



END POINT ASSESSMENT STRATEGY AND ASSESSMENT SPECIFICATION

JUNIOR ENERGY MANGER APPRENTICESHIP STANDARD – LEVEL 3 – ST0161



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1. INTRODUCTION

The purpose of the end-point assessment (EPA) is to test that an apprentice is fully capable of doing their job before they receive their apprenticeship certificate. It also helps to demonstrate that what an apprentice has learned, can be applied in the real world.

The EPA is undertaken by an independent end-point assessment organisation (EPAO). EPAOs are responsible for designing, administering and marking assessments.

It is important to ensure that apprentices are assessed consistently and fairly. Every EPAO has to have in place their assessment material and material to support apprentices, employers and training providers.

In addition, policies, procedures and systems for controlling the quality of the assessments have to be in place to assure the Internal Quality Assurance (IQA). IQA also involves ensuring that assessors are qualified and trained, that grading is applied consistently and that assessment instruments such as test questions or practical tasks are robust.

The External Quality Assurance (EQA) provider monitors the performance of different EPAOs, the effectiveness of the apprenticeship standard and assessment plan; checking it is reliable, rigorous and fit-for-purpose.

2. JUNIOR ENERGY MANAGER STANDARD

The Junior Energy Manager apprenticeship standard has been designed to operate as the professional standard for people working as Junior Energy Managers. It is an entry level apprenticeship and includes options for aspiring to become senior energy managers or consultants.

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 or energy management core topics. Junior Energy Managers would be expected to focus on energy assessment and measurement of energy consumption, their organisation's 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.

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Junior Energy Managers might be required to work closely with engineers, facilities managers, procurement and finance departments as well as energy and technology services and technology suppliers.

Junior Energy Managers may be required to work in various types of organisations, in both, public and private sector, from multi-site set ups to small but energy intensive enterprises, depending on their employer's activities.

The Junior Energy Manager apprenticeship adopts a core energy management knowledge, skills and behaviours approach to allow flexibility for employers and enable transferability of skills between different set ups and employers for apprentices.

3. APPRENTICESHIP STRUCTURE

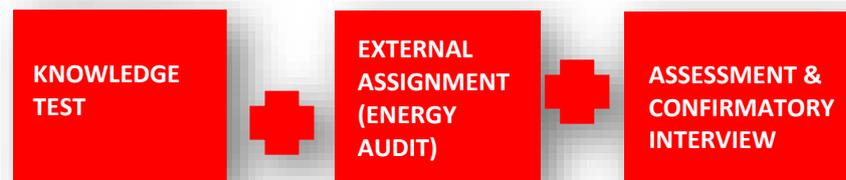
On-program:



Assessment Gateway:



Knowledge and Synoptic
End Assessment:



An apprenticeship is split into 3 sections:

- **ON-PROGRAMME TRAINING AND LEARNING**

The Apprentice must be involved in active learning throughout their apprenticeship. On programme training includes both on-the-job and off-the-job training and learning, and should enable them to develop the knowledge, skills and behaviours set out within the Apprenticeship Standard.

Continuous assessment is needed to track Apprentices' progress, gather feedback and offer Employers and Training Providers a clear perspective of Apprentices' readiness for the EPA.

The continuous assessment may be through a one-to-one monitoring progress or as a formal qualification that precedes the EPA. The Training Provider is primarily responsible for the quality assurance of the delivery of the On-Programme element but Employers, in some circumstances, may be able to carry out all or part of this function.

- **GATEWAY TO END POINT ASSESSMENT**

The decision to determine when each Apprentice is ready to undertake End Point Assessment is referred to as 'the Gateway' and should involve participation from the Employer, Training Provider and Apprentice. Agreement, or 'Sign-Off', is required to demonstrate that the Apprentice has the knowledge, skills and behaviours required within the Standard and to inform the End Point Assessment Organisation that they are ready for EPA.

A formal meeting, Gateway meeting should be held in apprentice's workplace between apprentice, employer and training provider. The meeting usually lasts approximately 30 – 45 minutes and apprentices will be asked to bring records of their progression to the meeting for review and discussion and their readiness will be discussed in order to arrange the End Point Assessment.

The purpose of the meeting also is to:

- To confirm that the apprentice is happy for the EPAO to make the final claim for apprenticeship completion, subject to passing all assessments
- To confirm of apprenticeship eligibility
- To confirm the achievement of the necessary levels of maths and English qualifications for the Junior Energy Manager Standard
- Confirmation of authenticity which must confirm that the apprentice has completed all work submitted for the End Point Assessment.

A Portfolio of Evidence is required to be submitted at gateway for the Junior Energy Manager Apprenticeship. This will then be reviewed by an EPA Assessors ahead of the last EPA step, the Professional Discussion/Interview.

A Portfolio of Evidence is a repository for the work that best demonstrates that apprentice can apply the knowledge and skills, and demonstrate the behaviours identified in the apprenticeship standard.

The Portfolio will include three types of evidence:

1. Evidence documenting the apprentice's on-job activities and achievements
2. Evidence documenting the apprentice's learning and skills development journey. Evidence should include: training log (account of your learning and skills development journey and course completion certificates, marked course assessments and projects) and reflective statement.
3. Self-assessment Report and CV

The evidence chosen:

- Must cover the totality of the relevant Standard
- Should be signposted and include a summary and/or mapping document that clearly shows where the evidence is located and which learning outcome it meets (Note: If you are using an e-portfolio this should clearly provide links to your evidence.)
- Must be structured in line with the requirements outlined in the EMA Portfolio Guidance document and ideally be presented in an electronic format.
- Will be reviewed by the EPA assessor against the criteria for the Junior Energy Manager Standard.

During the Gateway period, a training provider may also wish to set up mock assessments.

- **END POINT ASSESSMENT (EPA)**

Once an Apprentice has met the on-programme and Gateway requirements they must undertake their End Point Assessment to check they have the required knowledge, skills and behaviours. On successful completion of the EPA the Apprentice will receive a feedback report from the End Point Assessment Organisation and will also be awarded an apprenticeship certificate by the Education and Skills Funding Agency (ESFA).

4. JUNIOR ENERGY MANAGER END POINT ASSESSMENT METHODS

There are three aspects to End Point Assessment in the Junior Energy Manager Apprenticeship End Point Assessment Programme.

1. Knowledge Test – The Apprentice will complete structured series of multiple-choice questions to check the requirements of the Standard. The knowledge test could be undertaken in class or remotely, it is time restricted to 90 minutes and must be completed once the Apprentice has passed Gateway. A successful completion of the Knowledge Test will enable the apprentice to proceed onto the Practical Assessment.

2. Practical Assessment - Energy Audit and Report - represents and demonstrates the application of knowledge, skills and behaviours. It should be conducted in the Apprentice's normal work set up and the Employer should make allowance, in terms of time and resource, for the practical task to be undertaken.

The completed collected information, data and completed report will be submitted to the EPAO Assessor who will ensure that it demonstrates the required competence of the standard.

3. Professional Conversation / Interview – During this stage the Apprentice will discuss the outcomes of the Practical Assessment and demonstrate:

- What they set out to achieve?

- What they have produced in the report
- How they approached the practical task, identified opportunities and dealt with any issues.

As part of the Interview the Apprentice's Portfolio of Evidence will be discussed.

In addition, a set of competency-based questions will also enable the apprentice to draw on their experiences throughout their apprenticeship and demonstrate the required knowledge, skills and behaviours outlined in the standard.

5. EPA TIMESCALES

The EPA processes should be designed to ensure that the timescale for End Point Assessment (Gateway to publication of results) is expected to take no more than three months.

(Note: This timescale does not allow for any re-sits or re-takes. These can have an impact on the final EPA date.)

EPAs will take place at the date, time and EPA site/or via video conference system as detailed in the EPA Booking Confirmation Form or, if there is a delay, in the same running order as was scheduled for that particular day. The Employer/Apprentice must submit the Portfolio of Evidence at least 1 month prior to the Knowledge Test EPA.

6. EPA DELIVERY

6.1 On-Site

If circumstances allow, the Practical Task – Energy Audit of the EPA should take place at the Employer's premises. The Knowledge Test and Interview can be delivered and invigilated via a video conferencing system.

EPA will only be carried out at an agreed EPA Site on the dates and times detailed on the Booking Confirmation Form.

The Employer must ensure:

- a contact who will be responsible for ensuring that all arrangements are in place for each Apprentice, in advance of the EPA taking place is named in advance
- the EPA Site and any relevant equipment is available and accessible for the EPA; and it meets any requirements relevant for the EPA such as health and safety and technical requirements;
- the video conferencing system provided by the EPAO is compatible with the company video conferencing facilities



- the EPA Site and any relevant equipment meets any requirements relevant for the EPA such as health and safety, and technical requirements; and how to report any incidents which may occur in line with the Employer's policies and procedures;
- a contact is available who will be responsible for informing the EPA Assessor of any fire evacuation procedures and how to report any incidents which may occur in line with the Employer's policies and procedures;
- suitable signage is used to indicate that a room is being used for assessment to avoid interruptions;
- a representative of the Employer is available for the EPA, if necessary; and
- that there are no distractions during the EPA.

6.2 Remote Assessment

EPAO can use conferencing to conduct assessment (remote assessment delivery) where appropriate for the Knowledge Test and Interview. This means that the EPA Assessors and the Apprentice do not have to be in the same physical location when assessment takes place.

The Booking Confirmation Form will include a unique link to the remote session which must be passed on to the Apprentice to whom it has been assigned. This will allow the Apprentice to access their remote EPA session.

It is the responsibility of the training provider and employer to make certain that the unique link is shared with the Apprentice at the earliest convenience, or no later than one week from the date of the EPA event.

On the day, the Apprentice will be required to click on their link, to join their EPA event. Please note, no notifications will be issued prior to this. Therefore, the Apprentice must be encouraged to note the EPA event date in their own personal calendar.

It is the responsibility of the Employer to:

- i) check that its in-house systems and any firewalls are compatible before the EPA;
- ii) check that the wi-fi connection where the Assessment will take place is tested in advance of the date of Assessment;
- iii) ensure assessments are conducted using a suitable device, whether a smartphone, a tablet (e.g. ipad) or laptop/desktop. During remote assessments, the invigilation will be conducted remotely, too. Two devices with video capability will be required for all remote assessments.
- iv) make certain that the EPA takes place in a room where the Apprentice is free from distraction and does not have access to any outside help
- v) refrain from using rooms which would require urgent access, in the case of an emergency;

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vi) that only an authorised representative, if named on the Booking Confirmation Form remains in the room during the EPA if necessary;

vii) Suitable signage is displayed to indicate to others that the room is being used for assessment; and

viii) have an EPA Event Contact who will be responsible for ensuring that all arrangements are in place for each Apprentice before the EPA takes place.

On the day of the assessment, the Apprentice must log into the system ten minutes before the agreed start time. If the Apprentice is not in attendance by the start time specified on the Booking Confirmation Form, and the EPA team have been unable to reach the EPA Apprentice's Contact as per the Booking Confirmation Form to ascertain the reason(s) why the Apprentice has been unable to join after ten minutes from the start time, then the EPA will be cancelled, and a Charge applied in accordance with EPAO Fees.

All remote assessments are recorded for quality assurance purposes and Apprentices should be informed of this prior to the session.

6.3 Environment Check / Invigilation

The EPA Assessor may request to carry out an environment check to ensure the Apprentice does not have access to any unauthorised materials. The EPA Assessor will ask the Apprentice to scan the room, until they are satisfied the whole room has been covered. This should include checking:

- the area behind monitor and under the desk;
- for any sort of audio device that the Apprentice is wearing (hearing aids are permitted);
- the area around the computer is clear;
- any scrap paper is blank. Please be aware that at any point during the EPA, the EPAO may halt the assessment and ask the Apprentice to provide further reassurance that the assessment environment has not been compromised.

Responsibility of the EPA Assessor

On the day of the EPA, before any EPA can take place, the EPA Assessor will:

- check that the Apprentice is present on the date/time of EPA;
- check the Apprentice's valid photographic ID;
- check that the location where the EPA is to be carried out, is safe in line with the Terms and Conditions;
- environment check and
- check that application of any Access Arrangements has been granted

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The EPA Assessor may be required to gather additional digital evidence (i.e. photographic or audio) of the Assessment to supplement their written observations or account of the Apprentice's performance. Where photographic evidence is required, the EPA Assessor will make certain that only a minimum number of photographs are taken, which clearly show specific aspects of the Assessment. For example, using certain angles to shield the identity of the client/model. The EPAO will store these images for a maximum of six years, as per the EPAO conditions. After this period, the images will be deleted.

Following the EPA, the EPA Assessor will inform the Apprentice when results will be available. The EPA Assessor will not confirm results at the end of the EPA.

Responsibility of the Employer

The Employer must ensure that Apprentices:

- understand the EPA process;
- understand what is required of them (including the mandatory requirement to produce valid photographic ID on the date of the EPA);
- have access to any equipment and resources required to carry out the EPA;
- have access to equipment which must meet Health & Safety requirements; and
- are aware of the EPA booking details.

Where the use of clients/models is required, it is the responsibility of the Employer to ensure that written consent has been obtained, in advance of the EPA event.

Attendees at the EPA

In exceptional circumstances and in line with access arrangements, an Employer may request the attendance of a representative such as the Apprentice's line manager, outside of the Assessment Plan requirements. The representative must be fully aware that their presence must not be a distraction to the Apprentice, nor prevent the EPA Assessors from carrying out the assessment. These arrangements must be agreed with the EPAO team, at the time of Booking and confirmed on the Booking Confirmation Form.

7. SPECIFICATION OF THE EPA METHODS

There are three aspects to End-point Assessment in the Junior Energy Manager Apprenticeship End-point Assessment Programme.

1. Knowledge Test
2. Practical Task
3. Professional Discussion

7.1 Knowledge Test

The Knowledge Test is a combination of multiple-choice and structured questions to assess an apprentice's bulk of technical knowledge relevant to the Junior Energy Manager apprenticeship standard.

The Test will consist of 60 questions split into 10 sections listed in the Table 1 and required to be completed within 90 minutes under closed book conditions.

Questions may draw on any combination of the subject areas which might be encountered in energy management practice or relate to the core energy management principles. Apprentices will be asked to apply their knowledge by answering questions identified by subject area below.

Table 1:

Section	Number of questions/marks	Weighting
01 Understand the roles, responsibilities and reporting of a Junior Energy Manager	10	17%
02 Understand how a building, processes and transport behaves, how energy and water is used, and, how to assess, plan and implement CAPEX and Revenue improvement actions	10	17%
03 Understand how to implement an appropriate auditing system, measurement and verification	6	10%
04 Understand what legislation, regulations and orders are relevant to the Junior Energy Manager's organization and what may impact it in the future	5	8%
05 Know how to plan an awareness campaign and motivate colleagues to reduce energy consumption and cost	5	8%
06 Understand how energy is purchased, and understand the current and anticipated drivers of cost that affect: the energy, its delivery, and taxes and subsidies	10	17%
07 Understand and be able to describe the Junior Energy Manager's organization in terms of energy and water usage by ICT	3	5%
08 Understand the importance of water in the Junior Energy Manager's workplace and the wider context	3	5%

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09 Know how transport/travel planning and logistics operation system impact the Junior Energy Manager's workplace	3	5%
10 Understand an energy management contribution to strategic planning based on energy, carbon and water and key performance indicators for measuring and verifying success	5	8%

Apprentices should be able to apply these fundamental energy management principles appropriately and effectively at the level required of a competent newly qualified energy manager in practice. Each single multiple-choice question will be followed by three possible answers. Apprentices should mark only one answer for each question.

The questions in the assessment are designed to test the application of energy management principles which can be expected of a newly qualified energy manager of England and Wales without reference to books and notes. They are not designed to test matters of detail which a newly qualified energy manager would be expected to look up.

Application of energy management principles and rules

The following illustrations of the range of question style used to test the JEM apprenticeship are not intended to be exhaustive:

1. A question may require the apprentice to both identify and apply a fundamental energy management principle or rule.
2. A question may identify the relevant energy management principle or rule and require the apprentice to identify how it should be properly applied, and/or the outcome of that proper application.
3. An apprentice may be required to demonstrate that they understand whether their organisation or a client can achieve a desired energy management outcome and offer appropriate support to meet energy and cost reduction objectives and targets.
4. A question may require an apprentice to perform a calculation by applying rules, rates or percentages to identify a correct figure. The figures required to work out an answer to any calculation would normally be provided.

Example of questions:

- Newton's law states "energy cannot be created or destroyed; it converts from one form to another". When you boil water in an electric kettle, energy is converted from electricity into what forms?
- Assuming that you are boiling 1.5 Litres of water in an electric kettle. The initial temperature of water is 15 °C and boils at 100 °C. What is the electricity consumption?
- In a night time energy audit of an office, 100 4ft T12 lights (40 W each) and 160 17-inch LCD screens (35 W each) were left ON. Assuming the office is occupied between 9am and 5pm five days per week, how much electricity could be saved in 30 days?
- What is a coefficient of performance and what might it apply to?

- What is the efficiency in percentage of a CHP unit that burns 200kW of gas, producing 60 KW of electricity and 110kW of heat?

The EPAO will review the completed knowledge test against the correct answer sheet. Any incorrect or missing answers will be assigned 0 marks and all questions are worth 1 mark each.

The following grades: Pass, Distinction or Fail will be applied to mark the overall Knowledge Test. The minimum pass mark is 37 correct answers distributed across 10 sections listed in the End Point Assessment Plan document. The Distinction mark is 51 correct answers distributed across 10 sections listed in the End Point Assessment Plan document. Each of the 10 sections has to be passed in order to pass the Knowledge Test.

7.2 Practical Assessment

The Practical Assessment will be in the form of an energy audit. Within the energy audit, the apprentice will be required to undertake several appropriate, integrated key activities that she or he has been taught and has been practicing through their apprenticeship programme, but now assessed in a more rounded manner. This large and complex exercise draws together core practical occupational responsibilities and is done under controlled conditions where possible and on the employer's site. The practical assessment involves a pre-set assessment with pre-set resources.

As part of this practical assessment the EPAO will set the energy audit task and tailor it to the individual apprentice and their organisation. All apprentices are required to review energy consuming equipment within part or all of a building or a specific process in order to assess how installed systems and processes are currently operating and whether there is an opportunity to improve performance through optimisation, upgrading or total replacement.

An example of the Energy Audit Task for apprentices:

- Undertake an energy audit within your organisation/site to identify measures that would improve energy management practices.

Audit approach proposed to apprentices:

1. Plan your energy audit
2. Site audit
3. Analyse data
4. Evaluate improvement opportunities.
5. Write up a report

The following grades: Pass, Distinction or Fail will be applied to mark the overall Practical Test. The Practical Test assessment forms 60% of the final grade.

7.3 Interview

The Interview will draw on the Portfolio of Evidence and the outcome of the practical assessment (energy audit). It will also assess the apprentice's knowledge, skills and behaviours that might not have been covered by the earlier assessment stages. All these elements will form basis for the professional conversation which will not only act as an assessment device but also a confirmatory device that the apprentice has met the Junior Energy Manager apprenticeship standard.

The Interview will take 60-90 minutes and the apprentice's skills, knowledge and experiences will be assessed against their professional background and core energy management competencies: Technical and Operational, Energy Assessments, Measurements, and Verification, Behavioural Change and Motivation, Regulatory & Legal Compliance, and Carbon Management, Energy Management Strategy / Plan, Waste Management, Procurement, Energy Efficient Transport, Water Management, IT.

The purpose of the Interview is to:

- Explore evidence for areas of the Standard that are best done face to face or via a video conference platform.
- Clarify any questions that the EPA Assessors have about the evidence submitted in the Portfolio and Energy Audit Report.
- Discuss how the apprentice has progressed in their role, what they have done and their approach to work.
- Identify a balanced level of knowledge, skills and behaviours required to deliver energy management by a Junior Energy Manager.
- Provide the basis for the EPA Assessors to make the decision about the grade to be awarded.

The Interview will cover:

- The findings of the energy audit outlined in the report
- How the apprentice approached the practical assessment – energy audit if not observed on site
- What the apprentice submitted in the portfolio
- The standard of the apprentice's work, as evidenced in the portfolio
- How the apprentice approached the work submitted in the portfolio
- The apprentice's understanding of the core areas of energy management within their organisation, including Technical and Operational, Energy Assessments, Measurements, and Verification, Behavioural Change and Motivation, Regulatory & Legal Compliance, and Carbon Management, Energy Management Strategy / Plan, Waste Management, Procurement, Energy Efficient Transport, Water Management, IT.

- Any further areas covered within the Junior Energy Manager apprenticeship standard

The Interview will be undertaken by two independent assessors from the EPAO (the same independent assessors will have assessed the Portfolio and other EPA methods, and they will also make the grading decision).

The Interview will take place following the completion and assessment of the Knowledge Assessment and Practical Assessment. It is only after the Interview has been completed that the grading decision can be taken.

The Interview may be carried out face to face, or remotely using e.g. video conference, phone or Skype, depending on cohort numbers and locations of apprentices.

The following grades: Pass, Distinction or Fail will be applied to mark the Interview. The Interview assessment forms 20% of the final grade.

8. REVIEWING OF PORTFOLIO OF EVIDENCE CONTENT

The Portfolio is not marked but is the requirement needed to successfully complete the End Point Assessment and conclude the Junior Energy Manager apprenticeship programme.

A Portfolio of Evidence is a repository for the work that **best demonstrates** that apprentice can apply the knowledge and skills, and demonstrate the behaviours identified in the apprenticeship standard. So, the Portfolio of Evidence contains the proof that the apprentice has attained, and can apply, the knowledge, skills and behaviours defined in the Junior Energy Manager apprenticeship standard.

The Portfolio will enable the apprentice, to show how they have applied their knowledge and understanding and demonstrated the required behaviours in a real work environment to achieve real work objectives.

The Portfolio should contain evidence from apprentice's real work activity that you have completed during and towards the end of the apprenticeship. It should demonstrate the application of knowledge and competence in the work environment and cover the bulk of the standard. It will also draw on the apprentice's learning record created during the apprenticeship. It is essential that candidates prove their competence by producing evidence of their ability to perform the role identified in the Junior Energy Manager Apprenticeship Standard. This evidence should include the best work completed during the apprenticeship programme.

WHAT SHOULD THE PORTFOLIO OF EVIDENCE INCLUDE?

The Portfolio will include three types of evidence:

1. Evidence documenting the apprentice's on-job activities and achievements
2. Evidence documenting the apprentice's learning and skills development journey. Evidence should include: training log (account of your learning and skills development journey and course completion certificates, marked course assessments and projects) and reflective statement.
3. Self-assessment Report and CV This is an indication of a typical portfolio and is not prescriptive and the volume of evidence will relate to the type and quality of evidence produced, with the opportunity to cross reference evidence against Skills, Behaviours and Knowledge.

PORTFOLIO OF EVIDENCE WILL BE REVIEWED BY EMPLOYER, TRAINING PROVIDER AND EPAO

The completed portfolio will be reviewed against the requirements summarised in the Apprenticeship Standard and set out in detail in the Portfolio of Evidence assessment criteria at the end of this document. At least 3 relevant examples are expected to be provided for each KSB competency.

The evidence contained in the portfolio will be assessed against all components of the standards, i.e.:

- Knowledge;
- Skills; and
- Behaviours.

Review of the Portfolio by an Employer/Training Provider

Initially, the portfolio will be reviewed by the employer/training provider using the assessment criteria. An employer/training provider will declare that the apprentice is ready to provide the End-Point Assessment and provide their rationale for this which may include additional information from in house performance management of the apprentice, to help inform the EPAO in their subsequent review of the portfolio.

Review of the Portfolio by the End-Point Assessment Organisation

The EPAO reviews the portfolio and makes its own judgement on the quality of the evidence.

The EPAO will examine the evidence in the portfolio for:

- completeness – the evidence in the portfolio, taken together, must cover the totality of the standard
- quality – the evidence must at least satisfy the minimum requirements for each area of the standard, as defined in the assessment criteria.

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The EPAO may note particular aspects of the portfolio that will be discussed with the apprentice during the Interview (professional discussion), the last assessment method of the EPA, to confirm the initial judgement and review of the Portfolio.

The Portfolio of Evidence is not graded but its completion is required to demonstrate the skills, knowledge/understanding and behaviours of a competent Junior Energy Manager apprentice before undertaking the Knowledge Test, Practical Assessment and Interview.

8.1 Portfolio of Evidence – Reviewing Criteria

The apprentice’s Portfolio of Evidence will be assessed against the criteria outlined below.

Technical Knowledge Ref	Assessment Criteria	Not Yet Achieved	Meets the criteria
TK1	Relevant level of theory and practices at Junior Energy Manager level that underpins how energy flows in an out of buildings, equipment and processes and how key energy systems operate		
TK2	Relevant level of theory and practices that underpin the energy efficient use of equipment, processes and IT systems		
TK3	Energy performance, water measurement and verification of measured data		
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		
TK11	Understand energy tariffs		
TK12	Know relevant initiatives/policies associated with transport, travel planning and logistics operational system within the context of the Junior Energy Manager’s workplace		

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TK13	Understand the impact of transport and logistics on climate change if relevant to the Junior Energy Manager's workplace		
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		
Skills Ref	Assessment Criteria	Not Yet Achieved	Meets the criteria
S1	Complete template reports and ensure records are maintained for audit and reporting purposes		
S2	Relate the workings of plant, processes and equipment to energy consumption		
S3	Identify and explain variables that vary the energy consumption of a building and process (Building operation: summer/winter; day/night, etc.)		
S4	Identify and explain suitable and measurable energy performance indicators (energy use, consumption, efficiency)		
S5	Implement and/or maintain metering and measurement plans and undertake basic analysis of the outputs		
S6	Carry out basic checks on bills and other recorded data to verify accuracy and repeatability		
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		
S8	Contribute to the organisation's procurement process/products/services		
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		
S10	Identify, organise and use resources effectively to complete tasks as instructed, with consideration for efficiency, cost, quality, safety, security and environmental impact		
S11	Carry out basic financial calculations relating to energy costs and savings		
S12	Work effectively and safely when undertaking tasks to approved standards and safe working practices as part of a team, working alone or with appropriate supervision		
S13	Use a variety of appropriate communication methods to interact with others to give/receive information accurately, in a timely, positive and professional manner		
S14	Demonstrate analytical and problem-solving skills		
S15	Communicate effectively using evidence-based reporting, communication and presentation skills		
Behaviours Ref	Assessment Criteria	Not Yet Achieved	Meets the criteria
B1	Target and goal oriented		

B2	Forward thinking and proactive		
B3	Display a self-disciplined, self-motivated approach whilst recognising personal limitations and seeking advice from fact holders and specialists when required		
B4	Deliver a supportive professional service to external and internal customers		
B5	Environmentally and economically focused		
B6	Focus on undertaking and completing work in a way that contributes to sustainable development		
B7	Comply responsibly with current and relevant industry standards and regulations		
B8	Be quality and efficiency focussed, and professional in work and in personal standards		

9. FINAL GRADE DETERMINATION

The combination of the assessment of the Knowledge Assessment, Practical Assessment and the Interview builds a cumulative picture of performance against the Junior Energy Manager apprenticeship standard. It requires apprentices to demonstrate the application of knowledge, skills and behaviours in an integrated manner to deliver the required outcomes, enabling the EPAO to make a holistic judgement about how well the apprentice meets or exceeds the Standard. Whilst the bulk of the evidence is expected to come from the Portfolio and the Practical Assessment, it is the combined picture of all assessment elements that determines the result.

10. GRADING: PASS OR DISTINCTION

To achieve a Distinction the apprentice will need to have achieved a Distinction at least in two assessments, one of them being the Practical Assessment. The Distinction criteria are in addition to the Pass criteria. The apprentice will also need to achieve at least a Pass for the one other assessment (Knowledge Test or Interview).

Overall, to gain a Distinction the apprentice should:

- consistently exceed the learning outcomes set for the role (both what is delivered and how it is delivered);
- go beyond what is typically expected at this level;
- be able to perform well in difficult situations or when under pressure;
- be seen as a role model by others;
- be able to work upwards as well as with peers;

- show they understand the wider context of the work they are doing

All assessments must be passed to achieve an overall pass graded apprenticeship.

Following the grading decision, the apprentice will be either confirmed the final grade and given opportunity to apply to be awarded a professional recognition by the EPAO, or be advised on what further training they would need to undertake to reach the necessary standard.

11. CONFIRMATION OF END-POINT ASSESSMENT RESULTS

Once the Apprentice has completed all of their assessments, the EPAO will review all of the results and provide feedback. The EPAO will then recommend an overall grade, for the End Point Assessment, and this will be submitted to the Education and Skills Funding Agency (ESFA) who will issue the apprenticeship completion certificate. The certificate from the ESFA will confirm that the Apprentice has successfully completed their apprenticeship programme and also provide them with their overall grade, of Pass or Distinction. The EPAO will also collate all of the End Point Assessment results into a feedback report and the document will be made available to the Apprentice.

All EPA decisions are subject to moderation before results are confirmed to candidates.

As an additional check to verify quality and consistency, the EPAO will reserve the right to make any additional investigations that may be necessary following the moderation process.

If an apprentice fails in any part of the assessment, resits would be available if determined by the employer. Where a resit is permitted the grading of the resit assessment will be pass only, unless there are exceptional circumstances accounting for the original fail (as determined by the EPAO). Apprentices will only be required to re-sit the assessment method they did not pass. Permitted resits will be no longer than 6 months from their initial assessment and additional learning must be provided to ensure the Junior Energy Manager Apprenticeship Standard is met and employer assurance at all times.

A resit must not be used for an apprentice wishing to move from 'pass' to 'distinction'.

12. END POINT ASSESSMENT ASSESSORS

12.1 Who can be an End-point Assessor

The EPAO will deliver the Junior Energy Manager Apprentice End Point Assessment with contracted assessors who will act as the EPA Assessors. The EPA Assessors are passionate,

ENERGY MANAGERS ASSOCIATION

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motivated individuals with current high-level occupational experience and interest in assessing apprentices against the Junior Energy Manager Apprenticeship standard.

The Assessors are selected from amongst the EMA Fellows (the highest membership level) or equivalent – some of the most experienced and respected energy managers in the United Kingdom.

Apart from the high occupational credentials of the Assessors, further requirement is an experience in assessing individuals.

To be eligible for consideration as an EPA Assessor the individual must:

- possess a relevant occupational background;
- be a member of the EMA (or equivalent). We would expect those assessing to be at least Members of the EMA or of a similar professional body.
- comply with the EMA Code of Professional Conduct and will be required to undertake Continuing Professional Development (CPD). The Code of Professional Conduct can be found [here](#);
- have up-to-date working knowledge of energy management practice covered by the standard;
- understand the requirements of the apprenticeship and the End-point Assessment

Desirable:

- Previous experience in assessment or verification and relevant qualifications

End-Point Assessment Assessor Requirements

In accordance with the requirements specified in the Junior Energy Manager Apprentice standard and end-point assessment, the End Point Assessment is delivered only by the EPA Assessors who meet the following criteria:

Role purpose	Definition
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<p>Occupationally competent</p>	<p>The End Point Assessors must:</p> <ul style="list-style-type: none"> • Have current technical or occupational understanding in areas being assessed (E.g. in depth energy management and energy auditing knowledge) ; • Be fully conversant with the Junior Energy Manager Apprentice standard and assessment plan (all criteria being assessed); • Be occupationally competent, hold a relevant occupational qualification about the level being assessed and have relevant occupational experience of at least 5-10 years; • Have experience in assessing and interviewing techniques; • Have experience of producing clear, accurate and concise written reports; • Have experience in developing assessment material and resources; • Have experience in assessing against specific criteria and provide detailed feedback to the learners/assessed professionals; • Have no connections with the apprentice, employer and training provider; • Have full knowledge of the Microsoft Office suite; • Have excellent time management and organisational skills and are able to work independently; • Have excellent communication and interpersonal skills; • Hold a Fellow or Member membership status of the Energy Managers Association (EMA)
	<p>The End Point Assessors must have sufficient ‘hands on’ operational experience within the energy management industry that can be evidenced, is current and relevant to the Junior Energy Manager apprentice standard and end point assessment. This must be of sufficient depth to be effective and reliable when verifying judgements about assessment process and decisions. 5-10 years hands on experience of working as an energy manager at a senior level in a commercial organisation or public sector including current experience.</p>



Familiar with the Junior Energy Manager Apprentice Standard and End Point Assessment Plan	The End Point Assessment Assessor must have an in-depth knowledge of the Junior Energy Manager Apprentice Standard and End Point Assessment Plan, units and grading criteria required. They must be committed to upholding the integrity of the standard.
Credible	The End Point Assessment Assessor should have access to, and be engaging with, continuous professional development activities in order to keep up to date with development and any issues relevant to the Junior Energy Manager qualification and/or its units. These may include those offered by the Energy Managers Association (EMA) or other recognised and relevant providers in the sector. The End Point Assessment Assessor should provide sufficient evidence to demonstrate current practical competence and continual professional development as an Energy Manager.
Accountability	The End Point Assessment Assessor will be accountable to the EPAO.
Independence	End Point Assessments can only be conducted by an independent Assessor who has not been involved with training the apprentice and who is not connected to the training provider, college or employer. Any conflicts of interest must be declared.

All End Point Assessors are required to hold a relevant qualification in addition to the demonstrated competence in the area they assess. The assessors' competence may also be demonstrated as a professional competence based on industry recommendation and verified through industry references.

13. CONTACT DETAILS

EMAIL: enquiries@theema.org.uk

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