce risks th regular monitoring and checking information</li> </ul>	n, Safety and edures of their licies / al activities others views the electrical centration rough of		<ul> <li>Communicates complex operational information in an understandable manner to others reliant on clear and accurate information</li> <li>Identifies and assesses the impact of an operational problem and seeks out and finds a solution/s to resolve the situation to an effective outcome</li> </ul>	
Assessor must ask the following	Assessor must	t record	all additional questions asked for clarification	Recording
standardised questions.	and the respon	nses pro	ovided by the apprentice including examples.	timeline.
Questions Develop some open				
ended questions				
Fail AwardedDPass Aw	varded		Distinction Awarded	



CE3 Manage planned/fault operations and activities on the network to provide a safe and secure electricity supply							
B3 Interpersonal skills – works well with people from different disciplines, backgrounds and expertise. Takes others ne							
concerns into account and supports them to accomplish an activity safely and on time							
To achieve a Pass the apprentice	must achieve	P	To achieve a Distinction the apprentice must	U			
ALL of the following:			achieve a minimum of ONE of the following:				
<ul> <li>Carries out and follows the construction of the safety and environmental polyprocedures during the deliver planned/unplanned operation</li> <li>Follows the correct company policies/strategies during their planned/unplanned operation</li> <li>Speaks confidently and listen when giving and receiving institueir planned/unplanned work</li> <li>Demonstrates how they work people with different disciplin expertise, taking their needs/account and supporting them activities safely and on time</li> </ul>	ompany health, icies and ry of their al activities r al procedures to others views structions during c activities well with es and concerns into to accomplish		<ul> <li>Consults and involves other control room engineers to safely manage planned/fault operations on the network and achieve a safe and effective outcome</li> <li>Communicates complex planned/fault operational information in an understandable manner to others reliant on clear and accurate information</li> </ul>				
Assessor must ask the following	Assessor must	t record	all additional questions asked for clarification and	Recording			
standardised questions. the responses			d by the apprentice including examples.	timeline.			
Questions Develop some open							
ended questions							
Fail Awarded   D   Pass	Awarded		Distinction Awarded				





CE4 Undertake work in complex, dynamic and reactive environments and provide technical/operational guidance to the rest of the business

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

To achieve a Pass the apprentice must achieve			To achieve a Distinction the apprentice must	D
ALL of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Presents complex technical infor colleagues/field engineers clearly concisely</li> <li>Considers the views of others du technical discussions for energies</li> </ul>	mation to y and ring		<ul> <li>Consults and involves other control room engineers to provide technical / operational guidance to safely manage operations on the network</li> </ul>	
<ul> <li>technical discussions for operational work on the network</li> <li>Speaks and listens to others views during</li> </ul>			Communicates complex technical operational information in an understandable manner to other control operations on the operations on the operations on the operations of t	
operational activities and takes the appropriate action/s to conduct their operational procedures			network	
<ul> <li>Demonstrates how they work we people with different disciplines a</li> </ul>	ll with and			
expertise, taking their needs/con account and supporting them to	cerns into accomplish			
activities safely and on time				
Assessor must ask the following Assessor m		ust reco	rd all additional questions asked for clarification	Recording
standardised questions. and the resp			provided by the apprentice including examples.	timeline.
<b>Questions</b> <i>Develop</i> some open ended questions				



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	Fail Awarded		Pass Awarded		Distinction Awarded	
Ň		EUIAS L S Operatio	evel 4 End-point Assessment fo nal Delivery Engineer) Supportir	r Electrical Powe ng Documents Q	r Networks Engineer (Control Engineer; Electrical Proje AN: 603/7295/3 – ST0475/AP01 V4.0 © 2023 Energy &	ect Engineer and Utility Skills Page 60



CE8 Work effectively under appropriate Control Engineer Authorisation in-line with company requirements								
B3 Interpersonal skills - works well w	B3 Interpersonal skills - works well with people from different disciplines, backgrounds and expertise. Takes others' needs and							
concerns into account and supports	them to accomplis	h an acti	vity safely and on time	D				
ALL of the following:	nust achieve		achieve a minimum of ONE of the following:	D				
<ul> <li>Follows the appropriate Comp procedures within the range o authorisation for control activit network</li> <li>Listens and takes others views consideration when discussing matters for network operations</li> <li>Speaks and communicates co operational procedures and ta action when required</li> <li>Demonstrates how they work with different disciplines and e their needs/concerns into acco supporting them to accomplish and on time</li> </ul>	any policy and f their ies on the s into g technical onfidently during kes the required well with people expertise, taking ount and n activities safely		<ul> <li>Consults and involves other control room engineers to provide support in operational procedures outside of their level of authorisation</li> <li>Passes complex technical information onto more senior authorised control engineers in an understandable manner to allow them to conduct operations on the network</li> </ul>					
Assessor must ask the following	Assessor must	record a	II additional questions asked for clarification and	Recording				
standardised questions. the responses		provided	by the apprentice including examples.	timeline.				
Questions Develop some open								
ended questions								





Fail Awarded		Pass Awarded		Distinction Awarded	
ENERGY &	EUIAS	Level 4 End-point Assessment for	r Electrical Power Net	works Engineer (Control Engineer; Electrical Pro	ject Engineer and
	LLS Operat	onal Delivery Engineer) Supportir	ng Documents QAN: 6	603/7295/3 – STÒ475/AP01 V4.0 © 2023 Energy	& Utility Skills Page 62



### Pathway: Engineer Project Role Specialist Skills

<b>EP1</b> Project manage activities to ens <b>B3</b> Interpersonal skills - works well we concerns into account and supports	sure projects are de vith people from dif	elivered o ferent dis	on time, meet stakeholder and budget requirements sciplines, backgrounds and expertise. Takes others' n	eeds and
To achieve a Pass the apprentice	must achieve	P	To achieve a Distinction the apprentice must	D
ALL of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Demonstrates how they use the Company policies and proced manage their work</li> <li>Demonstrates how they can prinformation in a clear and con sufficient depth for others</li> <li>Identifies budget / resource contheir project plans and outcom</li> <li>Demonstrates how they can we people from different disciplined and expertise taking their need into account to develop their project</li> </ul>	ne relevant ures to plan and resent cise manner with onsiderations in nes vork well with es, backgrounds ds and concerns projects		<ul> <li>Demonstrates they are able to consult and involve appropriate people from other areas to capitalise on different skills / perspectives / experience and / or knowledge to improve their project development / delivery</li> <li>Demonstrates they are able to assimilate complex project information and transmit it in an understandable manner</li> </ul>	
Assessor must ask the following	Assessor must	record a	Il additional questions asked for clarification	Recording
standardised questions. and the responses provided by the apprentice including examples			ided by the apprentice including examples.	timeline.
<b>Questions</b> Develop some open ended questions				
Fail AwardedDPass	Awarded		Distinction Awarded	



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EP2 Understand and work to project designs and interpret requirements to fit the specific environment the project is being constructed in

**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

To achieve a Pass the apprentice must achie	ve P	To achieve a Distinction the apprentice must	D
ALL of the following:		achieve a minimum of ONE of the following:	
<ul> <li>Demonstrates how they have ensured the project plans consider health, safety and environmental factors and comply with company policies and procedures</li> <li>Demonstrates how they can present information in a clear and concise manne with sufficient depth for others</li> <li>Demonstrates they can speak confidently listen to others and take the required acti</li> <li>Demonstrates they have an embedded d to reduce risks through systematic monito and checking of information on an on-goi basis and taking mitigation actions when required</li> </ul>	eir	<ul> <li>Demonstrates they are able to consult and involve appropriate people from other areas to capitalise on different skills / experience and / or knowledge to improve their project development / delivery</li> <li>Demonstrates they can evaluate and predict the impact of project problems, seek out solutions and make suggestions which result in improvement</li> </ul>	
Assessor must ask the following Assessor	must record a	II additional questions asked for clarification	Recording
standardised questions. and the response		ided by the apprentice including examples.	timeline.
Questions Develop some open			
ended questions			





Fail Av	varded		Pass Awarded			Distinction Award	ed	
	ERGY &	EUIAS Lev	el 4 End-point Assessmen	t for Electrical Po	wer Networks En	gineer (Control Engineer	; Electrical Project En	igineer and
	LITY SKILLS	Operationa	I Delivery Engineer) Suppo	orting Documents	QAN: 603/7295/	3 – ST0475/AP01 V4.0 @	2023 Energy & Utilit	y Skills Page 6



EP3 Manage stakeholder relations and produce final construction plans						
CB3 Interperson	al skill	s - works well	with people from c	different o	disciplines, backgrounds and expertise. Takes others'	needs and
concerns into ac	count	and supports t	hem to accomplis	h an activ	vity safely and on time	
To achieve a Pa	iss the	e apprentice r	nust achieve	Р	To achieve a Distinction the apprentice must	D
ALL of the follo	wing:				achieve a minimum of ONE of the following:	
<ul> <li>Demonstration information with suffic</li> <li>Demonstration taken into where need</li> <li>Demonstratisten to of</li> </ul>	ates ho n in a ient de ates th conside eded ates th thers a ates ho m diffe tise tal	ow they can pro- clear and concepth for others nat other views deration and s ney can speak and take the re- ow they can we event discipline king their need levelop their p	resent cise manner have been upport offered confidently, quired action ork well with es, backgrounds ds and concerns rojects		<ul> <li>Demonstrates they are able to resolve conflict/disagreement with stakeholders to reach a positive outcome</li> <li>Demonstrates they are able to assimilate complex project information and transmit it in an understandable manner to gain project approval/agreement</li> </ul>	
Assessor must	ask th	e following	Assessor must	record a	Il additional questions asked for clarification	Recording
standardised questions. and the response			and the respons	ses prov	ided by the apprentice including examples.	timeline.
Questions Deve	lop so	me open				
ended questions						
Fail Awarded		Pass	Awarded		Distinction Awarded	

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EP5 Be Authorised to work on the electricity network in-line with company/asset owner requirements B1 Health, Safety and 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

To achieve a Pass the apprentice m	ust achieve	Ρ	To achieve a Distinction the apprentice must	D
ALL of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Demonstrates how they have gas analysed information to plan provinvolve the work of third party construction of the planned activity, their requires the desired outcomes</li> <li>Demonstrates how they have readed defined problems which the tackled in a logical way, making for improvement</li> <li>Demonstrates how they follow hand environmental policies and and where necessary challenge behaviour using appropriate tect</li> </ul>	athered and ojects which ontractors ers involved in rements and ecognised ey have g suggestions nealth, safety procedures e unsafe chniques		<ul> <li>Demonstrates they are able to assimilate complex project / operational information and transmit it in an understandable manner to allow work on the network to be conducted safely.</li> <li>Demonstrates they can assess the impact of potential problems for work on the network, seek out solutions and make suggestions which resolve the situation</li> </ul>	
Assessor must ask the following	Assessor must reco	ord al	I additional questions asked for clarification	Recording
standardised questions.	and the responses	provi	ded by the apprentice including examples.	timeline.
Questions Develop some open				
ended questions				
Fail Awarded          □    Pass A	Awarded		Distinction Awarded	





**EP6** Issue, review and communicate to all site personnel the agreed safe systems of works associated with the activities being carried out

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

To achieve a Pass the apprentice must achieve		To achieve a Distinction the apprentice must	D
ALL of the following:		achieve a minimum of ONE of the following:	
<ul> <li>Demonstrates how they have ensured their project plans consider health, safety and environmental factors and comply with company policies and procedures</li> <li>Demonstrates they can speak confidently, listen to others and take the required action</li> <li>Demonstrates how they recognise risks and choose appropriate courses of action to deal with them</li> <li>Demonstrates high levels of concentration and the desire to reduce risks through monitoring and checking of network information</li> </ul>		<ul> <li>Demonstrates they are able to assimilate complex project / operational information and transmit it in an understandable manner to allow work on the network to be conducted safely</li> <li>Demonstrates they can assess the impact of potential problems for work on the network, seek out solutions and make suggestions which resolve the situation</li> </ul>	
Assessor must ask the following Assessor must	record a	all additional questions asked for clarification	Recording
standardised questions. and the response	ses prov	ided by the apprentice including examples.	timeline.
Questions Develop some open			
ended questions			
Fail Awarded   D   Pass Awarded		Distinction Awarded	





<b>EP7</b> Ensure the completion of final ha	and back documer	ntation to	the agreed specifications and timescales				
<b>B1</b> Health, Safety and Environment – follows health, safety and environmental policies and procedures and is prepared to							
and/or with teams. Demonstrates hig	h concentration an	d the de	sire to reduce risks through regular monitoring and ch	necking			
information							
To achieve a Pass the apprentice n	nust achieve	Р	To achieve a Distinction the apprentice must	D			
ALL of the following:			achieve a minimum of ONE of the following:				
<ul> <li>Demonstrates how they have a project plans consider health, senvironmental factors and com company policies and procedu</li> <li>Demonstrates how they use th Company policies and procedu and finalise their project</li> <li>Demonstrates they can speak listen to others and take the re</li> <li>Demonstrates how they follow and environmental policies and where necessary challeng</li> </ul>	ensured their safety and nply with ires ie relevant ures to complete confidently, quired action health, safety d procedures ie unsafe		<ul> <li>Demonstrates they are able to assimilate complex project / operational information and transmit it in an understandable manner to allow the network to be operationally returned safely</li> <li>Demonstrates they can assess the impact of problems for receipt of the network, seek out solutions and make suggestions which resolve the situation</li> </ul>				
<ul> <li>behaviour using appropriate te</li> <li>Demonstrates high levels of co</li> </ul>	chniques						
the desire to reduce risks throu	Jugh regular						
monitoring and checking of info	ormation						
Assessor must ask the following	Assessor must	record a	Il additional questions asked for clarification	Recording			
standardised questions.	and the respons	es prov	ided by the apprentice including examples.	timeline.			
Questions Develop some open							
ended questions							



Fail Awarded		Pass Awarded		Distinction Awarded			
	EUIAS Le	EUIAS Level 4 End-point Assessment for Electrical Power Networks Engineer (Control Engineer; Electrical Project Engineer) Operational Delivery Engineer) Supporting Documents QAN: 603/7295/3 – ST0475/AP01 V4 0 © 2023 Energy & Utility Ski					
	Operation	ia beinery Engineer/ oupporting t	Joouments		Page 70		



# Pathway: Operational Delivery Engineer Role Specific Skills

<ul> <li>OD1 Plan, manage and undertake a range of engineering activities and operations to the electricity network, to meet design, safety, time and commercial requirements</li> <li>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 safety and on time</li> </ul>								
To achieve a Pass the apprentice mu	ust achieve	Р	To achieve a Distinction the apprentice must	D				
ALL of the following:			achieve a minimum of ONE of the following:					
<ul> <li>Demonstrates how they use the Company policies and procedure and manage their work</li> <li>Demonstrates how they can pre information in a clear and conciss with sufficient depth for others</li> <li>Identifies budget / resource cons in their project plans and outcom</li> <li>Demonstrates how they can wor people from different disciplines and expertise taking their needs concerns into account to develo projects</li> </ul>	relevant es to plan sent se manner siderations nes rk well with , backgrounds s and p their		<ul> <li>Demonstrates they are able to consult and involve appropriate people from other areas to capitalise on different skills / perspectives / experience and / or knowledge to improve the outcome / delivery of the operation</li> <li>Demonstrates they are able to assimilate complex operational information and transmit it in an understandable manner</li> </ul>					
Assessor must ask the following Assessor mus			all additional questions asked for clarification	Recording				
standardised questions.	and the respo	nses pro	ovided by the apprentice including examples.	timeline.				
Questions Develop some open								
ended questions								
Fail Awarded   D   Pass Awarded			Distinction Awarded					



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**OD2** Be Authorised to work on the electricity network in-line with company/asset owner requirements B1 Health, Safety and 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 To achieve a Pass the apprentice must achieve To achieve a Distinction the apprentice must D Ρ . . . . . . . . 

ALL of the following:			achieve a minimum of ONE of the following:		
<ul> <li>Demonstrates how they ensure operations consider health, sare environmental factors and concompany policies and proced</li> <li>Demonstrates how they use the Company policies and proced planned operations</li> <li>Demonstrates how they recogn choose appropriate courses of with them</li> <li>Demonstrates how they follow and environmental policies are and where necessary challen behaviour using appropriate to the company choice appropriate to the company follow and environmental policies are and where necessary challen behaviour using appropriate to the company company company company company policies are appropriated.</li> </ul>	re their planned afety and mply with ures the relevant dures during their gnise risks and of action to deal w health, safety nd procedures ge unsafe		<ul> <li>Demonstrates they are able to consult and involve appropriate people to capitalise on different skills / perspectives / experience and / or knowledge to deliver a successful operational outcome</li> <li>Demonstrates they are able to assimilate complex operational information and transmit it in an understandable manner</li> </ul>		
Assessor must ask the following	Assessor must	record a	II additional questions asked for clarification and	Recording	
standardised questions.	the responses provided by the apprentice including examples.				
Questions Develop some open ended questions					
Fail AwardedDPass	Awarded		Distinction Awarded		




OD4 Take responsibility for and con	trol others who ma	y be wor	king on the network	
<b>B5</b> Risk awareness – has the embed	dded desire to redu	uce risks	through systematic monitoring and checking of inform	ation
identifying mitigation actions on an o	on-going basis		To achieve a Distinction the expression must	
To achieve a Pass the apprentice	must achieve	Р	To achieve a Distinction the apprentice must	D
ALL of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Demonstrates how they have planned operations consider and environmental factors an company policies and proced</li> <li>Demonstrates how they can p operational information in a c concise manner with sufficien others</li> </ul>	ensured their health, safety d comply with ures present lear and it depth for		<ul> <li>Demonstrates they are able to consult and involve appropriate people to capitalise on different skills/perspectives / experience and / or knowledge to deliver a successful operational outcome</li> <li>Demonstrates they are able to assimilate complex operational information and transmit it in an understandable manner</li> </ul>	
<ul> <li>Demonstrates they can speal listen to others and take the r where required</li> <li>Demonstrates they have an e to reduce risks through system and checking of information of basis and taking mitigation ad required</li> </ul>	k confidently, equired action embedded desire matic monitoring on an on-going ctions when			
Assessor must ask the following	Assessor must	record a	II additional questions asked for clarification and	Recording
standardised questions. the responses provided by the apprentice including examples.				timeline.
Questions Develop some open ended questions				
Fail AwardedDPass	Awarded		Distinction Awarded	





**OD5** Issue, review and communicate to all site personnel the agreed safe systems of works associated with the activities being carried out

**B1** Health, Safety and 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

To achieve a Pass the apprentice must achie	ve P	To achieve a Distinction the apprentice must	D
ALL of the following:		achieve a minimum of ONE of the following:	
<ul> <li>Demonstrates how their planned operation activities consider health, safety and environmental factors and comply with company policies and procedures</li> <li>Demonstrates they can speak confidently listen to others and take the required action.</li> <li>Demonstrates how they recognise risks a choose appropriate courses of action to company with them</li> <li>Demonstrates high levels of concentration the desire to reduce risks through monito and checking of operational information</li> </ul>	nal	<ul> <li>Demonstrates they are able to assimilate complex operational information and transmit it in an understandable manner to allow work on the network to be conducted safely</li> <li>Demonstrates they can assess the impact of potential problems for work on the network, seek out solutions and make suggestions which resolve the situation</li> </ul>	
Assessor must ask the following Assessor	must record a	II additional questions asked for clarification and	Recording
standardised questions. the responses provided by the apprentice including examples.			timeline.
Questions Develop some open ended questions			
Fail Awarded   D   Pass Awarded		Distinction Awarded	





<b>OD6</b> Ensure the completion of final hand b <b>CB1</b> Health, Safety and Environment – follo challenge unsafe behaviour using appropria and/or with teams. Demonstrates high cond information	ack documentation t ws health, safety an ate techniques to en centration and the de	o the agreed specifications and timescales d environmental policies and procedures and is prepar sure the protection of people and property when workin esire to reduce risks through regular monitoring and ch	red to ng alone ecking
To achieve a Pass the apprentice must a	achieve P	To achieve a Distinction the apprentice must	D
ALL of the following:		achieve a minimum of ONE of the following:	
<ul> <li>Demonstrates how their operational consider health, safety and environm factors and comply with company porcedures</li> <li>Demonstrates how they use the rele Company policies and procedures to and finalise network operations</li> <li>Demonstrates they can speak confic listen to others and take the required</li> <li>Demonstrates how they follow health and environmental policies and procedures and where necessary challenge uns behaviour using appropriate techniq</li> </ul>	plans	<ul> <li>Demonstrates they are able to assimilate complex project / operational information and transmit it in an understandable manner to allow the network to be operationally returned safely</li> <li>Demonstrates they can assess the impact of problems for receipt of the network, seek out solutions and make suggestions which resolve the situation</li> </ul>	
the desire to reduce risks through re	gular		
monitoring and checking of informati	on		
Assessor must ask the following Asse	ssor must record a	Il additional questions asked for clarification and	Recording
standardised questions. the re	esponses provided	by the apprentice including examples.	timeline.
Questions Develop some open ended questions			





Fail Awarded		Pass Awarded		Distinction Awarded	
	EUIAS S Operati	Level 4 End-point Assessment for onal Delivery Engineer) Supporting	Electrical Power Documents QA	Networks Engineer (Control Engineer; Electrical Proje N: 603/7295/3 – ST0475/AP01 V4.0 © 2023 Enerav &	ect Engineer and Utility Skills
		, , , , , , , , , , , , , , , , , , ,			Page 76



## Appendix F: Practice Technical Interview Template

This document is for use by the employer/provider person playing the role of the assessor during a practice technical interview. It is designed to help replicate the live assessment experience and to enable feedback to be provided to the apprentice. The practice technical interview must be conducted under examination conditions and recorded. The apprentice must be asked questions.

Apprentice Full Name:			
Employer and location:			
Assessor Full Name:			
Date of Interview:	Start time:	Finish time:	

#### **Please Note:**

The Technical Interview is graded out of 100.

Pass: Each criteria must be met to achieve a pass, which will provide 60 marks.

Distinction: All of the Pass criteria must be met and ONE of the criteria from each of the distinction areas, which will provide additional 25 – 40 marks.

Fail: The apprentice does not demonstrate the pass criteria.

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K7 Company engineering policies a	opropriate to their	role		
To achieve a Pass the apprentice	must achieve	Р	To achieve a Distinction the apprentice must	D
ALL of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Demonstrate how they have g analysed relevant information relevant Company engineerin their asset projects to achieve solutions</li> <li>Explain the link between their and how they have ensured of the relevant technical specific</li> <li>Explain how they have used the of the company engineering p their asset projects to achieve objectives</li> </ul>	gathered and to apply the g policies to workable asset projects compliance with ations heir knowledge policies to support e regulatory		<ul> <li>Confidently explains in detail the relevant company engineering policies which support sound engineering principles in their work projects</li> <li>Confidently explains how they have used their knowledge of relevant engineering policies to improve the integrity, safety and longevity of the electrical network in their asset projects</li> </ul>	
Assessor must ask the following	Assessor must	record a	Il additional questions asked for clarification and	Recording
standardised questions. the responses p			by the apprentice including examples.	timeline.
Questions Develop some open				
ended questions				
Fail Awarded 🛛 Pass	Awarded		Distinction Awarded	



K8 Engineering problems including how to identify the problem, gather and analyse all relevant information, provide and implement a workable solution and monitoring its effectiveness

**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

To achieve a Pass the apprentice must achieve		Р	To achieve a Distinction the apprentice must	D
ALL of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Demonstrate how they have gas analysed relevant information is solutions to resolve engineerin</li> <li>Explain how they have recogning defined problems associated with projects</li> <li>Explain how they have tackled in a step by step logical way an suggestions for solving problem benefit customers and the bus</li> <li>Explain how operational analyse undertaken supports the comp and policies ensuring compliant requirements</li> </ul>	athered and to implement g problems sed, and vith their work asset issues and made ms which mess sis they have any strategies ace with technical		<ul> <li>Confidently explains how they have resolved engineering problems based on sound principles to improve the integrity / safety / longevity of the network</li> <li>Explains how they have assessed the effect of differing approaches to resolve engineering problems and made suggestions for improvement</li> </ul>	
Assessor must ask the following	Assessor must r	record al	l additional questions asked for clarification and	Recording
standardised questions. the responses p		rovided I	by the apprentice including examples.	timeline.
<b>Questions</b> <i>Develop</i> some open ended questions				



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Fail Awarded		Pass Awarded		Distinction Awarded	
ENERGY &	FUIAST	evel 4 End-point Assessment for	Electrical Power I	Networks Engineer (Control Engineer: Electrical Projec	t Engineer and
	LS Operatio	nal Delivery Engineer) Supporting	Documents QAN	N: 603/7295/3 – ST0475/AP01 V4.0 © 2023 Energy & l	Utility Skills Page 80



K9 Company business planning and reso	ource control me	asures		
<b>B6</b> Planning and Organising - takes a for projects and ensure plans are in place to	ward looking per manage anticipa	rspective ated isรเ	e when considering the delivery of decisions, activities a ues, considers contingency planning	and
To achieve a Pass the apprentice must	t achieve	Ρ	To achieve a Distinction the apprentice must	D
ALL of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Explain how they have gathered at analysed relevant information in or implement effective planning solution resource requirements in their asset.</li> <li>Demonstrate how they have linked asset work to company strategies a policies to ensure compliance with company business planning and recontrol measures.</li> <li>Demonstrate how they have developroject plans/designs that contain of budgets, desired outcomes, times evaluation records.</li> <li>Explains how they have taken a for perspective when considering deliving that plans and ensured that plans a set of the plans.</li> </ul>	nd rder to ions or et projects I their and the esource oped objectives, cales and rward looking very planning are in place		<ul> <li>Confidently explains the principles of the company's business planning policy and resource control measures and the effect on their work projects</li> <li>Explains how they have used their knowledge of business planning and resource control measures to assess different approaches to their asset projects and made suggestions for improvement</li> </ul>	
to manage anticipated issues, including				
contingency planning		a and cll		Decending
Assessor must ask the following Ass	sessor must re	cora all	additional questions asked for clarification and	Recording
standardised questions. the	e responses pro	bvided b	by the apprentice including examples.	timeline.



Questions Devel	lop son	ne open			
ended questions					
Fail Awarded		Pase	s Awarded	Distinction Awarded	





**S3** 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

**B6** Planning and 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

To achieve a Pass the apprentice must achieve		Р	To achieve a Distinction the apprentice must	D
ALL of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Explain how they have gatherer relevant information in order to improve the integrity/safety/lon electrical network</li> <li>Demonstrate how they have line work to company strategies an ensure compliance with the corregulatory principles</li> <li>Explain how their engineering a supports the business/client to regulatory incentive mechanism</li> <li>Explains how they have taken a perspective when considering the asset projects and ensured that place to manage anticipated is contingency planning</li> </ul>	d and analysed maintain and gevity of the ked their asset d policies to mpany asset work achieve ns a forward looking he delivery of t plans are in sues, including		<ul> <li>Confidently discusses and justifies their application of sound engineering principles in their asset projects to improve the integrity, safety and longevity of the electrical network</li> <li>Demonstrates how they have assessed the impact of differing engineering approaches and made suggestions for improvement in the integrity, safety, or longevity of the electrical network</li> </ul>	
Assessor must ask the following	Assessor must r	ecord al	I additional questions asked for clarification and	Recording
standardised questions.	the responses p	rovided I	by the apprentice including examples.	timeline.



<b>Questions</b> Devel	op son	ne open			
ended questions					
Fail Awarded		Pass	Awarded	Distinction Awarded	



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<b>S5</b> Read, understand and interpret technical information relative to their role, identified in company strategies and policies and work in compliance with technical specifications							
To achieve a Pa	ass the	e apprentice	must achieve	Р	To achieve a Distinction the apprentice must	D	
ALL of the follo	wing:				achieve a minimum of ONE of the following:		
<ul> <li>Explain how they have gathered and analysed relevant information in order to produce asset projects/designs which meet company requirements/ specifications</li> <li>Demonstrate how they have used and interpreted technical Information to develop project plans that contain objectives / budgets / desired outcomes / timescales/evaluation records</li> <li>Demonstrate how they have used technical information to recognise and define design problems which they have tackled in a logical</li> </ul>			red and analysed o produce asset company used and ion to develop ectives / budgets es/evaluation used technical define design ckled in a logical		<ul> <li>Demonstrates how they have used technical information to apply engineering principles which have led to improved integrity, safety and longevity of the electrical network</li> <li>Demonstrates how they used technical information to consider the inclusion of new technologies or innovations which have been implemented in their work projects</li> </ul>		
Assessor must	ask th	ne following	Assessor must	record a	II additional questions asked for clarification and	Recording	
standardised questions. the responses provided by the a					by the apprentice including examples.	timeline.	
Questions Develop some open							
ended questions							
Fail Awarded		Pass	Awarded		Distinction Awarded		





**S6** Produce clear and precise reports in relation to their activities to line management, other business departments and/or to external stakeholders

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

To achieve a Pass the apprentice mus	t achieve ALL	Р	To achieve a Distinction the apprentice must	D
of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Demonstrate how they have gather analysed relevant information in or clear and precise reports in relation activities to line management, other departments and/or to external state</li> <li>Explain how their asset reports the produced link to company strateging</li> <li>Demonstrate how operational report have produced have been used to internal and/or external stakeholded their requirements</li> <li>Explain how they have dealt with se queries/problems in a logical way suggestions for resolution which re- benefit to stakeholders/business</li> </ul>	ered and rder to produce n to their er business akeholders ey have es and polices orts/plans they support ers and meet stakeholder and made esulted in a		<ul> <li>Demonstrates how they have used their knowledge gained from project monitoring and the evaluation of records to produce clear and precise reports which benefit the business</li> <li>Discusses reports produced which demonstrate their skills in assessing the impact in different approaches, and provides analysis to support suggestions for improvement</li> </ul>	
Assessor must ask the following	Assessor must	record	all additional questions asked for clarification	Recording
standardised questions.	and the respons	ses prov	vided by the apprentice including examples.	timeline.



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Questions Develop some open ended						
questions						
Fail Awarded		Pass Awarded		Distinction Awarded		



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**S7** 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

**B6** Planning and 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

To achieve a Pass the apprentice mus	t achieve ALL	Р	To achieve a Distinction the apprentice must	D			
of the following:			achieve a minimum of ONE of the following:				
<ul> <li>Demonstrate how they have gathered and analysed relevant information in order to develop and agree project plans</li> <li>Demonstrate how they have developed project plans that contain objectives, budgets, desired outcomes, timescales and evaluation records</li> </ul>			<ul> <li>Demonstrates confidently how they have applied sound engineering principles to develop project plans to undertake projects which contain clear objectives, budgets, desired outcomes and timescales</li> </ul>				
<ul> <li>outcomes, timescales and evaluation records and where appropriate budgets</li> <li>Demonstrate how asset plans they have produced have been used to deliver required stakeholder outcomes by following implementation criteria, monitoring process controls and using evaluation records</li> </ul>			<ul> <li>Discusses project plans produced which demonstrate their skills in assessing the impact in different approaches, and provide analysis to support suggestions for improvement</li> </ul>				
• Explains how they have taken a forward looking perspective when considering the delivery of asset management activities and ensured that plans are in place to manage anticipated issues, including contingencies							
Assessor must ask the following	Assessor must r	record a	all additional questions asked for clarification	Recording			
standardised questions.	and the respons	ses prov	vided by the apprentice including examples.	timeline.			



Questions Develop some open ended						
questions						
Fail Awarded		Pass Awarded		Distinction Awarded		



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S9 Demonstrate that their work activities support the business to achieve its regulatory incentive mechanisms							
B2 Stakeholder management - – is proactive in identifying their stakeholders and managing their expectations, presenting							
appropriate information to them clearly a	nd concisely	Р	To achieve a Distinction the expression must	D			
of the following:		r	achieve a minimum of ONE of the following:	D			
<ul> <li>Demonstrate how they have gathered and analysed relevant operational information in order to support the business to achieve its regulatory incentive mechanisms</li> <li>Explain how their asset projects link to company strategies and polices and support the achievement of regulatory incentive mechanisms</li> <li>Explain how the company regulatory incentive mechanisms impact/affect relevant stakeholders and their requirements</li> <li>Identifies the relevant regulatory stakeholders and how the business manage their expectations by presenting appropriate information to them</li> </ul>			<ul> <li>Confidently discusses the company's asset engineering principles and the part they play in supporting the business to achieve its regulatory incentive mechanisms</li> <li>Confidently explains how the company's inclusion of new technologies and engineering innovations are supporting the business to achieve its regulatory incentive mechanisms</li> </ul>				
Assessor must ask the following	Assessor must r	record a	all additional questions asked for clarification	Recording			
standardised questions.	vided by the apprentice including examples.	timeline.					
Questions Develop some open ended							
questions							
Fail AwardedDPass A	warded		Distinction Awarded				





S10 Provide information to support business planning processes in relation to their role activities								
B6 Planning and 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								
of the following:	F	To achieve a Distinction the apprentice must	U					
or the following.								
Demonstrate how they have gathered and		Explains how they have monitoring /						
analysed relevant operational information in		evaluated projects produced which has						
order to support the business planning processes		led to learning points to support future						
in relation to their job role		planning processes						
<ul> <li>Demonstrate how they have developed asset</li> </ul>		<ul> <li>Discusses project plans produced which</li> </ul>						
plans that support/comply with the business		demonstrate their skills in assessing the						
planning processes		impact in different approaches, and						
<ul> <li>Identifies the stakeholders which are affected by</li> </ul>		provide analysis to support suggestions						
the business planning processes and how they		for improvement in the planning process						
are affected								
<ul> <li>Demonstrate how they have developed asset</li> </ul>								
project plans that take a forward-looking								
perspective and manage anticipated issues								
<ul> <li>Explain how their work planning links/supports</li> </ul>								
Company strategies and polices and supports								
the achievement of regulatory incentive								
mechanisms								
Demonstrate how their asset planning has								
managed anticipated operational issues and								
considered contingency planning								
<ul> <li>of the following:</li> <li>Demonstrate how they have gathered and analysed relevant operational information in order to support the business planning processes in relation to their job role</li> <li>Demonstrate how they have developed asset plans that support/comply with the business planning processes</li> <li>Identifies the stakeholders which are affected by the business planning processes and how they are affected</li> <li>Demonstrate how they have developed asset project plans that take a forward-looking perspective and manage anticipated issues</li> <li>Explain how their work planning links/supports Company strategies and polices and supports the achievement of regulatory incentive mechanisms</li> <li>Demonstrate how their asset planning has managed anticipated operational issues and considered contingency planning</li> </ul>		<ul> <li>achieve a minimum of ONE of the following:</li> <li>Explains how they have monitoring / evaluated projects produced which has led to learning points to support future planning processes</li> <li>Discusses project plans produced which demonstrate their skills in assessing the impact in different approaches, and provide analysis to support suggestions for improvement in the planning process</li> </ul>						





Assessor must ask the following	Assessor must re	Recording		
standardised questions.	and the responses provided by the apprentice including examples.			timeline.
Questions Develop some open ended				
questions				
Fail Awarded   D   Pass A	Awarded		Distinction Awarded	





#### Pathway: Control Engineer Role Specific Skill

CE5 Agree and co-ordinate the work of others to maximise network availability and minimise network risks 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 To achieve a Pass the apprentice must achieve ALL Ρ To achieve a Distinction the apprentice must D achieve a minimum of ONE of the following: of the following: • Demonstrate how they have gathered and • Demonstrates how they have used their analysed relevant operational information in order knowledge gained from the monitoring to plan and agree the operational work required and the evaluation of operational activities Demonstrate how they have developed / data to agree and co-ordinate • operational plans that maximise network operational activities which demonstrate  $\square$ overall improvement availability and minimise network risks Demonstrates how they have gathered Identify the relevant stakeholders required for the operational activity, their requirements and and analysed information / data and  $\square$ the desired outcomes of the work considered differing approaches to Takes a forward looking perspective when operational activities which has led to an considering the delivery of decisions, activities improved performance and projects and ensure plans are in place to  $\square$ manage anticipated issues and considers contingency planning Assessor must ask the following Assessor must record all additional questions asked for clarification Recording standardised questions. and the responses provided by the apprentice including examples. timeline. Questions Develop some open ended questions Fail Awarded Pass Awarded **Distinction Awarded**  $\square$  $\square$ ENERGY &



CE6 Escalate significant network incidents to the business as appropriate monitoring the real time impacts on the system B2 Stakeholder management – is proactive in identifying their stakeholders and managing their expectations, presenting appropriate information to them clearly and concisely

To achieve a Pass the apprentice must achie	ve ALL P	To achieve a Distinction the apprentice must	D
of the following:		achieve a minimum of ONE of the following:	
<ul> <li>Demonstrate how they have gathered and analysed relevant operational information identify potential network incidents/faults a escalated them in line with operational procedures</li> <li>Identify the relevant stakeholders affected potential network incidents/faults and how will/could be affected</li> <li>Demonstrate how they have dealt with ne incidents in a logical way and made sugge which supported the course of action take</li> <li>Proactive identifies the relevant stakehold manages their expectations, presenting appropriate information to them clearly ar concisely</li> </ul>	d  to to and d by the y they twork estions en lers and d	<ul> <li>Demonstrates how they have used their knowledge gained from previous network incidents to inform their decisions and allow accurate the reporting to stakeholders</li> <li>Demonstrates how they have gathered and analysed operational information/data to report network incidents and have made suggestions to improve/rectify the situation</li> </ul>	
Assessor must ask the following Assess	sor must record a	all additional questions asked for clarification	Recording
standardised questions. and the	e responses prov	vided by the apprentice including examples.	timeline.
Questions Develop some open ended			
questions			
Fail Awarded   D   Pass Awarded		Distinction Awarded	



ENERGY & EUIAS Level 4 End-point Assessment for Electrical Power Networks Engineer (Control Engineer, Electrical Power Networks Engineer) Control Engineer, Electrical Power Networks Engineer (Control Engineer, Electrical Power Networks Engineer) Control Engineer, Electrical Power Networks Engineer (Control Engineer) Operational Delivery Engineer) Supporting Documents QAN: 603/7295/3 – ST0475/AP01 V4.0 © 2023 Energy & Utility Skills EUIAS Level 4 End-point Assessment for Electrical Power Networks Engineer (Control Engineer; Electrical Project Engineer and



**CE7** Ensure interface arrangements and the impact of embedded generation are considered where appropriate **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 To achieve a Pass the apprentice must achieve ALL To achieve a Distinction the apprentice must D Ρ achieve a minimum of ONE of the following: of the following: Demonstrate how they have gathered and Confidently explains the company's • analysed relevant operational information in order interface arrangements and the effects to make interface arrangements and considered and engineering principles of embedded the effects embedded generation where generation on the operational network appropriate Confidently explains how the company's Identify the relevant stakeholders affected by the inclusion of new technologies and interface arrangements and effects of embedded engineering innovations are used to generation Demonstrate how they have dealt with interface / support network interface arrangements  $\square$ embedded generation problems in a logical way and / or the impact of embedded and made suggestions which supported the generation course of action taken Takes responsibility for solving problems by •  $\square$ identifying and analysing the issues and drawing logical, sound solutions that benefit customers and the business Assessor must ask the following Assessor must record all additional questions asked for clarification Recording and the responses provided by the apprentice including examples. standardised questions. timeline. Questions Develop some open ended auestions





Fail Awarded		Pass Awarded		Distinction Awarded	
ENERGY &	EUIAS	Level 4 End-point Assessment for Elect	trical Powe	er Networks Engineer (Control Engineer; Electrical Project Eng	ineer and
	S Operatio	onal Delivery Engineer) Supporting Doo	cuments C	AN: 603/7295/3 – ST0475/AP01 V4.0 © 2023 Energy & Utility	Skills Page 9



#### Pathway: Electrical Project Engineer Role Specific Skills

**EP4** Undertake contractor management of external parties, agreeing work specifications, variations, and acceptance of work completion in-line with company processes and procedures

**B6** 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

To achieve a Pass the apprentice must	achieve ALL	Р	To achieve a Distinction the apprentice must	D
of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Demonstrate how they have gathered and analysed relevant information in order to manage contractors / external parties</li> <li>Identifies the contractors / external parties which were affected by their project and how they gained agreement to achieve the desired outcomes</li> <li>Explain how they identified and dealt with project problems in a logical way and made suggestions for resolution which resulted in a successful outcome</li> <li>Takes a forward-looking perspective when considering the delivery of decisions, activities</li> </ul>			<ul> <li>Confidently explains how they have used the company's engineering principles/policies to agree and manage the work of contractors/external parties in their work projects</li> <li>Discusses projects produced which demonstrate their skills in assessing the impact of different approaches to resolve problems and agree the work of contractors/external parties</li> </ul>	
and projects and ensure plans are in place to manage anticipated issues, considers				
contingency planning				
Assessor must ask the following Assessor must			all additional questions asked for clarification	Recording
standardised questions.	and the response	es prov	vided by the apprentice including examples.	timeline.



Questions Develop some open ended						
questions						
Fail Awarded		Pass Awarded		Distinction Awarded		



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#### Pathway: Operational Delivery Engineer Role Specific Skills

**OD3** Understand and take control of reactive activities including testing, inspection and maintenance of appropriate plant and equipment to meet operational requirements

**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

To achieve a Pass the apprentice mus	st achieve ALL	Ρ	To achieve a Distinction the apprentice must	D
of the following:			achieve a minimum of ONE of the following:	
<ul> <li>Demonstrate how they have gather analysed relevant information in cooperational decisions</li> <li>Explain how their operational active company strategies and policies a ensure compliance with technical</li> <li>Explain how they have identified a network problems in a logical way suggestions or taken action which successful outcome</li> <li>Takes responsibility for solving probility for solving problem probility</li></ul>	ered and order to make vities link to the and how they specifications and dealt with and made has led to a lems by and drawing customers and		<ul> <li>Confidently explains how they have used the Company's engineering principles/policies to plan and manage their operational projects to improve the integrity, safety or longevity of the network</li> <li>Discusses projects produced which demonstrate their skills in assessing the impact of different approaches to resolve operational problems and make suggestions for improvement</li> </ul>	
Assessor must ask the following Assessor must		record	all additional questions asked for clarification	Recording
standardised questions. and the respon		ses prov	vided by the apprentice including examples.	timeline.
Questions Develop some open ended				
questions				





Fail Awarde	ed		Pass Awarded	ł		Di	stinction Awar	ded	
	& SKILLS	EUIAS Level 4 Operational D	4 End-point Assessme elivery Engineer) Sup	ent for Electrica	al Power Netw ents QAN: 60	orks Engineer 3/7295/3 – S1	r (Control Engineer 0475/AP01 V4.0 ©	Electrical Project 2023 Energy & U	t Engineer and Jtility Skills
									Page 100



# Appendix G: Work Log Mapping Document

## Introduction

Throughout the on-programme part of the apprenticeship, the apprentice will need to compile a work log of evidence to support the requirements of the technical interview which is based on the work log. The evidence within the work log will need to be mapped using the work log mapping document by the apprentice to the KSB requirements, and this would normally come from the evidence relating to at least 5 holistic jobs.

The independent assessor will use the work log mapping document to review the evidence in the apprentice's work log in preparation for the technical interview.

The work log mapping document below consists of the core requirements and specialist skills.

#### Apprentices next steps

- 1. Complete all the details on the first page and include employer details of where relevant competencies from their experience at work was gained.
- 2. Ensure each piece of evidence is signed off by their tutor/supervisor/mentor and training provider. The apprentice can use a number of different types of evidence to demonstrate their competence as described in Section 5 of the Specification – 'What to include in the portfolio of evidence'. For further guidance, the apprentice must seek advice from their tutor/supervisor/mentor and training provider.
- 3. Map evidence to the criteria in the following pages using a referencing system indicating where the evidence for the criteria is located in the portfolio e.g., work based evidence Job 1 (J1) page 5 paragraph 2. This will allow the independent assessor, appointed by the EUIAS to locate the section or specific piece of evidence being discussed and referred to during the interview.



4. Place the work log mapping document at the front of the work of evidence.

The apprentice's training provider must make arrangements for EUIAS to have access to the apprentice's work log including the portfolio mapping document at Gateway. For those using e-portfolios such as ONEFILE or SMARTASSESSOR the reference used must simply be the file or folder name you used when uploading the evidence to such systems.



#### Work Log Mapping Document

This document must be placed at the front of the work log and submitted to EUIAS with the work log of evidence.

#### Mapping Sign off on Completion:

Apprentice Full Name (Print)	Apprentice Signature	Training Provider (Company)	Training Provider Full Name of Signatory	Date of Sign Off

#### Core Knowledge

7	Apprenticeshin Standard Criteria		WORK LOG			
Ref.			REVIEW			
		(Apprentice Input)				
			2	3		
K7	Company engineering policies appropriate to their role					
K8	Engineering problems including how to identify the problem, gather and analyse all relevant information, provide and implement a workable solution and monitoring its effectiveness					
K9	Company business planning and resource control measures					
Asse	essor Comments:					



#### Core Skills

			WORK LOG				
Ref.	Apprenticeship Standard Criteria	REVIEW					
		(Apprentice Input)					
		1	2	3			
S3	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						
S5	Read, understand and interpret technical information relative to their role, identified in company strategies and policies and work in compliance with technical specifications						
S6	Produce clear and precise reports in relation to their activities to line management, other business departments and/or to external stakeholders						
S7	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						
S9	Demonstrate that their work activities support the business to achieve its regulatory incentive mechanisms						
S10	Provide information to support business planning processes in relation to their role activities						
Asse	ssor Comments:						



### **Core Behaviours**

Ref.	Ref. Apprenticeship Standard Criteria			WORK LOG REVIEW (Apprentice Input)			
		<b>N</b>	1	2	3		
B2	Stakeholder management						
B4	Analysing and solving problems						
B6	Planning and Organising						
Asse	essor Comments:						



### Pathway: Control Engineer Role Specific Skills

	Annuartic cohin Standard Critaria		WORK LOG REVIEW			
Pof						
Rel.	Apprenticeship Standard Chteria	(App	(Apprentice Input)			
		1	2	3		
CE5	Agree and co-ordinate the work of others to maximise network availability and minimise network risks					
CE6	Escalate significant network incidents throughout the business as appropriate (monitoring of real time impacts on the system					
CE7	Ensure interface arrangements and the impact of embedded generation are considered where appropriate					
Asse	ssor Comments:					



#### Pathway: Electrical Project Engineer Role Specific Skills

Ref.	Apprenticeship Standard Criteria		WORK LOG REVIEW (Apprentice Input)			
				3		
EP4	Undertake contractor management of external parties, agreeing work specifications, variations and acceptance of work completion in-line with company processes and procedures					
Asse	ssor Comments:					



## Pathway: Operational Delivery Engineer Role Specific Skills

Ref.	Apprenticeship Standard Criteria		WORK LOG REVIEW (Apprentice Input)			
		1	2	3		
OD3	Understand and take control of reactive activities including testing, inspection and maintenance of appropriate plant and equipment to meet operational requirements					
Asse	ssor Comments:					


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