Changing lives through learning

Open Awards Level 3 End-point Assessment for

ST0161 Junior Energy Manager

Ofqual: 610/3526/9

End-point Assessment Handbook

Version History

Version	Date	Change(s) made	Section(s)	Publication source(s)
1	February 2024	New document.	All	Development Team
1.1	February 2024	Amendment to overall grade table	Grading	Development Team
1.2	May 2024	Minor typographic changes	All	Delivery Team
1.3	August 2025	Updated guidance on resits and retakes	Resits and Retakes	Development Team

This EPA Handbook is for apprentices, employers and providers. It provides an overview of the end-point assessment, the assessment methods, the grading criteria etc. It is a reference document which will guide you through each stage of the process.

For further information about apprenticeship standards and Trailblazers please contact **enquiries@openawards.org.uk**.

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Occupational Overview

Junior Energy Managers often work in fields such as facilities management, property or sustainability. Such broad fields offer specialised skillsets in a wide range of vocations.

Junior Energy Managers perform an essential role in supporting their company or organisation to meet energy and cost reduction objectives and targets within the context of wider sustainability commitments such as carbon and water management and corporate social responsibility. They need to be technically aware, numerate, have good communication skills and be keen to broaden and continually improve their existing knowledge of energy management core topics.

Junior Energy Managers would be expected to focus on energy assessment and measurement of energy consumption, their organisations technical and operational energy management issues, energy management strategy, regulatory and legal compliance, reporting and communicating on the status of their organisation's energy performance and progress of improvements.

Further details on the knowledge, skills and behaviours associated within the occupational standard are accessible on the IfATE website[1] and in the Assessment Specification section in this document.

Standard Information

Level: 3

Reference: ST0161

Approved for delivery: 1 December 2015

Route: Construction and the built environment

Typical duration to gateway: 24 months (this does not include the EPA period)

Minimum duration to gateway: 12 months (this does not include the EPA period)

Employers involved in creating the standard: The Energy Managers Association, Waterwise Ltd, Planet First Ltd, Whitbread Plc, Pinsent Masons LLP, Heelec Ltd, Voyage Control Ltd, Tivarri Ltd, Parker Bromley Energy Ltd, Siemens Plc.

External Quality Assurance Provider: Ofqual

[1] **https://www.instituteforapprenticeships.org/apprenticeship-standards/**

Entry Requirements

Employers will set the entry requirements for their apprentices, but apprenticeship candidates will normally have a minimum of 3 GCSEs at grades A* to C / 9 to 4 (including mathematics, English), or equivalent qualifications such as: IGCSEs, Scottish Standard Grade, 14-19 Diploma, BTEC/NVQs. Apprentices without English or Maths GCSE at grade A* to C or equivalent must achieve this prior to the completion of the Apprenticeship.

EPA Documents Overview

An overview of the main documents and supporting materials you will encounter during this end-point assessment is in the table below.

Document Name	Brief Description	Who Should Read this Document	When To Use this Document	Additional Information
Skills Scan	This document is designed to support employers and providers to ensure that an apprentice's job role meets the requirements of the standard.	Employers Providers	Use this during the decision-making process when considering whether the apprenticeship is appropriate for the apprentice.	This allows employers and providers to ensure that the apprenticeship is a good fit for the skills and aspirations of the apprentice.
Apprentice EPA Journey	A one (1) page visual overview of the different milestones the apprentice will reach within their EPA journey.	Apprentices Employers Providers	Before committing to the course to make sure it is the right fit for you. Throughout the EPA journey.	This roadmap will help you to understand what has been achieved so far and what still needs to be completed.
EPA Handbook	This provides an overview of the end-point assessment, the	Apprentices Employers Providers	During the apprenticeship as a reminder of the expectations,	This is a key document which will help you to navigate your way
	assessment methods, the grading criteria		assessment methods and grading.	through each step of the end-point

Document Name	Brief Description	Who Should Read this Document	When To Use this Document	Additional Information
	etc. It is a reference document which will guide you through each stage of the process.			assessment. Refer back to this frequently.
Progression Tracker	This allows the employer to compile and record an evidence base to prove that the apprentice has demonstrated competence against each KSB specified in the assessment plan.	Apprentices Employers Providers	Throughout the on-programme period prior to gateway.	This document could be a valuable basis for discussions around progress that the employer may have with the apprentice.
Preparation for the Practical Assessment	This gives you a brief reminder of how to prepare for the Practical Assessment and the KSBs that will be assessed through this assessment method.	Apprentices Employers Providers	When preparing for your Practical Test.	The grading descriptors will help apprentices to identify areas you may need to work on.
Portfolio Referencing Matrix	This gives you an overview of the Portfolio of Evidence requirements. It also includes a declaration for the apprentice and the employer to sign.	Apprentices Employers Providers	When you submit the Portfolio of Evidence at gateway to support the Assessment Interview.	If this document is not signed and submitted the apprentice will not be able to enter gateway.
Document Name	Brief Description	Who Should Read this Document	When To Use this Document	Additional Information

Document Name	Brief Description	Who Should Read this Document	When To Use this Document	Additional Information
Preparation for the Interview	This gives you a brief reminder of how to prepare for the Interview and the KSBs that will be assessed.	Apprentices Employers Providers	When preparing for your Interview.	The grading descriptors may help you to complete a self-assessment whilst preparing for the Interview.
Gateway Authenticity and Declaration form	This form declares that the apprentice is ready for gateway, the gateway conditions have been met and the evidence submitted has been produced by the apprentice.	Apprentices Employers Providers	At gateway.	This form needs to be signed by employers, providers and the apprentice. The apprentice is unable to enter gateway until this form has been completed and submitted.

Gateway Requirements

The training provider must provide Open Awards with the following evidence to enable us to approve the gateway.

- Fully completed and signed Gateway Authenticity Declaration form.
- Apprentices must have completed the minimum apprenticeship on-programme duration (12 months from the start date).
- Apprentices must have achieved English and mathematics at Level 2. The Department for Education maintains a list of current and prior qualifications accepted as meeting the minimum English and maths requirements for apprenticeships at Level 3 and above. The most current list can be found on the DfE website. For those apprentices with an education, health and care plan or a legacy statement the apprenticeships English and mathematics minimum requirement is Entry Level 3 and British Sign Language qualifications are an alternative to English qualifications for whom this is their primary language.
- Site audit proposal.
- For this standard, apprentices are also required to have completed a portfolio of evidence.

For more information on acceptable qualifications for English and mathematics, please visit **here.**

Portfolio

Apprentices on this standard are required to develop and submit a portfolio of evidence related to the KSBs that will be assessed by the assessment interview. The portfolio must be submitted to Open Awards alongside other gateway evidence. Open Awards preferred format is an electronic portfolio either uploaded by the training provider to the Open Awards Portal, or else a login provided to enable Open Awards to access the portfolio. Training providers should contact Open Awards to discuss alternative arrangements, e.g., where a paper-based or mixed portfolio is developed.

Apprentices should select their best possible evidence to reflect their current level of proficiency against the standard at the point they undertake their interview. The portfolio is not assessed and will only be used to support the interview; feedback will not be provided on the portfolio. However, where the content requirements below are not met, or the evidence not authenticated as being valid and attributable to the apprentice, the portfolio will be returned by Open Awards to the apprentice, via the training provider, for amendment and subsequent resubmission. This resubmission

will not be considered as an assessment attempt and therefore, resubmission of the portfolio will not constitute either a resit or retake of the assessment interview. However, this will delay completion of the gateway checks. Therefore, training providers and employers are encouraged to ensure the portfolio requirements are met before submission at gateway.

Open Awards have developed supporting evidence tracking documentation to support apprentices, training providers and employers meet the portfolio content requirements set out in the assessment plan. This documentation is available from the Open Awards Secure Portal.

ST0161-PAS	Portfolio authenticity statement – Completion of this is a mandatory requirement.
ST0161-ERS	Evidence reference sheet – Completion of this is a mandatory requirement as it shows the evidence requirements within the assessment plan have been met; however, Open Awards will accept any alternative equivalent approach demonstrating that the portfolio content and structure requirements set out below have been met.
ST0161-CMS	Criteria mapping sheet – Completion of this is NOT mandatory, but will help IEPAs prepare for the professional discussion by giving apprentices the opportunity to signpost to where they believe appropriate evidence may be found.

Portfolio Content and Structure

The portfolio must contain evidence related to the KSBs that will be assessed by the professional discussion.

It will typically contain 12 discrete pieces of evidence which should be mapped against the KSBs. Evidence may be used to demonstrate more than one KSB; a qualitative as opposed to quantitative approach is suggested.

Evidence sources may include:

- workplace documentation/records, for example workplace policies/procedures, records
- witness statements
- annotated photographs, project documents, blogs, and press articles
- video clips (maximum total duration 20 minutes); the apprentice must be in view and identifiable
- feedback from colleagues and/or clients.

This is not a definitive list; other evidence sources are possible. However, the portfolio should NOT include reflective accounts or any methods of self-assessment.

Any employer contributions should focus on direct observation of performance (for example witness statements) rather than opinions. The evidence provided must be

valid and attributable to the apprentice; the portfolio of evidence must contain a completed Portfolio authenticity statement (ST0161-PAS) confirming this. Mock assessment activities are NOT considered acceptable evidence to be included within the portfolio.

Portfolio Submission

The portfolio must be submitted at gateway alongside the gateway evidence. Because the portfolio must be completed as a gateway requirement, all evidence must be generated and dated pre-gateway. No post-gateway dated evidence can be included as it will be considered invalid.

Where invalid evidence is included within the portfolio, the content requirements are not met, or the evidence is not authenticated, the portfolio will be returned by Open Awards to the apprentice, via the training provider, for amendment and subsequent resubmission. Resubmitted portfolios must be submitted to Open Awards to enable the gateway checks to be completed.

Identification Checks

Open Awards requires the apprentice to present photographic identification to an Open Awards invigilator or assessor immediately prior to each assessment on each assessment day. This is a requirement to ensure Open Awards can confirm an individual completing an assessment is the person they are claiming to be.

The following are acceptable forms of evidence of an apprentice's identification:

- a valid passport (any nationality)
- a signed UK photo card driving licence
- valid warrant card issued by HM Forces or the Police
- other photographic ID card, e.g., employee ID card (must be current employer), student ID card, travel card
- UK biometric residence permit.

Where this identification is not available to be checked, the assessment will NOT be allowed to commence.

Where an apprentice does not have access to the necessary identification or where the name on the identification does not match the name registered with Open Awards, the training provider must contact Open Awards in advance to make arrangements for alternative or additional authentication checks to be made.

Assessment

The ST0161 EPA consists of three (3) assessment methods:

- Knowledge Test
- Practical Assessment (Energy Audit)
- Assessment Interview (underpinned by the Portfolio of Evidence)

Assessment preparation

Support materials are available on the Open Awards portal to help prepare apprentices for their assessments. These materials will also support training providers and employers post-gateway to ensure apprentices are well prepared for their EPA experience. They are not intended to be used to measure proficiency pre-gateway or to support gateway decisions. Training providers can access these materials through the Secure Portal.

Order of Assessments

The Knowledge Test and the Practical Assessment (Energy audit) can be done in any order in any order. The result of one assessment method does not need to be known before starting the next.

However, the Assessment Interview MUST be done after the Practical Assessment (Energy audit). Water audit aspects of KSBs assigned to the Assessment Interview will be assessed in the Assessment Interview only if the Practical Assessment (Energy audit) does not include a water audit.

Assessment Window

All three (3) assessment methods must be completed within a period of three months from the gateway. Therefore, training providers and employers should ensure that assessments are planned and booked to ensure this timescale can be met.

Knowledge Test

This is a computer-based test which will be undertaken online and remotely invigilated by Open Awards. It is a closed book test so the apprentice may not use or refer to any books, notes or other materials during the test. Apprentices have 90 minutes maximum to complete the 60 multiple-choice questions in which they will demonstrate the KSBs assigned to this assessment method.

Each question will have four (4) answer options, of which only one (1) answer is correct. A correct answer gets 1 mark. Any incorrect or missing answers are assigned zero marks. The total number of marks available for the knowledge test is 60. This assessment will be graded fail/pass/distinction.

Delivery

The assessment will be undertaken remotely (normally via Zoom) and apprentices will be sent information providing them with the key details required to access the scheduled test. Open Awards must approve the suitability of the proposed venue for the apprentice to sit the test which will be taken in the presence of an Open Awards invigilator in line with the current version of Open Awards' Conditions for Conducting Controlled Assessments Remotely.

Knowledge Test Knowledge, Skills and Behaviours

Knowledge Statements	
TK1	Relevant level of theory and practices at Junior Energy Manager level that underpins how energy flows in and out of buildings, equipment and processes and how key energy systems operate.
TK4	Understand the economics of energy consumption, supply and demand of energy, sustainability issues and role of the organisation in tackling them.
TK5	Understand the principles of energy loss assessment.
TK6	Understand the principles of industry regulations, and environmental and regulatory requirements, and EU directives relevant to energy and climate change within the context of the Junior Energy Manager's workplace.
TK7	Test and maintain procedures of equipment and processes used to determine energy performance and how inefficiencies arise and how to improve energy performance.
TK8	Know how to read meters and sub-meters, collect, record and analyse metered data and interpret manufacturer's installation and maintenance requirements.
TK9	Understand how to estimate energy used from solid or liquid fuels that are not metered.
TK10	Know how to understand a bill, set an energy baseline and identify variables that affect energy consumption in organisations, and how to query and challenge bills with suppliers.

Knowledge Statements	
TK11	Understand energy tariffs.
TK14	Understand the importance of water management to the business' utility costs and carbon emissions.
TK15	Understand and continually improve an energy management contribution to strategic planning based on energy, carbon and water and key performance indicators for measuring and verifying success.

Practical Assessment (Energy Audit)

This assessment method takes the form of a three (3) stage Energy Audit that requires the apprentice to draw on their core practical occupational responsibilities and give the apprentice the opportunity to demonstrate the KSBs mapped to this assessment method. It is done under controlled conditions.

The Practical Assessment will be done under controlled conditions and comprise:

- Stage 1: Site audit proposal agreed between Open Awards and the apprentice's employer.
- Stage 2: Observation of an on-site or off-site energy audit in-line with the employer's practices and policies - typically three (3) hours.
- Stage 3: Compile and submit the energy report within two (2) weeks (i.e., 10 working days) of the observation. The report will be between 3,000 and 4,500 words excluding tables, charts and appendices.

Site proposal

The site audit proposal (stage 1) is NOT assessed but must be submitted at gateway (see template *ST0161-EAP*). It should be typically 1-3 sides of A4 (500 to 1500 words) and provide an outline of the employer's context. Within the proposal the employer should suggest an energy audit that the apprentice could undertake.

It should clearly indicate what buildings, plant, equipment etc., is available to the apprentice, as well as what control systems/meters and measurable data, and related financial information they will be able to access during the observation. Within the proposal the employer should suggest an energy audit that the apprentice could undertake.

The proposal must indicate whether the proposed audit will be on-site or off-site, and if a water audit is included.

The proposal may include reference to lighting, heating, cooling, ventilation and pumping systems. Open Awards expects the observation will be conducted in the apprentice's normal working environment to take account of the occupational context in which the apprentice operates.

The proposal must ensure apprentices are able to access:

- information on energy and water consumption of a building/site, plant, equipment, processes and IT systems with which they are familiar
- data for a range of measurable energy performance indicators
- meters and information on the manufacturer's installation and maintenance requirements
- basic financial information relating to energy costs and savings.

This proposal will be reviewed by the IEPA allocated by Open Awards. They will directly contact the employer to discuss the proposal to ensure it will enable the apprentice to address the KSBs assigned to this assessment method. They will also seek to confirm if a water audit can be included as part of the energy audit.

Energy audit

Open Awards will agree an on-site or off-site energy audit with the employer and confirm necessary arrangements. The apprentice will be given at least one (1) week's notice of the observation time and date. The observation will be undertaken on a one-to-one basis; the IEPA is only able to assess one apprentice at a time. Throughout the observation, apprentices are expected to comply with and work in accordance with the standard procedures of their employer.

Energy report

Open Awards preferred format is an electronic report uploaded by the training provider on behalf of the apprentice to their Open Awards SharePoint folder. Training providers should contact Open Awards to discuss alternative arrangements, e.g., where a paper-based or mixed portfolio is developed.

Practical Assessment (Energy Audit) Grading Descriptors

Ref	KSB's	Pass Descriptors	Distinction Descriptors
S2 TK2	Relate the workings of plant, processes and equipment to energy consumption. Relevant level of theory and practices that underpin the energy efficient use of equipment, processes and IT systems.	Identifies specific examples of plant, processes and equipment workings related to energy consumption. Helps to assure the energy efficient use of equipment, processes and systems within the workplace. Demonstrates an understanding of the energy efficient use of equipment, processes and systems within the workplace. Explains with modest impact and few identified improvements for efficient use of equipment, processes and systems.	Explains specific examples of plant, processes and equipment workings related to energy consumption and evidences where she/he driven results to improve the plant, process and equipment workings to reduce energy consumption. Applies techniques to manage the energy efficient use of equipment, processes and systems within the workplace. Demonstrates and explains more complex understanding of the Energy efficient use of equipment, processes and systems within the workplace. Actively reviews performance of the equipment, processes and systems and recommends corrective actions to deal with the energy efficient use of equipment, process and systems.
S3	Identify and explain variables that vary the energy consumption of a building and process (Building operation: summer/winter; day/night, etc.)	Identifies specific variables that vary the energy consumption of the workplace building and process.	Explains specific variables that vary the energy consumption of the workplace building and process, and shows an understanding of influencing the variables to reduce energy consumption and optimise the building use and processes.
S4 TK3	Identify and explain suitable and measurable	Demonstrates an understanding of a range of measurable	Can demonstrate positive outcomes of effectively impacting energy

	energy performance indicators (energy use, consumption, efficiency). Energy performance, water measurement and verification of measured data.	energy performance indicators and applies these effectively in the workplace. Demonstrates an understanding of energy performance and water measurement. Understands how to measure and verify the collected data. Completes the measurement and verification tasks without instructions.	performance indicators in the workplace. Demonstrates an understanding of energy performance and water measurement with extensive and far reaching outcomes demonstrating very significant impact and well thought out identified improvements. Takes a detailed approach to completing the measurement and verification tasks and actively reviews energy performance in the workplace to looks for ways to maximise efficiency.
S5 TK8	Implement and/or maintain metering and measurement plans and undertake basic analysis of the outputs. Know how to read meters and sub-meters, collect, record and analyse metered data and interpret manufacturer's installation and maintenance requirements.	Demonstrates an understanding of the metering and measurement plans requirement. Able to evidence basic analysis of the outputs. Demonstrates ability to analyse metered data. Works to collect, record and analyse metered data and can spot possible anomalies without any instructions or support. Can interpret installation and maintenance requirements accurately and plan action to manage technology/system replacement if required.	Explains how to implement and maintain metering and measurement plans, and shows basic analysis of the outputs. Proactively identifies opportunities arising from maintaining metering and measurement plans. Actively reviews performance of metering technology and uses collected data for ways to maximise energy/water efficiency and performance. Demonstrates a proactive approach to installation and maintenance requirements. Identifies and anticipates problems related to the workplace energy performance as a result of installation and maintenance action.

S7	Contribute to all aspects of the energy and water use audits: conduct energy and water assessments and/or audits, and identify products, systems and processes solutions that reduce energy and water consumption.	Demonstrates an understanding of all aspects of the energy and water use audits: conduct energy and water assessments and/or audits, and identify products, systems and processes solutions that reduce energy and water consumption. Able to evidence instances of his/her contribution to all aspects of the energy and water use audits: conduct energy and water assessments and/or audits, and identify products, systems and processes solutions that reduce energy and water consumption.	Evidences detailed comprehensive energy and water use audits undertaken without supervision.
S11	Carry out basic financial calculations relating to energy costs and savings.	Demonstrates an ability to undertake financial calculations related to energy costs and savings and complete work without instructions.	Demonstrates an understanding of financial calculations related to energy costs and savings and can manipulate the figures to calculate payback period, potential return on investment and similar.
B7 TK6	Comply responsibly with current and relevant industry standards and regulations. Understand the principles of industry regulations, and environmental and regulatory requirements, and EU directives relevant to energy	Demonstrates understanding of all current and relevant industry standards and regulations related and to be adhered by the organisation. Describes application and understanding of the principles of industry regulations, and environmental and regulatory requirements, and EU directives relevant to energy and	Demonstrates knowledge of new industry standards and regulation and can anticipate likely forthcoming changes through an understanding of current political focus. Explains recommended suggestions and evidence based improvements / corrective actions to deal with regulatory compliance within the workplace.

	and climate change within the context of the Junior Energy Manager's workplace.	climate change within the context of the Junior Energy Manager's workplace. Works in accordance with the workplace relevant regulations and regulatory requirements and EU directives.	
B11	Exercise responsibilities in an ethical manner.	Completes work responsibly and works in accordance with ethical procedures.	Evidences strong work ethic and responsibility.

Assessment Interview

The apprentice and the IEPA will have a conversation, allowing the apprentice to evidence the KSBs assigned to this assessment method and draw on appropriate evidence from their portfolio to underpin the interview. The portfolio itself will not be assessed, but it must meet a minimum level of quality to enable the interview to take place. The apprentice will be able to access their portfolio to refer to during the interview.

The interview will be undertaken on a one-to-one basis between the IEPA and the apprentice and last between 60 and 90 minutes. It will include:

I. skills not covered by the Practical Assessment (i.e., water audit)
II. behaviours using the Portfolio of Evidence as a basis for the oral assessment and discussion.

The interview will normally be undertaken remotely through video conferencing (E.g., MS Teams or Zoom). It may be possible to undertake it face-to-face on the same day as the Energy Audit observation, where this is undertaken on-site. However, providers must discuss this with Open Awards.

As the discussion only involves the apprentice and the IEPA, neither the employer or provider are required or able to attend.

The apprentice will be given at least one (1) week's notice of the Assessment Interview. Open Awards will provide employers with requirements for the interview at least five (5) working days in advance of the assessment. This will specify requirements such as room layout, environment and equipment or materials.

Assessment Interview Grading Descriptors

Ref	KSB's	Pass Descriptors	Distinction Descriptors
TK12	Know relevant initiatives/ policies associated with transport, travel planning and logistics operational system within the context of the Junior Energy Manager's workplace	Can describe and explain relevant initiatives/policies associated with transport, travel planning and logistics operational system with the context of the workplace. Demonstrates an understanding of how to streamline travel planning and logistics within the workplace and can list alternative solutions.	Explains managing and reviewing the workplace initiatives/policies associated with transport, travel planning and logistics operational system. Explains improving travel planning and logistics within the workplace.
TK13	Understand the impact of transport and logistics on climate change if relevant to the Junior Energy Manager's workplace.	Considers links between transport/logistical exercise and climate change and communicates them in the workplace.	Explains ensuring policies, procedures and management controls are in place within the workplace to diminish negative impact of transport/logistical exercise on climate change.
S1	Complete template reports and ensure records are maintained for audit and reporting purposes.	Explains understanding of the reporting elements, purpose and target audience. Describes evidence of preparing energy reports and highlights areas of personal contribution.	Explains and provides examples of completing a range of energy reports that are different in tone to reflect their intended purpose and audience and how they resolved any challenging areas with respect to completing reports and maintaining the record.
S6	Carry out basic checks on bills and other recorded data to verify accuracy and repeatability.	Demonstrates an understanding and can explain how to carry out basic checks on bills and	Can explain in detail and provide examples of personal contribution to carrying out basic bills' and

		other recorded data to verify accuracy and repeatability.	other recorded data checks.
S7 TK3	Contribute to all aspects of the energy and water use audits: conduct energy and water assessments and/or audits, and identify products, systems and processes solutions that reduce energy and water consumption. Energy performance, water measurement and verification of measured data (water audit aspects assessed in the assessment interview only when the practical task does not include a water audit)	Outlines all aspects of the energy and water use audits: conduct energy and water assessments and/or audits, and identify products, systems and processes solutions that reduce energy and water consumption. Able to offer examples of instances of his/her contribution to all aspects of the energy and water use audits: conduct energy and water assessments and/or audits, and identify products, systems and processes solutions that reduce energy and water consumption. Has an understanding of energy performance and water measurement. Has an understanding how to measure and verify the collected data. Explains completing the measurement and verification tasks without instructions.	Evidences detailed comprehensive energy and water use audits undertaken without supervision. Makes positive suggestions for improvements of meter and submeter installations. Explains an assessment of energy performance and water measurement with extensive and far reaching outcomes demonstrating very significant impact and well thought out identified improvements. Takes a detailed approach to completing the measurement and verification tasks and actively reviews energy performance in the workplace to looks for ways to maximise efficiency.
S8	Contribute to the organisation's	Able to evidence and describe his/her	Able to outline and evaluate a proactive

	procurement process/products/services.	contribution to the organisation's procurement processes.	contribution and identification of opportunities for improvement of the organisation's procurement processes and proposing operational models to take advantage of these opportunities.
S9	Assist with the gathering of energy performance data and administration and implementation of energy awareness and motivation programmes and their associated communication strategies for reduced energy use.	Demonstrates knowledge of data gathering and administering. Can explain developing a detailed action plan and timeline for implementing and communicating energy awareness and motivation programmes with the aim to reduce energy use.	Able to explain methods and describe measurement technologies for gathering energy performance data and utilising them to communicate better energy awareness. Sets methods of raising energy awareness amongst a variety of audiences. Explains successfully developing and implementing motivation programmes to reduce energy use.
S10	Identify, organise and use resources effectively to complete tasks as instructed, with consideration for efficiency, cost, quality, safety, security and environmental impact.	Describes and displays evidence of specific examples of organising and using resources to complete given task with the focus on efficiency, cost, quality, safety, security and environmental impact.	Can successfully identify risks and contingency plans to mitigate risks from an ineffective use of resources to complete tasks.
S12	Work effectively and safely when undertaking tasks to approved standards and safe working practices as part of a team, working alone	Shows awareness and evidence of working effectively and safely when undertaking tasks to approved standards	Effectively details a combination of approaches to work effectively and safely when undertaking tasks to deliver them

	or with appropriate supervision.	and safe working practices.	to approved standards and safe working practices. Communicates effective and safe approaches to approved standards to others within the team and/or organisation.
S13 S15	Use a variety of appropriate communication methods to interact with others to give/receive information accurately, in a timely, positive and professional manner. Communicate effectively using evidence-based reporting, communication and presentation skills.	Evidenced instances of effectively delivering presentations as part of the EPA and presenting evidence of communicating and interacting with others to give/receive information accurately, in a timely, positive and professional manner. Evidences an effective delivery of presentations as part of the EPA. Presents evidence of presenting in the workplace, subsequent discussion and demonstrates specific examples of delivering stakeholders events.	Can evidence positive outcomes of engagement events delivered using variety of appropriate communication methods. Shows an understanding of the reason for engagement with stakeholders. Can evidence interaction with others through quantitative outcomes and/or positive feedback.
S14	Demonstrate analytical and problem solving skills.	Demonstrates ability to effectively analyse and solve problems related to the role within the workplace and offers examples.	Able to evidence positive outcomes of analytical and problem-solving exercise undertaken without guidance within the workplace and sets out examples
B1	Target and goal oriented.	Describes evidence of actions within the workplace that led to	Describes planning, process and outcome of an action that led to

		hitting performance or other targets. Outlined 3 professional goals planning to achieve within the next 12 months.	hitting a target within the workplace. Takes responsibilities for identifying possible targets and goals. Outlines and describes 5 professional goals planning to achieve within the next 12 months.
B2	Forward thinking and proactive	Explains occasions of proactively seeking opportunities for up-to date information relevant to the workplace's energy management task. Provides examples of positive contributions to an energy management task by anticipating certain regulatory, industry, sector, event developments.	Evidences detailed personal commitment to energy management principles and workplace values Actively seeks opportunities to make positive contributions to energy management practices and energy efficiency.
B3	Display a self-disciplined, self-motivated approach whilst recognising personal limitations and seeking advice from fact holders and specialists when required.	Completes work without instruction, plans work to ensure task are completed within set timescale, demonstrates flexibility to changing working environment and demands. Co-ordinates with stakeholders to ensure the correct resources and processes are in place. Able to identify and seek advice from relevant stakeholders when required.	Takes a detailed approach to planning work. Actively reviews performance with a critical eye and looks for ways to maximise efficiency. Demonstrates the ability and confidence to deputise for the line manager/senior energy managers when necessary.

B4	Deliver a supportive professional service to external and internal customers.	Evidences effective professional relationship throughout employment and effectively engages external and internal stakeholders and clients	Demonstrates strong interpersonal skills in relationships with a broad range of stakeholders, including senior management and other internal and external stakeholders and clients. Encourages and facilitates good working relationships. Demonstrates a high level of consideration for people's opinions.
B5	Environmentally and economically focused	Describes personal commitment to environmental and sustainability issues, and their impact on the economy	Evaluates in detail own personal commitment to environmental principles and compares to those of the general population. Evidences personal action to foster awareness of environmental issues. Acts as a role model and encourages others to adopt environmental principles. Challenges environmental and economic issues.
B6	Focus on undertaking and completing work in a way that contributes to sustainable development.	Explains undertaking and completing work in a way that contributes to sustainable development.	Demonstrates learning from challenges experienced in practice, and details how these were altered to achieve sustainable development. Details combination of approaches that work together to deliver

			sustainable development. Considers anticipates factors that may affect undertaking and completing work.
B8	Be quality and efficiency focussed, and professional in work and in personal standards.	Evidences focus on delivering quality service with focus on efficiency and building relationships. Throughout employment effectively engages external and internal stakeholders and clients, develops objectives and completes an action. Assists in the monitoring of standards and practices to ensure energy quality is maintained.	Demonstrates high personal commitment to delivering quality service and can provide examples of how they resolved/would resolve challenging situations related to quality and efficiency of their or organisation's service
B9	Be aware of the needs and concerns of others, especially where related to diversity and equality.	Evidences strong team working and empathy through employment within the team. Contributes to meetings and planning, supports team briefings. Shows respect for others, adapts communication style for audience. Understands different needs and requirements.	Demonstrates the development of significant team building activities, proactively engages with other departments and/or wide range of stakeholders. Demonstrates a high level of consideration for people's needs and concerns.
B10	Carry out and record Continuing Professional	Describes processes of carrying out and	Actively seeks a variety of CPD

	Development and professional training, necessary for maintaining and enhancing competence	recording CPD and training. Outlines activities outside of the apprenticeship programme that contributed to enhancing energy management skills and competencies.	activities and professional training to upskill and maintain and enhance competence. Plans the Continuing Professional Development 12 months in advance. Can detail planned CPD activities. Takes responsibility for identifying possible development opportunities for other team members.
B12	Be able to adjust and respond effectively to unexpected change, and deal with contingency risks.	Describes instances of accurately assessing risk and planning an action to manage unexpected change and risk.	Explains instances of pro-actively and independently implementing effective change and risk management controls and communicating these controls to other stakeholders.

Grading

Individual Assessment Grades

Knowledge Test

- A score of less than 37 marks will be graded as a fail.
- To achieve a pass, apprentices must achieve at least 37 marks.
- To achieve a distinction, apprentices must achieve at least 51 marks.

Practical Assessment (Energy Audit)

- If one or more pass grading descriptors are not met, the assessment will be graded as a fail.
- To achieve a pass **all** pass criteria must be met.
- To achieve a distinction **all** pass criteria **and all** distinction criteria must be met.

Assessment Interview

- If one or more pass grading descriptors are not met, the assessment will be graded as a fail.
- To achieve a pass **all** pass criteria must be met.
- To achieve a distinction **all** pass criteria **and all** distinction criteria must be met.

Overall Grade

The grades from the three (3) individual assessment methods will be combined in the following way to determine the overall grade:

- All assessments must be passed to achieve an overall pass graded apprenticeship.
- To achieve a distinction grade, an apprentice must achieve a distinction at least in two (2) assessments, one (1) of which must be the practical assessment (Energy Audit).

Knowledge Test	Practical Assessment	Assessment Interview	Overall Grade
Any Grade	Any Grade	Fail	Fail
Fail	Any Grade	Any Grade	Fail
Any Grade	Fail	Any Grade	Fail
Pass	Pass	Pass	Pass
Distinction	Pass	Pass	Pass
Pass	Pass	Distinction	Pass
Pass	Distinction	Pass	Pass
Distinction	Pass	Distinction	Pass
Pass	Distinction	Distinction	Distinction
Distinction	Distinction	Pass	Distinction
Distinction	Distinction	Distinction	Distinction

Resits and Retakes

Apprentices who fail one or more assessment methods will be offered the opportunity to take a resit or a retake. Open Awards will provide feedback alongside the result notification to all apprentices who fail an assessment method. This feedback will be provided via the training provider, normally **within ten (10) workings days** of the assessment taking place. The exception to this is the online knowledge test where only the result notification will be provided and this will normally be within 72 hours of the assessment taking place.

Where the result notification suggests a retake may be appropriate, it is recommended the employer and training provider consider a supportive action plan that responds to the performance weaknesses identified within the feedback. This action plan should clearly state the nature and extent of the re-training and include the estimated time to prepare the apprentice for the retake. When a retake is booked, Open Awards will require confirmation from the training provider that the apprentice has received further training and is ready to be assessed.

The timescale for a re-take is dependent on how much re-training is required and is typically taken within three (3) months of the EPA outcome notification. A resit involves the apprentice attempting one or more failed assessment components again, without the need to undertake further training. Open Awards normally require a minimum of 10 workings days' notice when booking a resit or a retake. The exception is the online knowledge test when five (5) workings days' notice is required.

Resits or retakes are only to be taken in the event that the original assessment grade is a fail. A resit or retake cannot be taken with the intention of increasing the original grade if an apprentice has passed their EPA. Therefore, feedback will not normally be provided to apprentices who achieve a pass or higher.

The maximum grade that can be achieved for a resit or retake is a pass. Where an apprentice believes exceptional circumstances impacted on their initial assessment attempt, they must submit a formal request with supporting evidence for exceptional circumstances to be considered, directly to Open Awards **within five (5) working days** of receiving the assessment decision.

The number of resits and retakes that can be taken by an apprentice will normally be at the discretion of the employer. Open Awards will facilitate two (2) resits or retakes, however, more than two (2) resits or retakes may be taken if available.

The same IEPA who undertook the initial assessment attempt may be allocated by Open Awards to assess an apprentice's resit or retake. This may be a requirement of the assessment plan. The allocation of IEPAs to assessments will be taken by Open Awards based upon the requirements of the assessment plan or operational considerations.

Quality Assurance

Internal Quality Assurance

Quality assurance is at the heart of Open Awards' practices and we follow suitably rigorous processes to ensure that the integrity of our assessments is maintained.

Internal quality assurance is the process of reviewing and evaluating assessment practices and decisions to ensure that:

- an identified individual is responsible for coordinating internal quality assurance processes
- there are clear and documented roles and responsibilities for all those involved
- all learners are assessed accurately, fairly and consistently to the right standard
- internal quality assurance is structured and incorporates all of the requirements set out in the assessment plan associated with the apprenticeship standard
- assessment tasks and learner work are sampled appropriately
- good practice is promoted through internal standardisation events and quality assurance meetings
- decisions are supported by full and clear records and action plans that are followed
- internal processes are transparent and regularly evaluated.

External quality assurance

External quality assurance for this apprenticeship standard is undertaken by Ofqual.

Knowledge Test Indicative Content

Ref	KSB to be assessed
Knowledge	
TK1	Relevant level of theory and practices at Junior Energy Manager level that underpins how energy flows in and out of buildings, equipment and processes and how key energy systems operate.
The apprentice should possess foundational knowledge of principles governing energy movement in buildings, equipment, and processes. This includes understanding thermodynamics, heat transfer mechanisms, and fluid dynamics as they relate to energy systems. The apprentice will know: ● the basic principles of thermodynamics, such as the laws governing energy transfer and conversion. ● various heat transfer mechanisms, including conduction, insulation, convection, radiation, and understand their applications in energy systems. ● fluid dynamics and its relevance to energy systems, recognising how fluid flow impacts the efficiency of processes and equipment. ● key components in energy systems, such as pumps, and heat exchangers, and their roles in facilitating energy flow.	
TK4	Understand the economics of energy consumption, supply and demand of energy, sustainability issues and role of the organisation in tackling them.
The apprentice should have a good understanding of the economic dimensions of energy management. This encompasses energy consumption economics, supply and demand dynamics, sustainability principles, and the organisational role in addressing these challenges. The apprentice will understand: ● the financial aspects related to energy consumption, including life cycle costing and return on investment for energy-efficient technologies. ● the principles of supply and demand in the energy market, considering factors affecting energy pricing, market fluctuations, and their impact on resource allocation. ● sustainability principles, covering economic, environmental, and social facets of energy practices. This includes an understanding of the triple bottom line and implications of unsustainable energy practices on organisational viability. ● the organisation's role in addressing sustainability challenges, including energy policy compliance, adoption of renewable energy sources, and implementation of energy-efficient policies.	

<table>
<tr><th>Ref</th><th>KSB to be assessed</th></tr>
<tr><td colspan="2">

- how the adoption of renewable energy sources affects an organisation economically. This includes potential cost savings, government incentives, and long-term financial benefits associated with sustainable energy practices.

</td></tr>
<tr><td>TK5</td><td>Understand the principles of energy loss assessment.</td></tr>
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The apprentice should have a good understanding of the principles underlying energy loss assessment. This involves grasping fundamental principles related to the evaluation of energy losses, encompassing the identification of contributing factors and the application of quantification methods within diverse systems.

The apprentice will understand:

- fundamental principles related to energy loss assessment, including concepts such as heat transfer, insulation efficiency, and factors influencing energy losses.
- factors contributing to energy loss in diverse systems, considering variables like equipment inefficiencies, transmission losses, and thermal bridging.
- methods used to quantify energy losses, including the use of energy audit tools, thermal imaging, and data analysis techniques.

</td></tr>
<tr><td>TK6</td><td>Understand the principles of industry regulations, and environmental and regulatory requirements, and EU directives relevant to energy and climate change within the context of the Junior Energy Manager’s workplace.</td></tr>
<tr><td colspan="2">

The apprentice will have a good understanding of fundamental principles, awareness of environmental and regulatory requirements, and clear insights into relevant UK and EU legislations and directives shaping energy and climate change practices within the workplace.

The apprentice will understand:

- the core principles underpinning industry regulations, including adherence to UK legislation such as the Climate Change Act and the EU Emissions Trading System.
- environmental and regulatory requirements, ensuring compliance with UK standards such as the Environmental Permitting Regulations and the Energy Savings Opportunity Scheme (ESOS).
- key EU directives impacting energy and climate change initiatives in the workplace, including directives such as the Energy Efficiency Directive and the Renewable Energy Directive.
- regulatory compliance within the workplace, incorporating UK regulations like the Minimum Energy Efficiency Standards (MEES) and the EU's commitment to the Paris Agreement.
- how EU directives contribute to climate change mitigation strategies within the workplace, recognising their role in fostering sustainable energy practices. This includes alignment with UK initiatives such as the Clean Growth Strategy.

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Ref	KSB to be assessed
TK7	Test and maintain procedures of equipment and processes used to determine energy performance and how inefficiencies arise and how to improve energy performance.

The apprentice should be familiar with the testing protocols, maintenance procedures, and insights into how inefficiencies arise in equipment and processes. Furthermore, the apprentice should be familiar with strategies to enhance energy performance and mitigate inefficiencies.

The apprentice will know:

- the principles of testing procedures used to determine energy performance, including methods such as energy audits, metering, and data analysis.
- maintenance procedures essential for ensuring optimal energy performance in equipment and processes, encompassing routine checks, calibration, and preventive measures.
- how inefficiencies arise in energy-consuming equipment and processes, covering factors such as wear and tear, outdated technology, and suboptimal operating conditions.
- strategies for improving energy performance, including the adoption of energy-efficient technologies, process optimisation, and employee training on energy-conscious practices.
- how to apply techniques to improve energy performance, including real-time monitoring, feedback mechanisms, and continuous improvement methodologies.

TK8	Know how to read meters and sub-meters, collect, record and analyse metered data and interpret manufacturer's installation and maintenance requirements.

The apprentice must have a good knowledge of meter reading techniques, data collection methods, recording procedures, and the ability to interpret manufacturer's installation and maintenance requirements for accurate energy management.

The apprentice will know:

- various techniques for reading meters and sub-meters accurately, covering aspects such as digital and analogue meter readings, and sub-metering technologies.
- effective methods for collecting metered data, including manual readings, automated systems, and the integration of smart meters.
- recording procedures, encompassing accurate documentation of metered data, data storage, and the use of energy management software.
- how to analyse metered data, including identifying consumption patterns, recognising anomalies, and utilising data analysis tools for informed decision-making.
- how to interpret manufacturer's installation and maintenance requirements for meters and sub-meters, ensuring compliance with specifications and optimising equipment performance.

Ref	KSB to be assessed
TK9	Understand how to estimate energy used from solid or liquid fuels that are not metered.

The apprentice should have knowledge of methods to estimate energy consumption when metering is unavailable, covering techniques specific to solid and liquid fuels.

The apprentice will understand:

- estimation methods for determining energy usage from solid or liquid fuels in the absence of direct metering, including calorimetry, emission factors, and theoretical calculations.
- key characteristics of solid and liquid fuels that impact energy content, such as moisture content, combustion efficiency, and energy density.
- recording procedures for fuel usage estimates, ensuring accurate documentation of relevant parameters and factors affecting energy content.
- how to analyse combustion processes for solid and liquid fuels, considering factors such as stoichiometry, combustion efficiency, and the impact on energy release.
- how to apply estimation techniques in real-world scenarios, accounting for variations in fuel quality, combustion conditions, and environmental factors.

TK10	Know how to understand a bill, set an energy baseline and identify variables that affect energy consumption in organisations, and how to query and challenge bills with suppliers.

The apprentice is expected to possess a good level of bill comprehension, ability of baseline establishment, identification of key variables influencing energy consumption, and the skills to effectively query and challenge bills with suppliers.

The apprentice will know:

- the components of energy bills, including tariff structures, usage breakdowns, and additional charges, ensuring a comprehensive understanding of billing statements.
- how to set energy baselines for organisations, considering historical consumption patterns, seasonal variations, and the influence of external factors on energy usage.
- variables affecting energy consumption in organisations, covering factors such as equipment efficiency, occupancy patterns, and climate conditions.
- how to effectively query and challenge bills with suppliers, including the ability to identify billing discrepancies, interpret contractual terms and negotiate more favourable terms when necessary.

TK11	Understand energy tariffs.

The apprentice is expected to have a good knowledge of different energy tariff structures, their implications for organisations, and the ability to make informed decisions regarding tariff selection and optimisation.

Ref	KSB to be assessed
The apprentice will understand: ● types of energy tariffs, including fixed, variable, time-of-use, and peak-demand tariffs, recognising their unique features and applications. ● the components of energy tariffs, including standing charges, unit rates, and any additional charges, ensuring clarity on billing structures. ● how different energy tariffs impact organisations, considering factors such as budgeting, cost predictability, and the alignment of tariffs with operational patterns. ● how to select and optimise energy tariffs based on organisational needs, taking into account factors such as consumption patterns, peak demand periods, and financial considerations. ● legislative and regulatory aspects influencing energy tariffs, including an awareness of government initiatives, subsidies, and incentives affecting tariff structures.	
TK14	Understand the importance of water management to the business' utility costs and carbon emissions.
The apprentice is expected to be aware of the interconnected dynamics of water management, energy consumption, and carbon emissions in business operations. This includes awareness of the connections between water management strategies, their impact on controlling utility costs, mitigating carbon emissions, fostering energy efficiency, the relationship between energy and water circulation, and the specific effects of hot water in business operations. The apprentice will understand: ● the relationship between water consumption patterns, utility costs, energy efficiency, water circulation, and the specific effects of hot water. This involves exploring detailed tariff structures, operational efficiency gains, understanding the energy implications associated with water circulation systems, and the distinctive impact of hot water on processes. ● the intricate dynamics where water management practices intersect with utility costs as well as carbon emissions. This includes understanding energy-intensive hot water treatment processes, transportation, the carbon footprint involved with various aspects of water use and circulation, and the specific emissions associated with hot water production and usage. ● strategic approaches to sustainable water and energy management, including the role of water circulation systems and the specific effects of hot water, water conservation methodologies, innovative hot water reuse strategies, and the strategic integration of cutting-edge, energy-efficient technologies for both water heating, circulation, and hot water applications.	
TK15	Understand and continually improve an energy management contribution to strategic planning based on energy, carbon and water and key performance indicators for measuring and verifying success.

Ref	KSB to be assessed
	The apprentice should have a clear understanding of how energy, carbon, and water considerations contribute to strategic goals, along with the identification and application of Key Performance Indicators (KPIs) for measuring and verifying success. The apprentice will understand: ● how energy, carbon, and water considerations are strategically integrated into organisational planning. This includes aligning energy efficiency initiatives, carbon reduction goals, and water conservation strategies with broader strategic objectives. ● how to identify and apply relevant KPIs to measure and verify the success of energy management initiatives. This involves selecting indicators such as energy intensity, carbon footprint, and water-use efficiency to gauge performance against set targets. ● how energy management contributes to strategic planning beyond cost savings, encompassing considerations of environmental impact, sustainability and resilience. ● ways to improve the contribution of energy management to strategic planning. This may include understanding technological advancements.

Open Awards Policies

Current versions of the following Open Awards policies are accessible through the Secure Portal.

These policies include:

- End Point Assessment Pricing Policy
- Reasonable Adjustments and Special Considerations Policy
- Data Protection
- Enquiries and Appeals Policy
- Complaints Policy
- Malpractice and Maladministration Policy
- Equality and Diversity Policy
- Sanctions Policy
- Safeguarding Policy
- Conflict of Interest Policy
- Fair Access Policy

In addition, the current version of the following relevant document may be obtained by training providers, employers or apprentices by contacting Open Awards directly:

- Instructions for Conducting Controlled Assessment Remotely

Support

For information about Open Awards support offer, including information on our policies, quality assurance, re-sits, appeals, complaints and general enquiries, please see our website: **www.openawards.org.uk** or contact our customer service team on 0151 494 2072 or via email at **enquiries@openawards.org.uk**.

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