



# **PRACTICAL ASSESSMENT SPECIFICATION**

**JUNIOR ENERGY MANGER APPRENTICESHIP STANDARD – LEVEL 3 –  
ST0161**

## Contents

1. INTRODUCTION - JUNIOR ENERGY MANAGER END POINT ASSESSMENT METHODS .....	3
2. PRACTICAL ASSESSMENT .....	3
3. MAPPING OF KNOWLEDGE, SKILLS AND BEHAVIOURS (KSB) IN THE PRACTICAL ASSESSMENT .....	4
4. PRACTICAL ASSESSMENT FORMAT – ENERGY AUDIT & REPORT.....	6
5. ENERGY AUDIT TASK.....	6
6. ON-SITE ENERGY AUDIT .....	6
7. PREPARATION FOR AN AUDIT .....	7
7.1 AUDIT SCOPE .....	7
7.2 SITE ACCESS .....	7
7.3 INITIAL DATA ANALYSIS .....	8
8. CONDUCTING AN AUDIT .....	8
8.1. GENERAL EQUIPMENT ASSESSMENT .....	9
8.2 EQUIPEMENT TO FOCUS ON AND OTHER AREAS OF TO CONSIDER.....	9
9. REPORTING .....	10
10. EXAMPLE OF THE PRACTICAL TASKS.....	10
11. PRACTICAL TASK PERFORMANCE OBJECTIVES .....	11
12. PRACTICAL TASK ASSESSMENT CRITERIA.....	23
13. ASSESSMENT OF THE PRACTICAL TASK ELEMENT OF THE EPA .....	24
14. MOCK ASSESSMENT MATERIALS (MOCKS).....	25
15. DELIVERY AND CONDUCT .....	25
16. RECOMMENDED RESOURCES.....	<b>Error! Bookmark not defined.</b>

## 1. INTRODUCTION - 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’s will complete a structured series of multiple-choice questions to check their knowledge of the Standard. The knowledge test could be undertaken in class or online, 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 Task.

**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 EPA Assessor who will ensure that it demonstrates the required competence of the standard.

**3. Professional Conversation / Interview** - The Apprentice will discuss the outcomes of the Practical Assessment and demonstrates:

- 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
- A set of competency-based questions will also enable the apprentice to draw on their experiences throughout their apprenticeship.

The purpose of this document is to specify the Practical Assessment – Energy Audit and Report.

## 2. PRACTICAL ASSESSMENT

### **Purpose**

A practical assessment is an activity set up where the apprentice is required to complete a defined set of work tasks to assess their knowledge, skills and behaviours. The apprentice is observed, the End Point Assessment Assessor noting performance, asking questions and recording achievement.

In the context of the Junior Energy Manager apprenticeship, the practical assessment represents an energy audit and report.

The practical assessment 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 EPA Assessor who will ensure that it demonstrates the required competences of the standard.

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. This large and complex exercise draws together core practical occupational responsibilities and is done under controlled conditions where possible. The practical assessment involves a pre-set assessment with pre-set resources.

## **Audit Task**

As part of this practical assessment the EPAO will set the energy audit task and tailor it to the individual apprentice and their organisation.

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 opportunity.
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.

## **3. MAPPING OF KNOWLEDGE, SKILLS AND BEHAVIOURS (KSB) IN THE PRACTICAL ASSESSMENT**

### **Assessment method 2: Practical Assessment**

<b>Technical Knowledge</b>	
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
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
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	
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
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
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	
B1	Target and goal oriented

B2	Forward thinking and proactive
B4	Deliver a supportive professional service to external and internal customers
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
B11	Exercise responsibilities in an ethical manner
B12	Be able to adjust and respond effectively to unexpected change, and deal with contingency risks

## 4. PRACTICAL ASSESSMENT FORMAT – ENERGY AUDIT & REPORT

As part of this task the apprentice will undertake an on-site energy audit and compile an energy report which would evaluate audit findings and identify measures that would improve energy management practices.

The site audit will last approximately 3 hours. The apprentice will then have 2 weeks to compile and submit their energy report to the End Point Assessment Organisation (EPAO).

## 5. ENERGY AUDIT TASK

As part of this practical assessment the EPAO will set the energy audit task and tailor it to the individual apprentice and their organisation.

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 opportunity.
5. Write up a report

## 6. ON-SITE ENERGY AUDIT

As part of the Junior Energy Manager apprentice's practical assessment, they will be asked 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.

The apprentice can apply any of the two formal processes for energy auditing: ISO 50002 and BS EN 1624. Any apprentice should be able to carry out a basic assessment of all types of equipment on their site and identify simple techniques for energy savings.

The process of carrying out an audit is similar in most cases, regardless of the size of building or the equipment it contains. The difference might be in scale and technical requirements and therefore it should be agreed between the employer and the EPAO ahead of the EPA which part of the building/site or process will be audited.

The audit requirements will focus on pre-agreed audit areas (the energy audit should be carried out on a whole building or part of it that includes the use and control of multiple systems such as lighting, heating, cooling and ventilation) to ensure that as far as possible a standard environment and questions can be formulated.

## 7. PREPARATION FOR AN AUDIT

As part of the apprentice's preparation for the energy audit, there are a number of important things to consider which will allow the audit to be as successful as possible, allowing an apprentice to access all areas of the building and gather the relevant information required.

### 7.1 AUDIT SCOPE

The scope of the apprentice's energy audit will be agreed between the employer and EPAO before commencement of the EPA. The scope will be established based on the purpose is of an audit.

As the audit will be undertaken at the employer's site and as part of the EPA which proceeding on the job and off the job training, the apprentice should be familiar with the energy audit process, what he/she is trying to achieve and the required outputs in terms of information, financials and reporting style.

Any Junior Energy Manager apprentice should be able to carry out a basic assessment of all types of equipment and identify simple techniques for energy saving. Below is the list of basic and common instruments to look out for during an energy audit.

### 7.2 SITE ACCESS

Before attending site, the following items should be considered:

- A method statement and risk assessment for an audit.

- During the audit, safe access will be needed to all areas of a building in order to inspect any energy using equipment that may be found so the building occupants need to be notified in advance. Are there of any restrictions to the audit or equipment? For instance, there may be health restrictions in place in food manufacturing environments.
- The apprentice should be familiar with the site and have access to all relevant areas. But if necessary, he/she can be accompanied by a member of site staff who has the requisite skills/permission to show you the areas that need to be visited and who can answer any questions that may arise, especially if it is an unfamiliar building. Apprentice should be able to explain things such as how the building operates, its occupancy levels and times and the basic functions of any equipment that may be seen.
- An apprentice may need to access items such as a building management system (BMS) to understand the control settings and operation of certain equipment so he/she needs to ensure a suitably qualified person is available.

## 7.3 INITIAL DATA ANALYSIS

Before attending any site to conduct an energy audit, it is always good practice and can be very informative to find out as much basic information about a building as possible.

The Junior Energy Manager apprentice undertaking the energy audit task should have access to all energy consumption data.

At its most basic, this could just be copies of bills for the past year so that an estimate of annual energy usage can be made. For electricity consumption, a calculation of how much energy has been used during various tariff times may also be possible. Other items that may be found on billing can also give good information.

Ideally, more detailed information should be available such as half hourly data. Sub-metering data may also be available which can illustrate more detailed consumption trends, perhaps down to equipment level.

Another example of analysing data before an audit could be the use of a regression analysis to understand the relationship between energy use and another variable relevant to a building.

Junior Energy Manager apprentice should start an audit with some familiarity about a building's general use and occupation and potentially already have an idea of consumption patterns and questions that these may raise as sometimes, it's possible corrective actions could be taken during an audit. If data is not readily available, then the audit will have to be based more on what is seen during the on-site process.

## 8. CONDUCTING AN AUDIT

While an apprentice may have a variety of tools or equipment to conduct an audit, some basic items should always be carried. These are basic recording equipment (pen and paper, tablet etc), a camera with a good zoom and resolution and a torch. Other equipment may also be



carried such as a light meter, thermal camera or clamp on meter although you should ensure you are trained to use any electrical equipment.

Although each site will be different, it can be a good idea to establish a methodology for auditing to ensure the apprentice always covers the whole building and gather relevant data within the available time period.

The apprentice may then work through a building and its equipment in whatever logical way suits such as floor by floor or process by process.

While there will always be equipment in any building that an apprentice may not be familiar with, they should be able to identify the various types of general equipment that may be seen such as air handling units, boilers, chillers, variable speed drives (VSD) and basic types of lighting.

If equipment is unfamiliar, site staff may be able to provide advice to help with understanding its operation or may be able to provide a technical manual. Apprentice should take photographs of all equipment with any labelling so they can be identified later, data plates and anything that they may want to refer to afterwards for investigation or reporting.

## **8.1. GENERAL EQUIPMENT ASSESSMENT**

For all areas of a building, the following general rules are useful in assessing any equipment seen:

- What is their general operation related to the buildings use?
- What general control systems are there in the building for the equipment seen?
- Is there a good staff awareness of how things work?
- What is the general equipment age and efficiency?

## **8.2 EQUIPEMENT TO FOCUS ON AND OTHER AREAS OF TO CONSIDER**

- Control Systems
- Lighting
- Heating Systems
- Cooling Systems
- Ventilation Systems
- Pumping Systems

Other:

- Compressed Air
- On-Site Generation
- Human Behaviour
- Metering

## 9. REPORTING

Before commencing an audit, the apprentice should be able to understand what output is required from his/her report and let this guide the amount of detail in a report. For the purpose of the Junior Energy Manager End Point Assessment, it should also be ensured that the report covers how the apprentice planned their energy audit, how they went about the energy consumption assessment and data collection and analysis of data and opportunities' evaluation and prioritising.

## 10. EXAMPLE OF THE PRACTICAL TASK

Practical Tasks	<p>Undertake an energy audit and identify opportunities/improvements to reduce your organisation's energy use. Write up your auditing process and evaluation of the findings report.</p> <p>The energy audit process and the findings report will focus on the 3 main parts. Your report should be structured to include:</p> <ul style="list-style-type: none"><li>• Background and context to the scenario identified</li><li>• A description and justification of your actions within the specific scenario of the Practical Assessment task.</li><li>• A critical evaluation of the energy efficiency opportunities in the context of the set task.</li></ul> <p>The overall Practical Task should be no more than 4,500 words in total.</p>
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Note that the apprentice must reach the minimum word count for each part (1000 words) however, need not reach the maximum word count set for each (1,500 words) part; they are an upper limit only to ensure the Practical Task total word count does not exceed 4,500 words. However, while succinctness and clarity are features of good communication, the apprentice must sufficiently express their answers and provide enough evidence from the narrative that the End Point Assessment Assessors can judge them to be competent.

*Note that for client confidentiality purposes, Apprentices may not disclose details of clients in submitting evidence if this compromises confidentiality protocols or agreements laid down by the organisation(s).*



## 11. PRACTICAL TASK PERFORMANCE OBJECTIVES

The performance objectives for knowledge, skills and behaviours are given in Tables 2a), b) and c) below respectively.

Table 2a: Practical Task (Knowledge)

Technical Knowledge Assessment Objectives & Description	Standard Section	Elements' Competency		Elements of Practical Task		
		Pass	Distinction	Energy Audit Planning & Scope	Energy Consumption Assessment & Data Collection	Data Analysis & Opportunities' Evaluation
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	TK1	Shows insight into managing energy flow and energy systems within the workplace  Demonstrates application or understanding of how energy flows in different environments and how the most common energy systems (at least 5) operate	Applies techniques to manage energy flow and energy systems within the workplace  Demonstrates and explains more complex understanding of how energy flows and various energy systems operate. Offers appropriate solutions to optimise energy systems			
Relevant level of theory and practices that underpin the energy efficient use of equipment, processes and IT systems	TK2	Helps to assure the energy efficient use of equipment,	Applies techniques to manage the energy efficient use of equipment,			

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		<p>processes and systems within the workplace</p> <p>Demonstrates an understanding of the energy efficient use of equipment, processes and systems within the workplace</p> <p>Explains with modest impact and few identified improvements for efficient use of equipment, processes and systems</p>	<p>processes and systems within the workplace</p> <p>Demonstrates and explains more complex understanding of the energy efficient use of equipment, processes and systems within the workplace</p> <p>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</p>			
<p>Energy performance, water measurement and verification of measured data</p>	TK3	<p>Demonstrates an understanding of energy performance and water measurement. Understands how to measure and verify the collected data</p> <p>Completes the measurement and verification tasks without instructions</p>	<p>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</p> <p>Takes a detailed approach to completing the measurement and verification tasks and actively reviews energy performance in the workplace to look for ways to maximise efficiency</p>			

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<p>Understand the economics of energy consumption, supply and demand of energy, sustainability issues and role of the organisation in tackling them</p>	<p>TK4</p>	<p>Demonstrates appropriate understanding of the economic (and political) impact on energy consumption and the fluctuation of energy demand and supply</p> <p>Can describe global sustainability issues and role of organisations in tackling them</p> <p>Understands how to relate global sustainability issues to the workplace and undertakes basic tasks to tackle them</p>	<p>Demonstrates advanced understanding of the economic (and political) impact on energy consumption and the fluctuation of energy demand and supply</p> <p>Demonstrates ability to formulate complex global sustainability issues and role of organisations in tackling them</p> <p>Offers suggestions and demonstrates proactivity on how to tackle global sustainability issues in the workplace</p>			
<p>Test and maintain procedures of equipment and processes used to determine energy performance and how inefficiencies arise and how to improve energy performance</p>	<p>TK7</p>	<p>Demonstrate how to use a set of approaches to test and maintain procedures of equipment and processes used to determine energy performance and how inefficiencies arise and how to improve energy performance</p> <p>Able to suggest and apply at least 10 different energy performance improvements in the workplace</p>	<p>Applies approaches to test and maintain procedures of equipment and process used to determine energy performance and identify inefficiencies when they arise</p> <p>Offers appropriate solutions to identified inefficiencies when necessary</p> <p>Recommends, leads on and manages applications of energy performance improvements in the workplace</p>			

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<p>Know how to read meters and sub-meters, collect, record and analyse metered data and interpret manufacturer's installation and maintenance requirements</p>	<p>TK8</p>	<p>Demonstrates ability to read meters and sub-meters and identifies faults or explains possible faults of meters and sub-meters</p> <p>Demonstrates ability to analyse metered data</p> <p>Works to collect, record and analyse metered data and can spot possible anomalies without any instructions or support</p> <p>Can interpret installation and maintenance requirements accurately and plan action to manage technology/system replacement if required</p>	<p>Makes positive suggestions for improvements of meter and submeter installations</p> <p>Actively reviews performance of metering technology and uses collected data for ways to maximise energy/water efficiency and performance</p> <p>Demonstrates a proactive approach to installation and maintenance requirements.</p> <p>Identifies and anticipates problems related to the workplace energy performance as a result of installation and maintenance action.</p>			
<p>Understand how to estimate energy used from solid or liquid fuels that are not metered</p>	<p>TK9</p>	<p>Demonstrates and explains the principles of energy used from solid or liquid fuels that are not metered</p>	<p>Demonstrates and explains more complex understanding of the principles of energy used from solid or liquid fuels that are not metered</p> <p>Identifies and anticipates problems related to energy used from fuels that are not metered</p>			

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<p>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</p>	<p>TK10</p>	<p>Describes elements of energy/water bills, understand the pricing and what makes up delivered energy tariffs</p> <p>Explains or demonstrates how to deal with issues related to bills</p> <p>Ability to challenge bills with suppliers and brokers</p> <p>Demonstrates understanding of procurement processes within the workplace and works collaboratively to improve them</p> <p>Conducts development of energy baseline and benchmarking from collected data</p>	<p>Ensures energy/water bills are correct and actively challenges bills with suppliers and brokers</p> <p>Understands procurement processes within the workplace and demonstrates a significant impact and well thought out improvements regarding the procurement of energy and water in the workplace</p> <p>Conducts development of energy baseline and benchmarking from collected data with guidance or support</p>			
<p>Understand the importance of water management to the business' utility costs and carbon emissions</p>	<p>TK14</p>	<p>Demonstrates an understanding of the importance of water management within the workplace and communicates it internally</p>	<p>Ensures policies, procedures and water management controls are in place within the workplace</p> <p>Makes positive suggestions for improvements of water management procedures in the workplace</p>			

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<p>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</p>	<p>TK15</p>	<p>Understands the function of strategic planning with respect to energy, carbon and water, and can relate it to the organisation's key performance indicators</p> <p>Identified specific steps required to draft an energy and water management strategy</p>	<p>Can explain in detail the function of strategic planning with respect to energy, carbon and water, and can explain its relevance to the organisation's key performance indicators.</p> <p>Able to provide examples of contribution to drafting an energy and water strategy</p>			
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Table 2b: Practical Task (Skills)

Skills Assessment Objectives & Description	Standard Section	Elements' Competency		Elements of Practical Task		
		Pass	Distinction	Energy Audit Planning & Scope	Energy Consumption Assessment & Data Collection	Data Analysis & Opportunities' Evaluation
<p>Relate the workings of plant, processes and equipment to energy consumption</p>	<p>S2</p>	<p>Identifies specific examples of plant, processes and equipment workings related to energy consumption</p>	<p>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</p>			



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Identify and explain variables that vary the energy consumption of a building and process (Building operation: summer/winter; day/night, etc.)	S3	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.			
Identify and explain suitable and measurable energy performance indicators (energy use, consumption, efficiency)	S4	Demonstrates an understanding of a range of measurable energy performance indicators and applies these effectively in the workplace	Can demonstrate positive outcomes of effectively impacting energy performance indicators in the workplace			
Implement and/or maintain metering and measurement plans and undertake basic analysis of the outputs	S5	Demonstrates an understanding of the metering and measurement plans requirement.  Able to evidence basic analysis of the outputs	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			
Carry out basic checks on bills and other recorded data to verify accuracy and repeatability	S6	Demonstrates an understanding and can explain how to carry out basic checks on bills and other recorded data to verify accuracy and repeatability	Can explain in detail and provide evidence of personal contribution to carrying out basic bills' and other recorded data checks			

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<p>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</p>	<p>S7</p>	<p>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</p> <p>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</p>	<p>Evidences detailed comprehensive energy and water use audits undertaken without supervision.</p>			
<p>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</p>	<p>S9</p>	<p>Demonstrates knowledge of data gathering and administering.</p> <p>Can develop a detailed action plan and timeline for implementing and communicating energy awareness and motivation programmes with the aim to reduce energy use</p>	<p>Able to explain methods and describe measurement technologies for gathering energy performance data and utilising them to communicate better energy awareness</p> <p>Able to raise energy awareness amongst a variety of audiences</p> <p>Successfully developing and implementing motivation</p>			

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			programmes to reduce energy sue.			
Identify, organise and use resources effectively to complete tasks as instructed, with consideration for efficiency, cost, quality, safety, security and environmental impact	S10	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.			
Carry out basic financial calculations relating to energy costs and savings	S11	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			
Use a variety of appropriate communication methods to interact with others to give/receive information accurately, in a timely, positive and professional manner	S13	Effectively delivers a presentation as part of the EPA and presents evidence of communicating and interacting with others to give/receive information accurately, in a timely, positive and professional manner	Can evidence positive outcomes of engagement events delivered using variety of appropriate communication methods  Can evidence interaction with others through quantitative outcomes and/or positive feedback			

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Demonstrate analytical and problem-solving skills	S14	Demonstrates ability to effectively analyse and solve problems related to the role within the workplace	Able to evidence positive outcomes of analytical and problem-solving exercise undertaken without guidance within the workplace			
Communicate effectively using evidence-based reporting, communication and presentation skills	S15	Effectively delivers a presentation 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			

Table 2c: Practical Task (Behaviours)

Behaviours Assessment Objectives & Description	Standard Section	Competency		Elements of Practical Task		
		Pass	Distinction	Energy Audit Planning & Scope	Energy Consumption Assessment & Data Collection	Data Analysis & Opportunities' Evaluation

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Target and goal oriented	B1	<p>Displays evidence of actions within the workplace that led to hitting performance or other targets</p> <p>Outlined 3 professional goals planning to achieve within the next 12 months</p>	<p>Describes planning, process and outcome of an action that led to hitting a target within the workplace</p> <p>Outlines and describes 5 professional goals planning to achieve within the next 12 months</p>	
Forward thinking and proactive	B2	<p>Provides evidence of proactively seeking opportunities for up to date information relevant to the workplace's energy management task</p> <p>Provides evidence of a positive contribution to an energy management task by anticipating certain regulatory, industry, sector, event developments</p>	<p>Evidences detailed personal commitment to energy management principles and workplace values</p>	
Deliver a supportive professional service to external and internal customers	B4	<p>Evidences effective professional relationship thought employment and effectively engages external and internal stakeholders and clients</p>	<p>Demonstrates strong interpersonal skills in relationships with a broad range of stakeholders, including senior management and other internal and external stakeholders and clients</p>	

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Focus on undertaking and completing work in a way that contributes to sustainable development	B6	Provides evidence of 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	
Comply responsibly with current and relevant industry standards and regulations	B7	Demonstrates understanding of all current and relevant industry standards and regulations related and to be adhered by the organisation	Demonstrates knowledge of new industry standard and regulation and can anticipate likely forthcoming changes through an understanding of current political focus	
Exercise responsibilities in an ethical manner	B11	Completes work responsibly and works in accordance with ethical procedures	Evidences strong work ethic and responsibility	
Be able to adjust and respond effectively to unexpected change, and deal with contingency risks	B12	Accurately assesses risk and plans action to manage unexpected change and risk	Demonstrates implementing effective change and risk management controls and communicates these controls to other stakeholders	

The above tables are designed as follows: The first column gives the title of the assessment objective and description (knowledge, skills or behaviours); the second column lists where these are assessed in the Junior Energy Manager apprenticeship standard, the third column lists the

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'pass' knowledge, skill or behaviour requirement to demonstrate, the fourth column lists the 'distinction' knowledge, skill or behaviour requirement to demonstrate that would make up an overall objective and elements of the Practical Task.

As this is a competency-based assessment all knowledge, skills and behaviour requirements need to be achieved in this assessment.

## 12. PRACTICAL TASK ASSESSMENT CRITERIA

Below table is describing the difference between an overall Practical Task being deemed competent (Pass and Distinction) and non-competent (Fail).

*Assessment criteria for the Practical Task.*

Practical Task	Highly Competent (DISTINCTION)	Competent (PASS)	Not competent (FAIL)
To be deemed competent each overall Assessment Objective is individually demonstrated within the Practical Task  and	A well thought out task that clearly demonstrates an engagement with the topic, focus on each knowledge, skills and behaviour requirements and development outcomes. Demonstrates self-reflection, in depth analysis and the improvement of energy management practices as a result of the energy audit. Uses detailed	Good and consistent reference is made to address the achievement of each individual knowledge, skill and behaviour in their Practical Assessment. Shows a clear ability to demonstrate how each Assessment Objective (knowledge, skill or behaviour) has been achieved through undertaking the energy audit, using appropriate processes, assessing energy consumption and critically examining the	Overly focused on only one or two elements of the Assessment Objectives or there are complete gaps (one or more) in coverage of some of the Assessment Objectives within the overall Practical Task. Insufficient use of energy auditing process to explain how many of the Assessment Objectives have been achieved or the

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<p>Each Element of the Practical Task is individually answered to a competent level.</p>	<p>reference and high-quality processes, assessment methods and uses are range of methods to examine the collected data, identifying opportunities and details analysis of their impact and payback.</p> <p>Shows high quality and detailed evidence within the Elements of the Practical Task. Considers in depth different perspectives on energy auditing, planning, scoping, data collecting and analysis, with detailed references to using models or theories in context in any findings and conclusions.</p>	<p>collected data, identifying opportunities, describing the undertaken activities and including evidence where helpful.</p> <p>and</p> <p>Shows good evidence and attempt to complete the Elements of the Practical Task. There must be sufficient evidence of being able to demonstrate the energy audit planning, scoping, data collecting and analysis and opportunities identification, recognising the knowledge, skills and behaviours which add most value and sufficiently demonstrating the ability to reflect on learning during their work experience</p>	<p>evidence of undertaking the audit is not sufficiently credible.</p> <p>and</p> <p>Overly focused on only one or two challenge questions. Insufficient demonstration of the energy audit planning, scoping, data collecting and analysing and identifying opportunities and a weak critical discussion of the usefulness of knowledge, skills and behaviours acquired and demonstrated. Emphasis on description of processes rather than critical evaluation and reflection on the energy audit outcome and energy efficient opportunities.</p>
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## 13. ASSESSMENT OF THE PRACTICAL TASK ELEMENT OF THE EPA

The apprentice must successfully complete the Practical Task to the satisfaction of the Independent Assessor. The Energy Report will be also reviewed by the Independent Assessor and quality assured by another Independent Assessor. The Assessors who will decide whether the apprentice has demonstrated the required competencies of the Standard. To ensure the Assessors' independence, they will not have been engaged in any aspect of the apprentice's work experience, training or development.



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The grading of the Practical Task will be 'Pass', 'Distinction' or 'Fail', but to award a Distinction or Pass both Independent Assessors must be satisfied that all performance objectives, if not all elements individually, have been demonstrated competently and to the required level.

## 14. MOCK ASSESSMENT MATERIALS

Mock assessment materials are provided for the Practical Assessment by the EPAO. A list of Audit Mock tasks provides an example of what the actual practical task will look like in terms of the feel and level of demand.

## 15. DELIVERY AND CONDUCT

Practical Assessment is delivered at the employer's site in the apprentices' standard set up. The access to the relevant areas such as the plant room/boiler room should be made available by an employer during the assessment. The EPAO will discuss the set up and delivery of the tests with the employer/training provider, as part of their planning discussions.

The employer/training provider should ensure that apprentices are adequately prepared before each assessment attempt.

## 16. CONTACT DETAILS

EMAIL: [enquiries@theema.org.uk](mailto:enquiries@theema.org.uk)

PHONE: 0203 916 5516

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## 17. RECOMMENDED RESOURCES FOR APPRENTICES

ISO 50002:2014, ENERGY AUDITS — REQUIREMENTS WITH GUIDANCE FOR USE, <https://www.iso.org/standard/60088.html>

BS EN 16247-1:2012, ENERGY AUDITS. GENERAL REQUIREMENTS,  
<https://shop.bsigroup.com/en/ProductDetail/?pid=000000000030219029>

ENERGY AUDITING TECHNIQUES GUIDE (2019), <https://www.theema.org.uk/product/energy-auditing-guide/>

CIBSE, Guide F: ENERGY EFFICIENCY IN BUILDINGS (2012), <https://www.cibse.org/knowledge/knowledge-items/detail?id=a0q20000008I7oTAAS>

ENERGY AUDITS: WHAT IS IT? HOW DO I DO ONE?, <https://www.youtube.com/watch?v=0WIKNkKnX2Y>

ENERGY PROFILES: HOW DO I MAKE ONE FOR MY COMPANY?, <https://www.youtube.com/watch?v=jgo4e7a5rtE>

ENERGY BASELINES: HOW DO YOU MAKE ONE FOR YOUR COMPANY?, <https://www.youtube.com/watch?v=hDYaTx1SK4M&t=35s>

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## 18. RECOMMENDED RESOURCES FOR ASSESSORS:

ENERGY MANAGEMENT IN BUILDING SERVICES COURSE,  
<https://www.theema.org.uk/product/energy-management-in-building-services-london/>

ENERGY AUDITING TECHNIQUES COURSE,  
<https://www.theema.org.uk/product/energy-auditing-techniques/>

ENERGY MONITORING, TARGETING AND VALIDATION,  
<https://www.theema.org.uk/product/energy-monitoring-targeting-and-validation/>