

POWER ENGINEERING COMPETENCY FRAMEWORK			
SKILLS MAP - Senior Engineer / Engineer (Regulatory)			
Sector	Power Engineering in the Public Service		
Track	Regulatory		
Occupation	Electrical Engineer		
Job Role	Senior Engineer / Engineer (Regulatory)		
Job Role Description	<p>The Senior Engineer / Engineer (Regulatory) is responsible for formulating regulatory frameworks, policies, technical measures, legislations, codes of practice and performance standards for power systems and emerging technologies. He/She represents the agency in industry and inter-agency committees for technical matters, technology discussions and policy decisions. He investigates power failure and low voltage electrical incidents, monitors regulatory breaches and takes appropriate regulatory action.</p> <p>He devises competency criteria for licensees carrying out electrical works and conducts applicant assessment and checks for Electrician's Licence and licensing of electrical installations. He also conducts inspections on electricity and supply installations, and inspects electricity system operations to ensure safety, security and reliability. He monitors non-compliance or breaches of legislation, licence conditions, codes of practice and performance standards. He also conducts audits of licensees' safety plans and emergency preparedness. In addition, he assesses the practicability and feasibility of new technologies and analyses data for identifying operational and strategic insights.</p> <p>He is detail-oriented with a compliance mindset, and is agile in responding to system failures, incidents and regulation breaches.</p>		
Critical Work Functions and Key Tasks / Performance Expectations	Critical Work Functions	Key Tasks	Performance Expectations (For legislated / regulated occupations)*
	Establish regulatory framework for power industry	Develop regulatory frameworks, policies and technical measures/processes for power systems	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
		Formulate legislation, codes of practice and performance standards	
		Develop technical regulations and requirements for new and emerging technologies	
		Represent the agency in industry and inter-agency committees for technical matters, technology discussions and policy decisions	
	Manage licensing and compliance operations	Devise competency criteria for licensees carrying out electrical works	* Performance Expectations are non-exhaustive and subject to prevailing regulations and industry standards
		Conduct applicant assessment and checks for Electrician's Licence and licensing of electrical installations	
		Formulate technical training and development plans for licensees	
		Conduct inspections on electricity and supply installations	
		Investigate power failure and electrical incidents involving low voltage consumer electricity or installations	
		Monitor non-compliance or breaches of legislation, licence conditions, codes of practice and performance standards	
		Ensure implementation of regulatory action against parties who breach regulatory requirements	
	Ensure power system safety, security and reliability	Inspect operations associated with the electricity system to ensure safety, security and reliability	
		Conduct audits of licensees' safety plans and emergency preparedness	
		Conduct reviews of power systems with licensees to identify vulnerabilities and mitigating measures to enhance reliability	
		Conduct public talks and awareness and education initiatives for safe electricity use for the industry and the public	
	Oversee electricity network projects	Provide inputs to optimise electricity transmission and distribution network development/renewal plans to meet electricity demand	
		Vet project proposals for project feasibility based on evaluation of site suitability	
		Monitor implementation of approved electricity transmission and distribution network projects	
		Conduct Concept and Master Plan Review for land related matters pertaining to the electricity system including power stations and substations	
Ensure implementation of cyber and physical security of the electricity critical infrastructure			
Contribute to decarbonisation, decentralisation and digitalisation initiatives	Contribute to national energy and power policies, strategies and frameworks to balance economic competitiveness, environmental sustainability, energy security		
	Conduct practicability and feasibility assessments of new electrical and power technologies		
	Assess regulatory and power system implications of innovation initiatives leveraging new electrical and power technologies		
	Provide technical advice for industry implementation of green initiatives for application of clean and renewable energy		
	Engage industry in the adoption of best practices for transmission, distribution and the integration of distributed generation sources		
	Analyse data for identification of operational and strategic insights		
Skills & Competencies	Technical Skills and Competencies		Critical Core Skills

	Business Intelligence and Data Analytics	Level 3	Problem Solving	Intermediate	
	Continuous Improvement Management	Level 4	Communication	Intermediate	
	Cyber Incident Management	Level 4	Sense-Making	Intermediate	
	Cyber Risk Detection and Monitoring	Level 3	Collaboration	Intermediate	
	Cybersecurity Framework Application	Level 3	Digital Fluency	Intermediate	
	Demand Response Management	Level 4	Decision Making	Basic	
	Electricity Network Incident Management	Level 3	Creative Thinking	Intermediate	
	Electricity Network Performance Monitoring	Level 3	Customer Orientation	Intermediate	
	Electricity Network Planning	Level 3	Transdisciplinary Thinking	Basic	
	Emergency Response and Crisis Management	Level 4	Developing People	Basic	
	Energy Security and Reliability Management	Level 4	Adaptability	Intermediate	
	Engineering Asset Management	Level 3	Influence	Intermediate	
	Engineering Problem Solving	Level 4	Self Management	Intermediate	
	Engineering Safety Standards Interpretation	Level 4			
	Environmental Sustainability Management	Level 4			
	Equipment and Systems Installation and Commissioning	Level 3			
	Innovation Management	Level 4			
	Inter-agency Collaboration	Level 4			
	Network Technical Specifications Development	Level 3			
	Policy and Regulations Framework Development for Technology Advancement	Level 4			
	Policy Development	Level 4			
	Policy Implementation and Revision	Level 4			
	Power Engineering Management	Level 3			
	Power Plant Incident Investigation	Level 3			
	Power Quality Management	Level 4			
	Power Strategy Planning and Governance	Level 4			
	Regulatory Advisory	Level 4			
	Regulatory Compliance and Risk Management	Level 4			
	Solid-State Power System Apparatus Implementation	Level 4			
	Stakeholder Management	Level 4			
	Strategy Development	Level 4			
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.