

POWER ENGINEERING COMPETENCY FRAMEWORK						
SKILLS MAP - Senior Associate Engineer / Associate Engineer (System Stability & Planning / System Control)						
Sector	Power Engineering in the Public Service					
Track	Monitoring & Control					
Occupation	Assistant Electrical Engineer					
Job Role	Senior Associate Engineer / Associate Engineer (System Stability & Planning / System Control)					
Job Role Description	<p>The Deputy Director / Senior Specialist / Specialist (System Stability & Planning / System Control) is responsible for providing expert advice to ensure the stability of the power system. He/She advises on plans and schedules to ensure adequate generation capacity and leads the review of the licensee's Ten-Year Transmission Network Development Plan.</p> <p>He provides expert advice on enhancing power plant performance and optimising real-time monitoring and remote control of the power system to ensure secure and reliable supply of electricity. He also approves mitigating measures to minimise system issues. He advises on strategies for adoption of best practices and integration of new technologies with the power system. Further, he acts as a catalyst and nexus between different parties to drive decarbonisation, decentralisation and digitalisation initiatives in the sector.</p> <p>He possesses good leadership and interpersonal skills. Furthermore, he is a strategic thinker with a global mindset who actively contributes to national energy and power policies, strategies and frameworks to balance economic competitiveness, environmental sustainability, energy security.</p>					
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks		Performance Expectations (For legislated / regulated occupations)*		
	Manage power system stability and planning	Propose Planting Strategy, Generation Planting Schedule and Strategy to ensure adequate generation capacity		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		
		Coordinate the review of licensee's Ten-Year Transmission Network Development Plan for adherence to the planning criteria in the Transmission Code				
		Support analysis on proposed power plant and consumer connections to the electricity systems				
		Conduct on-site witnessing of generator testing and post-mortem studies for reviewing power plant performance				
		Support system studies on the integration of new transmission/generation technologies with the power system				
	Monitor and control power system operations	Assist in real-time monitoring and remote control of the power system to ensure secure and reliable supply of electricity				
		Support operations planning and assessment of equipment outage requests				
		Coordinating with contractors/licensees to increase their output and send out advisory to the market				
		Coordinate remote switching operation on transmission equipment				
	Contribute to decarbonisation, decentralisation and digitalisation initiatives	Keep abreast of national energy and power policies, strategies and frameworks				
		Gather data on 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	
Battery Systems Management		Level 2	Collaboration		Basic	
Business Intelligence and Data Analytics		Level 2	Problem Solving	Basic		
Continuous Improvement Management		Level 3	Sense-Making	Basic		
Contract and Contractor Management		Level 2	Communication	Basic		
Cybersecurity Framework Application		Level 2	Digital Fluency	Basic		
Distributed Generation System Performance Monitoring		Level 3	Customer Orientation	Basic		
Electrical Equipment and Systems Testing		Level 2	Adaptability	Basic		
Electrical Systems Design		Level 2	Influence	Basic		
Electricity Network Incident Management		Level 2	Self Management	Basic		
Electricity Network Operations Management		Level 2				
Electricity Network Performance Monitoring		Level 2				
Electricity Network Planning		Level 2				
Emergency Response and Crisis Management		Level 3				
Engineering Problem Solving		Level 3				
Engineering Safety Standards Interpretation		Level 3				
Environmental Sustainability Management		Level 3				

	Equipment and Systems Installation and Commissioning	Level 2	
	Inter-agency Collaboration	Level 3	
	Internet of Things (IoT) 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 Quality Management	Level 3	
	Power Strategy Planning and Governance	Level 3	
	Power System Monitoring and Control Management	Level 3	
	Regulatory Advisory	Level 3	
	Regulatory Compliance and Risk Management	Level 3	
	Stakeholder Management	Level 3	
	Technical Inspection	Level 2	
	Technology and Systems Application	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.