# Qualification Specification:

**OCN NI Level 2 Award in Promoting Sustainable Practices through Renewable Energy Technologies**

- **Qualification No: 610/6287/X**

**OCN NI Level 2 Certificate in Promoting Sustainable Practices through Renewable Energy Technologies**

- **Qualification No: 610/6286/8**

**Version: 1.0**

# 1. Specification Updates

Key changes have been listed below:

| Section | Detail of change | Version and date of Issue |
|---|---|---|
| | Newly developed qualifications | V1.0 – June 2025 |
| | | |
| | | |

# 2. Contents

# 3. Introduction to Open College Network Northern Ireland (OCN NI)

The Open College Network Northern Ireland (OCN NI) is a UK recognised awarding organisation based in Northern Ireland. We are regulated by CCEA Regulation to develop and award regulated professional and technical (vocational) qualifications from Entry Level up to and including Level 5 across all sector areas. In addition, OCN NI is also regulated by Ofqual to award qualifications in England.

OCN NI is also an educational charity that advances education by developing nationally recognised qualifications and recognising the achievements of learners. We work with centres such as Further Education Colleges, Private Training Organisations, Voluntary & Community Organisations, Schools, SME's and Public Sector bodies to provide learners with opportunities to progress into further learning and/or employment. OCN NI's Strategic Plan can be found on the OCN NI website www.ocnni.org.uk.

For further information on OCN NI qualifications or to contact us, you can visit our website at www.ocnni.org.uk. The website should provide you with details about our qualifications, courses, contact information, and any other relevant information you may need.

## OCN NI Contact Details

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# 4. About this Specification

This specification details OCN NI's specific requirements for the delivery and assessment of the **OCN NI Level 2 Award and Certificate in Promoting Sustainable Practices through Renewable Energy Technologies.**

This specification will provide guidelines for centres to ensure the effective and correct delivery of these qualifications. OCN NI qualification specifications are based on research and engagement with the practitioner community to ensure they provide appropriate skills and knowledge for learners.

The qualification specification will detail the following aspects of the **OCN NI Level 2 Award and Certificate in Promoting Sustainable Practices through Renewable Energy Technologies.**

- **Qualification Features**: this includes the key characteristics and features of these qualifications, such as its intended audience, purpose, and credit value.

- **Centre Requirements:** this details the prerequisites and obligations that centres must fulfil to be eligible to deliver and assess these qualifications. These include guidelines on staff qualifications, resources, and required procedures.

- **Structure and Content:** this details the structure and content of the qualification including units, and any specific content that learners will be required to study.

- **Assessment Requirements:** this details assessment criteria and assessment methods for these qualifications, ensuring that summative assessment approaches are clear.

- **Quality Assurance:** the quality and consistency of delivery and assessment of these qualifications are of paramount importance to OCN NI. The mandatory quality assurance arrangements including processes for internal and external quality assurance that all centres offering these qualifications must adhere to are detailed.

- **Administration:** guidance on the administrative aspects of delivering these qualifications, including registration, certification, and record-keeping.

- Reference to other handbooks and policies as appropriate to the qualification.

It is important to note that OCN NI will communicate any significant updates or changes to this specification in writing to our Centres. Additionally, we will make these changes available on our official website at www.ocnni.org.uk.

To stay current, please refer to the online version of this specification as it is the most authoritative and up-to-date publication. Be aware that downloaded and printed copies may not reflect the latest revisions.

## 4.1 Additional Support

OCN NI offers a comprehensive range of support services designed to assist Centres in meeting the delivery and quality assurance requirements of OCN NI qualifications. These services include:

- **Learner Assessment Booklets**: These booklets are created to assist learners in demonstrating the fulfilment of assessment criteria and organising the quality assurance prerequisites for each individual unit.

- **Qualification Support Pack**: A support pack has been developed to support Centres in the delivery of these qualifications. The pack includes planning and assessment templates, guides to best practice, etc.

- **Professional Development for Educators**: OCN NI provides opportunities for professional development tailored to meet the various needs of practitioners and quality assurance staff. Centres can join our training sessions, available in both face-to-face and online formats, or explore a wealth of training materials by visiting www.ocnni.org.uk

- **OCN NI Subject Advisors**: Our team of subject advisors offers vital information and support to Centres. They provide guidance on specification details, non-exam assessment advice, updates on resource developments, and various training opportunities. They actively engage with subject communities through an array of networks to facilitate the exchange of ideas and expertise, to support practitioners to provide quality education programs to learners.

All centres can access information, support and guidance to support the delivery and quality assurance of these qualifications by contacting their designated Business Development Advisor or by contacting us on Contact Us | OCN NI

# 5. About these qualifications

## 5.1 Qualification Regulation Information

OCN NI Level 2 Award in Promoting Sustainable Practices through Renewable Energy Technologies
Qualification Number: 610/6287/X

Operational start date: 01 September 2025
Operational end date: 31 August 2030
Certification end date: 31 August 2032

OCN NI Level 2 Certificate in Promoting Sustainable Practices through Renewable Energy Technologies
Qualification Number: 610/6286/8

Operational start date: 01 September 2025
Operational end date: 31 August 2030
Certification end date: 31 August 2032

The qualification's operational start and end dates define the regulated qualification's lifecycle. The operational end date is the final date for learner registration, while learners have until the certificate end date to complete the qualification and receive their certificates.

It is important to note that all OCN NI regulated qualifications are listed on the Register of Regulated Qualifications (RQF), which can be found at Ofqual Register. This register is maintained by Ofqual in England and CCEA Regulation in Northern Ireland. It contains information about qualifications that are regulated and accredited. It is a key resource for learners, employers, and educational institutions to verify the status and recognition of qualifications.

Centres must adhere to administrative guidelines diligently, with special attention to the fact that fees, registration, and certification end dates for the qualification may be subject to changes. It is a centre's responsibility to make itself aware of updates on any modifications to ensure compliance with the latest requirements. OCN NI provides centres with timely updates through various channels including website, newsletters and through this specification. Information on qualification fees can be found on the Centre Login section of the OCN NI website www.ocnni.org.uk .

## 5.2 Sector Subject Area

A subject sector area is a specific category used to classify academic and vocational qualifications. Subject sector areas are part of the educational and qualifications framework to organise and categorise qualifications. The sector subject for these qualifications is:

**15.3 Business management**

## NOS:

COGHU001 – Prepare plant and equipment to use a hydrogen product
COGSBP17 – Promote Energy Efficiency within Sustainable Business Practice
LANWFS14 – Manage energy efficiency in workplace and facilities services
INSEA5 – Promote low and zero carbon energy technologies

## 5.3 Grading

Grading for these qualifications is pass/fail.

## 5.4 Qualification's Aim and Objectives

### Qualification's Aim

The aim of the OCN NI Level 2 Award and Certificate in Promoting Sustainable Practices through Renewable Energy Technologies qualification is to provide knowledge and skills in the use of renewable technologies to promote sustainable energy production and use.

### Qualification's Objectives

The objectives of the OCN NI Level 2 Award and Certificate in Promoting Sustainable Practices through Renewable Energy Technologies are to develop an understanding of:

- the environmental impact of fossil fuels and renewable energy
- sourcing energy from biomass encompassing its conversion and environmental impact
- sourcing energy from heat pumps and heat pump technology
- sourcing energy from hydrogen encompassing its production, storage, and utilisation
- sourcing energy from solar and wind including key concepts and environmental impact

## 5.5 Target Learners

The OCN NI Level 2 Award and Certificate in Promoting Sustainable Practices through Renewable Energy Technologies are targeted at individuals who have an interest or involvement in environmental sustainability, climate change mitigation, and/or corporate social responsibility.

## 5.6 Entry Requirements

There are no formal entry requirements for these qualifications. Learners should however be at least 14 years of age.

## 5.7 Progression

The OCN NI Level 2 Award and Certificate in Promoting Sustainable Practices through Renewable Energy Technologies qualification allows for progression within the suite and to further learning in this area and/or into employment.

## 5.8 Delivery Language

These qualifications is exclusively available in English. If there is a desire to offer these qualifications in Welsh or Irish (Gaeilge), we encourage you to get in touch with OCN NI. They will assess the demand for such provisions and, if feasible, provide the qualification in the requested language as appropriate.

# 6. Centre Requirements for Delivering these qualifications

## 6.1 Centre Recognition

New and existing OCN NI recognised centres must apply for and be granted approval to deliver these qualifications prior to the commencement of delivery.

## 6.2 Qualification Approval

Once a Centre has successfully undergone the Centre Recognition process, it becomes eligible to apply for qualification approval. The Centre's capability to meet and sustain the qualification criteria will be assessed. Throughout the qualification approval process, OCN NI will aim to ensure that:

- centres possess suitable physical resources (e.g., equipment, IT, learning materials, teaching rooms) to support qualification delivery and assessment
- centre staff involved in the assessment process have relevant expertise and/or occupational experience
- robust systems are in place for ensuring ongoing professional development for staff delivering the qualification
- centres have appropriate health and safety policies concerning learner equipment use
- qualification delivery by centres complies with current equality and diversity legislation and regulations
- as a part of the assessment process for these qualifications, it may be useful for learners to have access to a practical work setting

## 6.3 Centre Staffing

To offer these qualifications centres are mandated to establish the following roles as a minimum, although a single staff member may serve in more than one capacity*:

- Centre contact
- Programme Co-ordinator
- Assessor
- Internal Quality Assurer

*Note: An individual cannot serve as an Internal Quality Assurer for their own assessments.

## 6.4 Tutor Requirements

Tutors responsible for delivering these qualifications are expected to possess a high degree of occupational competency. They should meet the following criteria:

- **Occupational Competency:** Tutors should demonstrate a clear understanding of the subject matter, including up-to-date knowledge. This competence should enable them to effectively impart knowledge and practical skills to learners.

- **Qualifications:** Tutors should hold qualifications at a level that is at least one level higher than the qualification they are teaching. This ensures that they have the necessary academic foundation to provide in-depth guidance and support to learners.

These requirements collectively ensure that learners receive instruction from highly qualified and experienced instructors, thereby enhancing the quality and effectiveness of their educational experience.

## 6.5 Assessor Requirements

The assessment of these qualifications takes place within the Centre and is subjected to OCN NI's rigorous quality assurance procedures. The achievement of individual units is based on the criteria defined in each unit.

Assessors play a pivotal role in ensuring the validity and fairness of assessments. They are required to meet the following criteria:

- **Occupational Competency:** Assessors should possess a high degree of occupational competency in the relevant subject matter. This expertise enables them to accurately evaluate and measure a learner's knowledge and skills. Additionally, they should hold qualifications at a level that is at least one level higher than the qualification they are assessing, ensuring their in-depth understanding of the subject matter.

- **Assessment Expertise:** Assessors should have direct or related experience in the field of assessment. This includes knowledge of best practices in designing, conducting, and grading assessments. Their expertise ensures that assessments are both fair and valid.

- **Assessors Qualification:** Assessors should hold or be currently undertaking a recognised assessor's qualification; or must have attended the OCN NI Assessment Training.

- **Comprehensive Assessment Oversight:** Assessors are responsible for evaluating all assessment tasks and activities comprehensively. They must thoroughly review and assess each element to ensure a fair and accurate representation of a learner's skills and knowledge.

These rigorous requirements uphold the quality and integrity of the qualification's assessment process, ensuring that learners receive a fair and reliable evaluation of their competencies.

## 6.6 Internal Quality Assurer Requirements

The Internal Quality Assurer plays a crucial role in the Centre's internal quality assurance processes. The Centre must designate a skilled and trained Internal Quality Assurer who assumes the role of an internal quality monitor responsible for verifying the delivery and assessment of the qualifications.

The Internal Quality Assurer for these qualifications must meet the following criteria:

- **Internal Qualify Assurance Expertise:** Internal Quality Assurers should have direct or related experience in the field of verification and have at least one year's occupational experience in the areas they are internally quality assuring. This includes knowledge of best practices in designing, conducting, and grading assessments. Their expertise ensures that assessments are both fair and valid.
- **Internal Quality Assurers Qualification:** Internal Quality Assurers should hold or be currently undertaking a recognised Internal Quality Assurer's qualification; or must have attended the OCN NI Internal Qualify Assurance Training.
- **Thorough Evaluation of Assessment Tasks and Activities:** Internal Quality Assurers are tasked with conducting in-depth reviews and assessments of all assessment tasks and activities. Their responsibility is to ensure a comprehensive and meticulous oversight of each element to guarantee a just and precise reflection of a learner's abilities and knowledge and to ensure that all assessment and quality assurance requirements are fulfilled.

# 7. Qualification Structure

## 7.1 Qualification Purpose

The OCN NI Level 2 Award and Certificate in Promoting Sustainable Practices through Renewable Energy Technologies are designed to introduce learners to the core principles of sustainability and renewable energy. They provide foundational knowledge and skills required to understand and promote sustainable practices across various sectors. Suitable for those with an interest in climate action or preparing for green economy roles, the qualifications focus on the environmental impact of energy choices, the role of technologies like solar PV and heat pumps, and practical ways to contribute to Net Zero targets. Learners will develop awareness of renewable systems, explore real-world applications, and gain employability skills that support progression into further training or employment in sustainability, energy, or environmental services.

## 7.2 Qualification Level

In the context of the OCN NI Level 2 Award and Certificate in Promoting Sustainable Practices through Renewable Energy Technologies it is essential to understand the significance of qualification levels, as they play a pivotal role in assessing the depth and complexity of knowledge and skills required for successful attainment. These qualifications aligns with Level 2 which signifies a moderate level of difficulty and intricacy. It's important to note that qualification levels in the educational framework range from Level 1 to Level 8, complemented by three 'entry' levels, namely Entry 1 to Entry 3.

## 7.3 Qualification Size

### Total Qualification Time (TQT)

This represents the total amount of time a learner is expected to spend to complete the qualification successfully. It includes both guided learning hours (GLH) and independent study or additional learning time.

### Guided Learning Hours (GLH)

These are the hours of guided instruction and teaching provided to learners. This may include classroom instruction, tutorials, or other forms of structured learning.

| **OCN NI Level 2 Award in Promoting Sustainable Practices through Renewable Energy Technologies** | |
|---|---|
| Total Qualification Time (TQT): | 70 hours |
| | |
| Total Credits Required: | 7 credits |
| Guided Learning Hours (GLH): | 56 hours |
| **OCN NI Level 2 Certificate in Promoting Sustainable Practices through Renewable Energy Technologies** | |
| Total Qualification Time (TQT): | 150 hours |
| | |
| Minimum Credits Required: | 15 credits |
| Minimum Guided Learning Hours (GLH): | 120 hours |

## 7.4 How to Achieve the Qualification

To achieve the **OCN NI Level 2 Award in Promoting Sustainable Practices through Renewable Energy Technologies** learners must complete the mandatory unit and one unit from the optional units (7 credits).

To achieve the **OCN NI Level 2 Certificate in Promoting Sustainable Practices through Renewable Energy Technologies** learners must complete the mandatory unit and three units from the optional units (15 credits).

# 8. Assessment Structure

These qualifications are assessed through internal assessment and each unit is accompanied by specific assessment criteria that define the requirements for achievement.

## 8.1 Assessment Guidance: Portfolio

The portfolio for these qualifications is designed to provide a comprehensive view of a learner's skills and knowledge. It is an holistic collection of evidence that may include a single piece of evidence that satisfies multiple assessment criteria. There is no requirement for learners to maintain separate evidence for each assessment criterion.

When learners are creating their portfolio, they should refer to the assessment criteria to understand the evidence required.

It is essential that the evidence in the portfolio reflects the application of skills in real-world situations. Learners should ensure that they provide multiple examples or references whenever the assessment criteria require it.

When demonstrating knowledge, learners may draw from their own organisation or another organisation they are familiar with to provide context.

## 8.2 Understanding the Units

The units outlined in this specification establish clear assessment expectations. They serve as a valuable guide for conducting assessments and ensuring quality assurance efficiently. Each unit within this specification follows a consistent structure. This section explains the operational framework of these units. It is imperative that all educators, assessors, Internal Quality Assurers, and other personnel overseeing the qualification review and familiarise themselves with this section to ensure a comprehensive understanding of how these units function.

- **Title:** The title will reflect the content of the unit and should be clear and concise.
- **Level:** A unit can have one of six RQF levels: Entry, One, Two, Three, Four or Five. All units within these qualifications are level 2.
- **Credit Value:** This describes the number of credits ascribed to a unit. It identifies the number of credits a learner is awarded upon successful achievement of the unit. One credit is awarded for the learning outcomes which a learner, on average, might reasonably be expected to achieve in a notional 10 hours of learning.
- **Learning Outcome:** A coherent set of measurable achievements.
- **Assessment Criteria:** These enable a judgement to be made about whether or not, and how well, the students have achieved the learning outcomes.
- **Assessment Guidance and Methods:** These detail the different assessment methods within the unit that may be used.
- **Content:** This provides indicative content to assist in teaching and learning.
- **Scope:** This provides possible teaching content.

# 9. Qualification Summary by Unit

### OCN NI Level 2 Award in Promoting Sustainable Practices through Renewable Energy Technologies

Total Qualification Time (TQT) for this qualification: 70 hours
Guided Learning Hours (GLH) for this qualification: 56 hours

In order to achieve the OCN NI Level 2 Award in Promoting Sustainable Practices through Renewable Energy Technologies, the learner must successfully complete the mandatory unit The Environmental Impact of Fossil Fuels and Renewable Energy and one optional unit for a total of 7 credits.

### OCN NI Level 2 Certificate in Promoting Sustainable Practices through Renewable Energy Technologies

Total Qualification Time (TQT) for this qualification: 150 hours
Guided Learning Hours (GLH) for this qualification: 120 hours

In order to achieve this qualification, the learner must successfully complete the mandatory unit and 3 units from the following optional units for a total of 15 credits.

| Unit Reference Number | OCN NI Unit Code | Unit Title | Credit Value | GLH | Level |
|---|---|---|---|---|---|
| ***Mandatory unit*** | | | | | |
| Y/651/7477 | CBG773 | The Environmental Impact of Fossil Fuels and Renewable Energy | 3 | 24 | Two |
| ***Optional units*** | | | | | |
| Y/651/7486 | CBG774 | Energy from Biomass | 4 | 32 | Two |
| D/651/7488 | CBG775 | Energy from Heat Pumps | 4 | 32 | Two |
| F/651/7489 | CBG776 | Energy from Hydrogen | 4 | 32 | Two |
| K/651/7490 | CBG777 | Energy from Solar | 4 | 32 | Two |
| M/651/7492 | CBG778 | Energy from Wind | 4 | 32 | Two |

# 10. Units

| | |
|---|---|
| Title | The Environmental Impact of Fossil Fuels and Renewable Energy |
| Level | Two |
| Credit Value | 3 |
| Guided Learning Hours (GLH) | 24 |
| OCN NI Unit Code | CBG773 |
| Unit Reference No | Y/651/7477 |
| Learn Direct Code | QB9 |
| *Unit purpose and aim(s):* This unit will enable the learner to understand of a variety of renewable energy technologies, emphasising the environmental impact of non-renewable resources like coal, natural gas, and oil. The learner will also understand the benefits of renewable energy technologies in supporting sustainability goals and impact on greenhouse gas (GHG) emissions control. | |

| Learning Outcomes | Assessment Criteria |
|---|---|
| 1. Understand the environmental impact of non-renewable resources. | 1.1. Define coal, oil, and natural gas as non-renewable resources.<br>1.2. Assess and compare the environmental impacts caused by the extraction, production and combustion of coal, oil and gas on our ecosystems, air and water quality.<br>1.3. Describe the negative effects of non-renewable resources, focusing on their environmental impacts, such as greenhouse gas emissions. |
| 2. Understand the main sources of microgeneration renewable electricity-generating and heat-generating technologies. | 2.1. Define the term microgeneration.<br>2.2. Compare and contrast examples of the following renewable electricity-generating and heat-generating technologies:<br>a) solar photovoltaic (PV)<br>b) wind<br>c) hydro<br>d) solar thermal<br>e) biomass<br>f) ground and air source heat pumps<br>2.3. Describe the financial benefits associated with microgeneration renewable energy technologies.<br>2.4. Describe the environmental benefits derived from the adoption of renewable energy technologies. |
| 3. Understand how renewable energy technologies contribute to a reduction in emissions and meeting sustainability goals. | 3.1. Explain how the adoption of renewable energy sources supports sustainability objectives including the following government policies, targets and legislation:<br>a) Energy Act 2023<br>b) The Climate Change Act 2008 (2050 Target Amendment) Order 2019<br>c) Climate Change Act 2008)<br>d) United Nations' Sustainable Development Goals (SDGs).<br>3.2. Assess the extent and importance of renewable energy systems in reducing greenhouse gas emissions in particular carbon emissions, compared to conventional energy sources. |

| **Assessment Guidance**<br>**NOS:**<br>COGSBP17 – Promote Energy Efficiency within Sustainable Business Practice<br>LANWFS14 – Manage energy efficiency in workplace and facilities services<br>INSEA5 – Promote low and zero carbon energy technologies | | |
|---|---|---|
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered. | | |
| **Assessment Method** | **Definition** | **Possible Content** |
| Portfolio of evidence | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge | Record of observation<br>Learner notes/written work<br>Learner log |

| Learning Outcome | Unit title: The Environmental Impact of Fossil Fuels and Renewable Energy |
|---|---|
| 1. Understand the environmental impact of non-renewable resources. | **Scope**<br><br>**Teaching will cover: How the extraction, production, refining and transportation and use of fossil fuels has major environmental global impacts contributing to climate change.**<br>• Methane – Green House Gas<br>• Carbon Dioxide – Green House Gas<br>• Nitrogen – Acid Rain<br>• Liquid Fuel Spills - Oil |
| 2. Understand the main sources of microgeneration renewable electricity-generating and heat-generating technologies. | **Scope**<br><br>**Teaching will cover: Understanding the Microgeneration schemes available as alternatives to Fossil Fuel use, covering the financial and environmental benefits of the following.**<br>• solar photovoltaic (PV)<br>• wind<br>• hydro<br>• solar thermal<br>• biomass<br>• ground and air source heat pumps |
| 3. Understand how renewable energy technologies contribute to a reduction in emissions and meeting sustainability goals. | **Scope**<br><br>**Teaching will cover: understanding the range of renewable energy sources with sustainability objectives, referencing government policies promoting their use.**<br>• 10X - a sub-regional economic approach<br>• Building Regulations<br>• Environment Agency<br>• Energy Act 2023<br>• The Climate Change Act 2008 (2050 Target Amendment) Order 2019 & Climate Change Act 2008) |

| | |
|---|---|
| Title | Energy from Biomass |
| Level | Two |
| Credit Value | 4 |
| Guided Learning Hours (GLH) | 32 |
| OCN NI Unit Code | CBG774 |
| Unit Reference No | Y/651/7486 |
| Learn Direct Code | QB9 |
| *Unit purpose and aim(s):* This unit will enable the learner to understand biomass energy, encompassing its sources, conversion processes, applications, advantages, limitations, and environmental impact. | |

| Learning Outcomes | Assessment Criteria |
|---|---|
| 1. Understand Biomass Energy Sources. | 1.1. Define the term biomass and list examples of categorised types of biomass including:<br>a) wood<br>b) agricultural crops<br>c) agricultural residues<br>d) municipal wastes<br>1.2. Compare three of the main plant crops that are grown commercially to produce biomass.<br>1.3. Describe why biomass crops and organic wastes are defined as a renewable source of energy. |
| 2. Understand biomass energy conversion and applications. | 2.1. Identify the biomass conversion processes for energy production<br>2.1. Identify the biomass conversion processes for energy production<br>2.1. Identify the biomass conversion processes for energy production<br>2.2. Explain the process of producing biomass energy from the combustion of wood chips and wood pellets.<br>2.3. Explain the production of biogas from the biological breakdown of organic matter through anaerobic digestion. |
| 3. Understand the advantages, limitations, and environmental impact of biomass energy. | 3.1. Assess the advantages of biomass energy compared to fossil fuels in relation to:<br>3.1. Assess the advantages of biomass energy compared to fossil fuels in relation to:<br>3.1. Assess the advantages of biomass energy compared to fossil fuels in relation to:<br>a) renewable nature<br>b) carbon neutrality<br>c) local sourcing<br>3.2. Identify limitations and challenges associated with biomass energy including:<br>a) land use<br>b) feedstock availability<br>c) greenhouse gas emissions<br>d) technology constraints |
| 4. Understand biomass energy's role in achieving net-zero targets. | 4.1. Assess how biomass energy contributes to achieving net-zero targets by reducing carbon emissions through carbon-neutral processes.<br>4.1. Assess how biomass energy contributes to achieving net-zero targets by reducing carbon emissions through carbon-neutral processes. |

| | |
|---|---|
| | 4.1. Assess how biomass energy contributes to achieving net-zero targets by reducing carbon emissions through carbon-neutral processes.<br>4.2. Assess the importance of biomass in transitioning from fossil fuel-based energy to renewable sources and its role in supporting sustainable practices. |

**Assessment Guidance**

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

| Assessment Method | Definition | Possible Content |
|---|---|---|
| Portfolio of evidence | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge | Record of observation<br>Learner notes/written work<br>Learner log |

| Learning Outcome | Unit title: Energy from Biomass |
|---|---|
| 1. Understand Biomass Energy Sources. | **Scope**<br><br>**Teaching will cover Understanding what biomass is and how it can collected/harvested. The main crops will be discussed and an understanding of how biomass is a renewable energy source**<br>• wood as energy<br>• crops from agriculture<br>• reuse of waste as an energy source<br>• specific crops used for biomass/biofuels: corn, soybeans, sugar cane |
| 2. Understand biomass energy conversion and applications | **Scope**<br><br>**Teaching will cover: The aspects of energy conversion through burning biomass at a source plant or appliance to transfer energy into the following elements**<br>• heat<br>• electricity<br>• biofuels |
| 3. Understand the advantages, limitations, and environmental impact of biomass energy. | **Scope**<br><br>**Teaching will cover: Advantages – removing reliance on fossil fuels, supplying renewable alternative energy sources and gaining fuel security. Disadvantages – Poor planning leading to loss of biodiversity, damage to land and allowing further environmental problems such as flooding and erosion.**<br>• land use changes and deforestation<br>• sustainable sourcing and management practices<br>• ensuring sustainable methods for crops<br>• waste is properly defined for conversion to biomass |
| 4. Understand biomass energy's role in achieving net-zero targets. | **Scope**<br><br>**Teaching will cover: The CO2 Nett zero journey will not have one overall energy outcome, understanding the multi strand approach to Nett Zero and how differing approaches will work for all regions, lifestyles and economies**<br>• contributing to Nett Zero as renewable energy sources<br>• reducing reliance on fossil fuels, gaining fuel security<br>• similarities in system/appliance operation to common appliances<br>• proven track record – widely used in mainland Europe<br>• there is no silver bullet |

| | |
|---|---|
| Title | Energy from Heat Pumps |
| Level | Two |
| Credit Value | 4 |
| Guided Learning Hours (GLH) | 32 |
| OCN NI Unit Code | CBG775 |
| Unit Reference No | D/651/7488 |
| Learn Direct Code | QB9 |

*Unit purpose and aim(s):* This unit will enable the learner to understand heat pump technology, how it works, and its types. Learners will also understand how to calculate efficiency, advantages, and limitations of air and ground heat pumps as well as exploring how using heat pumps can reduce carbon emissions, support renewable energy, and help governments reach goals for zero harmful emissions.

| Learning Outcomes | Assessment Criteria |
|---|---|
| 1. Understand Heat Pump Technology. | 1.1. Describe what is meant by heat pump technology with reference to the main components:<br>a) condenser<br>b) evaporator<br>c) compressor<br>d) expansion valve<br>e) refrigerant<br>1.2. Describe how a heat pump/refrigeration unit works. |
| 2. Understand the main types of air and ground source heat pumps. | 2.1. Define what is meant by air source and ground source heat pumps and describe the main differences between them.<br>2.2. Identify the common types of closed-loop ground heat source pump systems used in domestic installations from the following categories:<br>a) vertical<br>b) horizontal<br>c) pond<br>2.3. Identify the key component parts of air source and ground source heat pump systems. |
| 3. Be able to calculate the Coefficient of Performance (COP) of heat pumps. | 3.1. Calculate the COP of two different heat pumps.<br>3.2. Explain the significance of the COP values calculated in AC 3.1 how the values relate to the efficiency of heat pump systems and be used to compare systems. |
| 4. Understand the advantages and disadvantages of using heat pump systems. | 4.1. Summarise the advantages of using heat pumps in terms of efficiency and cost-effectiveness compared to oil and gas heating systems.<br>4.2. Identify the limitations and disadvantages of using heat pumps. |
| 5. Understand how heat pump technologies support the transition to Net Zero. | 5.1. Explain how the use of heat pump technologies can support the transition away from fossil fuel-based heating systems.<br>5.2. Assess the role of heat pump technologies as part of the overall adoption of renewable energy sources.<br>5.3. Assess and compare the following forms of heating in terms of reduction in carbon emissions and supporting the transition to net-zero:<br>a) renewable electricity sources<br>b) power heat pumps |

| Assessment Guidance | | |
|---|---|---|
| The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered. | | |
| **Assessment Method** | **Definition** | **Possible Content** |
| Portfolio of evidence | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge | Record of observation<br>Learner notes/written work<br>Learner log |

| Learning Outcome | Unit title: Energy from Heat Pumps |
|---|---|
| 1. Understand heat pump technology. | **Scope**<br><br>**Teaching will cover: Understanding how a Heat Pump can replace Gas and Oil boilers as a source of heating generation and the basic principles of their operation.**<br>• refrigerant cycle and components<br>• fluorinated gases (FGAS)<br>• regulations and certifications for refrigerant working |
| 2. Understand the main types of air and ground source heat pumps. | **Scope**<br><br>**Teaching will cover: Knowing the differences between the heat pumps currently available and the systems they operate on.**<br>• air source heat pumps<br>• ground source heat pumps<br>• aquifers as heat pump proposition<br>• mono valent<br>• bi valent |
| 3. Be able to calculate the Coefficient of Performance (COP) of heat pumps. | **Scope**<br><br>**Teaching will cover: energy conversion within the heat pump to produce an effective heating cycle, knowing how to complete the calculation of co-efficient of performance for the heat pump and efficiency comparisons with other fossil fuel appliances.**<br>• input energy<br>• heating output energy<br>• gas boiler performance % of efficiency per unit of fuel m3<br>• oil boiler performance % of efficiency per litre of fuel<br>• heat pump performance % of efficiency per unit of energy Kw |
| 4. Understand the advantages and disadvantages of using heat pump systems. | **Scope**<br><br>**Teaching will cover: Knowing the best uses and limitations of Heat Pumps knowing that they are not appropriate for every building type and the need for strict system planning and design regimes before any potential Heat Pump installation.**<br>• building type/size – apartment/flat, terraced, townhouse, semi-detached and detached<br>• building era/age<br>• building insulation<br>• building fabric – wooden, brick/block, concrete, stone<br>• electrical infrastructure – urban, sub urban, rural |
| 5. Understand how heat pump technologies support the transition to net-zero. | **Scope**<br><br>**Teaching will cover: How Heat Pumps will bring instant 'Localised' zero carbon to the dwelling as heat pumps do not have a flue therefore have no flue pipe Green House Gases (GHG) emissions at source.**<br>• carbon zero systems and technologies<br>• heat pump carbon dioxide emissions<br>• oil boiler carbon dioxide emissions<br>• gas boiler carbon dioxide emissions |

| | |
|---|---|
| Title | Energy from Hydrogen |
| Level | Two |
| Credit Value | 4 |
| Guided Learning Hours (GLH) | 32 |
| OCN NI Unit Code | CBG776 |
| Unit Reference No | F/651/7489 |
| Learn Direct Code | QB9 |

*Unit purpose and aim(s):* This unit will enable the learner to understand hydrogen energy, encompassing its production, storage, and utilisation. The learner will also understand the hydrogen infrastructure and safety, and its environmental impacts.

| Learning Outcomes | Assessment Criteria |
|---|---|
| 1. Understand use of hydrogen as an energy source. | 1.1. Explain the role of hydrogen as an energy carrier and its importance in the context of renewable energy.<br>1.2. Explain the basic principles of hydrogen production, storage, and utilisation. |
| 2. Understand hydrogen storage, transportation methods and technologies. | 2.1. Describe the main methods and technologies for storing and transporting hydrogen with reference to safety, efficiency, and scalability. |
| 3. Understand the infrastructure and safety issues associated with the use of hydrogen as an energy source. | 3.1. Assess the development of hydrogen infrastructure, including refuelling stations and distribution networks in own region.<br>3.2. Explain the safety protocols associated with hydrogen production, storage, and usage. |
| 4. Understand the economic and environmental implications of the use of hydrogen as an energy source. | 4.1. Assess the economic feasibility and environmental benefits of using hydrogen as an energy source. |
| 5. Understand the use of hydrogen as part of the overall energy infrastructure and potential future trends for development. | 5.1. Assess the integration of hydrogen into existing energy systems and infrastructure.<br>5.2. Analyse the potential future development of hydrogen as an energy source. |

**Assessment Guidance**
**NOS:**
COGHU001 – Prepare plant and equipment to use a hydrogen product

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

| Assessment Method | Definition | Possible Content |
|---|---|---|
| Portfolio of evidence | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge | Record of observation<br>Learner notes/written work<br>Learner log |

| Learning Outcome | Unit title: Energy from Hydrogen |
|---|---|
| 1. Understand the use of hydrogen as an energy source. | **Scope**<br><br>**Teaching will cover: Understanding what Hydrogen is, how we can manufacture it, and the best uses for Hydrogen as an energy source.**<br>• Hydrogen as a chemical element<br>• power vehicles<br>• generate electricity<br>• power industry<br>• heat our homes and businesses. |
| 2. Understand hydrogen storage and transportation methods and technologies. | **Scope**<br><br>**Teaching will cover: The 4 recognised methods of storing renewable hydrogen, and the 2 main methods of Hydrogen transportation.**<br>• Geological hydrogen storage<br>• Liquified hydrogen<br>• Compressed hydrogen storage<br>• Materials-based storage<br>• Pipeline Transportation for Gaseous H2<br>• Fuel Tankers for Liquified H2 |
| 3. Understand the infrastructure and safety issues associated with the use of hydrogen as an energy source. | **Scope**<br><br>**Teaching will cover: How hydrogen technologies and production must be safely developed to allow use across a variety of applications and sectors.**<br>• Steam reforming of natural gas<br>• Biomass gasification and methane pyrolysis.<br>• Thermochemical processes<br>• Electrolysis of water.<br>• Solar-driven and biological processes |
| 4. Understand the economic and environmental implications of the use of hydrogen as an energy source. | **Scope**<br><br>**Teaching will cover: How hydrogen has the potential to address two major challenges required to achieve net zero emissions by 2050. As a clean fuel source for power generation. Second, hydrogen can replace fossil fuels to decarbonise sectors such as domestic heating, industry, shipping and aviation.**<br>• Manufacturing of Hydrogen – New Job Opportunities<br>• Storage of Hydrogen – New Job Opportunities<br>• Transportation of Hydrogen – New Job Opportunities<br>• Retrofitting Fossil Fuels with Hydrogen – New Job Opportunities<br>• Economic Growth<br>• Zero Emission from Green Hydrogen<br>• Nett Zero 2050 potential |
| 5. Understand use of hydrogen as part of the overall energy infrastructure and potential future trends of for development. | **Scope**<br><br>**Teaching will cover: How Hydrogen will need infrastructure investment and change to allow the energy source to replace fossil fuels and offer fuel security.**<br>• Hydrogen effects on materials<br>• Best 'first place' use for Hydrogen<br>• Hydrogen By-Products of Combustion |

| | |
|---|---|
| Title | Energy from Solar |
| Level | Two |
| Credit Value | 4 |
| Guided Learning Hours (GLH) | 32 |
| OCN NI Unit Code | CBG777 |
| Unit Reference No | K/651/7490 |
| Learn Direct Code | QB9 |

*Unit purpose and aim(s):* This unit will enable the learner to understand solar energy, encompassing its key concepts, how it works, the different forms of solar power generation, technological advancement and its environmental impact.

| Learning Outcomes | Assessment Criteria |
|---|---|
| 1. Understand the basic principles of solar energy. | 1.1. Describe the basic principles of solar energy and its importance as renewable energy source.<br>1.2. State the approximation amount of solar energy available for UK energy purposes each year.<br>1.3. Identify two different forms of solar power generation. |
| 2. Be able to assess a site for solar power potential. | 2.1. Describe the principles of solar radiation and how it varies based on geographic location,<br>2.2. Assess a given site for solar power potential, considering factors like sunlight duration and shading. |
| 3. Understand the operation of solar photovoltaic cells and modules. | 3.1. Explain the operation of solar photovoltaic cells and modules and how they convert sun's energy into electrical energy. |
| 4. Understand solar thermal technology. | 4.1. Describe the use of solar thermal technologies for space heating and water heating. |
| 5. Understand how Concentrating Solar Power (CSP) systems work. | 5.1. Explain the use of lens in Concentrating Solar Power (CSP) systems for use in solar power plants. |
| 6. Understand the environmental considerations of solar power. | 6.1. Assess the environmental benefits and challenges associated with the use of solar power. |
| 7. Understand technological advancements in the production of solar energy. | 7.1. Assess the current technological trends in production of solar energy including the use of automated tracking systems to maximise energy output. |

**Assessment Guidance**

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

| Assessment Method | Definition | Possible Content |
|---|---|---|
| Portfolio of evidence | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |

| | | |
|---|---|---|
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge | Record of observation<br>Learner notes/written work<br>Learner log |

| Learning Outcome | Unit title: Energy from Solar |
|---|---|
| 1. Understand the basic principles of solar energy. | **Scope**<br><br>**Teaching will cover: How much energy transfer from the sun can generate electricity in the UK by absorbing the sunlight and using that light energy to create an electrical current within the PV panel.**<br>• Solar Thermal<br>• Solar PV<br>• Solar irradiance data for United Kingdom |
| 2. Be able to assess a site for solar power potential. | **Scope**<br><br>**Teaching will cover: The best installation planning, designing and component selection for successful Solar PV/Thermal systems**<br>• Location – Roof Panel<br>• Orientation - Panel<br>• Shading – Roof Panel<br>• Structure - Roofs<br>• Structure – Floors (Unvented Hot Water Capacity) Solar Thermal<br>• Use – Power Kw consumption<br>• Use – Hot Water consumption |
| 3. Understand the operation of solar photovoltaic cells and modules. | **Scope**<br><br>**Teaching will cover: How Solar panels are made up of many small units called photovoltaic cells, which convert sunlight into electricity.**<br>• Photons, sunlight, electrons and atoms.<br>• Annual UK average electricity consumption<br>• Annual UK Solar PV off-set – percentage reduction in grid use |
| 4. Understand solar thermal technology. | **Scope**<br><br>**Teaching will cover: The different areas that Solar energy can be utilised in.**<br>• Electricity Generation - PV<br>• Electrical Storage – Batteries - EESS<br>• Hot Water Storage<br>• Space Heating Off-Set – Pre heat thermal stores<br>• Swimming Pool Pre Heat |
| 5. Understand how concentrated solar power (CPS) systems work. | **Scope**<br><br>**Teaching will cover: The development and use of CSP systems globally and where they are most effective.**<br>• Electricity is generated when the concentrated light is converted to heat<br>• Relationship between the heat engine, steam turbine, electrical power generator and thermochemical reaction |
| 6. Understand the environmental considerations of solar power | **Scope**<br><br>**Teaching will cover: The environmental benefits of conversion to Solar energy collection.**<br>• Reduced Carbon Dioxide Emissions from Fossil Fuels<br>• Reduced energy bills to the system operator<br>• Ability to store energy for use when required<br>• Potential to move away from petrol and diesel cars and embrace electric vehicles |

| | |
|---|---|
| 7. Understand technological advancements in the production of solar energy. | **Scope**<br><br>**Teaching will cover: How Solar energy can and will develop and play a major part in the road to net carbon zero 2050 and how the technology will advance in the decades ahead.**<br>• Concentrated Solar Power<br>• Automated Solar Tracking Systems<br>• Solar Farms<br>• Solar Flotilla |

| | |
|---|---|
| Title | Energy from Wind |
| Level | Two |
| Credit Value | 4 |
| Guided Learning Hours (GLH) | 32 |
| OCN NI Unit Code | CBG778 |
| Unit Reference No | M/651/7492 |
| Learn Direct Code | QB9 |

*Unit purpose and aim(s):* This unit will enable the learner to understand wind energy, encompassing its key concepts, how it works, the different types of wind turbines and technological advancements. The learner will also understand wind energy source potential and environmental and social impacts.

| Learning Outcomes | Assessment Criteria |
|---|---|
| 1. Understand wind energy. | 1.1. Define the following renewable wind power related terms:<br>a) wind turbines<br>b) wind energy<br>c) power output<br>1.2. Explain the basic principles of how wind energy is harnessed and converted into electricity using wind turbines. |
| 2. Understand different types of wind turbines. | 2.1. Describe the main types of wind turbines, including horizontal-axis and vertical-axis turbines and their applications.<br>2.2. Compare the advantages of horizontal and vertical axis turbines. |
| 3. Be able to assess wind source potential. | 3.1. Assess the wind resource potential of a given location taking into account factors like wind speed, turbulence, and wind direction. |
| 4. Understand the technologies involved in the design of wind energy systems. | 4.1. Define the term wind survival speed how this is incorporated in wind energy design criteria.<br>4.2. Describe how and why power control in important in wind turbine design.<br>4.3. Explain how yawing ensures that a wind turbine faces the oncoming wind. |
| 5. Understand the environmental and social impacts associated with wind energy. | 5.1. Identify the environmental and social implications of wind power, including its:<br>a) carbon footprint<br>b) impact on wildlife<br>c) community considerations |

**Assessment Guidance**

The following assessment method/s may be used to ensure all learning outcomes and assessment criteria are fully covered.

| Assessment Method | Definition | Possible Content |
|---|---|---|
| Portfolio of evidence | A collection of documents containing work undertaken to be assessed as evidence to meet required skills outcomes<br>OR<br>A collection of documents containing work that shows the learner's progression through the course | Learner notes/written work<br>Learner log/diary<br>Peer notes<br>Record of observation<br>Record of discussion |

| | | |
|---|---|---|
| Practical demonstration/assignment | A practical demonstration of a skill/situation selected by the tutor or by learners, to enable learners to practise and apply skills and knowledge | Record of observation<br>Learner notes/written work<br>Learner log |

| Learning Outcome | Unit title: Energy from Wind |
|---|---|
| 1. Understand wind energy | **Scope**<br><br>**Teaching will cover: The key areas of understanding how wing power and energy works, how it is a renewable energy source, how the energy is collected through wind turbines and understanding the power output produced.**<br>• Turbines<br>• Energy<br>• Power<br>• Watts<br>• Kilowatts<br>• Megawatts<br><br>**Describing how a wind turbine produces green electricity through the interaction of the component parts**<br>• Rotor hub<br>• Low speed shaft<br>• High-speed shaft<br>• Nacelle<br>• Gear box<br>• Generator<br>• Tower |
| 2. Understand different types of wind turbines | **Scope**<br><br>**Teaching will cover: Knowing how to identify the different types of wind turbines, Horizontal and Vertical Axis Turbines and understanding the advantages of horizontal and vertical axis turbines**<br>• Horizontal-axis wind turbines (HAWTs)<br>• Vertical-axis wind turbines (VAWTs) |
| 3. Be able to assess wind source potential | **Scope**<br><br>**Teaching will cover: Understanding the best location for siting wind turbines and consideration factors such as wind speed, turbulence, planning requirements and noise/nuisance factors**<br>• Kinetic energy available in the wind<br>• Consistent wind patterns |
| 4. Understand the technologies involved in wind energy systems. | **Scope**<br><br>**Teaching will cover: The operational technical abilities of the wind turbine to minimise damage and maximise output ensuring Wind survival speed.**<br>• Passive stall control<br>• Pitch control<br>• Active stall control<br>• Yawing |

| | |
|---|---|
| 5. Understand the environmental and social impacts associated with wind energy | **Scope**<br><br>**Teaching will cover: Knowing how to Identify the environmental and social implications of wind power.**<br>• Wildlife impact<br>• Community impact<br>• Social implications of wind power<br>• Wind Turbine Carbon Footprint |

# 11. Quality Assurance of Centre Performance

## 11.1 Internal Assessment

When delivering and assessing these qualifications, Centres must align with stakeholders' expectations and address learners' needs by implementing a practical and applied programme. Centres have the flexibility to customise programmes to meet local requirements and establish connections with local employers and the broader vocational sector.

The Assessor should work with the Internal Quality Assurer to ensure that the assessment is planned in line with OCN NI requirements. Assessment Plans must be developed and approved by the Internal Quality Assurer prior to the delivery of the qualification.

All units within these qualifications must undergo internal assessment. Learners must provide evidence that they have appropriately met all assessment criteria required for that grade.

The assessment format for all units involves a task conducted after the delivery of the unit's content, or part of it, if multiple tasks are used. Tasks may exhibit in various forms, encompassing practical and written types. Please refer to 'OCN NI's Assessment Definitions Guide' for additional details.

A task constitutes a distinct activity completed independently by learners, separated from teaching, practice, exploration, and other activities guided by tutors. Tasks are assigned to learners with a specified start date, completion date, and explicit requirements for the evidence to be produced. Some tasks may include observed practical components and require diverse forms of evidence.

A valid assignment will enable a clear and formal assessment outcome, which meets the requirements of the assessment criteria. Assessment decisions are based on the specific assessment criteria given in each unit and set at each grade level. The way in which individual units are written provides a balance of assessment of understanding, practical skills and vocational attributes appropriate to the purpose of qualifications.

It is the Assessor's role to ensure that learners are appropriately prepared for assessment, this begins from induction onwards. Assessors should ensure that learners understand how assessment tasks are used to determine the award of credit, the importance of meeting assessment timelines, and that all learners work must be independently created, where source documents are used this should be appropriately referenced, learners should be aware of what would constitute plagiarism and the possible consequences.

When conducting the assessment, Assessors must ensure they do not provide direct input, instructions or specific feedback which may compromise the authenticity of the work submitted.
Once the Assessor has authenticated the learners work, they must transparently demonstrate the rationale behind their assessment decisions. Once a learner completes all assigned tasks for a unit, the Assessor will allocate a grade for the unit. Refer to the 'Unit Grading Matrix' for additional information on the grading process.

Once the Assessor has completed the assessment process for the task, the assessment decision is recorded formally, and feedback is provided to the learner. The feedback should show the learner the outcome of the assessment decision, how it was determined or where the criteria has been met, it may indicate to the learner why achievement of the assessment criteria has not been met. It must be clear to the learner that this Assessment outcome is subject to verification.

For further information on assessment practice, please see the 'OCN NI Centre Handbook'. Assessment Training is also available and can be booked through the OCN NI Website.

## 11.2 Internal Qualify Assurance

The role of the Internal Quality Assurer is to ensure appropriate internal quality assurance processes are carried out. The Internal Quality Assurer must oversee that assessments are conducted in accordance with relevant OCN NI policies, regulations, and this specification.

The Internal Quality Assurer must ensure assessments are fair, reliable, and uniform, thereby providing a consistent standard for all learners.

Internal Quality Assurers are required to provide constructive feedback to Assessors, identifying areas of strength and those that may require improvement. This feedback contributes to the ongoing professional development of Assessors.

Contributing to the standardisation of assessment practices within the Centre is an important function of this role. This entails aligning assessment methods, grading criteria, and decision-making processes to maintain fairness and equity.

Internal Quality Assurers will actively engage in the sampling and monitoring of assessments to ensure the consistency and accuracy of assessment decisions. This process helps identify trends, areas for improvement, and ensures the robustness of the overall assessment system.

For further information on Internal Qualify Assurance practice, please see the 'OCN NI Centre Handbook'. Internal Qualify Assurance Training is also available and can be booked through the OCN NI Website.

## 11.3 Documentation

For internal quality assurance processes to be effective, the internal assessment and Internal Qualify Assurance team needs to keep effective records.

- The programme must have an assessment and Internal Qualify Assurance plan. When producing a plan, they should consider:
    - the time required for training and standardisation activities
    - the time available to undertake teaching and carry out assessment,
    - consider when learners may complete assessments and when quality assurance will take place
    - the completion dates for different assessment tasks
    - the date by which the assignment needs to be internally verified
    - sampling strategies
    - how to manage the assessment and verification of learners' work so that they can be given formal decisions promptly
    - how resubmission opportunities can be scheduled

The following documents are available from OCN NI and document templates can be found in the Centre Login section of the OCN NI website www.ocnni.org.uk:

- A1 – Learner Assessment Record per Learner
- Learner Authentication Declarations
- Records of any reasonable adjustments applied for and the outcome – please see 'OCN NI's Reasonable Adjustments and Special Consideration Policy' for further information
- M1 Internal Qualify Assurance Sample Record
- M2 Feedback to Assessor
- Records of any complaints or appeals

## 11.4 External Quality Assurance

All OCN NI recognised centres are subject to External Quality Assurance. External quality assurance activities will be conducted to confirm continued compliance with the CCEA Regulation General Conditions of Recognition, OCN NI terms and conditions and the requirements outlined within these qualifications specification.

The External Quality Assurance is assigned by OCN NI. The External Quality Assurer will review the delivery and assessment of these qualifications. This will include, but is not limited to, the review of a sample of assessment evidence and evidence of the Internal Qualify Assurance of assessment and assessment decisions. This will form the basis of the External Quality Assurance report and will help OCN NI determine the Centres risk.

The role of the External Quality Assurer serves as an external overseer of assessment quality, working to uphold consistency, compliance, and continuous improvement within the assessment process. Their role is crucial in ensuring that assessments are valid, reliable, fair, and aligned with the required standards and regulations.

For further information on OCN NI Centre Assessments Standards Scrutiny (CASS) Strategy, please see the OCN NI Centre Handbook.

## 11.5 Standardisation

As a process, standardisation is designed to ensure consistency and promote good practice in understanding and the application of standards. Standardisation events:

- make qualified statements about the level of consistency in assessment across centres delivering a qualification
- make statements on the standard of evidence that is required to meet the assessment criteria for units in a qualification
- make recommendations on assessment practice
- produce advice and guidance for the assessment of units
- identify good practice in assessment and Internal Qualify Assurance

Centres offering these qualifications must carry out internal standardisation activities prior to the claim for certification.

Centres offering units of an OCN NI qualification must attend and contribute assessment materials and learner evidence for standardisation events if requested.

OCN NI will notify centres of the nature of sample evidence required for standardisation events (this will include assessment materials, learner evidence and relevant Assessor and Internal Quality Assurer documentation). OCN NI will make standardisation summary reports available and correspond directly with centres regarding event outcomes.

# 12. Administration

## 12.1 Registration

A centre must register learners for these qualifications within 20 days of commencement of the delivery of the programme.

For further information on learner registration please see the OCN NI Centre Handbook and the QuartzWeb Manual, available through the Centre Login section of the OCN NI website. Administration training is also available and can be booked through www.ocnni.org.uk.

## 12.2 Certification

Once all internal quality assurance activities have been successfully completed, the Centre can claim certification for the learner(s).

Certificates will be issued to centres within 20 working days from completion of a satisfactory external quality assurance activity, if appropriate, alternatively from the submission of an accurate and complete marksheet.

It is the responsibility of the centre to ensure that certificates received from OCN NI are held securely and distributed to learners promptly and securely.

For further information on the uploading of results please see the QuartzWeb Manual for guidance, administration training is also available and can be booked through OCN NI

## 12.3 Charges

OCN NI publishes all up-to-date qualification fees in its Fees and Invoicing Policy document. Further information can be found on the centre login area of the OCN NI website.

## 12.4 Equality, Fairness and Inclusion

OCN NI's are committed to ensuring all learners have an equal opportunity to access our qualifications and assessment, and that our qualifications are awarded in a way that is fair to every learner.

OCN NI is committed to making sure that:

- learners with a protected characteristic are not, when they are undertaking one of our qualifications, disadvantaged in comparison to learners who do not share that characteristic
- all learners achieve the recognition they deserve for undertaking a qualification and that this achievement can be compared fairly to the achievement of their peers

For information on reasonable adjustments and special considerations please see the OCN NI Centre Handbook and Reasonable Adjustments and Special Considerations Policy held in the back office of the OCN NI website.

## 12.5 Retention of Evidence

OCN NI has published guidance for centres on the retention of evidence. Details are provided in the OCN NI Centre Handbook and can be accessed via the OCN NI website.

## OCN NI Level 2 Award in Promoting Sustainable Practices through Renewable Energy Technologies
## Qualification Number: 610/6287/X

## OCN NI Level 2 Certificate in Promoting Sustainable Practices through Renewable Energy Technologies
## Qualification Number: 610/6286/8

| | |
|---|---|
| Operational start date: | 01 September 2025 |
| Operational end date: | 31 August 2030 |
| Certification end date: | 31 August 2032 |

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## 12.6 Appendix 1 - Definition of OCN NI's Assessment Verbs

The following verbs are working definitions of those used in OCN NI assessments with examples of how they can be applied and used in different but equally valid contexts.

| Verb | Definition | Example |
|---|---|---|
| **Analyse** | To examine closely and break into components to enable results to be interpreted and findings presented | The learner will be expected to perform a critical process which will involve closely examining data, breaking it into meaningful components, interpreting the results, and presenting clear findings to inform future decisions and / or draw meaningful conclusions. |
| **Assess** | Make an informed judgment in line with given criteria regarding a range of given things or information. | The learner will be expected to actively demonstrate their ability to evaluate and reflect on various aspects of their work be it academic work, job performance or personal goals. |
| **Calculate** | To determine something using a mathematical method to find an answer or result. | The learner will be expected to have the knowledge and understanding to select the correct mathematical formula they should use to work out the answer needed for a specific task. Learners will need to use appropriate formulas and perform accurate computations to successfully meet the criteria asked of them. |
| **Compare** | To examine and evaluate the similarities and differences between information, items, or equipment in order to enhance understanding and make informed decisions. | The learner will be expected to identify the specific information, items, or equipment to be compared. This involves selecting relevant subjects for comparison based on the task or objective. The learner analyses the characteristics, features, and attributes of each subject. The learner identifies relevant items, analyses their features, evaluates similarities and differences, and draws conclusions to make informed decisions or solve problems. |
| **Define** | Description of what a term means and its application i.e. to specify meaning. | The learner will be expected to explain and provide a clear definition of key terms or concepts within a subject area. This may involve describing the meaning of a specific term, concept, or idea and illustrating its application in relevant contexts. The learner should demonstrate understanding by accurately defining terms and their |

| | | |
|---|---|---|
| | | significance or relevance. |
| **Describe** | To paint a full picture of a concept, process or thing in words. | The learner will be expected to explore a concept, process, or object and provide a detailed verbal or written account that includes significant features, characteristics, and relevant details. The learner should be able to demonstrate the ability to convey a comprehensive understanding and include all key components, stages and/or features of concept, process, or object being described. |
| **Explain** | Make clear a given subject matter and / or give reasons for and/or the procedure in a given situation or regarding a given subject matter / Setting out purposes or reasons. | The learner will be expected to provide clarity on the subject, outlining the procedure or procedures associated with it, and set out reasons for its importance and / or significance. The learner will be expected to demonstrate a detailed comprehension of the subject matter. |
| **Identify** | To select and list appropriate items from information that you have been given or collected. | The learner will be expected to review a set of data, information or items, and accurately select and list the required individual elements of data, information or items. The learner should be able demonstrate the ability to filter relevant information from a broader set, showing comprehension and attention to detail. |
| **State** | To express something clearly and concisely, often as a fact or a specific piece of information. | The learner will be expected to give a straightforward answer without explanation or elaboration. They may list a fact or point directly related to the question. Typically one or two sentences express in clear terms what is meant by a concept or thing. |
| **Summarise** | To provide a brief account giving the main points of a topic or range of topics. | The learner will be expected to examine a topic or set of information and condense it into a concise summary that captures the essential points, themes, or arguments, without including unnecessary details. The learner should be able to demonstrate the ability to distill complex or extensive information into its core components and present it in a clear and coherent manner focusing on the most significant aspects and omitting extraneous details. |