

NATIONAL SKILL QUALIFICATION FRAMEWORK QUALIFICATION FILE

Version 6: Draft of 08 March 2016

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

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List of documents submitted in support of the Qualifications File

1. Qualifications Pack
2. Industry Validations
3. Industry Endorsement tracker
4. Integrated Occupational Map
5. NSQC Summary Sheet

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SUMMARY

Qualification Title	Solar PV Business Development Executive
Qualification Code	SGJ/Q0107
Nature and purpose of the qualification	Nature of the qualification - A qualification pack The main purpose of the qualification - To provide employment opportunity to unemployed youth - To upgrade the skills of people already in solar PV sector
Body/bodies which will award the qualification	Skill Council for Green Jobs
Body which will accredit providers to offer courses leading to the qualification	Skill Council for Green Jobs
Body/bodies which will carry out assessment of learners	Affiliated Assessment Agency of SCGJ
Occupation(s) to which the qualification gives access	Solar PV Business Development Executive A Solar PV Business Development Executive specializes in developing solar PV business of the company
Licensing requirements	N/A
Level of the qualification in the NSQF	5
Anticipated volume of training/learning required to complete the qualification	140hours
Entry requirements and/or recommendations	B.B.A. / B.Com. / B.Tech. No prior experience required
Progression from the qualification	Vertical Progression - BD Manager (Level 7) Horizontal Progression – Market Research Analyst (Level 5)
Planned arrangements for the Recognition of Prior learning (RPL)	SCGJ recognizes that there may be candidates who have prior learning experience in the Renewable Energy Sector and are desirous of being certified. - Propose to carry out RPL for candidates working in Solar, Banking or Project Finance organizations. - A bridge course would be conducted for people who are working in solar industry. - Linking of this Qualification to Start Up India
International comparability where known	This Level 5 qualification compares with UK NOS: Level 3 NOS Mapping is NA
Date of planned review of the qualification.	30 th September 2019

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Formal structure of the qualification			
Title and identification code of component.	Mandatory/Optional	Estimated size (learning hours)	Level
SGJ/ N0122 Development of rooftop solar PV business	Mandatory	40	5
SGJ/ N0123 Development of ground mount solar PV business	Mandatory	40	5
SGJ/ N0123 Development of off grid solar PV business	Mandatory	40	5
SGJ/ N0120 Work effectively with others	Mandatory	20	4

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SECTION 1 ASSESSMENT

Body/Bodies which will carry out assessment:

Affiliated Assessment Agency of SCGJ

How will RPL assessment be managed and who will carry it out?

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. Confederation of Indian Industry (CII) or any other Affiliated Assessment Agency of SCGJ, as per RPL Policy and Guidelines

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.

The emphasis is on examination of existing businesses through case study analysis and practical demonstration of skills and knowledge based on the performance criteria.

The assessment papers are developed by Subject Matter Experts (SME) available with the Assessment Agency, in collaboration with Skill Council for Green Jobs, as per the performance and assessment criteria mentioned in the Qualification Pack. The assessments papers are also checked for the various outcome based parameters such as quality, time taken, precision, tools & equipment requirement etc. The assessment sets are then reviewed for consistency. The technical limitations at the training centres are taken care in theory and viva.

The assessment agencies are instructed to hire assessors with integrity, reliability and fairness. Each assessor shall sign a document with its assessment agency by which they commit themselves to comply with the rules of confidentiality and conflict of interest, independence from commercial and other interests that would compromise impartiality of the assessments. The assessment agencies are instructed to identify assessors as per the Assessment Policy and Guidelines established by Skill Council for Green Jobs relevant for that Qualification.

The assessors selected by Assessment Agencies are scrutinized and made to undergo training and introduction to SCGJ Assessment Framework, competency based assessments, and assessors guides. The assessors are provided with assessors guide developed by the Subject Matter Expert of the assessment agency in collaboration with SCGJ as per the assessment framework. The assessment guides are developed to ensure the maximum possible consistency in the assessment by different assessors and elaborate on the following

- Qualification Pack Structure
- Guidance for the assessor to conduct theory, practical and viva assessments
- Guidance for trainees to be given by assessor before the start of the assessments.
- Guidance on assessments process, practical brief with steps of operations practical observation checklist and mark sheet
- Viva guidance for uniformity and consistency across the batch.

The assessment by assessment agency is completely based on the assessment criteria as mentioned

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in the Qualification Pack. Each NOS in the Qualification Pack (QP) is assigned a relative weightage for assessment based on the criticality of the NOS. Therein each Performance Criteria in the NOS is assigned marks for or practical based on relative importance, criticality of function and training infrastructure.

The following tools are proposed to be used for final assessment:

Practical Assessment: This will comprise of a test to evaluate the individual's grasp on domain skills imparted.

Viva/Structured Interview: This tool will be used to assess the conceptual understanding and the behavioural aspects as regards the job role and the specific task at hand. It will also include questions to ascertain the soft skills of interacting with the customer or client.

Written Test: Under this test few key items which cannot be assessed practically will be assessed.

The written assessment will comprise of:

- True / False Statements
- Multiple Choice Questions
- Problem Statements
- Case Study Analysis

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ASSESSMENT EVIDENCE

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Solar PV Business Development Executive

Qualification Pack SGJ/ Q0107

Sector Skill Council 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.

Assessment Outcomes	Assessment Criteria for outcomes	Total Marks	Marks allocation		
			Out of	Theory	Skills Practical
SGJ/N0122 Development of rooftop solar PV business	PC1. Assess the market and evaluate the market trends to decide the strategy for sale	100	5	2	3
	PC2. Identify market opportunities and potential customers		10	4	6
	PC3. Identify the customer requirements		10	3	7
	PC4. Clarify the customer queries with respect to rooftop solar PV power plant		10	3	7
	PC5. Assess the area of installation, power output expectation, budget, etc. during discussion with the customer		5	2	3
	PC6. Create relevant solutions to meet customer requirements		10	3	7
	PC7. Develop the working calculation sheet outlining the broad estimate for the rooftop solar PV power plant		10	3	7
	PC8. Prepare the cost benefit analysis for setting up of rooftop solar PV power plant		10	3	7
	PC9. Prepare a proposal for setting up of rooftop solar PV power plant		10	4	6

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	PC10. Prepare a pitch for the customer and close the sale		10	4	6
	PC11. Create and manage a pipeline of potential customers		10	4	6
		TOTAL	100	35	65
SGJ/N0123 Development of ground mount solar PV business	PC1. Assess the market and evaluate the market trends to decide the strategy for sale	100	5	2	3
	PC2. Identify market opportunities and potential customers		10	3	7
	PC3. Identify tenders issued by central/state governments and/ or their agencies for procurement under government scheme		2	2	0
	PC4. Assist in completing the tender and bidding documents		7	3	4
	PC5. Identify the customer requirements for ground mount solar PV		10	5	5
	PC6. Clarify the customer queries with respect to ground mount solar PV power plant		8	4	4
	PC7. Create interest among the customer to invest in ground mount solar PV		13	3	10
	PC8. Asses the area of installation, power output expectation, budget, etc. during discussion with the customer		5	2	3
	PC9. Create relevant solutions to meet customer requirements, if required		5	2	3
	PC10. Develop the working calculation sheet outlining the broad estimate for the ground mount solar PV power plant		8	3	5
	PC11. Prepare the cost benefit analysis for setting up of ground mount solar PV power plant		10	4	6
	PC12. Prepare O&M solutions for ground mount solar PV power plants for relevant customers, if required		10	4	6
	PC13. Create and manage a pipeline of potential customers and relevant tenders		7	3	4
	TOTAL	100	40	60	
SGJ/N0124 Development of off grid solar PV business	PC1. Assess the market and evaluate the market trends to decide the strategy for sale of products	100	10	5	5
	PC2. Identify the un-electrified areas and areas with limited grid availability		10	4	6
	PC3. Identify market opportunities and potential customers		11	4	7
	PC4. Identify the customer requirements		10	3	7
	PC5. Clarify the customer queries with respect to off grid solar PV systems		10	3	7
	PC6. Demonstrate LED based solar lighting systems to the relevant customers		12	4	8
	PC7. Demonstrate solar home lighting		12	4	8

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	systems/small capacity solar power plant which can meet the requirement of running couple of lights, fans, TV and charging of mobile phones etc. to identified communities				
	PC8. Demonstrate solar pumps in areas with high water tables and no or erratic grid power		15	5	10
	PC9. Create relevant solutions to meet requirements of the local households/ community requirements		10	3	7
		TOTAL	100	35	65
SGJ/N0120 Work effectively with others	PC1. Accurately pass on information to the authorized persons who require it and within agreed timescale and confirm its receipt	50	4	2	2
	PC2. Assist others in performing tasks in a positive manner where required and possible		4	2	2
	PC3. Consult and assist others to maximize effectiveness and efficiency in carrying out tasks		4	2	2
	PC4. Display appropriate communication etiquette while working		6	3	3
	PC5. Display active listening skills while interacting with others at work		4	2	2
	PC6. Demonstrate responsible and disciplined behaviours at the workplace		4	2	2
	PC7. Escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict		3	1	2
	PC8. Identify the need for common grounds with clients, team members, etc. and negotiate in an effective manner to achieve the same		3	1	2
	PC9. Consider and respect the opinions, creativity, values, beliefs and perspectives of others		4	2	2
	PC10. Ensure collaboration and group participation to achieve common goals		6	3	3
	PC11. Promote a friendly, co-operative environment that is conducive to employee's sense of belonging		4	2	2
	PC12. Facilitate an understanding and appreciation of the differences among team members		4	2	2
			TOTAL	50	24

SECTION 2 EVIDENCE OF LEVEL

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OPTION A

Title/Name of qualification/component: Solar PV Business Development Executive		Level: 5	
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process	<p>The individual is expected to highlight the benefits of using solar power to develop and generate the business for the organization. He/she proposes the right kind of solution to meet the specific needs of the respective clients. He/she keeps track of central and state solar policies/programs and has good understanding of the solar PV technology, its applications and economics</p>	<p>The Job holder is expected to exhibit well developed skills with a clear choice of procedures in familiar context such as assessing the market to identify market opportunities, engaging the customer and clarifying customer queries regarding solar PV, developing relevant solar PV solutions to meet the client requirement, preparing the cost benefit analysis of proposed solution and pitching to the customer, maintaining a pipeline of potential customers, etc.</p> <p>Thus considering the scope of work the job holder can be placed at Level 5.</p> <p>Since the individual's work is not limited to working in familiar, routine & predictable environment but rather even encompasses jobs that require working in non-routine and fairly unpredictable environment such as identifying client requirement during discussions, assessing the area of installation and creating relevant solutions, identifying relevant tenders, demonstrating solar off grid solutions and their benefits to potential customers, etc., s/he can't be placed in Level 4.</p> <p>And as the individual doesn't require to exhibit wide range of specialized developed skill and working around non-standard practices, the role does not qualify as a level 6 role</p>	5
Professional knowledge	<p>The individual is expected to exhibit the knowledge of the typical specifications, functioning, operating principle of various solar PV plant and off grid components, government regulations and policies, methods of</p>	<p>The Job holder is expected to exhibit knowledge of facts such as typical specifications, types, efficiency, cost, etc. of solar PV components, knowledge of principles such as solar PV power generation technology, customer</p>	5

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Title/Name of qualification/component: Solar PV Business Development Executive		Level: 5	
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
	financial modelling, financial institutions involved in solar power projects, various customer relationship models, etc.	<p>relationship principles, knowledge of processes like applicable regulation relating to the solar PV, financial modelling processes like CAPEX, OPEX, etc. and general concepts of in the field of solar PV such as knowledge of power generation, electrical concepts like voltage, current, power, etc. S/he should possess the ability to speak, read and write in the local vernacular language and English which is always preferred.</p> <p>Thus considering the professional knowledge, s/he can be placed at level 5</p> <p>The Job holder is expected to possess professional skills more than just factual knowledge about solar PV components but also knowledge of facts like estimated cost and warranties of solar PV components, knowledge of principles like financial modelling for example, CAPEX, OPEX, etc. and customer relationship management principles, knowledge of processes like various financial institutions providing loans, various types of land purchase and transfer procedures, providing cost benefit analysis of relevant solutions the client, etc. therefore s/he can't be placed at Level 4</p> <p>And since the job holder doesn't require to exhibit factual & theoretical knowledge in broad contexts within solar PV such as evolving technological trends, the various socio-economic factors and their impact on solar PV etc., the role can't be placed at Level 6.</p>	
Professional skill	The individual is expected to plan & organize the schedule for all meetings and discussions to be	The Job holder is expected to possess a range of practical and cognitive skills required to accomplish	5

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NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
	undertaken by self or by the team. Further s/he must be able to take decisions on a regular basis, manage relationship with customers and apply domain knowledge to perform tasks related to business development of solar PV. S/he is also expected to critically evaluate information obtained from customers and teams to create relevant solutions	<p>tasks and solve problems by selecting and applying basic methods and tools. For example, the individual has to assess the market trends and decide on the strategy for sale. He/she has to understand the client requirements during discussion and clarify any client's queries regarding solar PV technology, assess the relevant solution basis the client queries and requirement and prepare cost benefit analysis of using the relevant solar PV solutions.</p> <p>Thus considering the professional skills the job holder can be placed at Level 5</p> <p>Since the Job holder is expected to exhibit cognitive skills along with practical skills required to accomplish the tasks and solve problems by identifying market trends and opportunities by primary and secondary research, identifying customer specific requirements through discussions, s/he can't be placed at Level 4.</p> <p>And as the job holder is not expected to possess practical and cognitive skills required to generate solutions for specific problems related to solar PV as a whole, but rather expected to generate solutions specific to a customer using basic methods, s/he can't be placed at level 6</p>	
Core skill	The individual is expected to exhibit fluent business communications skills, networking skills & capable of handling and using customer data in the prescribed way.	The Job holder is expected to be possess the desired mathematical skills for appropriately preparing cost benefit analysis of a specific solution relevant to the client, calculating payback period, etc. , have understanding of social/political environment like impact of using renewable energy on environment and rural areas,	5

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NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
		<p>exhibits some skill of collecting and organizing information like identifying market trends and business opportunities through primary and secondary research and communications skill for clarifying the customer queries and pitching the relevant solution to make the sale.</p> <p>Thus considering the core skills, s/he can be placed at Level 5</p> <p>The job holder is expected to exhibit core skills more than language to communicate with required clarity, basic algebraic and arithmetic skill and basic understanding of socio-political environment. For example, s/he is supposed to create financial models using complex method like CAPEX, OPEX, etc., understand and use to create strategies the impact of solar PV on social environment and impact of political environment on the business. Hence s/he can't be placed at Level 4.</p> <p>And since the job holder doesn't require to exhibit logical communication which helps in managing group dynamics while developing the solar PV business etc., therefore s/he can't be placed at Level 6.</p>	
Responsibility	The individual is primarily responsible to identify market trends through various means like primary research and secondary research like magazines, etc. and responsible to create a suitable strategy for sale to his/her region. He/she is responsible to transfer knowledge and trends with team to ensure development of business across various regions	The solar PV business development executive is responsible for his/ her own work s/he identifies market trends and opportunities, updates self through primary and secondary research and to an extent subordinate's works and learning as s/he is responsible ensuring knowledge transfer to the team of business development executives to help develop the solar PV business for the organisation.	5

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NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
		<p>Considering the responsibilities the individual can be placed at level 5</p> <p>Since the Job holders responsibility is not limited till his/her own work & learning but also encompasses some responsibilities for others learning as s/he is expected to ensure knowledge transfer to team members s/he can't be placed at 4.</p> <p>As the responsibilities are not so broad enough to be fully responsible for others work or running the operations of the entire business development function and is not fully responsible for other's work and learning s/he can't be placed at level 6.</p>	

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SECTION 3

EVIDENCE OF NEED

What evidence is there that the qualification is needed?

The government of India has launched the national solar mission which has an ambitious target of achieving 100 GW installed capacity from solar energy by 2022. Out of this 100 GW, 40 GW would be coming as rooftop solar projects and 60 GW would be coming as ground mount solar projects. The mission supplements India's INDC targets.

During extensive industry interactions carried out while creating occupational maps and prioritization of job roles for Qualification Pack development, the mentioned qualification was indicated as a key requirement by the industry. In addition, the Skill Gap Report for the sector has indicated that a significant proportion of the workforce is involved in this work function. The study also indicates that this domain will be in great demand, due to focus of Government of India to support the sector through policy and implementation. Research was conducted in the Renewable energy sector manpower requirement estimates till 2030. The research provides the data that the discussed qualification is one of the critical roles in the sector. The details of statistics and research analysis are provided separately as a research analysis report

Evidence of the qualification is supported by industry validations. The complete list of validating companies has been enclosed as an annexure to the Q file.

What is the estimated uptake of this qualification and what is the basis of this estimate?

The increase in manpower requirements (as per projections) from 2017 to 2025 is approx. 5 times for this role. A minimum of 4,116 of Solar PV Business Development Executive by 2025 are estimated. All the numbers are provided in research analysis study

What steps were taken to ensure that the qualification(s) does/do not duplicate already existing or planned qualifications in the NSQF?

Currently, Skill Council for Green Jobs is the only Sector Skill Council set up which has the mandate of Certification and Assessment of candidates undergoing Skill Development courses in Solar Photovoltaic domain. NSDC list of Approved QPs was checked prior to commissioning the work. There is no overlap of these Qualification Packs with existing Qualification Packs.

The NCO/2015 Classification and MES Course List was also cross examined for existing trades and was mapped to NCO-2015/ 2433.0601.

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?

In the Qualification Pack, review date is scheduled for after 3 years in consultation with Subject Matter Experts. The monitoring of evaluation of assessments and Employer feedback will be sought post-placement, for review of the effectiveness of the Qualification.

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SECTION 4

EVIDENCE OF PROGRESSION

What steps have been taken in the design of this or other qualifications to ensure that there is a clear path to other qualifications in this sector?

1. Discussing the growth trajectory within each occupation after studying organisational charts of various industry players across small, medium and large scale organizations.
2. Conducted workshops with industry professionals for defining and validating the career progression/ occupational map
3. Exploring various lateral career opportunities for the discussed qualification

Please refer to attached career path as per annexure 1 which clearly defines the career path.

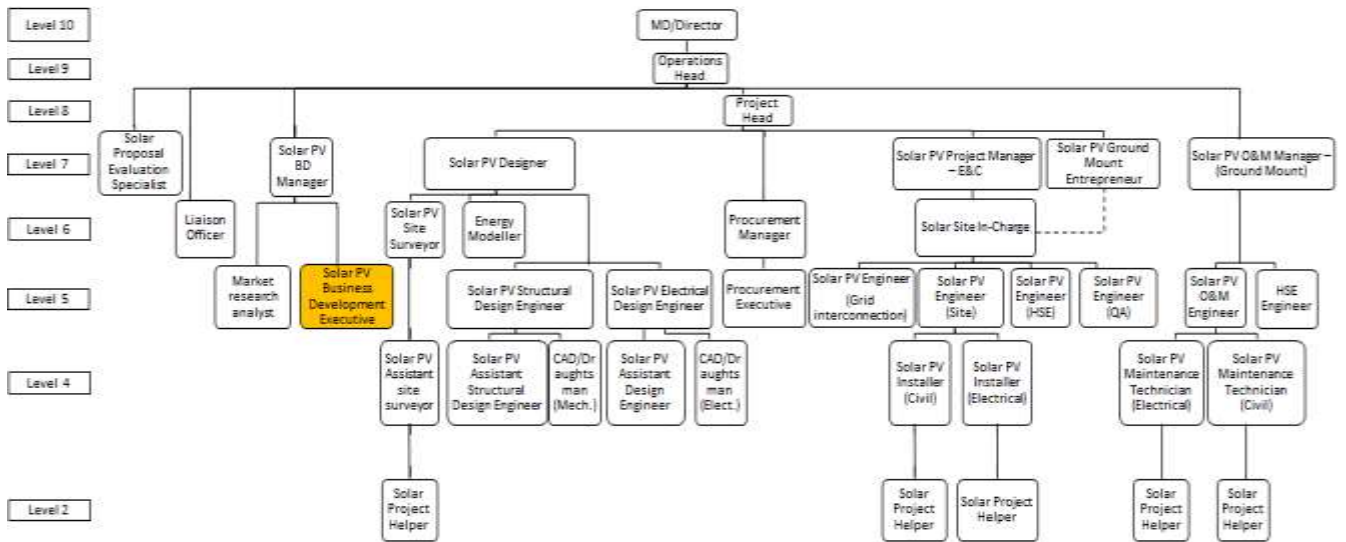
1. Career Map of Solar PV Business Development Executive- Annexure 1

Annexure 1: Career Map

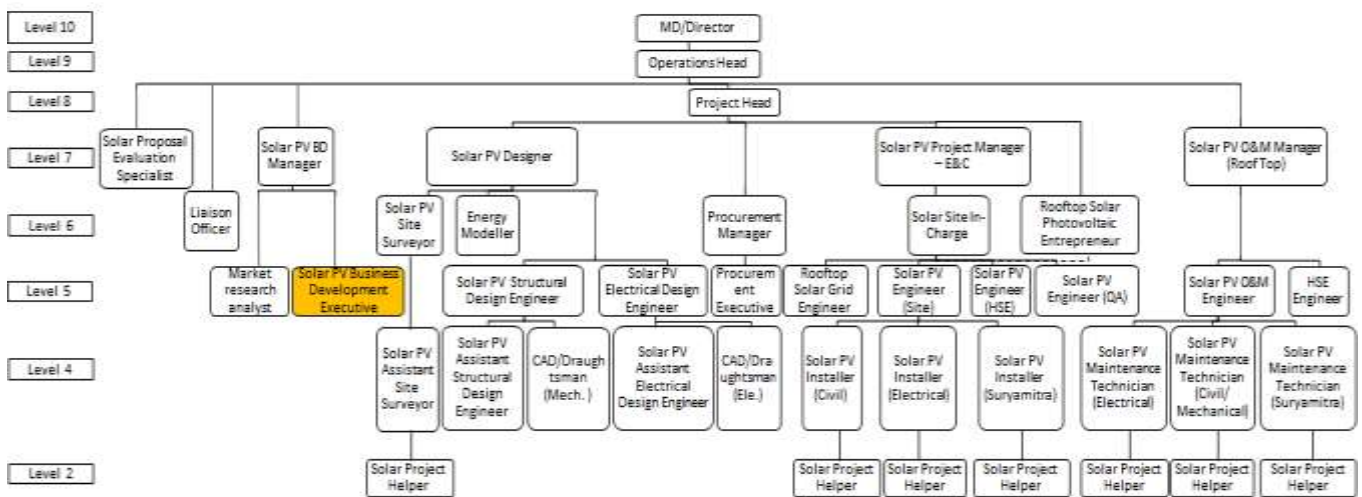
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Solar PV- Ground Mount



Solar- PV- Roof Top



Annexure 2: QP SGJ/ Q0107