

**POWER ENGINEERING COMPETENCY FRAMEWORK FOR POWER ENGINEERING PROFESSIONALS IN PUBLIC SERVICE
TECHNICAL SKILLS AND COMPETENCIES (TSC) REFERENCE DOCUMENT**

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| TSC Category | Energy Operations Management | | | | | |
| TSC Title | Electricity Network Performance Monitoring | | | | | |
| TSC Description | Monitor electricity network performance to enhance power quality, safety and reliability | | | | | |
| TSC Proficiency Description | Level 1 | Level 2 | Level 3 | Level 4 | Level 5 | Level 6 |
| | | <Insert TSC Code> | <Insert TSC Code> | <Insert TSC Code> | <Insert TSC Code> | |
| | | Apply network performance monitoring procedures and document key performance indicators | Interpret network performance trend analysis reports and analyse key performance indicators | Manage network performance analysis, including trend analysis, and advise on performance improvement measures | Drive network performance optimisation, integrating new technologies to enhance performance monitoring | |
| Knowledge | | <ul style="list-style-type: none"> Relevant standards and Codes of Practice on network assets and operations and maintenance Basic performance monitoring regime of electricity network systems Basic key performance indicator data of electricity network systems Types of network operation and maintenance schemes, and incidents Principles and techniques of condition assessments | <ul style="list-style-type: none"> Relevant standards and Codes of Practice on network assets and operations and maintenance Performance monitoring regime of electricity network systems Key performance indicators of electricity network systems Trend analysis Failure rate analysis Principles and techniques of condition assessments Types of network operation and maintenance schemes, and incidents | <ul style="list-style-type: none"> Relevant standards and Codes of Practice on network assets and operations and maintenance Systems Engineering Performance monitoring and control Principles of predictive maintenance Principles and techniques of condition monitoring Asset health and risk assessment methodologies Asset remnant life assessment standards and methods | <ul style="list-style-type: none"> Emerging technologies and innovations on electricity network asset management Asset lifecycle management strategies Optimisation of network asset performance Asset health and risk assessment methodologies Systems engineering Asset remnant life assessment standards and methods | |
| Abilities | | <ul style="list-style-type: none"> Conduct network performance monitoring and maintain database of key performance indicators Maintain database of network asset operations, maintenance and incidents Collate statistics and information for performance reports | <ul style="list-style-type: none"> Implement network performance monitoring based on key performance indicators Review and audit database of network asset key performance indicators to ensure timeliness and accuracy of entries Prepare performance reports based on collated statistics and | <ul style="list-style-type: none"> Review processes and key performance indicators for network performance monitoring Direct and advise team on complex performance and failure analysis Review and vet performance reports and recommend performance improvement measures Provide technical advice and recommend the | <ul style="list-style-type: none"> Lead the team in network performance monitoring Develop new operation and maintenance plans and processes for network assets Identify scope of asset replacement and/or disposal strategies, methodologies and processes Drive asset optimisation for performance and | |

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| | | | information, and results of analyses | <p>renewal or disposal planning of network assets</p> <ul style="list-style-type: none"> • Carry out analyses, including trend analysis, of key performance indices, records of asset operations, maintenance and incidents, and failure rates of assets of same type • Scrutinise and endorse recommendation of priority in renewal or disposal planning of network assets • Take charge of database of key performance indicators for network assets | <p>effectiveness with minimum risks</p> <ul style="list-style-type: none"> • Integrate new technologies to enhance performance monitoring and predictive maintenance of assets • Submit renewal and/or disposal plans to senior management | |
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