

**ASSESSMENT
MATERIAL****EVIDENCE
GUIDE****Qualification**

LEN0112.v1

Level: 2**Credit: 13****Version: 1****LEN0112F.v1 Maintain off-grid PV
system and components****CONTENTS**

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**ASSESSMENT AND
ASSESSOR
DETAILS****Competent**☐**Not Yet Competent**☐**Assessment**☐**Re-Assessment**☐**Assessor Name:****Assessor Code****Assessor Signature****Date**

DD		MM		YYYY					

**CANDIDATE
DETAILS****Candidate Name:**

First Name

Last Name

Father Name**Institute Name and
District****CNIC/BFORM #****OR****Registration Number:****Gender**Male ☐Female ☐**Candidate Consent**

I agree to the time and date of the assessment and am aware of the requirements of the assessment. I fully understand my rights of appeal.

Candidate Signature:**ASSESSMENT
RESULTS
SUMMARY FORM**You can use this coversheet as an *Assessment Results Summary Form*. Simply post a photocopy of this completed coversheet to **NAVTTTC**

NAVTTTC OFFICE ONLY

**1. DATE
FORM
RECEIVED:**

DD		MM		YYYY					

**2. DATE ENTERED INTO
DATABASE:**

DD		MM		YYYY					

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ASSESSMENT SUMMARY & RECORD

CANDIDATE NAME:				FATHER NAME:			
ACTIVITY		METHOD			DESIRED OUTCOMES	RESULT	
NATURE OF ACTIVITY	WRITTEN	ORAL	OBSERVATION	PORTFOLIOS	DESIRED OUTCOMES FOR SUCCESSFUL ASSESSMENT OF COMPETENCY STANDARD: MAINTAIN OFF-GRID PV SYSTEM AND COMPONENTS	COMPETENT	NOT YET COMPETENT
Practical skill demonstration			✓		Maintain 2 kW battery backup solar system.		
Knowledge Assessment	✓	✓			Answer any questions your assessor may have for you during the practical skill demonstration		
Other Requirements				✓	All candidate formative assessments completed by Instructor including; ○ Observations ○ Demonstrations ○ Questions and recorded answers All work produced as module projects and assignments Completed learner logbooks		

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CANDIDATE ASSESSMENT

Candidate Name:

Father Name:

ALL WORK ASSESSED IN THIS COMPETENCY STANDARD MUST BE YOUR OWN WORK.

GUIDANCE TO CANDIDATE

To meet this standard you are required to complete the following practical tasks within 3 hour:

- Maintain 2 kW battery backup solar system.

ACTIVITIES	CANDIDATE RESPONSE
1. Complete practical assessment	During a practical assessment, under observation by an assessor, I will correctly: • Maintain 2 kw battery backup solar system ✓ Select tools and equipment for Maintain and operational check of 2 kW backup solar system. ✓ Perform quality inspection (Supply check. Voltage level sequence check load current battery level, rpm, frequency at full load 2 kW battery backup solar system. ✓ Perform basic measurements tests Load voltage ,load current ,frequency ,RPM ✓ Perform minor adjustments and calibrations 2 kW battery backup solar system. ✓ Conducting visual and technical inspection of faulty solar system rating 2 kW. ✓ Repair or replace faulty component or faulty solar panels. ✓ Prepare Load management schedules ✓ Check electrical parameters (VL,VOC,ISE,), sun radiation level ✓ Cleaning up and storing tools, equipment and material use for routine inspection and maintain 2 kW battery backup solar system
3. Other requirements	All candidate formative assessments completed by Instructor including; ○ Observations ○ Demonstrations ○ Questions and recorded answers All work produced as module projects and assignments Completed learner logbooks

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ASSESSOR JUDGEMENT GUIDE

Candidate Name:

Father Name:

INSTRUCTIONS FOR ASSESSOR

THIS SECTION CONTAINS MINIMUM EVIDENCE REQUIREMENTS.

The supplied off-grid pv system and components requiring maintenance must meet the evidence requirements of the candidate's competence in maintaining off-grid pv system and components

Set timeframe for practical skill demonstration must reflect the commercially viable timeframe for the tasks.

Oral questioning may be used to clarify candidate understanding of the topic and its application.

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES/NO	ASSESSOR COMMENTS
1. Completed practical skill demonstration	During a practical assessment, under observation by an assessor, the candidate correctly carried out:		
2. Maintain 2 kW battery backup solar system	✓ Selected tools and equipment for Maintain and operational check of 2 kW backup solar system.		
	✓ Performed quality inspection (Supply check. Voltage level sequence check load current battery level, rpm, frequency at full load 2 kW battery backup solar system.		
	✓ Performed basic measurements tests Load voltage ,load current ,frequency ,RPM		
	✓ Performed minor adjustments and calibrations 2 kW battery backup solar system.		
	✓ Conducted visual and technical inspection of faulty solar system rating 2 kW.		
	✓ Repaired or replaced faulty component or faulty solar panels.		
	✓ Prepared Load management schedules		
	✓ Checked electrical parameters (VL,VOC,ISE,), sun radiation level		
	✓ Cleaned up and storing tools, equipment and material use for routine inspection and maintain 2 kW battery backup solar system		
	✓ Selected tools and equipment for Maintain and operational check of 2 kW backup solar system.		
	✓ Performed quality inspection (Supply check. Voltage level sequence check load current battery level, rpm, frequency at full load 2 kW battery backup solar system.		
	✓ Performed basic measurements tests Load voltage ,load current ,frequency ,RPM		
	✓ Cleaned up and storied tools, equipment and material		
	Meeting set timeframe appropriate for supplied off-grid PV system and components requiring maintenance		
3. Knowledge assessment	Candidate's answers to questions are correct and demonstrate understanding of the topics and their application. <i>Assessor to document below all questions asked and candidate answers. Use extra sheets if required and attached.</i>		
4. Other requirements	All candidate formative assessments completed by Instructor including; ○ Observations		

	○ Demonstrations ○ Questions and recorded answers All work produced as module projects and assignments ● Completed learner logbooks			
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LIST OF TOOLS, EQUIPMENT, MATERIAL AND CONTEXT OF ASSESSMENT

Instructions	This section contains information regarding; Context of the assessment List of required tools and equipment. List of consumable items required during the service
1. Context of Assessment	This practical skill demonstration will be conducted in a Building Electrician's lab/workshop environment The Assessor will select the required tools, equipment and consumables from the list below for the assessment

S. No	Consumable and non-consumable Items	Quantity
1	Pointer (Red , Yellow , Blue)	05 each
2	Knowledge assessment including space for answers	05 each
3	Personal protective equipment	05 each
4	Fire extinguishers	01 each
5	First aid box	01 each
6	Adjustable wrench	05 each
7	Amp meter	05 each
8	AVO meter	05 each
9	Batteries	02 each
10	Battery charger	01 each
11	Bench vice	05 each
12	Ceiling hole cutter	05 each
13	Charge controller	01 each
14	Chisel	01 each
15	Clamp on meter	05 each
16	Compass	05 each
17	Cutter	05 each
18	Drill machine	02 each
19	Earth tester meter	02 each
20	Extension board	02 each
21	File set	05 each
22	Inter changeable screw driver	05 each
23	Gloves	05 each
24	Goggles	05 each
25	Grinder	02 each
26	Hammer	05 each
27	Hand drill machine	02 each
28	Helmet	05 each
29	Herts meter	05 each
30	Hacksaw	05 each
31	Knife (cable)	05 each
32	Level	05 each
33	L-key set	05 each
34	Lock plier	05 each
35	Measuring tape	05 each
36	Mega meter (Analog & Digital)	02 each
37	Micrometre	02 each
38	Multimeter	05 each
39	Number punch	02 each
40	Phase sequence meter	02 each
41	Pipe cutter	05 each
42	Pipe vice	02 each
43	Pipe wrench	05 each
44	Plier set	05 each

45	Punching tool (Networking /Telephone)	05 each
46	Ratchet set	05 each
47	Safety boots	05 each
48	Scissor	05 each
49	Screw driver set	05 each
50	Soldering iron	05 each
51	Spanner set	05 each
52	Steel scale	05 each
53	Wire stripper	05 each
54	Grip plier	05 each
55	PVC Wire 3/.029	01 coil
56	PVC Wire 7/.029	01 coil
57	PVC Wire 7/.044	01 coil
58	PVC Wire 1/.044	01 coil
59	Magnetic conductor	10 nos
60	Over load relay (as required current rating)	10 nos
61	Circuit breaker	10 nos
62	Main switch	05 nos
63	Fuses (Different Current Ratings)	05 nos
64	PVC pipe (Different Sizes)	200 ft
65	Single pole switch	12 nos
66	Two way switch	12 nos
67	3 / 2 / pin socket	12 nos each
68	PVC Duckt	As per requirement
69	Lamp Holders	As per requirement
70	PVC Board (Different Sizes)	As per requirement