Job Information

Field	Detail
Job Title	Energy Engineer (Mining and Metals Industry)
Date of profiling	March 2024
Organisation	DRA Projects (Pty) Ltd
Location	Woodmead
DRA Global Band	
Upward Reporting Relationship – First Level	
Upward Reporting Relationship – Second Level	
Downward Reporting Relationship	

Primary Purpose (Role):

As an Energy Engineer with an electrical background in the Mining and Metals Industry, you will play a crucial role in hybrid renewable energy systems, particularly microgrids. The ideal candidate will have a strong background in designing, implementing, and optimizing hybrid renewable energy projects, with a focus on integrating thermal, solar, wind, and energy storage technologies. This role requires a deep understanding of energy systems, renewable energy technologies, and microgrid control strategies. This position requires a strong foundation in electrical engineering, energy systems, and a dedication to driving efficiency in the challenging industrial environment of South Africa's mining and metals sector.

Key Performance Areas (Responsibilities)

Design and Develop Hybrid Renewable Energy Systems.
- Lead the design and development of hybrid renewable energy systems, including microgrids, ensuring they meet project requirements and adhere to relevant codes and standards.

Feasibility Studies and Site Assessments.
- Conduct thorough feasibility studies and site assessments to determine the technical, economic, and environmental viability of hybrid renewable energy projects, considering factors such as resource availability, load profiles, and grid connectivity.

Engineering Plans and Specifications
- Develop detailed engineering plans, specifications, and cost estimates for hybrid renewable energy systems, ensuring they are accurate, efficient, and cost-effective.

Collaboration and Project Management
- Collaborate with cross-functional teams, including engineers, designers, project managers, and clients, to ensure the successful implementation of hybrid renewable energy projects, from concept to completion.

Technical Expertise and Support
- Provide technical expertise and support during the construction, commissioning, and operation of hybrid renewable energy systems, troubleshooting any issues that arise and ensuring compliance with project requirements.

Performance Monitoring and Optimization
- Monitor and analyse the performance of hybrid renewable energy systems, identifying opportunities for optimization and improvement to enhance overall system efficiency and reliability.

Regulatory Compliance
- Ensure compliance with relevant regulatory requirements, standards, and codes of practice governing hybrid renewable energy systems, keeping abreast of changes and updates in the regulatory landscape.

Training and Knowledge Sharing
- Provide training and knowledge sharing sessions to internal teams and external stakeholders on hybrid renewable energy systems, sharing best practices and lessons learned.

Research and Development

- Stay up to date with the latest developments in renewable energy technologies, microgrid design principles, and energy management strategies, contributing to ongoing research and development efforts in the field.

Reporting and Documentation

- Prepare regular reports and documentation on the progress and performance of hybrid renewable energy projects, highlighting key achievements, challenges, and recommendations for future improvements.

Health, Safety, and Environmental Compliance

- Ensure that all activities related to hybrid renewable energy projects comply with health, safety, and environmental regulations and standards, promoting a culture of safety and sustainability.

Client Relations

- Build and maintain strong relationships with clients, stakeholders, and partners, providing expert advice and support to ensure the successful delivery of hybrid renewable energy projects.

Continuous Improvement

- Identify and implement continuous improvement initiatives to enhance the efficiency, reliability, and sustainability of hybrid renewable energy systems, driving innovation in the field.

Energy Audits and Assessments

- Conduct comprehensive energy audits to identify areas of energy waste and inefficiency, particularly focusing on electrical systems.
- Analyse energy consumption patterns and propose strategies for improvement, with a strong emphasis on electrical efficiency.
- Collaborate with cross-functional teams to ensure successful project implementation.

Data Analysis and Reporting

- Collect and analyse data related to electrical energy usage and efficiency.
- Prepare detailed reports and presentations to communicate electrical energy performance and opportunities for improvement.

Cost Reduction

- Identify cost-saving opportunities associated with electrical energy consumption and implement strategies to achieve savings.

Job Requirements

Dimensions	
Financial	
Direct Staff	
Indirect Staff	
Scope of Responsibility	

Qualifications	
Formal Qualification Required	**Essential / Advantageous**
Master's degree in electrical engineering or a related field	Advantageous
Bachelor's degree in electrical engineering or a related field	Essential
Professional engineering certification	Essential

Experience

Job Related Experience Required	Time Span	Essential / Advantageous
Proven experience in electrical energy management and efficiency projects, preferably within the mining and metals industry.		Essential

Knowledge Areas

Job Related Knowledge Required	Essential / Advantageous
Strong knowledge of electrical systems, power distribution, and renewable energy technologies.	Essential
Proficiency in data analysis tools and energy modelling software, with a focus on electrical data.	Essential
Excellent project management skills.	Essential
Familiarity with South African electrical regulations and environmental standards.	Essential
Strong communication and presentation skills, particularly in conveying electrical energy-related information.	Essential
Ability to collaborate effectively in a multidisciplinary team.	Essential

DRA LEVEL 3 COMPETENCIES

Confidence / Sensitivity / Resilience

The ability to help people to display confidence, to build resilience and optimism in the challenging and varied international environments, to bounce back from crises and setbacks in these contexts and with appropriate support helps them to manage in a wide variety of circumstances and locations and to recover from challenges and setbacks.

1
- Models leadership skills and aligns actions with shared values
- Exemplifies integrity and expects honest, ethical behaviour from others
- Inspires others to act and fosters a climate of motivation
- Enables others to accept responsibility for their work and creates a culture of accountability
- Persuades and encourages others to adapt to desired changes
- Coaches and develops others
- Recognises and acknowledges efforts as well as the achievements of others

Adaptability

The ability to actively adapt to new information that becomes available, and to adjust own views easily.

2
- Anticipates change by keeping up to date on current research and trends affecting one's field
- Continually searches for ways to adapt and improve through change
- Consciously models appropriate adaptions and encourages it in others
- Redirects own or own team's efforts in response to changed circumstances to ensure practical problem solving
- Recognises and capitalises on opportunities
- Systematically analyses and shares the learning/knowledge gained from change

EMOTIONAL LEADERSHIP

Strategic Thinking

The ability to establish a clear and inspiring vision and goals and unifies business units with the strategic direction, taking into account the broad social-political and economic environment, nationally and internationally.

3
- Champion DRA's vision
- Sees patterns, relationships, or connections that are not obvious to others
- Presents complex matters or situations in a clear, concise fashion; assembles issues, observations, ideas, and interpretations into a cohesive, well-balanced proposition
- Rapidly identifies critical issues in a complicated situation
- Establishes priorities and ensures their alignment with goals
- Establishes methodology for measuring outcomes; communicates results
- Seeks, evaluates and implements alternative solutions
- Encourages others to appreciate connections within complex issues
- Develops practical new answers or explanations for complex problems

Systemic Analytical Thinking

The ability to identify critical issues, relationships, patterns and trends across global situations, processes and systems that are not related, analyse and synthesise data and approaching strategic work as part of a more extensive integrated and inter-related system.

4
- Sees multiple relationships and missing factors/gaps in systems or processes and takes corrective action as necessary.
- Creates new concepts that are not obvious to others and not learned from previous education or experience to explain situations or resolve problems.
- Looks at things in a novel way (i.e. breakthrough thinking)/ Shifts the paradigm; starts a new line of thought.
- Anticipates the consequences of situations and proactively works to overcome potential obstacles
- Thinks beyond the issues and balances multiples perspectives when setting the direction or reading conclusions
- Thinks beyond the organisation and balances multiple perspectives when setting the direction or reaching conclusions.
- Effectively resolves complex problems that require substantial, in-depth analysis
- Quickly identifies critical issues, stakeholders and viewpoints in a complicated situation or problem
- Finds ways to condense large amounts of information into a useful form

THINKING

DRA LEVEL 3 COMPETENCIES

Strategic Decision Making

The ability to make consequential decisions in a volatile, uncertain, complex, and ambiguous strategic environment and engages in establishing a broad sense of ownership, accountability and responsibility internationally.

THINKING

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- Anticipates the consequences of decisions
- Involves people appropriately in decisions that may impact them.
- Makes decisions, sets priorities, and chooses goals based on risks and rewards. (Appropriately weighs the costs and benefits of an immediate decision versus further analysis)
- Quickly responds with a back-up plan if a decision goes amiss
- Proactively identifies and prioritises the critical issues involved to facilitate the decision-making process for his or her team or group.
- Sticks to a decision even when faced with resistance or opposition (e.g., stays confident in the decision, does not give in or falter).
- Uses sound judgement to make appropriate, timely decisions in complex situations
- Makes decisions that may have a significant impact on other functions
- Predicts how a decision will affect individuals and groups in the department and company and develops strategies to build support for the decision and overcome obstacles

Planning, Organising & Control

The ability to plan, organise and control multi-national roles realistically, plans and manages resources efficiently, accurately establishes priorities and executes them despite conflicting agendas and multiple deliverables and building in time for contingencies to achieve longer-term objectives.

ACTION

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- Creates realistic plans that clearly define goals, milestones, and results.
- Plans in detail how to accomplish a large or complex project (e.g., identifies necessary sequence of action steps, then determines when each should be done and who should do it).
- Understands the roles of others within the company and uses this knowledge to improve efficiency (e.g., knows whom to contact in other areas to obtain information
- Develops controls, checks, and balances to monitor progress against plans and ensure the accuracy of the final product.
- Anticipates possible delays or risks to plans and determines alternative courses of action to ensure timely delivery and results.
- Involves his or her team in planning and setting priorities.
- Determines priorities for both short-term and long-term and plans an appropriate allocation of available resources
- Evaluates the current flow of work and information across units and identifies opportunities to improve coordination and make better use of resources to accomplish projects/initiatives
- Establishes realistic timeframes/schedules for project implementation

Leading Change

The ability to steer and implement change and managing uncertainty to achieve strategic results

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- Manages the process for change in an area
- Proactively identifies and addresses causes of resistance to change by defining clear targets and milestones for change efforts and gains people's commitment to them.
- Clearly communicates the rationale for and benefits of proposed changes
- Provides clear, timely, and accurate information about a change
- Answers questions related to the impact of the proposed change directly and with candour.
- Solicits people's feedback about how a change effort is progressing and how people are doing.
- Adapts own behaviour to support organisational change; acts as a role model for others.
- Evaluates systems and processes to ensure that they are aligned with and supportive of change efforts.
- Creates and fosters an environment that promotes and encourages change
- Anticipates resistance to change and prepares arguments to address resistance

DRA LEVEL 3 COMPETENCIES

NETWORK / INFLUENCE	ACTION		
	Strategic Agility		
	The ability to constantly and rapidly sense and respond to a changing environment by intentionally making strategic moves and consequently adapting the necessary organisational configuration for successful implementation.		
	8	Integrates complicated ideas and approaches to develop the best possible solutions.	
		Breaks down complicated problems or concepts into clear and manageable components.	
		Focuses others on the core message or desired result of a complex plan or idea	
		Continually searches for better ways to improve	
		Consciously models decisiveness and encourages it in others	
		Takes calculated risks in pursuing new and cutting-edge ideas that will enhance a project	
		Makes decisions through weighing up the cost-benefit and risk implications	
		Willingly takes calculated risks in situations where others tend to wait and see	
		Prefers to err on the side of action rather than miss an opportunity	
		Takes action with potential negative consequences for the department or on other functions	
		Creates relevant options and/ or proposes logical outcomes for addressing problems considering the associated constraints and risks	
		Develops contingency plans prior to their need	

	Strategic Networking	
	Displays the ability to establish and build lasting / trusting relationships internally and externally to enhance strategic opportunities	
	9	Pro-actively identifies and deliberately develops strategically important external relationships
		Works to communication company's vision and to understand the strategic priorities of other stakeholders, in order to promote recognition of long-term mutual benefits, within a relationship.
		Pre-empts potential conflicts of interest by developing mutually advantageous long-term strategies.
		Works to develop strong relationships within the company and with peers and colleagues within own professional network.
		Identifies networks/committees which would be of benefit to the company
		Understands the conditions for effective partnership working
		Creates network opportunities) for own division/department/team interested parties to exchange information with others
		Creates commitment to and enthusiasm for the accomplishment of challenging objectives across diverse teams
		Integrates people and resources to achieve high levels of synergy

	Communication & Influencing	
	Promotes an environment that embraces transparent, direct and honest communication with multiple stakeholders to successfully complex challenges and leverage internal and external communication networks to achieve goals	
	10	Actively seeks perspectives from others to ensure inclusiveness and understanding
		Encourages feedback and uses it as a factor when considering personal and or organisational changes
		Models interpersonal communication that invites participation and future dialogue
		Leverages working relationships with customers and colleagues to build strong connections, cooperation and collaboration
		Facilitates management of differences by addressing them openly and encouraging mutually beneficial resolutions. Encourages the open expression of dissent and contrary viewpoints
		Identifies key stakeholders whose support will be needed to get ideas or projects approved and implemented effectively and build relationships with them
		Stands firm when presenting own ideas yet is flexible in listening to and accepting others' input
		Helps the other person to vent anger and negative emotions
		Builds a strong case by linking knowledge and know-how to clients' interests, needs and goals
		Uses alliances to gain support for ideas, seeking advice and support from people who have been successful in influencing others

DRA LEVEL 3 COMPETENCIES

AUTHENTIC INDIVIDUAL AND TEAM LEADERSHIP

Team Leadership

The ability to provide inspiration, clarity, empowering people at all levels and develop a positive ethical climate, foster self-awareness, an internalised moral perspective, balanced processing of information, and relational transparency, to realise success

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- Fosters cooperation and collaboration in others through trust-building and relationships
- Encourages and enables flexibility
- Facilitates and models teamwork across the organisation
- Creates a culture of accountability
- Fosters partnerships towards a shared vision
- Builds effective teams across organisations and levels, inside and outside company.
- Delegates assigned tasks in alignment with operational goals
- Facilitates the recruitment, selection and retention of employees, while championing employee development for career growth and mobility

Personal Leadership

The ability to provide inspiration, clarity, empowering people at all levels and develop a positive ethical climate, foster self-awareness, an internalised moral perspective, balanced processing of information, and relational transparency, to realise success

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- Links work proposals to departmental initiatives and ensures team is aware of objectives
- Involves others in leadership development opportunities.
- Leads initiatives to change the process, system, or function to support departmental goals more effectively
- Builds buy-in and enthusiasm for departmental goals and vision across teams and functional boundaries and levels.

Vision Leadership

The ability to provide inspiration, clarity, empowering people at all levels and develop a positive ethical climate, foster self-awareness, an internalised moral perspective, balanced processing of information, and relational transparency, to realise success

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- Lead the development of the vision
- Defines and articulates the vision in the context of wider company priorities
- Describe the vision in compelling terms to develop understanding and promote acceptance amongst team members
- Empower staff to create alignment of company's vision and programming activities
- Set a high standard for moral and ethical conduct (ethical/moral)
- Keeping things working in the face of time, change and uncertainty, in a way which keeps people and purposes aligned.
- Sets clear behavioural guidelines
- Generates energy and enthusiasm towards vision and mission
- Solicit sufficient opinions and viewpoints prior to making important decisions (balanced processing)
- Aware of own strengths, limitations, the perceptions of others and impact of behaviour on others (self-awareness)

Acceptance

Title	Name	Signature
Incumbent Title	Incumbent	
Manager Title	Manager	