

QUALIFICATIONS PACK - OCCUPATIONAL STANDARDS FOR POWER SECTOR

What are Occupational Standards(OS)?

- OS describe what individuals need to do, know and understand in order to carry out a particular job role or function
- OS are performance standards that individuals must achieve when carrying out functions in the workplace, together with specifications of the underpinning knowledge and understanding

Contact Us:

Power Sector Skill Council
2nd Floor, CBIP Building,
Malcha Marg,
Chanakyapuri, New
Delhi

E-mail: pssc@cbip.org



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Introduction

Qualifications Pack-Technical Helper (Distribution)

SECTOR: POWER

SUB-SECTOR: Distribution

OCCUPATION: Lineman

REFERENCE ID: PSS/ Q 0101

ALIGNED TO: NCO-2004/7245.90

Technical helper (Distribution) supports and assists Linemen to construct, operate, maintain and repair overhead and underground electrical distribution systems.

Brief Job Description: The incumbent in the job will carry out equipment upkeep, material and equipment transportation, cable laying and other activities to support erection and maintenance of power poles, structures, overhead and underground powerlines and cables, etc. They will help in fixing nuts and bolts and other mechanical support to the Lineman as well.

Personal Attributes: Physically and mentally able to safely perform essential functions of the job. This will also include differently abled people who can perform the job with or without reasonable accommodations (modified practices.) The candidate should be able to climb ladders, scaffolds, poles and towers of various heights. Also able to crawl and work in confined spaces such as attics, manholes and crawlspaces. The candidate should be able to read, hear and understand instructions and warnings.

Job Details

Qualifications Pack Code	PSS/ Q 0101		
Job Role	Technical Helper (Distribution)		
Credits (NSQF)	TBD	Version number	1.0
Sector	Power	Drafted on	26/03/2015
Sub-sector	Distribution	Last reviewed on	26/03/2015
Occupation	Lineman	Next review date	26/03/2017

Job Role	Technical Helper (Distribution)
Role Description	Technical Helper (Distribution) helps linemen in constructing operating, maintaining and repairing overhead and underground power distribution systems.
NSQF level	2
Minimum Educational Qualifications	8 th
Maximum Educational Qualifications	NA
Training (Suggested but not mandatory)	Electrical - 6 months
Experience	NA
Applicable National Occupational Standards (NOS)	<p>Compulsory:</p> <ol style="list-style-type: none"> PSS N 0101 (Assisting in repair and maintenance of power distribution lines and components) PSS N 0102 (Preparation and assistance for erection and maintenance of power distribution lines) PSS N 0103 (Assisting in operation and maintenance of 11/0.433 KV Distribution Substation) PSS N 0104 (Assisting in laying of underground and AB cables) PSS/ N 2001 (Use basic health and safety practices for power related work) CSC/ N 1336 (Work effectively with others) <p>Optional: N.A.</p>
Performance Criteria	As described in the relevant OS units

Definitions

Keywords /Terms	Description
Core Skills/Generic Skills	Core Skills or Generic Skills are a group of skills that are key to learning and working in today's world. These skills are typically needed in any work environment. In the context of the NOS, these include communication related skills that are applicable to most job roles.
Function	Function is an activity necessary for achieving the key purpose of the sector, occupation, or area of work, which can be carried out by a person or a group of persons. Functions are identified through functional analysis and form the basis of NOS.
Job role	Job role defines a unique set of functions that together form a unique employment opportunity in an organization.
Knowledge and Understanding	Knowledge and Understanding are statements which together specify the technical, generic, professional and organizational specific knowledge that an individual needs in order to perform to the required standard.
National Occupational Standards (NOS)	NOS are Occupational Standards which apply uniquely in the Indian context
Occupation	Occupation is a set of job roles, which perform similar/related set of functions in an industry.
Organisational Context	Organisational Context includes the way the organization is structured and how it operates, including the extent of operative knowledge managers have of their relevant areas of responsibility.
Performance Criteria	Performance Criteria are statements that together specify the standard of performance required when carrying out a task.
Qualifications Pack(QP)	Qualifications Pack comprises the set of NOS, together with the educational, training and other criteria required to perform a job role. A Qualifications Pack is assigned a unique qualification pack code.
Qualifications Pack Code	Qualifications Pack Code is a unique reference code that identifies a qualifications pack.
Scope	Scope is the set of statements specifying the range of variables that an individual may have to deal with in carrying out the function which have a critical impact on the quality of performance required.
Sector	Sector is a conglomeration of different business operations having similar businesses and interests. It may also be defined as a distinct subset of the economy whose components share similar characteristics and interests.
Sub-Sector	Sub-sector is derived from a further breakdown based on the characteristics and interests of its components.
Sub-functions	Sub-functions are sub-activities essential to fulfil the achieving the objectives of the function.
Technical Knowledge	Technical Knowledge is the specific knowledge needed to accomplish specific designated responsibilities.
Unit Code	Unit Code is a unique identifier for a NOS unit, which can be denoted with an 'N'
Unit Title	Unit Title gives a clear overall statement about what the incumbent should be able to do
Vertical	Vertical may exist within a sub-sector representing different domain areas or the client segments served by the industry.



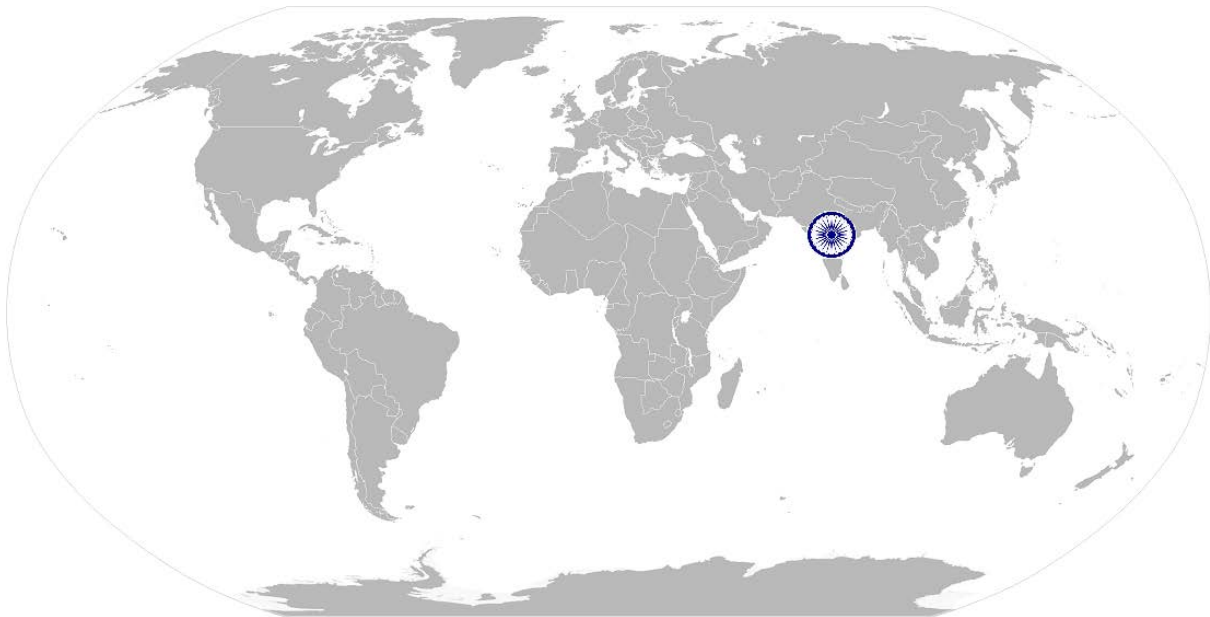
Acronyms

Keywords /Terms	Description
T&D	Transmission and Distribution
REC	Rural Electrification Corporation
AB Cables	Aerial Bunched Cables
HT	Hight Tension
LT	Low Tension
HV	High Voltage
LV	Low Voltage
BDV	Breakdown Voltage
ULF	Ultra Low Frequency
VLF	Very Low Frequency
OPGW	Optical Groundwire
KV	Kilovolt



PSS/ N 0101: Assisting in repair and maintenance of Power Distribution Lines and components

National Occupational Standard



Overview

This unit covers the competencies required for assistance to lineman and/or senior lineman in repair and maintenance of Power Distribution Lines. It also covers the respective health and safety competencies required to perform such operations.



PSS/ N 0101: Assisting in repair and maintenance of Power Distribution Lines and components

National Occupational Standard

Unit Code	PSS/ N 0101
Unit Title (Task)	Assist in repair and maintenance of Power Distribution Lines and components
Description	<p>This unit covers the competencies required by assistants who help linemen in the repair and maintenance for Power Transmission and Distribution Lines and components. This includes handling of tools and equipment for installation and maintenance and carrying out necessary tasks in a safe, efficient and effective manner. This will also include preventive and corrective maintenance of overhead and underground lines and cables.</p> <p>The candidate will be expected to perform mostly under supervision.</p>
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Working safely Handling tools and equipment Assisting in repair and maintenance for Power distribution lines Post repair and maintenance activities
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Working safely	<p>The user / individual on the job should be able to:</p> <p>PC1. work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines</p> <p>PC2. adhere to procedures or systems in place for health and safety, personal protective equipment (PPE) and other relevant safety regulations for electrical and related operations</p> <p>PC3. work following laid down procedures and instructions</p> <p>PC4. ensure that all tools, equipment, etc. are in a safe and usable condition and are kept at secured location</p> <p>PC5. ensure work area is clean and safe from hazards before and after the job is completed</p>
Handling tools and equipment for repair and maintenance	<p>The user / individual on the job should be able to:</p> <p>PC6. prepare and maintain the work area as per directions of Lineman/supervisor</p> <p>PC7. identify various types of circuits and its components correctly</p> <p>PC8. identify accurately and acquire correct tools, equipment required for various aspects of repair and maintenance of distribution lines and components</p> <p>PC9. ensure the tools and equipment are well maintained and handled, and approved for use</p> <p>PC10. select and use tools and equipment such as chainsaws, pruning saws, manlifts and chippers to trim trees or its branches where required</p> <p>PC11. identify hazards of trimming trees such as limits of approach, public safety and step and touch potential</p>

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	PC12. clean and handle transmission and distribution line tools according to standard procedures
Assist in repair and maintenance of Power distribution lines	<p>The user / individual on the job should be able to:</p> <p>PC13. follow instruction, job standards and specifications accurately and safely while assisting linemen in performing off-line overhead and underground line maintenance procedure according to company procedures</p> <p>PC14. hold, align, load and unload, poles and related equipment as per instructions and job standards and requirements accurately and safely while assisting in pole dismantling and re-setting procedure as per company procedures</p> <p>PC15. carry out conductor stringing procedures, paving conductor on the ground along the pole under the guidance of lineman/supervisor as per instructions</p> <p>PC16. re-tighten stay wires as per standard procedure, on instructions</p> <p>PC17. tighten nuts and bolts securely for aligning lines and under guidance of lineman</p> <p>PC18. hold, handover components, measure, unpack, join, align, load, unload equipment as per instructions, job standards and requirements accurately and safely while assisting linemen in repair of conductors by splicing, jointing, using armor rods, line guards and vibration dampers</p>
Post-repair and maintenance activities	<p>The user / individual on the job should be able to:</p> <p>PC19. deal promptly and effectively with problems within control, and seek help and guidance from the relevant people for problems that cannot be resolved</p> <p>PC20. leave the work area in a safe and tidy condition on completion of the repair and maintenance activities</p> <p>PC21. refer unresolved job related problems to appropriate personnel for support</p> <p>PC22. monitor the problem and keep the supervisor informed about progress or any delays in resolving the problem</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions</p> <p>KA2. relevant health and safety requirements applicable in the work place</p> <p>KA3. own job role and responsibilities and sources for information pertaining to employment terms, entitlements, job role and responsibilities</p> <p>KA4. reporting structure, inter-dependent functions, lines and procedures in the work area</p> <p>KA5. how to engage with specialists for support in order to resolve incidents and service requests</p> <p>KA6. importance of working in clean and safe environment practices and procedures</p> <p>KA7. relevant people and their responsibilities within the work area</p> <p>KA8. escalation matrix and procedures for reporting work and employment related issues</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. common electricity terminology and correct interpretation of the same</p>



PSS/ N 0101: Assisting in repair and maintenance of Power Distribution Lines and components

	<p>Terminology: e.g. Current, Voltage, Resistance, Kilowatt (kw), Kilowatt hour: (kwh)(unit of electric consumption)</p> <p>KB2. specific terminology used in Distribution Line work</p> <p>Terminology: e.g. pole, tower, load, load shedding, etc.</p> <p>KB3. elements of the power system</p> <p>Elements: e.g. generation, transmission, distribution, metering, etc.</p> <p>KB4. different types of material and accessories used in power T&D</p> <p>Materials and accessories: e.g. Supports (Poles-Steel, Cement , Wooden), Conductors (Sizes, current carrying capacity), Conductor Accessories, Binding Tape, Binding Wire, P.G. Clamp, T Clamp etc. , Insulators (Pin, Disc, shackle, Guy etc.), Cross Arms, Stay sets, GO Switches etc. type of cross arms, etc.</p> <p>KB5. tools and equipment used in testing, repair and maintenance</p> <p>Tools: e.g. Plier, Screwdriver, Wrench set, Hammer, Drilling machine, Hacksaw / cutting tools, Measuring tape, Pulleys (Force Pulley with sling), Tommy bar, Crimping machine, Round / flat file, Earth rod (discharge rod), leakage current monitoring kit</p> <p>KB6. specific health and safety precautions which must be taken when carrying out T&D lines repair and maintenance work especially live line or equipment</p> <p>Precautions: e.g. loose dhotis, pajamas, key chain or watch chains should not be worn; shoes with projecting nails or other types of metal parts not to be used; do not start work unless circuit is in off condition, line clear permit is taken on equipment, equipment or line is properly earthed, every electrical line or equipment should be first made off and take line clear permit before taking the work in hand</p> <p>KB7. types and sizes of conductors and cables</p> <p>KB8. causes of conductor damage</p> <p>Causes: Aeolian vibration, sway oscillation, galloping, unbalanced loading</p> <p>KB9. importance of following good housekeeping and fire prevention procedures</p> <p>KB10. importance of following job instructions and defined maintenance procedures</p> <p>KB11. components of Distribution lines</p> <p>Line components: e.g. cross arm, insulator, line hardware, x-brace, armor rod, conductor, jumper, copper bond, arching horn, spacer, gang operated switch, drop out fuse, lightning arrester, etc..</p> <p>KB12. importance of leaving the work area and equipment in a safe and clean condition on completion of the repair and maintenance activities</p> <p>KB13. importance of reporting problems in a timely manner</p> <p>KB14. principles and practices of electrical safety</p> <p>KB15. standard procedures how to deal with electric shocks and electrocutions to rescue and minimize damage and harm</p> <p>KB16. personal protective equipment (PPE) and clothing that must be worn during the inspection, repair and maintenance activity and from where can it be obtained</p> <p>PPE: e.g. safety helmet, safety glove, safety shoe, climbing harness, lanyard and tool belt (when climbing), earth rod (discharge rod), zola, safety rope</p>
Skills (S) [Optional]	
A. Core Skills/	Communication

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Generic Skills	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. listen and interpret information correctly regarding various job specifications, health and safety instructions, memos, etc. applicable to the job in English and/or local language</p> <p>SA2. check and clarify task-related information</p> <p>SA3. liaise with appropriate authorities using correct protocol</p> <p>SA4. communicate with people in respectful form and manner in line with organizational protocol</p>
	Numerical and computational skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA5. undertake basic numerical computations and calculations Numerical computations: addition, subtraction, multiplication, division,</p> <p>SA6. identify various basic, compound and solid shapes as per dimensions given Basic shapes: square, rectangle, triangle, circle, quadrilaterals Solid shapes: cube, rectangular prism, cylinder</p> <p>SA7. use appropriate measuring techniques and units of measurement</p> <p>SA8. use appropriate units and number systems to express degree of accuracy Units and number systems representing degree of accuracy: decimals places, significant figures</p> <p>SA9. use metric systems of measurement</p>
	Learning
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA10. participate in on-the-job and other learning, training and development interventions and assessments</p> <p>SA11. clarify task related information with appropriate personnel or technical adviser</p> <p>SA12. seek to improve and modify own work practices</p> <p>SA13. maintain current knowledge of application standards, legislation, codes of practice and product/process developments</p>
B. Professional Skills	Problem Solving
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. identify problems with work planning, procedures, output and behavior and their implications</p> <p>SB2. prioritize and plan for problem solving</p> <p>SB3. communicate problems appropriately to others</p> <p>SB4. identify sources of information and support for problem solving</p> <p>SB5. seek assistance and support from other sources to solve problems</p> <p>SB6. identify effective resolution techniques</p> <p>SB7. select and apply resolution techniques</p> <p>SB8. seek evidence for problem resolution</p>
	Plan and Organize
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB9. plan, prioritize and sequence work operations as per job requirements</p> <p>SB10. organize and analyze information relevant to work</p> <p>SB11. basic concepts of shop-floor work productivity including waste reduction,</p>

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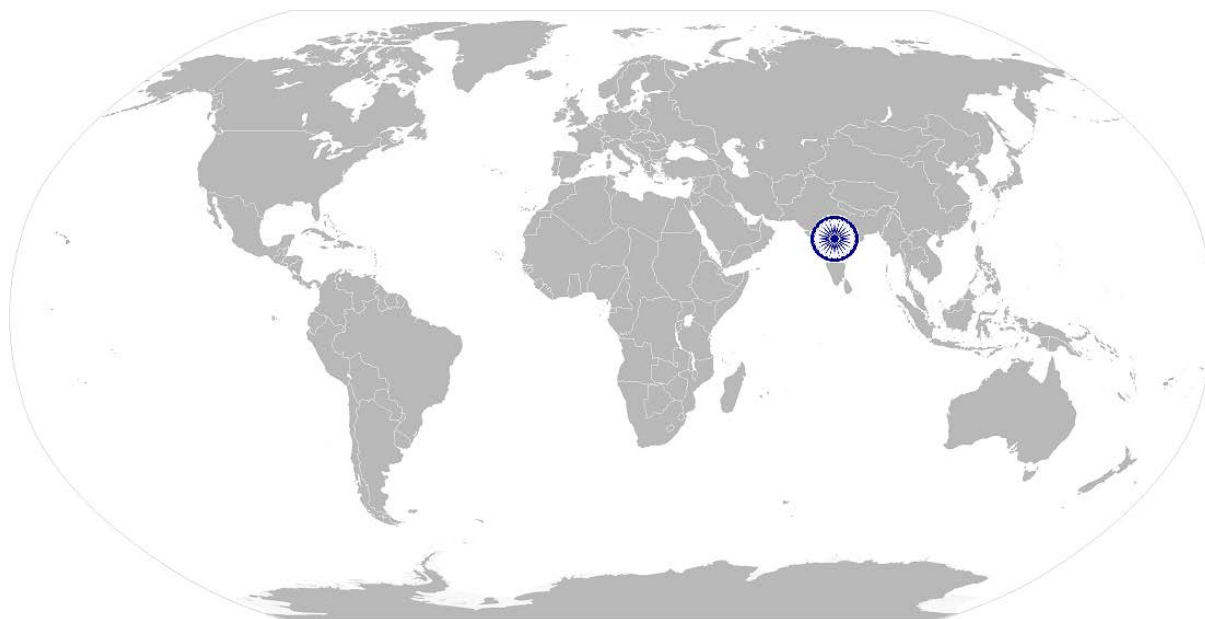
	efficient material usage and optimization of time
	Initiative and Enterprise
	The user/individual on the job needs to know and understand how to: SB12. undertake and express new ideas and initiatives to others SB13. modify work plan to overcome unforeseen difficulties or developments that occur as work progresses SB14. participate in improvement procedures including process, quality and internal/external customer/supplier relationships SB15. one's competencies in new and different situations and contexts to achieve more
	Self-Management
	The user/individual on the job needs to know and understand how to: SB16. exercise restraint while expressing dissent and during conflict situations SB17. avoid and manage distractions to be disciplined at work SB18. manage own time for achieving better results
	Teamwork
	The user/individual on the job needs to know and understand how to: SB19. work in a team in order to achieve better results SB20. identify and clarify work roles within a team SB21. communicate and cooperate with others in the team for better results SB22. seek assistance from fellow team members



PSS/ N 0101: Assisting in repair and maintenance of Power Distribution Lines and components

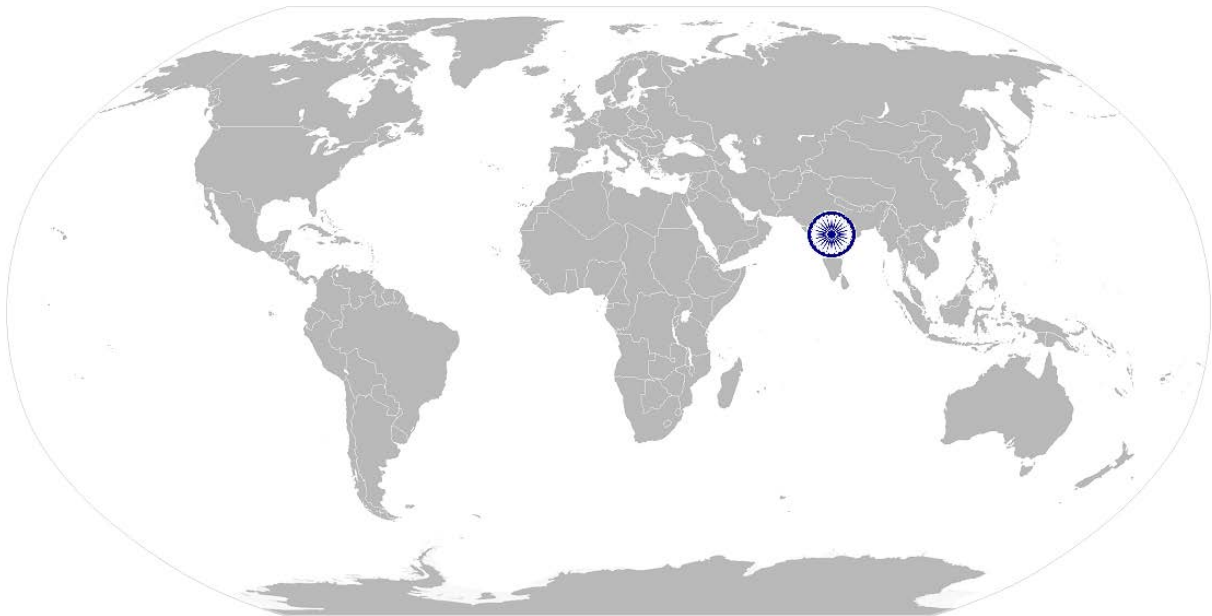
NOS Version Control

NOS Code	PSS/ N 0101		
Credits NSQF	TBD	Version number	1.0
Industry	Power	Drafted on	26/03/15
Industry Sub-sector	Distribution	Last reviewed on	26/03/15
		Next review date	26/03/17





National Occupational Standard



Overview

This unit covers the competencies required for supporting erection of Power Distribution Lines through preparation and assistance in activities involved. It also covers the respective health and safety competencies required to perform such operations.

PSS/ N 0102: Preparation and assistance for erection of Power Distribution Lines

Unit Code	PSS/ N 0102
Unit Title (Task)	Preparation and assistance for erection of Power Distribution Lines
Description	<p>This unit covers the competencies required by technical helpers to assist in the erection of Power Distribution Lines. This includes working with the crew to install poles, dismantle poles and lay wiring, handling of tools and equipment for installation and carrying out necessary tasks in a safe, efficient and effective manner.</p> <p>The candidate will be expected to perform entirely under supervision and as per instructions given.</p>
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Working safely • Prepare for erection of Power Distribution Lines • Support and assist in Erection of Power Distribution Lines • Post erection activities
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Working safely	<p>The user / individual on the job should be able to:</p> <p>PC1. work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines</p> <p>PC2. adhere to procedures or systems in place for health and safety, personal protective equipment (PPE) and other relevant safety regulations for electrical and related operations</p> <p>PC3. work following laid down procedures and instructions</p> <p>PC4. ensure that all tools and equipment are in a safe and usable condition and are kept at secured location</p> <p>PC5. ensure work area is clean and safe from hazards before and after the job is completed</p>
Prepare for erection or removal of Power Distribution lines	<p>The user / individual on the job should be able to:</p> <p>PC6. clarify and accurately understand job requirements for specific operations as per instructions given</p> <p>PC7. identify equipment and tools required for installation work</p> <p>PC8. perform loading and unloading operations for pole tower parts, tools and equipment in a safe and efficient manner</p> <p>PC9. report hazards to senior crew members</p>
Support and assist in erection or removal of Power Distribution lines	<p>The user / individual on the job should be able to:</p> <p>PC10. perform excavation operations for pole setting, as per requirement and specifications mentioned by the lineman or supervisor, in a safe and efficient manner</p> <p>PC11. perform pole erection procedures as per requirements and instructions, in a safe and efficient manner</p>

PSS/ N 0102: Preparation and assistance for erection of Power Distribution Lines

	<p>PC12. set poles to proper depth, and align properly to the satisfaction of the supervisor</p> <p>PC13. measure materials accurately for concrete mixing as per instructions</p> <p>PC14. mix concrete to required texture and consistency as per instructions given</p> <p>PC15. carry out pit filling as per requirement, as correct procedures</p> <p>PC16. perform pole dismantling procedure where required</p> <p>PC17. perform post-installation procedures for ensuring clean and safe environment in the work and surrounding area</p>
<p>Post Erection activities</p>	<p>The user / individual on the job should be able to:</p> <p>PC18. remove the waste components safely and correctly</p> <p>PC19. deal promptly and effectively with problems within control, and seek help and guidance from the relevant people for problems that cannot be resolved</p> <p>PC20. leave the work area in a safe and tidy condition on completion of the erection activities</p> <p>PC21. refer unresolved job related problems to appropriate personnel for support</p> <p>PC22. monitor the problem and keep the lineman or supervisor informed about progress or any delays in resolving the problem</p>
<p>Knowledge and Understanding (K)</p>	
<p>A. Organizational Context (Knowledge of the company / organization and its processes)</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions</p> <p>KA2. relevant health and safety requirements applicable in the work place</p> <p>KA3. own job role and responsibilities and sources for information pertaining to employment terms, entitlements, job role and responsibilities</p> <p>KA4. reporting structure, inter-dependent functions, lines and procedures in the work area</p> <p>KA5. how to engage with specialists for support in order to resolve incidents and service requests</p> <p>KA6. importance of working in clean and safe environment practices and procedures</p> <p>KA7. relevant people and their responsibilities within the work area</p> <p>KA8. escalation matrix and procedures for reporting work and employment related issues</p>
<p>B. Technical Knowledge</p>	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. basic electric safety</p> <p>KB2. cement and concrete mixing principles</p> <p>KB3. materials used in a concrete mix such as sand, water, cement, gravel, mortar</p> <p>KB4. importance of correctly mixing ingredients for preparing concrete</p> <p>KB5. kinds of tools and equipment used in erection of poles and towers Tools and equipment: e.g. sling, drilling machine, climbing gear, digging tools, wrench set, hammer, tool's bag, block and tackle with rope, ratchet set, hand winch, compression tool, hydraulic cutter, boom truck, pulleys (force pulley with sling), come along clamp, max puller, tension meter</p> <p>KB6. tower parts and accessories</p> <p>KB7. Parts and accessories: e.g. insulator, machine bolts, suspension clamps, strain clamp, overhead earth wires, cross-arms and braces, conductors and</p>

PSS/ N 0102: Preparation and assistance for erection of Power Distribution Lines

	<p>accessories, OPGW (optical ground wire), tower parts (lattices / members, step bolts, bolts and nuts, plates and back plates, grounding cables)</p> <p>KB8. specific health and safety precautions which must be taken when carrying out pole erection procedures Safety requirements: e.g. poles securely fastened, warning devices are installed</p> <p>KB9. hazards associated with carrying out pole erection processes and how they can be minimized Hazards: e.g. blockages and obstructions, live wires and equipment, unsecured ladders, etc.</p> <p>KB10. importance of following job instructions and defined procedures for tower/pole erection</p> <p>KB11. importance of leaving the work area and equipment in a safe and clean condition on completion of the erection activities</p> <p>KB12. importance of reporting problems in a timely manner</p> <p>KB13. importance of tools and equipment to be kept in a safe and usable condition</p> <p>KB14. personal protective equipment (PPE) and clothing that must be worn during the heat treatment activity and from where can it be obtained</p>
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	<p>Communication</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. listen and interpret information correctly from various job specifications, health and safety instructions, memos, etc. applicable to the job in English and/or local language</p> <p>SA2. convey and share technical information clearly using appropriate language</p> <p>SA3. check and clarify task-related information</p> <p>SA4. liaise with appropriate authorities using correct protocol</p> <p>SA5. communicate with people in respectful form and manner in line with organizational protocol</p> <p>Numerical and computational skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. undertake basic numerical computations and calculations Numerical computations: addition, subtraction, multiplication, division,</p> <p>SA7. identify various basic, compound and solid shapes as per dimensions given Basic shapes: square, rectangle, triangle, circle, quadrilaterals Solid shapes: cube, rectangular prism, cylinder</p> <p>SA8. use appropriate measuring techniques and units of measurement</p> <p>SA9. use appropriate units and number systems to express degree of accuracy Units and number systems representing degree of accuracy: decimals places, significant figures</p> <p>SA10. use metric systems of measurement</p>
	Learning

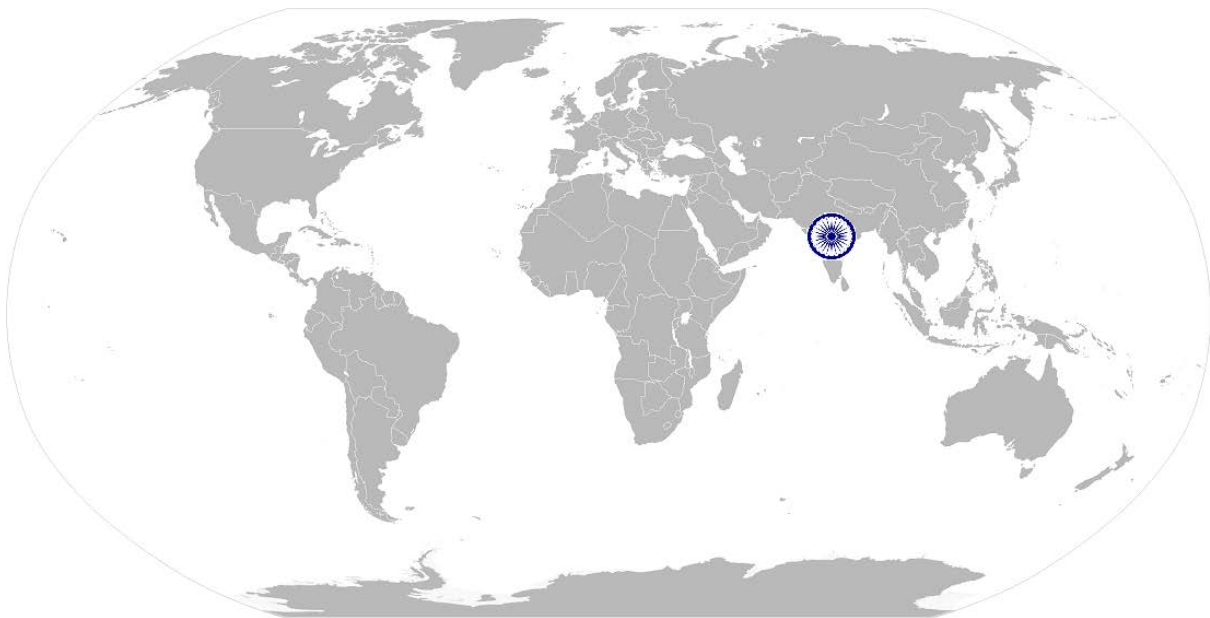
PSS/ N 0102: Preparation and assistance for erection of Power Distribution Lines

	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA11. participate in on-the-job and other learning, training and development interventions and assessments</p> <p>SA12. clarify task related information with appropriate personnel or technical adviser</p> <p>SA13. seek to improve and modify own work practices</p> <p>SA14. maintain current knowledge of application standards, legislation, codes of practice and product/process developments</p>
<p>B. Professional Skills</p>	<p>Problem Solving</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB1. identify problems with work planning, procedures, output and behavior and their implications</p> <p>SB2. prioritize and plan for problem solving</p> <p>SB3. communicate problems appropriately to others</p> <p>SB4. identify sources of information and support for problem solving</p> <p>SB5. seek assistance and support from other sources to solve problems</p> <p>SB6. identify effective resolution techniques</p> <p>SB7. select and apply resolution techniques</p> <p>SB8. seek evidence for problem resolution</p>
	<p>Plan and Organize</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB9. plan, prioritize and sequence work operations as per job requirements</p> <p>SB10. organize and analyze information relevant to work</p> <p>SB11. basic concepts of shop-floor work productivity including waste reduction, efficient material usage and optimization of time</p>
	<p>Initiative and Enterprise</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB12. undertake and express new ideas and initiatives to others</p> <p>SB13. modify work plan to overcome unforeseen difficulties or developments that occur as work progresses</p> <p>SB14. participate in improvement procedures including process, quality and internal/external customer/supplier relationships</p> <p>SB15. one's competencies in new and different situations and contexts to achieve more</p>
	<p>Self-Management</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB16. exercise restraint while expressing dissent and during conflict situations</p> <p>SB17. avoid and manage distractions to be disciplined at work</p> <p>SB18. manage own time for achieving better results</p>
	<p>Teamwork</p>
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SB19. work in a team in order to achieve better results</p> <p>SB20. identify and clarify work roles within a team</p> <p>SB21. communicate and cooperate with others in the team for better results</p> <p>SB22. seek assistance from fellow team members</p>

PSS/ N 0102: Preparation and assistance for erection of Power Distribution Lines

NOS Version Control

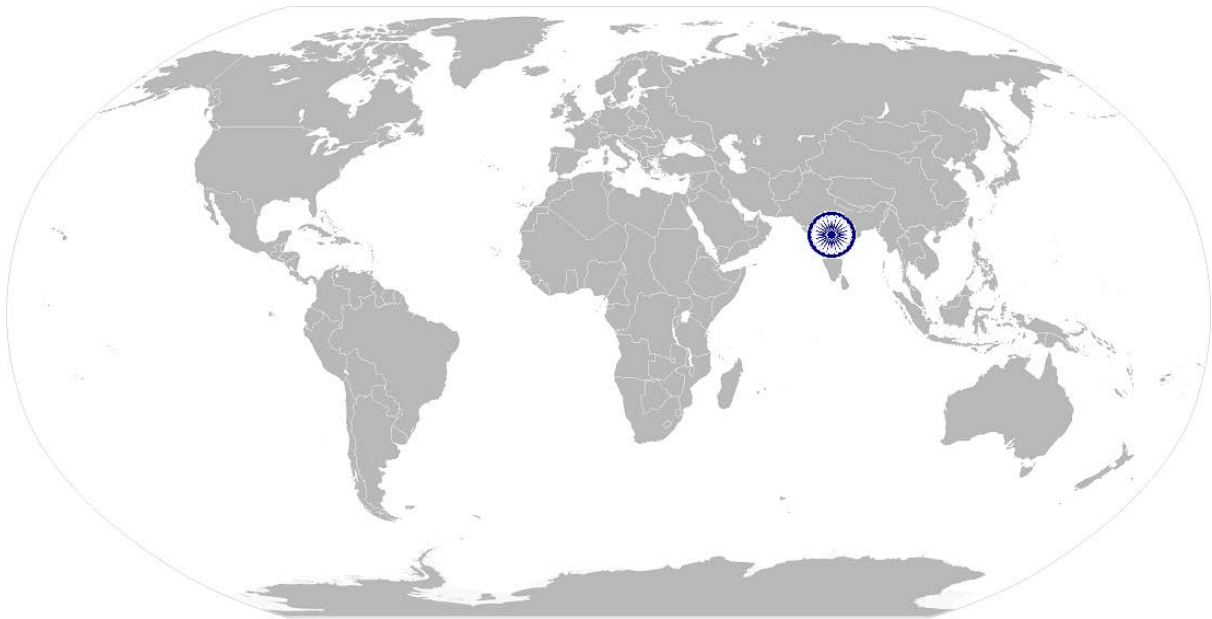
NOS Code	PSS/ N 0102		
Credits NSQF	TBD	Version number	1.0
Industry	Power	Drafted on	26/03/15
Industry Sub-sector	Distribution	Last reviewed on	26/03/15
		Next review date	26/03/17





PSS/ N 0103: Assisting in operation and maintenance of 11/0.433 KV Distribution Substation

National Occupational Standard



Overview

This unit covers the competencies required for supporting and providing assistance in the erection and maintenance of an 11/0.433 KV Distribution Substation. It also covers the respective health and safety competencies required to perform such operations.



PSS/ N 0103: Assisting in operation and maintenance of 11/0.433 KV Distribution Substation

Unit Code	PSS/ N 0103
Unit Title (Task)	Assisting in operation and maintenance of an 11/0.433 KV Distribution Substation
Description	<p>This unit covers the competencies required by technical helpers to support and assist in erection and maintenance for an 11/0.433 KV Distribution Substation. This includes working with the crew to install the Substation transformer, handling of tools and equipment for installation and maintenance and carrying out necessary tasks in a safe, efficient and effective manner.</p> <p>The candidate will be expected to perform under complete supervision and as per instructions given.</p>
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Working safely • Assisting to erect an 11/0.433 KV Distribution Substation • Assisting in carrying out maintenance for the Distribution Substation • Post erection activities
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Working safely	<p>The user / individual on the job should be able to:</p> <p>PC1. work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines</p> <p>PC2. adhere to procedures or systems in place for health and safety, personal protective equipment (PPE) and other relevant safety regulations for Electrical and related operations</p> <p>PC3. work following laid down procedures and instructions</p> <p>PC4. ensure that all tools, equipment, power cables are in a safe and usable condition and are kept at secured location</p> <p>PC5. ensure work area is clean and safe from hazards before and after the job is completed</p>
Assisting to erect an 11/0.433 KV Distribution Substation	<p>The user / individual on the job should be able to:</p> <p>PC6. clarify and understand accurately job requirements for specific operations as per instructions given by supervisor</p> <p>PC7. identify various components of the power system</p> <p>PC8. identify equipment and tools required for installation work accurately</p> <p>PC9. inspect the component to check if it is as per specification and without defects</p> <p>PC10. identify, measure and acquire correct materials required for the Substation erection and installation work</p> <p>PC11. perform loading and unloading operations for substation parts in a safe and efficient manner</p>



PSS/ N 0103: Assisting in operation and maintenance of 11/0.433 KV Distribution Substation

	PC12. assist in lifting the transformer and putting it on the transformer bed in a safe and efficient manner
Assisting in carrying out maintenance of the substation	<p>The user / individual on the job should be able to:</p> <p>PC13. hand over correct equipment and tools to supervisors and senior technicians in a safe manner</p> <p>PC14. clean bushings, transformer and other components safely and as per correct procedure</p> <p>PC15. remove dust & dirt deposition, salt or chemical deposition, cement or acid fumes depositions</p> <p>PC16. clean conservator from inside as per instruction and standard procedure</p> <p>PC17. climb ladders and elevated platforms and structures to carry out maintenance and other activities, safely</p>
Post erection activities	<p>The user / individual on the job should be able to:</p> <p>PC18. layout gravel in the substation as required</p> <p>PC19. assist in fixing the fence to secure the substation in a safe, efficient manner as per correct procedure</p> <p>PC20. fix rating plate and diagram plate as per requirement</p> <p>PC21. deal promptly and effectively with problems within control, and seek help and guidance from the relevant people for problems that cannot be resolved</p> <p>PC22. leave the work area in a safe and tidy condition on completion of the substation construction and maintenance activities</p> <p>PC23. refer unresolved job related problems to appropriate personnel for support</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes) as	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions</p> <p>KA2. relevant health and safety requirements applicable in the work place</p> <p>KA3. own job role and responsibilities and sources for information pertaining to employment terms, entitlements, job role and responsibilities</p> <p>KA4. reporting structure, inter-dependent functions, lines and procedures in the work area</p> <p>KA5. how to engage with specialists for support in order to resolve incidents and service requests</p> <p>KA6. importance of working in clean and safe environment practices and procedures</p> <p>KA7. relevant people and their responsibilities within the work area</p> <p>KA8. escalation matrix and procedures for reporting work and employment related issues</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. various components of the power system Components: e.g. transformers</p> <p>KB2. specific health and safety precautions which must be taken when carrying out substation installation and maintenance processes</p> <p>KB3. hazards associated with carrying out substation construction and installation</p>

PSS/ N 0103: Assisting in operation and maintenance of 11/0.433 KV Distribution Substation

	<p>process and maintenance, and how they can be minimized Hazards: e.g. live wires and equipment, heavy objects, insects and reptiles, obstructions and blockages, sharp edges and equipment, etc.</p> <p>KB4. importance of following job instructions and defined installation and maintenance procedures</p> <p>KB5. equipment used in substation construction and maintenance activities</p> <p>KB6. importance of leaving the work area and equipment in a safe and clean condition on completion of the heat treatment activities</p> <p>KB7. importance of reporting problems in a timely manner</p> <p>KB8. importance of tools and equipment to be kept in a safe and usable condition</p> <p>KB9. importance of using gravel in paving substation surfaces</p> <p>KB10. importance of displaying rating and diagram plates</p> <p>KB11. personal protective equipment (PPE) and clothing that must be worn during the heat treatment activity and from where can it be obtained</p>
Skills (S) [Optional]	
<p>A. Core Skills/ Generic Skills</p>	Communication
	<p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. listen and interpret information correctly from various job specification documents, manuals, health and safety instructions, memos, etc. applicable to the job in English and/or local language</p> <p>SA2. convey and share technical information clearly using appropriate language</p> <p>SA3. check and clarify task-related information</p> <p>SA4. liaise with appropriate authorities using correct protocol</p> <p>SA5. communicate with people in respectful form and manner in line with organizational protocol</p>
	Numerical and computational skills
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. undertake basic numerical computations and calculations Numerical computations: addition, subtraction, multiplication, division,</p> <p>SA7. identify various basic, compound and solid shapes as per dimensions given Basic shapes: square, rectangle, triangle, circle, quadrilaterals Solid shapes: cube, rectangular prism, cylinder</p> <p>SA8. use appropriate measuring techniques and units of measurement</p> <p>SA9. use appropriate units and number systems to express degree of accuracy Units and number systems representing degree of accuracy: decimals places, significant figures</p> <p>SA10. use metric systems of measurement</p>
	Learning
	<p>The user/individual on the job needs to know and understand how to:</p> <p>SA11. participate in on-the-job and other learning, training and development interventions and assessments</p> <p>SA12. clarify task related information with appropriate personnel or technical adviser</p> <p>SA13. seek to improve and modify own work practices</p> <p>SA14. maintain current knowledge of application standards, legislation, codes of practice and product/process developments</p>



PSS/ N 0103: Assisting in operation and maintenance of 11/0.433 KV Distribution Substation

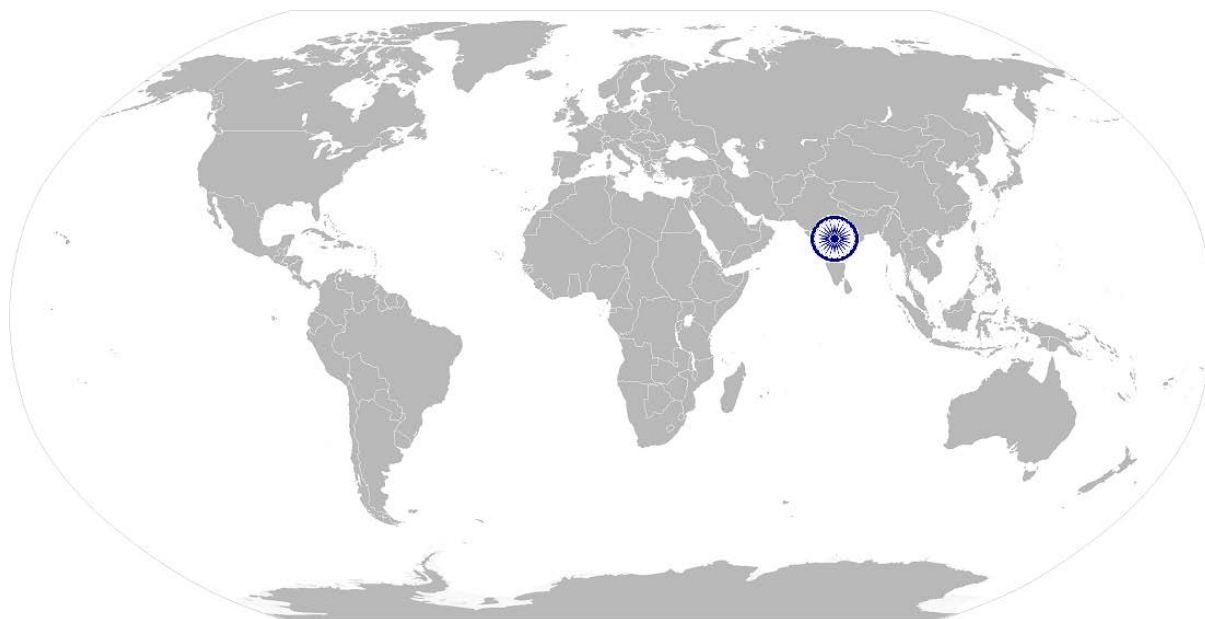
B. Professional Skills	Problem Solving
	The user/individual on the job needs to know and understand how to: SB1. identify problems with work planning, procedures, output and behavior and their implications SB2. prioritize and plan for problem solving SB3. communicate problems appropriately to others SB4. identify sources of information and support for problem solving SB5. seek assistance and support from other sources to solve problems SB6. identify effective resolution techniques SB7. select and apply resolution techniques SB8. seek evidence for problem resolution
	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB9. plan, prioritize and sequence work operations as per job requirements SB10. organize and analyze information relevant to work SB11. basic concepts of shop-floor work productivity including waste reduction, efficient material usage and optimization of time
	Initiative and Enterprise
	The user/individual on the job needs to know and understand how to: SB12. undertake and express new ideas and initiatives to others SB13. modify work plan to overcome unforeseen difficulties or developments that occur as work progresses SB14. participate in improvement procedures including process, quality and internal/external customer/supplier relationships SB15. one's competencies in new and different situations and contexts to achieve more
	Self-Management
	The user/individual on the job needs to know and understand how to: SB16. exercise restraint while expressing dissent and during conflict situations SB17. avoid and manage distractions to be disciplined at work SB18. manage own time for achieving better results
	Teamwork
	The user/individual on the job needs to know and understand how to: SB19. work in a team in order to achieve better results SB20. identify and clarify work roles within a team SB21. communicate and cooperate with others in the team for better results SB22. seek assistance from fellow team members



PSS/ N 0103: Assisting in operation and maintenance of 11/0.433 KV Distribution Substation

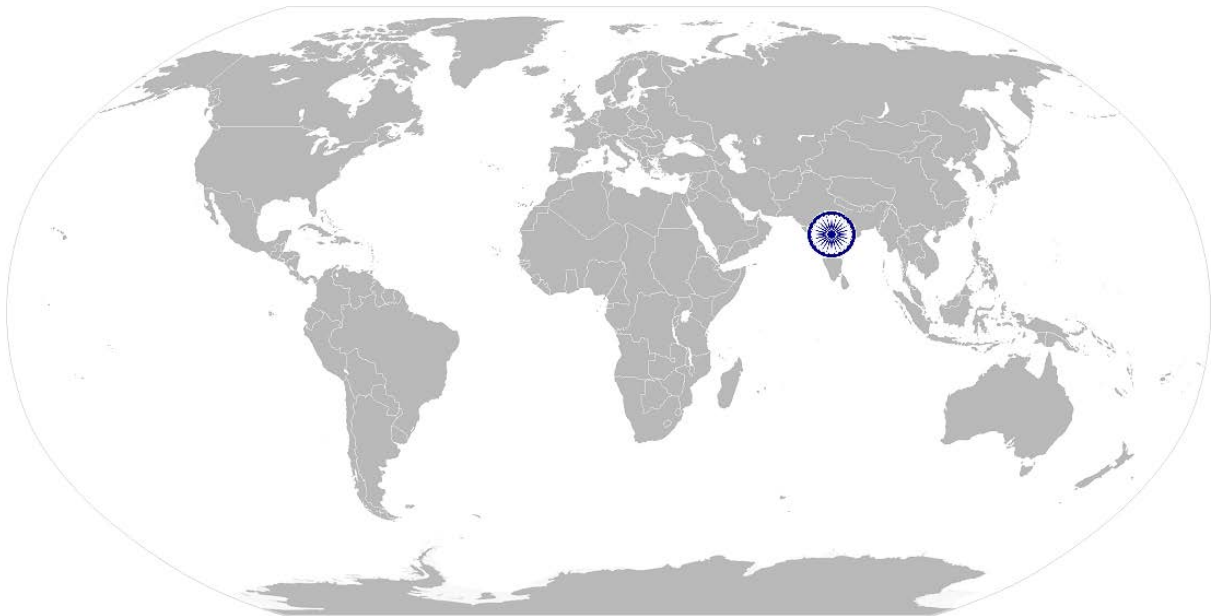
NOS Version Control

NOS Code	PSS/ N 0103		
Credits NSQF	TBD	Version number	1.0
Industry	Power	Drafted on	26/03/15
Industry Sub-sector	Distribution	Last reviewed on	26/03/15
		Next review date	26/03/17



PSS/ N 0104: Assisting in laying of underground and AB cables

National Occupational Standard



Overview

This unit covers the competencies required for assisting in laying down underground and AB cables for Power Distribution, including preparing the cables, trenching and laying of these lines. It also covers the respective health and safety competencies required to perform such operations.

PSS/ N 0104: Assisting in laying of underground and AB cables

Unit Code	PSS/ N 0104
Unit Title (Task)	Assisting in laying of underground and AB cables
Description	<p>This unit covers the competencies required by technical helpers to support linemen in laying underground and AB cables for setting up Power Distribution Lines. This includes digging trenches, prepare and lay wiring, handling of tools and equipment for laying cables and carrying out necessary tasks in a safe, efficient and effective manner.</p> <p>The candidate will be expected to perform under complete supervision and as per instructions given.</p>
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Working safely • Preparing for laying cables • Assisting in laying and maintenance of cables • Post laying activities
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Working safely	<p>The user / individual on the job should be able to:</p> <p>PC1. work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines</p> <p>PC2. adhere to procedures or systems in place for health and safety, personal protective equipment (PPE) and other relevant safety regulations for Electrical and related operations</p> <p>PC3. work following laid down procedures and instructions</p> <p>PC4. ensure that all tools, equipment, power cables are in a safe and usable condition and are kept at secured location</p> <p>PC5. ensure work area is clean and safe from hazards before and after the job is completed</p>
Preparing materials for job	<p>The user / individual on the job should be able to:</p> <p>PC6. clarify job requirements for specific operations as per instructions given from the supervisor</p> <p>PC7. identify all tools and equipment required for the work are acquired and transported safely to the work site</p> <p>PC8. perform loading and unloading of materials, tools and equipment in a safe and efficient manner</p>
Assisting in laying and maintenance of cables	<p>The user / individual on the job should be able to:</p> <p>PC9. perform trench digging operations as per requirement and specifications, in a safe and efficient manner</p> <p>PC10. pull cable through conduit using equipment such as tension machines, winches and capstans</p> <p>PC11. measure materials required for the concrete mix and mixing them in</p>

PSS/ N 0104: Assisting in laying of underground and AB cables

	proportions specified by the supervisor
Post laying operations	<p>The user / individual on the job should be able to:</p> <p>PC12. deal promptly and effectively with problems within control, and seek help and guidance from the relevant people for problems that cannot be resolved</p> <p>PC13. perform post-installation procedures for ensuring clean and safe environment in the work and surrounding area</p> <p>PC14. refer unresolved job related problems to appropriate personnel for support</p> <p>PC15. monitor the problem and keep the lineman or supervisor informed about progress or any delays in resolving the problem</p> <p>PC16. transport and store materials, equipment, tools as per laid down practice, in as safe and efficient manner</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. relevant legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions</p> <p>KA2. relevant health and safety requirements applicable in the work place</p> <p>KA3. own job role and responsibilities and sources for information pertaining to employment terms, entitlements, job role and responsibilities</p> <p>KA4. reporting structure, inter-dependent functions, lines and procedures in the work area</p> <p>KA5. how to engage with specialists for support in order to resolve incidents and service requests</p> <p>KA6. importance of working in clean and safe environment practices and procedures</p> <p>KA7. relevant people and their responsibilities within the work area</p> <p>KA8. escalation matrix and procedures for reporting work and employment related issues</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. common electric and power terminology used in distribution</p> <p>KB2. specific health and safety precautions which must be taken when carrying out cable laying processes and working in confined spaces Precautions: e.g. loose dhotis, pajamas, key chain or watch chains should not be worn; shoes with projecting nails or other types of metal parts not to be used; do not start work unless circuit is in off condition, line clear permit is taken on equipment, equipment or line is properly earthed, every electrical line or equipment should be first made off and take line clear permit before taking the work in hand</p> <p>KB3. hazards associated with carrying out cable laying processes and how they can be minimized Hazards: live wires and equipment, blockages and obstructions, loose earth, sharp surfaces and edges, insects and reptiles, heavy objects, etc.</p> <p>KB4. importance of following job instructions and defined cable laying procedures</p> <p>KB5. tools and equipment used in cable laying activities</p> <p>KB6. preparation of cables and equipment for cable laying activities</p> <p>KB7. adjacent utilities such as gas, water, communication and drainage requirements</p>

PSS/ N 0104: Assisting in laying of underground and AB cables

	<p>KB8. trench digging techniques and related safety measures KB9. concrete mixing techniques and materials involved KB10. back filling procedures KB11. pulling methods and calculations KB12. importance of leaving the work area and equipment in a safe and clean condition on completion of the job activities KB13. importance of reporting problems in a timely manner KB14. importance of tools and equipment to be kept in a safe and usable condition KB15. personal protective equipment (PPE) and clothing that must be worn during the cable laying and maintenance activity and from where can it be obtained PPE: e.g. safety helmet, safety glove, safety shoe, climbing harness, lanyard and tool belt (when climbing), earth rod (discharge rod), zola, safety rope</p>
Skills (S) [Optional]	
A. Core Skills/ Generic Skills	<p>Communication</p> <p>The user/ individual on the job needs to know and understand how to:</p> <p>SA1. interpret information correctly from various job specification documents, manuals, health and safety instructions, memos, etc. applicable to the job in English and/or local language SA2. convey and share technical information clearly using appropriate language SA3. check and clarify task-related information SA4. liaise with appropriate authorities using correct protocol SA5. communicate with people in respectful form and manner in line with organizational protocol</p> <p>Numerical and computational skills</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA6. undertake basic numerical computations and calculations Numerical computations: addition, subtraction, multiplication, division, SA7. identify various basic, compound and solid shapes as per dimensions given Basic shapes: square, rectangle, triangle, circle, quadrilaterals Solid shapes: cube, rectangular prism, cylinder SA8. use appropriate measuring techniques and units of measurement SA9. use appropriate units and number systems to express degree of accuracy Units and number systems representing degree of accuracy: decimals places, significant figures SA10. use metric systems of measurement</p>
	<p>Learning</p> <p>The user/individual on the job needs to know and understand how to:</p> <p>SA11. participate in on-the-job and other learning, training and development interventions and assessments SA12. clarify task related information with appropriate personnel or technical adviser SA13. seek to improve and modify own work practices SA14. maintain current knowledge of application standards, legislation, codes of practice and product/process developments</p>
B. Professional Skills	Problem Solving

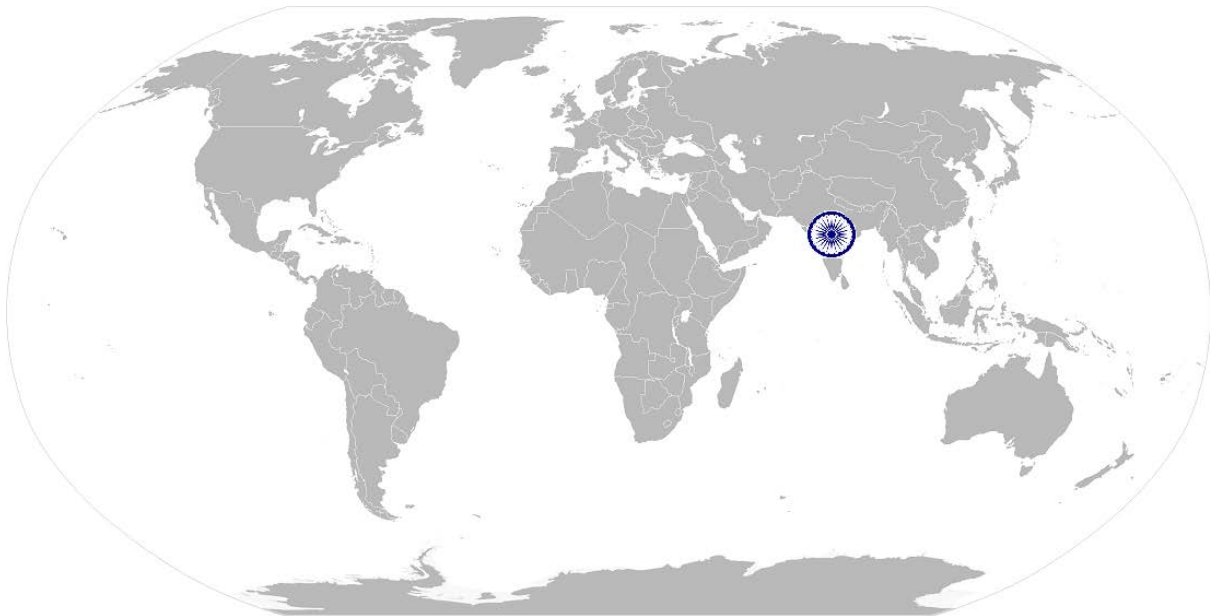
PSS/ N 0104: Assisting in laying of underground and AB cables

	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB1. identify problems with work planning, procedures, output and behavior and their implications SB2. prioritize and plan for problem solving SB3. communicate problems appropriately to others SB4. identify sources of information and support for problem solving SB5. seek assistance and support from other sources to solve problems SB6. identify effective resolution techniques SB7. select and apply resolution techniques SB8. seek evidence for problem resolution
	Plan and Organize
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB9. plan, prioritize and sequence work operations as per job requirements SB10. organize and analyze information relevant to work SB11. basic concepts of shop-floor work productivity including waste reduction, efficient material usage and optimization of time
	Initiative and Enterprise
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB12. undertake and express new ideas and initiatives to others SB13. modify work plan to overcome unforeseen difficulties or developments that occur as work progresses SB14. participate in improvement procedures including process, quality and internal/external customer/supplier relationships SB15. one's competencies in new and different situations and contexts to achieve more
	Self-Management
	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB16. exercise restraint while expressing dissent and during conflict situations SB17. avoid and manage distractions to be disciplined at work SB18. manage own time for achieving better results
	Teamwork
<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none"> SB19. work in a team in order to achieve better results SB20. identify and clarify work roles within a team SB21. communicate and cooperate with others in the team for better results SB22. seek assistance from fellow team members 	

PSS/ N 0104: Assisting in laying of underground and AB cables

NOS Version Control

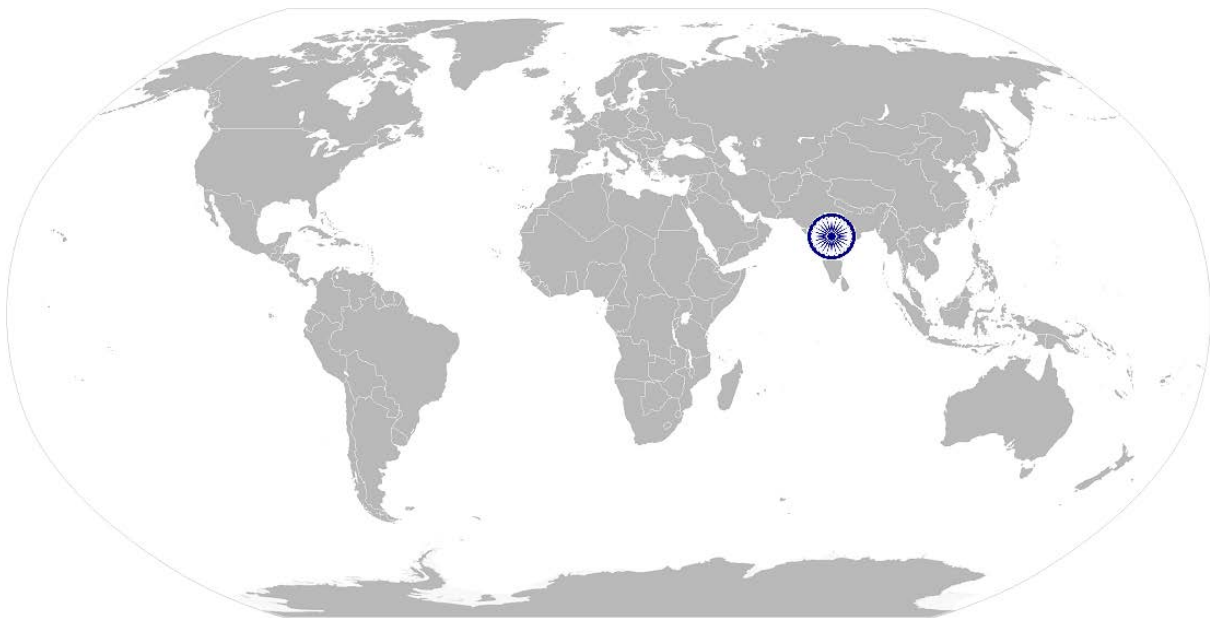
NOS Code	PSS/ N 0104		
Credits NSQF	TBD	Version number	1.0
Industry	Power	Drafted on	26/03/15
Industry Sub-sector	Distribution	Last reviewed on	26/03/15
		Next review date	26/03/17





PSS/ N 2001: Use basic health and safety practices for power related work

National Occupational Standard



Overview

This unit covers health, safety and security for power related work. This includes procedures and practices that candidates need to follow to help maintain a healthy, safe and secure work environment in a power plant, power station/substation or on the field while working on power equipment.

PSS/ N 2001: Use basic health and safety practices for power related work

National Occupational Standard

Unit Code	PSS / N 2001
Unit Title (Task)	Use basic health and safety practices for power related work
Description	<p>This unit covers health, safety and security for power related work. This includes procedures and practices that candidates need to follow to help maintain a healthy, safe and secure work environment in a power plant, power station/substation or on the field while working on power equipment. It covers responsibilities towards self, others, assets and the environment.</p> <p>It includes understanding of risks and hazards in the workplace, along with common techniques to minimize risk, deal with accidents, emergencies, etc.</p> <p>It covers knowledge of fire safety, common first aid applications, safe practices and emergency procedures.</p>
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> Health and safety Fire safety Emergencies, rescue and first-aid procedures
Performance Criteria(PC) w.r.t. the Scope	
Element	Performance Criteria
Health and safety	<p>The user/individual on the job should be able to:</p> <p>PC1. use protective clothing/equipment for specific tasks and work conditions</p> <p>Protective clothing: leather or asbestos gloves, flame proof aprons, flame proof overalls buttoned to neck, cuffless (without folds), trousers, reinforced footwear, helmets/hard hats, cap and shoulder covers, ear defenders/plugs, safety boots, knee pads, particle masks, glasses/goggles/visors</p> <p>Equipment: hand and face shields, machine guards, residual current devices, shields, dust sheets, respirator</p> <p>PC2. state the name and location of people responsible for health and safety in the workplace</p> <p>PC3. state the names and location of documents that refer to health and safety in the workplace</p> <p>PC4. identify job-site hazardous work and state possible causes of risk or accident in the workplace</p> <p>Hazards: electrical hazards (dealing with high voltage equipment, power supply and points, loose and naked cables and wires, electrical machines and appliances, etc.); sharp edged and heavy tools; heated metals; oxyfuel and gas cylinders; welding radiation; hazardous surfaces(sharp, slippery, uneven, chipped, broken, etc.); hazardous substances(chemicals, gas, oxy-fuel, fumes, dust, hazardous waste materials, etc.); physical hazards(working at heights, working in windy</p>

PSS/ N 2001: Use basic health and safety practices for power related work

	<p>or moist areas, large and heavy objects and machines, sharp and piercing objects, moving objects and part of machinery, tools and machines, intense light, loud noise, abnormal temperature; obstructions in corridors, by doors, blind turns, over stacked shelves and packages, etc.); working in high temperatures</p> <p>Possible causes of risk and accident: physical actions; not following instructions; inattention; sickness and incapacity (such as drunkenness); health hazards (such as untreated injuries and contagious illness); not taking safety precautions</p> <p>PC5. follow electrical safe working procedures such as Tag out/Lock out, PTW (Permit To Work),</p> <p>PC6. follow warning signs (danger, out of service, etc.) while working with electrical systems</p> <p>PC7. use standard safe working practices when working at heights, confined areas and trenches</p> <p>PC8. test any electrical equipment and system using insulated testing devices before touching them</p> <p>PC9. ensure positive isolation of electrical equipment & system as per given standards</p> <p>PC10. recognize any abnormalities in electrical equipment or system installed alarm annunciation and/or noticing parameters from gauge/ indicator installed</p> <p>Parameters: temperature, pressure, flow & current</p> <p>PC11. carry out safe working practices while dealing with hazards to ensure the safety of self and others</p> <p>Safe working practices: using protective clothing and equipment; putting up and reading safety signs; handle tools in the correct manner and store and maintain them properly; keep work area clear of clutter, spillage and unsafe objects lying casually; while working with electricity take all electrical precautions like insulated clothing, adequate equipment insulation, use of control equipment, dry work area, switch off the power supply when not required, etc.; safe lifting and carrying practices; use equipment that is working properly and is well maintained; take due measures for safety while working at heights, etc. including safety harness, fall arrestors, guardrails, proper work positioning, do not jump or overload, etc.; take due measures for safety while working in confined spaces or trenches, etc.</p> <p>PC12. state methods of accident prevention in the work environment of the job role</p> <p>Methods of accident prevention: training in health and safety procedures; using health and safety procedures; use of equipment and working practices (such as safe carrying procedures); safety notices, advice; instruction from colleagues and supervisors</p> <p>PC13. state location of general health and safety equipment in the workplace</p> <p>General health and safety equipment: fire extinguishers; first aid equipment; safety instruments and clothing; safety installations (e.g.</p>
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PSS/ N 2001: Use basic health and safety practices for power related work

	<p>fire exits, exhaust fans)</p> <p>PC14. inspect for faults, set up and safely use of scaffolds and elevated platforms and ladders Faults: corrosion of metal components, deterioration, splits and cracks timber components, imbalance, loose rungs, missing/ unfixed nuts or bolts, etc. Set up: firm/level base, clip/lash down, leaning at the correct angle, appropriate load as per capacity, etc.</p> <p>PC15. lift, carry and transport heavy objects & tools safely using correct procedures from storage to workplace and vice versa</p> <p>PC16. inspect power plant and its equipment routinely for any signs of oil, water and/or steam leakage</p> <p>PC17. store flammable materials and machine lubricating oil safely and correctly</p> <p>PC18. check that the emission and pollution control devices are working properly in line with environmental policy standards</p> <p>PC19. apply good housekeeping practices at all times Good housekeeping practices: clean/tidy work areas, removal/disposal of waste products, protect surfaces</p> <p>PC20. identify common hazard signs displayed in various areas Various areas: on chemical containers; equipment; packages; inside buildings; in open areas and public spaces, etc.</p> <p>PC21. retrieve and/or point out documents that refer to health and safety in the workplace Documents: fire notices, accident reports, safety instructions for equipment and procedures, company notices and documents, legal documents (e.g. government notices)</p> <p>PC22. inform relevant authorities about any abnormal situation/behavior of any equipment/system promptly</p>
Fire safety	<p>The user/individual on the job should be able to:</p> <p>PC23. use the various appropriate fire extinguishers on different types of fires correctly Types of fires: Class A: e.g. ordinary solid combustibles, such as wood, paper, cloth, plastic, charcoal, etc.; Class B: flammable liquids; Class C: e.g. combustible gases, such as gasoline, propane, diesel fuel, tar, cooking oil, and similar substances; Class D: combustible chemicals and metals such as magnesium, titanium, and sodium (These fires burn at extremely high temperatures and require special suppression agents) These categories of fires become Class A, B, C and D fires when the electrical equipment that initiated the fire is no longer receiving electricity; Class E: e.g. electrical equipment such as appliances, wiring, breaker panels, etc.</p> <p>PC24. demonstrate rescue techniques applied during fire hazard</p> <p>PC25. demonstrate good housekeeping in order to prevent fire hazards</p> <p>PC26. demonstrate the correct use of a fire extinguisher</p>

PSS/ N 2001: Use basic health and safety practices for power related work

Emergencies, rescue and first-aid procedures	<p>The user/individual on the job should be able to:</p> <p>PC27. demonstrate how to free a person from electrocution</p> <p>PC28. administer appropriate first aid to victims where required e.g. in case of bleeding, burns, choking, electric shock, poisoning etc.</p> <p>PC29. demonstrate basic techniques of bandaging</p> <p>PC30. respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments</p> <p>PC31. perform and organize loss minimization or rescue activity during an accident in real or simulated environments</p> <p>PC32. administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases</p> <p>PC33. demonstrate the artificial respiration and the CPR Process</p> <p>PC34. participate in emergency procedures</p> <p>Emergency procedures: raising alarm, safe/efficient, evacuation, correct means of escape, correct assembly point, roll call, correct return to work</p> <p>PC35. complete a written accident/incident report or dictate a report to another person, and send report to person responsible</p> <p>Incident Report includes details of: name, date/time of incident, date/time of report, location, environment conditions, persons involved, sequence of events, injuries sustained, damage sustained, actions taken, witnesses, supervisor/manager notified</p> <p>PC36. demonstrate correct method to move injured people and others during an emergency</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. names (and job titles if applicable), and where to find, all the people responsible for health and safety in a workplace.</p> <p>KA2. names and location of documents that refer to health and safety in the workplace.</p>
B. Technical Knowledge	<p>The user/individual on the job needs to know and understand:</p> <p>KB1. meaning of “hazards” and “risks”</p> <p>KB2. health and safety hazards commonly present in the work environment and related precautions</p> <p>KB3. possible causes of risk, hazard or accident in the workplace and why risk and/or accidents are possible</p> <p>KB4. possible causes of risk and accident</p> <p>Possible causes of risk and accident: physical actions; not following instructions; inattention; sickness and incapacity (such as drunkenness); health hazards (such as untreated injuries and contagious illness); not taking safety precautions</p> <p>KB5. methods of accident prevention</p> <p>Methods of accident prevention: training in health and safety</p>

PSS/ N 2001: Use basic health and safety practices for power related work

	<p>procedures; using health and safety procedures; use of equipment and working practices (such as safe carrying procedures); safety notices, advice; instruction from colleagues and supervisors</p> <p>KB6. safe working practices when working with tools and machines</p> <p>KB7. safe working practices while working at various hazardous sites</p> <p>KB8. where to find all the general health and safety equipment in the workplace</p> <p>KB9. various dangers associated with the use of electrical equipment</p> <p>KB10. positive isolation of electrical equipment and system</p> <p>KB11. safe handling and disposal of hazardous power plant wastes</p> <p>KB12. use of emission and pollution control devices and measures taken to control pollution</p> <p>KB13. various safety procedures and equipment used to work at heights, trenches and confined places</p> <p>KB14. safe working practices specific to working with electrical equipment & system e.g. lock out/ tag out, PTW, etc.</p> <p>KB15. preventative and remedial actions to be taken in the case of exposure to toxic materials Exposure: ingested, contact with skin, inhaled Preventative action: ventilation, masks, protective clothing/ equipment); Remedial action: immediate first aid, report to supervisor Toxic materials: solvents, flux, lead</p> <p>KB16. importance of using protective clothing/equipment and other insulated work gear while handling electrical system and equipment</p> <p>KB17. precautionary activities taken to prevent fire accident</p> <p>KB18. various causes of fire Causes of fires: heating of metal; spontaneous ignition; sparking; electrical heating; loose fires (smoking, welding, etc.); chemical fires; etc.</p> <p>KB19. techniques of using the different fire extinguishers</p> <p>KB20. different methods of extinguishing fire</p> <p>KB21. different materials used for extinguishing fire Materials: sand, water, foam, CO₂, dry powder</p> <p>KB22. emergency rescue techniques applied during a fire hazard</p> <p>KB23. various types of safety signs and what they mean</p> <p>KB24. appropriate basic first aid treatment relevant to the condition e.g. shock, electrical shock, bleeding, breaks to bones, minor burns, resuscitation, poisoning, eye injuries</p> <p>KB25. content of written accident report</p> <p>KB26. potential injuries and ill health associated with incorrect manual handling</p> <p>KB27. safe lifting, carrying and transporting practices</p> <p>KB28. personal safety, health and dignity issues relating to the movement of a person by others</p> <p>KB29. potential impact to a person who is moved incorrectly</p>
Skills (S) [Optional]	

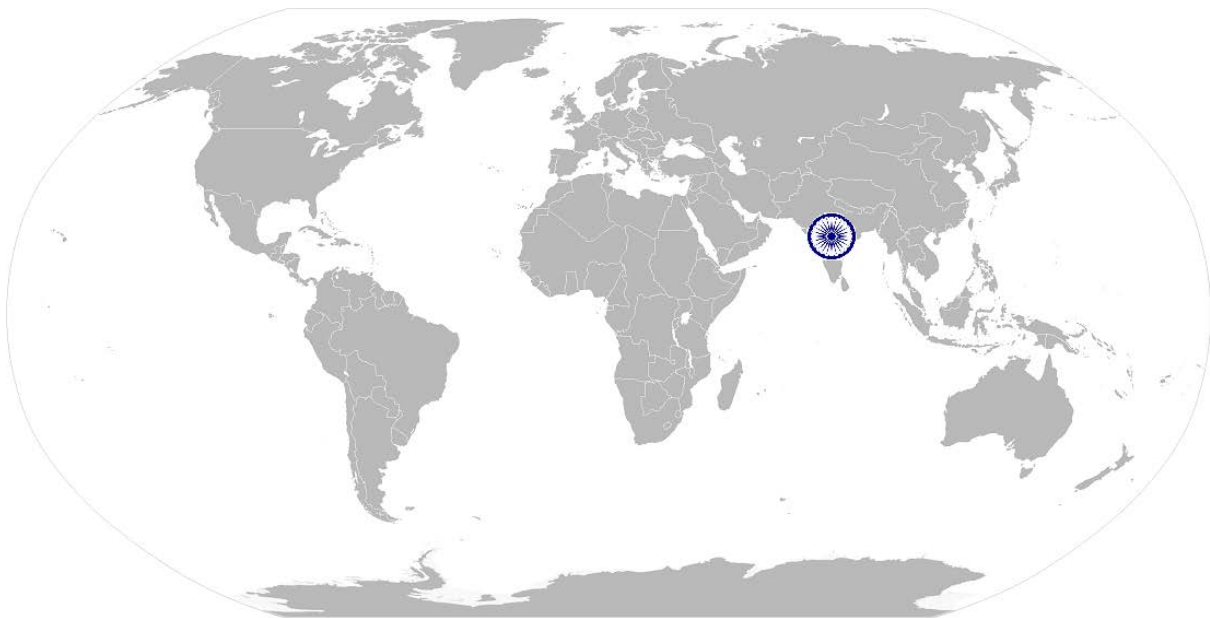
PSS/ N 2001: Use basic health and safety practices for power related work

A. Core Skills/ Generic Skills	Reading and Writing Skills
	The user/individual on the job needs to know and understand how to: SA1. read and comprehend basic content to read labels, charts, signages SA2. read and comprehend basic English to read manuals of operations SA3. read and write an accident/incident report in local language or English
	Oral Communication (Listening and Speaking skills)
	The user/individual on the job needs to know and understand how to: SA4. question coworkers appropriately in order to clarify instructions and other issues SA5. give clear instructions to coworkers, subordinates others
	Decision Making
B. Professional Skills	Plan and Organize
	The user/individual on the job needs to know and understand how to: SB1. plan and organize their own work schedule, work area, tools, equipment and materials to maintain decorum and for improved productivity
	Working with others
	The user/individual on the job needs to know and understand how to: SB2. remain congenial while discussing and debating issues with co-workers SB3. follow appropriate protocols for communication based on situation, hierarchy, organizational culture and practice SB4. ask for, provide and receive required assistance where possible to ensure achievement of work related objectives SB5. thank coworkers for any assistance received SB6. offer appropriate respect based on mutuality and respect for fellow workmanship and authority
	Problem Solving
B. Professional Skills	The user/individual on the job needs to know and understand how to: SB7. think through the problem, evaluate the possible solution(s) and suggest an optimum /best possible solution(s) SB8. identify immediate or temporary solutions to resolve delays SB9. identify sources of support that can be availed of for problem solving for various kind of problems SB10. seek appropriate assistance from other sources to resolve problems SB11. report problems that you cannot resolve to appropriate authority
	Analytical Thinking



PSS/ N 2001: Use basic health and safety practices for power related work

	<p>The user/individual on the job needs to know and understand how to:</p> <ul style="list-style-type: none">SB12. identify cause and effect relations in their area of workSB13. use cause and effect relations to anticipate potential problems and their solution
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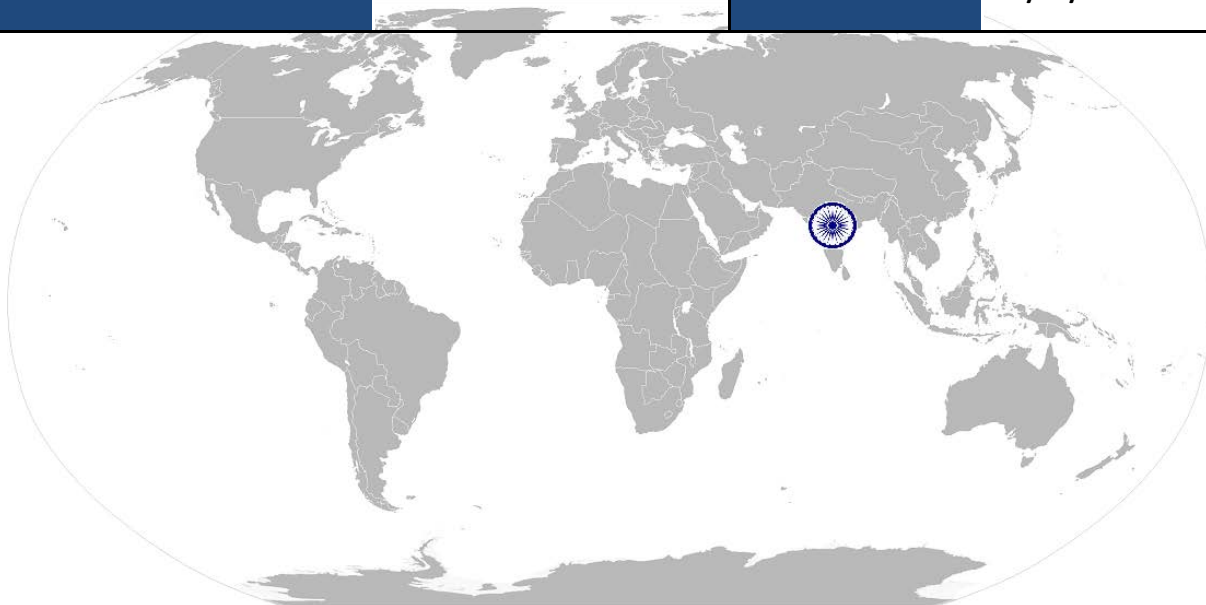




PSS/ N 2001: Use basic health and safety practices for power related work

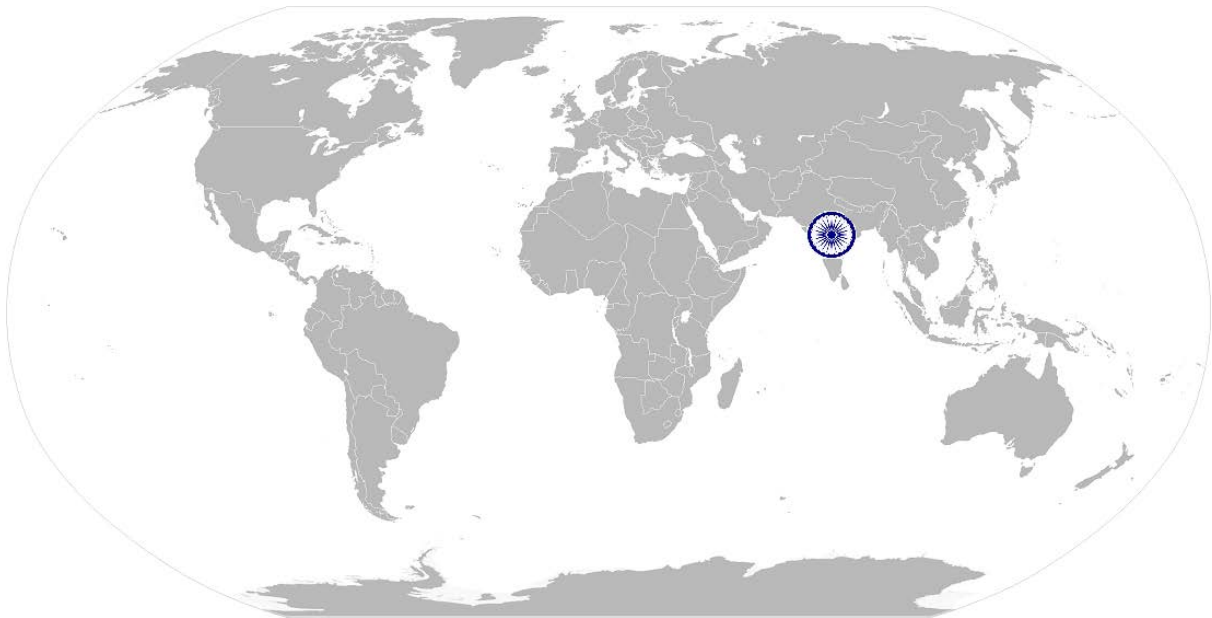
NOS Version Control

NOS Code	PSS / N 2001		
Credits (NSQF)	TBD	Version number	1.0
Industry	Power	Drafted on	26/03/15
Industry Sub-sector	Generation, Transmission, Distribution, Renewable energy, Equipment manufacturing	Last reviewed on	26/03/15
		Next review date	26/03/17





National Occupational Standard



Overview

This unit covers basic practices that improve effectiveness of working with others in an organizational set-up.

CSC/ N 1336: Work effectively with others

Unit Code	CSC / N 1336
Unit Title (Task)	Work effectively with others
Description	<p>This unit covers basic etiquette and competencies that a candidate is required to possess and demonstrate in their behavior and interactions with others at the workplace.</p> <p>These cover areas such as communication etiquette, discipline, listening, handling conflict and grievances.</p>
Scope	<p>This unit/task covers the following:</p> <ul style="list-style-type: none"> • Working with others
Performance Criteria (PC) w.r.t. the Scope	
Element	Performance Criteria
Working with others	<p>The user/individual on the job should be able to:</p> <p>PC1. accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required</p> <p>PC2. accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt</p> <p>PC3. give information to others clearly, at a pace and in a manner that helps them to understand</p> <p>PC4. display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible</p> <p>PC5. consult with and assist others to maximize effectiveness and efficiency in carrying out tasks</p> <p>PC6. display appropriate communication etiquette while working</p> <p>Communication etiquette: do not use abusive language; use appropriate titles and terms of respect; do not eat or chew while talking (vice versa)etc.</p> <p>PC7. display active listening skills while interacting with others at work</p> <p>PC8. use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism</p> <p>PC9. demonstrate responsible and disciplined behaviors at the workplace</p> <p>Disciplined behaviors: e.g. punctuality; completing tasks as per given time and standards; not gossiping and idling time; eliminating waste, honesty, etc.</p> <p>PC10. escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict</p>
Knowledge and Understanding (K)	
A. Organizational Context (Knowledge of the company / organization and its processes)	<p>The user/individual on the job needs to know and understand:</p> <p>KA1. legislation, standards, policies, and procedures followed in the company relevant to own employment and performance conditions</p> <p>KA2. reporting structure, inter-dependent functions, lines and procedures in the work area</p> <p>KA3. relevant people and their responsibilities within the work area</p> <p>KA4. escalation matrix and procedures for reporting work and employment related issues</p>

CSC/ N 1336: Work effectively with others

B. Technical Knowledge

- The user/individual on the job needs to know and understand:
- KB1. various categories of people that one is required to communicate and co-ordinate with in the organization
 - KB2. importance of effective communication in the workplace
 - KB3. importance of teamwork in organizational and individual success
 - KB4. various components of effective communication
 - KB5. key elements of active listening
 - KB6. value and importance of active listening and assertive communication
 - KB7. barriers to effective communication
 - KB8. importance of tone and pitch in effective communication
 - KB9. importance of avoiding casual expletives and unpleasant terms while communicating professional circles
 - KB10. how poor communication practices can disturb people, environment and cause problems for the employee, the employer and the customer
 - KB11. importance of ethics for professional success
 - KB12. importance of discipline for professional success
 - KB13. what constitutes disciplined behavior for a working professional
 - KB14. common reasons for interpersonal conflict
 - KB15. importance of developing effective working relationships for professional success
 - KB16. expressing and addressing grievances appropriately and effectively
 - KB17. importance and ways of managing interpersonal conflict effectively


Skills (S) [Optional]





CSC/ N 1336: Work effectively with others

NOS Version Control

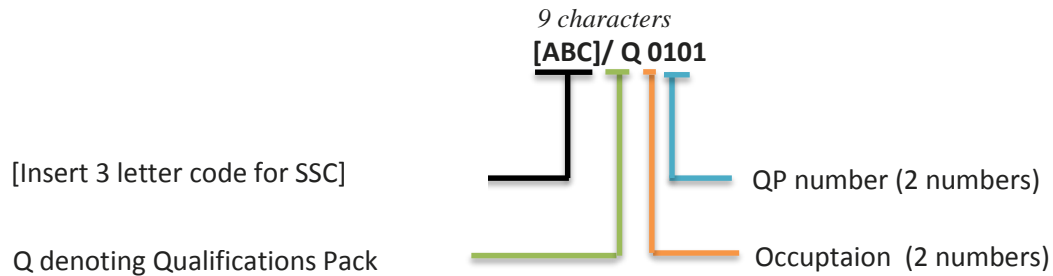
NOS Code	CSC / N 1336		
Credits(NSQF)	TBD	Version number	1.0
Industry	Capital Goods, Power	Drafted on	26/03/15
Industry Sub-sector	Generation, Transmission, Distribution, Renewable Energy, Power Equipment Manufacturing	Last reviewed on	26/03/15
		Next review date	26/03/17



Annexure

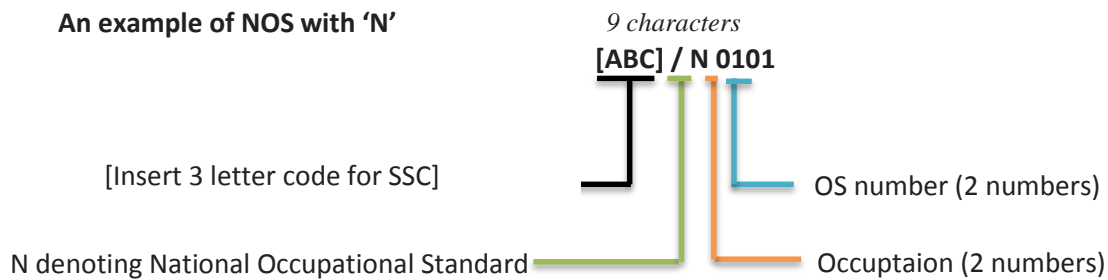
Nomenclature for QP and NOS

Qualifications Pack



Occupational Standard

An example of NOS with 'N'



The following acronyms/codes have been used in the nomenclature above:

Sub-sector	Range of Occupation numbers
Generation	01-10
Transmission	01-10
Distribution	01-10
Renewable Energy	01-10
Power Equipment Manufacturing	01-10

Sequence	Description	Example
Three letters	Power	PSS
Slash	/	/
Next letter	Whether QP or NOS	N
Next two numbers	Occupation code	01
Next two numbers	OS number	01



CRITERIA FOR ASSESSMENT OF TRAINEES

Job Role Technical Helper (Distribution)

Qualification Pack PSS/Q0101

Sector Skill Council Power

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. Individual assessment agencies will create unique question papers for theory part for each candidate at each examination/training center (as per assessment criteria below)
4. Individual assessment agencies will create unique evaluations for skill practical for every student at each examination/training center based on this criteria
5. To pass the Qualification Pack, every trainee should score a minimum of 70% in every NOS
6. 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

		Mark Allocation			
		Total Mark (600)	Out of	Theory	Skills Practical
PSS/ N 0101: Assisting in repair and maintenance of Power Distribution Lines and components	PC1. work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	100	7	2	5
	PC2. adhere to procedures or systems in place for health and safety, personal protective equipment (PPE) and other relevant safety regulations for electrical and related operations		7	2	5
	PC3. work following laid down procedures and instructions		4	1	3
	PC4. ensure that all tools, equipment, etc. are in a safe and usable condition and are kept at secured location		3	0	3
	PC5. ensure work area is clean and safe from hazards before and after the job is completed		3	0	3
	PC6. prepare and maintain the work area as per procedure or operation specification		5	2	3
	PC7. identify various types of circuits and its components correctly		5	2	2

	PC8. identify accurately and acquire correct tools, equipment and instruments required for various aspects of repair and maintenance of distribution lines and components	5	2	3
	PC9. ensure the tools and equipment are well maintained and handled, and approved for use	2	0	3
	PC10. select and use tools and equipment such as chainsaws, pruning saws, manlifts and chippers to trim trees or its branches where required	2	0	3
	PC11. identify hazards of trimming trees such as limits of approach, public safety and step and touch potential	5	2	3
	PC12. clean and handle transmission and distribution line tools according to standard procedures	6	2	4
	PC13. follow instruction, job standards and specifications accurately and safely while assisting linemen in performing off-line overhead and underground line maintenance procedure according to company procedures	7	2	5
	PC14. hold, align, load and unload, poles and related equipment as per instructions and job standards and requirements accurately and safely while assisting in pole dismantling and re-setting procedure as per company procedures	6	2	4
	PC15. carry out conductor stringing procedures, paving conductor on the ground along the pole under the guidance of lineman/supervisor as per instructions	6	2	4
	PC16. re-tighten stay wires as per standard procedure, on instructions	5	1	3
	PC17. tighten nuts and bolts securely for aligning lines and under guidance of lineman	3	0	3

	PC18. hold, handover components, measure, unpack, join, align, load, unload equipment as per instructions, job standards and requirements accurately and safely while assisting linemen in repair of conductors by splicing, jointing, using armor rods, line guards and vibration dampers		6	2	4
	PC19. deal promptly and effectively with problems within control, and seek help and guidance from the relevant people for problems that cannot be resolved		4	0	4
	PC20. leave the work area in a safe and tidy condition on completion of the repair and maintenance activities		3	0	3
	PC21. refer unresolved job related problems to appropriate personnel for support		3	0	3
	PC22. monitor the problem and keep the supervisor informed about progress or any delays in resolving the problem		3	0	3
	Total		100	24	76
PSS/ N 0102: Preparation and assistance for erection of Power Distribution Lines	PC1. work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	100	6	2	4
	PC2. adhere to procedures or systems in place for health and safety, personal protective equipment (PPE) and other relevant safety regulations for electrical and related operations		6	2	4
	PC3. work following laid down procedures and instructions		4	1	3
	PC4. ensure that all tools, equipment, power cables are in a safe and usable condition and are kept at secured location		3	0	3
	PC5. ensure work area is clean and safe from hazards before and after the job is completed		4	1	3
	PC6. clarify and accurately understand job requirements for specific operations as per instructions given		4	1	3

PC7. identify equipment and tools required for installation work	4	1	3
PC8. perform loading and unloading operations for pole tower parts, tools and equipment in a safe and efficient manner	4	1	3
PC9. report hazards to senior crew members	4	1	3
PC10. perform excavation operations for pole setting, as per requirement and specifications mentioned by the supervisor, in a safe and efficient manner	6	2	4
PC11. perform pole erection procedures as per requirements and instructions, in a safe and efficient manner	6	2	4
PC12. set poles to proper depth, and align properly to the satisfaction of the supervisor	5	1	4
PC13. measure materials accurately for concrete mixing as per instructions	5	1	4
PC14. mix concrete to required texture and consistency as per instructions given	4	1	3
PC15. carry out pit filling as per requirement, as correct procedures	5	1	4
PC16. perform pole dismantling procedure where required	5	1	4
PC17. perform post-installation procedures for ensuring clean and safe environment in the work and surrounding area	5	1	4
PC18. remove the waste components safely and correctly	4	1	3
PC19. deal promptly and effectively with problems within control, and seek help and guidance from the relevant people for problems that cannot be resolved	4	1	3
PC20. leave the work area in a safe and tidy condition on completion of the erection activities	3	1	2
PC21. refer unresolved job related problems to appropriate personnel for support	4	1	3

	PC22. monitor the problem and keep the lineman or supervisor informed about progress or any delays in resolving the problem		5	1	4
		Total	100	25	75
PSS/ N 0103: Assisting in operation and maintenance of 11/0.433 KV Distribution Substation	PC1. work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	100	6	2	4
	PC2. adhere to procedures or systems in place for health and safety, personal protective equipment (PPE) and other relevant safety regulations for Electrical and related operations		6	2	4
	PC3. work following laid down procedures and instructions		4	1	3
	PC4. ensure that all tools, equipment, power cables are in a safe and usable condition and are kept at secured location		3	0	3
	PC5. ensure work area is clean and safe from hazards before and after the job is completed		3	0	3
	PC6. clarify and understand accurately job requirements for specific operations as per instructions given by supervisor		5	2	3
	PC7. identify various components of the power system		4	2	2
	PC8. identify equipment and tools required for installation work accurately		4	2	2
	PC9. inspect the component to check if it is as per specification and without defects		5	1	4
	PC10. identify, measure and acquire correct materials required for the Substation erection and installation work		6	1	5
	PC11. perform loading and unloading operations for substation parts in a safe and efficient manner		3	0	3
	PC12. assist in lifting the transformer and putting it on the transformer bed in a safe and efficient manner		6	2	4

	PC13. hand over correct equipment and tools to supervisors and senior technicians in a safe manner		3	1	2
	PC14. clean bushings, transformer and other components safely and as per correct procedure		5	1	4
	PC15. remove dust & dirt deposition, salt or chemical deposition, cement or acid fumes depositions		3	0	3
	PC16. clean conservator from inside as per instruction and standard procedure		5	2	3
	PC17. climb ladders and elevated platforms and structures to carry out maintenance and other activities, safely		5	1	4
	PC18. layout gravel in the substation as required		3	1	2
	PC23. assist in fixing the fence to secure the substation in a safe, efficient manner as per correct procedure		6	2	4
	PC19. fix rating plate and diagram plate as per requirement		6	2	4
	PC20. deal promptly and effectively with problems within control, and seek help and guidance from the relevant people for problems that cannot be resolved		3	0	3
	PC21. leave the work area in a safe and tidy condition on completion of the substation construction and maintenance activities		3	0	3
	PC22. refer unresolved job related problems to appropriate personnel for support		3	0	3
		Total	100	25	75
PSS/ N 0104: Assisting in laying of underground and AB cables	PC1. work safely at all times, complying with health and safety legislation, regulations and other relevant guidelines	100	7	2	5
	PC2. adhere to procedures or systems in place for health and safety, personal protective equipment (PPE) and other relevant safety regulations for Electrical and		7	2	5

	related operations			
	PC3. work following laid down procedures and instructions	5	1	4
	PC4. ensure that all tools, equipment, power cables are in a safe and usable condition and are kept at secured location	5	1	4
	PC5. ensure work area is clean and safe from hazards before and after the job is completed	5	1	4
	PC6. clarify job requirements for specific operations as per instructions given from the supervisor	6	2	4
	PC7. identify all tools, equipment and material supplies required for the work are acquired and transported safely to the work site	6	2	4
	PC8. perform loading and unloading of materials, tools and equipment in a safe and efficient manner	7	2	5
	PC9. perform trench digging operations as per requirement and specifications, in a safe and efficient manner	8	2	6
	PC10. pull cable through conduit using equipment such as tension machines, winches and capstans	6	2	4
	PC11. measure materials required for the concrete mix and mixing them in proportions specified by the supervisor	8	3	5
	PC12. deal promptly and effectively with problems within control, and seek help and guidance from the relevant people for problems that cannot be resolved	5	0	5
	PC13. perform post-installation procedures for ensuring clean and safe environment in the work and surrounding area	7	2	5
	PC14. refer unresolved job related problems to appropriate personnel for support	5	0	5

	PC15. monitor the problem and keep the supervisor informed about progress or any delays in resolving the problem		6	1	5
	PC16. transport and store materials, equipment, tools as per laid down practice, in as safe and efficient manner		7	2	5
		Total	100	25	75
PSS/ N 2001 (Use basic health and safety practices at the workplace)	PC1. use protective clothing/equipment for specific tasks and work conditions	100	3	0	3
	PC2. state the name and location of people responsible for health and safety in the workplace		2	0	2
	PC3. state the names and location of documents that refer to health and safety in the workplace		2	0	2
	PC4. identify job-site hazardous work and state possible causes of risk or accident in the workplace		3	1	2
	PC5. follow electrical safe working procedures such as Tag out/Lock out, PTW (Permit To Work),		3	1	2
	PC6. follow warning signs (danger, out of service, etc.) while working with electrical systems		3	1	2
	PC7. use standard safe working practices when working at heights, confined areas and trenches		3	1	2
	PC8. test any electrical equipment and system using insulated testing devices before touching them		3	1	2
	PC9. ensure positive isolation of electrical equipment & system as per given standards		3	1	2
	PC10. recognize any abnormalities in electrical equipment or system installed alarm annunciation and/or noticing parameters from gauge/ indicator installed		3	1	2
	PC11. carry out safe working practices while dealing with hazards to ensure the safety of self and others		3	1	2
	PC12. state methods of accident prevention in the work environment		2	0	2

	of the job role			
	PC13. state location of general health and safety equipment in the workplace	2	0	2
	PC14. inspect for faults, set up and safely use of scaffolds and elevated platforms and ladders	2	0	2
	PC15. lift, carry and transport heavy objects & tools safely using correct procedures from storage to workplace and vice versa	3	1	2
	PC16. inspect power plant and its equipment routinely for any signs of oil, water and/or steam leakage	3	0	3
	PC17. store flammable materials and machine lubricating oil safely and correctly	2	0	2
	PC18. check that the emission and pollution control devices are working properly in line with environmental policy standards	5	2	3
	PC19. apply good housekeeping practices at all times	3	1	2
	PC20. identify common hazard signs displayed in various areas	2	0	2
	PC21. retrieve and/or point out documents that refer to health and safety in the workplace	2	0	2
	PC22. inform relevant authorities about any abnormal situation/behavior of any equipment/system promptly	3	0	3
	PC23. use the various appropriate fire extinguishers on different types of fires correctly	4	1	3
	PC25. demonstrate good housekeeping in order to prevent fire hazards	3	1	2
	PC26. demonstrate the correct use of a fire extinguisher	3	1	2
	PC27. demonstrate how to free a person from electrocution	3	1	2
	PC28. administer appropriate first aid to victims where required e.g. in case of bleeding, burns, choking, electric shock, poisoning etc.	3	0	3

	PC29. demonstrate basic techniques of bandaging		3	1	2
	PC30. respond promptly and appropriately to an accident situation or medical emergency in real or simulated environments		3	1	2
	PC31. perform and organize loss minimization or rescue activity during an accident in real or simulated environments		3	1	2
	PC32. administer first aid to victims in case of a heart attack or cardiac arrest due to electric shock, before the arrival of emergency services in real or simulated cases		3	1	2
	PC33. demonstrate the artificial respiration and the CPR Process		3	1	2
	PC34. participate in emergency procedures		3	1	2
	PC35. complete a written accident/incident report or dictate a report to another person, and send report to person responsible		3	1	2
	PC36. demonstrate correct method to move injured people and others during an emergency		3	1	2
	Total		100	24	76
CSC/ N 1336 (Work effectively with others)	PC1. accurately receive information and instructions from the supervisor and fellow workers, getting clarification where required	100	10	3	7
	PC2. accurately pass on information to authorized persons who require it and within agreed timescale and confirm its receipt		10	3	7
	PC3. give information to others clearly, at a pace and in a manner that helps them to understand		10	3	7
	PC4. display helpful behavior by assisting others in performing tasks in a positive manner, where required and possible		10	3	7
	PC5. consult with and assist others to maximize effectiveness and efficiency in carrying out tasks		10	3	7
	PC6. display appropriate communication etiquette while		10	3	7

	working			
	PC7. display active listening skills while interacting with others at work	10	3	7
	PC8. use appropriate tone, pitch and language to convey politeness, assertiveness, care and professionalism	10	3	7
	PC9. demonstrate responsible and disciplined behaviors at the workplace	10	3	7
	PC10. escalate grievances and problems to appropriate authority as per procedure to resolve them and avoid conflict	10	3	7
	Total	100	30	70