POWER ENGINEERING COMPETENCY FRAMEWORK				
SKILLS MAP - Senior Assistant Engineer / Assistant Engineer (Construction & Commissioning)				
Sector	Power Engineering in the Public Service			
Track	Construction & Commissioning			
Occupation	Assistant Electrical Engineer			
Job Role	**Senior Assistant Engineer / Assistant Engineer (Construction & Commissioning)**			
Job Role Description	The Senior Assistant Engineer / Assistant Engineer (Construction & Commissioning) is responsible for assessing and ensuring adherence to construction and installation plans of electrical equipment, systems and networks to identify potential risks. He/She supports the review of electrical design submittals. He assists and prepares draft reports of all commissioning checks. He supports the investigation of defects, deficiencies and abnormalities. He also collaborates with contractors and monitors their performance to ensure compliance with technical standards and codes of practice. To prevent safety breaches in the workplace, he conducts safety checks and supervises contractors on safe work practices. To drive decarbonisation, decentralisation and digitalisation, he conducts research on latest technology trends and green initiatives. He should be authorised as a trained person by a licensed electrical worker to carry out the job duties. He possesses a compliance mindset in ensuring adherence to technical standards during installations and investigations. In addition, he has good communication skills and an eye for detail to supervise and collaborate with contractors. Furthermore, he is digitally literate to interpret data.			
Critical Work Functions and Key Tasks / Performance Expectations	**Critical Work Functions**	**Key Tasks**	**Performance Expectations (For legislated / regulated occupations)***	
	Manage construction / installation	Ensure adherence to construction sequence and installation plans for electrical equipment, systems and networks	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 * Performance Expectations are non-exhaustive and subject to prevailing regulations and industry standards	
		Assess technical deviations from design specifications and technical standards to warrant change-out or major overhaul of electrical, systems and networks		
		Identify potential construction related issues and risks for a specified functional area		
		Assist in audit tests on electrical equipment, systems and networks upon completion		
	Manage commissioning process	Support review of electrical design submittals to ensure compliance with project requirements		
		Assist in commissioning checks and tests on electrical equipment, systems and networks		
		Support investigation of defects, deficiencies and abnormalities		
		Prepare draft commissioning report documenting all commissioning activities and findings		
		Support pre-start-up safety reviews (PSSR)		
		Support commissioning activities during handover, initial start-up and ramp-up period		
	Manage key stakeholders / Manage contractors	Collaborate with contractors through regular dialogue and sharing sessions		
		Support the development of tender specifications for electrical and power installation services		
		Assist in technical evaluation of tender submissions for electrical and power installation services		
		Monitor electrical and power installation works done by contractors		
		Monitor contractor performance and compliance with technical standards and codes of practice		
	Manage health, safety 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**	
	Airfield Lighting Systems Management	Level 3	Decision Making	Basic
	Battery Systems Management	Level 3	Problem Solving	Basic
	Business Intelligence and Data Analytics	Level 2	Communication	Basic

	Continuous Improvement Management	Level 3	Collaboration	Basic
	Contract and Contractor Management	Level 2	Sense-Making	Basic
	Cybersecurity Framework Application	Level 2	Digital Fluency	Basic
	Electrical Equipment and Systems Testing	Level 3	Creative Thinking	Basic
	Emergency Response and Crisis Management	Level 3	Customer Orientation	Basic
	Engineering Problem Solving	Level 3	Building Diversity	Basic
	Engineering Safety Standards Interpretation	Level 3	Learning Agility	Basic
	Environmental Sustainability Management	Level 3	Adaptability	Basic
	Equipment and Systems Installation and Commissioning	Level 3	Influence	Basic
	Hybrid AC and DC Power Distribution and Utilisation	Level 3	Self Management	Basic
	Inter-agency Collaboration	Level 3		
	Internet of Things (IoT) Application	Level 3		
	Lifts and Escalators Systems Management	Level 3		
	Lighting Technologies Application	Level 3		
	Lightning Protection Systems Management	Level 3		
	Modelling, Simulation and Visualisation	Level 2		
	Power Engineering Management	Level 3		
	Regulatory Compliance and Risk Management	Level 3		
	Relay and Protection Systems Management	Level 3		
	Solar Photovoltaic Systems Application	Level 3		
	Stakeholder Management	Level 3		
	Substation Design 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.