

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting – NCVET – 30th December, 2021

CONTACT DETAILS OF THE BODY SUBMITTING THE QUALIFICATION FILE

Name and address of submitting body:

Electronics Sector Skills Council of India

155, 2nd Floor, ESC House

Okhla Industrial Area- Phase 3,

New- Delhi – 110020

Tel: 011- 8447738501

Name and contact details of individual dealing with the submission

Name: Dr. Abhilasha Gaur

Position in the organisation: COO

Address if different from above: Same as above

Tel number(s):

E-mail address: ceo@essc-india.org

List of documents submitted in support of the Qualifications File

1. Model Curriculum

Model Curriculum to be added which will include the following:

- **Indicative list of tools/equipment to conduct the training**
- **Trainers qualification**
- **Lesson Plan**
- **Distribution of training duration into theory/practical/OJT component**

NSQF QUALIFICATION FILEApproved in 14th NSQC Meeting – NCVET – 30th December, 2021**SUMMARY**

1	Qualification Title: Battery System Assembly Operator
2	Qualification Code, if any: ELE/Q6604
3	NCO code and occupation: NCO-2016/NILL & Assembly – EM & B
4	Nature and purpose of the qualification (Please specify whether qualification is short term or long term): Responsible for assembling and testing the Battery system for an Electric Vehicles
5	Body/bodies which will award the qualification: Electronics Sector Skills Council of India
6	Body which will accredit providers to offer courses leading to the qualification: Electronics Sector Skills Council of India
7	Whether accreditation/affiliation norms are already in place or not, if applicable (if yes, attach a copy): Yes
8	Occupation(s) to which the qualification gives access: Assembly-EM&B
9	Job description of the occupation: The Battery System Assembly Operator system is responsible for assembling the battery pack for an Electric Vehicle. Along with that, s/he tests the engine management system, climate controls, communications and safety systems; and takes corrective actions against any malfunction detected.
10	Licensing requirements: N/A
11	Statutory and Regulatory requirement of the relevant sector (documentary evidence to be provided): N/A
12	Level of the qualification in the NSQF: Level 4
13	Anticipated volume of training/learning required to complete the qualification: 450 Hours
14	Indicative list of training tools required to deliver this qualification: NA
15	Entry requirements and/or recommendations and minimum age: 8th Grade Pass + NTC (2 years after 8th) +2 Year NAC/relevant Experience) OR 10th Grade pass + 2 Year NTC/NAC/ relevant experience

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting – NCVET – 30th December, 2021

	<p>OR</p> <p>Certificate-NSQF (Level-3 in the domain of EV / Electrical / Mechanical / Automobile) with 2 Years of relevant Experience</p> <p>OR</p> <p>12th Grade</p> <p>and</p> <p>18 Years</p>		
16	Progression from the qualification (Please show Professional and academic progression): Battery System Assembly Supervisor		
17	Arrangements for the Recognition of Prior learning (RPL): RPL will be based on the same approved Qualification Pack and Assessment Criteria mentioned in the Qualification Pack by Electronics Sector Skills Council of India (ESSCI)		
18	International comparability where known (research evidence to be provided): Yet to establish		
19	Date of planned review of the qualification: 16 th Dec 2025		
20	Formal structure of the qualification Mandatory components		
	Title of component and identification code/NOSs/Learning outcomes	Estimated size (learning hours)	Level
(i)	Bridge Module (Introduction)	10	4
(ii)	Assemble the Battery System (ELE/N6604)	150	4
(iii)	Test the Battery System assembly (ELE/N6605)	170	4
(iv)	Work effectively at the work place (ELE/N9905)	30	4
(v)	Apply health and safety practices at the workplace (ELE/N1002)	30	4
(vi)	Employability Skills (60 Hours) (DGT/VSQ/N0102)	60	4
	Total	450	

SECTION 1**ASSESSMENT**

21	Body/Bodies which will carry out assessment: Electronics Sector Skills Council of India
22	How will RPL assessment be managed and who will carry it out? Give details of how RPL assessment for the qualification will be carried out and quality assured. The RPL assessment will be carried out through pre assessment, identifying the skills gaps, provide bridge training to cover the competency gap and then conduct final assessment of the candidates.
23	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. Assessment is done through third parties who are affiliated to ESSCI as Assessment Body. Assessors are trained & certified by ESSCI through Training of Assessors program. The assessment involves two processes. The first process is gathering the evidence of the competency of individuals. The second part of the assessment process is the judgement as to whether a person is competent or not. The assessment plan contains the following information: <ul style="list-style-type: none">● What will be assessed, i.e. the competency based on each NOS● How assessment will occur i.e. methods of assessment● When the assessment will occur● Where the assessment will take place i.e. context of the assessment (workplace/simulation)● The criteria for decision making i.e. those aspects that will guide judgements and Where appropriate, any supplementary criteria used to make a judgement on the level of performance. The assessment is conducted through theory, viva voce and practical.

Please attach most relevant and recent documents giving further information about assessment and/or RPL.

Give the titles and other relevant details of the document(s) here. Include page references showing where to find the relevant information.

ASSESSMENT EVIDENCE

Complete a grid for each component as listed in “Formal structure of the qualification” in the Summary.

NOTE: this grid can be replaced by any part of the qualification documentation which shows the same information – i.e. Learning Outcomes to be assessed, assessment criteria and the means of assessment.

24. Assessment evidences

Title of Component: Battery System Assembly Operator

CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Battery System Assembly Operator

Qualification Pack ELE/Q6604

Sector Skill Council Electronics Sector Skills Council of India

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 centre (as per assessment criteria below).
5. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre 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

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting – NCVET – 30th December, 2021

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
ELE/N6604 Assemble the Battery system				
<i>Planning for the assembly</i>	14	33	-	-
PC1. interpret the design and connectivity requirement	1	4	-	-
PC2. establish the inter-operability between various components of the system	1	3	-	-
PC3. select components of the battery system such as integrated circuit, busbar etc. as per design	1	3	-	-
PC4. determine temperature monitoring sensor for energy storage system (ESS) and portable applications	1	3	-	-
PC5. choose the functional blocks of the battery system including battery authentication, a real-time clock, memory etc.	1	3	-	-
PC6. deduce security aspects to be included at all stages of the assembly	2	3	-	-
PC7. use necessary structure for shock absorption	2	3	-	-
PC8. deploy provisions for removal of harmful gas, excess heat etc.	1	3	-	-
PC9. examine the possibility of high voltage short circuit	2	4	-	-
PC10. plan the assembly as per quality, industry and compliance standards	2	4	-	-
<i>Assembling the Battery system</i>	16	37	-	-
PC11. match voltage, capacity and internal impedance of the cells	1	2	-	-
PC12. group cells with similar operating parameters	1	3	-	-

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting – NCVET – 30th December, 2021

PC13. join cells in series strings and string in parallel as per standard operating procedure	1	3	-	-
PC14. assemble modules and attach slave Battery Management System (BMS)	1	3	-	-
PC15. test the modules after assembly	1	3	-	-
PC16. stack modules in series and parallel combination to achieve final configuration	1	3	-	-
PC17. place the battery pack in enclosure	2	4	-	-
PC18. attach master Battery Management System with the battery pack	2	4	-	-
PC19. test the pack for quality assurance	2	4	-	-
PC20. store the packs in FIFO (First in First Out) mode at 50% State of Charge (SOC)	2	4	-	-
PC21. maintain the necessary climatic condition	2	4	-	-
NOS Total	30	70	-	-
ELE/N6605 Test the Battery system assembly				
<i>Testing the Battery system</i>	10	22	-	-
PC1. review standard procedures for battery cell and module testing	2	4	-	-
PC2. use recommended tools and equipment for testing	2	4	-	-
PC3. use simple instructions which can be understood by the stakeholders	1	3	-	-
PC4. test battery cells and modules for various performance parameters	1	3	-	-
PC5. comply with globally accepted regulatory standards for technical specifications while testing	2	4	-	-
PC6. maintain test records in a logbook	2	4	-	-
<i>Rectifying malfunctions</i>	20	48	-	-
PC7. review test results as per standards specified by the design department	2	6	-	-
PC8. summarize test results in the prescribed format	3	7	-	-
PC9. identify cause of the problem, if test results diverge from specifications	3	7	-	-

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting – NCVET – 30th December, 2021

PC10. seek technical assistance from supervisor / engineers on faults that cannot be fixed	3	7		
PC11. apply correct techniques to rectify malfunctions as per standard operating procedure	3	7		
PC12. retest the battery system to ensure that design specifications are met	3	7		
PC13. report rectification activities to superiors for future reference	3	7		
NOS Total	30	70	-	-

ELE/N9905: Work effectively at the workplace				
<i>Communicate effectively at the workplace</i>	5	13	-	-
PC1. exchange information and instruction with colleagues, and seek clarifications and feedback as necessary	1	3	-	-
PC2. assist colleagues where required	1	3	-	-
PC3. follow business communication etiquette in all interactions and communicative formats (online, digital, and in-person)	1	4	-	-
PC4. document and share all relevant information with stakeholders in agreed formats and as per agreed timelines	2	3	-	-
<i>Work effectively</i>	6	13	-	-
PC5. identify and obtain clarity regarding organisational, team and own goals and targets	1	2	-	-
PC6. prioritise and plan work in order to achieve goals and targets	1	2	-	-
PC7. monitor own and team performance as per agreed plan	1	2	-	-
PC8. complete duties accurately, systematically and within required timeframes	1	2	-	-
PC9. express emotions appropriately at the workplace and manage own response to heightened emotions	1	2	-	-
PC10. maintain orderliness and cleanliness in the work area	1	3	-	-
<i>Maintain and enhance professional</i>	8	7	-	-

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting – NCVET – 30th December, 2021

<i>competence</i>				
PC11. identify own strengths and weaknesses in relation to goals and targets	1	1	-	-
PC12. adapt self, service, or product to meet success criteria	1	1	-	-
PC13. seek and select opportunities for continuous professional development	1	1	-	-
PC14. formulate a professional development plan to enhance capabilities	2	1	-	-
PC15. build or contribute to the organizational knowledge base of cases, clients, issues, solutions, and innovations	1	1	-	-
PC16. examine developments and trends in field of work and their potential impact on work	1	1	-	-
PC17. take feedback from peers, supervisors and clients to improve own performance and practices	1	1	-	-
<i>Work in a disciplined and ethical manner</i>	11	16	-	-
PC18. perform tasks as per workplace standards, organisational policies and legislative requirements	2	2	-	-
PC19. display appropriate professional appearance at the workplace and adhere to the organisational dress code	1	2	-	-
PC20. demonstrate responsible and disciplined behaviour at the workplace such as punctuality; completing tasks as per given time and standards; demonstrating professional behaviour at all times, adopting environment- friendly practices, etc.	1	2	-	-
PC21. identify the cause of conflict and options for resolution with peers or escalate grievances and problems to appropriate authority as per procedure for conflict resolution	2	2	-	-
PC22. protect the rights of the client and organisation when delivering services	1	2	-	-
PC23. ensure services are delivered equally to all clients regardless of personal and cultural beliefs	1	2	-	-
PC24. operate within an agreed ethical code of practice and report unethical conduct to the appropriate authorities	2	2	-	-

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting – NCVET – 30th December, 2021

PC25. follow organisational guidelines and legal requirements on disclosure and confidentiality	1	2	-	-
<i>Uphold social diversity at the workplace</i>	10	11	-	-
PC26. recognize and evaluate biased practices against underrepresented groups like women and persons with disabilities, in workplace systems and processes	2	2	-	-
PC27. identify and report discrimination and harassment based on gender, disability, or cultural difference at the workplace	2	2	-	-
PC28. use inclusive or neutral language and gestures in all interactions	2	2	-	-
PC29. respect the personal and professional space of others	2	2	-	-
PC30. access grievance redressal mechanisms as per legislations	2	3	-	-
NOS Total	40	60	-	-
ELE/N1002: Apply health and safety practices at the workplace				
<i>Deal with workplace hazards</i>	20	31	-	-
PC1. identify job-site hazards and possible causes of accident in the workplace	2	3	-	-
PC2. perform work complying to organizational safe working practices and observing hazard signs displayed on containers, equipment and in various work areas such as inside buildings, in open areas and public spaces, etc.	3	4	-	-
PC3. use appropriate personal protective equipment (PPE) for specific tasks and work conditions, contaminant (concentration w.r.t air) requirements and severity of hazard while conforming to the Indian/International standards	3	4	-	-
PC4. follow standard safety procedures while handling tool/ ,equipment, hazardous substances and while working in hazardous environments	3	4	-	-
PC5. dispose electronic waste (such as toxins; metals such as lead, cadmium, barium; flame retardant plastics, welding slag etc.) as per industry approved techniques	2	4	-	-

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting – NCVET – 30th December, 2021

PC6. avoid damage of components due to negligence in electrostatic discharge (ESD) procedures	2	3	-	-
PC7. locate general health and safety equipment in the workplace such as fire extinguishers; first aid equipment; safety instruments, clothing and installations (fire exits, exhaust fans)	2	3	-	-
PC8. maintain appropriate posture while handling heavy objects	1	3	-	-
PC9. apply good housekeeping practices at all times	2	3	-	-
<i>Apply fire safety practices</i>	4	9	-	-
PC10. take preventive measures to prevent fire hazards	2	3	-	-
PC11. <ul style="list-style-type: none"> • use appropriate fire extinguishers for different types of fires • Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids and gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class C: e.g. electrical equipment such as appliances, wiring, breaker panels, etc. (These categories of fires become Class A, B, and D fires when the electrical equipment that initiated the fire is no l 	1	3	-	-
PC12. exhibit rescue and first-aid techniques in case of fire or electrocution	1	3	-	-
<i>Follow emergencies, rescue and first-aid procedures</i>	6	13	-	-
PC13. administer appropriate first aid to victims in case of bleeding, burns, choking, electric shock, poisoning etc.	1	3	-	-
PC14. administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock,	1	2	-	-
PC15. participate regularly in emergency procedures such as raising alarm, safe/efficient, evacuation, correct means of taking shelter and escaping, correct assembly point, roll call, correct return to work	2	4	-	-
PC16. use correct method to move injured people and others during an emergency	2	4	-	-
<i>Effective waste management/recycling practices</i>	5	12	-	-

NSQC Approved

NSQF QUALIFICATION FILE**Approved in 14th NSQC Meeting – NCVET – 30th December, 2021**

PC17. identify recyclable and non-recyclable, and hazardous waste generated	1	3	-	-
PC18. segregate waste into different categories	1	2	-	-
PC19. ensure disposal of non-recyclable waste appropriately	1	2	-	-
PC20. deposit non-recyclable and reusable material at identified location	1	3	-	-
PC21. follow processes specified for disposal of hazardous waste	1	2	-	-
NOS Total	35	65	-	-

DGT/VSQ/N0102: Employability Skills (60 Hours)

Assessment Criteria for Outcomes	Theory Marks	Practical Marks	Project Marks	Viva Marks
<i>Introduction to Employability Skills</i>	1	1	-	-
PC1. identify employability skills required for jobs in various industries	-	-	-	-
PC2. identify and explore learning and employability portals	-	-	-	-
<i>Constitutional values – Citizenship</i>	1	1	-	-
PC3. recognize the significance of constitutional values, including civic rights and duties, citizenship, responsibility towards society etc. and personal values and ethics such as honesty, integrity, caring and respecting others, etc.	-	-	-	-
PC4. follow environmentally sustainable practices	-	-	-	-
<i>Becoming a Professional in the 21st Century</i>	2	4	-	-
PC5. recognize the significance of 21st Century Skills for employment	-	-	-	-
PC6. practice the 21st Century Skills such as Self- Awareness, Behaviour Skills, time management, critical and adaptive thinking, problem-solving, creative thinking, social and cultural awareness, emotional awareness, learning to learn for continuous learning etc. in personal and professional life	-	-	-	-
<i>Basic English Skills</i>	2	3	-	-
PC7. use basic English for everyday conversation in different contexts, in person and over the telephone	-	-	-	-
PC8. read and understand routine information, notes, instructions, mails, letters etc. written in English	-	-	-	-
PC9. write short messages, notes, letters, e-mails etc. in English	-	-	-	-
<i>Career Development & Goal Setting</i>	1	2	-	-
PC10. understand the difference between job and career	-	-	-	-
PC11. prepare a career development plan with short- and long-term goals, based on	-	-	-	-

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting –NCVET – 30th December, 2021

aptitude				
Communication Skills	2	2	-	-
PC12. follow verbal and non-verbal communication etiquette and active listening techniques in various settings	-	-	-	-
PC13. work collaboratively with others in a team	-	-	-	-
Diversity & Inclusion	1	2	-	-
PC14. communicate and behave appropriately with all genders and PwD	-	-	-	-
PC15. escalate any issues related to sexual harassment at workplace according to POSH Act	-	-	-	-
Financial and Legal Literacy	2	3	-	-
PC16. select financial institutions, products and services as per requirement	-	-	-	-
PC17. carry out offline and online financial transactions, safely and securely	-	-	-	-
PC18. identify common components of salary and compute income, expenses, taxes, investments etc	-	-	-	-
PC19. identify relevant rights and laws and use legal aids to fight against legal exploitation	-	-	-	-
Essential Digital Skills	3	4	-	-
PC20. operate digital devices and carry out basic internet operations securely and safely	-	-	-	-
PC21. use e- mail and social media platforms and virtual collaboration tools to work effectively	-	-	-	-
PC22. use basic features of word processor, spreadsheets, and presentations	-	-	-	-
Entrepreneurship	2	3	-	-
PC23. identify different types of Entrepreneurship and Enterprises and assess opportunities for potential business through research	-	-	-	-

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting –NCVET – 30th December, 2021

PC24. develop a business plan and a work model, considering the 4Ps of Marketing Product, Price, Place and Promotion	-	-	-	-
PC25. identify sources of funding, anticipate, and mitigate any financial/ legal hurdles for the potential business opportunity	-	-	-	-
Customer Service	1	2	-	-
PC26. identify different types of customers	-	-	-	-
PC27. identify and respond to customer requests and needs in a professional manner.	-	-	-	-
PC28. follow appropriate hygiene and grooming standards	-	-	-	-
Getting ready for apprenticeship & Jobs	2	3	-	-
PC29. create a professional Curriculum vitae (Résumé)	-	-	-	-
PC30. search for suitable jobs using reliable offline and online sources such as Employment exchange, recruitment agencies, newspapers etc. and job portals, respectively	-	-	-	-
PC31. apply to identified job openings using offline /online methods as per requirement	-	-	-	-
PC32. answer questions politely, with clarity and confidence, during recruitment and selection	-	-	-	-
PC33. identify apprenticeship opportunities and register for it as per guidelines and requirements	-	-	-	-
NOS Total	20	30	-	-

Outcomes to be assessed/NOSs to be assessed	Assessment criteria for the outcome
Provided in the above section	

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting –NCVET – 30th December, 2021

Means of assessment 1	
<ol style="list-style-type: none">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. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training centre (as per assessment criteria below.)4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training centre based on these criteria.	
Means of assessment 2	
Add boxes as required.	
Pass/Fail	
<ol style="list-style-type: none">1. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS.2. In case of successfully passing only certain number of NOS's, the trainee is eligible to take subsequent assessment on the balance NOS's to pass the Qualification Pack.	

SECTION 2

25. EVIDENCE OF LEVEL

Title/Name of qualification/component: Battery System Assembly Operator			
Level: 4			
NSQF Domain	Key requirements of the job role	How the job role relates to the NSQF level descriptors	NSQF Level
Process	<p>Demands a wide range of specialised technical skill, clarity of knowledge and practice in broad range of activity involving standard and non-standard practices.</p> <ul style="list-style-type: none"> • Understand the design to assemble the battery system • Use appropriate technique to assemble the battery system • Test the battery assembly system for proper functionality • Test the battery assembly system thoroughly and rectifying the malfunctions 	<p>Battery System Assembly Operator's job is to control battery performance and safety and assemble the battery pack for Electric Vehicles. His / Her responsibilities include engine management, climate controls, communications and safety systems testing of the battery pack after the assembly is done and fix up all malfunctions detected</p>	4
Professional knowledge	<p>Factual and theoretical knowledge in broad contexts within a field of work or study.</p> <ul style="list-style-type: none"> • Knowledge of assembling and disassembling of the battery system. • Knowledge of operations of different models of battery system • Methods to troubleshoot and identify problems with work planning and procedures • Standard Operating Procedure (SOP) and their application • Common problems and their remedies 	<p>Battery System Assembly Operator should know the basic knowledge of how to assemble the battery system and tools requirement. Concept of passive active cells</p> <p>Hence Level 4</p>	4
Professional skill	<p>A range of cognitive and practical skills required to generate solutions to specific problems in a field of work or study.</p>	<p>Battery System Assembly Operator should know the basic knowledge of how to assemble the BMS and tools</p>	4

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting –NCVET – 30th December, 2021

	<ul style="list-style-type: none"> Communicate with customer, team and supervisor to understand the work requirement Identify the errors in orders Maintain test results and processes Complete the documentation of assembly and testing records 	<p>requirement. Concept of passive active cells</p> <p>Hence Level 4</p>	
Core skill	<p>Reasonably good in:</p> <ul style="list-style-type: none"> Knowledge of assembling and disassembling of the battery. Knowledge of operations of different models of batteries Methods to troubleshoot and identify problems with work planning and procedures Knowledge of safety and environmental standards Knowledge of relevant National / International Standards Common problems and their remedies 	<p>Battery System Assembly Operator should know the basic knowledge of how to assemble the BMS and tools requirement. Concept of passive active cells</p> <p>Hence Level 4</p>	4
Responsibility	<p>Responsibility of completing the work assigned and reporting the same as per standards.</p> <ul style="list-style-type: none"> Understand the job role and follow the organisational policy Record and report about the work status Follow safety regulations at work place Work along with colleagues and supervisors 	<p>Battery System Assembly Operator should know the basic knowledge of how to assemble the BMS and tools requirement. Concept of passive active cells</p> <p>Hence Level 4</p>	

SECTION 3

EVIDENCE OF NEED

26	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?		
	Basis	In case of SSC	In case of other Awarding Bodies (Institutes under Central Ministries and states departments)
	<p>Need of the qualification The Indian electronics industry is one of the largest and fastest-growing industries in the world.</p> <p>The market growth of E-Mobility & Battery is expected to be at a CAGR of 50% over the forecast period (2019-26)</p>	<p>The SSC would undertake market study and would enclose demand forecast for the proposed job role both on short-term and long-term basis to substantiate the requirement of the Qualification proposed. The SSC can produce the data from primary or authorized secondary sources as well.</p>	<p>The Submitting Body would produce any reputable and reliable research reports, such as labour market information reports; occupational mapping or similar research carried out by Ministry/State/Any other authentic source forecasting the demand for the proposed qualification</p>
<p>Industry Relevance We are in the process of taking industry validation.</p>	<p>The SSC would undertake validation of the job roles with actual end-user industry where such employment is going to be generated and absorbed instead of generic validation of industry. The SSC would submit the endorsements from users/intended users of the qualification clearly supporting or otherwise the need for</p>	<p>The Submitting Body would submit the list of industry participation while preparation of the curriculum/ course content of the qualifications. These could include minutes of the meeting/ reports of these consultations</p>	

NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting – NCVET – 30th December, 2021

		trained people against specific job role. (<i>The industry validation format to be used</i>)	
	Usage of the qualification: This Qualification Pack will be used across E-Mobility & Battery industry which is organised as well as unorganised	The SSC would submit details of the employment generated (wherever applicable) and realised by virtue of training in the Qualifications of the sector earlier submitted for NSQF alignment. In case of unorganized sector, case studies or evidences may be given	The submitting body would submit the details of trained and placed data in the proposed qualification (if an existing qualification is being proposed for NSQF alignment) Information about the success of the qualification should be given (e.g. uptake figures, examples of use in recruitment and placement rates (if known) should be given. However, many of the bodies that do not have placement tracking mechanism established in place would provide necessary endorsements by the state/ ministry stating that a tracking mechanism would be institutionalized and placement records shall be provided annually or later, depending on length of qualification.
	Estimated uptake The dynamics in the electric vehicle market are expected to	The SSC would submit the estimated uptake of the qualification and What steps were carried out to test the likely	The Submitting Body should submit the estimated uptake by reflecting the number of the takers for this

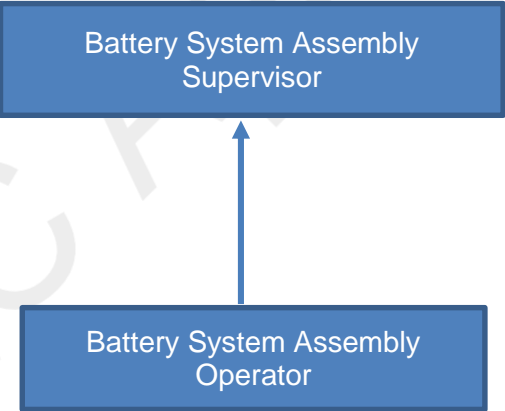
NSQF QUALIFICATION FILE

Approved in 14th NSQC Meeting – NCVET – 30th December, 2021

	change as the electrification of road transport is expected to move into top gear by the second half of the 2020s	uptake of the qualification? The basis of this estimate should include data about the number of jobs or places in courses of learning which will be available to people who are awarded the qualification.	qualification for at least two years from submission of the qualification
27	<p>Recommendation from the concerned Line Ministry of the Government/Regulatory Body. To be supported by documentary evidences</p> <p>Ministry of Electronics and Information Technology, Government of India (MeitY)</p>		
28	<p>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</p> <p>This is the first time that this Qualification is being made. The national qualification registers as well as the Qualification Packs with NSDC have been checked.</p>		
29	<p>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</p> <ul style="list-style-type: none"> ● Agencies have been appointed by the SSC to interact with training providers to gather feedback in implementation. ● Monitoring of results of assessments ● Employer feedback will be sought post-placement ● A formal review is scheduled in a year 		

SECTION 4

EVIDENCE OF PROGRESSION

30	<p>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? <i>Show the career map here to reflect the clear progression</i></p> <ol style="list-style-type: none">1. Discussing the growth trajectory within each occupation after studying organisational charts of various industry players across small, medium and large-scale organizations.2. Exploring various lateral career opportunities for the discussed qualification3. Ensuring that there is a clear role up in terms of performance criteria qualification experience and skill requirement from lower NSQF Level to higher levels in the hierarchy. <p>Career pathway has been identified as illustrated below (Annexure 1)</p> <p>Annexure 1: Career Map of Battery System Assembly Operator</p>  <pre>graph BT; A[Battery System Assembly Operator] --> B[Battery System Assembly Supervisor];</pre> <p>The diagram illustrates a career progression path. It consists of two blue rectangular boxes. The bottom box is labeled 'Battery System Assembly Operator'. A vertical blue arrow points upwards from this box to a second blue rectangular box above it, labeled 'Battery System Assembly Supervisor'.</p>
----	--