

POWER ENGINEERING COMPETENCY FRAMEWORK				
SKILLS MAP - Deputy Director / Senior Specialist / Specialist (Energy Management Systems)				
Sector	Power Engineering in the Public Service			
Track	Monitoring & Control			
Occupation	Electrical Engineer			
Job Role	Deputy Director / Senior Specialist / Specialist (Energy Management Systems)			
Job Role Description	<p>The Deputy Director / Senior Specialist / Specialist (Energy Management Systems) is responsible for endorsing the standards for Information Technology (IT) and Operational Technology (OT) systems. He/she leads failure analysis for Energy Management Systems and provides expert advice to ensure prompt resolution of faults.</p> <p>He leads the formulation of cybersecurity initiatives and plans, advises on incident investigation, and leads security reviews and audits. He also leads the design, implementation and management of department security initiatives, and advises on resolution of cybersecurity threats, system abnormalities and information security issues. He leverages data analytics to enhance strategic decision-making. He also advises on practical implications of decarbonisation, decentralisation and digitalisation initiatives.</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)*
	Oversee energy management systems	Endorse standards for Information Technology (IT) and Operational Technology (OT) systems to ensure high system availability and high quality data		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
		Lead fault/failure engineering analysis for faulty equipment or software issues in Energy Management Systems		
		Advise on gas and power application studies and simulations		
		Oversee faults in Sectorial Detection & Early Warning System (SDEWS) to prevent disruption to real-time operations		
		Endorse system schematic diagrams and databases to ensure that they reflect the actual condition in the field		
	Manage cybersecurity risks	Lead the design, implementation and management of department security initiatives		
		Advise on resolution of cybersecurity threats, system abnormalities and information security issues		
		Collaborate with Cyber Security Agency (CSA) in threat detection and technical assistance in the event of suspected intrusion or attacks		
		Lead annual technical security reviews and ISO 27001 audits with internal/external audit consultants		
		Develop strategies to ensure the adequacy and effectiveness of security controls		
	Contribute to decarbonisation, decentralisation and digitalisation initiatives	Advise on national energy and power policies, strategies and frameworks to balance economic competitiveness, environmental sustainability and energy security		
		Drive industry and inter-agency collaboration for research and assessment of new electrical and power technologies		
		Provide expert advice on regulatory and power system implications of innovation initiatives leveraging new electrical and power technologies		
		Champion industry implementation of green initiatives for application of clean and renewable energy		
Advise on strategies for adoption of best practices for transmission, distribution and the integration of distributed generation sources				
Champion the use of data analytics for strategic decision-making				
Skills & Competencies	Technical Skills and Competencies		Critical Core Skills	
	Business Intelligence and Data Analytics	Level 5	Problem Solving	Advanced
	Continuous Improvement Management	Level 6	Creative Thinking	Advanced
	Contract and Contractor Management	Level 5	Decision Making	Advanced
	Cyber Incident Management	Level 6	Sense-Making	Advanced
	Demand Response Management	Level 6	Collaboration	Advanced
	Distributed Energy Resources Implementation and Interconnection	Level 6	Developing People	Advanced
	Emergency Response and Crisis Management	Level 6	Communication	Advanced
	Energy Security and Reliability Management	Level 6	Transdisciplinary Thinking	Advanced
	Energy Storage Systems Management	Level 6	Digital Fluency	Advanced
	Environmental Sustainability Management	Level 6	Customer Orientation	Advanced
	Innovation Management	Level 6	Adaptability	Advanced
	Inter-agency Collaboration	Level 6	Influence	Advanced

	Internet of Things (IoT) Application	Level 6	Self Management	Advanced
	Modelling, Simulation and Visualisation	Level 5		
	Operational Technology Security Audit	Level 6		
	Operational Technology Security Management	Level 6		
	Policy Development	Level 3		
	Power Engineering Management	Level 5		
	Power Strategy Planning and Governance	Level 6		
	Public Health and Safety Management	Level 6		
	Regulatory Advisory	Level 5		
	Regulatory Compliance and Risk Management	Level 6		
	Robotics and Automation Systems Application	Level 5		
	Smart Grid Implementation	Level 6		
	Stakeholder Management	Level 6		
	Strategy Development	Level 6		
	Technology Road Mapping	Level 6		
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.