

POWER ENGINEERING COMPETENCY FRAMEWORK				
SKILLS MAP - Senior Technical Officer / Technical Officer (Operations & Maintenance)				
Sector	Power Engineering in the Public Service			
Track	Operations & Maintenance			
Occupation	Electrical Engineering Technician			
Job Role	Senior Technical Officer / Technical Officer (Operations & Maintenance)			
Job Role Description	<p>The Senior Technical Officer / Technical Officer (Operations &amp; Maintenance) is responsible for supporting preventive and corrective maintenance works including fault analysis, testing, investigation of power failures and fault repair for low voltage electrical equipment and systems. He/She also maintains maintenance documentation and inventory records, and supports in condition monitoring for power systems.</p> <p>He coordinates tender evaluation, contractor selection and contract negotiations for electrical operations and maintenance services, and oversees contractor work performance and compliance with technical standards and codes of practice. He reports breaches of safety requirements in the workplace and applies Permit-To-Work systems for electrical works. He should be authorised as a trained person by a licensed electrical worker to carry out the job duties.</p> <p>He has good interpersonal skills and is a good team player in liaising with team members and contractors. He is detail-oriented and systematic in conducting maintenance procedures.</p>			
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks		Performance Expectations (For legislated / regulated occupations)*
	Manage operations and maintenance	Support preventive and corrective maintenance works on electrical equipment, systems and networks in accordance with maintenance procedures		In accordance with: - Electricity Act including subsidiary legislations - Energy Market Authority of Singapore Act - International Electrotechnical Commission (IEC) Standards - International Organization for Standardisation (ISO) Standards - Singapore Standards for Electrical and Power sector - Workplace Safety and Health (WSH) Act
		Assist in conducting fault analysis and testing of electrical equipment, systems and networks		
		Support investigation of power failures and electrical incidents		
		Assist in minor fault repair work for electrical equipment and systems		
		Document inspection and maintenance activities		
	Manage power assets	Assist in performing inspection of electrical equipment according to organisation's Standard Operating Procedures (SOP) and requirements		* Performance Expectations are non-exhaustive and subject to prevailing regulations and industry standards
		Assist in performing equipment obsolescence analysis and asset replacement for low voltage electrical equipment and systems		
		Maintain inventory records of electrical equipment and components		
		Coordinate condition monitoring works on electrical equipment and systems		
	Manage key stakeholders / Manage contractors	Facilitate collaboration with contractors		
		Prepare documentation to support tenders for electrical and power operations and maintenance services		
		Coordinate tender evaluation, contractor selection and contract negotiations		
		Coordinate electrical and power operations and maintenance works done by contractors		
		Monitor contractor performance and compliance with technical standards and codes of practice		
	Manage safety, health and environment	Report breaches of safety requirements in the workplace		
		Guide contractors on safe work practices		
		Comply with relevant sector regulations and codes of practice		
		Apply Permit-To-Work systems for electrical works		
		Comply with the agency's environmental sustainability practices, policies and procedures		
Contribute to decarbonisation, decentralisation and digitalisation initiatives	Keep abreast of the latest trends in electrical and power technologies			
	Gather data for green initiatives using clean and renewable energy			
	Record data for operational analytics			
Skills & Competencies	Technical Skills and Competencies		Critical Core Skills	
	Continuous Improvement Management	Level 3	Problem Solving	Basic
	Contract and Contractor Management	Level 2	Customer Orientation	Basic
	Corrective Maintenance Management	Level 2	Collaboration	Basic
	Cybersecurity Framework Application	Level 2	Digital Fluency	Basic
	Distributed Generation System Performance Monitoring	Level 3	Communication	Basic

	Electrical Equipment and Systems Testing	Level 2	Sense-Making	Basic		
	Electrical Maintenance Management	Level 2	Computational Thinking	Basic		
	Electricity Network Incident Management	Level 1	Adaptability	Basic		
	Electricity Network Operations Management	Level 2	Influence	Basic		
	Electricity Network Performance Monitoring	Level 2	Self Management	Basic		
	Emergency Response and Crisis Management	Level 3				
	Engineering Asset Management	Level 2				
	Engineering Problem Solving	Level 3				
	Environmental Sustainability Management	Level 3				
	Facilities Maintenance Management	Level 2				
	Lighting Technologies Application	Level 3				
	Modelling, Simulation and Visualisation	Level 2				
	Power Engineering Management	Level 3				
	Power Plant Incident Investigation	Level 2				
	Power Plant Inspection	Level 2				
	Power Plant Operations Management	Level 2				
	Power Quality Management	Level 3				
	Preventive Maintenance Management	Level 2				
	Regulatory Compliance and Risk Management	Level 2				
	Solar Photovoltaic Systems Application	Level 3				
	Stakeholder Management	Level 2				
	Technical Inspection	Level 2				
	Technology and Systems Application	Level 2				
	Traction Power Systems Management	Level 2				
	Uninterrupted Power Supply Management	Level 2				
	Workplace Safety and Health Framework Implementation	Level 2				
<b>Programme Listing</b>	For a list of training programmes available for the Power Engineers in the Public Service, please refer to separate document on training courses.					

The information contained in this document serves as a guide.