

## NSQF QUALIFICATION FILE

Approved in 24th NSQC Meeting-NCVET-Dated 17th Nov,2022

### CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

**Name and address of submitting body:**

Skill Council for Green Jobs,  
CIBP Building, Malcha Marg,  
Chankyapuri, New Delhi - 110021

**NCVET Code**

**2022/POW/SCGJ/06463**

**Name and contact details of individual dealing with the submission**

**Name:** Dr. Praveen Saxena  
**Position in the organisation:** Chief Executive Officer  
**Address if different from above:** (Same as above)  
**Tel number(s):** 9871119101  
**E-mail address:** ceogreenjobs@gmail.com

**List of documents submitted in support of the Qualification File**

1. Model Curriculum
2. Occupational Map

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**SUMMARY**

1	<b>Qualification Title:</b>	Junior Technician-Rooftop Rainwater Harvesting
2	<b>Qualification Code, if any: -</b>	SGJ/Q4003
3	<b>NCO code and occupation: -</b>	NCO-2015/3113.0601 Maintenance Technician
4	<b>Nature and purpose of the qualification (Please specify whether qualification is short term or long term):</b>	<p><b>Nature:</b> This Qualification contains National Occupation Standards for performing installing of a rainwater harvesting unit.</p> <p><b>Purpose of the qualification:</b> To increase employment opportunities in installation of rainwater harvesting systems which is required to be installed by various regulations of both the Central and State Governments on various buildings types.</p>
5	<b>Body/bodies which will award the qualification:</b>	Skill Council for Green Jobs
3	<b>Body which will accredit providers to offer courses leading to the qualification:</b>	Skill Council for Green Jobs
7	<b>Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy)</b>	Yes
8	<b>Occupation(s) to which the qualification gives access:</b>	Technician
9	<b>Job description of the occupation:</b>	The individual at work is responsible for performing site survey, and installation of rainwater harvesting systems across different consumer categories/buildings types. The individual will also be responsible for routine maintenance of rainwater harvesting systems.
10	<b>Licensing requirements:</b>	NA
11	<b>Statutory and Regulatory</b>	-

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	<b>requirement of the relevant sector (documentary evidence to be provided):</b>	
<b>12</b>	<b>Level of the qualification in the NSQF:</b>	Level 3
<b>13</b>	<b>Anticipated volume of training/learning required to complete the qualification:</b>	330 hours
<b>14</b>	<b>Indicative list of training tools required to deliver this qualification:</b>	Training kit (Trainer guide, Presentations), White board, Marker, Projector screen, Power Point Presentation Laptop with charger, Related Standard Operating Procedures, PVC Internal Sanitary Tee & Pipe with smoothing inlet & Flexible Coupling, Overflow pipe, Riser Pipe, access opening, Riser with Lid, Pump Platform, Lifting Lugs, Prefabricated concrete deadman, Hold down straps, Ladder, tank sizing chart, measurement conversion chart, Required Building Layout Plans, Area Layout Plans, Sewage layout maps etc., First-aid kit, Basic tools and equipment.
<b>15</b>	<b>Entry requirements and/or recommendations and minimum age:</b>	8th Class Pass + NTC (2 years) OR Class 10th Pass OR Previous relevant Qualification of NSQF Level 2, with 2 years of relevant experience  Min Age: 14 years
<b>16</b>	<b>Progression from the qualification:</b>	Vertical Progression: Rooftop Rainwater Harvesting Entrepreneur (Level 4) Or Rainwater Harvesting system Designer (Level 4) Horizontal Progression: NA
<b>17</b>	<b>Arrangements for the Recognition of Prior learning (RPL):</b>	SCGJ recognizes that there may be candidates who have prior learning

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		<p>experience in the water management sector and are desirous of being certified.</p> <ul style="list-style-type: none"> <li>•Propose to carry out RPL for candidates working with non-government organization or industries working in water management</li> <li>•Identify the candidates through training need analysis of the water management sector</li> <li>•Develop the RPL Training Delivery Plan and bridge course for bridging the skill gap</li> <li>•Training and certification of the candidates</li> </ul>	
18	<b>International comparability where known (research evidence to be provided):</b>	ISCO-08/3113	
19	<b>Date of planned review of the qualification:</b>	16 <sup>th</sup> November 2025	
20	<b>Formal structure of the qualification</b> <b>Mandatory/Optional components</b>		
	<b>Title of component and identification code/NOSs/Learning outcomes</b>	<b>Estimated size (learning hours)</b>	<b>Level</b>
(I)	<p><a href="#">SGJ/N0159: Analyse different types and components of Rain Water Harvesting System</a>            Module 1: Introduction to Rain Water Harvesting (RWH)            Module 2: Analyse different types and components of RWH Systems</p>	60	3
(II)	<p><a href="#">SGJ/N1208: Assess site and read design for RWH system Installation</a>            Module 3: Assess site and consider RWH Design as per Guidelines</p>	60	3
(III)	<p><a href="#">SGJ/N0160: Install and maintain RWH system:</a>            Module 4: Setup Rain Water Harvesting (RWH) System            Module 5: Discuss various case</p>	90	3

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	studies showcasing best practices of Rain Water Harvesting System		
(VI)	SGJ/N6103: Maintain Health & Safety at work place  Module 6: Maintain Health & Safety at work place	30	3
(VII)	DGT/VSQ/N0101: Employability Skills  Module 7: Employability Skills	30	2
(VIII )	On the Job Training	60	
	<b>Total</b>	330	

**SECTION 1**  
**ASSESSMENT**

21	<p><b>Body/Bodies which will carry out assessment:</b> Skill Council for Green Jobs through its affiliated/accredited Assessment Agency.</p>
22	<p><b>How will RPL assessment be managed and who will carry it out?</b> The RPL assessment will be carried out through pre-assessment, identifying the skills gaps, provide bridge training to cover the competency gap, where required, and then conduct final assessment of the candidates.</p> <p>Final assessment will be carried out by SCGJ affiliated/accredited Assessment Agency of SCGJ, as per RPL Policy and Guidelines</p>
23	<p><b>Describe the overall assessment strategy and specific arrangements which have been put in place to ensure that assessment is always valid, reliable and fair and show that these are in line with the requirements of the NSQF.</b></p> <ol style="list-style-type: none"> <li>1. Assessment System Overview:             <ul style="list-style-type: none"> <li>• Batches assigned to the assessment agencies for conducting the assessment on SDSM/SIP or email</li> <li>• Assessment agencies send the assessment confirmation to VTP/TC looping SSC</li> <li>• Assessment agency deploys the ToA certified Assessor for executing the assessment</li> <li>• SSC monitors the assessment process &amp; records</li> <li>• If the batch size is more than 30, then there should be 2 Assessors.</li> </ul> </li> <li>2. Testing Environment: Assessor must:             <ul style="list-style-type: none"> <li>• Confirm that the centre is available at the same address as mentioned on SDMS or SIP                 <ul style="list-style-type: none"> <li>• Check the duration of the training.</li> <li>• Check the Assessment Start and End time to be as 10 a.m. and 5 p.m.</li> <li>• Check that the allotted time to the candidates to complete Theory &amp; Practical Assessment is correct.</li> <li>• Check the mode of assessment—Online (TAB/Computer) or Offline (OMR/PP).</li> <li>• Confirm the number of TABs on the ground are correct to</li> </ul> </li> </ul> </li> </ol>

	<p>execute the Assessment smoothly.</p> <ul style="list-style-type: none"><li>• Check the availability of the Lab Equipment for the particular Job Role.</li></ul> <p>3. Assessment Quality Assurance levels / Framework:</p> <ul style="list-style-type: none"><li>• Question papers created by the Subject Matter Experts (SME)</li><li>• Question papers created by the SME should be verified by the other subject Matter Experts along with the approval required from SSC</li><li>• Questions are mapped with NOS and PC</li><li>• Question papers are prepared considering that level 1 to 3 is for the unskilled &amp; semi-skilled individuals, and level 4 and above are for the skilled, supervisor &amp; higher management</li><li>• Assessor must be ToA certified</li><li>• Assessment agency must follow the assessment guidelines to conduct the assessment</li></ul> <p>4. Types of evidence or evidence-gathering protocol:</p> <ul style="list-style-type: none"><li>• Time-stamped &amp; geotagged reporting of the assessor from assessment location</li><li>• Centre photographs with signboards and scheme specific branding</li><li>• Biometric or manual attendance sheet (stamped by TP) of the trainees during the training period</li><li>• Time-stamped &amp; geotagged assessment (Theory + Viva + Practical) photographs &amp; videos</li></ul> <p>5. Method of verification or validation:</p> <ul style="list-style-type: none"><li>• Surprise visit to the assessment location</li><li>• Random audit of the batch</li><li>• Random audit of any candidate</li></ul> <p>6. Method for assessment documentation, archiving, and access</p> <ul style="list-style-type: none"><li>• Hard copies of the documents are stored</li><li>• Soft copies of the documents &amp; photographs of the assessment are uploaded / accessed from Cloud Storage and are stored in the Hard Drives</li></ul>
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## **24. Assessment evidences**

### **CRITERIA FOR ASSESSMENT OF TRAINEES**

**Title of Component:** Junior Technician-Rooftop Rainwater Harvesting

**Qualification Pack:** SGJ/Q4003

**Sector Skill Council:** Skill Council for Green Jobs

#### **Guidelines for Assessment**

1. Criteria for assessment for each Qualification Pack will be created by the Sector Skill Council. Each Performance Criteria (PC) will be assigned marks proportional to its importance in NOS. SSC will also lay down proportion of marks for Theory and Skills Practical for each PC.
2. The assessment for the theory part will be based on knowledge bank of questions created by the SSC.
3. Assessment will be conducted for all compulsory NOS, and where applicable, on the selected elective/option NOS/set of NOS.
4. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criterion.
6. To pass the Qualification Pack, every trainee should score a minimum of 70% of aggregate marks to successfully clear the assessment.
7. In case of *unsuccessful completion*, the trainee may seek reassessment on the Qualification Pack.

**Outcome** Please refer to the QP-NOS for the Assessment criteria and outcome

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**SECTION 2**

**25. EVIDENCE OF LEVEL**

**OPTION A**

Title/Name of qualification/component: Junior Technician-Rooftop Rainwater Harvesting			Level:3
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process	<p><b>Junior Technician-Rooftop Rainwater Harvesting has essentially routine and predictable work</b></p> <ul style="list-style-type: none"> <li>• Install Rain water harvesting system as per given design</li> <li>• Follow procedure to calculate the total rooftop area and surface area and perform installation/maintenance</li> <li>• He/She also maintains health and safety at workplace</li> </ul>	<p>A Junior Technician-Rooftop Rainwater Harvesting requires to perform routine and predictable work for e.g. system installation as per predictable design guideline given by Superior/Entrepreneur and maintain basic health and safety as per organizational protocol. Therefore it is pegged at Level 3</p> <p>It requires more than repetitive work as predict the design of installation so doesn't qualify for Level 2. They are not given clean choice to choose type of rainwater harvesting. He/she will be restricted to install rooftop rain water harvesting system. So not pegged at level 4.</p>	3

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Title/Name of qualification/component: Junior Technician-Rooftop Rainwater Harvesting			Level:3
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Professional knowledge	<p><b>Basic knowledge of rooftop rain water harvesting</b></p> <p>A person should have a basic knowledge of <b>rooftop rain water harvesting</b> and storage mechanism. He/She should have basic understanding and knowledge of</p> <ul style="list-style-type: none"> <li>• Types of tools, equipment, and machines required for installation of rainwater harvesting unit</li> <li>• Processes involved in construction of rainwater harvesting systems</li> <li>• Quality parameters of the raw material</li> <li>• Procedure to keep the working area clean and safe</li> <li>• Methods of effective utilization of resources</li> <li>• Relevant people and their responsibilities within the work area</li> <li>• Various categories of people that one is required to communicate and co-ordinate with in the organization</li> </ul>	<p>A technician should have basic understanding of the facts, process and principle applied in a water harvesting. He/She not required broader knowledge of the various water conservation techniques and its applications. So qualification is pegged at level 3.</p>	3

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NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
	<ul style="list-style-type: none"> <li>• Importance of effective communication in the at project site</li> <li>• Importance of discipline for professional success</li> <li>• What constitutes disciplined behaviour for a working professional</li> <li>• Legislations, grievance redressal mechanisms, and penalties against harassment in the workplace</li> <li>• Health and safety roles and responsibilities of relevant personnel within and outside the organization</li> </ul>		
Professional skill	He/She is responsible for accomplishing tasks like installation and maintenance of rain water harvesting, Cleaning of filters and valves, assist Superior etc. for which practical skills are required. which can happen when he/she has the necessary skill to use the tools & tackles and knows which method to apply to solve the problem.	Technician can recall and demonstrate practical skill, routine and repetitive in narrow range of application.	3
Core skill	Rooftop Rainwater Harvesting Installation Technician is a semi- skilled activity performer who works on direction as per Standard	Technician can communicate effectively through written and oral, with minimum required clarity,	3

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NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
	Operation Procedure defined by his/her organization or as per given plan to install Rainwater harvesting system.	skill of basic arithmetic and algebraic principles, personal banking, basic understanding of social and natural environment.	
Responsibility	Rooftop Rainwater Harvesting Installation Technician having responsibility to accomplish task as per direction of Designer or Entrepreneur at Rainwater Harvesting System Installation site.	Technician works under close supervision. They have some responsibility for own work as installation of system as given design satisfying space allocation and Government guidelines within defined limit.	3

**SECTION 3**

**EVIDENCE OF NEED**

26	<p><b>What evidence is there that the qualification is needed? What is the estimated uptake of this qualification and what is the basis of this estimate?</b></p>
<p><b>Basis</b></p>	<p><b>In case of other Awarding Bodies (Institutes under Central Ministries and states departments)</b></p>
<p>Need of the qualification</p>	<p>As the government has mandated installation of rainwater harvesting systems in all building, there is a huge demand for skilled Technicians for system installation, designers and Entrepreneurs across rainwater harvesting business opening up multiple opportunities for entrepreneurship and employment. As reported by Press Information Bureau, 2022, 33 States/UTs have adopted the rainwater harvesting provisions. The implementation of the rainwater harvesting policy comes within the purview of the State Government/Urban Local Body / Urban Development Authority. As per Model Building Bye Laws- 2016, provision of rainwater harvesting is applicable to all residential plots above 100 sq.m. Accordingly, the Ministry of Jal Shakti launched Jal Shakti Abhiyan (JSA) in 2019 as a ‘Jan Andolan’ to accelerate water conservation and rainwater harvesting at grass-root level through citizen’s participation across the country.</p>
<p>Industry Relevance</p>	<p>The industry validation is submitted along with its summary sheet for reference.</p>
<p>Usage of the qualification</p>	<ul style="list-style-type: none"> <li>• This Qualification will be used across various building and rooftops of industries.</li> <li>• It would be used by the training institute for new trainings/For employers to conduct RPL and for annual Appraisal</li> <li>• The SSC would submit details of the employment generated (wherever applicable) and realised.</li> </ul>
<p>Estimated</p>	<p>In addition to direct job creation opportunities for</p>

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	uptake	technician for system installation and maintenance across consumers types, it is proposed that the qualification may also be utilised by the Schools as a Green vocational course.
27	<b>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</b>  Request for recommendation sent to Ministry of New and Renewable Energy and they concurred in the meeting	
28	<b>What steps were taken to ensure that the qualification(s) does (do) not duplicate already existing or planned qualifications in the NSQF? Give justification for presenting a duplicate qualification</b>  SCGJ has explored the growth trajectory within each occupation after studying organisational charts of various industry players across small, medium and large-scale organizations. Various lateral career opportunities for the concerned qualification have also been explored. With this it was ensured that there is a clear role in terms of performance criteria, academic qualification, experience and skill requirement from lower NSQF Level to higher levels in the hierarchy. Please refer to attached career path/Occupational map which clearly defines the career path in the concerned sector.  National Qualifications Register was searched to assess if there was any similar qualification and no overlap was found with the existing qualifications.	
29	<b>What arrangements are in place to monitor and review the qualification(s)? What data will be used and at what point will the qualification(s) be revised or updated? Specify the review process here</b>  <ul style="list-style-type: none"><li>• Agencies have been appointed by the SSC to interact with training providers to gather feedback in implementation.</li><li>• Monitoring of results of assessments and training delivery</li><li>• Employer feedback will be sought post-placement</li><li>• A formal review is scheduled in a 3 years' time</li></ul>	

**SECTION 4**  
**EVIDENCE OF PROGRESSION**

