ENERGY & ENVIRONMENT AWARDS

Skills for a greener world

EEA Level 3 End-point Assessment for Power Industry
Substation Fitter
Distribution Maintenance

Apprentice Guide

QAN 610/6033/1
ST01331 V1.1 V1.2

Apprentice Guide for

EEA Level 3 End-point Assessment for Power Industry Substation Fitter – Distribution Maintenance

QAN 610/6033/1

Updates to this Guide

Since the first publication of Energy & Environment Awards Power Industry Substation Fitter (PISF) – Distribution Maintenance Apprentice Guide, the following updates have been made.

Version	Date first published	Section updated	Page(s)
v2.0	May 2025	Rebranded	All
v1.1	November 2024	Standard updated (V1.2) to include statement '*The apprentice may choose to end the assessment method early.' For 3 assessment methods*	23, 32, 34
v1.0	October 2024	First published	All

At a Glance Component 1: Multiple-choice test

Date(s):	
Time:	
Location:	
Examination Conditions:	Controlled by an invigilator
Additional Requirements:	
Assessed and marked by:	Energy & Environment Awards

At a Glance Component 2: Interview based on an EPA portfolio

Date(s):	
Time:	
Location:	
Examination Conditions:	With an Energy & Environment Awards Independent assessor at your employer's premises or a suitable venue for example a training provider's premises
Additional Requirements:	EPA Portfolio to be completed and submitted at Gateway
Assessed and marked by:	1 independent assessor, approved by Energy & Environment Awards.

At a Glance Component 3: Trade test practical assessment

Date(s):	
Time:	
Location:	
Examination Conditions:	Conducted in a simulated environment which reflects your natural work environment
Additional Requirements:	• Both the • multiple-choice test; and • interview based on an EPA portfolio **must be completed and passed before** the trade test practical assessment with questions can take place.
Assessed and marked by:	1 employer assessor, approved by Energy & Environment Awards.

At a Glance Component 4: Trade test technical interview

Date(s):	
Time:	
Location:	
Examination Conditions:	With an employer assessor in your place of work.
Additional Requirements:	• Both the • multiple-choice test; and • interview based on an EPA portfolio **must be completed and passed before** the trade test technical interview can take place.
Assessed and marked by:	1 employer assessor, approved by Energy & Environment Awards.

Introduction

Energy & Environment Awards has been selected by your employer to carry out end-point assessment (EPA) and it is our job to ensure that you are assessed fairly.

How This Apprentice Guide Is Organised

- ✓ Section 1:

  What is in the Apprentice Guide?

- ✓ Section 2:

  An Apprentice's End-point Assessment Journey

- ✓ Section 3:

  End-point Assessment Components

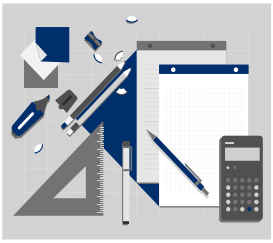
How to Use This Guide

This guide has been split into 3 sections. You can dip into each section that you are working on where you will find useful information, practical advice, tips you need and useful dates to successfully complete your EPA.

Throughout we have used headings and cross referenced to our EPA Power Industry Substation Fitter (PISF) Specification and/or Supporting Documents which provides details of the EPA components.

Section 1: The Basics

What is an apprenticeship standard?



An apprenticeship standard is a description of your apprenticeship and it is based on the Power Industry Substation Fitter standard, which was written by employers. It contains the Substation Fitter's job profile, and describes the knowledge, skills and behaviours (KSBs):

- Knowledge: (as part of KSBs) – specific information, technical detail, and 'know-how' identified as part of the apprenticeship standard that must be evidenced during your end-point assessment
- 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
- Behaviours (as part of KSBs) – specific mindsets, attitudes or approaches identified as part of the apprenticeship standard that must be evidenced during end-point assessment

The standard can be accessed via the link below:
https://skillsengland.education.gov.uk/apprenticeship-standards/st1331
Select the occupational standard tab.

What is an assessment plan?

An Assessment Plan is also written by employers and provides details of what is required for you to pass your end-point assessment. It includes details of what you will be assessed on, how each assessment will take place, what methods will be used and who will assess you.

Energy & Environment Awards designed the end-point assessment (EPA) to meet the requirements of the Assessment Plan. The Assessment Plan can be accessed via the link below:
https://skillsengland.education.gov.uk/apprenticeship-standards/st1331
Select the EPA plan tab.

What is an end-point assessment (EPA)?

The end-point assessment is the assessments you take at the end of your apprenticeship. You will typically spend 30 months on-programme working towards your standard. You are required to spend a minimum of 12 months on-programme. After this you have a Gateway meeting with your employer or training provider to confirm you are ready for the end-point assessments. The words end-point means that you will be assessed at the end of your on-programme (training) to confirm you have met the standard. Your EPA period will typically last 6 months. The end-point assessments consist of 4 components:

- Multiple-choice test
- Interview based on your EPA portfolio
- Trade test practical assessment with questions
- Trade test technical interview

Each component has a provisional grade, and each grade is carried forward to award a final grade. You must pass all 4 components to pass your apprenticeship.

The final grade can be a Fail, Pass or Distinction.

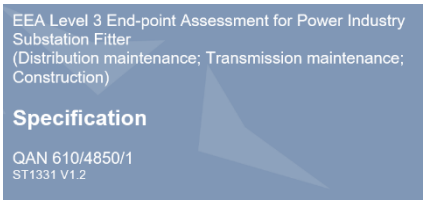
What are the gateway requirements?

Gateway is a meeting where your employer, training provider and you ensure that you are confident that you can demonstrate all the KSBs defined in the apprenticeship standard and you are ready for EPA. After the meeting, your training provider will confirm the outcomes of the Gateway meeting by sending a signed document to Energy & Environment Awards. The document confirms that you have met the following Gateway requirements:

- achieved English and mathematics qualifications in line with the apprenticeship funding rules
- have passed an emergency first aid 1 day course
- compiled an EPA portfolio, which your interview based on an EPA portfolio will be based

Your training provider will send copies of these documents to Energy & Environment Awards.

What is the EPA Specification?



The end-point assessment specification provides details of:

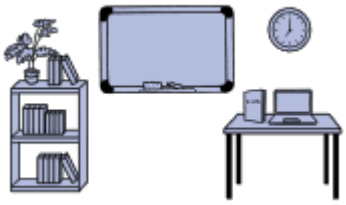
- the assessment methods used in your EPA
- KSBs that are covered by each assessment
- KSBs amplification and guidance

The Specification can be accessed via the link below:
https://energyenvironmentawards.co.uk/epa/power-industry-substation-fitter/

Section 2: Apprentice EPA Journey

Let us Begin Your EPA Journey.

Find a quiet place and read on….



Power Industry Substation Fitter is a core and options apprenticeship standard. You must be trained and assessed against the core and one of the following options:

- Distribution maintenance
- Transmission maintenance
- Construction

This Apprentice Guide is for apprentices following the **distribution maintenance** option. Separate Apprentice Guides are available for those following either transmission maintenance or construction.

Your EPA journey consists of 3 elements:

- A training programme with on the job, off the job elements, typically 30 months
- Gateway meeting window
- End-point Assessment (EPA) typically 6 months

Your journey begins with the training program. Your employer and training provider are responsible for this part. This is where you will gain the required Knowledge, Skills and Behaviours (KSBs).

How will you be assessed in the end-point assessment?

You will be assessed on the following components:

1. **Multiple-choice test**
2. **Interview based on your EPA portfolio**
3. **Trade test practical assessment with questions**
4. **Trade test technical interview**

The multiple-choice test and interview based on an EPA portfolio **must be completed and passed before** the trade test practical assessment and trade test technical interview can take place.

It is important for you to keep a record of when your 4 components are scheduled. We suggest you use the 'At a Glance' tables on page 5-6.

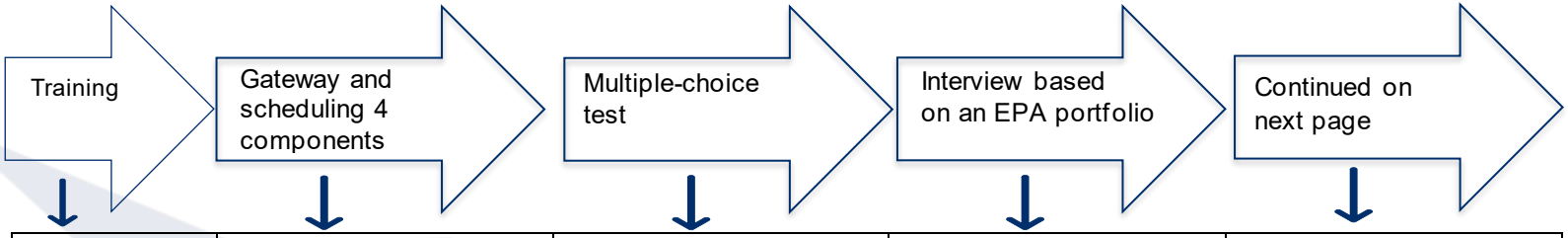
You must pass all 4 components to achieve this qualification. For further guidance refer to Section 3 End-point Assessment Components.

Reasonable adjustments

A reasonable adjustment is any action that helps to reduce the effect of a disability or difficulty that places you at a substantial disadvantage during assessments. If this applies to you make sure you tell your training provider who can make an application for a reasonable adjustment to Energy & Environment Awards on your behalf.

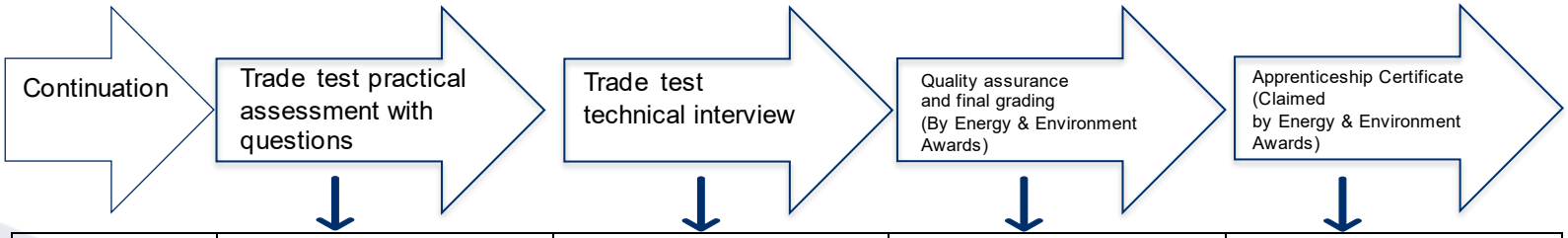
Your EPA Journey in a Diagram

The diagram below illustrates the order of your EPA **journey** from the day you register to your final certification:



Typically, 30 months	You have: Attended a Gateway meeting with your employer/provider Achieved English and mathematics qualifications in line with the apprenticeship funding rules Passed an emergency first aid 1 day course Compiled an EPA portfolio, which your first interview will be based on	60 minutes Multiple-choice 40 questions Under exam conditions supervised by an invigilator. Face to face Closed book See below for further details	75 minutes Time may increase by up to 10%, to allow you to complete your last answer Under examination conditions. Face to face or remote as agreed and recorded using relevant technology Independent assessor See below for further details	The multiple-choice test and interview based on an EPA portfolio must be completed and passed before the trade test practical assessment and trade test technical interview can take place

*For further details refer to Section 3 in this Apprentice Guide or Section 2 of the Specification.



	30-37.5 hours over max 21 working days Under examination conditions. Face to face Tasks will be completed in a simulated/realistic working environment Employer assessor See below for further details*	At least 75 minutes Under examination conditions. Face to face or remote as agreed and recorded using relevant technology Employer assessor See below for further details*	Awarded Final Grading: Distinction, Pass or Fail	ESFA will send your Certificate to your training provider or employer Contact your training provider or employer if you do not receive your certificate

*For further details refer to Section 3 in this Apprentice Guide or Section 2 of the Specification.

Section 3: End-point Assessment Components

Now let us continue your journey through EPA. There are 4 components that you must pass to be awarded a certificate.

Component 1: Multiple-choice test

Overview

The multiple-choice test is computer or paper based. You will have 60 minutes to complete the test. The test consists of 40 questions.

The multiple-choice questions will have four possible answers of which one will be correct.

Step-by-Step Guide

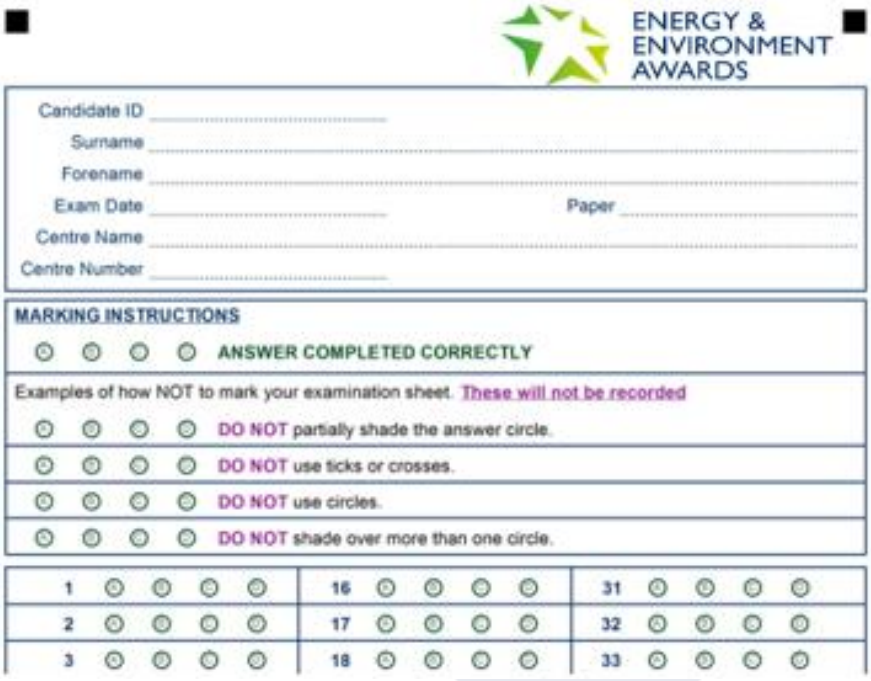
The table below provides a step-by-step guide on how the multiple-choice test will be carried out:

Who will start and finish my multiple-choice test?	You will sit your multiple-choice test in the presence of an invigilator.
What format will my test take?	The test may be paper-based or taken online. Your training provider will let you know what the format of your test is. All other aspects of the test are exactly the same, including: • content • timings • question types • scoring

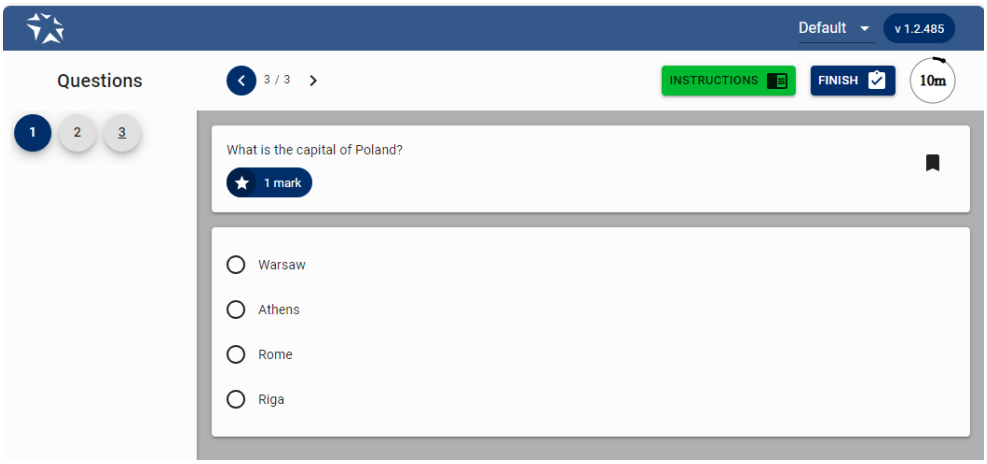
How will the question appear in a paper-based test?	Here is an example of how the question will appear:

Question 1	
In a workplace, who is responsible for maintaining health and safety?	
Possible answers	
a)	Employers
b)	Safety managers
c)	Most senior person on-site
d)	Everyone

You must **select one answer** that you think is correct. You will be provided with an answer sheet where you will be expected to shade in the answer you have selected. Here is an example:



Always have a go even if you are not sure that it is the correct answer.

How will the question appear in an online test?	Here is an example of how the question will appear in an online version of the test:  You must **select one answer** that you think is correct.
Can I take any resources into the exam room?	The test is closed book which means that you cannot refer to reference books or any other materials. You will be provided with appropriate stationery on the day.
Can I have internet access?	No access to the internet is allowed and this means you must not take your SMART watch into the exam room.
How will the multiple-choice test be organised for me?	**Locations:** Your multiple-choice test will take place at your employer's or training provider's premises or a suitable venue. • You will take the test in a quiet space and in the presence of an invigilator • Your test will be scheduled by your employer or training provider with Energy & Environment Awards • If you fail the multiple-choice test, you can re-sit or re-take the failed test at your employer's discretion. There are no limits to the number of re-sits or re-takes you can take but it is important to revise and ensure that you are confident with the knowledge you are being tested on

What criteria will I have to learn? **AND** How many questions will be asked on each criteria?	The multiple-choice test questions are based on the core knowledge criteria for this component. Below is a list of the knowledge criteria, assessed in the multiple-choice test along with an indication of the number of questions, targeting each criterion, that will be asked in a multiple-choice test paper:

Number of Questions	Knowledge
Core	
1 - 3	**K1**: Power network industry appreciation: generation of electricity, Transmission Network Operator, Distribution Network Operator (DNO), Independent Distribution Network Operator (IDNO), Independent Connections Provider (ICP), supplier, generators - role and boundary of operation.
1 - 2	**K2**: The office of gas and electricity markets (Ofgem) - their role and powers.
1 - 3	**K3**: Power industry regulations: Electricity at Work Regulations, and The Electricity Safety, Quality and Continuity Regulations (ESQCR). Their purpose and basic requirements.
1 - 3	**K6**: Business operation considerations: how activities may impact customers, financial constraints (budgets), penalties and rewards, ethical business practices.
5 - 7	**K9**: Health and safety regulations, standards, and guidance - their purpose and basic requirements: asbestos awareness, Construction Design Management (CDM), Health and Safety at Work Act, Control of Substances Hazardous to Health (COSHH), Lifting Operations and Lifting Equipment Regulations (LOLER), lone working, Management of Health and Safety at Work, Provision and Use of Work Equipment Regulations (PUWER), Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (RIDDOR), and warning signs and symbols.
1 - 2	**K14**: Working in confined spaces awareness.

	1 - 2	**K17**: The Environmental Protection Act – its purpose and basic requirements.
	1 - 3	**K20:** Oil: containment, storage, disposal, spill management escalation and reporting, and specialist risk assessment.
	1 - 3	**K21:** Sulfur hexafluoride (SF6): regulations, procedures, certification requirements for handling, reporting leaks.
	3 - 5	**K30**: Mathematical theory in power engineering. Round numbers, scientific notation, percentages and ratios. Areas, perimeters, volumes and surface areas of simple shapes. Scales, tables, graphs and charts. Pythagoras' Theorem and sin, cos, and tan in right-angled triangles. Substitution of numerical values into simple engineering formulae. The sequence of arithmetic operations.
	3 - 5	**K31:** Mechanical theory in power engineering. Mass, force and weight. Parameters of mechanical systems. The components of hydraulic and pneumatic systems. Statics and forces. Energy, work and power. The parameters of material tensile strengths. The parameters of mechanical advantage. The lever principle and theorem of movement.
	1 - 3	**K32**: Electrical theory in power engineering. Circuit technology. Magnetism and electromagnetism. Transformers.
	1 - 2	**K33**: Power engineering electrical networks: generation, transmission, distribution and transformation of system voltages.
	1 - 3	**K34**: Power engineering electrical plant and apparatus, the properties and purpose of transformers, switchgear, earthing devices, voltage control and automated equipment.
	1 - 2	**K35:** The symptoms and causes of common faults on electrical power circuits, plant and apparatus.
	6 - 8	**K36:** Substation high-voltage (HV) and low-voltage (LV) equipment and its purpose: air compressors, busbars,

	circuit breakers, current transformers and voltage transformers, earthing systems and associated equipment, electrical switchgear, multi-core cabling, HV metering , isolators, primary equipment and connections, protection and control systems, telecontrol and automation equipment, transformer cooling, transformers, substation batteries, and AVCS systems (automatic voltage control systems). **Remember** the questions have been written to reflect the Power Industry Substation Fitter role as a whole and are not focussed on specific plant, machinery, or employer-specific processes. For amplification and guidance refer to Section 3 of the PISF Specification (see link on page 10).
What should I do to prepare for the multiple-choice test?	**You should be prepared to**: • revise the core knowledge criteria listed above (K1, K2, K3, K6, K9, K14, K17, K20, K21, K30, K31, K32, K33, K34, K35 and K36) • ask your employer or training provider for additional questions that they have prepared to support you • attend the multiple-choice test which will last 60 minutes While on-programme, the employer or training provider must ensure you are: • familiar with all areas assessed by the multiple-choice test as listed above • supported in completing a practice test and provide you with constructive feedback to enable you to identify areas you need to carry out further revision in

Practice Component 1: Multiple-choice test

You should have an opportunity to have a practice multiple-choice test which mirrors the real assessment. The practice multiple-choice test would be set up by your employer or training provider using the structure in the table above. The feedback provided will assist you with preparing for the actual multiple-choice test.

Component 2: Interview based on an EPA portfolio

Overview

The first interview is based on your EPA portfolio. It is to allow you to demonstrate how you have met the KSBs in order to carry out your occupational role as a Power Industry Substation Fitter effectively and safely. The interview allows for testing of responses where there are a range of potential answers.

Step-by-Step Guide

The table below provides a step-by-step guide on how the interview based on an EPA portfolio will be carried out:

Who will assess me?	1 independent assessor, appointed by Energy & Environment Awards will assess you under examination conditions.
How will the interview be organised?	**Locations:** Your interview will take place at your employer's premises or a suitable venue. **Time:** The interview must last 75 minutes for apprentices following the distribution maintenance option The independent assessor has the option to increase the time of your interview by up to 10%, to allow you to complete your last answer. You may choose to end the interview early. You must be confident you have demonstrated competence against the assessment requirements for the interview. The independent assessor will ensure you are fully aware of all assessment

	requirements. The independent assessor may suggest the assessment continues. The independent assessor cannot suggest or choose to end this interview early (unless in an emergency). **Your interview will be:** • a discussion between you and the independent assessor • face to face or remote, as agreed • assessed and outcomes will be recorded by the assessor on official Energy & Environment Awards interview documents • recorded using the relevant technology such as Microsoft Teams or an audio recording device You will have access to your EPA portfolio throughout the interview.
What topics will I have to cover?	The interview focuses on the four tasks in your EPA portfolio: 1. Communication and working with others 2. Sustainability 3. CPD and improvement activities 4. Working on the highway and location and avoidance of utilities For further details refer to 'Knowledge, Skills and Behaviours (KSBs) coverage in the PISF Specification on pages 21 – 32. **A link to the PISF Specification is available on page 10.**
How many questions will I be asked?	• A minimum of 7 questions for apprentices following the distribution maintenance option • Set questions which will be contextualised to the contents of your portfolio • Follow-up questions in order to seek clarification
Provisional Grading	The independent assessor will award a provisional grade. You must pass **ALL** the pass criteria in order to achieve a pass. To achieve a Distinction you must successfully achieve **ALL** the Pass criteria and **ALL** of the Distinction criteria.

Overall grading for this component	Fail, Pass or Distinction.
Can I finish the interview early?	You may choose to end the interview early. You must be confident you have demonstrated competence against the assessment requirements for the interview. The independent assessor will ensure you are fully aware of all assessment requirements and understand the implications of ending the interview early. The independent assessor may suggest the interview continues. The independent assessor will document your request to end the assessment early.
Can the independent assessor end the interview early?	The independent assessor cannot suggest or choose to end the assessment methods early, unless in an emergency.

EPA Portfolio Requirements

The requirements are as follows:

EPA Portfolio Template

Throughout the on-programme part of your apprenticeship you must compile an EPA portfolio to support you in your first interview. During the interview the independent assessor will ask questions based on the evidence contained in your EPA portfolio.

For further guidance refer to:

- Section below 'How do I organise my portfolio of evidence?'
- PISF Specification Section 5: Guidance on EPA portfolio

How do I organise my EPA portfolio?

Step-by-Step Guide

You must complete an EPA portfolio template. You should request the EPA Portfolio Template from your provider

The EPA portfolio template comprises four tasks to support the compilation of the portfolio. Each task should help you focus on the specific knowledge, skills and behaviours that will be assessed in the interview.

For each task there is:

- a series of questions to be answered
- a text box following each question for you to provide your response. These boxes will expand to take more text; however, quality of answer is more important than quantity. You will be able to use your answers as prompts in the interview
- tables for you to record evidence that supports the examples provided in response to the questions. A copy of the tables can be found in Appendix B

Your EPA portfolio is **not assessed**. It serves the following purposes:

- A carefully prepared EPA portfolio will support you during the interview
- Your organised EPA portfolio will allow you to refer to examples and discuss the evidence with the independent assessor
- It allows the assessor to review it before the interview to help focus and contextualise the questions that you will be asked.

What should I include in my EPA portfolio?

Quality vs quantity

You should be supported in selecting evidence for your EPA portfolio by your employer or training provider.

We would advise you to choose the best pieces of evidence to support the answer to each question in the EPA portfolio template. The completed EPA portfolio should contain the four tasks with your responses and at least one piece of evidence backing up each of the questions. A piece of evidence may cover more than one question. No other evidence should be included.

Examples of acceptable evidence:

- workplace documentation/records, for example job task sheets/job card/times sheets, equipment maintenance /service records related to the apprentice
- witness statements signed and dated by coaches/trainers

- employer contributions that focus only on direct observation of evidence (for example witness statements) rather than opinions
- annotated photographs/video clips with a maximum total duration of 10 minutes showing the apprentice carrying out tasks
- diagrams

The above is not a definitive list. You can include other relevant evidence sources.

You **must not** include in your portfolio any methods of self-assessment.

Evidence must be:

- produced by you (authentic)
- relevant to the task
- cross referenced and easily accessible in the portfolio
- produced during the time you were carrying out your on-programme training

What can I do to prepare for the interview?

You should:

- ensure there is quality evidence to cover the answer to each question in the EPA portfolio template
- be familiar with the structure of your EPA portfolio
- know the tasks/KSBs covered by the interview
- know where you have referenced your evidence by referring to your EPA Portfolio Evidence Log. A copy is included in Appendix B
- know how you will be graded

The role of your employer or training provider

Employers or training providers are expected to support you in preparing your portfolio by:

- providing clear instruction and deadlines to allow you to plan and compile your portfolio in preparation for the Gateway meeting
- advising on which pieces of evidence to select
- authenticating evidence as valid
- signing off the EPA portfolio

- submitting the portfolio to Energy & Environment Awards as part of Gateway requirements.

Practice Component 2: Interview based on an EPA Portfolio

You should have an opportunity to have a practice interview which mirrors the real assessment. The practice interview would be set up by your employer or training provider using the structure in the table above.

Component 3: Trade test practical assessment

Overview

A trade test practical assessment involves an employer assessor, approved by Energy & Environment Awards observing and questioning you undertaking tasks in a simulated/realistic working environment. The task(s) must be capable of being completed by a competent substation fitter.

Step-by-Step Guide

The table below provides a step-by-step guide on how the trade test practical assessment will be carried out:

Structure of your observation	The total assessment time is 30-37.5 hours The trade test practical assessment may take place in parts but must be completed over no more than 21 working days. A working day is typically considered to be 7.5 hours long. The reason for this split is that you will need to complete several tasks, which may require work on different apparatus.
Where will the assessment take place?	• In a simulated environment which closely relates to your natural work environment
What knowledge, skills and behaviours (KSBs) do I	**Prepare for substation fitter activities (core)** **K22**: Planning, prioritising, organisation, and time management techniques for self and working party.

have to demonstrate during the practical assessment?	**S1**: Review drawings, instructions, or information to understand the task for example, work instructions, design specifications, utility plans, on-line search documents.
	S2: Prioritise and plan tasks with consideration for safety, environmental impact, quality, and cost.
	S3: Identify and organise resources to complete tasks for example, consumables.
	S18: Select, check, and prepare resources.
	Organise and supervise a working party (core)
	S5: Receive and clear a safety document. Brief a working party.
	B3: Take ownership for work and responsibility for its impact on others. For example, self-motivated, disciplined in the approach to work tasks, identify and deal appropriately with distractions to enable tasks to be achieved, work carried out in line with standards.
	Maintain work site health, safety, and environment compliance including completing a risk assessment (core)
	K7: The hazards associated with work on or near electrical power networks.
	K10: Risk assessments and method statements. Emergency procedures. Personal protective equipment (PPE). Manual handling. Fire safety.
	K19: Recycling and waste transfer requirements.
	K37: Hazards and controls for access and egress of operational substation sites: security, pre-entry checks, logging in requirements, automatic or remotely operated equipment, and fire suppression systems.
	S6: Follow substation access and egress procedures.
	S7: Identify hazards and risks and apply control measures.

	S8: Apply health and safety procedures in compliance with regulations, standards, and guidance. For example, demarcate the work area, working at height, confined spaces, COSHH.
	S10: Apply measures to leave power work environments in a safe condition.
	S13: Segregate waste for reuse, recycling, and waste transfer.
	B1: Prioritise health and safety. For example, risk aware, minimise risks, and proactively work towards preventing accidents.
	Identify apparatus (core)
	S4: Identify apparatus to be worked on.
	Tools and equipment (core)
	K23: Hand tools and power tools application and operation requirements. Insulated tools - selection and care considerations.
	S17: Select, check, prepare, use, and store hand tools and power tools.
	Complete work records (core)
	K25: Documentation requirements; importance of accurate records.
	S23: Record information.
	Use maintenance specifications (distribution maintenance)
	S27: Read, interpret, and follow maintenance specifications.
	Electrical testing (distribution maintenance)
	K43: Electrical testing requirements and methods: continuity and polarity of circuits, insulation resistance, Voltage, Earth

Fault Loop Impedance (EFLI), phase rotation, and joint or contact resistance.
S28: Conduct diagnostic testing to identify asset condition; identify action.
S29: Conduct continuity testing using a continuity test instrument or multimeter.
S30: Conduct joint or contact resistance testing using a contact resistance tester (ductor).
S31: Conduct insulation testing using an insulation test instrument.
S46: Conduct supply checks of a low voltage single and three phase supply to identify: correct polarity, voltage, earth fault loop impedance and phase rotation.
S47: Use electrical test instruments to diagnose a fault condition on low voltage distribution or control equipment for example open circuit, blown fuse, short circuit or out phase condition.
Circuit breaker maintenance (distribution maintenance)
K44: Insulating oil sampling methods: sample taps and sample tubes and their requirements.
K47: Post fault and routine maintenance of oil filled circuit breakers requirements.
S32: Conduct circuit breaker timing tests.
S33: Set up oil pumping equipment.
S34: Remove and replace insulating oil from substation plant avoiding contamination.
S35: Clean oil filled equipment following removal of insulating oil.
S36: Check circuit breaker contact condition; remove and replace or dress.

	S37: Take oil samples from equipment.
	S38: Clean and lubricate operating mechanisms using approved lubricants.
	S39: Adjust, remove, and replace components for example, gaskets.
	Battery maintenance (distribution maintenance)
	K49: Substation battery maintenance and testing requirements: wet cell and dry (sealed) battery types.
	S44: Check battery connections for any damage, clean cells, check monitoring alarms, check function of charging equipment.
	S45: Test substation batteries using voltage and analytical testing instruments.
	Inspection and monitoring of substation equipment (distribution maintenance)
	K45: Requirements for inspection, monitoring and condition assessment of equipment in distribution secondary or primary substation types.
	S40: Conduct functional tests of equipment - post maintenance or routine.
	S41: Inspect substation site, buildings and equipment including steelwork and neutral earthing conductors and connections and identify defects.
	Switching operations (distribution maintenance)
	K56: Low voltage and high voltage operational switching and testing requirements.
	S48: Interpret network schematic diagrams and geographic records to identify running arrangements prior to operation.

	S49: Prepare low voltage or high voltage switching operation schedules. **S50**: Operate network switching equipment such as switches, circuit breakers, links or fuses on low voltage or high voltage distribution networks. **For amplification and guidance refer to the PISF Specification:** https://energyenvironmentawards.co.uk/epa/power-industry-substation-fitter/
What tasks will I have to cover?	The task(s) must allow you to undertake the activities required for a practical assessment. For further details refer to 'Knowledge, Skills and Behaviours (KSBs) Coverage' in Section 2 of the PISF Specification. Refer to link above.
What resources can I use?	Equipment and resources needed for the practical assessment will be: • provided by your employer • the tools, equipment and PPE required for the job • in good and safe working condition Relevant work instructions/manuals must be available in hard copy or electronically.
How many questions will I be asked?	The employer assessor: • will ask at least 9 open questions from your employer's question bank • may ask follow-up questions in order to seek clarification from you
Who will assess me?	An employer assessor, approved by Energy & Environment Awards.
Provisional Grading	The employer assessor will award a provisional grade. You must pass **ALL** the pass criteria in order to achieve a pass. To achieve a Distinction you must successfully achieve **ALL** the Pass descriptors and **ALL** of the Distinction descriptors

Overall grading for this component	Fail, Pass or Distinction
Can I finish the trade test practical early?	You may choose to end the trade test practical early. You must be confident you have demonstrated competence against the assessment requirements for the trade test practical. The employer assessor will ensure you are fully aware of all assessment requirements and understand the implications of ending the trade test practical early. The employer assessor may suggest the trade test practical continues. The employer assessor will document your request to end the assessment early.
Can the employer assessor end the trade test practical early?	The employer assessor cannot suggest or choose to end the trade test practical early, unless in an emergency.

Practice Component 3: Trade test practical assessment

You should have an opportunity to have a practice trade test which mirrors the real assessment. A practice trade test would be set up for you by your employer or training provider using the structure in the table above.

Component 4: Trade test technical interview

Overview

The trade test technical interview allows you to demonstrate the KSBs mapped to this assessment method. The interview allows for testing of responses where there are a range of potential answers that cannot be tested through the multiple-choice test.

Step-by-Step Guide

The table below provides a step-by-step guide on how the trade test technical interview will be carried out:

Who will assess me?	1 employer assessor, approved by Energy & Environment Awards will assess you under examination conditions.
How will the interview be organised?	**Locations:** Your interview will take place at your employer's premises or a suitable venue. **Time:** Your technical interview last at least 75 minutes **Your interview will be:** • a discussion between you and the employer assessor • face to face or remote, as agreed • assessed and outcomes will be recorded by the assessor on official Energy & Environment Awards-approved technical interview documents • recorded using the relevant technology such as Microsoft Teams or an audio recording device
What topics will I have to cover?	The interview focuses on core themes and themes based on your option: Core 1. Role and responsibilities 2. Electrical danger - control and first aid 3. Working at height 4. Asset security 5. Insulating mediums 6. Methods of cooling transformers 7. Handling and transportation of insulation oil

	8. Determining insulating oil integrity Distribution maintenance 9. Functional tests 10. Jointing earthing conductors 11. Ground mounted distribution oil filled switchgear maintenance 12. Transformers maintenance requirements 13. Air break disconnectors maintenance requirements For further details refer to 'Knowledge, Skills and Behaviours (KSBs) coverage in the PISF Specification on pages 88 – 122. **A link to the PISF Specification is available on page 10.**
How many questions will I be asked?	• A minimum of 10 questions • Follow-up questions in order to seek clarification
Provisional Grading	The employer assessor will award a provisional grade. You must pass **ALL** the pass criteria in order to achieve a pass.
Overall grading for this component	Fail or Pass.
Can I finish the trade test technical interview early?	You may choose to end the trade test technical interview early. You must be confident you have demonstrated competence against the assessment requirements for the trade test technical interview. The employer assessor will ensure you are fully aware of all assessment requirements and understand the implications of ending the trade test technical interview early. The employer assessor may suggest the trade test technical interview continues. The employer assessor will document your request to end the assessment early.
Can the employer assessor end the trade test technical	The employer assessor cannot suggest or choose to end the trade test technical interview early, unless in an emergency.

interview early?	

Practice Component 4: Trade test technical interview

You should have an opportunity to have a practice technical interview which mirrors the real assessment. The practice technical interview would be set up by your employer or training provider using the structure in the table above.

Overall grading

All assessment components contribute equally to your overall EPA grade.

Grades from individual assessment components will be combined in the following way to determine your overall EPA grade as a whole.

Multiple-choice test	Interview based on an EPA portfolio	Trade test practical assessment with questions	Trade test technical interview	Overall grading
Fail in any component				Fail
Pass	Pass	Pass	Pass	Pass
Pass	Distinction	Pass	Pass	Pass
Pass	Pass	Distinction	Pass	Pass
Pass	Distinction	Distinction	Pass	Distinction

Section 4: Resits and retakes

If you fail one or more EPA components you can re-sit or a re-take the failed component at your employer's discretion. Your employer needs to agree that a re-sit or re-take is appropriate. A re-sit does not need further learning, but a re-take does. You should have a supportive action plan to prepare for your re-sit or re-take.

Your employer and Energy & Environment Awards will agree the timescale for your re-sit or re-take. A re-sit is typically taken within 4 months of the EPA outcome notification. Failed EPA component(s) must be re-sat or re-taken within the 6 months of the fail notification, otherwise the entire EPA will need to be re-sat or re-taken in full, unless in the opinion of Energy & Environment Awards exceptional circumstances apply outside the control of you or your employer.

Where any assessment method has to be re-sat or re-taken, you will be awarded a maximum EPA grade of pass, unless Energy & Environment Awards determines there are exceptional circumstances which required a re-sit or re-take.

Re-sits and re-takes will not be offered to you if you wish to move from pass to a higher grade.

Energy & Environment Awards resit and re-take policy can be found at:

https://energyenvironmentawards.co.uk/policies-and-fees/

Section 5: Appendices

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 –mindsets, attitudes or approaches needed for competence. Whilst these can be innate or instinctive, they can also be learnt. Behaviours tend to be very transferable. They may be more similar across occupations than knowledge and skills. For example, team worker, adaptable and professional

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

Employer Assessor – provided by the employer and approved by Energy & Environment Awards. Will assess the knowledge, skills and behaviours (KSBs) that you have been taught throughout the apprenticeship. Their role as an Employer Assessor would involve assessing component 3 (trade test practical assessment with questions) and component 4 (trade test technical interview)

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

Gateway – the stage of the apprenticeship where the apprentice, employer and trainer determine whether the apprentice is ready to undertake the End-Point Assessment

Independent Assessor – will holistically assess the knowledge, skills and behaviours (KSBs) that you have been taught throughout the apprenticeship. Their role as an Independent Assessor would involve assessing component 2 (interview based on your EPA portfolio)

Knowledge – the information, technical detail, and 'know-how' that someone needs to have and understand to successfully carry out the duties. Some knowledge will be occupation-specific, whereas some may be more generic

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

Skills – the practical application of knowledge needed to successfully undertake the duties. They are learnt through on and/or off-the-job training or experience

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. The occupational standards are developed by employers for occupations that meet the Institute for Apprenticeships & Technical Education current criteria. For further details refer to: https://skillsengland.education.gov.uk/apprenticeship-standards/st1331

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

Appendix B: EPA Portfolio Evidence Log

Distribution maintenance

Employer Name	

Full Name of Apprentice	
The work submitted in this EPA portfolio is my own	☐
Date	

Supervisor/Mentor Name	
The work submitted in this EPA portfolio is the apprentice's own	☐
Date	

Task 1: Communication and working with others		
Supporting evidence provided (please check box)		☐
Date of activity	Description of evidence	Reference

Please add additional lines if needed

Task 2: Sustainability		
Supporting evidence provided (please check box)		☐
Date of activity	Description of evidence	Reference

Please add additional lines if needed

Task 3: CPD and improvement activities		
Supporting evidence provided (please check box)		☐
Date of activity	Description of evidence	Reference

Please add additional lines if needed

Task 4: Working on the highway and location and avoidance of utilities		
Supporting evidence provided (please check box)		☐
Date of activity	Description of evidence	Reference

Please add additional lines if needed