NRWDI

NATIONAL RADIOACTIVE WASTE DISPOSAL INSTITUTE

NATIONAL RADIOACTIVE WASTE DISPOSAL INSTITUTE (NRWDI)

STRATEGIC PLAN
FOR 2017/2018 - 2019/2020

Private Bag X1
Pretoria
0001
Gauteng Province
South Africa

NATIONAL DEVELOPMENT PLAN 2030

FOREWORD

The management of radioactive waste disposal on a national basis is an institutional ministerial obligation and assigned to the National Radioactive Waste Disposal Institute (NRWDI), also referred to as the "Institute".

NRWDI is an independent entity established by statute under the provision of section 55(2) of the Nuclear Energy Act (No. 46 of 1999) to discharge this institutional obligation of the Minister of Energy. The National Radioactive Waste Disposal Institute Act (NRWDIA) (Act no. 53 of 2008) endorsed the establishment of the National Radioactive Waste Disposal Institute (NRWDI). The NRWDI has been listed as a Schedule 3A national public entity.

With South Africa opting for the New Nuclear Build Programme in an attempt to diversify the energy mix in the country and to achieve security of supply, the emphasis on an entity like NRWDI to manage South Africa's radioactive waste on a national basis cannot be underestimated. This entity has the potential of being on the cutting edge of radioactive waste disposal technologies as one of its key functions is research and development

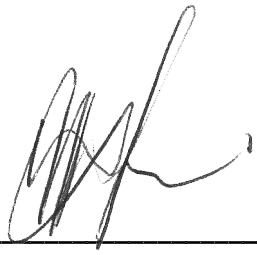
The sustainability of NRWDI, however, remains a risk for the organisation. The funding over the MTEF cycle is inadequate to cover both the operational and project related costs. Under the circumstances, a large portion of the allocation will be devoted to operational costs until the situation is normalised. A draft Bill to establish the Radioactive Waste Management Fund (RWMF) for the collection of levies and imposition of penalties on waste generators is currently being drafted. Once the Bill has passed the approval process, the Institute will be able to source funds from the RWMF, thus providing long term sustainability for the organisation.

The actual extent and complexity of the core tasks and the challenges that lie ahead for the Institute and the country will gradually unfold as the organization dedicatedly works its way forward. It is important to visualize and understand the depth and complexity of the tasks in the context of what has been experienced and achieved by the world's advanced nations such as France, Finland, Sweden, and others in radioactive waste research, management and disposal over a long period of time. South Africa must now commence its long journey towards the safe management and disposal of all of its radioactive wastes, including Intermediate level Waste (ILW) and High Level Waste (HLW), while continuing its operations with Low Level Waste (LLW) at the Vaalputs site in the Northern Cape.

A key priority in operationalising the Institute is the Vaalputs functional shift which entails the transfer of staff and assets of the Vaalputs Radioactive Waste Disposal Facility from Necsa to the Institute in terms of section 30 of the NRWDI Act. It is envisaged that the functional shift will be completed in 2017.

The Institute, although cognizant of the complex challenges as outlined above, is however confident that it is ready to begin the journey to lay a solid foundation for the delivery of suitable strategies and solutions for the management and disposal of all of our radioactive waste in a manner that will continue to ensure the protection of the public and the environment, thus making its contribution towards the safe utilization of nuclear energy in our country.

In line with the provisions of the National Treasury's Framework for Strategic Plans and Annual Performance Plans, this strategic plan has identified strategically important outcome orientated goals and objectives against which medium-term results can be measured and evaluated. The plan is broken down into goals and objectives in order to address the breadth and depth of the fledgling organization's mandate and responsibilities.



Mr. Tshepo Mofokeng **Signature:** _____

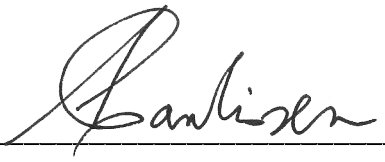
Chairperson: NRWDI Board

OFFICIAL SIGN–OFF

It is hereby certified that this Strategic Plan was developed by the management of the National Radioactive Waste Disposal Institute (NRWDI).

The Strategic Plan takes into account all the relevant policies, legislation and other mandates for which the NRWDI is responsible, and accurately reflects the strategic outcome oriented goals and objectives which the NRWDI will endeavour to achieve over the period 2017/ 18 – 2019/20 in line with the MTSF period.

Mr. Alan Carolissen
Chief Operating Officer



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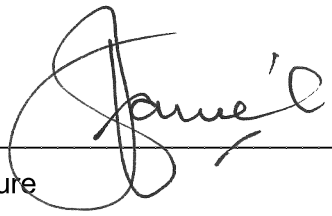
Mr. Justin Daniel
Chief Financial Officer



Signature

Dr Wolsey Barnard
Chief Executive Officer

Signature

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PART A: STRATEGIC OVERVIEW

This document provides the NRWDI Strategic Plan for the period 2017/18 - 2019/20. It sets out NRWDI's policy priorities, programmes and project plans for the next three years within the scope of its mandate and available resources. This strategic plan serves as a blueprint for translating NRWDI's goals and objectives into reality thus making a contribution to the outcomes in the Medium Term Strategic Framework (MTSF).

1. VISION, MISSION AND VALUES

VISION

To achieve excellence in the safe management and disposal of radioactive waste in a manner that protects the environment for both current and future generations**.**

MISSION

To develop and implement a management approach for the long-term care and disposal of radioactive waste that is, safe, technically sound, socially acceptable, environmentally responsible and economically feasible.

VALUES

NRWDI has adopted the following corporate values, which serve as guiding principles around which its corporate culture and actions are governed and shaped. These corporate values are listed as follows:

Table 1: Corporate values

Accountability	We will be fully responsible for the wise, prudent and cost-effective management of resources and be accountable for all our actions.
Leadership	We will demonstrate leadership in all we do.
Excellence	We will pursue the best available knowledge, understanding and innovative thinking in our analysis, engagement processes and decision making.

Integrity	We will conduct ourselves with openness, honesty and respect for all stakeholders.
Engagement	We will seek the active participation and consultation of all stakeholders and will be responsive to a diversity of views and perspectives.
Professionalism	We will act professionally at all times
Transparency	We will conduct our activities in an open and transparent manner taking into account the interests and concerns of all interested and affected parties.

2. LEGISLATIVE AND OTHER MANDATES

2.1 CONSTITUTIONAL MANDATE

The NRWDI mandate is underpinned by *Section 24(b) of the Constitution of the Republic of South Africa, Act 108 of 1996* which states that:

Everyone has the right –

(a) To an environment that is not harmful to their health or well-being; and

(b) To have the environment protected for the benefit of present and future generations through reasonable legislative and other measures that:

(i) Prevent pollution and ecological degradation;

(ii) Promote conservation; and

(iii) Secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

2.2 LEGISLATIVE MANDATE

The management of radioactive waste disposal on a national basis is assigned to the National Radioactive Waste Disposal Institute. The Institute is an independent entity established by statute under the provision of section 55(2) of the Nuclear Energy Act (No. 46 of 1999) to fulfil the institutional obligation of the Minister of Energy.

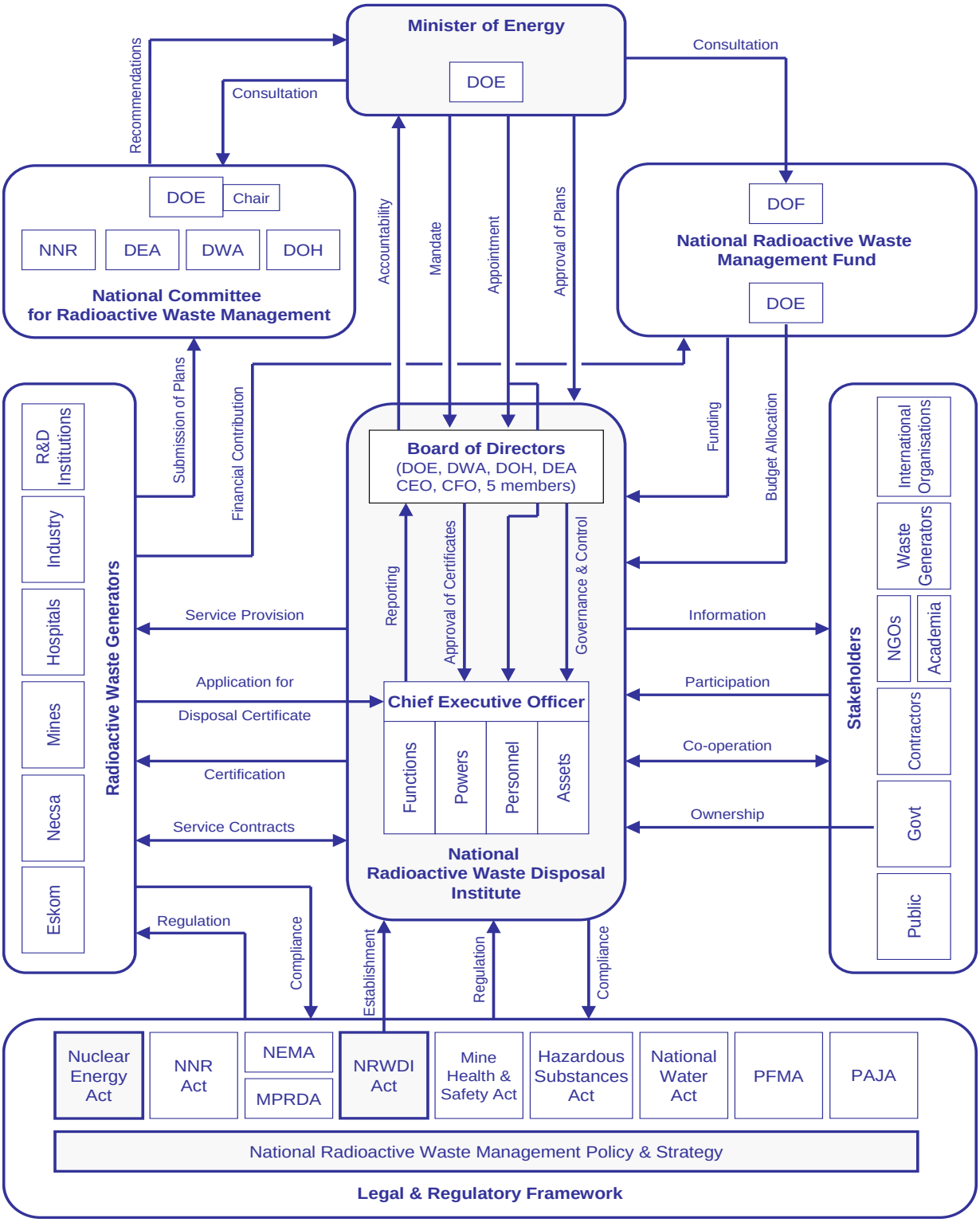
The National Radioactive Waste Disposal Institute Act (NRWDIA) (Act no. 53 of 2008) was proclaimed by the President of the Republic of South Africa in Government Gazette no. 32764 and NRWDIA became effective on the 1st December 2009. The NRWDIA endorsed the establishment of the National Radioactive Waste Disposal Institute (NRWDI).

As a public entity, NRWDI is also governed by the *Public Finance Management Act, Act 1 of 1999 (as amended by Act 29 of 1999)*, and it is listed as *Schedule 3A* public entity.

In order to play its role in accordance with the legislative and regulatory framework and to focus on delivering its mandate, NRWDI has developed specific outcomes and strategic objectives, around which a number of strategic initiatives and on-going operational programmes have been planned (and are being implemented) to address the organisation's responsibilities and obligations.

Figure 1 depicts the legislative and regulatory environment within which the Institute operates.

Figure 1: Radioactive Waste Disposal Legislative and Regulatory Framework



2.3 POLICY MANDATE

The Institute is mandated to manage radioactive waste disposal and related waste management activities on a national basis. This mandate is articulated in a number of policy documents as reflected below:

- Radioactive Waste Management Policy and Strategy for South Africa (2005)
- Nuclear Energy Policy and Strategy for South Africa (2008).

2.4 FUNCTIONAL MANDATE

The functions of the Institute as per Section 5 of the NRWDI Act (Act 53 of 2008) are summarised as follows:

- Manage radioactive waste disposal on a national basis;
- Operate the national low level waste repository at Vaalputs;
- Design and implement disposal solutions for all categories of radioactive waste;
- Develop criteria for accepting and disposing radioactive waste in compliance with applicable regulatory safety requirements and any other technical and operational requirements;
- Assess and inspect the acceptability of radioactive waste for disposal and issue radioactive waste disposal certificates;
- Manage, operate and monitor operational radioactive waste disposal facilities including related predisposal management of radioactive waste on disposal sites;
- Investigate the need for any new radioactive waste disposal facilities and to site, design and construct new facilities as required;
- Define and conduct research and development aimed at finding solutions for long-term radioactive waste management;
- Maintain a national radioactive waste database and publish a report on the inventory and location of all radioactive waste in the Republic at a frequency determined by the BOD;
- Manage ownerless radioactive waste on behalf of the Government, including the development of radioactive waste management plans for such waste;
- Assist generators of small quantities of radioactive waste in all technical aspects related to the management of such waste;
- Implement institutional control over closed repositories, including radiological monitoring and maintenance as appropriate;

- Implement any assignments or directives from the Minister regarding radioactive waste management;
- Provide information on all aspects of radioactive waste management to the public living around radioactive waste disposal facilities and to the public in general;
- Advise nationally on radioactive waste management;
- Co-operate with any person or institution in matters falling within these functions; and
- Any other function necessary to achieve the objectives of the Institute

The majority of the above functions are currently performed within the scope of Low Level Waste (LLW) inventories. In future, the scope would need to be extended to address the national inventory of radioactive waste consisting of Intermediate Level Waste (ILW), High Level Waste (HLW), long-lived waste, spent/used nuclear fuel and disused sealed radioactive sources. This implies that alternative disposal concepts would have to be researched, designed and implemented. It is also possible that alternative disposal sites would need to be obtained, characterised, constructed and operated.

2.5 INTERNATIONAL CONVENTIONS

The assurance of nuclear safety is reinforced by a number of international instruments. These include certain Conventions such as the Convention on Nuclear Safety and Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management that are legally binding on the participating States. South Africa, as a contracting party to these conventions is obliged to adhere to the articles of these conventions and to provide regular reports on compliance to these conventions.

The Joint Convention establishes an international peer review process among Contracting Parties and provides incentives for Member States to improve nuclear safety in line with international best practises. One of the objects of the Institute is to fulfil national obligations in respect of international nuclear instruments relating to management of spent nuclear fuel and radioactive waste management, including disposal, to ensure that the Republic of South Africa is in compliance with the articles of the Joint Convention through existing national legal and regulatory infrastructure.

The South African Joint Convention report provides information on used fuel and waste management facilities, radioactive waste inventories, ongoing decommissioning projects, used fuel and radioactive waste management safety, as well as information on imports/exports of radioactive waste (trans-boundary movements) and disused sealed radioactive sources.

2.6 RELEVANT COURT RULINGS

There has been no court rulings that might have had significant on-going impact on the Institute's operations and/or service delivery obligations, and as such suitable legislative frameworks, codes of good legal practices and resources have been put in place to mitigate such risks.

2.7 PLANNED POLICY INITIATIVES

Sealed radioactive sources, including disused sealed sources, are controlled as Group IV Hazardous Substances, in terms of the Hazardous Substances Act, 1973 (Act No. 15 of 1973) and are regulated by the Directorate Radiation Control in the Department of Health.

Currently all disused sealed radioactive sources are temporarily stored at Necsa because the end point (i.e., final disposal) has not yet been defined in radioactive waste management plans. The disposal of all radioactive material falls within the ambit of the National Nuclear Regulator and therefore the regulatory framework to manage the total life cycle of sealed radioactive sources needs to be harmonised.

The safety, security and control of disused radioactive sources is a high priority and in line with international commitment in order to prevent radiation accidents that may be caused by the potential abuse and misuse of such sources for, e.g., malicious purposes. NRWDI will liaise with all role players and stakeholders to mitigate these risks by implementing sustainable disposal options (end points) for various categories of disused sealed radioactive sources.

3. SITUATIONAL ANALYSIS

The broader institutional environment of the Institute is primarily influenced and impacted upon by the following five considerations:

(a) The role of the Nuclear New Build Programme (NNBP) and future prognosis in relation to the overall impact on sustainable energy development, as well as the contribution to national energy supply security;

(b) Economic considerations and the required development costs for future high-level radioactive waste (HLW) research, management and disposal facilities, in particular in respect of the anticipated cost impacts associated with the country's planned nuclear power expansion programme;

(c) Availability of high-tech skills, the implementation of state-of-the–art technologies, and the pursuit of technology-transfer programmes, are all required for the development and

maintenance of a vibrant and successful radioactive waste management and disposal regime that will not compromise public safety and national security;

(d) Promulgation of national strategies and interventions, supported by appropriate levels of government funding and participation to ensure that public perceptions, concerns and expectations are adequately addressed, and that public education, participation and communication activities in respect of radioactive waste management and disposal issues are placed at the centre-stage; and

(e) Consideration of the 'long-term view' regarding the Institute's core tasks and functions in respect of R&D, management and disposal technologies for all forms of radioactive waste, etc. This Strategic Plan cannot make pronouncements on this (eg rock mechanics) as it is 'early days with certain unknowns' for the Institute. Its current major task is to achieve stability and 'lay the foundation for growth'.

As a newly-formed public entity, the Institute is currently faced with many developmental and institutional challenges during its transitional establishment phase as it works its way towards achieving maturity and stability**.**

Owing to the unique nature of the situation that faces the Institute, namely its establishment as a new public entity, with a newly appointed executive management and administrative staff, and limited infrastructural resources to support its activities, the Institute's various short- and medium-term policy initiatives and priorities include the implementation of unique intervention strategies and actions that are necessary to address the situation.

These interventions must also enable the Institute to deliver on its mandate and allow it to implement its functions and exercise its powers as provided for in the NRWDI Act, without any risk of failure.

3.1 PERFORMANCE ENVIRONMENT

The Government of the Republic of South Africa has adopted five key pillars, derived from manifesto of the ruling party to drive the government's Medium term Strategic Framework (MTSF) and policy agenda viz:

- Creation of more jobs, decent work and sustainable livelihoods for inclusive growth;
- Rural Development, including land reform and increasing food production;
- Education;
- Health; and
- Reducing levels of crime in our society.

The MTSF has been translated into a set of 14 outcomes that should inform the strategic planning, focus and delivery of government services by state departments and public entities. These Outcomes are:

- Outcome 1 - Quality basic education
- Outcome 2 - Long and healthy life for all South Africans
- Outcome 3 - All people in SA feel and are safe
- Outcome 4 - Decent employment through inclusive growth
- Outcome 5 - Skilled and capable workforce to support an inclusive growth path
- Outcome 6 - An efficient, competitive and responsive economic infrastructure network
- Outcome 7 - Vibrant, equitable, sustainable rural communities contributing towards food security for all
- Outcome 8 - Sustainable human settlements and improved quality of household life
- Outcome 9 - Responsive, accountable, effective and efficient local government
- Outcome 10 - Protect and enhance our environmental assets and natural resources
- Outcome 11 - Create a better South Africa and contribute to a better Africa and a better world
- Outcome 12 - An efficient, effective and development-oriented public service
- Outcome 13 - A comprehensive, responsive and sustainable social protection system
- Outcome 14- A diverse, socially cohesive society with a common national identity

The outcomes that are of particular relevance to NRWDI are Outcomes 5, 6,10 and 12 and will be expanded in greater detail as to how they relate to the different strategic outcome orientated goals and programmes of the entity in Section 6 of the Strategic Plan.

3.2 NATIONAL DEVELOPMENT PLAN (NDP)

In 2012/13, the South African government adopted the National Development Plan (NDP) as it launching pad and a blue print for future economic and socio-economic development strategy for the country. The NDP identifies some of the failures in implementation of government policies that were aimed at redressing economic and socio-economic, and the absence of broad partnerships as the main cause for the slow progress in eliminating poverty and reducing inequality.

The NDP therefore becomes the government's strategic long-term vision towards 2030 with the aim of ensuring that all South African citizens attain a decent standard of living through poverty alleviation and reduction of economic inequality (GINI Coefficient).

The following are four overriding implementation objectives of the National Development Plan:

- Providing overarching goals for what is to be achieved by the year 2030;
- Building consensus on the key obstacles for achieving these goals and identifying what needs to be done to overcome the obstacles;
- Providing a shared long-term strategic framework within which more planning can take place in order to advance the long term goals set out in the NDP; and
- Creating a basis for making choices about how best to use limited resources.

NRWDI has taken due cognisance of the thirteen (13) NDP objectives and the four (4) overriding implementation objectives of the Plan toward 2030 and has aligned its strategy accordingly.

3.3 ALIGNMENT WITH THE DEPARTMENT OF ENERGY'S STRATEGIC PLAN AS WELL AS THE NATIONAL DEVELOPMENT PLAN AND THE MEDIUM TERM STRATEGIC FRAMEWORK

NRWDI reports into the Department of Energy and it is critical for the organisation to have its strategic plan aligned to that of the shareholder department. Indicated below are the relevant strategic outcome orientated goals of the Department of Energy which have been integrated into the strategic planning process of NRWDI.

Table 2: Other planning instruments integrated into NRWDI planning

DoE Strategic Outcome Orientated Goal	NRWDI Strategic Outcome Orientated Goal	NRWDI Strategic Objective	Linkages to the NDP Proposals	Linkages to the MTSF (2014 – 2019) (Outcomes	NRWDI Programme
SOOG1: Corporate Governance	SOOG 1: Effective resource utilisation and good governance	SO1.1 Improved payment system SO1.2 Highly motivated team of employees SO1.3 Good image of NRWDI SO1.4. National Radioactive Waste Management System	Creating a basis for making choices about how to best use limited resources Chapter 15 of the NDP relates to the eradication of corruption.	**Outcome 5:** Skilled and capable workforce to support an inclusive growth path' **Outcome 12:** An efficient, effective and development-oriented public service	Programme1 Administration
SOOG 2: Environmental Assets	SOOG 2: Safe management and disposal of radioactive waste	SO2.1 Excellent radioactive waste management and	Creating a basis for making choices about how to best use limited resources	**Outcome 5:** Skilled and capable workforce to support	Programme 2: Radwaste Operations

DoE Strategic Outcome Orientated Goal	NRWDI Strategic Outcome Orientated Goal	NRWDI Strategic Objective	Linkages to the NDP Proposals	Linkages to the MTSF (2014 – 2019) (Outcomes	NRWDI Programme
		disposal service on a national basis SO2.2 Environmentally sound management and disposal of radioactive waste SO2.3 Transparent waste disposal site management	Chapter 5 of the NDP relates to ensuring environmental sustainability and transition to a low carbon economy	an inclusive growth path **Outcome 10:** Protect and enhance our environmental assets and natural resources **Outcome 12:** An efficient, effective and development-oriented public service	
SOOG3: Infrastructure	SOOG 3: Comprehensive site selection,site characterisation and design of radioactive waste disposal storage and related facilities	SO3.1. Excellent site selection and investigations for storage and disposal facilities	Creating a basis for making choices about how to best use limited resources Chapter 5 of the NDP relates to ensuring	**Outcome 6 :** An efficient, competitive and responsive economic infrastructure network	Programme 3: Radwaste Technology and Siting

DoE Strategic Outcome Orientated Goal	NRWDI Strategic Outcome Orientated Goal	NRWDI Strategic Objective	Linkages to the NDP Proposals	Linkages to the MTSF (2014 – 2019) (Outcomes	NRWDI Programme
		SO3.2. Advanced design and construction of storage and disposal facilities SO3.3 Effective scientific and technical support for development and maintenance of safety cases	environmental sustainability and transition to a low carbon economy	**Outcome 10:** Protect and enhance our environmental assets and natural resources	
SOOG 4: Regulations	SOOG 4: Effective compliance with national nuclear legislative and regulatory requirements	SO4.1. Quality management system SO4.2 Nuclear Installation Licence	Creating a basis for making choices about how to best use limited resources Chapter 5 of the NDP relates to ensuring environmental sustainability and	**Outcome 5:** Skilled and capable workforce to support an inclusive growth path **Outcome 10:** Protect and enhance our environmental	Programme 4 : Radwaste Compliance Management

DoE Strategic Outcome Orientated Goal	NRWDI Strategic Outcome Orientated Goal	NRWDI Strategic Objective	Linkages to the NDP Proposals	Linkages to the MTSF (2014 – 2019) (Outcomes	NRWDI Programme
			transition to a low carbon economy	assets and natural resources **Outcome 12:** An efficient, effective and development-oriented public service	

3.4 ORGANIZATIONAL ENVIRONMENT

NRWDI is registered as a public entity in terms of section 38(1) (m) of the PFMA, and classified as a Schedule 3A entity.

The governance of the Institute is entrusted to a Board appointed in accordance with the Act, with the Minister of Energy being the Executive Authority responsible for the Institute.

The Board provides policy and strategic leadership and is the Accounting Authority of NRWDI. The Chief Executive Officer and the Chief Financial Officer are ex-officio members of the Board.

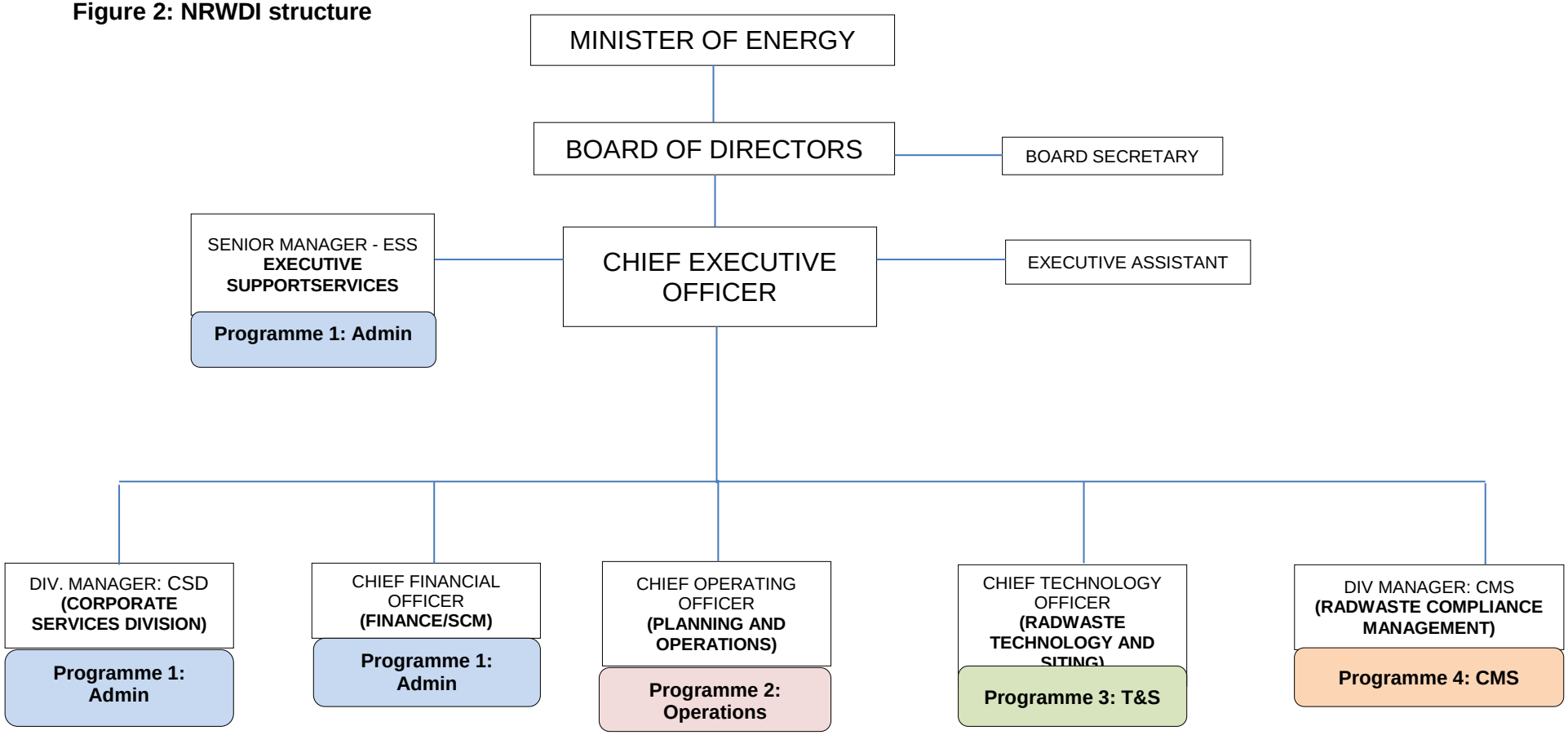
In charting the Institute's work over the duration of this compilation of the Strategic Plan, with effect from 01 October 2016 the Chief Executive Officer is now responsible for the day-to-day running of the Institute, assisted by a senior management team, which includes the Chief Financial Officer and Divisional Managers.

The operational component of NRWDI has to be delivered through the ***Vaalputs National Radioactive Waste Disposal Facility***, whose functional shift from Necsa to NRWDI is a key imperative for full operationalization of the Institute.

3.5 ORGANIZATIONAL STRUCTURE

The Institute's macro-organisational structure reflects the key operational functions to oversee the core operational component of the Institute, as well as the key support capacity for effective delivery on the Institute's mandate. The structure is aligned to the Institute's strategic programmes, namely: Administration, Radwaste Operations, Radwaste Technology and Siting, and Radwaste Compliance Management.

Figure 2: NRWDI structure



3.6 FINANCIAL SUSTAINABILITY

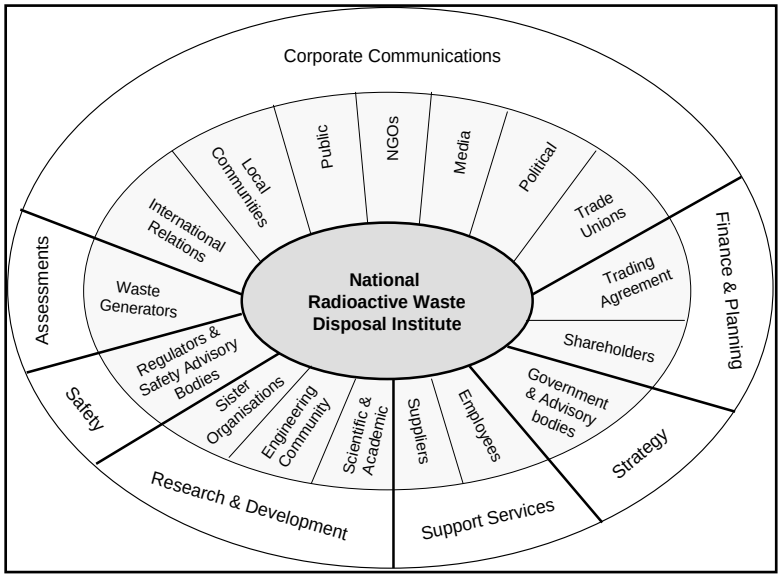
Over and above the annual MTEF grant allocation made by DoE, the Radioactive Waste Management Fund (RWMF) has to be finalised in order to ensure the financial sustainability of the Institute. The RWMF Bill is in progress and the Institute is involved in its conceptualisation.

3.7 RELATIONSHIP WITH STAKEHOLDERS

The biggest challenge of the management and disposal of radioactive waste is to ensure societal and political acceptance. People's perceptions pertaining to the disposal and management of radioactive waste are driven by their fears caused by memories/perceptions of nuclear bomb explosions and weapons programs, nuclear reactor accidents, health effects associated with cancer and genetic birth effects.

Demonstrating technical competence and regulatory compliance are not enough to instill stakeholder confidence and trust. To ensure societal and political acceptance, it is imperative to ensure public participation and stakeholder engagement. Advancement of enhanced stakeholder participation and corporate transparency go hand in glove. Stakeholder confidence building strategies and policies are regional specific and must take into account cultural diversities.

Figure 3: NRWDI stakeholder map



The Institute will have a wide spectrum of stakeholders (see Figure 4,NRWDI Stakeholder Map) and needs to develop and implement a comprehensive communication and stakeholder strategy and plan to (1) demystify and decipher the public's fears regarding the management and disposal of radioactive waste and (2) to deepen and strengthen stakeholder acceptance, confidence and trust in the Institute.

3.8 DESCRIPTION OF THE STRATEGIC PLANNING AND PERFORMANCE MANAGEMENT PROCESSES

The strategic plan is formed to address medium to long-term organisational endeavours that are focused on desired outcomes based on organisational legislative mandate, obligations, and policies. This process includes taking into consideration government priorities for the MTSF period and objectives & outcomes as identified by the South African Constitution and DOE as the executive authority. NRWDI's Strategic Plan is focused on the delivery of the organisation's main purpose, which is to deliver on the organisation's mandate. All the divisions and business units in the organisation are therefore expected to gauge their outputs on the extent to which their programmes and activities deliver or assist to delivery on NRWDI's corporate strategy, which is the rallying point of the organisation.

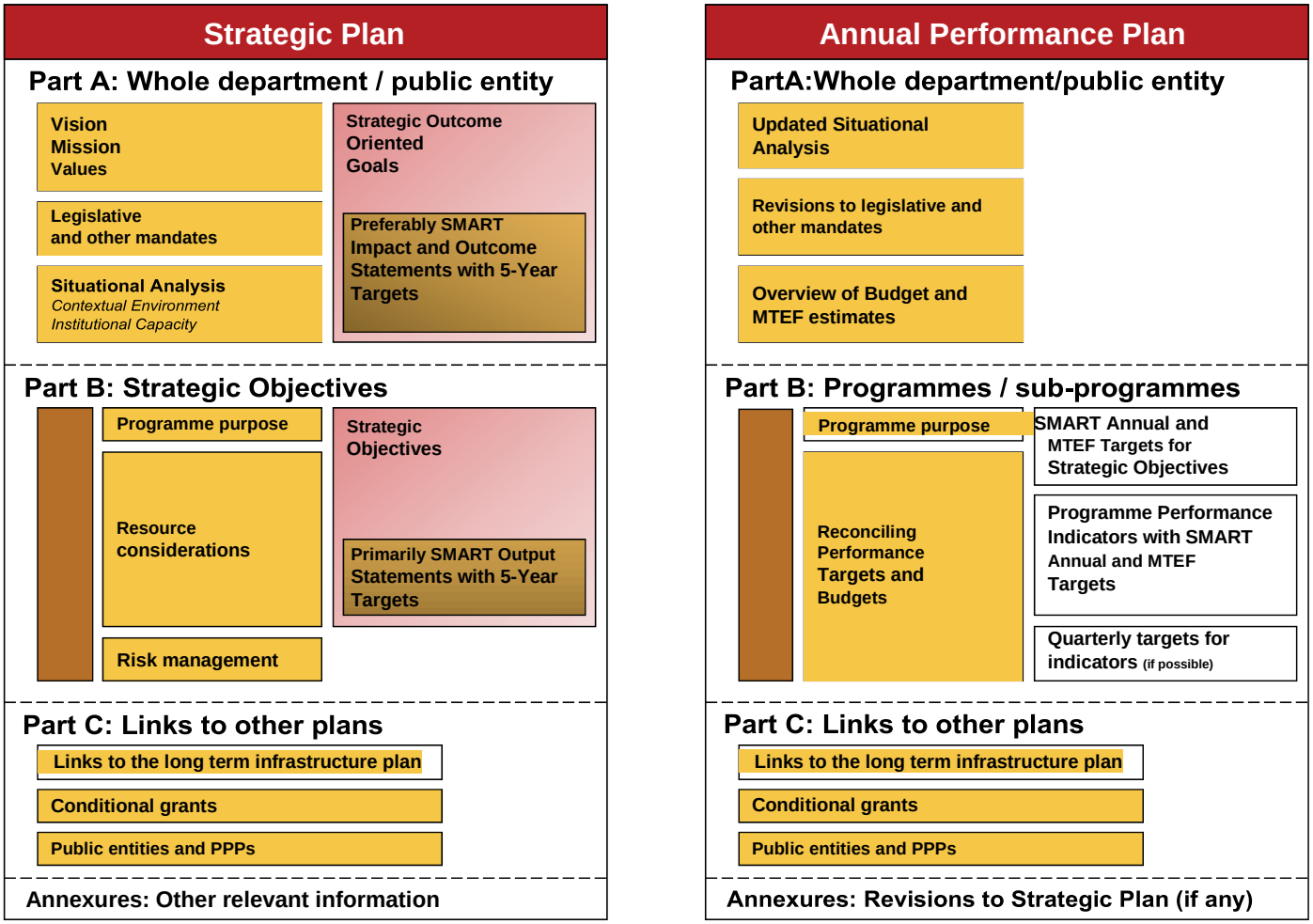
As NRWDI's strategic plan impacts both internal and external stakeholders of the organization, to varying degrees these relationships are being recognized during various planning phases, including the communication of the plan.

The National Radioactive Waste Disposal Institute is a Schedule 3A entity. As such, it is subject to government-wide guidelines and stipulations in so far as strategic and financial planning are concerned. This is important for two reasons:

- Using the framework will assist the NRWDI's Strategic Plan to demonstrate alignment to the overall Energy Policy and the Department of Energy's strategy both in content and in format.
- The extent to which the guidelines have been applied by entities is an auditable criterion by the Auditor-General of South Africa (AGSA) and thus the NRWDI must demonstrate adherence to this.

The figure below details the framework for an SOE's Strategic Plan and Annual Performance plan.

Figure 4: Framework for and SOE's strategic plan and annual performance plan (National treasury, August 2010)



In developing its strategic plan, NRWDI undertook an environmental scan through a PESTEL analysis and the outcome is as reflected below:

Political

The New Nuclear Build Programme is currently being supported by the SA Government. Nuclear energy use is increasing around the world seeing the greenhouse gas emissions emitted from nuclear plants are far less than the coal fired power stations. The need for the safe storage of radioactive material is likely to increase as a result of the abovementioned both in SA and around the world

Economic

SA predicted GDP at 0.5% for 16/17. The GDP of a country is one the main indicators used to measure the performance of a country's economy. With the predicted GDP being so low, it means that unemployment is on the increase, there is less money to spend and investor confidence is very low. SA has competing Social, Education, Infrastructure and Health budget priorities The entity itself currently has challenges with regards to the funding. SA also runs the risk of obtaining "junk status"

Social

There is this negative perception of nuclear energy due to the lack of public engagement. Programmes must be put in place to communicate the safe storage of radioactive waste to the public. The environmental benefits of nuclear energy must be communicated to the public in order to win their support.

Technological

There are various competing energy carriers due to the energy mix. Social media can be used as an effective tool for communication with stakeholders (facebook, twitter, snapchat) The storage of radioactive material is highly technological and possible partnerships with developed countries like France, Finland, Sweden, Switzerland need to be forged to learn more about different waste disposal technologies and have skills transferred.

Environmental

There is this growing environmental agenda. Public is becoming more and more aware of the environment as they would like to preserve the environment for future generations.

Legal

There are legal challenges from anti-nuclear groups. There are various regulatory requirements set out by the Regulatory bodies. The current NRWDI Act needs to be amended. The RWMF Bill needs to follow the parliamentary process to be enacted to provide sustainability for the organisation. Preparations for the NIL-28 transfer need to take place.

The SWOT analysis also plays a significant part in the Institute's planning as it focuses on the internal and external factors affecting the institute. The application of the analysis to the Institute's provides NRWDI with the opportunity to improve operations, discover opportunities and put mitigation strategies in place to address the risks.

4. STRATEGIC OUTCOME ORIENTED GOALS OF NRWDI

In giving effect to the legislated functions of the Institute and the prevailing needs, priorities and expectations of the nuclear waste management sector, the Institute has revised its goals and strategic objectives in order to better direct its work and activities.

The Institute's strategic outcome-orientated goals are as follows:

Table 3: Strategic outcome goals for the NRWDI

STRATEGIC OUTCOME ORIENTATED GOALS	GOAL STATEMENT
SOOG 1: **Effective resource utilisation and good governance**	To effect good corporate governance for effective and efficient service delivery
SOOG 2: **Safe management and disposal of radioactive waste**	To ensure safe management and disposal of radioactive waste which is technically sound, sociably acceptable and environmentally responsible
SOOG 3: **Comprehensive site selection, site characterisation and design of radioactive waste disposal storage and related facilities**	To develop and establish waste disposal infrastructure for the various classes of radioactive waste.
SOOG 4: **Effective compliance with national nuclear legislative and regulatory requirements**	To ensure effective compliance with national nuclear legislative and regulatory requirements in order to obtain and maintain various Nuclear Installation Licenses for the Institute.

The linkages of the Outcomes in the MTSF to NRWDI strategic outcome orientated goals and programmes is depicted below:

Table 4**: Linkages of the outcomes of the MTSF to NRWDI strategic orientated goals and programmes**

Outcomes in MTSF	NRWDI strategic orientated goals	NRWDI Programmes
Outcome 5: Skilled and capable workforce to support an inclusive growth path	• Effective resource utilisation and good governance • Safe management and disposal of radioactive waste • Comprehensive site selection, site characterisation and design of radioactive waste disposal storage and related facilities • Effective compliance with national nuclear legislative and regulatory requirements	• Programme 1: Administration • Programme 2: Radioactive Waste Operations • Programme 3 : Technology and Siting • Programme 4 : Compliance Management
Outcome 6 : An efficient, competitive and responsive economic infrastructure network	• Siting and design of radioactive waste disposal storage and related facilities	• Programme 3: Radwaste Technology and Siting
Outcome 10: Protect and enhance our environmental assets and natural resources	• Safe management and disposal of radioactive waste • Effective compliance with national nuclear legislative and regulatory requirements	• Programme 2: Radioactive Waste Operations • Programme 4: Compliance Management

Outcomes in MTSF	NRWDI strategic orientated goals	NRWDI Programmes
Outcome 12: An efficient, effective and development-oriented public service	• Effective resource utilisation and good governance • Safe management and disposal of radioactive waste • Comprehensive site selection, site characterisation and design of radioactive waste disposal storage and related facilities • Effective compliance with national nuclear legislative and regulatory requirements	• Programme 1: Administration • Programme 2: Radioactive Waste Operations • Programme 3 : RadwasteTechnology and Siting • Programme 4 : Compliance Management

The contribution that NRWDI makes to Outcomes 5, 6, 10 and 12 in the MTSF are articulated in greater detail below:

- ***Outcome 5: Skilled and capable workforce to support an inclusive growth path***

  The Institute acknowledges that the nuclear field of expertise is highly technical and complex in addition requires scarce skills. The Institute will manage and develop human capital through structured programmes that will enhance capabilities both internally and externally to increase the skills base in the field of radioactive waste management. This will help to ensure that there is a skills pipeline which will make a contribution to succession planning and business continuity of the Institute. This outcome is cross cutting across the different programmes of the entity.

- ***Outcome 6 - An efficient, competitive and responsive economic infrastructure network***

  The Institute will develop the National Radioactive Waste Management Database to monitor the waste generated, stored and disposed nationally. TheInstitute will also conduct site selections and investigations for the establishment of storage and disposal facilities. Site selections will include the identification, evaluation, characterisation and selection of suitable sites to make them available for the establishment and installation of storage and disposal facilities for all classes of waste not only from safety and environmental protection considerations but from all other aspects such as access, transportation and community and stakeholder acceptance. These facilities must be designed to receive, store and dispose all the high level waste and spent nuclear fuel from the country's power reactors and long lived intermediate level radioactive waste from the decommissioning of nuclear power plants. The Institute will also provide scientific and technical support in the development and maintenance of safety cases for storage and disposal facilities for regulatory compliance purposes.

- ***Outcome 10 - Protect and enhance our environmental assets and natural resources***

  The overarching mandate of the Institute is to develop and implement a management approach for the long-term care of South Africa's radioactive waste that is technically sound, socially acceptable, environmentally responsible and economically feasible. In order to give effect the overarching mandate, the following management approaches will be pursued by the Institute:

  - A ***technically sound*** management approach which is informed by the best technical and scientific knowledge and experience available. At a minimum it must ensure: public health and worker safety; security of nuclear material. It must also meet international safeguards and non-proliferation obligations.
  - A ***socially acceptable*** management approach which will emerged from a process of collaboration with all stakeholders. It takes into account the best available knowledge and expertise, and be responsive to the values and objectives which are imperative for stakeholders.

- An ***environmentally responsible*** management approach in which the physical, chemical and biological stresses on the environment, including the cumulative effects over long time periods, and the potential consequences of failure of any part of the containment system, are within the natural capacity of the environmental processes to accept and adjust to, thus ensuring the long-term integrity of the environment.
- An ***economically feasible*** management approach that ensures that adequate economic resources are available, now and in the future, to pay the costs of the selected approach. The cost must be reasonable. This approach ensures that funding shortfalls will not occur that would threaten the assured continuation of the necessary processes.
- A ***net-benefit*** management approach to ensure that disposal activities do not exceed the benefits of the practice that generates the waste and that waste producers fully cover the cost of the disposal cycle.

The Institute will develop a quality management system for the NRWDI head office to discharge the obligations and regulatory requirements associated with holding a nuclear authorisation. The development of operating policies and procedures will give effect to implementing regulatory requirements with regards to safety, health, environment and a quality system. The development of these policies and procedures will assist in protecting the health and safety of people and the environment from the harmful effects of radiation. In addition to this, NRWDI will develop a nuclear installation licence for the national waste disposal facility to conduct waste disposal activities.

- ***Outcome 12 - An efficient, effective and development-oriented public service***

  The Institute will ensure that human capital is developed through structured programmes to enhance capabilities internally and externally and to increase the skills base in the field of radioactive waste management. Clear plans with clear deliverables will ensure that the state resources are spent effectively and efficiently and are aligned to Government's broader socio- economic objectives.

NRWDI will contribute to achieving the strategic outcome orientated goals through the initiatives outlined below:

Table 5**: Initiatives to address strategic outcome orientated goals**

Strategic Outcome Orientated Goal 1	**Effective resource utilisation and good governance**
Goal Statement	To effect good corporate governance for effective and efficient service delivery
Indicator	• Training and capacity building • Institute structure optimised to address mandate • Implement Roadmap for transfer of Vaalputs staff • Funding process finalised –after care funding, funding model and Fund Bill • MoU's/Agreements/SLA with stakeholders • Finalised document on corporate governance and structures and systems • Assess and review current NRWDI Act
Strategic Outcome Orientated Goal 2	**Safe management and disposal of radioactive waste**
Goal Statement	To ensure safe management and disposal of radioactive waste which is technically sound, sociably acceptable and environmentally responsible
Indicators	• Participation in DoE/Industry working groups/Steering Committees • Establish nuclide inventory database
Strategic Outcome Orientated Goal 3	**Siting and design of radioactive waste disposal storage and related facilities**
Goal Statement	To develop and establish waste disposal infrastructure for the various classes of radioactive waste.
Indicators	• Participation in DoE/Industry working groups/Steering Committees • Establish nuclide inventory database
Strategic Outcome Orientated Goal 4	**Effective compliance with national nuclear legislative and regulatory requirements**

Strategic Outcome Orientated Goal 1	**Effective resource utilisation and good governance**
Goal Statement	To ensure effective compliance with national nuclear legislative and regulatory requirements in order to obtain and maintain various Nuclear Installation Licenses for the Institute.
Indicators	• Develop and refine policies and nuclear installation licensing documents, procedures and risks • Security review of building

PART B: STRATEGIC OBJECTIVES

5. STRATEGIC OUTCOME ORIENTED GOALS OF NRWDI

5.1 PROGRAMME 1: ADMINISTRATION

5.1.1 Programme Overview

To ensure that NRWDI is operationally efficient, cost-effective, properly managed, and complies with good corporate governance principles.

5.1.2 Sub Programmes

The core outcome is achieved through the provision of key corporate functions under the following sub-programmes:

- ***Executive Support Services*** (*Organisational performance management; Risk management; Company Secretariat; Communications and stakeholder relations; Corporate Social Investment*).

  The Executive support office has been established to ensure that NRWDI has processes and systems that are efficient, integrated, quality controlled and cost effective which will deliver value for all its stakeholders. It further aims to remove existing constraints by achieving alignment through effective stakeholder engagement and value-adding partnerships that are mutually beneficial which will result in the organisation meeting and exceeding its strategic goals and objectives.

- ***Strategic Planning***

  Strategic planning, monitoring and evaluation coordinates the translation of policy priorities agreed upon by the MANCO and the Board into actionable strategic plans with clear objectives, performance measures and resource commitments. It also carries out monitoring and evaluation activities to ensure that the entity delivers on its strategic objectives.

- ***Finance and Supply Chain Management***

  Finance and Supply Chain Management ensures compliance with all relevant financial statutes and regulations, the most important of which is the Public Finance Management Act (PFMA). It ensures that goods and services are procured taking into consideration the procurement legislation as well as with due cognisance to the principles of corporate governance.

- ***Corporate Services*** (*Human capital management; Information and communications technology management; Legal services management; and General administration and facilities management*)

  The Corporate Services sub-programme primarily provides integrated strategic and operational business enabling services. Legal Services is responsible for providing a comprehensive legal advisory service to enable the entity to execute its mandate effectively within the rule of law. Human Resources (HR) Management provides transformational HR support enabling the entity to attract, develop and retain skilled people across the organisation. Information and Communication Technology (ICT) management provides long term planning and day to day support in respect of ICT needs, services and systems**.** Facilities Management ensures physical and information security and also provides accommodation and its maintenance and servicing.

5.1.3 Programme 1: Strategic Objectives

Programme 1 Strategic Outcome Oriented Goal: Effective resource utilisation and good governance.

Strategic Objective SO1.1	Improved payment system
Objective statement	To ensure that 100% of all creditors are paid within 30 days after relevant documents are received.
Baseline	None

Strategic Objective SO1.2	Highly motivated team of employees
Objective statement	To ensure staff are managed equally and according to best practice so that each employee makes a valuable contribution to the achievement of organisational objectives
Baseline	None

Strategic Objective SO1.3	Good image of NRWDI
Objective statement	To position and promote NRWDI as custodian for the safe management of radioactive waste so that its stakeholders are aware and appreciate and support the role and actions of the Institute
Baseline	None

Strategic Objective SO1.4	National Radioactive Waste Management Inventory System
Objective statement	The Radioactive Waste Management Inventory System is an IAEA requirement as well as a requirement of the NRWDI Act. The system will be used to monitor the waste generated, stored and disposed nationally.
Baseline	None

The resource allocation over the next three years for Programme1 is reflected in the table below:

Table 6**: Resource considerations: Programme 1: Administration**

Statement of financial performance	**Revised estimate**	**Medium-term estimate**		
R thousand	**2016/17**	**2017/18**	**2018/19**	**2019/20**
Revenue				
Non-tax revenue	**403**	**683**	**752**	**827**
Interest received	403	683	752	827
Other non tax revenue(OSG)			0	0
Other non tax revenue(CISF)			0	0
Transfers received	11270	19400	20538	21882
Total revenue	**11673**	**20083**	**21289**	**22709**
Expenses				
Current expenses	26675	20083	21289	22709
Compensation of employees	15845	16434	17420	18465
Directors remuneration	1151	450	495	545
Goods & Services of which:	8125	3089	3253	3566
Travel & Subsistence	*1110*	*250*	*275*	*303*
Audit Fees	*500*	*1072*	*1179*	*1297*
Consultant Fees	*402*			
Bank Charges	*2*	*5*	*6*	*6*
Cleaning Services	*24*	*25*	*28*	*30*
Contracted-out Services	*3834*			
Entertainment Costs	*4*			
Electronic Office Equipment		*120*	*132*	*145*

Legal costs	*14*			
Advertisement & recruitment	*408*			
Membership Fees		*32*	*35*	*39*
Computer services		*50*	*55*	*61*
Workshops/Conferences	*176*	*140*	*154*	*169*
Rental Buildings	*502*	*766*	*842*	*926*
Stationery and Printing	*34*	*32*	*35*	*39*
Telecommunication	*380*	*280*	*294*	*311*
Consumable Materials	*9*	*19*	*21*	*23*
Electricity charges	*80*	*151*	*165*	*182*
Small Capital		*118*	*0*	*0*
Repair and Maintenance	*646*	*30*	*33*	*36*
Finance Costs	**0**	**0**	**0**	**0**
Capital costs	**1483**			
Depreciation	***71***	**110**	**121**	**133**
Transfers and subsidies				
Total expenses	**26675**	**20083**	**21289**	**22709**
Surplus/(Deficit)	**-15002**	**0**	**0**	**0**

The following human resources are employed under Programme 1:

Posts	Number
Chief Executive Officer	1
Chief Financial Officer	1
Cleaner	2
Company Secretary	1
Divisional Manager : Corporate Services	1
Finance Manager	1
Manager: Strategic Planning	1
IT Engineer	1
IT Technician	1
Legal Advisor	1
Secretary	3
Senior Legal Advisor	1
Senior Manager : Human Capital	1
Senior Manager : IT	1

5.2 PROGRAMME 2: RADWASTE OPERATIONS

Purpose: To provide radioactive waste disposal and related services on a national basis that is, safe, technically sound, socially acceptable, environmentally responsible and economically feasible that meet or exceed the expectations of our stakeholders.

Strategic Objectives: Programme 2: Radwaste Operations

Strategic Outcome Oriented Goal :Safe management and disposal of radioactive waste on a national basis

Strategic Objective SO.2.1	Excellent radioactive waste management and disposal service on a national basis
Objective statement	To provide waste disposal services on a national basis that is safe, technically sound and cost effective
Baseline	None

Strategic Objective SO2.2	Environmentally sound management and disposal of radioactive waste
Objective statement	To minimise the physical, chemical and biological stresses on the environment, thus ensuring the long-term integrity of the environment.
Baseline	None

Strategic Objective SO2.3	Transparent waste disposal site management
Objective statement	Meetings need to be held on a quarterly basis with the communities around the Vaalputs area to educate and make them aware of nuclear safety and other issues relating to Vaalputs
Baseline	None

Resource Allocations

The resource allocation over the next three years for Programme 2 is reflected in the table below:

Table 7 Resource allocations: Programme 2: Radwaste Operations

Statement of financial performance	Revised estimate	Medium-term estimate		
R thousand	**2016/17**	**2017/18**	**2018/19**	**2019/20**
Revenue				
Non-tax revenue		**0**	**0**	**0**
Other non tax revenue(OSG)		500	0	0
Other non tax revenue(CISF)		750	788	827
Transfers received		2966	4361	5821
Total revenue		**4216**	**5149**	**6648**
Expenses				
Current expenses		**4216**	**5149**	**6648**
Compensation of employees		**2863**	**3035**	**3217**
Goods & Services of which:		**1352**	**2113**	**3431**
Travel & Subsistence		*50*	*55*	*61*
Contracted-out Services		*350*	*368*	*386*
Membership Fees		*16*	*18*	*19*
Stationery and Printing		*4*	*4*	*5*
Telecommunication		*30*	*30*	*30*
Consumable Materials		*2*	*3*	*3*
Operating Material		*900*	*1636*	*2927*
Capital costs				
Transfers and subsidies				
Total expenses		**4216**	**5149**	**6648**
Surplus/(Deficit)		**0**	**0**	**0**

The following human resources are employed under Programme 2:

Posts	Number
Chief Operations Officer	1

5.3 PROGRAMME 3: RADWASTE TECHNOLOGY AND SITING

Purpose**:** To develop and implement programmes for safe storage and disposal of spent nuclear fuel or high level radioactive waste and long lived intermediate level waste on a national basis. The programme reports to the CEO.

Goal : Siting and design of radioactive waste disposal storage and related facilities – Programme 3

Strategic Objective SO3.1	Excellent site selection and investigations for the establishment of storage and disposal facilities
Objective statement	It is important to identify, evaluate, characterise and select suitable sites to make them available for the establishment and installation of storage and disposal facilities for high level waste not only from safety and environmental protection considerations but from all other aspects such as access, transportation and community and stakeholder acceptance.
Baseline	None

Strategic Objective SO3.2	Advanced design and construction of storage and disposal facilities
Objective statement	Facilities must be designed to receive, store and dispose all the high level waste and spent nuclear fuel from the country's power reactors and long lived intermediate level radioactive waste from the decommissioning of nuclear power plants
Baseline	None

Strategic Objective SO3.3	Efficient scientific and technical support for development and maintenance of safety cases
Objective statement	Scientific and technical support is required in the development and maintenance of safety cases for storage and disposal facilities for regulatory compliance purposes
Baseline	None

Resource Allocations

The resource allocation over the next three years for Programme 3 is reflected in the table below:

Table 8: Resource allocations: Programme3: Radwaste Technology and Siting

Statement of financial performance R thousand	Revised estimate 2016/17	Medium-term estimate 2017/18	 2018/19	 2019/20
Revenue				
Non-tax revenue		**0**	**0**	**0**
Other non tax revenue(OSG)		1000	0	0
Other non tax revenue(CISF)		7100	11562	12645
Transfers received		4010	4255	4515
Total revenue		**12110**	**15817**	**17161**
Expenses				
Current expenses		**12110**	**15817**	**17161**
Compensation of employees		**3847**	**4078**	**4322**
Goods & Services of which:		**8263**	**11739**	**12838**
Travel & Subsistence		*100*	*110*	*121*
Membership Fees		*32*	*35*	*39*
Stationery and Printing		*8*	*9*	*10*
Telecommunication		*18*	*18*	*18*
Consumable Materials		*5*	*5*	*6*
Operating Material		*8100*	*11562*	*12645*
Total expenses		**12110**	**15817**	**17161**
Surplus/(Deficit)		**0**	**0**	**0**

The following human resources are employed under Programme 3:

Posts	Number
Chief Technology Officer	1
Geologist	1
Scientist	1
Senior Manager Corporate Services	1
Senior Research Scientist	1

5.4 PROGRAMME 4: RADWASTE COMPLIANCE MANAGEMENT

Purpose**:** To ensure that the core function of the NRWDI (i.e., disposal of radioactive waste on a national basis) is executed in compliance with regulatory requirements and specifically the National Nuclear Regulator's (NNR's) requirements that the holder of a nuclear installation license (NIL) must implement compliance assurance measures that:

(a) provides for overriding priority to nuclear and radiation safety; and

(b) provides the required resources, processes and arrangements to ensure compliance with the conditions of authorisation, the requirements of the NNR Act and associated regulations.

Strategic Objectives: Programme 4: Radwaste Compliance Management

Goal: Effective compliance with national nuclear legislative and regulatory requirements – Programme 4

Strategic Objective SO4.1	Quality management system
Objective statement	To ensure policies and procedures are developed and effectively implemented to give effect to compliance with regulatory requirements with regards to safety, health, environment and quality management systems.
Baseline	None

Resource Considerations

The resource allocation over the next three years for Programme 4 is reflected in the table below:

Table 9: Resource considerations: Programme 4: Radwaste Compliance Management

Statement of financial performance	**Revised estimate**	**Medium-term estimate**		
R thousand	**2016/17**	**2017/18**	**2018/19**	**2019/20**
Revenue				
Non-tax revenue		**0**	**0**	**0**
Other non tax revenue(CISF)		200	210	221
Transfers received		3625	3846	4082
Total revenue		**3825**	**4056**	**4302**
Expenses				
Current expenses		**3825**	**4056**	**4302**
Compensation of employees		**3481**	**3690**	**3912**
Goods & Services of which:		**344**	**366**	**390**
Travel & Subsistence		*100*	*110*	*121*
Membership Fees		*16*	*18*	*19*
Stationery and Printing		*6*	*7*	*7*
Telecommunication		*18*	*18*	*18*
Consumable Materials		*4*	*4*	*4*
Operating Material		*200*	*210*	*221*
Transfers and subsidies				
Total expenses		**3825**	**4056**	**4302**
Surplus/(Deficit)		**0**	**0**	**0**

The following human resources are employed under Programme 4:

Posts	**Number**
Divisional Manager	1
Licensing Specialist	1
Scientist	1

6. STRATEGIC OBJECTIVES AND ANNUAL TARGETS FOR 2017/2018 TO 2019/2020

6.1 PROGRAMME 1: ADMINISTRATION

	Strategic Objective	Strategic Plan Target	Estimated Performance	Medium Term Targets		
			2016/17	2017/2018	2018/2019	2019/2020
1.	**SO 1.1** Improved payment system	100% of all creditors paid within 30 days after relevant documents are received	97% of all creditors paid within 30 days after relevant documents are received	100% of all creditors paid within 30 days after relevant documents are received	100% of all creditors paid within 30 days after relevant documents are received	100% of all creditors paid within 30 days after relevant documents are received
2.	**SO 1.2** Highly motivated team of employees	HR policies and procedures which will ensure that employees are managed equally and according to best practice so that each employee makes a valuable contribution to	5 policies to be developed (HR policy list available)	21 policies to be developed (HR policy list available)	Policies implemented and reviewed	Policies implemented and reviewed

	Strategic Objective	Strategic Plan Target	Estimated Performance	Medium Term Targets		
			2016/17	**2017/2018**	**2018/2019**	**2019/2020**
		the achievement of organisational objectives				
3.	**SO 1.3** Good image of NRWDI	80% positive feedback from stakeholders	Stakeholder engagement plan to be drafted in the new financial year	60% feedback from stakeholders survey	70% feedback from stakeholders	80% positive feedback from stakeholders
4.	**SO 1.4** National Radioactive Waste Management Inventory System	Fully functional system utilised for waste generation, disposal and storage	Business requirements analysis and URS completed	Document detailed system design	Develop and code system	Test and operationalise the system

6.2 PROGRAMME 2: RADWASTE OPERATIONS

	Strategic Objective	Strategic Plan Target	Estimated Performance	Medium Term Targets		
			2016/17	2017/2018	2018/2019	2019/2020
1.	**SO2.1** Excellent radioactive waste management and disposal service on a national basis	Increased compliance rate with regards to annual SHEQ audit	New target	80% compliance rate with regards to annual SHEQ audit	80% compliance rate with regards to annual SHEQ audit	85% compliance rate with regards to annual SHEQ audit
2.	**SO2.2** Environmentally sound management and disposal of radioactive waste	ISO 9001 and ISO 14001 Certification maintained	New target	Maintain ISO 9001 and 14001 certification	Maintain ISO 9001 and 14001 certification	Maintain ISO 9001 and 14001 certification
3.	**SO2.3** Transparent waste disposal site management	12 meetings held with communities in Kamiesberg Municipality Area regarding nuclear safety and other issues relating to Vaalputs	New target	4 VPSIF Meetings	4 VPSIF Meetings	4 VPSIF Meetings

6.3 PROGRAMME3: RADWASTE TECHNOLOGY AND SITING

	Strategic Objective	Strategic Plan Target	Estimated Performance	Medium Term Targets		
			2016/17	2017/2018	2018/2019	2019/2020
1.	**SO 3.1** Excellent site selection and investigations for the establishment of storage and disposal facilities	Sites development strategy in place	New target	CISF siting project plan developed	Prepare a safety case	Safety case submitted to Regulator
2.	**SO 3.2** Advanced design and construction of storage and disposal facilities	Operational storage facility	New target	Conceptual design developed	Detailed design developed	Detailed Design submitted for approval to NNR
3.	**SO 3.3** Efficient scientific and technical support for development and maintenance of safety cases	3 Research and Development reports	New target	1 Research and Development reports	1 Research and Development report	1 Research and Development report

6.4 PROGRAMME 4: RADWASTE COMPLIANCE MANAGEMENT

	Strategic Objective	Strategic Plan Target	Estimated Performance	Medium Term Targets		
			2016/17	2017/2018	2018/2019	2019/2020
1.	**SO 4.1** Quality management system	Quality management system in place	6 elements of ISO 9001 developed	75% of the QMS completed	100% of the QMS completed and implemented	100% of the QMS completed and implemented

7. RISK MANAGEMENT

Risk management remains one the unavoidable topics to deal with in our strategic and operational agenda, particularly when considering our continuously changing business horizons which require the organisation to be innovatively adaptive in order to survive and to be sustainable. NRWDI continuously monitors and evaluates its risk profile by taking contingency and corrective actions when required. Although in most instances risk management is addressed in a reactive manner, proactive and preventative risk management is also considered. NRWDI's risk management is carried out by conducting detailed risk and threats analysis within the context of our legal and regulatory requirements, business drive and strategic objectives, the results of which are then used to define acceptable risk levels, which in turn are further outlined in organisational preventive policies, standards, guidelines and procedures.

Below is a list of the key risks that may affect realisation of our strategic objectives:

Table 10: Key risks that may affect the realisation of NRWDI's strategic objectives

Risk	Risk Description	Risk Implication	Risk Mitigation
Financial	Inadequate funding of the Institute Revenue	• Inability to deliver on the Institute's mandate • Negative impact on the "going concern" status of the Institute. • Threat to employment security.	• Promoting effective budget management. • Growing external revenue streams • Implementation of cost curtailment initiatives. • Influencing the expeditious implementation of Radioactive Waste Management Act
Operations	Delay in the functional shift from Necsa (transfer of	• No access to the Institute's core	• Establish NRWDI/Necsa Steering Committee to address all outstanding operational

Risk	Risk Description	Risk Implication	Risk Mitigation
	function, budget, staff, assets and liabilities)	asset (Vaalputs site) • Negative impact on the operationalization of the Institute	matters with regard to the operationalization • DoE/Necsa/NRWDI Steering Committee to oversight w.r.t unresolved issues relating to the functional shift.
Operations	Inability to establish infrastructure relating to the long-term storage and disposal of HLW and Spent Fuel.	• Inability to deliver in on the Institute's mandate • Loss of external revenue • Shutdown of Koeberg Nuclear Power Plant by 2025 • Loss of reputation and brand strength.	• Signed MoU with Eskom for the siting and establishment of CISF.
Regulatory	Inability to obtain Nuclear Installation License for Vaalputs.	• Negative impact on the operationalization of the Institute	• Develop and implement a detail project plan to ensure that NRWDI is the license holder of the Vaalputs NIL
Learning and Growth	Inadequate number of Suitably Qualified, Experienced Persons (SQEP)	• Inability to deliver in on the Institute's mandate • Non Compliance with regulatory requirements	• Implement staff development programmes • Implement Talent Management and Succession Planning

8. RESOURCE CONSIDERATIONS

Whilst mindful of the provisions of the Act, the planning and prioritization of the various activities undertaken by the Board and the allocation of related interim budgets to establish the Institute were also informed and influenced by the identification and application of relevant key policies, in particular the Radioactive Waste Management Policy and Strategy for the Republic of South Africa. This planning and prioritization of the Institute's activities was done within the budgetary constraints of the available seed funds of R19,8 million which have been appropriated by Parliament to fund the Institute's establishment activities

The MTEF budget estimates are presented in the table below.

Table 11: MTEF budget estimates for 2017/2018 to 2019/2020

Statement of financial performance	Baseline					MTEF		
	Audited outcome R'000			Budget estimate R'000	Revised Estimate R'000	Revised Indicative Baseline		R'000
	2013/14	2014/15	2015/16	2016/17		2017/18	2018/19	2019/20
Revenue								
Non-tax revenue	0	1080	1030	403	403	683	752	827
Interest Received	0	1080	1030	403	403	683	752	827
Other non-tax revenue (OSG)	0	0	0	0	0	1500	0	0
Other non-tax revenue (CISF)	0	0	0	0	0	8050	12560	13693
Transfers received	0	2526	6004	11270	11270	30000	33000	36300
Total revenue	0	3606	7034	11673	11673	40233	46311	50819
Expenses								
Current expenses	0	3606	7034	26675	26675	40233	46311	50819
Compensation of Employees	0	67	396	15845	15845	26819	28416	30109
Directors Remuneration	0	1823	1575	1151	1151	450	495	545
Goods and Services	0	1713	5034	9608	9608	12855	17279	20032
Goods and Services	0	0	0	0	0	0	0	0
Finance Costs	0	0	0	1483	1483	0	0	0
Capital Costs	0	2	28	71	71	110	121	133
Transfers and subsidies	0	0	0	0	0	0	0	0
Total expenses	0	3606	7034	26675	26675	40233	46311	50819
Surplus / (Deficit)	0	0	0	-15 002	-15 002	0	0	0

Expenditure analysis

The majority of the NRWDI's functions are currently performed within the scope of Low Level Waste (LLW) inventories. In medium to long term, the activities undertaken by NRWDI will be extended to address the national inventory of radioactive waste consisting of Intermediate Level Waste (ILW), High Level Waste (HLW), long-lived waste, spent/used nuclear fuel and disused sealed radioactive sources. This implies that alternative disposal concepts would have to be researched, designed and implemented. It is also possible that alternative disposal sites would need to be obtained, characterised, constructed and operated.

The key priority for the NRWDI is to establish a national "away from reactor" above ground facility for the interim storage (up to 100 years) and related activities pertaining to irradiated fuel elements, or assemblies discharged from a nuclear reactor and not intended for further use in the nuclear reactor by 2025, and to establish a deep geological repository for the disposal of spent nuclear fuel and High Level Waste (HLW) by 2070.

Against this backdrop, the bulk of the NRWDI of the expenditure will be associated with the establishment of the abovementioned key national waste storage and disposal facilities and related activities such as research and development; and to increase radioactive waste management awareness knowledge among South Africans through active campaigns on an ongoing basis.

The NRWDI has received a once-off seed fund allocation of R19.8 million in 2014 for the establishment and operationalization, and these funds were utilised in the 2014/15 to 2016/17 financial years to start up and operationalize the Institute.

The expenditure of the Institute is expected to increase from R40.2 million in 2017/18 to R50.8 million in 2019/20, as the Institute matures in its operational activities and embarks on key projects such as: establishing a storage facility for the acceptance, monitoring and long term storage of post irradiated fuel elements and assemblies, increasing nuclear energy and waste awareness and the level of nuclear knowledge among all South Africans through active demystification campaigns, communicating nuclear safety and related issues, implementing waste disposal service that is safe, technically sound, socially acceptable, environmentally responsible and establishment and implementation of a National Waste Management Inventory Database.

The number of personnel in the Institute is expected to remain constant over the medium term. Expenditure on compensation of employees is expected to increase from R26.8 million in 2017/18 to R28.4 million in 2019/20 due to general inflationary increases.

The NRWDI is expected to derive its revenue from transfer payments received from government and other non-tax revenue received for providing waste disposal and related services to waste generator, in particular Necsa and Eskom (Koeberg).

Total revenue is projected to grow from R9.6 million in 2017/18 to R13.7 million to 2019/20 over the medium term at mainly from fees charged to Eskom for the establishment of a central interim storage facility and the disposal of the steam generators.

PART C: LINKS TO OTHER PLANS

9. LONG-TERM INFRASTRUCTURE AND OTHER CAPITAL PLANS

The Institute's medium- to long-term new infrastructure involves the design, construction and commissioning of a high-level waste interim storage facility, and a deep disposal repository, while its long-term financial commitment and liabilities considerations are for the decommissioning of the Vaalputs site and its aftercare. The long-term costs of designing, constructing and commissioning a dry storage and a deep repository are not known at present.

Eskom are currently working on the decommissioning and disposal of the six steam generators in the two Koeberg NPP units, with 2018 being the targeted year for replacement of these components. Eskom plans to transport the steam generators and dispose them as complete units (no cutting) in trenches at Vaalputs. However, since these are not standard packages as defined in the waste acceptance criteria (WAC) for Vaalputs, a waiver application and a safety case must be submitted to the regulator. In addition, an application for their transportation to Vaalputs by road, over a distance of about 700 km, must be submitted.

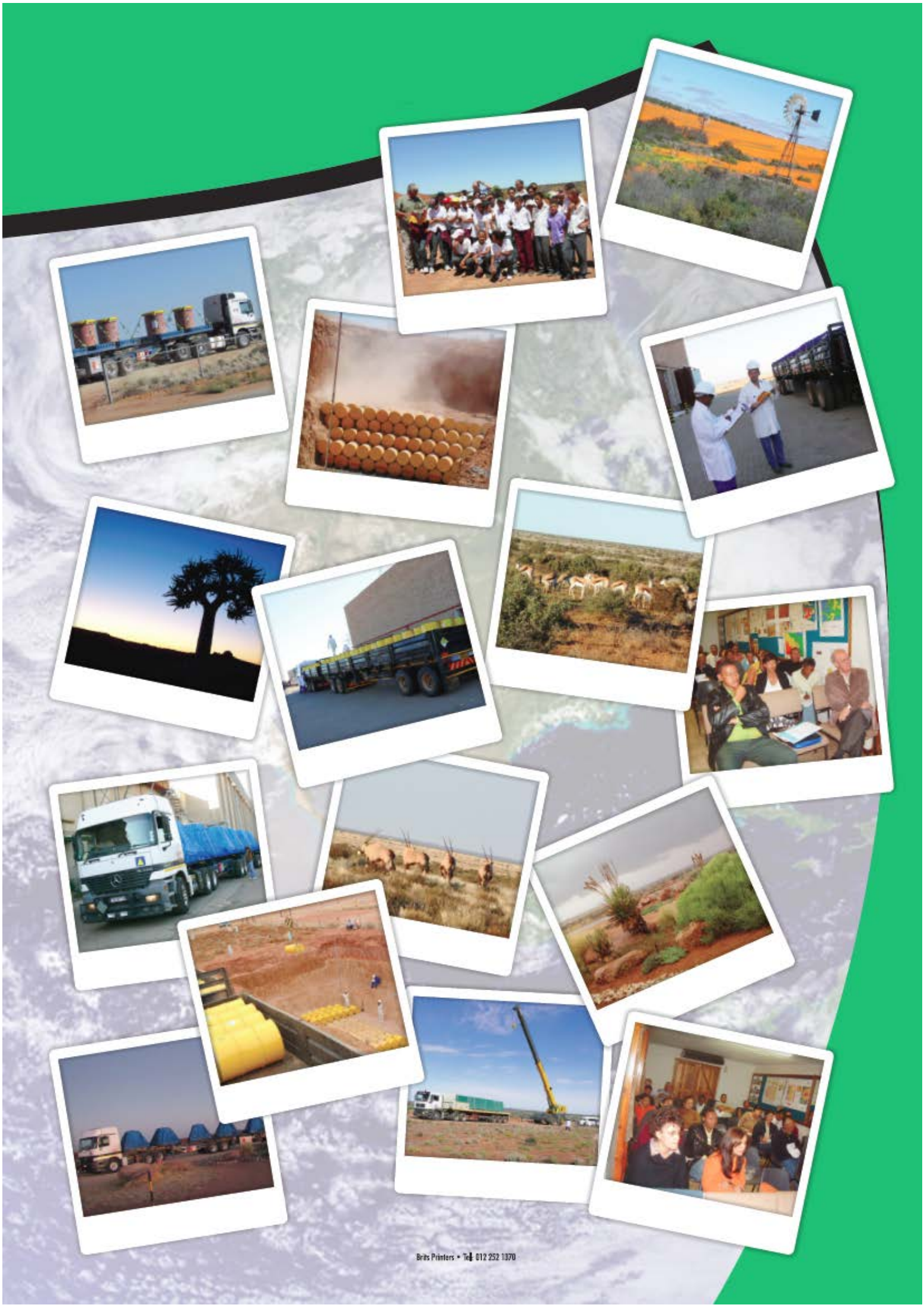
LIST OF ABREVIATIONS

AGSA	Auditor General of South Africa
BoD	Board of Directors
CEO	Chief Executive Officer
ESS	Executive Support Services
HLW	High Level Waste
ILW	Intermediate Level Waste
LLW	Low Level Waste
NDP	National Development Plan
NIL	Nuclear Installation License
NNR	National Nuclear Regulator
NRWDIA	National Radioactive Waste Disposal Institute Act
NRWDI	National Radioactive Waste Disposal Institute
SHEQ	Safety, Health, Environment and Quality
CFO	Chief Financial Officer
CISF	Central Interim Storage Facility
CMS	Compliance Management Services
COO	Chief Operations Officer
CSD	Corporate Services Division
CTO	Chief Technology Officer
DoE	Department of Energy
GDP	Gross Domestic Product
HR	Human Resources
ICT	Information and Communication Technology
ISO	International Standards Organisation
MANCO	Management Committee
MoU	Memorandum of Understanding
MTEF	Medium Term Expenditure Fund
MTSF	Medium Term Strategic Framework
Necsa	South African Nuclear Energy Corporation
NNBP	Nuclear New Build Programme
NPP	Nuclear Power Plant

NRWDI	National Radioactive Waste Disposal Institute
NNR	National Nuclear Regulator
PESTEL	Political Economical Social Technological Environmental Legal
PFMA	Public Finance Management Act
QMS	Quality Management System
R&D	Research and Development
RWMF	Radioactive Waste Management Fund
SA	South Africa
SCM	Supply Chain Management
SHEQ	Safety, Health, Environment and Quality
SLA	Service Level Agreement
SMART	Specific, Measurable, Achievable, Realistic, Time bound
SO	Strategic Objective
SOE	State Owned Entity
SOOG	Strategic Outcome Orientated Goal
SQEP	Suitably Qualified and Experienced Person
URS	User Requirement Specification
WAC	Waste Acceptance Criteria

LIST OF TABLES

LIST OF FIGURES



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