

# **Competency Standards for Caribbean Vocational Qualifications (CVQ)**

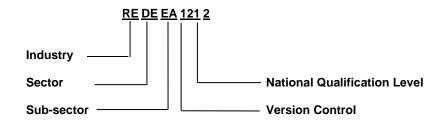
## REDEEA1212

# **CVQ Level 2 in Energy Advisory**

Unit Number	Unit Title	Requirement
UA03202	Contribute to safety and security on the worksite	Mandatory
UA03302	Prepare for energy assessment	Mandatory
UA03402	Conduct energy assessment	Mandatory
UA03502	Perform measurements and calculations	Mandatory
UA03602	Prepare and present energy assessment report	Mandatory

To obtain a Caribbean Vocational Qualification (CVQ) all Mandatory Units must be achieved.

## **Legend to Unit Code**



Key: E - RE - Renewable Energy; DE - Domestic Energy; EA - Energy Advisory

# **ACKNOWLEDGEMENTS**

The Technical and Vocational Education and Training Council thanks the following for their contribution to the development of this document:

### Members of the Energy Advisory Working Group

Ms. Felecia Cox - National Petroleum Corporation

Mr David Green - Williams Solar

Ms Audrey Jones-Drayton - Samuel Jackman Prescod Institute

Ms Camella Riley-Pilgrim - Samuel Jackman Prescod Institute

Mr Gleeson Roach - Williams Solar

Mr Trevor Sawchyn - Sault College

Mr Richard Singh - Innogen

Mr Akil Thompson - Technical and Vocational Education and

Training (TVET) Council

The TVET Council especially acknowledges the contribution of the late Mr. Ted Newbury from Sault College, Canada.

## **Country of Origin**

**Barbados** 

# **Qualification Overview**

This qualification is aimed at professionals working in the renewable energy sector, particularly those with responsibility for assessing energy efficiency in residential buildings. Candidates should possess basic mathematical and computer skills and be able to effectively communicate with others. They should also have knowledge of basic electrical installation.

## Who is the qualification for?

The qualification is specifically designed for persons who provide energy usage/conservation advice to customers. It may be used in conjunction with the sales and installation of other renewable energy methods such as wind or PV (solar).

### Jobs within the occupational area

Relevant occupations include:

- Photovoltaic installation project managers
- Photovoltaic electrical installers
- Electrical technicians

This list is not exhaustive and only serves to illustrate the breadth of the qualification.

#### Where could it be used?

These competencies are for persons who are likely to be in roles where, for example, their duties include:

- Planning and designing of photovoltaic electrical systems
- Planning and designing a cost reduction or energy conservation programme

### Occupational Standards can also be used to:

- Prepare job descriptions and specifications
- Determine recruitment criteria
- Appraise staff performance objectively
- Identify skill and training gaps and needs
- Conduct labour market analyses
- Develop curriculum
- Assess the effectiveness of training programmes
- Determine compensation and rewards

#### The benefits of acquiring the CVO to candidates

- Provide a basis for articulation and accreditation
- Provides a broad-based preparation for employment
- Is an alternative route to further/higher education
- Complements and has parallel standing with academic qualifications
- Provides enhanced employability and higher earning potential
- Facilitates an apprenticeship with actual work experience
- Equips candidates with the knowledge, skills and attitudes for the workplace
- Past work experience and skills can count towards achieving the CVQ
- Allows for continuity whereby if a candidate cannot complete the CVQ at a centre or school, they can continue at another approved centre
- CVQ's are recognised qualifications and facilitates free movement of labour throughout CARICOM

## The benefits of the CVQ to employers

- Provides a larger cadre of skilled employees/candidates to choose from
- Reduces cost of recruiting and selecting the ideal job candidate
- Reduces cost for training workers
- Ensures higher levels of productivity

# The benefits of the CVQ to the Caribbean region:

- Produces a higher skilled workforce that is ready to adapt to ever-changing global demands
- Provides greater access for persons to achieve higher qualifications
- Contributes to the region's human resource capacity development

## **UA03202**

# Contribute to safety and security on the worksite

Unit Descriptor

This unit describes the knowledge, skills and attitudes required to contribute to safety and security on the worksite by working in a safe manner while adhering to occupational health and safety.

## **ELEMENT**

## PERFORMANCE CRITERIA

Candidates must be able to:

- 1. Follow occupational safety and health procedures
- 1.1 Follow and adhere to occupational safety and health according to company procedures.
- 1.2 Adhere to occupational safety and health requirements when working at heights on elevated surfaces, using access equipment and in small spaces.
- 1.3 Select and use appropriate personal protective equipment according to industry and company requirements.
- 1.4 Check personal protective equipment to ensure it is operational and safe to use according to company procedures.
- 2.1 Assess area to identify potential hazards and risks.
- 2.2 Report potential hazards and risks to the appropriate person in accordance with company procedures.
- 2.3 Minimise hazards and risks within the limits of your responsibility.
- 2.4 Confirm that lock out and tag out procedures are followed to ensure the safety of electric and gas appliances.
- 3.1 Complete relevant documentation in accordance with company and occupational safety and health requirements.

2. Identify hazards and risks

3. Maintain documentation

- 3.2 Locate and retain plans, drawings or specifications for existing appliances.
- 3.3 Document test results which show variants from operational procedures.

# RANGE STATEMENT

All range statements must be assessed:

- **1. Elevated surfaces** may include but not limited to:
  - Roof surfaces (various types)
  - Mounting structures (independent)
  - Scaffolding
  - Support structures
- **3. Hazards** may include but not limited to:
  - Space limitations
  - Weather conditions
  - Surfaces
  - Vegetation
  - Utilities
- **5. Specifications** may include but not limited to:
  - Containment support
  - System voltage and power
  - System frequency
  - Safety
  - Testing
  - Cable
  - Mechanical system protection
  - Electrical system protection
  - Workmanship

- **2. Personal protective equipment** may include but not limited to:
  - Overalls/coveralls, safety harnesses
  - Gloves (electrical insulated)
  - Boots/shoes (electrical insulated)
  - Hard hat, helmets
  - Goggles,
  - Ear muffs
  - Respirators
- **4. Plans/drawings** may include but not limited to:
  - Axonometric
  - Cross section
  - Details
  - Elevations
  - Isometrics
  - Schematics
  - Sections

# UNDERPINNING KNOWLEDGE AND SKILLS

Candidates should know and understand:

- 1. What are the occupational health and safety requirements for the worksite, working at heights on elevated surfaces and in small spaces.
- 2. What is meant by 'working at heights' on elevated surfaces.
- 3. What are the different types of access equipment and working platforms.
- 4. What are the industry and company requirements for selecting and using personal protective equipment and how to do so.
- 5. How to check equipment to ensure that it is operational and safe to use.
- 6. How to assess the site to identify potential hazards and risks and why this is important.
- 7. What are the company procedures for reporting potential hazards and risks and to whom they should be reported.
- 8. How to minimise hazards and risks within the limits of your responsibility.
- 9. What are lock out and tag out procedures and how to confirm that procedures are followed to ensure the safety of electric and gas appliances.
- 10. What are the company and occupational health and safety requirements for completing safety documentation.
- 11. Why it is important to locate and retain plans, drawings or specifications for existing appliances.
- 12. What are the different types of plans, drawings and specifications.
- 13. How to document test results which show variants from operational procedures.

# **EVIDENCE GUIDE**

For assessment purposes

## (1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

#### (2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

#### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

## **UA03302**

# Prepare for energy assessment

Unit Descriptor

This unit describes the knowledge, skills and attitudes required to make the necessary preparations to conduct an energy assessment. It includes confirming the scope of work, schedule and access requirements as well as gathering data and information relating to energy consumption.

# **ELEMENT**

# PERFORMANCE CRITERIA

Candidates must be able to:

1. Plan the assessment

- 1.1 Confirm specifications for the scope of work according to company procedures.
- 1.2 Obtain necessary information to facilitate the assessment.
- 1.3 Identify the location of utility services from building plans, drawings or specifications.
- 1.4 Plan the assessment within required timeframe and confirm availability with stakeholders.
- 1.5 Identify potential hazards in conducting the assessment and manage risks within the limits of your authority.
- 1.6 Identify required access to restricted areas and confirm with stakeholders.
- 1.7 Identify required tools and equipment for the site inspection and confirm their availability on the day of the assessment.
- 2.1 Confirm the property address and description from the owner according to company requirements.
- 2.2 Determine the dimensions of the property using authorised methods according to company procedures.

2. Gather data and information

- 2.3 Obtain or create a sketch of the floor plan showing the location of energy consuming devices, fenestrations or utility entrance point.
- 2.4 Identify energy sources and manage the safety concerns of the property within the limits of your authority.
- 2.5 Prepare initial customer survey questions from the assessment of the property and scope of work.
- 2.6 Analyse responses to ensure customer needs are addressed.

# RANGE STATEMENT

All range statements must be assessed:

- **1. Stakeholders** may include but not limited to:
  - Customers
  - Authority having jurisdiction (AHJ)
  - Installation and engineering team
  - Procurement personnel
  - Utility company
  - Relevant government authorities
  - Fire/emergency service
- **3. Information** may include but not limited to:
  - Building drawings
  - Specifications
  - Local and international policy and standards

- **2. Survey questions** may include but not limited to:
  - Energy costs
  - Temperature variation
  - Length of residency
  - Reconstruction/re-modelling
  - Odours in the property
  - Personal/family habits/needs/characteristics
  - Utility bill information
- **4. Tools and equipment** may include but not limited to:
  - Hand tools
  - Electrical testing equipment
  - Temperature meter
  - Loggin

# UNDERPINNING KNOWELDGE AND SKILLS

Candidates should know and understand:

- 1. How to confirm specifications for the scope of work.
- 2. How to obtain necessary information from building drawings, specifications and other documents to facilitate the assessment.
- 3. How to identify the location of utility services from building plans, drawings or specifications.
- 4. Why it is important to plan the assessment within the required timeframe and confirm the availability of stakeholders and how to do so.
- 5. Why it is important to identify potential hazards in conducting the assessment and manage risks within the limits of your authority and how to do so.
- 6. How to determine required access to restricted areas and confirm with stakeholders.
- 7. Why it is important to identify the required tools and equipment for the site inspection and confirm their availability on the day of the assessment.
- 8. What are the authorised methods for determining the dimensions of the property.
- 9. How to obtain or create a sketch of the floor plan showing the location of energy consuming devices, fenestrations or the utility entrance point.
- 10. How to identify energy sources and manage safety concerns within the limits of your authority.
- 11. How to determine customer survey questions from the assessment of the property and scope of work.
- 12. How to analyse responses to ensure customer needs are addressed.
- 13. What are the local and international standards and policies related to efficiency in residential facilities.

## **EVIDENCE GUIDE**

For assessment purposes:

#### (1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

## (2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

#### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

## **UA03402**

# **Conduct energy assessment**

Unit Descriptor

This unit describes the knowledge, skills and attitudes required to make the necessary preparations to conduct an energy assessment. It includes confirming the scope of work, schedule and access requirements as well as gathering data and information relating to energy consumption.

## **ELEMENT**

# PERFORMANCE CRITERIA

Candidates must be able to:

1. Communicate information to customers

2. Undertake energy assessment procedures

- 1.1 Communicate with customers in a way that makes them feel valued and respected.
- 1.2 Communicate feedback accurately from the initial survey to customers.
- 1.3 Provide advice to customers about required changes based on the initial survey report.
- 1.4 Confirm that the scope of work remains unchanged.
- 1.5 Explain the scope of work to customers and how it will impact on them and their property.
- 1.6 Agree on the outcomes of the scope of work and the required timelines.
- 1.7 Review the customer utility bill and its features to customers.
- 1.8 Maintain communication with customers to ensure they are kept informed and reassured.
- 1.9 Respond promptly and professionally to customers' questions and comments.
- 2.1 Examine energy consuming devices to determine energy usage by examining label.
- 2.2 Test energy consuming devices with appropriate equipment where there is no label to determine energy usage.

to determine energy usage.

- 2.3 Examine the interior and exterior of the building to locate energy losses.
- 2.4 Determine the construction of the building to assist in estimating the R-Value in walls and ceilings.
- 2.5 Examine the capacity for existing renewable energy sources such as photovoltaic or thermal solar.
- 2.6 Document observations in logs according to company procedures.

# **RANGE STATEMENT**

All range statements must be assessed:

- **1. Energy consuming devices:** may include but not limited to:
  - Appliances
  - Media devices
  - Temperature/climate control devices
  - Alarm systems
  - Water heaters
  - Lighting systems
  - High ventilating and air conditioning (HVAC) systems

# UNDERPINNING KNOWELDGE AND SKILLS

Candidates should know and understand:

- 1. What is effective communication.
- 2. How to communicate with customers in a way that makes them feel valued and respected.
- 3. How to communicate feedback from the initial survey to customers and provide advice about required changes.
- 4. Why it is important to maintain effective communication with customers to ensure that they are kept informed and reassured and how to do so.
- 5. Why it is important to respond promptly and professionally to customers' questions and comments and how to do so.
- 6. How to confirm the scope of work, agreed timelines and explain the impact on customers and their property.
- 7. What is the Customer Utility Bill and how to review its features to customers.
- 8. How to read appliance labels.
- 9. What are the different types of energy consuming devices, how to identify and examine them for energy usage.
- 10. How to determine typical consumption numbers for energy consuming devices.
- 11. How to determine the performance of energy consuming devices.
- 12. What equipment should be used to test energy consuming devices without labels and how it should be used.
- 13. How to examine the interior and exterior of the building to locate energy losses i.e. using infra-red test devices.
- 14. How to determine the construction of the building to assist in estimating the R-Value in walls and ceilings.
- 15. How to examine the capacity for existing renewable sources such as photovoltaic or thermal solar.
- 16. What are the company procedures for documenting observations in logs.
- 17. What type of evidence can be used in the observation process, i.e. pictures, videos etc.
- 18. How to document test results in a manner that will enable complete calculations.

## **EVIDENCE GUIDE**

For assessment purposes:

### **Critical Aspects of Evidence**

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

#### (2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

#### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **must not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

## **UA03502**

# Perform measurements and calculations

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to collect and test the required data to complete calculations to quantify energy usage.

# **ELEMENT**

# PERFORMANCE CRITERIA

Candidates must be able to:

- 1. Identify and obtain data
- 2. Conduct calculations

- 1.1 Confirm the required **data** according to the scope of work.
- 1.2 Locate and identify data using labels, specifications and document logs.
- 2.1 Perform calculations according to company and industry requirements.
- 2.2 Identify results which appear erroneous and report to the appropriate persons according to company procedures.
- 2.3 Identify the causes of errors and carry out corrective action within the limits of own authority.
- 2.4 Arrange for retest or re-measurement as necessary in accordance with specifications and the industry.
- 2.5 Document, accurately, any assumptions used in your calculations.
- 2.6 Use industry averages to estimate values that cannot be found by testing.

# RANGE STATEMENT

All range statements must be assessed:

- 1. Data may include but not limited to:
  - Length and width of spaces
  - kW, kWh consumption numbers
  - Temperature
  - Therms or kW, kWh thermal measurements
  - Flow rate
  - R-Value

# UNDERPINNING KNOWLEDGE AND SKILLS

Candidates should know and understand:

- 1. How to identify required test data.
- 2. How to locate and identify data using labels, specifications and document logs.
- 3. What are the company and industry requirements to perform calculations.
- 4. How to find and use industry data for hours of use and typical consumption.
- 5. How to mathematically manipulate units of measure for energy to show total annual energy consumption and loss.
- 6. How to identify results which appear erroneous.
- 7. What are the company procedures for reporting erroneous results and to whom they should be reported.
- 8. How to identify the causes of errors and what corrective action can be taken.
- 9. How to retest or re-measure in accordance with specifications and industry.
- 10. Why it is important to accurately document any assumptions used in your calculations and how to do so.
- 11. What are the industry averages used to estimate values that cannot be found by testing.
- 12. What are the company and industry guidelines for documenting and presenting data collected.

## **EVIDENCE GUIDE**

For assessment purposes:

## (1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

#### (2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

#### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

# **UA03602**

# Prepare and present energy assessment report

Unit Descriptor:

This unit describes the knowledge, skills and attitudes required to prepare and present an energy assessment report. Candidates will be required to summarise data, prepare the report, including recommendations, and communicate the findings to the customer.

## **ELEMENT**

## PERFORMANCE CRITERIA

Candidates must be able to:

- 1. Review information to prepare report
- 1.1 Collate and document information according to the scope of work, specifications and company requirements.
- 1.2 Calculate estimated costs and identify potential associated reductions in energy use according to company and industry standards.
- 1.3 Summarise information based on company and industry requirements.
- 1.4 Discuss and clarify findings with stakeholders where necessary, prior to preparing the energy assessment report.
- 1.5 Propose recommendations to address potential challenges and possible energy loss based on results.
- 2.1 Prepare the energy assessment report in the required format according to company and industry requirements.
- 2.2 Present the energy assessment report and explain the result and recommendations to the customer clearly and concisely according to company requirements.
- 2.3 Confirm that the customer understands the results and recommendations and provide opportunities for questions and clarification.

2. Present report

- 2.4 Use effective communication strategies to communicate with customers, respond to questions and comments promptly and in a sensitive manner.
- 2.5 Acknowledge feedback from customer and, where necessary, provide follow up within the limits of your own authority.
- 2.6 Maintain and store reports safely and securely according to company procedures and industry requirements.

# **RANGE STATEMENT**

All range statements must be assessed:

#### 1. Stakeholders:

- Customers
- Authority having jurisdiction (AHJ)
- Installation and engineering team
- Procurement personnel
- Utility company
- Relevant government authorities
- Fire service

## 2. Communication strategies:

- Active listening
- Questioning
- Probing
- Non-verbal communication (body language, facial expressions, tone of voice etc.)

# UNDERPINNING KNOWELDGE AND SKILLS

Candidates should know and understand:

- 1. What are the company and industry requirements, scope of work and specifications for collating and documenting information and how to do so.
- 2. How to calculate and estimate costs and identify potential associated reductions in energy costs.
- 3. How to summarise information and propose recommendations.
- 4. Why it is important to discuss and clarify findings with stakeholders prior to preparing the energy assessment report.
- 5. Who are the stakeholders.
- 6. What types of construction techniques can be used to reduce energy loss.
- 7. How to propose recommendations to address potential challenges and possible energy loss based on assessment results.
- 8. How to prepare an energy assessment report and what is the required format for displaying energy data.
- 9. Why it is important to present the energy assessment report and explain the results and recommendations to customers.
- 10. Why it is important to confirm that the customer understands the results and recommendations and to provide opportunities for questions and clarifications and how to do so.
- 11. What are effective communication strategies and how to use them.
- 12. How to respond to customers' questions and comments promptly and in a positive and sensitive manner.
- 13. Why it is important to acknowledge feedback from customers and provide follow up where necessary.
- 14. What are the limits of your own authority in providing follow up to customers.
- 15. What are the company procedures and industry requirements for maintaining and storing reports safely and securely.

## **EVIDENCE GUIDE**

For assessment purposes:

#### (1) Critical Aspects of Evidence

Candidates must prove that they can carry out **all** the elements, meeting **all** of the performance criteria, range and underpinning knowledge **on more than one occasion**. This evidence must come from a real working environment.

### (2) Methods of Assessment

Assessors should gather a range of evidence that is valid, sufficient, current and authentic.

Evidence may be collected in a variety of ways including:

- Observation
- Written/oral questioning
- Written evidence
- Witness testimony
- Professional discussion

Questioning techniques should not require language, literacy or numeracy skills beyond those required in this unit of competency.

#### (3) Context of Assessment

This unit may be assessed on the job, off the job or a combination of both. Where assessment occurs off the job, that is the candidate is not in productive work, then an appropriate simulation must be used where the range of conditions reflects realistic workplace situations. The competencies covered by this unit would be demonstrated by a candidate working alone or as part of a team. The assessment environment should not disadvantage the candidate.

The candidate must have access to all tools, equipment, materials and documentation required. The candidate must be permitted to refer to any relevant workplace procedures, product and manufacturing specifications, codes, standards, manuals and reference materials.

Simulation **should not be used**, except in exceptional circumstances where natural work evidence is unlikely to occur.

#### **Assessment methods**

The methods which can be used to determine competence in performance and underpinning knowledge.

#### Assessors

The Assessor guides and assesses the candidate. His/her role is to determine whether evidence presented by a candidate for assessment within the programme, meets the required standard of competence in the relevant unit or element. The Assessor needs to be competent to assess to national standards in the area under assessment.

#### **Approved Centre**

Organisation/Centre approved to offer full Caribbean Vocational Qualifications.

#### **Case Studies**

In situations where it is difficult for workplace assessment to take place, case studies can offer the candidate an opportunity to demonstrate potential competence.

A case study is a description of an actual or imaginary situation presented in some detail. The way the case study is presented will vary depending upon the qualification, but the most usual methods are written, taped or filmed.

The main advantage of a case study is the amount of evidence of underpinning knowledge they can generate and the specific nature of the evidence produced.

#### Competence

In the context of vocational qualifications, competence means: the ability to carry out prescribed activities to nationally pre-determined standards in an occupation. The definition embraces cognitive, practical and behavioural skills, underpinning knowledge and understanding and the ability to react appropriately in contingency situations.

#### **CVO**

Caribbean Vocational Qualifications (CVQs) are work-based qualifications that assess an individual's competence in a work situation and certify that the individual can perform the work role to the standards expected in employment.

CVQs are based on national occupational standards of competence drawn up by standards-setting bodies known as Industry Lead Bodies. The standards describe the level and breadth of performance that is expected of persons working in the industry or sector which the CVQ covers.

# **CVQ** Coordinator

The CVQ Coordinator is the centre contact within each approved Centre offering CVQs. He/she has overall responsibility for the operation and administration of the CVQ system

#### **Element**

An element is a description of an activity which a person should be able to do. It is a description of an action, behaviour or outcome which a person should be able to demonstrate.

## **Explanation of CVQ Levels**

CVQs cover five (5) levels of competence, from entry level staff at Level 1 through to senior management at Level 5.

#### **Level 1 - Entry Level**

Recognises competence in a range of varied work activities performed in a variety of contexts. Most work activities are simple and routine. Collaboration with others through work groups or teams may often be a requirement. Substantial supervision is required especially during the early months evolving into more autonomy with time.

### **Level 2 - Skilled Occupations**

Recognises competence in a broad range of diverse work activities performed in a variety of contexts. Some of these may be complex and non-routine and involve some responsibility and autonomy. Collaboration with others through work groups or teams and guidance of others may be required.

#### Level 3 - Technician and Supervisory Occupations

Recognises competence in a broad range of complex, technical or professional work activities performed in a wide variety of contexts, with a substantial degree of personal responsibility and autonomy. Responsibility for the work of others and the allocation of resources are often a requirement. The individual is capable of self-directed application, exhibits problem solving, planning, designing and supervisory capabilities.

### Level 4 - Technical Specialist and Middle Management Occupations

Recognises competence involving the application of a range of fundamental principles and complex techniques across a wide and unpredictable variety of contexts. Requires very substantial personal autonomy and often significant responsibility for the work of others, the allocation of resources, as well as personal accountability for analysis, diagnosis, design, planning, execution and evaluation.

## Level 5 - Chartered, Professional and Senior Management Occupations

Recognises the ability to exercise personal professional responsibility for the design, development or improvement of a product, process, system or service. Recognises technical and management competencies at the highest level and includes those who have occupied positions of the highest responsibility and made outstanding contribution to the promotion and practice of their occupation.

#### **External Verifier**

The External Verifier is trained and appointed by the TVET Council/National Training Agency and is competent to approve and ensure an approved Centre's quality of provision.

#### **Internal Verifier**

The Internal Verifier acts in a supporting role for Assessors to ensure consistent quality of assessment and competence. They need to be competent to assess to national standards in the area under assessment.

#### **Observation**

Observation of the candidate carrying out his/her job in the workplace is the assessment method recommended in the vast majority of units and elements. Observation of staff carrying out their duties is something that most supervisors and managers do every day.

#### **Performance Criteria**

Performance criteria indicate what is required for the successful achievement of an element. They are descriptions of what you would expect to see in competent performance.

#### **Product of Work**

This could be items produced during the normal course of work, which can be used for evidence purposes such as reports, menus, promotional literature, training plans, etc.

#### **Questioning**

Questioning is one of the most appropriate ways to collect evidence to assess a candidate's underpinning knowledge and understanding.

Questioning can also be used to assess a candidate in those areas of work listed in the range which cannot be assessed by observation. Guidance on when this assessment method can be used is given in the assessment guidance of each individual element.

As an assessment method, questioning ensures you have all of the evidence about a candidate's performance. It also allows you to clarify situations.

## **Range statements**

The range puts the element of competence into context. A range statement is a description of the range of situations to which an element and its performance criteria is intended to apply.

Range statements are prescriptive therefore each category must be assessed.

#### **Role-plays**

Role-plays are simulations where the candidate is asked to act out a situation in the way he/she considers "real" people would behave. By using role-play situations to assess a candidate you are able to collect evidence and make a judgment about how the candidate is most likely to perform. This may be necessary if the range specified includes a situation in which the candidate is unlikely to find himself/herself in the normal course of their work, or where the candidate needs to develop competence, before being judged competently, for example, in a disciplinary situation,

#### **Simulations**

Where possible, assessment should always be carried out by observing **natural performance** in the workplace. **Simulated performance**, however, can be used where specified to collect evidence about an aspect of the candidate's work which occurs infrequently or is potentially hazardous; for example, dealing with fires.

By designing the simulated situation, briefing the candidate and observing his/her performance, you will be able to elicit evidence which will help you judge how a candidate is **most likely** to perform in real life.

### **Supplementary evidence**

Supplementary evidence can be used to confirm and support performance evidence. Types of supplementary evidence include witness testimonies, reports, journals or diaries, records of activities, personal statements, simulation (see note in glossary).

#### **Underpinning knowledge**

Underpinning knowledge indicates what knowledge is <u>essential</u> for a person to possess in order to successfully achieve an element and prove total competence.

#### Units

A unit of competence describes one or more activities which form a significant part of an individual's work. Units are accredited separately but in combination can make up a vocational qualification. There are three categories of units:

**Mandatory units** - are core to a qualification and must be completed.

**Optional units** - candidates must choose the required number of individual units, specified in the qualification structure, to achieve the qualification.

Page 33 of 33

# **Work-based projects**

Work-based projects are a useful way for you to collect evidence to support any decision you make about a candidate's performance. They are particularly appropriate in determining the level of a candidate's underpinning knowledge and understanding where it may be insufficient to rely only on questioning observation.

A project often involves the identification of a solution to a specific problem identified by you and/or the candidate (such as looking at ways to redress a recent drop in sales), or may be a structured programme of work built around a central situation or idea (such as the introduction of a new job rostering process)