GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

820 **8 August 2008**

SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Engineering

registered by Organising Field 06 – Manufacturing, Engineering and Technology, publishes the following Qualification and Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualification and Unit Standards. The full Qualification and Unit Standards can be accessed via the SAQA web-site at **www.saqa.org.za**. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification and Unit Standards should reach SAQA at the address below and ***no later than 8 September 2008.*** All correspondence should be marked **Standards Setting – Engineering** and addressed to

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SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
National Certificate: Energy Regulation

SAQA QUAL ID	*QUALIFICATION TITLE*		
63209	National Certificate: Energy Regulation		
ORIGINATOR		*PROVIDER*	
SGB Engineering			
QUALIFICATION TYPE	*FIELD*	*SUBFIELD*	
National Certificate	6 - Manufacturing, Engineering and Technology	Engineering and Related Design	
ABET BAND	*MINIMUM CREDITS*	*NQF LEVEL*	*QUAL CLASS*
Undefined	120	Level 5	Regular-Unit Stds Based

This qualification does not replace any other qualification and is not replaced by another qualification.

PURPOSE AND RATIONALE OF THE QUALIFICATION
Purpose:

This Qualification will provide broad knowledge, skills and values needed for learners who wish to pursue a career in the energy regulation field. Learners obtaining this qualification will be recognized on a national level for performing specific regulatory activities related to petroleum, piped gas and electricity industries. Learners achieving this qualification will be deployed in the country's energy regulation body.

The qualification will ensure professionalism, proficiency and excellence for employees in the regulatory environment that will promote pride, self worth and enhance their morale in the workplace. This qualification will enable the field to train the learners on an NQF registered qualification which will be manifested in the operational competence of the employee in terms of safe, sound and efficient work practices within the regulatory environment.

The purpose of this qualification is to introduce the regulatory framework that entails energy regulation in South Africa for three areas namely, petroleum, piped gas and electricity. It will also promote the understanding and correct interpretation of the energy legislation.

A learner certified as competent in this qualification will be able to interpret and understand energy legislation and avoid common misunderstandings on how the legislation should be interpreted. The learner will also gain the necessary basic technical knowledge of the different energy industries in South Africa and how they need to be regulated.

It will also enable learners to:

> Acquire a broad understanding of Energy Regulation in general and South African practices, in particular.
> Understand the functions and purpose of regulatory bodies in South Africa.
> Understand the legislation that impacts on Energy Regulation in South Africa (Gas Act, NERSA Act, Petroleum Pipelines Act, Gas Trade Agreements, Petroleum Pipeline Agreements, etc).
> Understand the different types of licenses and the application process.

> Understand economic regulation of network undertakings.
> Understand pricing and tariffs of the regulated energy industries.
> Have a broad knowledge of the agreements in place with other organizations and countries.

Rationale:

This qualification addresses the need in the energy regulation industry for individuals with knowledge, skills and understanding to correctly interpret and apply the regulatory legislation within the three energy regulatory areas currently existing in South Africa namely, petroleum, piped gas and electricity.

This qualification could assist with the achievement of national and industrial development policies and strategies to grow the pool of energy regulators and other related skills. People working in the energy regulation field require specialized technical knowledge and skills in order to meet the requirements of the constantly changing needs of the energy sector. Hence, the requirements for entrance to the qualification is for experienced learners that is already in possession of tertiary qualifications.

The qualification will also enhance the qualifying individuals technical skills and background for the petroleum, piped gas and electricity industries which in turn will enable the regulatory authority to carry out its function in each of these industries appropriately.

The qualification focuses on the skills, knowledge, values and attitudes required to ensure further progression.

The objective is to:

> Promote the development of knowledge, skills and values that are required in a regulatory industry.
> It ensures and addresses the potential of learners to apply their knowledge in the regulatory environment.
> Provide opportunities for learners to specialize in different industries that fall under the regulatory legislation.
> Ensure the quality of education and training is enhanced and is of a world class standard.

The qualification provides the learner with the necessary competencies to be employed in various roles within energy regulation. It will also enable the learner to pursue different career opportunities, as many of its competencies are generic enough to be applicable to other career paths and job roles.

The typical range of learners that will do this qualification will come from the chemical, electrical and mechanical technical engineering environment. The learners will participate in working areas related to the energy environment which entails regulation and legislation of the electricity, gas and petroleum industries.

Hence, the greater need in the country revolves around the regulation of energy with more learners being required to participate, particularly now that there is a global view on the energy crisis and the limited resources in energy generation worldwide, which is forcing a greater need for stricter energy regulatory processes. There will be tremendous benefits to be gained with the development of this energy regulation qualification for the learner, society, country and the economy of South Africa at large.

The qualification is structured in such a way that it gives learners exposure to a broad set of Core competencies in energy regulations while the Electives, which may be chosen from any of the three focal areas: piped gas, petroleum and electricity, to allow for competence in the learner's current work environment or chosen future work environment.

The Qualification supports the objectives of the National Qualifications Framework in the following ways:

> It provides a learning opportunity at Level 5 in energy regulation. It also gives the opportunity to learners to obtain official recognition for knowledge and skills that they possess in topics related to energy regulation through the awarding of an officially recognized Qualification.
> The inclusion of the specified Unit Standards in the Fundamental and Core Components contributes to the full personal development of each learner and the social and economic development of the nation at large.
> Setting national standards of practice in this specific area of interest which could enhance social and economic development to the learners at large.
> Building individual capacity in this specialized profession ensuring entry, progression and mobility into Life Long Learning in this specific learning field.
> Enhancing of professional competence on a national level providing an avenue of upliftment for the previously disadvantaged into this professional discipline.

RECOGNIZE PREVIOUS LEARNING?
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LEARNING ASSUMED IN PLACE
It is assumed that learners are already competent in:

> Communication at NQF Level 4.
> Mathematics at NQF Level 4.

Recognition of Prior Learning:

> The provision that the Qualification may be obtained through the recognition of prior learning, facilitates access to an education, training and career path in Energy Regulation, and thus accelerates the redress of past unfair discrimination in education, training and employment opportunities.

> This Qualification can be achieved wholly or in part through recognized RPL processes, which includes formal, informal and non-formal learning and work experience.

> Evidence of prior learning must be assessed through formal RPL processes through recognized methods.

> Any other evidence of prior learning should be assessed through formal RPL processes to recognize achievement thereof.

> Learners submitting themselves for RPL should be thoroughly briefed prior to the assessment, and will be required to submit a Portfolio of Evidence in the prescribed format to be assessed for formal recognition. While this is primarily a workplace-based qualification, evidence from other areas of learning may be introduced if pertinent to any of the exit level outcomes.

> The structure of this Unit Standard based Qualification makes the Recognition of Prior Learning (RPL) possible, if the learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this energy regulation qualification.

> Learners who already work in the energy regulatory industry who believe they posses the competencies to enable them meet all of the outcomes listed in the unit standards will be able to present themselves for assessment against the unit standards of their choice.

Access to the Qualification:

Access to the qualification is open bearing in mind learning assumed to be in place. It is, however, important that learners must have completed:

> Have a relevant Diploma or Degree.
> Have qualified as an Artisan in the appropriate field together with the minimum of an NQF Level 5/NQF Level 6 Technical Certificate.

QUALIFICATION RULES
To be awarded the Qualification, learners are required to obtain a minimum of 120 credits as detailed below.

All Fundamental Unit Standards totalling 26 credits are compulsory.

All the Core Unit Standards totalling 62 credits are compulsory.

Learners must select Elective Unit Standards totalling 32 credits.

The Elective Unit Standards listed in the qualification matrix are clustered into: Electrical (Hydro, Fossils and Steam), Piped Gas and Petroleum, all of which provide the learner with knowledge and skills which enables the learner to implement and manage a section/division/department within the Organization.

EXIT LEVEL OUTCOMES
1. Demonstrate an understanding of the implications of the various energy related Acts.

2. Demonstrate an understanding of the energy regulatory principles.

3. Analyze and interpret developments in energy regulation.

4. Analyze and interpret energy regulation and how it can be used by the Regulatory Authority to carry out its function.
> Range: Petroleum, Piped Gas and Electricity.

5. Demonstrate knowledge and application of infrastructure planning.

6. Demonstrate knowledge of tariff setting and third party access.

Critical Cross-Field Outcomes:

This qualification promotes, in particular, the following Critical Cross-Field Outcomes:

Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made when:

> Identifying potential risks in the workplace and implementing appropriate solutions to maintain a safe and secure working environment.
> Identifying and resolving general client queries and deviations from regulatory requirements.
> Identifying and pro-actively reporting on non-availability of resources and materials.

Working effectively with others as a member of a group, organisation and community during:

> Directing appropriate colleagues to attend to client queries.
> Understanding the impact of service delivery to the client.
> Activities involving clients, co-workers and suppliers.

> Communicating and receiving advice from supervisors.

Organising and managing oneself and one's activities responsibly and effectively when:

> Identifying, minimizing and reporting potential occupational health and safety hazards and risks in the workplace.
> Performing work activities in accordance with industry standard operating procedures.
> Safety equipment and clothing is selected and prepared in accordance with legislative requirements.

Collecting, analysing, organising and critically evaluating information to better understand and explain by:

> Carrying out written instructions issued by the clients and supervisors, correctly and efficiently.
> Interpreting and recording correct client contact details.

Communicating effectively using visual, mathematical and/or language skills in the modes of oral and/or written persuasion when:

> Issuing clear verbal instructions to team members, other colleagues and clients.
> Actively listening to feedback received from team members, other colleagues and clients.
> Evaluating and reporting problem situations to team members, other colleagues and clients.

Using science and technology effectively and critically, showing responsibility towards the environment and health of others when:

> Interpret various gauge settings, readings and recording the impact on the business.
> Understanding and interpreting the various gauge reading equipment.

Demonstrating and understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation when:

> Applying the inter-relatedness of the electricity, piped gas and petroleum manufacturing, distribution, storage and sale thereof.
> Recognizing the inter-relatedness between the various business units within the organization.

ASSOCIATED ASSESSMENT CRITERIA
Associated Assessment Criteria for Exit Level Outcome 1:

1. The impact of the energy related Acts in South Africa is identified and described.
2. The Energy related Acts are analysed in terms of their objectives.
3. A description is given of the objects and rationale for the energy related Acts.
4. A description is given of the relationship between the energy regulatory Acts and other related legislations.

Associated Assessment Criteria for Exit Level Outcome 2:

1. Describe the historical background to the development of the energy industry legislation and the areas of overlapping jurisdiction is explained.
2. The objectives and intentions of the licensing conditions is identified and explained.
> Range: Licencing conditions means but is not limited to; security of supply, competition, promotion of investment, public safety, and environmental issues.
3. The economic regulation principles embedded in the energy industry acts' knowledge component is identified, explained and understood.
4. The legal and other requirements that regulate the regulated body are described.

5. Explain the difference and hierarchy between an Act, Regulations, Rules, Charters and Codes.

Associated Assessment Criteria for Exit Level Outcome 3:

1. Evaluate developments in energy regulations locally and internationally in terms of Codes of Practice and Standards.
2. Analyze accepted deviations from Codes of Practice and Standards and how these would affect/influence the regulated industries.
3. Explain the key aspects of the most applicable National and International Codes of Practice and Standards.
4. Explain the rationale for the most used Codes of Practice and International Standards.
5. Explain the accepted performance levels of energy industries as experienced by its users and reasons for deviation from the accepted performance practice and standards.

Associated Assessment Criteria for Exit Level Outcome 4:

1. Describe the roles, functions and duties of the Regulatory Authority in terms of the different regulated industries.
2. Define the role of the International Regulatory Association and how this impacts on the local energy sector.
3. Demonstrate knowledge and understanding of alternative ways of organizing and regulating the different energy industries.
4. Demonstrate an understanding of tariff setting for each of the licensed and regulated industries.
5. Explore different ways to resolve disputes that arise in the energy industry due to regulatory requirements.

Associated Assessment Criteria for Exit Level Outcome 5:

1. Basic economic and technical analysis of an infrastructure investment project is performed in terms of the energy regulatory requirements.
2. The need to license a new project or to grow a new entrant into the industry is explained in terms of the energy regulatory requirements.
3. National energy demand and supply balance for each regulated industry is performed in terms of the energy regulatory requirements.
4. Preferred technology solutions for different energy demand and supply imbalance situations is selected in terms of the energy regulatory requirements.

Associated Assessment Criteria for Exit Level Outcome 6:

1. Rate structure is designed and evaluated in terms of the energy regulatory requirements.
2. Financial analysis of a tariff is completed in terms of the energy regulatory requirements.
3. Social, economic and environmental impacts of a tariff are evaluated in terms of the energy regulatory requirements.
4. A communication plan is developed in terms of the energy regulatory requirements.
> Range: Public meeting; write a report on third party input.
5. An access pricing framework is developed in terms of the energy regulatory requirements.

Integrated Assessment;

The applied competence (practical, foundational and reflective competencies) of this qualification will be achieved if a learner is able to achieve the Exit Level Outcomes of the qualification as per the rules specified. Applicable Critical Cross-Field Outcomes must be assessed during any combination of practical, foundational and reflexive competencies

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assessment methods and tools to determine the whole person development and integration of applied knowledge and skills.

Certain exit level outcomes are measurable and verifiable through assessment criteria assessed in one application. Applicable assessment tools to assess the foundational, reflective and practical competencies within the regulatory environment.

A detailed portfolio of evidence is required of the practical, foundational and reflective competencies of the learner. Assessors and moderators should develop and conduct integrated assessment by making use of a range of formative and summative methods.

Assessors should assess and give credit for the evidence of learning that has already been acquired (RPL) through any form of learning. Unit standards associated with this qualification must be used to assess Specific and Critical Cross-Field Outcomes.

During integrated assessment, the assessor should make use of formative and summative assessment methods and should assess combinations of practical, foundational and reflective competencies. Because assessment practices must be open, transparent, fair, valid, and reliable and ensure that no learner is disadvantaged in any way whatsoever, the qualification applies in an integrated assessment approach.

Learning, teaching and assessment are inextricably linked. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the unit standards should be integrated. Assessment of the fundamental unit standards should be conducted in conjunction with the core and elective unit standards where applicable.

A variety of methods must be used in assessment, and tools and activities must be appropriate to the context in which the learner is working. Where it is not possible to assess the learner in the workplace or on-the-job, simulations, case studies, role-plays and other similar techniques should be used to provide a context appropriate to the assessment.

Assessors and moderators should use a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience. Assessment should ensure that all specific outcomes, embedded knowledge and critical cross-field outcomes are evaluated. The assessment of the critical cross-field outcomes should be integrated with the assessment of specific outcomes and embedded knowledge.

Formative Assessment:

Assessment criteria for formative assessment will typically take place during training and serves to guide the learner towards full competence and is described in the various unit standards. Formative assessment takes place during the process of learning and assessors can use a range of appropriate assessment methods and tools or in any agreed-upon method of assessment of the knowledge required to perform the various competencies in a holistic manner. To be allowed access to the final qualifying assessment, a learner must show that he/she has reached a level of overall integrated competence.

The methods of assessment could include but not limited to the following:

> On-the-job Observations.
> Role-play and/or Simulations.
> Knowledge tests, exams, case studies, projects, logbooks, workbooks.
> Verbal report backs (presentations).
> Portfolios of Evidence (RPL).
> Working in teams (360 degrees evaluations).

> Scenario sketching Incident reports.

The assessment tools and methods used by the assessor must be:

> Fair, not to hinder or disadvantage the learner in any way.
> Valid, to measure what is intended to measure.
> Reliable, consistent and delivers the same output across a range of learners and assessors.

Summative Assessment:

For the learner to be certified competent against the qualification, he/she must prove overall competence through the integration of the competencies expressed in the unit standards. The elements of importance here are overall abilities, problem-solving capability and safe working. In addition, assessors should be satisfied that the learner has achieved a level of competence to be able to take charge of any aspect of the regulatory operations.

The learner's ability to demonstrate competence against a particular unit standard, under real-life working conditions and in the presence of an assessor, will be assessed. The summative assessment can also be used as a diagnostic assessment tool aimed at identifying the learner's skills gaps.

Workplace Assessment:

Workplaces can be used for assessment purposes provided that the appropriate facilities, tools, equipment, and support systems are available and accessible to both the assessor and the learner.

The regulatory operations industry agreed on the following requirements for workplace assessment:

> Assessment needs to occur in a familiar environment at the time of assessment.
> Assessment needs to take place at a time and venue mutually agreed to by the assessor and the learner.

Methods of Assessment:

The following methods of assessment have been identified as the preferred measurement and assessment of learner competence in the assessment criteria:

> Portfolio of Evidence.
> Written tests.
> Practical tests.
> Oral assessment methods.
> In-situ (on-the-job) observations.
> Simulation.
> Structured classroom discussions and oral tests.

These methods will be selected carefully based on the purpose of the assessment. For example, the written method will be used to assess knowledge and on-the-job demonstration for practical competence. The assessment must integrate a number of different methods (no less than two of those detailed above) in order to give the assessor reliable and valid proof of competence and evidence of required attitudes.

INTERNATIONAL COMPARABILITY

An extensive international comparability study was conducted with various countries including New Zealand, Ireland, Scotland, UK's City and Guilds, USA and Australia. It was discovered that

there was no similar registered qualifications to adequately compare this qualification with. However, during the research enough training course material, in-house working documentation and information could be gathered to compare it with.

International Energy Regulation Network (IERN):

IERN is a platform that aims at facilitating information exchange on electricity and natural gas market regulation, to the benefit of regulators, but also of other interested users. Through IERN, regulators and other energy market stakeholders will be able to exchange information about themselves, the sectors they are involved in and the way these sectors are regulated.

IERN will also be a place where regulators can exchange information about training courses, conferences and online resources on energy regulation. Longer-term, IERN aims at becoming not only vector for exchanging existing information, but also a producer of in-house working papers on best practice.

The platform contains a full list of National Regulators or Regulatory Institutions of the energy sector highly independent from stakeholders and with different degrees of autonomy from Ministerial Departments, organized by continent/country.

A wide variety of training courses (there are numerous) are listed that could be compared to the unit standards provided in this qualification, for example the LSE Short Course on Regulation; Utility Regulation.

Potential qualifications that could be compared to this qualification include the following (the focus is mainly on energy generation and conservation rather then on regulatory requirements:

> Postgraduate Diploma in Renewable Energy.
> Postgraduate Certificate in Renewable Energy.
> Degree of Master of Science in Renewable Energy.
> The website lists compulsory modules and credit allocation to each module. In addition, all these modules can be used as stand alone modules and used for Continuous Professional Development points.

Institute for Public-Private Partnerships Incorporated:

The Institute for Public-Private Partnerships, Inc. (IP3), established in 1994, provides global training and consulting services to governments and industries in the growing international marketplace of public-private partnership (PPP) modeling, regulation design and implementation, and competitive utility management. Their platform provides brochures on courses available, some of which can be done online. However, you need to register to access more information about these courses.

New Zealand:

In New Zealand, regulatory qualifications exist, however they pertain to law and security and law enforcement in various sector such as animal control and welfare, pest control, parking enforcement, rates management/officer and so on.

Scotland:

In Scotland, the regulatory qualification pertains to Financial Services.

Ireland:

In Ireland no comparable qualifications were identified.

Identified programmes that could be used to compare this qualification against include the following, however there are no comparisons that could be made to energy regulatory authorities:

> Enbridge Technology.
> Enbridge Technology is a training and technology provider, providing custom- designed training and consulting services for clients in the oil and gas industry worldwide. A list of the possible pipeline operations training modules could be accessed, covering both the operations and maintenance aspects, but the contents of these modules could not be accessed (available on a for-sale-basis only). The modules contain information on how to complete the covered tasks. The courses are designed in accordance with API-approved principles, and the API naming conventions. From the list it seems that the modules cover similar pipeline operations competencies with regard to this specific qualification.

The list includes, for example:

> Induction to fluid behaviour.
> Induction to batch tracking.
> Pump operations.
> Induction to Pipeline Control System (SCADA).
> Pumping Gradients.
> Pump unit selection.
> Trend Analysis.

From the available document, it is clear that a qualification for pipeline operators exists (Pipeline Control Centre Operations Qualification), however, there is no indication whether or not unit standards, levels or credits apply. It seems that the training came into being due to the regulatory requirements for pipeline operations.

City and Guilds:

Reference was made to oil and gas extraction, petroleum and chemical industries, but no documents were available.

American Petroleum Institute:

The platform was accessed and various training programmes exist, for example:

> Introduction to Pipelining.
> Introduction to Oil and Gas Production and Equipment.
> Introduction to Gas Processing.
> Petroleum Industry in Canada.
> Pipeline Environment Inspection.
> Petroleum Safety Training.
> Oil Spill Containment and Recovery.
> Oil Production Operators Course.
> Oil and Gas Production Operator Basics.
> Environmental Perspectives.

These courses are in existence but could not be accessed in order to determine more detail. The platform is set up as an advert to training rather than access to available competencies.

In Conclusion:

It was decided that in terms of the qualification model completeness the American Petroleum Institute (API) standards as well as American Standards of Temperature Measurement (ASTM) standards, which are accepted internationally was regarded as the best to compare and benchmark this qualification against in the context of the South African Regulatory Industry.

ARTICULATION OPTIONS
This Qualification allows for both horizontal and vertical articulation:

> Horizontal Articulation is possible with:
> ID 58330: National Certificate: Pipeline Operations at NQF Level 5.
> ID 61570: National Diploma: Power Plant Process Control operations at NQF Level 5.

> Vertical Articulation is possible with:
> National Certificate: Management Studies at NQF Level 6. Under construction.
> National Diploma: Master Artisan: Electrical at NQF Level 6. Under construction.

MODERATION OPTIONS
> Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with a relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.

> Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with relevant ETQA.

> Moderation of assessment will be overseen by the relevant ETQA or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the relevant ETQA's policies and guidelines for assessment and moderation.

> A learner wishing to be assessed for this qualification can only be assessed through an accredited assessment provider/centre.

> Moderation must include both internal and external moderation of assessments at exit points of the qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual Unit Standards as well as in the Exit Level Outcomes described in the Qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS
The assessor for this qualification must be:

> Have a similar qualification or that is at least one level higher than this qualification.
> Meet the requirements of National Assessor Unit Standards.
> Registered as an assessor with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
> Have at least a minimum of 1 year on the job relevant experience.

NOTES
N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	15234	Apply efficient time management to the work of a department/division/section	Level 5	4
Fundamental	119953	Apply principles of dispute management in labour relations	Level 5	10
Fundamental	10622	Conduct communication within a business environment	Level 5	8

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	15220	Set, monitor and measure the achievement of goals and objectives for a team, department or division within an organisation	Level 5	4
Core	257236	Apply knowledge of energy legislation and regulatory requirements	Level 5	6
Core	257239	Demonstrate an understanding of South African Regulated Industries	Level 5	8
Core	257238	Demonstrate an understanding of Third Party Access	Level 5	6
Core	257241	Demonstrate an understanding of the principles of regulation	Level 5	5
Core	257240	Demonstrate knowledge and understanding of Industry Infrastructure Planning and Tariff Setting	Level 5	8
Core	257237	Demonstrate knowledge and understanding of energy industry standard codes	Level 5	5
Core	257235	Demonstrate knowledge and understanding of the RSA Regulated Industry (Downstream) Marketing and Operations trends	Level 5	8
Core	243816	Develop a project quality management plan for a simple to moderately complex project	Level 5	6
Core	114882	Develop holistic productivity improvement strategies and plans	Level 5	10
Elective	116434	Control electrical networks from a control centre	Level 4	10
Elective	13710	Explain thermodynamic principles and concepts as applied in nuclear power generating plant	Level 4	9
Elective	119308	Manage and coordinate the movement and volumes of product through a dedicated-product pipeline network	Level 4	20
Elective	14586	Monitor and control quality control practices in a manufacturing/engineering environment	Level 4	8
Elective	119328	Perform and coordinate a pipeline network start-up	Level 4	20
Elective	119307	Perform basic planning of petroleum product movement	Level 4	4
Elective	116453	Perform operations on high voltage integrated systems	Level 4	4
Elective	119327	Perform pipeline network shut-down	Level 4	12
Elective	119310	Prepare for the movement of product throughout the pipeline network	Level 4	9
Elective	15231	Create and use a range of resources to effectively manage teams, sections, departments or divisions	Level 5	4
Elective	14907	Describe the Regulatory Nuclear Safety requirements as applied in nuclear power generating plant	Level 5	1
Elective	15225	Identify and interpret related legislation and its impact on the team, department or division and ensure compliance	Level 5	4
Elective	243843	Perform audits of product movements in a pipeline network	Level 5	11
Elective	10147	Supervise a project team of a technical project to deliver project objectives	Level 5	14

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION
None

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge and understanding of the RSA Regulated Industry (Downstream) Marketing and Operations trends

SAQA US ID	*UNIT STANDARD TITLE*		
257235	Demonstrate knowledge and understanding of the RSA Regulated Industry (Downstream) Marketing and Operations trends		
ORIGINATOR		*PROVIDER*	
SGB Engineering			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	8

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1
Demonstrate an understanding of the downstream regulated industries.

SPECIFIC OUTCOME 2
Demonstrate knowledge and understanding of the Electricity regulated industry.

SPECIFIC OUTCOME 3
Demonstrate knowledge and understanding of the Petroleum regulated industry.

SPECIFIC OUTCOME 4
Demonstrate knowledge and understanding of the Gas regulated industry.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63209	National Certificate: Energy Regulation	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Apply knowledge of energy legislation and regulatory requirements

SAQA US ID	*UNIT STANDARD TITLE*		
257236	Apply knowledge of energy legislation and regulatory requirements		
ORIGINATOR		*PROVIDER*	
SGB Engineering			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	6

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1
Explain the regulatory framework governing the energy regulation industry.

SPECIFIC OUTCOME 2
Define the objectives and principles relating to Acts and Regulations governing the energy regulatory industry.

SPECIFIC OUTCOME 3
Demonstrate knowledge and application of the different Regulator types within the industry.

SPECIFIC OUTCOME 4
Demonstrate a basic understanding of the role of the International Regulatory Association and how it impacts on the South African energy regulatory ndustry.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63209	National Certificate: Energy Regulation	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge and understanding of energy industry standard codes

SAQA US ID	*UNIT STANDARD TITLE*		
257237	Demonstrate knowledge and understanding of energy industry standard codes		
ORIGINATOR		*PROVIDER*	
SGB Engineering			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1
Demonstrate knowledge of National and International Codes of Practice and Standards.

SPECIFIC OUTCOME 2
Identify and describe accepted deviations from Codes of Practice and Standards for energy regulation.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63209	National Certificate: Energy Regulation	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of Third Party Access

SAQA US ID	*UNIT STANDARD TITLE*		
257238	Demonstrate an understanding of Third Party Access		
ORIGINATOR		*PROVIDER*	
SGB Engineering			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	6

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1
Develop a communication plan.

SPECIFIC OUTCOME 2
Organise a public meeting.

SPECIFIC OUTCOME 3
Conduct a public meeting.

SPECIFIC OUTCOME 4
Write a report on third party input.

SPECIFIC OUTCOME 5
Develop an access pricing framework.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63209	National Certificate: Energy Regulation	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of South African Regulated Industries

SAQA US ID	***UNIT STANDARD TITLE***		
257239	Demonstrate an understanding of South African Regulated Industries		
ORIGINATOR		***PROVIDER***	
SGB Engineering			
FIELD		***SUBFIELD***	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	***UNIT STANDARD TYPE***	***NQF LEVEL***	***CREDITS***
Undefined	Regular	Level 5	8

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1
Demonstrate knowledge and understanding of the history of regulated industries.

SPECIFIC OUTCOME 2
Demonstrate knowledge of the different regulated industries.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63209	National Certificate: Energy Regulation	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge and understanding of Industry Infrastructure Planning and Tariff Setting

SAQA US ID	*UNIT STANDARD TITLE*		
257240	Demonstrate knowledge and understanding of Industry Infrastructure Planning and Tariff Setting		
ORIGINATOR		*PROVIDER*	
SGB Engineering			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	8

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1
Analyse and assess the current situation of South African Industry Infrastructure.

SPECIFIC OUTCOME 2
Demonstrate an understanding of tariff setting for each of the regulated industries and for each licensed activity of the industry.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63209	National Certificate: Energy Regulation	Level 5

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of the principles of regulation

SAQA US ID	*UNIT STANDARD TITLE*		
257241	Demonstrate an understanding of the principles of regulation		
ORIGINATOR		*PROVIDER*	
SGB Engineering			
FIELD		*SUBFIELD*	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	*UNIT STANDARD TYPE*	*NQF LEVEL*	*CREDITS*
Undefined	Regular	Level 5	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1
Identify and describe the criteria of licensing conditions for a regulated industry.

SPECIFIC OUTCOME 2
Identify and explain the economic regulation principles embedded in the industry Acts.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	63209	National Certificate: Energy Regulation	Level 5