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COMPETENCY PROFILE

Senior Engineer - O & M - AC Area

A Report By

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Competency Management System

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Position Name : Senior Engineer O M rea

Position Details

Job Title	Senior Engineer - O M - AC Area	Grade/ Level	Managing Self - AC
Business	Adani Green - Solar	Function	Solar
Location	Keraliya,Madhopura,Nedan		

Competencies Required

Technical

Competencies	Required Level	Criticality
Inverter	Level 2-Practitioner	Critical C
Transformer / IDT	Level 2-Practitioner	Critical C
Sub Station / Switchyard	Level 2-Practitioner	Critical C
Cable Management	Level 2-Practitioner	Important I
Solar Power Plant Technology	Level 2-Practitioner	Important I
Control System Architecture and SCADA	Level 2-Practitioner	Important I
Weather Monitoring System	Level 2-Practitioner	Important I
Plant Performance	Level 1-Novice	Important I
Transmission Lines and Grid	Level 1-Novice	Important I

Cross Functional

Competencies	Required Level	Criticality
Safety	Level 2-Practitioner	Critical C
ISO Standards	Level 1-Novice	Important I
ESG	Level 1-Novice	Important I
SAP PM and MM Module	Level 1-Novice	Important I

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Inverter

Level 2-Practitioner

Criticality:Critical C

Level Indicators

- Knowledge of Invertor specifications circuit diagrams SLD components
- Invertor operations isolation protections
- Invertor testing methods faults and errors troubleshooting rectification
- Invertor MPPT - Maximum Power Point Tracking working principle
- Knowledge of all applicable codes standards for the invertor in the plant
- Knowledge of I-V testing and comparison with the approved standard test results and do the correction
- Preventive Predictive Breakdown maintenance and testing as per OEM guidelines

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Transformer / IDT

Level 2-Practitioner

Criticality:Critical C

Level Indicators

- Knowledge of the Transformers specifications, circuit diagrams, SLD, GTP Data
- Transformer testing, Faults, errors and rectification as per OEM guidelines
- Knowledge of all applicable codes standards for all the transformers in the plant
- Preventive, predictive, breakdown maintenance of the transformers
- Troubleshooting of the transformers, relay coordination fault identification
- Physical inspection of the transformers as per the check list/ SOP
- Knowledge of the Fire Alarm, detection and protection system of the transformers
- Knowledge of NIFPS system, operations, maintenance, troubleshooting

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Sub Station / Switchyard

Level 2-Practitioner

Criticality:Critical C

Level Indicators

- Knowledge of SS and Switchyard Equipments HT/LT Panels CRP Panels Battery system Aux. Supply system specification circuit diagrams SLD
- Knowledge of errors testing operations applicable codes standards
- Knowledge of Relay settings configuration co-ordination and calibration
- Knowledge of Parameters / Alarm monitoring of applicable relays
- SS/Switchyard components testing Faults errors identification and rectification / SOP
- Ability and technical knowledge for isolation and normalization of feeders / sections by following the SOP/PTW system
- Knowledge of safety PPE/Tools applicable for such operations
- Ability to undertake preventive predictive and breakdown maintenance
- Physical inspection of the SS/Switchyard as per the check list/SOP
- Knowledge of the Fire Alarm detection and protection system of the SS/Switchyard
- Knowledge of earthing system

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Cable Management

Level 2-Practitioner

Criticality:Important I

Level Indicators

- Knowledge of spec of different types of Power cable control communication OPGW
- Knowledge of Cable laying and testing
- Methods of Cable identifying / tagging systems accordance to SLD
- Knowledge of Cable jointing termination for Power Control and OFC cables
- Knowledge of error codes and error / fault clearing methods
- Basics of Cable insulation and earthing
- Working methods of preventive predictive and breakdown maintenance of cables
- Maintenance of cable trays and cable routes route marker

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Solar Power Plant Technology

Level 2-Practitioner

Criticality:Important I

Level Indicators

- Definition/ Name Plate Details of all the components
- Understanding the AC/ DC SLD of the Solar Power Plant
- Components of Solar Power Plant
- Synergy integration of the components

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Control System Architecture and SCADA

Level 2-Practitioner

Criticality:Important I

Level Indicators

- Knowledge of SCADA architecture and components
- Knowledge of RTUs PPC PLCs PCs HMIs servers switches firewall Gateway FOTE communication CITET config.
- Knowledge of testing operations rectification monitoring these components and Hardware
- Knowledge of Data monitoring transmission to the control centres ensuring the 24X7 availability at SCADA.
- Knowledge of Protection and escalation of possible cyber-attacks and breaches prepared with emergency response
- Undertake preventive checks as per OEM and knowledge of trouble shooting bugs and issues
- Knowledge of Connectivity RF/Broadband/ILL/MPLS/PLCC trouble shooting cable slicing

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Weather Monitoring System

Level 2-Practitioner

Criticality:Important I

Level Indicators

- Weather Factors influencing the Solar Plant
- Geographic Location- Latitude Longitude Time Regional Weather and Microclimatic factors
- Knowledge of WMS type configurations troubleshooting IOT Apps
- Awareness of Meteo Station and weather forecasting systems
- Sensors and data logging system

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Plant Performance

Level 1-Novice

Criticality:Important I

Level Indicators

- Data Visualisation - Knowledge of Parameters to be monitored for Performance
- Data Visualisation - Knowledge of monitoring the parameters from SCADA systems
- Data Visualisation - Knowledge using of various monitoring system Power BI DSM F S
- Data Analytics - Knowledge of CUF Bridge, PR Bridge, Loss diagram, repeated errors, Loss reduction, report generation and transmission loss, Plant availability, Grid availability

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Transmission Lines and Grid

Level 1-Novice

Criticality:Important I

Level Indicators

- Knowledge Compliance with Grid codes
- Troubleshooting methods in Transmission systems
- Coordination for Line Shutdowns
- Knowledge of type of insulators condition monitoring relays operations
- Insulators rectification/ replacement procedures
- Grid operation and coordination
- Coordination with SLDC/ RLDC SECI
- Transmission Line patrolling

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Safety

Level 2-Practitioner

Criticality:Critical C

Level Indicators

- Safety Guidelines awareness applicable for Power Plant
- Knowledge of HIRA / JSA preparation as per the Company Safety Policy OEM Guidelines
- Disaster / Emergency Management Plan Knowledge preparation
- Accident possibilities Identification of Disaster-prone Areas prevention
- Fire Detection Control Process thoroughness Fire Fighting System knowledge
- Encourage drive safety culture for all the team members
- Conducting Mock drills
- Implementation of PTW Systems
- PPE / safety items / equipment's identification applicability

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ISO Standards

Level 1-Novice

Criticality:Important I

Level Indicators

- Awareness adherence to define process

ESG

Level 1-Novice

Criticality:Important I

Level Indicators

- Awareness adherence to define process

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