

POWER ENGINEERING COMPETENCY FRAMEWORK				
SKILLS MAP - Senior Assistant Engineer / Assistant Engineer (Operations & Maintenance)				
Sector	Power Engineering in the Public Service			
Track	Operations & Maintenance			
Occupation	Assistant Electrical Engineer			
Job Role	Senior Assistant Engineer / Assistant Engineer (Operations & Maintenance)			
Job Role Description	<p>The Senior Assistant Engineer / Assistant Engineer (Operations & Maintenance) is responsible for overseeing 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 performs inspection of electrical equipment, equipment obsolescence analysis, asset replacement and condition monitoring of electrical equipment and systems.</p> <p>He supports the development of tender specifications and technical evaluation for electrical operations and maintenance services, monitors contractor performance and compliance, and collaborates with contractors through regular dialogue and sharing sessions. He assists in the research of emerging power technologies, environmentally sustainable initiatives and interprets data for operational analytics. 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 communication and interpersonal skills to supervise team members and contractors. He is detail-oriented and systematic in overseeing operations and maintenance regimes.</p>			
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks		Performance Expectations (For legislated / regulated occupations)*
	Manage operations and maintenance	Oversee preventive and corrective maintenance works on electrical equipment, systems and networks in accordance with maintenance schedule and 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
		Perform complex fault analysis and testing of electrical equipment, systems and networks		
		Diagnose the breakdown and abnormalities of malfunctioned electrical equipment and systems		
		Conduct minor fault repair work for electrical equipment and systems		
		Track inspection and maintenance documentation		
	Manage power assets	Carry out 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
		Perform equipment obsolescence analysis and asset replacement for low voltage electrical equipment and systems		
		Prepare specifications for procurement of the electrical equipment and components		
		Oversee condition monitoring works on electrical equipment and systems		
	Manage key stakeholders / Manage contractors	Collaborate with contractors through regular dialogue and sharing sessions		
		Support the development of tender specifications for electrical and power operations and maintenance services		
		Assist in technical evaluation of tender submissions for electrical and power operations and maintenance services		
		Monitor 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	Conduct safety checks in the workplace		
		Supervise 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	Conduct research on latest trends in electrical and power technologies			
	Conduct research for green initiatives using clean and renewable energy			
	Interpret data for operational analytics			
Skills & Competencies	Technical Skills and Competencies		Critical Core Skills	
	Business Intelligence and Data Analytics	Level 2	Decision Making	Basic
	Continuous Improvement Management	Level 3	Problem Solving	Basic
	Contract and Contractor Management	Level 2	Communication	Basic
	Corrective Maintenance Management	Level 2	Collaboration	Basic
	Cybersecurity Framework Application	Level 2	Digital Fluency	Basic

	Distributed Generation System Performance Monitoring	Level 3	Sense-Making	Basic	
	Electrical Equipment and Systems Testing	Level 3	Customer Orientation	Basic	
	Electrical Maintenance Management	Level 2	Creative Thinking	Basic	
	Electricity Network Incident Management	Level 2	Building Diversity	Basic	
	Electricity Network Operations Management	Level 2	Learning Agility	Basic	
	Electricity Network Performance Monitoring	Level 2	Adaptability	Basic	
	Emergency Response and Crisis Management	Level 3	Influence	Basic	
	Engineering Asset Management	Level 2	Self Management	Basic	
	Engineering Problem Solving	Level 3			
	Engineering Safety Standards Interpretation	Level 3			
	Environmental Sustainability Management	Level 3			
	Facilities Maintenance Management	Level 2			
	Hybrid AC and DC Power Distribution and Utilisation	Level 3			
	Inter-agency Collaboration	Level 3			
	Internet of Things (IoT) Application	Level 3			
	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 3			
	Power Quality Management	Level 3			
	Predictive Maintenance Management	Level 3			
	Preventive Maintenance Management	Level 2			
	Regulatory Compliance and Risk Management	Level 3			
	Solar Photovoltaic Systems Application	Level 3			
	Stakeholder Management	Level 3			
	Technical Inspection	Level 3			
	Technology and Systems Application	Level 3			
	Traction Power Systems Management	Level 3			
	Uninterrupted Power Supply Management	Level 3			
	Workplace Safety and Health Framework Implementation	Level 3			
Programme Listing	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.