NATIONAL NUCLEAR REGULATOR

2006 –2009 Strategic Plan

Final Draft

06 October 2005

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EXECUTIVE SUMMARY

One of the major challenges faced by the NNR since its establishment is that of delivery on the mandate prescribed by the NNR Act while confronting the transformation imperative as well as the urgent need for capacity building, training and development. Achieving these objectives requires deep commitment to effective and efficient planning and implementation processes.

In developing the Strategic Plan, for the period 2006/2007 to 2008/2009, the Board, Management and staff of the NNR have set the path towards improved delivery on the mandate prescribed by the NNR Act. This Strategic Plan, therefore, reaffirms the commitment of the NNR Board of Directors, and of NNR Management and staff to consolidate the efforts initiated in the past few years towards the transformation of the organisation into a national nuclear regulatory authority committed to excellence in service delivery.

This document is also submitted to the Minister of Minerals and Energy – in terms of Section 15(6) of the NNR Act for the Minister's consideration and guidance. The NNR considers the input of its other stakeholders to be of critical importance and will highly appreciate their contribution towards the development of the final Strategic Plan.

MANDATE

The National Nuclear Regulator (NNR) is vested with the important responsibility of providing for the protection of persons (the public and workers), property and the environment against nuclear damage. The National Nuclear Regulator Act, Act No 47 of 1999 establishes the NNR as the competent authority for nuclear regulation in South Africa.

The NNR's regulatory practice includes prescriptive and descriptive approaches, as appropriate, and focuses on holders of authorisations instituting appropriate processes for compliance with safety standards and nuclear authorisation conditions.

Section 5 of the NNR Act provides that the objects of the Regulator are to:

- Provide for the protection of persons, property and the environment against nuclear damage through the establishment of safety standards and regulatory practices;
- Exercise regulatory control related to safety over the siting, design, construction, operation, manufacture of component parts, and decontamination, decommissioning and closure of nuclear installations
- Exercise regulatory control over other actions, to which this Act applies, through the granting of nuclear authorisations;
- Provide assurance of compliance with the conditions of nuclear authorisations through the implementation of a system of compliance inspections;

- Fulfil national obligations in respect of international legal instruments concerning nuclear safety; and
- Ensure that provisions for nuclear emergency planning are in place.

VISION AND MISSION

In responding to the legislative requirements, the NNR has adopted the following vision and mission:

Vision

To be a leading impartial authority for the regulation of the safe use and handling of nuclear and radioactive materials.

Mission

To provide an effective and efficient national regulatory framework for the protection of persons, property and environment against nuclear damage through:

- Excellence in nuclear regulatory practices and
- Human resources and transformation practices best suited to the nuclear regulatory needs of the nation

STRATEGIC AREAS

To ensure delivery of its mandate in the next three-year period, the NNR will pursue its work within four strategic focus areas. These areas together with the key objectives in each area are listed below.

Strategic focus area 1: Core Business (protection of persons, property and the environment)

Key objectives:

To implement appropriate and innovative regulatory practices that provide for efficient and effective protection of persons, property and the environment through the following:

- Conducting safety assessment reviews for the purpose of granting or refusing authorizations of new actions and approval of changes to existing actions (CB1)
- Regulating the optimal reduction of public and workers' doses and risk for all facilities according to the ALARA principle (CB2)
- Ensuring a holistic compliance assurance approach including safety culture enhancement (CB3)

- Reviewing and implementing the current legislation (NNRA), updating the associated regulatory rules, and continuously monitoring SA's legislative environment (CB4)
- Reviewing conditions of authorisation (CB5)
- Fulfilling relevant national obligations in respect of international legal instruments (CB6)
- Ensuring that relevant nuclear authorisation holders have adequate nuclear emergency planning in place (CB 7)
- Reviewing safety standards and regulatory practices including investigations. Specifically, the NNR needs to purchase laboratory equipment in order to enhance its capabilities with regard to independent verifications. (CB 8)

Strategic focus area 2: Stakeholder Satisfaction

Key Objectives:

To adopt an inclusive, balanced and effective approach in addressing stakeholder needs through the following:

- Ensuring effectiveness of all bilateral agreements and other international collaborations (SS1)
- Improving stakeholder relation management including public education (SS2)

Strategic focus area 3: Internal Business Processes

Key Objectives:

To apply an integrated management system based on affordable best practices through the following:

- Improving business and regulatory practices (structure, systems and processes) (IBP1)
- Entering into institutional agreements (IBP 2)
- Implementing the NNR transformation policy and plan (IBP 3)
- Improving NNR Corporate Governance (IBP4)
- Improving the NNR nuclear emergency preparedness and response (IBP5)

Strategic focus area 4: Human Resources

Key Objectives

To be an employer of choice through the following:

- Implementing a holistic HR management strategy that will enhance the attraction and retention abilities of the Regulator (HR1)

- Realigning policies, procedures and practices with SA legislation, best practice and transformation imperatives (HR2)
- Implementing capacity building and development within the organisation and taking part in national capacity building initiatives (HR3)Leveraging strategic partnerships and alliances to further the technical expertise of NNR staff (HR4)
- Adequately staffing the NNR to execute its mandate (HR5)

The performance indicators for each strategic focus area are given in section 5 of this document, while the objectives and their associated deliverables are outlined in section 4.

Within the three-year strategic considerations outlined in this document, the NNR will continue with particularly focused attention to some specific areas in the next year. These are as follows:

- Implementing a holistic HR management strategy that will enhance the attraction and retention abilities of the Regulator
- Improving organisational climate with respect to internal stakeholder satisfaction.
- Enhancing regulatory presence at the authorised sites, through the implementation of the holistic compliance assurance programme.
- Enhancing ability to conduct independent verification and effective enforcement
- Enhancing external stakeholder relations management.
- Implementing effective and efficient business and regulatory processes
- Improving corporate governance

Financial information

To give effect to its strategic intent, the overall budgeted expenditure and income for the financial year 2006/07 reflects an increase of 26% or R14 757 641 against the comparative 2005/06 budget of R56 640 987. In addition to the usual inflationary adjustment, this increase accommodates provisions needed for the organisation to retain its current expertise, and to begin building the capacity considered necessary for the organisation to meet its mandate in the long term. The increase is broken down into the Personnel Expenses of R5 292 438, Subsistence and Transport of R409 812, Expenditure General of R4 944 884, Operational Expenses of R3 581 427 and Capital Expenditure of R529 080.

1 INTRODUCTION

This strategic plan covers the following issues:

Section 1: Introduction

This section provides an introduction to the strategic plan.

Section 2: Business definition

This section addresses the vision and mission statements, the values of the NNR, and then it outlines the critical business processes, products and services rendered by the organization.

Section 3: Environment Analysis

This section describes the environment in which the NNR operates. It also identifies the stakeholders that impact on the NNR's activities.

Section 4: Three year strategic objectives

This section provides the strategic objectives that will ensure the achievement of the NNR goals and hence the execution of the NNR mandate. These objectives are given for each strategic area.

This section marks the beginning of the synthesis process. In this section, the NNR employs the balanced scorecard approach as a tool through which performance of the strategy must be evaluated. To implement this approach, the NNR identified four key strategic areas to enable execution of mandate. These areas are core business, stakeholder satisfaction, human resource factors, and internal business processes. Accordingly, statements of high-level objectives are established for each of the strategic elements.

Section 5: Performance Measures

This section provides performance measures for each strategic area, and accordingly specific key performance indicators for each performance measure. The NNR employs both leading and lagging measures. The leading measures are monitored along with the execution of the strategy and the lagging measures are monitored periodically. The performance measures are presented in the NNR Scoreboard.

Section 6: Projections of revenue and expenditure

This section shows the multi-year projections of revenue and expenditure.

Section 7 Materiality and Significance Framework

This section discusses framework of materiality and significance adopted by the NNR.

Section 8: List of Abbreviations & Acronyms

This section shows a standard list of abbreviations.

2 BUSINESS DEFINITION

The business definition below guides the NNR towards giving effect to the National Nuclear Regulator Act (Act No 47 of 1999). The core business of the NNR derives from the NNR Act. This Act establishes the NNR in order to regulate nuclear activities and, among other things, provides for safety standards and regulatory practices for the protection of persons, property and the environment against nuclear damage.

2.1 VISION

To be a leading impartial authority for the regulation of the safe use and handling of nuclear and radioactive materials.

2.2 MISSION

To provide an effective and efficient national regulatory framework for the protection of persons, property and environment against nuclear damage through:

- Excellence in nuclear regulatory practices and
- Human resources and transformation practices best suited to the nuclear regulatory needs of the nation.

2.3 VALUES

The NNR core values are:

- **Excellence -** in all aspects of service delivery
- **Ethical conduct -** evidenced by integrity, honesty, trustworthiness, respect and fairness
- **Professionalism -** displayed through commitment, compassion, dedication, responsibility, accountability and being proactive
- **Credibility -** commanded through consistency, objectivity, impartiality, confidence, transparency, competence and knowledge base
- **Teamwork -** resulting in integrated systems, synergy, participation and co-operation
- **Valuing Diversity -** in all aspects of service delivery

2.4 CRITICAL PROCESSES, PRODUCTS AND SERVICES

The critical processes, products and services provided by the NNR include the following:

Key Processes

- Nuclear authorisations process

- Compliance assurance (Inspection, auditing and investigations)
- Safety assessment
- Developmental processes
- Stakeholder processes
- National competent authority with respect to transport of radioactive material
- Enforcement
- Operator qualification

Key Products and Services

- Nuclear authorisations
- Nuclear-related knowledge (advice)
- Regulatory information related to:
  - Inspection reports
  - Research reports
  - Compliance reports
  - Evaluation reports
  - Guides/good practices
  - Directives
  - Standards and regulatory practices
  - Safety indicators
  - Technical publications

2.5 GENERAL REGULATORY INFORMATION

The NNR uses various ways to provide regulatory information to its stakeholders. These include:

- Annual reports
- Information briefs
- External review reports
- Awareness programmes
- NNR image building
- Publications
- Public query responses

3 ENVIRONMENTAL ANALYSIS

3.1 ENVIRONMENTAL CHANGES

The nuclear landscape in South Africa has changed significantly over the last few years. These changes reflect a growing international trend towards a resurgence of nuclear. These include:

- A new technology, the pebble bed modular reactor, is currently being pursued.
- Increased security concerns after the events of 11 September 2001 in the USA, specifically, security of nuclear power plants and radioactive sources.
- Increased public need for information and pressure for greater stakeholder involvement in decision-making.
- International trends suggest that in the medium to long term, it is expected that there will be an upsurge in interest in uranium mining, largely fueled by the resurgence of nuclear interest. Uranium production in South Africa is likely to grow in response to this market need.
- Growing demand for land previously used for mining purposes to be used for other purposes such as low cost housing and building of recreation facilities.
- The national pool of appropriately skilled persons and local technical support organizations is insufficient to sustain the national needs. While a number of initiatives are underway by different stakeholders, there is need to consolidate and focus these efforts to produce the appropriate skills needed. These initiatives will only start to bear fruits in the medium to long term.
- The government has adopted the policy that nuclear will form part of the country's energy mix.

3.2 IMPACTS OF ENVIRONMENTAL CHANGES ON THE NNR

These environmental changes bring with them significant challenges for the NNR. It means that, while the NNR may have coped in the past, it will no longer cope in the future unless decisive action is taken now. Key challenges which confront the NNR as a result of the changes are as follows:

3.2.1 CAPACITY TO EXECUTE THE MANDATE

The NNR is challenged in sustaining an appropriate level of in-house technical (engineers and scientists) capacity to deliver on its core business and hence has to rely on external technical support. With the expanding nuclear program in the country, as well as the safety optimization of some existing ageing nuclear installations, this challenge will grow. The expanding nuclear program brings with it increased competition for scarce skills. Although the NNR has depended on technical support organizations to assist in fulfilling its mandate, this reliance is unsustainable in view of the environmental dynamics in the country and internationally.

Furthermore, an internal organizational factor that impacts on the capacity of the NNR is the ability to retain and attract staff within a holistic human resource management framework.

Notwithstanding these challenges, the NNR has a good standing in the international community such as the IAEA and other regulators. This offers the NNR opportunities and scope for further capacity development and technical support, which enables the organisation to maintain a leading role in Africa and abroad.

3.2.2 CORPORATE GOVERNANCE

The NNR needs to improve its corporate governance processes. In particular there is a need to strengthen strategic alliances between the Executing Authority and the Board while ensuring that the Board and Management vigorously pursue a shared vision for effective delivery on the NNR mandate. Building strong relationships at Executive and management levels will facilitate decision-making processes and gear the organization towards better delivery on its core business.

3.2.3 INTERNAL BUSINESS PROCESSES

There are internal inadequacies in synergy between systems, processes and structure. The unfilled posts in the organisation aggravate this challenge. In addition, there is a need to continuously reengineer the internal business processes in order to improve the efficiency and effectiveness of available human and financial resources.

3.2.4 PUBLIC INFORMATION ON NUCLEAR

There is poor public understanding of nuclear issues including the role of the regulator. This impacts on stakeholder relations especially with representatives of organised public and could negatively affect the nuclear industry in the country.

3.3 NNR STAKEHOLDERS

The NNR stakeholders are classified in the following categories:

3.3.1 REGULATED ENTITIES

- Entities with the potential to cause nuclear damage (installations and other actions)

3.3.2 SERVICE RECIPIENTS

- Workers at authorised entities
- General public that could be affected by authorised entities
- Government

3.3.3 POLICY AND LEGISLATIVE DECISION MAKERS

- Minister – Executive Authority

- Parliament
- Government departments

3.3.4 RESOURCE SUPPLIERS

- Educational institutions
- Expertise suppliers
- Research institutions
- Funders
- Information technology suppliers

3.3.5 STRATEGIC CO-OPERATIVES

- Organised labour
- NGOs & community-based organisations
- Organs of state
- International conventions
- Organised business
- Media
- General public
- International organisations
- Regulators in other countries

3.3.6 INTERNAL STAKEHOLDERS

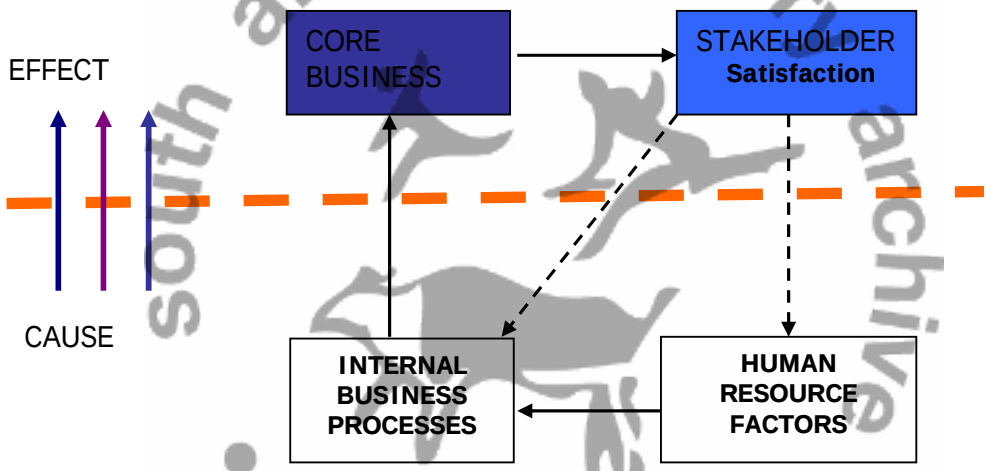
- Employees of the NNR

4 THREE- YEAR STRATEGIC OBJECTIVES

The strategic objectives of the NNR are based on the philosophy that the organisation must proactively respond to the external environment while being realistic in terms of its ability and resources to do so in the internal environment. This requires the organisation to take advantage of opportunities, both existing and projected, while minimising the impact of threats. The organisation must be realistic about its internal strengths and weaknesses and all other constraints.

The figure below presents the organisation's balanced scorecard elements and the cause and effect relationship.

NNR CAUSE & EFFECT PHILOSOPHY (Balanced scorecard elements)



Effective execution of core business will result in stakeholder (external) satisfaction and requires best HR practices and excellent internal business process.

STRATEGIC OBJECTIVES

The strategic objectives below cover the period 2006/7 to 2008/9. In regard to certain strategic objectives, the time frame for deliverables/outcomes is reflected as the end of March 2007. This indicates that NNR performance results will be reported and assessed at the end of the 2006/7 financial year, however, in the remaining two years the NNR will continue to focus on implementation to give effect to the relevant strategic objectives.

NOTE:

- Except where otherwise indicated in the table, all deliverables are due by March 2007.
- The progress on each deliverable that is due in March 2007 will be reported bi-annually to the Board
- The progress on each deliverable that is due beyond March 2007 will be reported annually to the Board

4.1 CORE BUSINESS

To implement appropriate and innovative regulatory practices that provide for efficient and effective protection of persons, property and the environment through the implementation of the following strategic objectives:

OBJECTIVES	ACCOUNTABILITY	OUTPUTS/OPERATIONAL DELIVERABLES	TIME FRAME
To conduct safety assessment reviews for the purpose of granting or refusing authorizations of new actions and approval of changes to existing actions **(CB1)**	PRD, NTNS, AG	• All applications/submissions evaluated against established criteria • Initial responses to all applicants within 4 weeks giving proposed timing of the review process • Completed application within the proposed timing • Explanation of instances where either of the above was not possible. • A report to the board on all of the above	March 2007
To regulate the optimal reduction of public and workers' doses and risk	NTNS	Report on verification of rehabilitation of contaminated sites	March 2007

OBJECTIVES	ACCOUNTABILITY	OUTPUTS/OPERATIONAL DELIVERABLES	TIME FRAME
for all facilities according to the ALARA principle **(CB2)**	NTNS, PRD	Regulatory processes reviewed and implemented such that: • Authorised actions are operated within regulatory control and if not enforcement actions will have been implemented • Identified operations requiring to be authorized are within regulatory control, and where not appropriate legislative imperatives will have been applied. • A report on the above to the Board including environmental monitoring around authorised facilities and doses (public and workers) as well as on verification of rehabilitation of contaminated sites	March 2007
To ensure a holistic compliance assurance approach including safety culture enhancement **(CB3)**	NTNS, PRD AG, RSD, NTNS, PRD	• Holistic compliance assurance system including safety culture enhancement programme developed and implemented • Strategy for regulatory control (standard, assessment, compliance inspection) over physical security measures developed and implemented • Report on the above to the Board	March 2007
To review and implement the current legislation (NNRA), update the associated regulatory rules, and continuously monitor SA's legislative environment **(CB4)**	RSD	• Processes for scanning legislative changes and ensuring NNR compliance to relevant legislation are reviewed and implemented • Report to the Board on implementation and compliance with legislation relevant to the South African environment, and co-operating with other organs of state as per the NNR Act.	March 2007
To review conditions of authorisation **(CB5)**	NTNS, PRD PRD, NTNS NTNS	• Review and update authorisations against relevant statutory requirements, safety standards and regulatory practices and international best practices • Updated authorisations issued to all holders • Process based authorisations issued to NECSA • Report to the Board	March 2007 March 2007 March 2008

OBJECTIVES	ACCOUNTABILITY	OUTPUTS/OPERATIONAL DELIVERABLES	TIME FRAME
To fulfil relevant national obligations in respect of international legal instruments **(CB6)**	RSD, NTNS, PRD, AG	• Processes for scanning developments and changes of international instruments updated and implemented. • A report to the Board indicating changes, and developments of international instruments and fulfilment of existing obligations	March 2007
To ensure that relevant nuclear authorisation holders have adequate nuclear emergency planning in place **(CB 7)**	PRD, NTNS AG, NTNS, PRD	• Regulatory requirements which are in line with international best practice for emergency planning developed and issued to relevant authorisation holders • Nuclear emergency planning provisions verified to be in place at all relevant authorisation holders • Report to the Board on adequacy of emergency preparedness arrangements for relevant authorisation holders reviewed and tested	March 2007
Reviewing safety standards and regulatory practice including investigations. Specifically, the NNR needs to purchase laboratory equipment in order to enhance its capabilities with regard to independent verifications. **(CB 8)**	RSD	Safety standards and regulatory practices for compliance with legislation and international best practice reviewed and submitted to the Executive Authority for promulgation. Investigations (regulatory research) conducted on the following: • Evaluation of extent of contamination of national water resource, Wonderfontein spruit • Epidemiology studies around authorised facilities for Nuclear installations • Financial Liability NNR fundamental principles and guidelines produced on the following: • Research reactor core conversion and upgrades • Decommissioning • Optimal reduction or radioactive waste • Plant life Extension • Protection of the environment against nuclear damage • Report to the Board on the above	March 2007

4.2 STAKEHOLDER SATISFACTION

To adopt an inclusive, balanced and effective approach in addressing stakeholders needs through the implementation of the following strategic objectives:

OBJECTIVES	ACCOUNTABILITY	DELIVERABLES/OUTCOMES	TIME FRAME
To ensure effectiveness of all bilateral agreements and other international collaborations **(SS1)**	RSD	• Participated in existing bilateral forums including activities and international collaborations • Established process for feedback into NNR business • Continued scanning for potential international collaboration • Reports to the Board	March 2007
To improve stakeholders relation management including public education **(SS2)**	RSD	• Reviewed and implemented communication strategic plan to improve NNR image and public confidence • NNR publications (annual report, Tsebo, any other technical publication) produced including annual report on the implementation of PAIA manual	March 2007

4.3 INTERNAL BUSINESS PROCESSES

To apply an integrated management system based on affordable best practices through the implementation of the following strategic objectives:

OBJECTIVES	ACCOUNTABILITY	DELIVERABLES/OUTCOMES	TIME FRAME
To improve business and regulatory practices (structure, systems and processes) **(IBP1)**	CSS, RSD, NTNS	NNR structure, internal business systems and processes reviewed for effectiveness and efficiency and output thereof implemented such that: • Security and disaster management processes developed and implemented • Self assessment of regulatory effectiveness based on IAEA RaSSia/IRRT methodology conducted • Quality management system developed and implemented • Improved structure, systems and processes implemented • Report to the Board	 March 2007 March 2009 March 2007 March 2007 March 2007
To enter into institutional agreements **(IBP 2)**	RSD	• Reviewed and implemented processes for concluding and implementing cooperative governance agreements with other organs of state • All necessary cooperative agreements with other organs of state concluded and implemented • Report to the Board	March 2007
To implement the NNR transformation policy and plan **(IBP 3)**	CSS	• Reviewed, updated and implemented transformation plan in keeping with legislative imperatives and best practices • Report to the Board	March 2007
To improve NNR Corporate Governance **(IBP4)**	CEO	• Reviewed, updated and implemented corporate governance manual against King II and international best practice NNR • Report to Board	March 2007 March 2008

To improve the NNR nuclear emergency preparedness and response **(IBP5)**	AG, NTNS, PRD, RSD	• Reviewed, improved, and implemented NNR internal emergency preparedness and response • Peer review on the adequacy of NNR emergency preparedness conducted • Report to the Board on the efficiency and adequacy of NNR emergency preparedness and response	March 2007 March 2008

4.4 HUMAN RESOURCES

To be an employer of choice through the implementation of the following strategic objectives:

OBJECTIVES	ACCOUNTABILITY	DELIVERABLES/OUTCOMES	TIME FRAME
Implementing a holistic HR management strategy that will enhance the attraction and retention abilities of the Regulator **(HR1)**	CSS	• Human Resources strategy reviewed and implemented to improve NNR's ability to retain and attract staff • Report to the Board	March 2007
To realign policies, procedures and practices with SA legislation, best practice and transformation imperatives **(HR2)**	CSS	• Revised organisational policies and procedures in line with national legislation, best practice and transformation plan • Implemented revised policies and procedures • Report to the Board	March 2007
To implement capacity building and development within the organisation and taking part in national capacity building initiatives **(HR3)**	CSS, RSD, PRD, AG, NTNS	<u>Organisational capacity:</u> • Revised and implemented skills development based on personnel development plans for each staff member to ensure the regulator has competent staff to execute its mandate • Developed and implemented a regulatory training program • Report to the Board	March 2007
	RSD	<u>External capacity:</u> • Participated in national capacity development initiatives for the nuclear industry including universities and students supervision • Report to the Board	March 2007

To leverage strategic partnerships and alliances to further the technical expertise of NNR staff **(HR4)**	RSD	• Revised and implemented plan for leveraging strategic partnerships to enhance the NNR's ability to execute its core mandate • Report to the Board	March 2007
To adequately staff the NNR to execute its mandate. **(HR5)**	CSS	• All vacant positions filled • Reviewed adequacy of staff complement to execute NNR's mandate in line with environmental changes • Report to the Board	March 2007

5 PERFORMANCE MEASURES

This section provides performance measures for each strategic area, and accordingly specific key performance indicators for each performance measure. The NNR employs both leading and lagging measures to measure performance. The leading measures are monitored along with the execution of the strategy and the lagging measures are monitored periodically.

The NNR has adopted the approach that proper monitoring of the implementation of the objectives in the strategic plan will provide a leading measure for ensuring that it achieves its purpose. The approach taken is that if 100% of the operational deliverables are achieved during the implementation, the strategy will have achieved its purpose. The achievement of the operational deliverables will be monitored quarterly.

5.1 THE NNR SCOREBOARD

The performance measures are presented in the NNR Scoreboard in Table 1.

TABLE 1 THE NNR SCOREBOARD (PERFORMANCE MEASURES)

CORE BUSINESS (PROTECTION OF PEOPLE AND ENVIRONMENT)

PERFORMANCE MEASURE	KPI 2006/2007	THREE-YEAR GOAL
LEADING MEASURES		
Achievement of Operations Plans Achievement of Core Business (CB1-8) Objectives in 4.1	100% achievement of objectives	Maintain at 100%
LAGGING MEASURES		
Worker exposure – normal operations (mSv/a)	Average below 5 mSv per annum Maximum below 50 mSv per annum	To regulate nuclear activities to ensure that worker exposure is maintained on average below 5 mSv/a and the maximum is reduced to below 50 mSv/a
Public exposure – normal operations (mSv/a) per facility	Below site specific dose constraint and public dose limit	• To regulate nuclear activities to ensure that appropriate steps are taken by authorisation holders to meet their site-specific public exposure dose constraints. • To regulate nuclear activities to ensure that public exposure is below 80% of public dose limit
Worker risk – accident conditions	Regulate to maintain below risk criteria as stipulated in safety standards (to be published)	Regulate to maintain below Risk criteria
Public risk – accident conditions	Regulate to maintain below risk criteria as stipulated in safety standards (to be published)	Regulate to maintain below Risk criteria
International legal instruments concerning nuclear safety	Facilitate national participation and compliance, as appropriate, with international legal instruments.	Maintain level of participation and compliance.
Nuclear emergency planning	Regulate to ensure adequate provisions for nuclear emergency planning.	Maintain appropriate level Maintain adequate provisions for nuclear emergency planning

STAKEHOLDER SATISFACTION

PERFORMANCE MEASURE	KPI 2006/7	THREE-YEAR GOAL
LEADING MEASURES		
Achievement of Stakeholder Satisfaction Objectives (SS1-2) in 4.2	100% achievement of objectives	Maintain at 100%
LAGGING MEASURES		
Stakeholder satisfaction index (%)	75%	Continuously improve to above 80%
Executive authority satisfaction index	Baseline to be determined 75%	Continuously improve to above 80%
Holder satisfaction – NNR processes (%)	65%	Continuously improve to above 80%
T.R 26 – Quarterly PFMA compliance reports	Compliance	Maintain compliance

INTERNAL BUSINESS PROCESSES

PERFORMANCE MEASURE	KPI 2006/7	THREE-YEAR GOAL
LEADING MEASURES		
Achievement of Internal Business Processes (IBP 1-5) Objectives in 4.3	100% achievement of objectives	Maintain at 100%
LAGGING MEASURES		
Response time (all processes)	100% of the agreed response time	Continuously reduce response time according to specific departmental goals and improve reliability to above 80% Maintain 100% response time reliability
Quality of processes	Comply with criteria established in quality standard document	Continuously improve compliance with criteria

HUMAN RESOURCES

PERFORMANCE MEASURE	KPI 2006/7	THREE-YEAR GOAL
LEADING MEASURES		
Achievement of Human Resources (HR 1-4) Objectives in 4.4	100% achievement of objectives	Maintain at 100%
LAGGING MEASURES		
Employee satisfaction (%)	80%	Continuously improve to above 80%
Employment equity	Targets specified in EE plan	Achieve annual organisational goals
Skills coverage ratio (%) internal resources	80%	Continuously improve to above 90%
Skills coverage ratio (%) external resources	20%	Continuously reduce to below 10%
Performance levels	Individual staff to score at least level 2 of the NNR's performance evaluation tool. (In a scale of 4, level 2 represents expected performance levels.)	Continuously improve to ensure all staff score above level 2 on performance reviews

6 PROJECTIONS OF REVENUE AND EXPENDITURE

The overall budgeted expenditure and income for the financial year 2006/07 is presented in Table 2 and reflects an increase of 26% or R14 757 641 against the comparative 2005/06 budget of R56 640 987.

This increase is broken down into the Personnel Expenses of R5 292 438, Subsistence and Transport of R409 812, Expenditure General of R4 944 884, Operational Expenses of R3 581 427 and Capital Expenditure of R529 080. These are discussed in detail below.

6.1 PERSONNEL EXPENSES

Included in R5 292 438 is an amount of R4 597 708 budgeted for the implementation of a strategy to increase attraction and retention of staff. It is anticipated that this expenditure will be funded from the State's contribution.

6.2 SUBSISTENCE AND TRANSPORT

The proposed R409 812 increase in subsistence and transport expenses resulted from an increased need to carry out inspections and assessments resulting from an increasing number of licence holders.

6.3 EXPENDITURE GENERAL

The following expenditure general expenses increased above inflation: consultants (R2 838 619), Training (R443 071). Details in respect of these increases are as follows:

6.3.1 CONSULTANTS

The following areas of core business need specialised skills and knowledge and are required for the review and assessment process:

(a) Medical Surveillance

Currently there is a focus on the health of radiation workers due to media reports on past practices at facilities. The NNR has to sharpen its review and assurance function in this regard and the workload in this area will increase due to compliance measures that have to be put in place for the mining and minerals facilities. Some of the activities to be undertaken by the NNR will require specialised knowledge, and occupational medical practitioners will be used. If not adequately addressed, this situation will negatively impact on the image and credibility of the NNR.

(b) Public Hazard Assessments

With the current staff (numbers and competencies) an additional demand is placed on resources to review public hazard assessments for a large number of mining and minerals facilities. In the past, dedicated specialists were allocated to this work which involves literature analyses and computational work. Contracts are being prepared for outsourcing this work and to build capacity in universities and scientific institutions.

(c) Electrical/Control and Instrumentation

The review workload in this area is high, with a specialised skill and knowledge requirement. The nuclear facilities regulated by the NNR are performing upgrades to their plant as a result of safety reassessment requirements. The current NNR capability in this area is stretched, leading to delays in the completion of the workload. The consultants that have been identified already have experience on similar plants abroad and have the capacity to perform the in depth reviews required within the time frames set.

(d) Nuclear Engineering

This area is perhaps the area of most concern as it is fundamental to the mission of the NNR. The competency to review accident analysis, nuclear core designs, changes to nuclear fuel use regimes, safety analyses, among others, requires specialised training and knowledge gained over many years. It is imperative that the review capability in this area is the best that can be obtained, in order to ensure that nuclear facilities are operated in a safe and responsible manner. The consultants that have been identified already have experience on similar plants abroad and have the capacity to perform the in depth reviews required within the time frames set. They are also able to provide transfer of skills to the NNR

(e) Civil Engineering

The NNR does not have civil or structural engineers in its staff complement. The regulated nuclear facilities are subjected to specific licensing requirements that entail the compilation of surveillance reports of a civil and structural nature. Currently, it is not possible to perform comprehensive technical reviews on these documents with the current NNR staff complement. International consultants will be used initially for this review work. It is the intention of the NNR, however, over the longer term (3 to 5 years) to get resources from local universities or scientific institutions in order to build the capacity to perform this work in the future.

(f) Level 2 PRA

Nuclear facilities are required to be compliant to certain risk criteria. All submissions for plant changes, emergency plan changes etc. must be accompanied by probabilistic risk assessment. Computation and modelling, risk assessment, source term analysis and containment performance analysis are central to this work scope. The NNR's capability in this area is currently low. Consultants will have to be used in this area in order to ensure proper analysis of submissions. Specific skills transfer requirements to NNR staff are however set.

(g) Severe Accident Analysis

It is internationally recognised that although designs of nuclear installations are very robust, that the possibility of a severe accident cannot be excluded. The review of submissions require the understanding of specific physical phenomena, characteristics of the plant, ensuring that plant changes implemented to improve the management of severe accidents, will not degrade normal plant performance and increase risk. This work requires specialised knowledge that is not available in the NNR. Consultants will have to be used in this area, but the building of NNR competencies through consultant interaction with less experienced NNR staff is being targeted.

(h) Fire and Safety Analysis

The capability to perform fire and safety analyses reviews within the NNR is currently being supported, however, the personnel involved have limited experience, leading to lack of depth in the analyses. The consultants will be used to augment the current NNR reviews and where possible the transfer of skills will be a joint goal to completing a comprehensive review of a submission.

6.3.2 TRAINING

The proposed increase in training is intended to implement an accelerated training and mentorship programme to build capacity and reduce over-reliance on outside consultants.

6.4 OPERATING COSTS

The following operating costs increased above inflation: regulatory research and development (R1 217 000), Maintenance and services contracts (R859 265) and communication and stakeholder management expenses (R598 300).

6.4.1 RESEARCH AND DEVELOPMENT

Research Costs increased above inflation due to the need to implement the verification and enforcement strategy. This has been a major weakness over the years and if this weakness continues the Regulator will not be able to, among other things:

- Make informed recommendations to the minister in respect of the quantum of security to be provided by authorization holders in terms of section 29 of the NNRA, due to failure of doing the Financial Liability project.

- Pursue the Wonderfonteinspruit study, which is in support of the compliance assurance program for the regulatory oversight of mines in the Carltonville area.

The State contribution has been increased from R5 742 000 to R13 473 708 if compared to the previous year. The increase is made up of R3 134 000 VAT, which used to be part of the State contribution, and R4 597 708 required for the attraction and retention of skills.

TABLE 2 OVERALL BUDGETED EXPENDITURE AND INCOME FOR FINANCIAL YEARS 2006/7 TO 2008/9

COST ITEM	PROPOSED BUDGET 2006/2007	FORECAST BUDGET 2007/2008	FORECAST BUDGET 2008/2009	SUBMITTED BUDGET 2005/2006	%
1.PERSONNEL EXPENSES	43,717,503	46,559,141	49,585,485	38,425,065	14%
2.SUBSISTENCE AND TRANSPORT EXPENSES	3,654,612	3,892,162	4,145,153	3,244,800	13%
3.EXPENDITURE GENERAL	13,798,889	14,695,817	15,651,045	8,854,005	56%
4.EXPENDITURE OPERATING COSTS	7,626,764	8,122,503	8,650,466	4,045,337	89%
5. CAPITAL EXPENSES:	2,600,860	2,769,915	2,949,960	2,071,780	26%
6.TOTAL NORMAL EXPENSES	71,398,628	76,039,539	80,982,109	56,640,987	26%
7. INCOME	71,398,628	76,039,539	80,554,655	56,941,347	8.1%
8.INCOME OVER EXPENDITURE	0	0	212,210	300,360	

INCOME

SOURCE	2006/2007	2007/2008	2008/2009	2005/2006	%
AUTHORISATION FEE ESKOM	29,818,355	31,756,548	33,895,146	24,705,518	21%
AUTHORISATION FEE PBMR	9,696,391	10,326,656	10,724,071	7,892,830	23%
AUTHORISATION FEE NESCA	6,481,480	6,902,776	6,910,125	5,373,605	21%
AUTHORISATION FEE VAALPUTS	2,159,556	2,299,927	2,302,375	1,790,424	21%
AUTHORISATION FEE FUEL PLANT	2,281,871	2,430,192	2,523,602	1,857,350	23%
AUTHORISATION FEE MINES	7,169,536	7,635,555	7,363,207	6,485,920	11%
OWN FUNDING				3,134,000	
INTEREST	305,893	527,882	327,171	274,700	11%
OTHER	11,838	12,608	12,158	10,000	12%
TOTAL BEFORE STATE CONTRIBUTION	57,924,920	61,892,146	65,699,892	51,524,347	12%
STATE CONTRIBUTION	13,473,708	14,147,393	14,854,763	5,417,000	149%
GRAND TOTAL	71,398,628	76,039,539	80,554,655	56,941,347	

7 MATERIALITY AND SIGNINFICANCE FRAMEWORK

7.1 INTRODUCTION

Treasury Regulation 28.1.5 provides that for purposes of materiality [sections 50(1), 55(2) and 61(1) (c) of the PFMA] and significance [section 54(2) of the Act], the accounting authority must develop and agree a framework of acceptable levels of materiality and significance with the relevant executive authority in consultation with the external auditors.

7.2 MATERIALITY

Having taken into account the following factors:

- Guidelines issued by the Auditor-General
- The nature of NNR's business
- Statutory requirements affecting NNR
- The inherent and control risks associated with NNR
- Quantitative and qualitative issues
- Requirements of section 55(2)(b) of the Public Finance Management Act

The Board of Directors of the NNR has assessed the levels of materiality for reporting and decision making purposes to be

- R50 000 and above which results from criminal conduct[1]
- Any irregular expenditure and, fruitless and wasteful expenditure
- Any losses recovered or written off

7.3 SIGNIFICANCE

Having taken into account the fact that no transactions covered by Section 54(2) of the Public Finance Management Act have occurred, and that it is unlikely that there

[1] All criminal behaviour associated with amounts of less than R50 000 would be appropriately dealt with by operational management

will be any such transactions in future, the Board of Directors has decided that the materiality level for the purposes of section 54(2) is R350 000.

8 ABBREVIATIONS

AG	–	Assessment Group
ALARA	–	As Low As Reasonably Achievable
CB1-7	–	Core Business Strategic Objectives 1 to 7
CSS	–	Corporate Support Services
EE	–	Employment Equity
HR	–	Human Resources
HR1-4	–	Human Resource Strategic Objectives 1 to 4
IAEA	–	International Atomic Energy Agency
IBP1-5	–	Internal Business Process Strategic Objectives 1 to 5
IRRT	–	International Regulatory Review Team
KPI	–	Key performance indicator
mSv	–	miliSievert
Necsa	–	South African Nuclear Energy Corporation
NGO	–	Non-Governmental Organisation
NNR	–	National Nuclear Regulator
NNRA	–	National Nuclear Regulator Act
NTNS	–	Nuclear Technology and Natural Sources
PAIA	–	Promotion of Access to Information Act
PBMR	–	Pebble Bed Modular Reactor
PFMA	–	Public Finance Management Act
PRD	–	Power Reactor Division
RASSC	–	Radiation Safety Standards Committee
RaSSia	–	Radiation Safety Infrastructure Appraisal
RSD	–	Regulatory Strategy Division
SAR	–	Safety Analysis Report
SS1-3	–	Stakeholder Satisfaction Strategic Objectives 1 to 3
SWOT	–	Strength Weakness Opportunities and Threats